



11.6 Traffic and VMT Analysis

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TRANSPORTATION IMPACT ANALYSIS

Norwalk Transit Village

*City of Norwalk
12700 Norwalk Boulevard
Norwalk, CA 90650*

March 8, 2023

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1 EXECUTIVE SUMMARY

This study analyzes the forecast traffic conditions associated with the proposed development of the Norwalk Transit Village (Project) located at 13200 Bloomfield Avenue, in the City of Norwalk. The Project proposes to construct 328 market rate apartments, 322 affordable apartments, 120 townhomes, 150 room hotel, 13,500 square feet (SF) of active commercial, 66,647 SF of neighborhood commercial, and 3.62 acres of park. The Project is anticipated to be built out by Year 2026.

The Project is forecast to generate approximately approximately 7,455 new daily trips which include approximately 653 AM peak hour trips and 771 PM peak hour trips.

1.1 LEVEL OF SERVICE ANALYSIS RESULTS

This study evaluates traffic conditions that include AM and PM peak hour intersections level of service (LOS) analysis. The results of the of the level of service analysis is as follows:

Existing Conditions - The results of the Existing conditions analysis show that all study intersections currently operate at acceptable levels of service (LOS D or better) with the exception of the following intersections:

- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

Opening Year 2026 Without Project Conditions – The results of the Opening Year 2026 Without Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersections:

- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

Opening Year 2026 Plus Project Conditions - With the addition of project-related traffic, all study intersections continue to operate at acceptable LOS D or better for the Existing With Project conditions the exception of the following intersections:

- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and LOS F in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

At the intersection of Imperial Highway & Bloomfield Avenue (Int. 7), the change in delay exceeds the delay and LOS thresholds when project traffic is added to this location. Therefore, mitigation is required at this intersection to improve the operations during the AM and PM peak hour.

Recommended Mitigation at the signalized intersection of Imperial Highway and Bloomfield Avenue would be to provide right-turn overlap phasing at the northbound, southbound and eastbound approaches. In addition, revise the signal phasing so that the eastbound left and northbound left turn phases are lagging. These improvements would reduce the overall delay at the intersection to 49.0 seconds LOS D during the AM peak hour and 51.4 seconds LOS D during the PM peak hour with the addition of Project traffic.

Future Year 2045 Without Project Conditions – The results of the Future Year 2045 Without Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersections:

- Imperial Highway & Pioneer Boulevard (Int. 1) LOS E in PM Peak Hour
- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and LOS F in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Pioneer Boulevard & Firestone Boulevard (Int. 9) LOS E in PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

Future Year 2045 Plus Project Conditions – The results of the Future Year 2045 Plus Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersections:

- Imperial Highway & Pioneer Boulevard (Int. 1) LOS E in PM Peak Hour
- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and LOS F in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Pioneer Boulevard & Firestone Boulevard (Int. 9) LOS E in PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

At the intersection of Imperial Highway & Bloomfield Avenue (Int. 7), the change in delay exceeds the delay and LOS thresholds when project traffic is added to this location. Therefore, mitigation is required at this intersection to improve the operations during the AM and PM peak hour.

Recommended Mitigation at the signalized intersection of Imperial Highway and Bloomfield Avenue would be to provide right-turn overlap phasing at the northbound, southbound and eastbound approaches. In addition, revise the signal phasing so that the eastbound left and northbound left turn phases are lagging. These improvements would reduce the overall delay at

the intersection to 49.0 seconds LOS D during the AM peak hour and 51.4 seconds LOS D during the PM peak hour with the addition of Project traffic.

The analysis also included a roadway segment evaluation to determine if there is adequate capacity on the existing roadway network to accommodate the additional Project traffic. The roadway segment analysis results show that all five (5) roadway segments operate at acceptable LOS D or better under all study scenarios from Existing Conditions to Future Year 2045 Plus Project Conditions.

At the Northern Project Driveway at Bloomfield Avenue, the intersection is assumed to be signalized when the project is constructed. As a stop-controlled intersection, this access point would operate deficiently (LOS E or F) which is why a signal is needed to improve operations and safety. The Southern Project Driveway is assumed to be unsignalized including a southbound left-turn movement, northbound right-turn movement, and westbound right-turn movement permitted. The westbound left-turn movement would be restricted at the southern access point along Bloomfield Avenue. Installation of the traffic signal and all improvements at the two project access points would be the applicant's responsibility.

1.2 VEHICLE MILES TRAVELED

As part of the California Environmental Quality Act (CEQA) analysis, a VMT assessment was conducted for this Project. The VMT assessment shows that the Project is screened out based on the Proximity To Transit criteria. Therefore, the Project is considered to have a less-than-significant transportation impact and no mitigation measures are required. The VMT assessment has been included in **Chapter 10** of this report.

2 INTRODUCTION

This study analyzes the forecast traffic conditions associated with the proposed development of the Norwalk Transit Village (Project) located at 13200 Bloomfield Avenue, in the City of Norwalk. The City of Norwalk (City) is located in the southeastern portion of Los Angeles County; refer to **Exhibit 1, Regional Vicinity Map**. Surrounding cities include the City of Santa Fe Springs to the north, the City of La Mirada to the east, the City of Cerritos to the south, and the City of Downey to the west.

The site is bound by Imperial Highway to the north, the Union Pacific Railroad to the east, and Bloomfield Avenue to the west; refer to **Exhibit 2** showing the Project Location Map. The project site (Assessor's Parcel Number [APN] 8045-008-902) is located within a predominantly residential area, with a residential townhome community to the north (Norwalk Manor), a 9.4-acre public park (Zimmerman Park) to the east, single-family residential units, a senior residential community and a hospital (Norwalk Community Hospital) to the south, and single-family residential units to the west, across Bloomfield Avenue. Regional access to the site is provided via Interstate 5 (I-5). Local access is provided via Bloomfield Avenue. Additionally, transit access is available for the Project site via the Norwalk/Santa Fe Springs Metrolink Station, located approximately 0.2 miles north of the Project site. **Exhibit 3** shows the Project Site Plan including land uses for each of the eight Planning Areas.

The Project site is developed with 27 buildings and was, until early 2022, being utilized by the California Department of State Hospitals as a temporary hospital facility. The Project proposes the Norwalk Transit Village Specific Plan (Specific Plan) and Tentative Tract Map to allow the demolition of the former facilities and construction of a mixed-use transit-oriented community with a mix of office/retail, multi-family residential uses, and park land uses. Transit-oriented development is a compact, walkable, high-density mixed-use residential and commercial area located within 0.25- to 0.5-miles of a transit station, incorporating features to encourage transit use throughout the day such as a mix of uses, high-quality pedestrian and bicycle access, narrow streets, and reduced parking requirements.

The Project plans to construct 328 market rate apartments, 322 affordable apartments, 120 townhomes, 150 room hotel, 13,500 square feet (SF) of active commercial, 66,647 SF of neighborhood commercial, and 3.62 acres of park. The Project is anticipated to be built out by Year 2026.

According to the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition), the proposed Project is forecast to generate approximately 7,455 new daily trips which include approximately 653 AM peak hour trips and 771 PM peak hour trips.

2.1 STUDY AREA

The study evaluates the following twenty (20) intersections during the AM and PM peak hours in the vicinity of the Project site:

1. Imperial Highway & Pioneer Boulevard
2. Imperial Highway & I-5 Southbound Off Ramp/Frontage
3. Imperial Highway & I-5 Northbound On Ramp/Adoree
4. Imperial Highway & Norwalk Boulevard
5. Imperial Highway & Avenida Manuel Salinas
6. Imperial Highway & Volunteer Avenue

7. Imperial Highway & Bloomfield Avenue
8. Imperial Highway & Carmenita Road
9. Pioneer Boulevard & Firestone Boulevard
10. Norwalk Boulevard & Civic Center Drive
11. Bloomfield Avenue & Civic Center Drive
12. Norwalk Boulevard & Adoree Street/I-5 Northbound Off Ramp
13. Norwalk Boulevard & Frontage Road/I-5 Southbound On Ramp
14. San Antonio Drive & Firestone Boulevard
15. Bloomfield Avenue & Rosecrans Avenue
16. I-5 Southbound Ramps & Rosecrans Avenue
17. I-5 Northbound Ramps & Rosecrans Avenue
18. Carmenita Road & Rosecrans Avenue
19. Bloomfield Avenue & North Project Driveway
20. Bloomfield Avenue & South Project Driveway

This study also evaluates five (5) roadway segments listed below:

1. Bloomfield Avenue from Civic Center Drive to Foster Road
2. Bloomfield Avenue from Foster Road to Markdale Avenue
3. Imperial Highway from Pioneer Boulevard to Norwalk Boulevard
4. Imperial Highway from Norwalk Boulevard to Bloomfield Avenue
5. Imperial Highway from Bloomfield Avenue to Shoemaker Avenue

These twenty (20) intersections and five (5) roadway segments have been identified in coordination with City staff as potential locations impacted by the proposed Project. It should be noted that Intersection 19 and Intersection 20 do not exist without the project since they are Project Driveways and were not analyzed under Existing, Opening Year 2026 Without Project and Buildout Year 2045 Without Project conditions. These study locations are analyzed for the following conditions:

- Existing Conditions;
- Opening Year 2026 Without Project Conditions
- Opening Year 2026 Plus Project Conditions
- Future Year 2045 Without Project Conditions
- Future Year 2045 Plus Project Conditions



Source: Google Earth Pro, June 2022



NOT TO SCALE

10/2022 - JN 187917



Planning Areas (PAS) Key Map

NOT TO SCALE



3 ANALYSIS METHODOLOGY

As required by the City of Norwalk, this transportation impact analysis has been prepared in accordance with the *Los Angeles County Public Works Transportation Impact Analysis Guidelines dated July 23, 2020*.

Level of Service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The intersection analysis conforms to the operational analysis methodology outlined the *Highway Capacity Manual (HCM 6th Edition)* and performed utilizing the *Synchro 11* traffic analysis software.

The *HCM* analysis methodology describes the operation of an intersection using a range of level of service from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle for study intersections as shown in **Table 1**.

For signalized intersections, signal timing data and parameters such as cycle lengths, splits, clearance intervals, etc. were obtained from the current signal timing sheets provided by City staff and incorporated into the Synchro model. Synchro reports average delays for a signalized intersection, which correspond to a particular LOS, to describe the overall operation of an intersection.

Unsignalized intersection LOS for all-way stops is based on the average delay for all approaches. Delay for one-way or two-way stop-controlled intersections is based on available gaps in traffic flow on the non-controlled approach and LOS is based on the approach with the worst delay.

TABLE 1 - LEVEL OF SERVICE DESCRIPTION & DELAY RANGE

Level of Service	Control Delay (seconds/vehicle)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤ 10.0	≤ 10.0	Operates with very low delay and most vehicles do not stop.
B	> 10.0 to 20.0	> 10.0 to 15.0	Operates with good progression with some restricted movements.
C	> 21.0 to 35.0	>15.1 to 25.0	Operates with significant number of vehicles stopping with some backup and light congestion.
D	> 35.1 to 55.0	> 25.0 to 35.0	Operates with noticeable congestion, longer delays occur, and many vehicles stop.
E	>55.0 to 80.0	> 35.1 to 50.0	Operates with significant delay, extensive queuing, and unfavorable progression.
F	> 80.0	> 50.0	Operates at a level that is unacceptable to most drivers. Arrival rates exceed capacity of the intersection. Extensive queuing occurs.

Source: Highway Capacity Manual (HCM) 6th Edition.

Roadway segments are also evaluated in this TIA. Average daily traffic (ADT) capacities represent the general level of daily traffic that each roadway type can carry and should be used as a general design guideline only. LOS for the circulation system is more precisely determined by examining peak hour

intersection volumes and therefore, the Circulation Element uses peak hour volumes as a basis for determining appropriate capacity needs rather than ADT’s. **Table 2** establishes the maximum average daily trips for various types of roadway facilities at certain levels of service. The roadway segment analysis in this report is provided to determine if the roadway capacities are exceeded with the Project.

TABLE 2 – ADT LEVEL OF SERVICE VOLUMES BY FACILITY TYPE

Facility Type	Maximum Volume	
	LOS D	LOS E
Major Highway (6 Lanes Divided)	50,600	56,300
Major Highway (5 Lanes Divided)	37,520	46,900
Secondary Highway (4 Lanes Divided)	30,000	37,500
Secondary Highway (4 Lanes Undivided)	20,000	25,000
Collector (2 Lanes Undivided)	10,000	12,500

Source: City of Norwalk General Plan, Circulation Element

3.1 LEVEL OF SERVICE ANALYSIS PERFORMANCE STANDARDS

According to the City’s General Plan, the City has established LOS “D” as the threshold standard for peak hour intersection analysis. The City has established LOS “C” as a target LOS standard although the City recognizes that not all intersections within the City can meet the target LOS “C”. As such, the LOS performance standards for an intersection is determined by the following:

- *An intersection operating at LOS D or better and is found to operate at LOS D or better with the addition of the Project is not considered significant and no mitigation measures are necessary.*
- *An intersection operating at LOS E experiences an added delay of 4.0 seconds or more with the addition of the Project is considered significant. Mitigation measures are necessary to bring the intersection back to a LOS D or better.*
- *An intersection operating at LOS F experiences an added delay of 2.0 seconds or more with the addition of the Project is considered significant. Mitigation measures are necessary to bring the intersection back to a LOS D or better.*

Caltrans Facilities

Within the study area, there are six (6) intersections that within Caltrans jurisdiction which include the I-5/Imperial Highway interchange, I-5/Norwalk Boulevard interchange, and I-5/Rosecrans Avenue interchange. For study purposes, the requirements for improvements established for the study locations within the City’s jurisdiction also apply to the study intersection within Caltrans jurisdiction.

4 EXISTING CONDITIONS

4.1 SURROUNDING ROADWAY NETWORK

The characteristics of the roadway system in the vicinity of the project site are described below:

Imperial Highway is a six-lane divided roadway trending in the east-west direction. Imperial Highway is classified as a 6-lane Major Highway within the study area per the City's General Plan. Within the study area, there are no Class II bike lanes on either side of the road between Pioneer Boulevard and Carmenta Road. Sidewalks are provided on both sides of the street. The posted speed limit is 40 MPH.

Bloomfield Avenue is a four-lane divided roadway trending in the north-south direction with intermittent turn lanes within the study area. Within the study area, Bloomfield Avenue is classified as a Secondary Highway per the City's General Plan. Sidewalks are provided on both sides of the street and there are no bicycle facilities within the study area. On-street parking is allowed intermittently, and the posted speed limit is 40 MPH.

Norwalk Boulevard is a six-lane divided roadway trending in the north-south direction with intermittent turn lanes provided at major intersections. There are no bike facilities provided on either side of the roadway. Sidewalks are provided on both sides of the street and on-street parking is allowed intermittently. The posted speed limit is 35 MPH.

Pioneer Boulevard is a four-lane divided roadway trending in the north-south direction with intermittent turn lanes provided at major intersections. Within the study area, Pioneer Boulevard is classified as a Secondary Highway per the City's General Plan. The roadway has no bicycle facilities, however provides parking on both sides of the street. Sidewalks are also provided on both sides of the street with marked crosswalks at signalized intersections. The posted speed limit is 35 MPH.

Civic Center Drive is a four-lane undivided roadway trending in the east-west direction. Civic Center Drive is classified as a Secondary Highway per the City's General Plan. The roadway has no bicycle facilities. Sidewalks are provided on both sides of the road. Parking is also provided on both sides of the road and the posted speed limit is 25 MPH.

4.2 EXISTING TRAFFIC VOLUMES

To determine the existing operations of the study intersections, peak hour intersection movement counts were collected on Thursday, March 10th, 2022. Morning (AM) peak period counts were collected between 7:00 AM to 9:00 AM and evening (PM) peak period counts were collected from 4:00 PM – 6:00 PM. The counts used in this analysis represent the highest hour within the peak periods counted for each intersection. 24-hour roadway segment counts were also collected for the study segments. Detailed count data is contained in **Appendix A**. Signal timing worksheets are also provided in **Appendix A**.

Exhibit 4 shows the Existing study intersection lane geometry.

Exhibit 5 shows the AM and PM peak hour volumes at the study intersections.

4.3 EXISTING PEAK HOUR STUDY INTERSECTION LOS

Table 3 summarizes existing conditions AM/PM peak hour level of service for all study intersections. Detailed analysis sheets are contained in **Appendix B**.

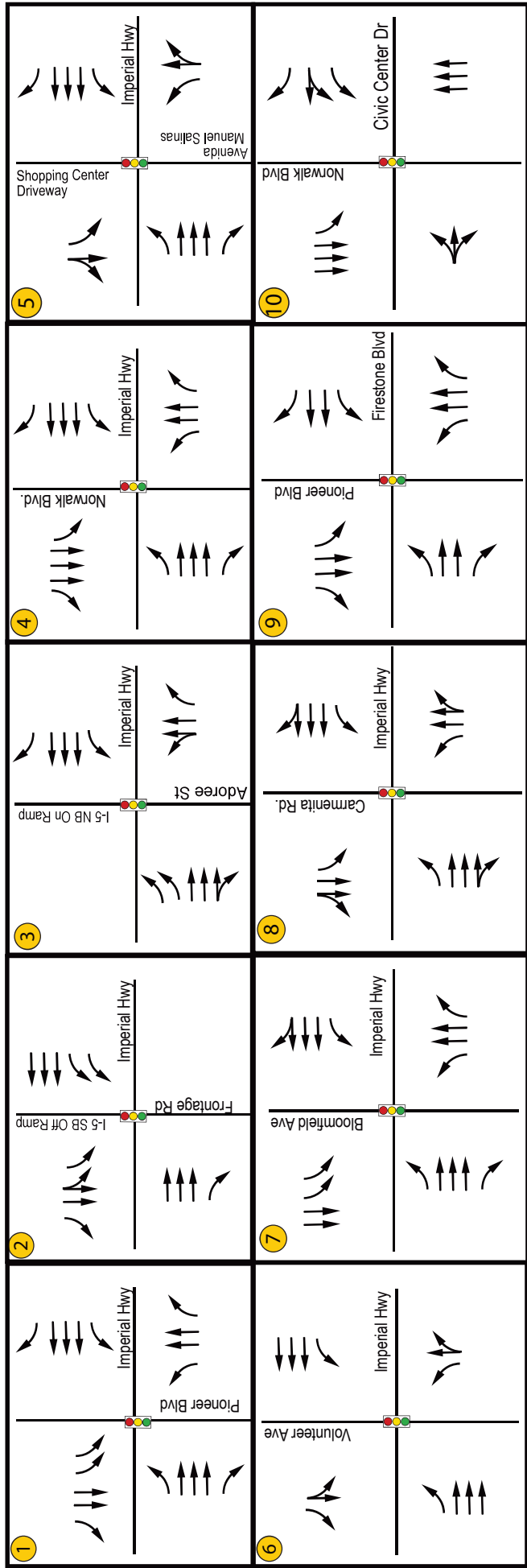
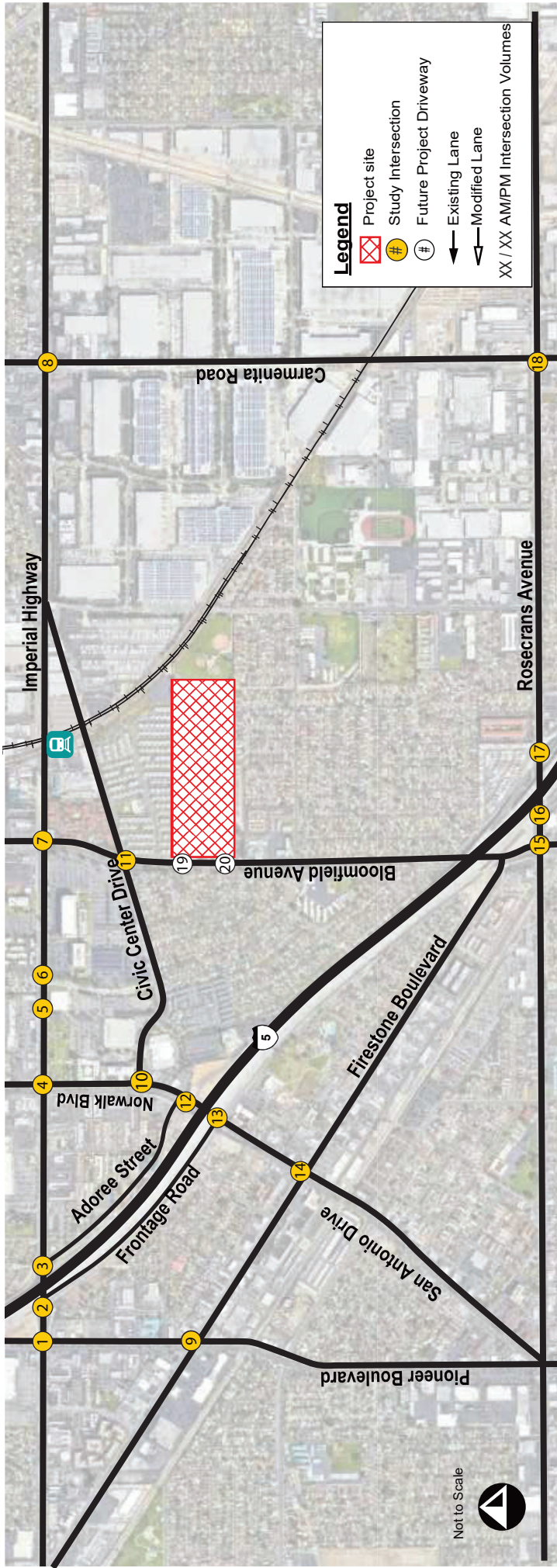
TABLE 3 – EXISTING AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Existing Conditions	
		AM	PM
		Delay ¹ - LOS	Delay ¹ - LOS
1 - Imperial Highway & Pioneer Boulevard	Signal	43.6 - D	43.5 - D
2 - Imperial Highway & I-5 SB Off-Ramp/Frontage	Signal	21.0 - C	19.3 - B
3 - Imperial Highway & I-5 NB On-Ramp/Adoree	Signal	12.5 - B	15.0 - B
4 - Imperial Highway & Norwalk Boulevard	Signal	41.5 - D	49.7 - D
5 - Imperial Highway & Avenida Manuel Salinas	Signal	12.7 - B	14.0 - B
6 - Imperial Highway & Volunteer Avenue	Signal	12.7 - B	17.6 - B
7 - Imperial Highway & Bloomfield Avenue	Signal	54.2 - D	61.8 - E
8 - Imperial Highway & Carmenita Road	Signal	59.4 - E	65.5 - E
9 - Pioneer Boulevard & Firestone Boulevard	Signal	45.5 - D	47.9 - D
10 - Norwalk Boulevard & Civic Center Drive	Signal	12.9 - B	18.2 - B
11 - Bloomfield Avenue & Civic Center Drive	Signal	26.5 - C	18.0 - B
12 - Norwalk Boulevard & I-5 NB Off-Ramp/Adoree St	Signal	52.6 - D	24.3 - C
13 - Norwalk Boulevard & I-5 SB On-Ramp/Frontage Rd	Signal	15.4 - B	18.1 - B
14 - San Antonio Drive & Firestone Boulevard	Signal	58.5 - E	58.4 - E
15 - Bloomfield Avenue & Rosecrans Avenue	Signal	39.4 - D	39.6 - D
16 - I-5 SB Ramps & Rosecrans Avenue	Signal	16.3 - B	16.3 - B
17 - I-5 NB Ramps & Rosecrans Avenue	Signal	21.9 - C	30.7 - C
18 - Carmenita Road & Rosecrans Avenue	Signal	59.7 - E	48.3 - D
19 - Bloomfield Avenue & North Project Driveway	Does Not Exist Without Project		
20 - Bloomfield Avenue & South Project Driveway	Does Not Exist Without Project		

Note: Deficient intersection operation indicated in **bold**.

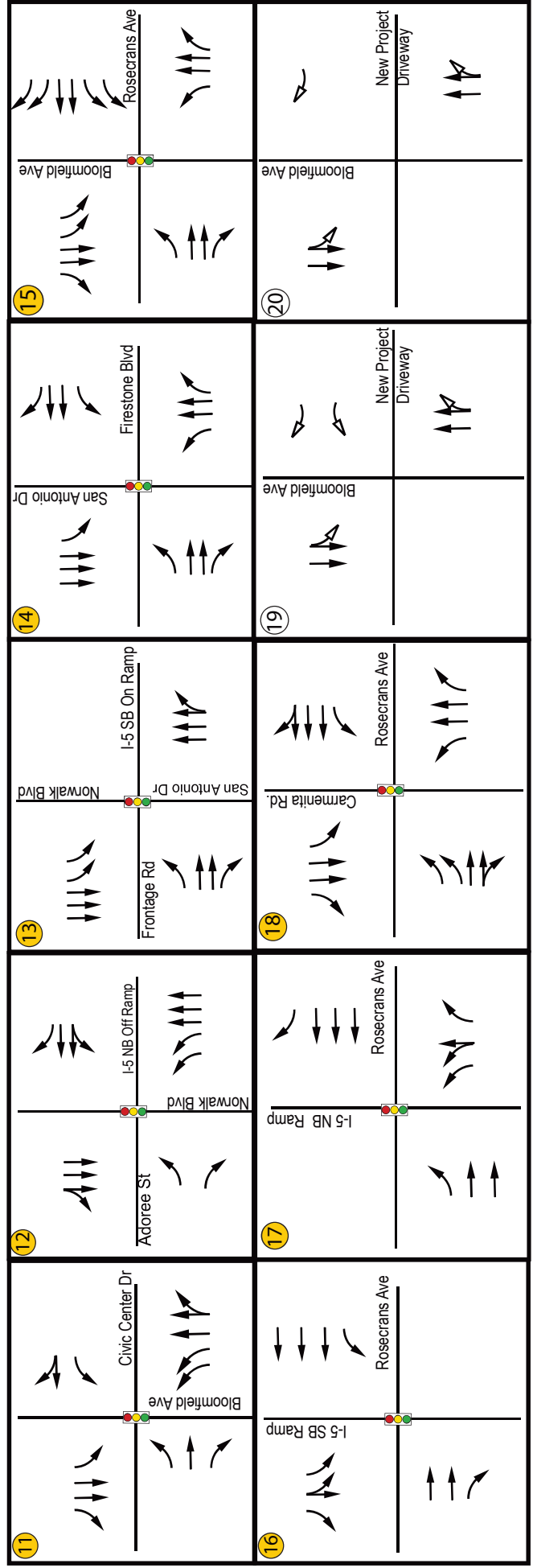
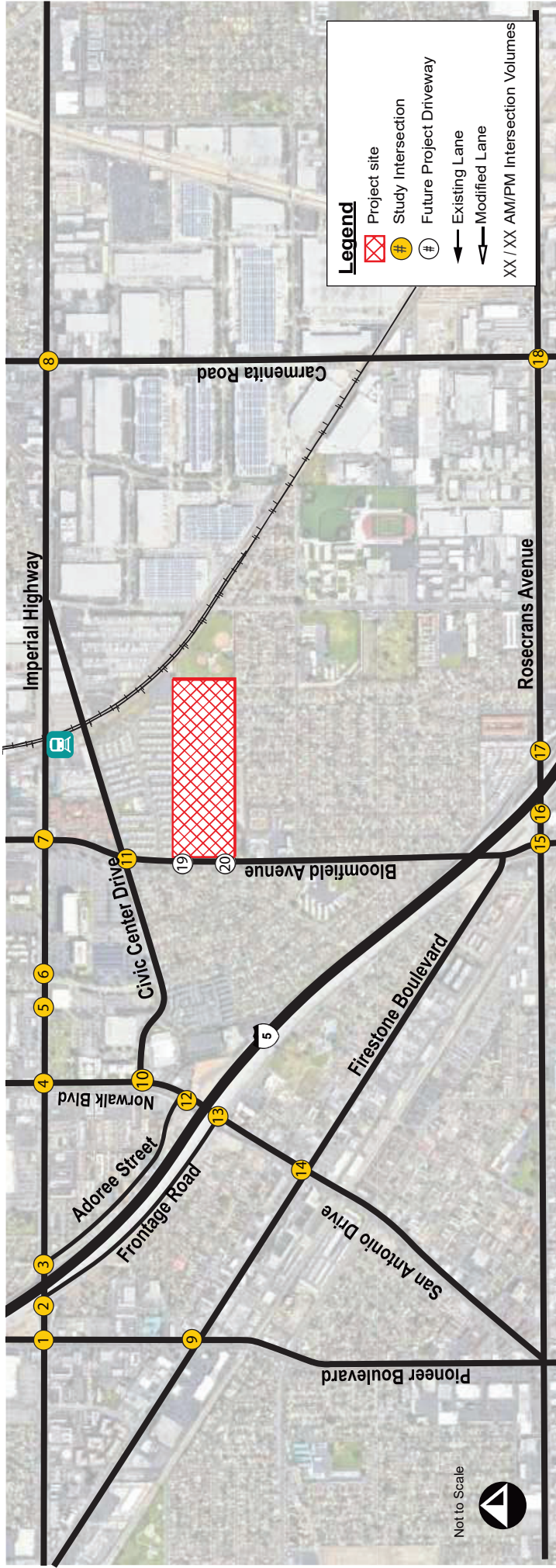
¹ Average seconds of delay per vehicle.

LOS = level of service.

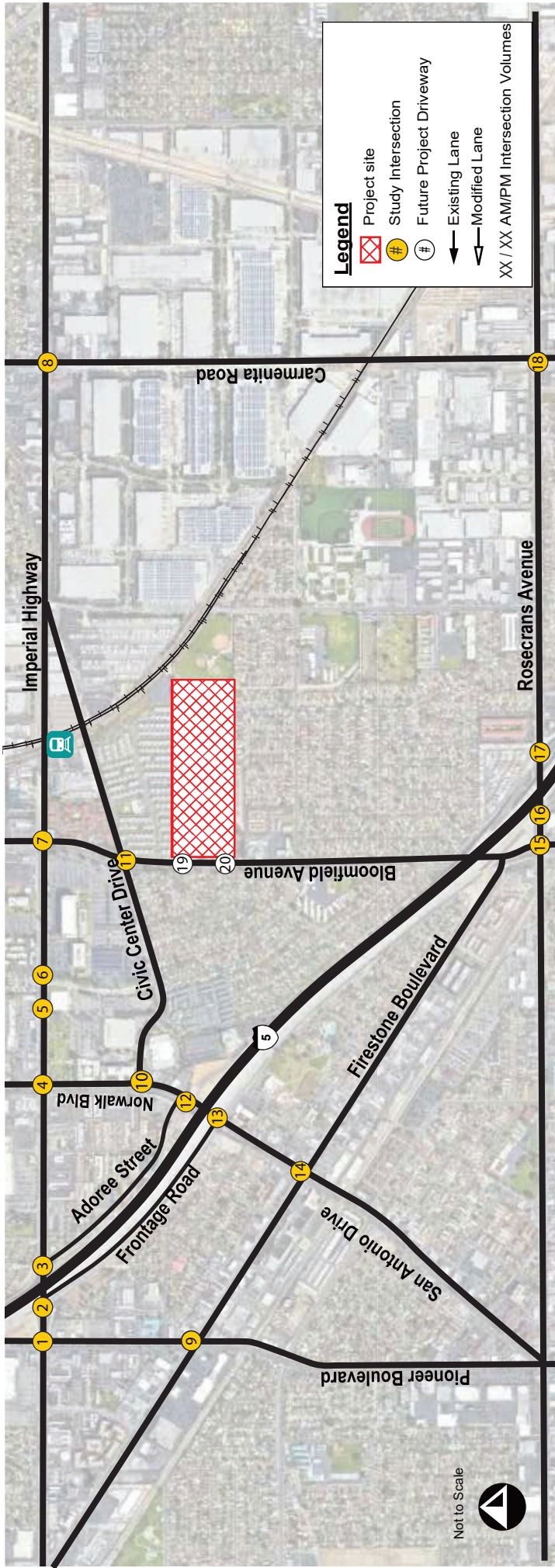


Existing Lane Geometry

Exhibit 4



Existing Lane Geometry

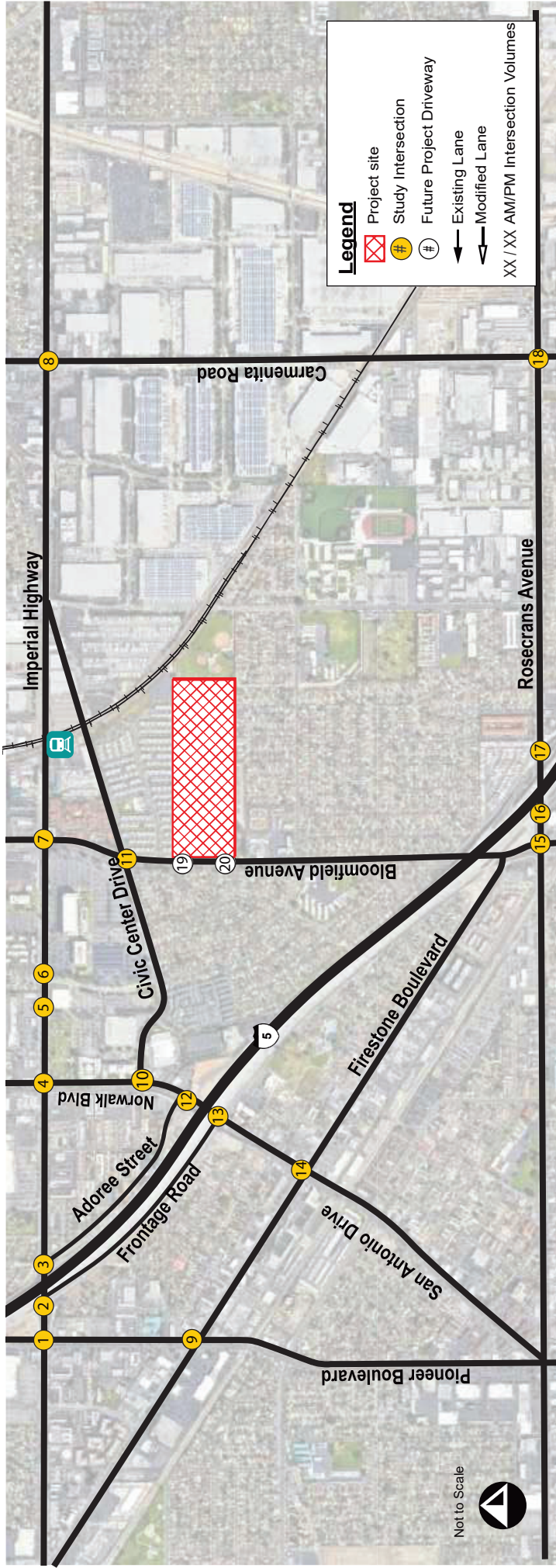


Legend

- Project site
- Study Intersection
- Future Project Driveway
- ↔ Existing Lane
- ↔ Modified Lane
- XX / XX AM/PM Intersection Volumes

<p>1</p> <p>531 / 498 303 / 435 137 / 140</p> <p>288 / 92 1135 / 1168 70 / 282</p> <p>21 / 39 409 / 422 172 / 230</p> <p>Imperial Hwy</p>	<p>2</p> <p>168 / 143 1183 / 1318 237 / 207</p> <p>445 / 270</p> <p>1576 / 1457 58 / 126 26 / 28</p> <p>157 / 147 1204 / 976 64 / 67</p> <p>Imperial Hwy</p>	<p>3</p> <p>382 / 639 979 / 1081 1 / 0</p> <p>78 / 126 112 / 137 8 / 11</p> <p>Imperial Hwy</p>	<p>4</p> <p>123 / 216 399 / 765 104 / 114</p> <p>72 / 144 569 / 515 110 / 109</p> <p>Imperial Hwy</p>	<p>5</p> <p>33 / 36 23 / 13 71 / 50</p> <p>1269 / 1259 58 / 61 96 / 18</p> <p>Shopping Center Driveway</p>	<p>6</p> <p>23 / 20 49 / 14 45 / 37</p> <p>9 / 14 1177 / 1226 137 / 33</p> <p>24 / 56 1241 / 1343 44 / 34</p> <p>Imperial Hwy</p>	<p>7</p> <p>120 / 200 551 / 778 90 / 147</p> <p>120 / 99 1010 / 934 31 / 44</p> <p>100 / 99</p> <p>101 / 134 693 / 1025 124 / 133</p> <p>Imperial Hwy</p>	<p>8</p> <p>73 / 122 680 / 791 119 / 106</p> <p>79 / 91 882 / 652 185 / 154</p> <p>Imperial Hwy</p>	<p>9</p> <p>173 / 191 593 / 863 67 / 62</p> <p>213 / 216 344 / 359 42 / 53</p> <p>173 / 191 593 / 863 67 / 62</p> <p>Pioneer Blvd</p>	<p>10</p> <p>1 / 0 505 / 879 77 / 116</p> <p>40 / 65 315 / 362 56 / 36</p> <p>Firestone Blvd</p>	<p>11</p> <p>23 / 20 49 / 14 45 / 37</p> <p>9 / 14 1177 / 1226 137 / 33</p> <p>23 / 20 49 / 14 45 / 37</p> <p>Volunteer Ave</p>	<p>12</p> <p>120 / 200 551 / 778 90 / 147</p> <p>100 / 99 1010 / 934 31 / 44</p> <p>100 / 99</p> <p>101 / 134 693 / 1025 124 / 133</p> <p>Imperial Hwy</p>	<p>13</p> <p>203 / 183 856 / 1023 48 / 50</p> <p>79 / 91 882 / 652 185 / 154</p> <p>Imperial Hwy</p>	<p>14</p> <p>123 / 216 399 / 765 104 / 114</p> <p>72 / 144 569 / 515 110 / 109</p> <p>Imperial Hwy</p>	<p>15</p> <p>33 / 36 23 / 13 71 / 50</p> <p>1269 / 1259 58 / 61 96 / 18</p> <p>Shopping Center Driveway</p>	<p>16</p> <p>23 / 20 49 / 14 45 / 37</p> <p>9 / 14 1177 / 1226 137 / 33</p> <p>23 / 20 49 / 14 45 / 37</p> <p>Volunteer Ave</p>	<p>17</p> <p>123 / 216 399 / 765 104 / 114</p> <p>72 / 144 569 / 515 110 / 109</p> <p>Imperial Hwy</p>	<p>18</p> <p>33 / 36 23 / 13 71 / 50</p> <p>1269 / 1259 58 / 61 96 / 18</p> <p>Shopping Center Driveway</p>	<p>19</p> <p>76 / 81 1206 / 1434 14 / 4</p> <p>11 / 78 12 / 7 5 / 18</p> <p>Imperial Hwy</p>	<p>20</p> <p>572 / 322 767 / 654</p> <p>55 / 99 350 / 482</p> <p>Civic Center Dr</p>
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Existing AM/PM Peak Hour Traffic Volumes



<p>11</p> <p>182 / 204</p> <p>653 / 891</p> <p>5 / 11</p> <p>299 / 285</p> <p>10 / 15</p> <p>84 / 123</p> <p>Bloomfield Ave</p> <p>Civic Center Dr</p> <p>6 / 5</p> <p>938 / 801</p> <p>148 / 78</p> <p>7 / 5</p> <p>19 / 9</p> <p>34 / 8</p> <p>Adoree St</p> <p>153 / 111</p> <p>48 / 18</p> <p>94 / 61</p> <p>825 / 1268</p> <p>17</p>	<p>16</p> <p>203 / 201</p> <p>1 / 0</p> <p>387 / 345</p> <p>I-5 SB Ramp</p> <p>1069 / 931</p> <p>73 / 64</p> <p>Rosecrans Ave</p> <p>1069 / 931</p> <p>148 / 78</p> <p>6 / 5</p> <p>938 / 801</p> <p>148 / 78</p> <p>7 / 5</p> <p>19 / 9</p> <p>34 / 8</p> <p>Adoree St</p> <p>153 / 111</p> <p>48 / 18</p> <p>94 / 61</p> <p>825 / 1268</p> <p>17</p>	<p>12</p> <p>153 / 111</p> <p>48 / 18</p> <p>94 / 61</p> <p>825 / 1268</p> <p>17</p> <p>212 / 249</p> <p>1062 / 1005</p> <p>I-5 NB Ramp</p> <p>230 / 191</p> <p>1 / 1</p> <p>38 / 48</p> <p>Rosecrans Ave</p> <p>503 / 612</p> <p>889 / 794</p> <p>93 / 108</p> <p>798 / 752</p> <p>I-5 NB Off Ramp</p> <p>550 / 294</p> <p>86 / 104</p> <p>130 / 133</p> <p>18</p>	<p>13</p> <p>827 / 1134</p> <p>212 / 377</p> <p>Frontage Rd</p> <p>43 / 39</p> <p>228 / 215</p> <p>83 / 108</p> <p>827 / 780</p> <p>I-5 SB On Ramp</p> <p>47 / 47</p> <p>673 / 618</p> <p>73 / 90</p> <p>Rosecrans Ave</p> <p>75 / 107</p> <p>852 / 975</p> <p>120 / 135</p> <p>19</p>	<p>14</p> <p>173 / 191</p> <p>593 / 863</p> <p>67 / 62</p> <p>San Antonio Dr</p> <p>213 / 216</p> <p>344 / 359</p> <p>42 / 53</p> <p>173 / 191</p> <p>593 / 863</p> <p>67 / 62</p> <p>San Antonio Dr</p> <p>47 / 74</p> <p>800 / 706</p> <p>55 / 41</p> <p>Firestone Blvd</p> <p>40 / 65</p> <p>315 / 362</p> <p>56 / 36</p> <p>20</p>	<p>15</p> <p>107 / 97</p> <p>571 / 548</p> <p>277 / 306</p> <p>Bloomfield Ave</p> <p>68 / 75</p> <p>639 / 555</p> <p>73 / 50</p> <p>Bloomfield Ave</p> <p>39 / 59</p> <p>607 / 636</p> <p>250 / 320</p> <p>Rosecrans Ave</p> <p>341 / 246</p> <p>678 / 699</p> <p>245 / 197</p> <p>New Project Driveway</p>
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Existing AM/PM Peak Hour Traffic Volumes

As shown in **Table 3**, all study intersections are currently operating at an acceptable level of service for Existing conditions with the exception of the following intersections:

- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

It may be noted that Intersection 19 and Intersection 20 do not exist without the project and were not analyzed under Existing conditions.

4.4 EXISTING ROADWAY SEGMENT ANALYSIS

A roadway segment analysis was conducted along two segments of Bloomfield Avenue and three segments of Imperial Highway near the Project site. **Table 4** provides the roadway segment LOS analysis based on the LOS D capacities outlined in the City's General Plan. As shown, all of the study segments are currently under the LOS D roadway capacities.

TABLE 4 – EXISTING ROADWAY SEGMENT LOS

Segment	Location	Classification (No. Lanes)	LOS D Capacity	Existing		
				ADT	V/C	LOS
Bloomfield Avenue	Civic Center Drive to Foster Road	Secondary Highway (4 lanes divided)	30,000	22,189	0.74	D
	Foster Road to Markdale Avenue	Secondary Highway (4 lanes divided)	30,000	20,691	0.69	D
Imperial Highway	Pioneer Boulevard to Norwalk Boulevard	Major Highway (6 lanes divided)	50,600	40,432	0.80	D
	Norwalk Boulevard to Bloomfield Avenue	Major Highway (6 lanes divided)	50,600	37,354	0.74	D
	Bloomfield Avenue to Shoemaker Avenue	Major Highway (6 lanes divided)	50,600	39,268	0.78	D

Note: Deficient roadway segment operations shown in **bold**.

ADT= Average Daily Traffic

LOS= Level of Service

V/C= Volume to Capacity Ratio

4.5 EXISTING PEDESTRIAN AND BICYCLE FACILITIES

As shown in **Exhibit 6**, there is an existing Class II bike lane that travels along Bloomfield Avenue north of Imperial Highway. Along the Project frontage, there are no bicycle facilities on either side of Bloomfield Avenue.

Sidewalks are provided along both sides of Bloomfield Avenue providing access for pedestrians to the nearby Norwalk / Santa Fe Springs Transit Center located 0.2 miles north of the Project. Pedestrian circulation would be provided throughout the project area via walkways and linear parks. Pedestrian crossings would be required to be provided throughout the project site, including the proposed traffic signal on Bloomfield Avenue.

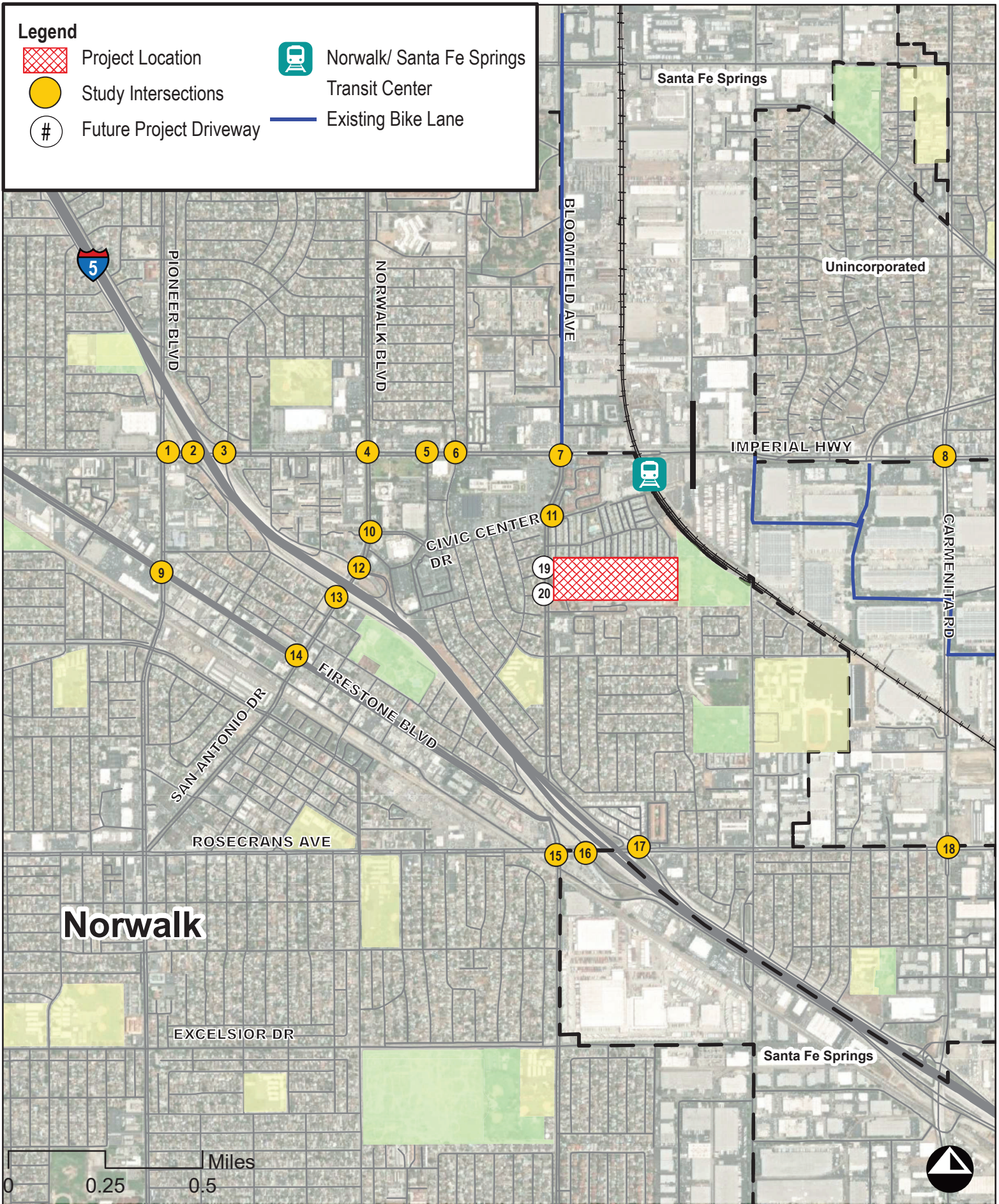
4.6 EXISTING TRANSIT SERVICE

The project site is in proximity to the Norwalk-Santa Fe Springs Metrolink Station, which is approximately 0.2 miles northeast (or a 0.5 mile walk). The Norwalk Transit System (NTS) offers seven fixed commuter bus routes within Norwalk and the surrounding communities, including Artesia, Bellflower, Cerritos, La Habra, La Mirada, Santa Fe Springs, Whittier, and unincorporated areas of Los Angeles County. The project site sits on Route 3: Gateway Plaza, Norwalk & 166th of the NTS. NTS can be used to access two other transit stations: the Norwalk Greenline station and the Los Angeles Metro - Norwalk Station.

Exhibit 7 shows the location of the Metrolink Station along with the seven fixed commuter bus routes near the Project site.







Legend

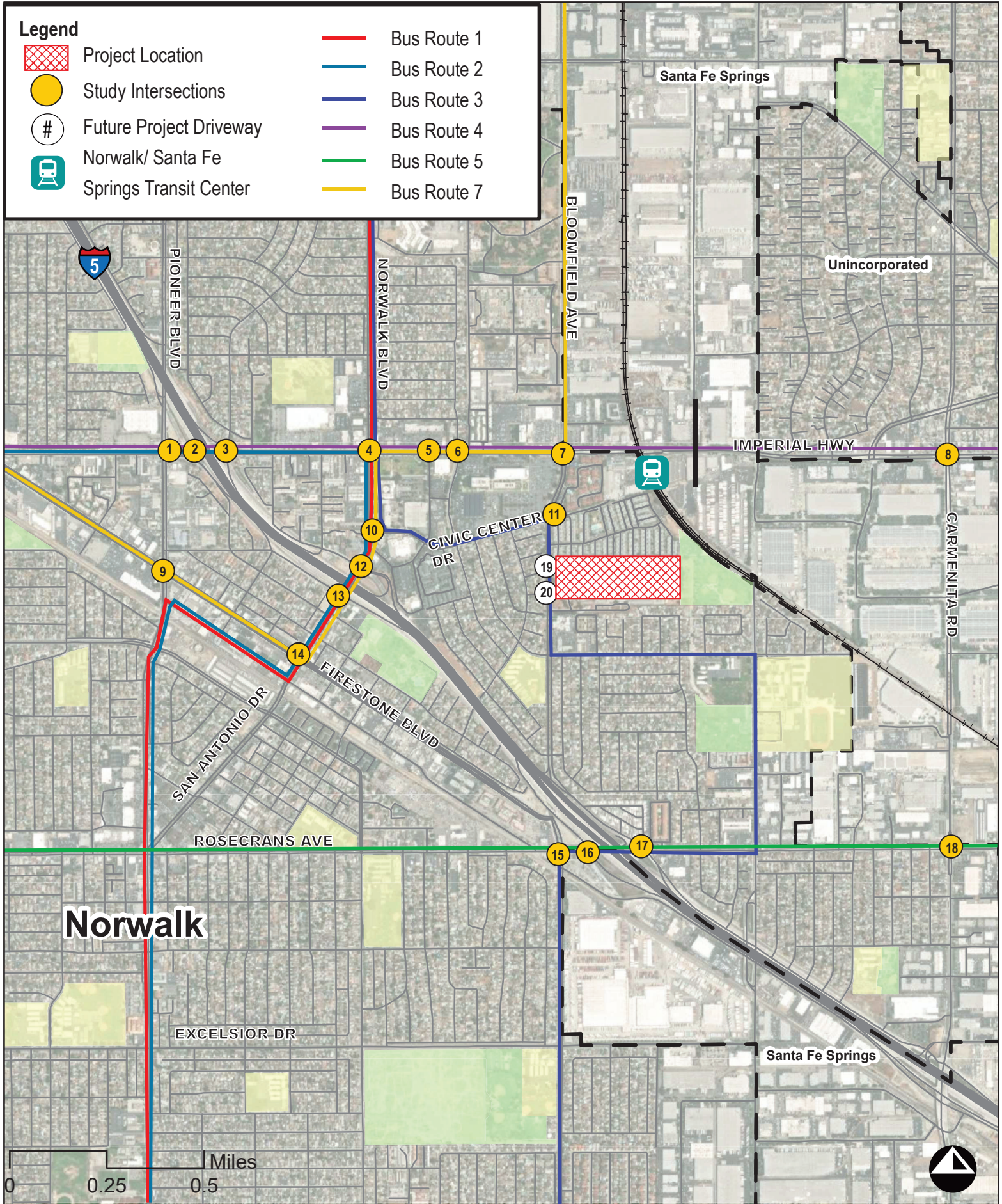
-  Project Location
-  Study Intersections
-  Future Project Driveway
-  Norwalk/ Santa Fe Springs Transit Center
-  Existing Bike Lane



Legend

-  Project Location
-  Study Intersections
-  Future Project Driveway
-  Norwalk/ Santa Fe Springs Transit Center

-  Bus Route 1
-  Bus Route 2
-  Bus Route 3
-  Bus Route 4
-  Bus Route 5
-  Bus Route 7



5 PROPOSED PROJECT

The Project proposes the Norwalk Transit Village Specific Plan and Tentative Tract Map to allow the demolition of the former facility and construction of a mixed-use transit-oriented community with a mix of office/retail, hospitality, multi-family residential uses, and park land uses.

Proposed residential units would include a mix of 60 percent market-rate and 40 percent affordable residential units. The proposed Specific Plan would allow the following:

- A new neighborhood commercial center encompassing approximately 3.06 acres of site. The commercial center (approximately 66,647 square feet of building area) would be situated in the westerly portion of the project adjacent to Bloomfield Avenue. The neighborhood commercial center would include non-residential uses at a maximum floor-to-area ratio (FAR) of 0.5, as well as an approximately 150-room hotel.
- Residential blocks would include up to 770 residential units that would consist of the following:
 - Approximately 120 market-rate townhouse units would be developed at a maximum density of 25 dwelling units (du) per acre;
 - Approximately 650 multi-family units developed at a maximum density of 60 du per acre:
 - Of the multi-family units, up to 328 units would be market-rate attached multi-family (apartments).
 - At least 40 percent of the total number of units (322 units) on the site would be affordable; and
 - Each residential block would be permitted to contain approximately 2,500-3,500 square feet of ground floor ancillary commercial uses allowing up to 11,000 square feet of ancillary commercial/quasi-civic uses within the residential blocks.
 - The ancillary commercial/quasi-civic uses in the residential blocks is in addition to the non-residential area in Planning Area 1.
- Open space would be provided through a combination of common and private, active and passive recreation areas, including a 1.56-acre park and 2.06 acres of linear parks; the 2.06 acres would be comprised of a 1.53-acre linear park, a 0.28-acre non-contingent dog run, and a 0.25-acre pump station.

Regional access to the site is provided via Interstate 5 (I-5). Local access is provided via Imperial Highway and Bloomfield Avenue. Additionally, transit access is available for the Project site via the Norwalk/Santa Fe Springs Metrolink Station, located approximately 0.2 miles north of the Project site.

5.1 PROJECT FORECAST TRIP GENERATION

In order to calculate vehicle trips forecast to be generated by the proposed projects, the *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition)* was used to calculate the trip generation rates as summarized in **Table 5** utilizing the fitted curve equations which are based on the proposed land use quantity. In addition, pass-by trip reductions were applied to Planning Area 1 which includes the Hotel and Shopping Plaza in accordance with the *ITE Trip Generation Handbook*. Internal trip reductions were also applied to all of the Planning Areas based on the NCHRP 684 Internal Reduction Tool.

Table 6 summarizes the vehicular trip generation forecast to be generated by the project using the rates shown in **Table 5**. As shown, the proposed Project for Planning Areas 1 through 8 is forecast to generate approximately 7,455 daily trips with 653 AM peak hour trips (281 in / 372 out) and 771 PM peak hour trips (439 in / 332 out).

TABLE 5 - ITE TRIP GENERATION RATES

Land Use	ITE Code ¹	Daily Trip Rate	AM Peak Hour Rate		PM Peak Hour Rate	
			Total	In : Out	Total	In : Out
Multi-Family Housing	220	T = 6.13 (X) – 550.73	0.38/DU	29% : 71%	0.61/DU	60% : 40%
Affordable Housing	223	T = 3.73 (X) + 139.35	0.50/DU	29% : 71%	0.46/DU	59% : 41%
Hotel	310	T = 10.84 (X) – 423.51	0.46/Room	56% : 44%	0.59/Room	51% : 49%
Shopping Plaza	821	T = 76.96 (X) + 1412.79	5.53/KSF	62% : 38%	5.67/KSF	48% : 52%
Strip Retail	822	T = 42.20 (X) + 229.68	2.36/KSF	60% : 40%	6.59/KSF	50% : 50%
Public Park	411	T = 0.64 (X) + 88.46	0.02/Acre	59% : 41%	0.11/Acre	55% : 45%

¹ Source: ITE Trip Generation Manual, 11th Edition. Rates shown are based on fitted curve equation.

TABLE 6 - PROPOSED PROJECT TRIP GENERATION

Land Use	Intensity		Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
				Total	In : Out	Total	In : Out
Planning Area 1							
Hotel	150	Rooms	1202	84	45 : 39	89	52 : 37
Shopping Plaza	67	KSF	4497	371	182 : 189	380	205 : 175
Planning Area 1 Subtotal (w/o reductions)			5699	455	227 : 228	469	257 : 212
<i>Pass-By Trip Reduction¹</i>			<i>1799</i>	<i>148</i>	<i>73 : 76</i>	<i>152</i>	<i>82 : 70</i>
<i>Internal Trip Reduction²</i>			<i>570</i>	<i>9</i>	<i>5 : 5</i>	<i>80</i>	<i>44 : 36</i>
Planning Area 1 Subtotal			3330	298	150 : 148	237	131 : 106
Planning Area 2							
Multi-Family Housing	167	DU	473	72	18 : 54	102	61 : 41
Strip Retail	2.5	KSF	335	19	10 : 9	33	18 : 15
<i>Internal Trip Reduction³</i>			<i>48</i>	<i>3</i>	<i>1 : 2</i>	<i>12</i>	<i>7 : 5</i>
Planning Area 2 Subtotal			760	88	27 : 61	123	72 : 51
Planning Area 3							
Multi-Family Housing	161	DU	436	61	18 : 43	98	59 : 39
Strip Retail	2.5	KSF	335	19	10 : 9	33	18 : 15
<i>Internal Trip Reduction³</i>			<i>46</i>	<i>2</i>	<i>1 : 1</i>	<i>12</i>	<i>7 : 5</i>
Planning Area 3 Subtotal			725	78	27 : 50	119	70 : 49
Planning Area 4							
Affordable Housing	161	DU	740	52	14 : 38	77	45 : 32
Strip Retail	2.5	KSF	335	19	10 : 9	33	18 : 15
<i>Internal Trip Reduction³</i>			<i>65</i>	<i>2</i>	<i>1 : 1</i>	<i>10</i>	<i>6 : 4</i>

Land Use	Intensity	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
			Total	In : Out	Total	In : Out
Planning Area 4 Subtotal		1011	69	23 : 46	100	57 : 43
Planning Area 5						
Affordable Housing	161 DU	740	27	14 : 13	46	25 : 21
Strip Retail	3.5 KSF	377	19	10 : 9	33	18 : 15
<i>Internal Trip Reduction³</i>		<i>67</i>	<i>2</i>	<i>1 : 1</i>	<i>7</i>	<i>4 : 3</i>
Planning Area 5 Subtotal		1050	44	23 : 21	72	39 : 33
Planning Area 6						
Multi-Family Housing	120 DU	185	46	13 : 33	73	44 : 29
Strip Retail	2.5 KSF	335	19	10 : 9	33	18 : 15
<i>Internal Trip Reduction³</i>		<i>31</i>	<i>2</i>	<i>1 : 1</i>	<i>10</i>	<i>6 : 4</i>
Planning Area 6 Subtotal		489	63	22 : 41	96	56 : 40
Planning Area 7 & 8						
Public Park	3.62 Acres	91	13	8 : 5	23	13 : 10
Planning Area 7 & 8 Subtotal		91	13	8 : 5	23	13 : 10
TOTAL TRIP GENERATION (With Pass-By & Internal Trip Reductions)		7,455	653	281 : 372	771	439 : 332

Notes: DU = Dwelling Unit KSF = 1,000 Square Foot

¹ Pass-By Trip Reduction based on ITE's Trip Generation Handbook, 3rd Edition, Sept 2017.

² Internal Trip Reduction based on NCHRP 684 Internal Reduction Tool for Shopping Plaza and Hotel uses.

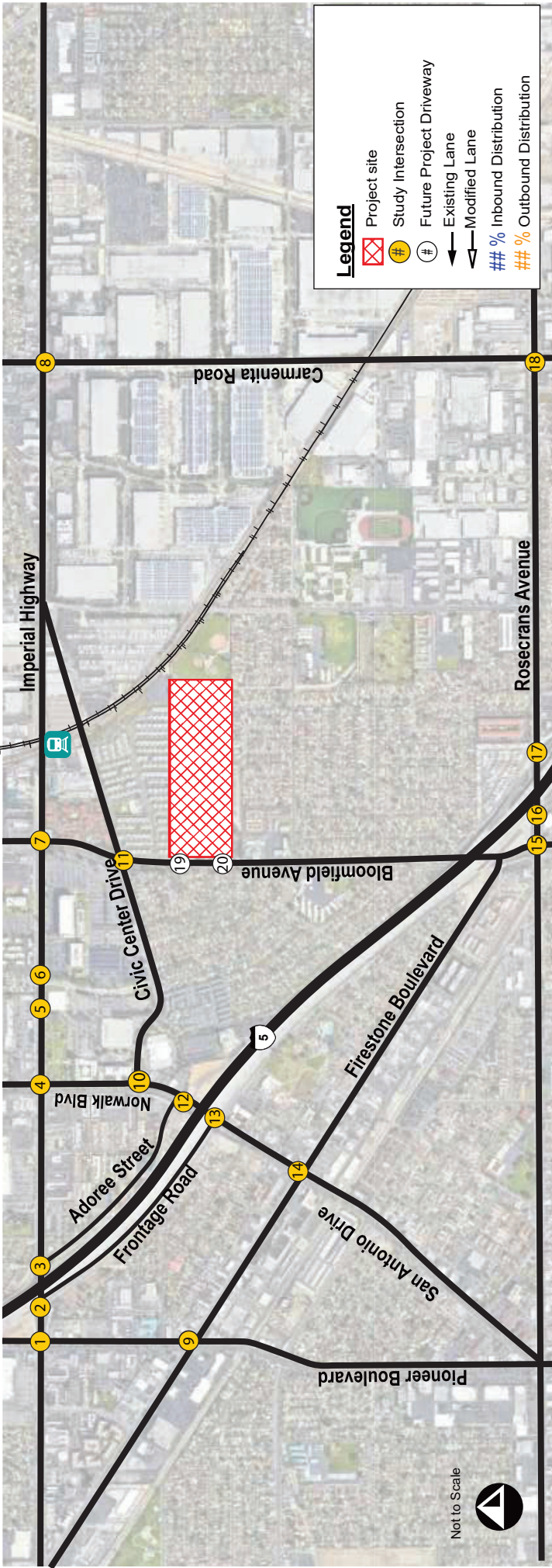
³ Internal Trip Reduction based on NCHRP 684 Internal Reduction Tool for Strip Retail and Multi-Family Residential uses.

5.2 TRIP DISTRIBUTION AND TRIP ASSIGNMENT OF PROPOSED PROJECT

Project trips were assigned onto the surrounding roadway network based on the location of the Project relative to the area transportation network and nearby attractions such as access to freeway interchanges, nearby shopping centers, employment centers, schools, etc.

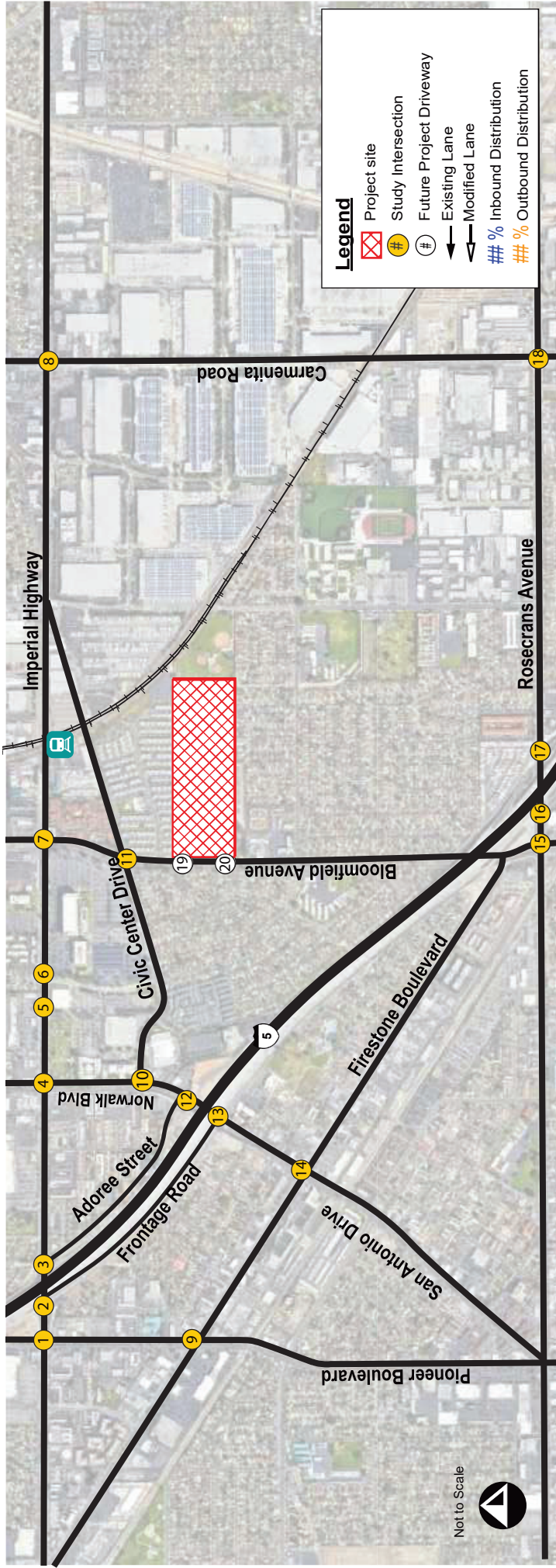
Exhibit 8 shows the forecast trip percent distribution of the proposed project within the study area.

Exhibit 9 shows the corresponding forecast assignment of AM and PM peak hour project-generated trips assuming the trip percent distribution shown in **Exhibit 8**.



1	Pioneer Blvd	Imperial Hwy	10% 5%	Imperial Hwy	Imperial Hwy
2	Frontage Rd	I-5 SB Off Ramp	15% 5%	Imperial Hwy	Imperial Hwy
3	Adoree St	I-5 NB On Ramp	15% 15%	Imperial Hwy	Imperial Hwy
4	Normalk Blvd	Normalk Blvd	5%	Imperial Hwy	Imperial Hwy
5	Shopping Center Driveway	Manuel Salinas	35%	Imperial Hwy	Imperial Hwy
6	Volunteer Ave	Imperial Hwy	35%	Imperial Hwy	Imperial Hwy
7	Bloomfield Ave	Imperial Hwy	10% 35% 5%	Imperial Hwy	Imperial Hwy
8	Carmenta Rd	Carmenta Rd	30%	Imperial Hwy	Imperial Hwy
9	Pioneer Blvd	Pioneer Blvd	5%	Imperial Hwy	Imperial Hwy
10	Normalk Blvd	Normalk Blvd	35%	Imperial Hwy	Imperial Hwy
					Civic Center Dr 10%

Project Distribution Percentages

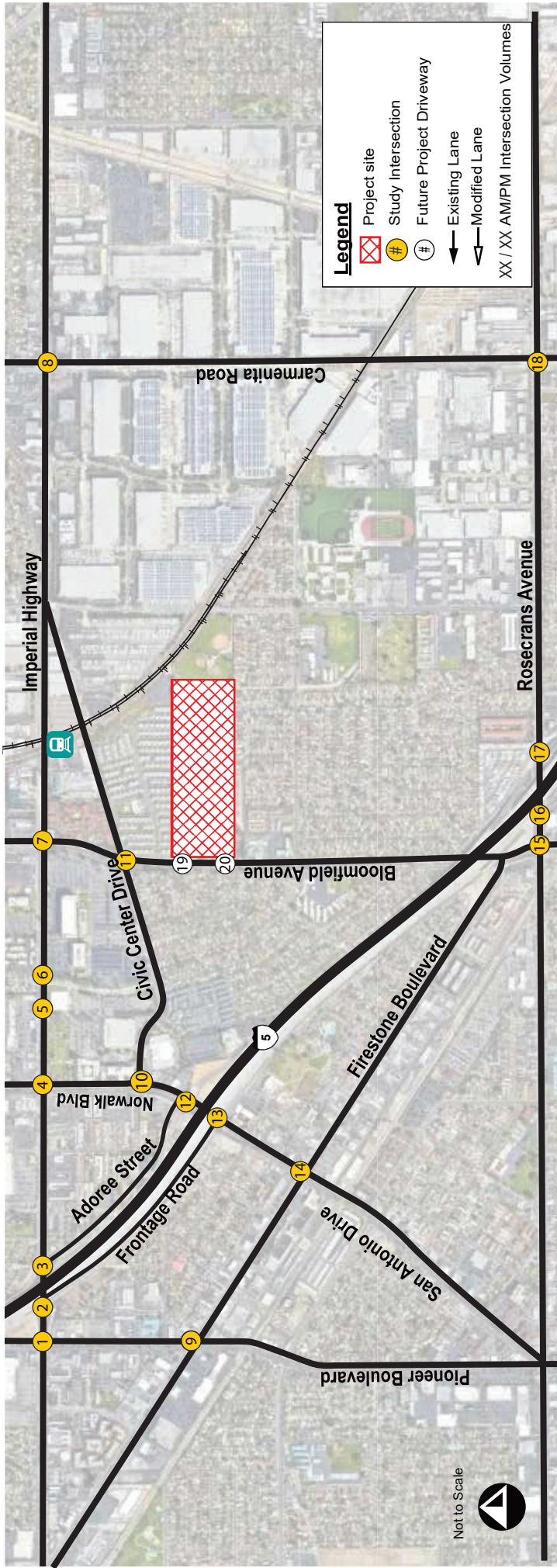


11	Bloomfield Ave	Civic Center Dr	50% → 10% ↖	50% ← 10% ↗	I-5 SB Ramp	Rosecrans Ave	25% ↓
12	Adoree St	Norwalk Blvd	5% ↗ 5% ↘	10% ←	I-5 NB Off Ramp	Rosecrans Ave	20% ↖
13	Frontage Rd	Norwalk Blvd	5% →	5% ↗	San Antonio Dr	Carmenia Rd	5% ↑
14	San Antonio Dr	Firestone Blvd	5% →	5% ↖	Bloomfield Ave	New Project Driveway	20% ↖ 40% ↗
15	Bloomfield Ave	Rosecrans Ave	7% ↖ 5% → 25% ↗	7% ↗	Rosecrans Ave	New Project Driveway	20% ↖ 40% ↗
16	I-5 SB Ramp	Rosecrans Ave	5% ↑ 20% ↗	25% ↓	Rosecrans Ave	New Project Driveway	20% ↖ 20% ↗
17	Adoree St	I-5 NB Ramp	5% ↗ 5% ↘	5% ↓	Rosecrans Ave	Rosecrans Ave	5% ↑
18	Frontage Rd	San Antonio Dr	5% →	5% ↗	San Antonio Dr	Rosecrans Ave	5% ↓
19	Bloomfield Ave	San Antonio Dr	40% ↖ 20% ↗	40% ↗	Bloomfield Ave	New Project Driveway	20% ↖
20	Bloomfield Ave	Firestone Blvd	7% ↖ 5% → 25% ↗	7% ↗	Firestone Blvd	New Project Driveway	20% ↖ 20% ↗

Project Distribution Percentages

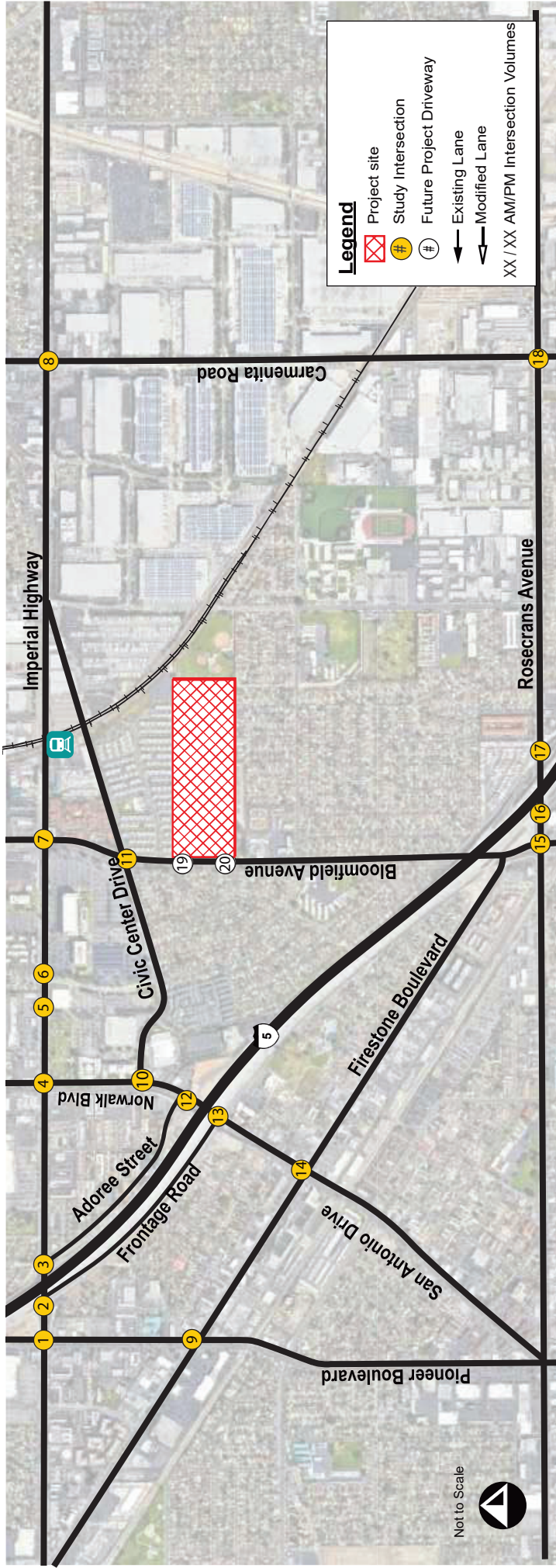
Not to Scale





1	Imperial Hwy Pioneer Blvd	Imperial Hwy Pioneer Blvd	Imperial Hwy Pioneer Blvd	Imperial Hwy Adoree St	Imperial Hwy Norwalk Blvd	Imperial Hwy Bloomfield Ave	Imperial Hwy Frontage Rd	Imperial Hwy I-5 SB Off Ramp	Imperial Hwy I-5 NB On Ramp	Imperial Hwy Adoree St	Imperial Hwy Carmenita Rd.	Imperial Hwy Carmenita Rd.	Imperial Hwy Firestone Blvd	Imperial Hwy Norwalk Blvd	Imperial Hwy Shopping Center Driveway	Imperial Hwy Manuel Salinas	Imperial Hwy Civic Center Dr
28 / 43	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
2	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
3	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
4	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
5	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
6	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
7	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
8	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
9	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33
10	37 / 33 18 / 16	14 / 21	42 / 64 14 / 21	55 / 49	42 / 64 14 / 21	129 / 114 18 / 16	55 / 49	84 / 128	55 / 49	18 / 16	84 / 128	18 / 16	14 / 21	14 / 21	98 / 150	129 / 114	37 / 33

Project Only AM/PM Peak Hour Traffic Volumes



11	Bloomfield Ave 140 / 214	Civic Center Dr 37 / 33 184 / 163	Adoree St 18 / 16 18 / 16	Norwalk Blvd I-5 NB Off Ramp 28 / 43	Frontage Rd 14 / 21 18 / 16	San Antonio Dr I-5 SB On Ramp 14 / 21	San Antonio Dr Firestone Blvd 14 / 21	Bloomfield Ave 147 / 127 57 / 97	Bloomfield Ave 147 / 131 112 / 171	Rosecrans Ave 14 / 21 70 / 107
12	18 / 16 18 / 16	18 / 16	18 / 16	14 / 21	18 / 16	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
13	18 / 16	14 / 21	28 / 43	14 / 21	14 / 21	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
14	18 / 16	14 / 21	28 / 43	14 / 21	14 / 21	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
15	18 / 16 73 / 65	37 / 33 184 / 163	18 / 16 18 / 16	28 / 43	14 / 21 18 / 16	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
16	18 / 16 73 / 65	37 / 33 184 / 163	18 / 16 18 / 16	28 / 43	14 / 21 18 / 16	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
17	18 / 16	18 / 16	18 / 16	14 / 21	14 / 21	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
18	18 / 16	14 / 21	28 / 43	14 / 21	14 / 21	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
19	147 / 127 57 / 97	14 / 21	28 / 43	14 / 21	14 / 21	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107
20	147 / 131 112 / 171	14 / 21	28 / 43	14 / 21	14 / 21	14 / 21	14 / 21	147 / 127 57 / 97	147 / 131 112 / 171	14 / 21 70 / 107

Project Only AM/PM Peak Hour Traffic Volumes

6 OPENING YEAR 2026 WITHOUT PROJECT CONDITIONS

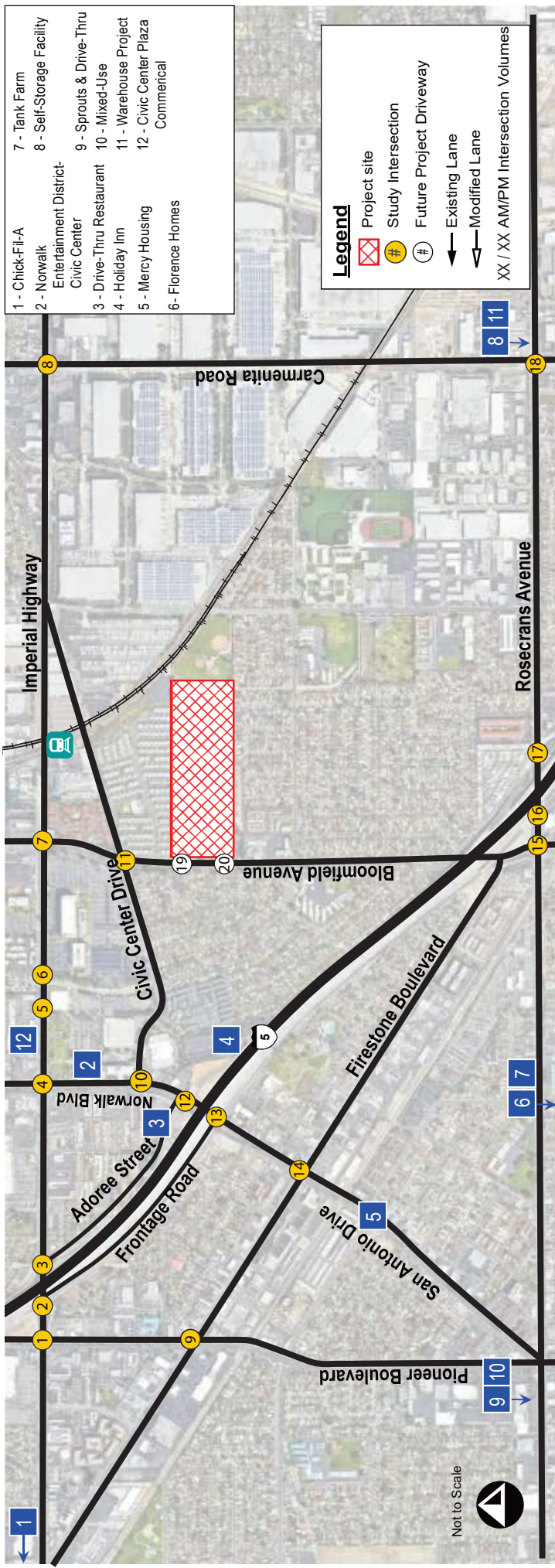
6.1 CUMULATIVE PROJECTS

Based on coordination with City staff, twelve (12) cumulative projects withing the City of Norwalk were identified that could add vehicular traffic to the Project study area by the Projects Opening Year 2026. Trips for each of the cumulative projects were estimated using the ITE Trip Generation rates and then distributed onto the study intersections. **Table 7** includes the list of cumulative projects and trip generation estimates for daily and AM/PM peak hour traffic. As shown, approximately 14,342 daily trips are estimated from these cumulative projects with 942 AM peak hour trips and 1,276 PM peak hour trips.

Exhibit 10 shows the cumulative project locations and cumulative project only AM and PM peak hour volumes at study intersections.

TABLE 7 - CUMULATIVE PROJECT TRIP GENERATION

#	Cumulative Project	ITE Code	Intensity	ADT	AM Peak Hour			PM Peak Hour		
					Total	Inbound	Outbound	Total	Inbound	Outbound
1	Chick-Fil-A Restaurant	934	4,985 SF	2,328	222	113	109	164	85	79
	Retail Building	822	4,000 SF	398	16	9	7	41	20	21
	<i>Pass-By Reduction (Daily, AM - 49%) (PM - 50%)</i>			(1,141)	(109)	(55)	(53)	(82)	(43)	(40)
	Sub-Total Trip Generation			1,585	129	67	63	123	63	61
2	Norwalk Entertainment District - Civic Center	821	110,000 SF	6,192	294	127	167	545	301	244
		221	350 DU							
3	Future Drive Through Restaurant	934	2480 SF	1,159	111	56	55	82	43	39
	<i>Pass-By Reduction (Daily, AM - 49%) (PM - 50%)</i>			(568)	(54)	(27)	(27)	(41)	(22)	(20)
	Sub-Total Trip Generation			591	57	29	28	41	22	20
4	Holiday Inn-Norwalk Entertainment Ctr.	310	121 Rooms	888	53	30	23	62	31	31
5	Mercy Housing	223	60 DU	363	30	9	21	36	21	15
6	Florence Homes	220	62 DU	473	42	10	32	47	30	17
7	Tank Farm	411	15 Acres	98	0	0	0	24	13	11
8	Self-Storage Facility	151	129,828 SF	188	12	7	5	19	9	10
9	Sprouts Retail	850	22,397 SF	2,407	64	38	26	230	115	115
	Drive Through Restaurant	934	4,900 SF	2,207	212	123	89	142	71	71
	<i>Pass-By Reduction (Sprouts) (Daily, PM - 36%)</i>			(867)	0	0	0	(83)	(41)	(41)
	<i>Pass-By Reduction (Drive Through Restaurant) (Daily, AM - 49% & PM - 50%)</i>			(1,081)	(104)	(60)	(44)	(71)	(36)	(36)
	Sub-Total Trip Generation			2,666	172	101	71	218	109	109
10	Maidstone/Alondra Mixed-Use	230	209 DU	719	92	21	71	75	53	22
11	Carmenita Warehouse Project	150	76,368 SF	159	33	25	8	36	10	26
12	Civic Center Plaza Commercial Building	822	9,600 SF	635	28	17	11	76	38	38
	<i>Pass-By Reduction (Daily, PM - 34%)</i>			(216)	0	0	0	(26)	(13)	(13)
	Sub-Total Trip Generation			419	28	17	11	50	25	25
Total Cumulative Project Trips				14,342	942	442	500	1,276	686	590



<p>1</p> <p>0/0</p> <p>1/2</p> <p>24/53</p> <p>0/0</p> <p>1/1</p> <p>0/0</p> <p>5/11</p> <p>4/10</p> <p>2/1</p> <p>2/1</p> <p>12/25</p> <p>Imperial Hwy</p> <p>Pioneer Blvd</p>	<p>2</p> <p>0/0</p> <p>5/12</p> <p>12/30</p> <p>39/87</p> <p>0/0</p> <p>1-5 SB Off Ramp</p> <p>Frontage Rd</p> <p>Imperial Hwy</p> <p>43/74</p>	<p>3</p> <p>0/0</p> <p>18/39</p> <p>34/79</p> <p>0/0</p> <p>1-5 NB On Ramp</p> <p>Adoree St</p> <p>Imperial Hwy</p> <p>0/0</p> <p>0/0</p> <p>0/0</p> <p>0/0</p> <p>31/32</p> <p>43/74</p> <p>0/0</p>	<p>4</p> <p>0/0</p> <p>22/37</p> <p>12/24</p> <p>0/0</p> <p>24/52</p> <p>4/4</p> <p>0/0</p> <p>Imperial Hwy</p> <p>Norwalk Blvd</p>	<p>5</p> <p>2/2</p> <p>0/0</p> <p>0/0</p> <p>0/0</p> <p>15/27</p> <p>20/23</p> <p>17/30</p> <p>28/64</p> <p>1/2</p> <p>Imperial Hwy</p> <p>Shopping Center Driveway</p>	<p>6</p> <p>0/0</p> <p>23/36</p> <p>0/0</p> <p>6/13</p> <p>1/1</p> <p>0/0</p> <p>1/1</p> <p>0/0</p> <p>17/38</p> <p>12/29</p> <p>9/13</p> <p>Imperial Hwy</p> <p>Volunteer Ave</p>	<p>7</p> <p>6/12</p> <p>2/3</p> <p>0/0</p> <p>6/10</p> <p>23/38</p> <p>9/16</p> <p>10/18</p> <p>2/3</p> <p>2/2</p> <p>0/0</p> <p>20/46</p> <p>2/2</p> <p>Imperial Hwy</p> <p>Bloomfield Ave</p>	<p>8</p> <p>0/0</p> <p>0/0</p> <p>0/0</p> <p>0/0</p> <p>0/0</p> <p>23/38</p> <p>0/0</p> <p>0/0</p> <p>0/0</p> <p>20/46</p> <p>0/0</p> <p>Imperial Hwy</p> <p>Carmelita Rd</p>	<p>9</p> <p>0/0</p> <p>35/46</p> <p>0/0</p> <p>0/0</p> <p>35/46</p> <p>0/0</p> <p>0/0</p> <p>24/52</p> <p>4/4</p> <p>Imperial Hwy</p> <p>Pioneer Blvd</p>	<p>10</p> <p>0/0</p> <p>20/23</p> <p>15/27</p> <p>0/0</p> <p>2/2</p> <p>36/44</p> <p>0/0</p> <p>2/2</p> <p>0/0</p> <p>2/2</p> <p>Imperial Hwy</p> <p>Firestone Blvd</p>	<p>11</p> <p>0/0</p> <p>23/36</p> <p>0/0</p> <p>6/13</p> <p>23/36</p> <p>0/0</p> <p>0/0</p> <p>11/18</p> <p>0/0</p> <p>0/0</p> <p>Imperial Hwy</p> <p>Civic Center Dr</p>	<p>12</p> <p>51/91</p> <p>54/105</p> <p>350/482</p> <p>55/99</p> <p>0/0</p> <p>48/79</p> <p>0/0</p> <p>19/33</p> <p>9/13</p> <p>18/40</p> <p>Imperial Hwy</p> <p>Manuel Salinas</p>
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<p>11</p> <p>Bloomfield Ave</p> <p>Civic Center Dr</p> <p>7/7 13/24 6/7</p> <p>9/15 16/24 0/0</p> <p>0/0 0/0 0/0</p>	<p>12</p> <p>Adoree St</p> <p>3/2 75/90 3/5</p> <p>34/79 7/9</p> <p>1-5 NB Off Ramp</p> <p>4/3 59/82</p> <p>17/36 0/0 0/0</p>	<p>13</p> <p>Frontage Rd</p> <p>46/62 8/7 0/0</p> <p>7/16 19</p> <p>0/0 0/0 0/0</p>	<p>14</p> <p>San Antonio Dr</p> <p>0/0 39/53 6/11</p> <p>0/0 0/0 1/2</p> <p>0/0 0/0 1/2</p>	<p>15</p> <p>Bloomfield Ave</p> <p>1/2 8/17 7/14</p> <p>2/2 1/1 0/0</p> <p>2/2 47/51 2/2</p> <p>6/13 0/0 1/2</p>	<p>16</p> <p>I-5 SB Ramp</p> <p>0/0 0/0 0/0</p> <p>0/0 0/0 0/0</p> <p>6/5 5/11</p>	<p>17</p> <p>Adoree St</p> <p>3/2 75/90 3/5</p> <p>34/79 7/9</p> <p>0/0 0/0 6/6</p> <p>0/0 4/8</p>	<p>18</p> <p>Frontage Rd</p> <p>46/62 8/7 0/0</p> <p>7/16 19</p> <p>0/0 0/0 0/0</p>	<p>19</p> <p>Bloomfield Ave</p> <p>0/0 14/31 0/0</p> <p>0/0 0/0 1/2</p> <p>0/0 0/0 0/0</p>	<p>20</p> <p>Bloomfield Ave</p> <p>1/2 8/17 7/14</p> <p>2/2 1/1 0/0</p> <p>2/2 47/51 2/2</p> <p>6/13 0/0 1/2</p>
<p>11</p> <p>Bloomfield Ave</p> <p>Civic Center Dr</p> <p>7/7 13/24 6/7</p> <p>9/15 16/24 0/0</p> <p>0/0 0/0 0/0</p>	<p>12</p> <p>Adoree St</p> <p>3/2 75/90 3/5</p> <p>34/79 7/9</p> <p>0/0 0/0 6/6</p> <p>0/0 4/8</p>	<p>13</p> <p>Frontage Rd</p> <p>46/62 8/7 0/0</p> <p>7/16 19</p> <p>0/0 0/0 0/0</p>	<p>14</p> <p>San Antonio Dr</p> <p>0/0 39/53 6/11</p> <p>0/0 0/0 1/2</p> <p>0/0 0/0 1/2</p>	<p>15</p> <p>Bloomfield Ave</p> <p>1/2 8/17 7/14</p> <p>2/2 1/1 0/0</p> <p>2/2 47/51 2/2</p> <p>6/13 0/0 1/2</p>	<p>16</p> <p>I-5 SB Ramp</p> <p>0/0 0/0 0/0</p> <p>0/0 0/0 0/0</p> <p>6/5 5/11</p>	<p>17</p> <p>Adoree St</p> <p>3/2 75/90 3/5</p> <p>34/79 7/9</p> <p>0/0 0/0 6/6</p> <p>0/0 4/8</p>	<p>18</p> <p>Frontage Rd</p> <p>46/62 8/7 0/0</p> <p>7/16 19</p> <p>0/0 0/0 0/0</p>	<p>19</p> <p>Bloomfield Ave</p> <p>0/0 14/31 0/0</p> <p>0/0 0/0 1/2</p> <p>0/0 0/0 0/0</p>	<p>20</p> <p>Bloomfield Ave</p> <p>1/2 8/17 7/14</p> <p>2/2 1/1 0/0</p> <p>2/2 47/51 2/2</p> <p>6/13 0/0 1/2</p>

Cumulative Project Locations & AM/PM Peak Hour Traffic Volumes

6.2 OPENING YEAR 2026 WITHOUT PROJECT PEAK HOUR STUDY INTERSECTION LOS

Traffic volumes for the Opening Year 2026 Without Project scenario were derived by adding cumulative project traffic to existing traffic. In addition, a 0.5% growth rate was applied for a period of 4 years (2022 to 2026) based on population growth, household growth and employment growth within Norwalk provided by the Southern California Association of Governments (SCAG) database. **Exhibit 11** shows the Opening Year 2026 Without Project AM/PM peak hour traffic volumes at the study intersections.

Table 8 summarizes the Opening Year 2026 Without Project AM and PM peak hour levels of service for all study intersections. Detailed analysis sheets are contained in **Appendix C**.

TABLE 8 – OPENING YEAR 2026 WITHOUT PROJECT AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Opening Year 2026 Without Project	
		AM	PM
		Delay ¹ - LOS	Delay ¹ - LOS
1 - Imperial Highway & Pioneer Boulevard	Signal	44.5 - D	46.0 - D
2 - Imperial Highway & I-5 SB Off-Ramp/Frontage	Signal	21.0 - C	19.7 - B
3 - Imperial Highway & I-5 NB On-Ramp/Adoree	Signal	12.5 - B	15.8 - B
4 - Imperial Highway & Norwalk Boulevard	Signal	43.2 - D	56.7 - E
5 - Imperial Highway & Avenida Manuel Salinas	Signal	14.6 - B	18.2 - B
6 - Imperial Highway & Volunteer Avenue	Signal	13.2 - B	15.4 - B
7 - Imperial Highway & Bloomfield Avenue	Signal	57.2 - E	65.3 - E
8 - Imperial Highway & Carmenita Road	Signal	61.0 - E	65.5 - E
9 - Pioneer Boulevard & Firestone Boulevard	Signal	46.3 - D	52.3 - D
10 - Norwalk Boulevard & Civic Center Drive	Signal	17.8 - B	20.0 - B
11 - Bloomfield Avenue & Civic Center Drive	Signal	28.6 - C	18.8 - B
12 - Norwalk Boulevard & I-5 NB Off-Ramp/Adoree St	Signal	61.4 - E	29.5 - C
13 - Norwalk Boulevard & I-5 SB On-Ramp/Frontage Rd	Signal	16.1 - B	29.8 - C
14 - San Antonio Drive & Firestone Boulevard	Signal	59.7 - E	59.3 - E
15 - Bloomfield Avenue & Rosecrans Avenue	Signal	39.9 - D	40.2 - D
16 - I-5 SB Ramps & Rosecrans Avenue	Signal	16.4 - B	16.3 - B
17 - I-5 NB Ramps & Rosecrans Avenue	Signal	21.9 - C	30.8 - C
18 - Carmenita Road & Rosecrans Avenue	Signal	60.0 - E	51.0 - D
19 - Bloomfield Avenue & North Project Driveway	Does Not Exist Without Project		
20 - Bloomfield Avenue & South Project Driveway	Does Not Exist Without Project		

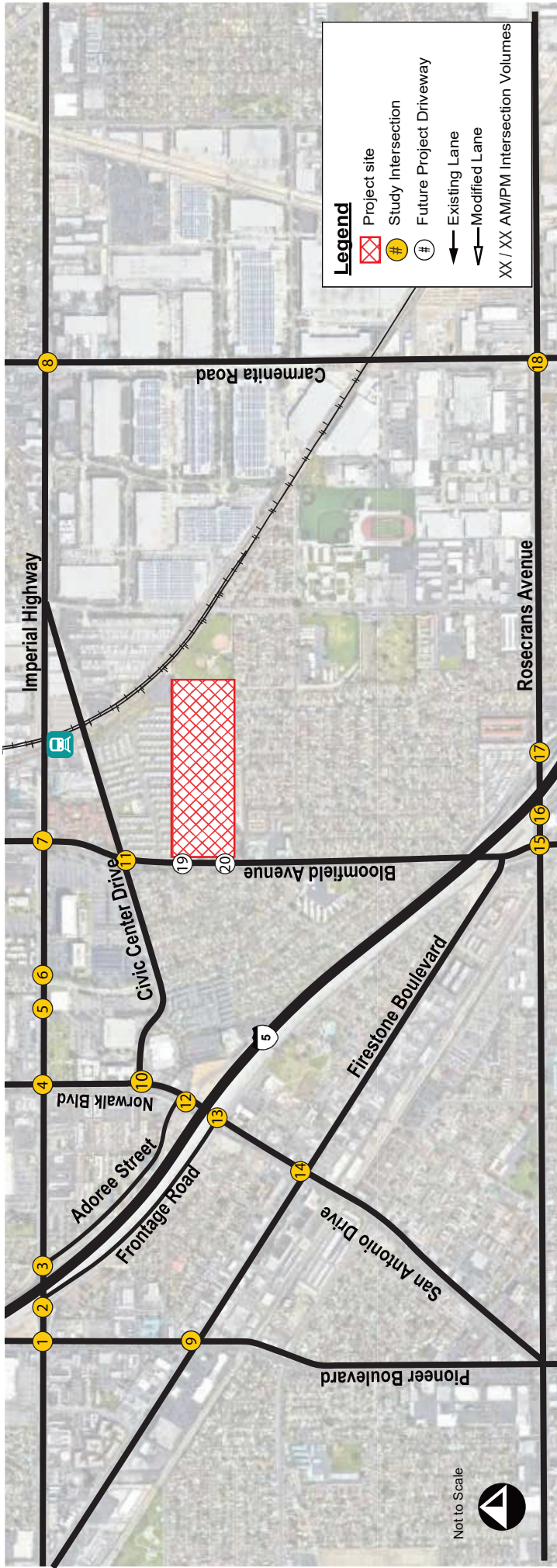
Note: Deficient intersection operation indicated in **bold**.

¹ Average seconds of delay per vehicle.

LOS = level of service.

As shown in **Table 8**, all study intersections are currently operating at an acceptable level of service for Existing conditions with the exception of the following intersections:

- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour

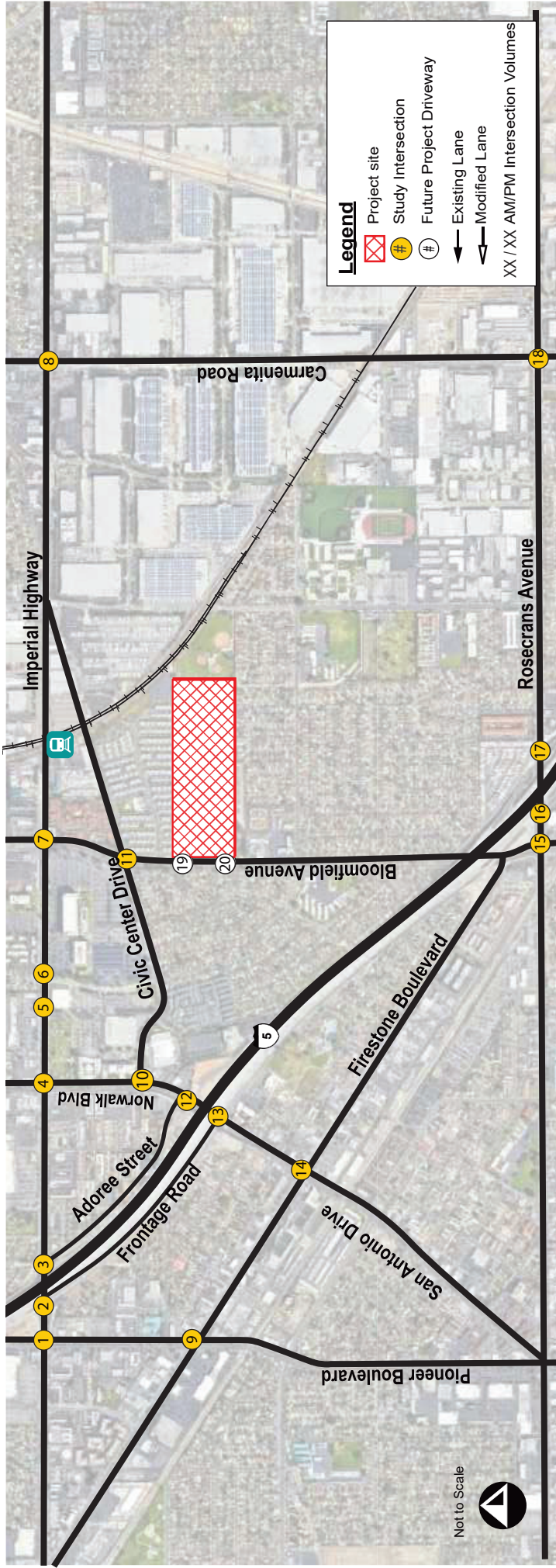


Legend

- Project site
- Study Intersection
- Future Project Driveway
- Existing Lane
- Modified Lane
- XX / XX AM/PM Intersection Volumes

<p>1</p> <p>Volunteer Ave</p> <p>Imperial Hwy</p> <p>542 / 508 23 / 20 1182 / 1244 49 / 14 15 / 27 310 / 446 46 / 38 1200 / 1262 137 / 33</p>	<p>2</p> <p>Pioneer Blvd</p> <p>Imperial Hwy</p> <p>168 / 143 1222 / 1405 237 / 207 187 / 260 419 / 431 23 / 41 109 / 130 1052 / 1138 155 / 196</p>	<p>3</p> <p>1-5 SB Off Ramp</p> <p>Imperial Hwy</p> <p>1126 / 1296</p>	<p>4</p> <p>Adoree St</p> <p>Imperial Hwy</p> <p>112 / 137 78 / 126 1022 / 1155 1 / 0 413 / 671</p>	<p>5</p> <p>Shopping Center Driveway</p> <p>Imperial Hwy</p> <p>1286 / 1289 59 / 63 71 / 50 23 / 13 35 / 38 124 / 82</p>	<p>6</p> <p>Firestone Blvd</p> <p>Imperial Hwy</p> <p>312 / 279 1050 / 1089 86 / 52 792 / 569 348 / 406 110 / 153</p>	<p>7</p> <p>Bloomfield Ave</p> <p>Imperial Hwy</p> <p>126 / 212 126 / 147 553 / 781 90 / 147 209 / 193 879 / 1061 57 / 66</p>	<p>8</p> <p>1-5 NB On Ramp</p> <p>Imperial Hwy</p> <p>100 / 99 1010 / 934 31 / 44 79 / 91 902 / 698 185 / 154</p>	<p>9</p> <p>Pioneer Blvd</p> <p>Imperial Hwy</p> <p>173 / 191 628 / 909 67 / 62 1228 / 1028 68 / 71 157 / 147</p>	<p>10</p> <p>Norwalk Blvd</p> <p>Imperial Hwy</p> <p>525 / 902 92 / 143 1 / 0 49 / 14 46 / 38 69 / 128 405 / 550</p>	<p>11</p> <p>Firestone Blvd</p> <p>Imperial Hwy</p> <p>317 / 364 56 / 36 40 / 65 49 / 76 836 / 750 55 / 41</p>	<p>12</p> <p>Adoree St</p> <p>Imperial Hwy</p> <p>78 / 126 112 / 137 8 / 11 1022 / 1155 1 / 0 413 / 671</p>	<p>13</p> <p>Frontage Rd</p> <p>Imperial Hwy</p> <p>1126 / 1296</p>	<p>14</p> <p>San Antonio Drive</p> <p>Imperial Hwy</p> <p>419 / 431 23 / 41 109 / 130 1052 / 1138 155 / 196</p>	<p>15</p> <p>1-5 NB On Ramp</p> <p>Imperial Hwy</p> <p>100 / 99 1010 / 934 31 / 44 79 / 91 902 / 698 185 / 154</p>	<p>16</p> <p>Adoree St</p> <p>Imperial Hwy</p> <p>78 / 126 112 / 137 8 / 11 1022 / 1155 1 / 0 413 / 671</p>	<p>17</p> <p>1-5 SB Off Ramp</p> <p>Imperial Hwy</p> <p>1126 / 1296</p>	<p>18</p> <p>Firestone Blvd</p> <p>Imperial Hwy</p> <p>317 / 364 56 / 36 40 / 65 49 / 76 836 / 750 55 / 41</p>	<p>19</p> <p>Shopping Center Driveway</p> <p>Imperial Hwy</p> <p>1286 / 1289 59 / 63 71 / 50 23 / 13 35 / 38 124 / 82</p>	<p>20</p> <p>Norwalk Blvd</p> <p>Imperial Hwy</p> <p>525 / 902 92 / 143 1 / 0 49 / 14 46 / 38 69 / 128 405 / 550</p>
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Opening Year 2026 Without Project AM/PM Peak Hour Traffic Volumes



Legend

- Project site
- Study Intersection
- Future Project Driveway
- Existing Lane
- Modified Lane
- XX / XX AM/PM Intersection Volumes

11	12	13	14	15	16	17	18	19	20
<p>Bloomfield Ave</p> <p>157 / 954</p> <p>954 / 825</p> <p>6 / 13</p> <p>Civic Center Dr</p> <p>189 / 211</p> <p>666 / 915</p> <p>5 / 11</p>	<p>Adoree St</p> <p>56 / 113</p> <p>900 / 1358</p> <p>3 / 5</p> <p>82 / 97</p> <p>101 / 70</p>	<p>Frontage Rd</p> <p>873 / 1196</p> <p>243 / 410</p> <p>51 / 46</p> <p>228 / 215</p> <p>90 / 124</p>	<p>San Antonio Dr</p> <p>173 / 191</p> <p>632 / 916</p> <p>73 / 73</p> <p>213 / 216</p> <p>344 / 359</p> <p>43 / 55</p>	<p>Bloomfield Ave</p> <p>108 / 99</p> <p>579 / 565</p> <p>284 / 320</p> <p>70 / 77</p> <p>640 / 556</p> <p>73 / 50</p>	<p>Rosecrans Ave</p> <p>39 / 59</p> <p>617 / 654</p> <p>251 / 321</p> <p>348 / 262</p> <p>678 / 701</p> <p>245 / 199</p>	<p>Adoree St</p> <p>56 / 113</p> <p>900 / 1358</p> <p>3 / 5</p> <p>82 / 97</p> <p>101 / 70</p>	<p>Frontage Rd</p> <p>873 / 1196</p> <p>243 / 410</p> <p>51 / 46</p> <p>228 / 215</p> <p>90 / 124</p>	<p>San Antonio Dr</p> <p>173 / 191</p> <p>632 / 916</p> <p>73 / 73</p> <p>213 / 216</p> <p>344 / 359</p> <p>43 / 55</p>	<p>Bloomfield Ave</p> <p>108 / 99</p> <p>579 / 565</p> <p>284 / 320</p> <p>70 / 77</p> <p>640 / 556</p> <p>73 / 50</p>
<p>I-5 SB Ramp</p> <p>203 / 201</p> <p>387 / 345</p> <p>1 / 0</p> <p>831 / 887</p> <p>378 / 356</p>	<p>I-5 NB On Ramp</p> <p>212 / 249</p> <p>1068 / 1010</p>	<p>I-5 NB Off Ramp</p> <p>503 / 612</p> <p>893 / 802</p>	<p>Rosecrans Ave</p> <p>235 / 203</p> <p>1 / 1</p> <p>38 / 48</p>	<p>San Antonio Dr</p> <p>77 / 113</p> <p>855 / 982</p> <p>122 / 141</p>	<p>Bloomfield Ave</p> <p>0 / 0</p> <p>0 / 0</p>	<p>San Antonio Dr</p> <p>0 / 0</p> <p>0 / 0</p>	<p>Bloomfield Ave</p> <p>0 / 0</p> <p>0 / 0</p>	<p>Bloomfield Ave</p> <p>0 / 0</p> <p>0 / 0</p>	<p>New Project Driveway</p> <p>0 / 0</p>

- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

It may be noted that Intersection 19 and Intersection 20 do not exist without the project and were not analyzed under Opening Year 2026 Without Project conditions.

6.3 OPENING YEAR 2026 WITHOUT PROJECT ROADWAY SEGMENT ANALYSIS

A roadway segment analysis was conducted along two segments of Bloomfield Avenue and three segments of Imperial Highway near the Project site. Daily traffic volumes from the cumulative projects were based on the same distribution assumptions used to calculate the AM and PM peak hour cumulative project traffic volumes. Existing daily traffic volumes were added to the cumulative projects only daily traffic volumes to derive the Opening Year 2026 Without Project daily traffic volumes.

Table 9 provides the roadway segment LOS analysis based on the LOS D capacities outlined in the City’s General Plan. As shown, all of the study segments are currently under the LOS D roadway capacities.

TABLE 9 – OPENING YEAR 2026 WITHOUT PROJECT ROADWAY SEGMENT LOS

Segment	Location	Classification (No. Lanes)	LOS D Capacity	Opening Year 2026 Without Project		
				ADT	V/C	LOS
Bloomfield Avenue	Civic Center Drive to Foster Road	Secondary Highway (4 lanes divided)	30,000	25,044	0.83	D
	Foster Road to Markdale Avenue	Secondary Highway (4 lanes divided)	30,000	22,229	0.74	D
Imperial Highway	Pioneer Boulevard to Norwalk Boulevard	Major Highway (6 lanes divided)	50,600	42,968	0.85	D
	Norwalk Boulevard to Bloomfield Avenue	Major Highway (6 lanes divided)	50,600	39,133	0.77	D
	Bloomfield Avenue to Shoemaker Avenue	Major Highway (6 lanes divided)	50,600	40,944	0.81	D

Note: Deficient roadway segment operations shown in **bold**.

ADT= Average Daily Traffic

LOS= Level of Service

V/C= Volume to Capacity Ratio

7 OPENING YEAR 2026 PLUS PROJECT CONDITIONS

7.1 OPENING YEAR 2026 PLUS PROJECT INTERSECTION ANALYSIS

Traffic volumes for the Opening Year 2026 Plus Project scenario were derived by adding Project traffic to Opening Year 2026 Without Project traffic. **Exhibit 12** shows the Opening Year 2026 Plus Project AM/PM peak hour traffic volumes at the study intersections.

Table 10 compares the Opening Year 2026 Without Project LOS to the Opening Year 2026 Plus Project AM and PM peak hour LOS for all study intersections. Detailed analysis sheets are contained in **Appendix D**.

TABLE 10 – OPENING YEAR 2026 WITHOUT & PLUS PROJECT AM/PM PEAK HOUR INT LOS

Study Intersection	Opening Year 2026 Without Project Conditions		Opening Year 2026 Plus Project Conditions		Change in Delay (sec.)		Improv. Required?	
	AM	PM	AM	PM	AM	PM	AM	PM
	Delay ¹ - LOS	Delay ¹ - LOS	Delay ¹ - LOS	Delay ¹ - LOS				
1 - Imperial Highway & Pioneer Blvd.	44.5 - D	46.0 - D	47.0 - D	46.7 - D	2.5	0.7	No	No
2 - Imperial Highway & I-5 SB Off-Ramp/Frontage Rd.	21.0 - C	19.7 - B	21.8 - C	21.3 - C	0.8	1.6	No	No
3 - Imperial Highway & I-5 NB On-Ramp/Adoree St.	12.5 - B	15.8 - B	13.4 - B	24.8 - C	0.9	9.0	No	No
4 - Imperial Highway & Norwalk Blvd.	43.2 - D	56.7 - E	46.4 - D	58.7 - E	3.2	2.0	No	No
5 - Imperial Highway & Avenida Manuel Salinas	14.6 - B	18.2 - B	14.7 - B	19.1 - B	0.1	0.9	No	No
6 - Imperial Highway & Volunteer Avenue	13.2 - B	15.4 - B	22.0 - C	24.6 - C	8.3	8.6	No	No
7 - Imperial Highway & Bloomfield Ave.	57.2 - E	65.3 - E	63.4 - E	86.4 - F	6.2	21.1	YES	YES
8 - Imperial Highway & Carmenita Rd.	61.0 - E	65.5 - E	61.4 - E	65.5 - E	0.4	0.0	No	No
9 - Pioneer Blvd. & Firestone Blvd.	46.3 - D	52.3 - D	47.1 - D	52.7 - D	0.8	0.4	No	No
10 - Norwalk Blvd. & Civic Center Dr.	17.8 - B	20.0 - B	18.2 - B	20.5 - C	0.4	0.5	No	No
11 - Bloomfield Ave. & Civic Center Dr.	28.6 - C	18.8 - B	38.9 - D	22.1 - C	10.3	3.3	No	No
12 - Norwalk Blvd. & I-5 NB Off-Ramp/Adoree St.	61.4 - E	29.5 - C	62.5 - E	30.7 - C	1.1	1.2	No	No
13 - Norwalk Blvd. & I-5 SB On-Ramp/Frontage Rd.	16.1 - B	29.8 - C	16.1 - B	29.5 - C	0.0	0.3	No	No
14 - San Antonio Dr. & Firestone Blvd.	59.7 - E	59.3 - E	60.0 - E	59.6 - E	0.3	0.3	No	No
15 - Bloomfield Ave. & Rosecrans Ave.	39.9 - D	40.2 - D	41.1 - D	43.8 - D	1.2	3.6	No	No
16 - I-5 SB Ramps & Rosecrans Ave.	16.4 - B	16.3 - B	16.6 - B	16.3 - B	0.2	0.0	No	No
17 - I-5 NB Ramps & Rosecrans Ave.	21.9 - C	30.8 - C	22.9 - C	32.2 - C	1.0	1.4	No	No
18 - Carmenita Rd. & Rosecrans Ave.	60.0 - E	51.0 - D	60.6 - E	51.0 - D	0.6	0.0	No	No
19 - Bloomfield Ave. & North Project Driveway ³	Does Not Exist Without Project		10.0 - A	9.9 - A	N/A	N/A	No	No
20 - Bloomfield Ave. & South Project Driveway ³	Does Not Exist Without Project		20.0 - C	16.5 - C	N/A	N/A	No	No

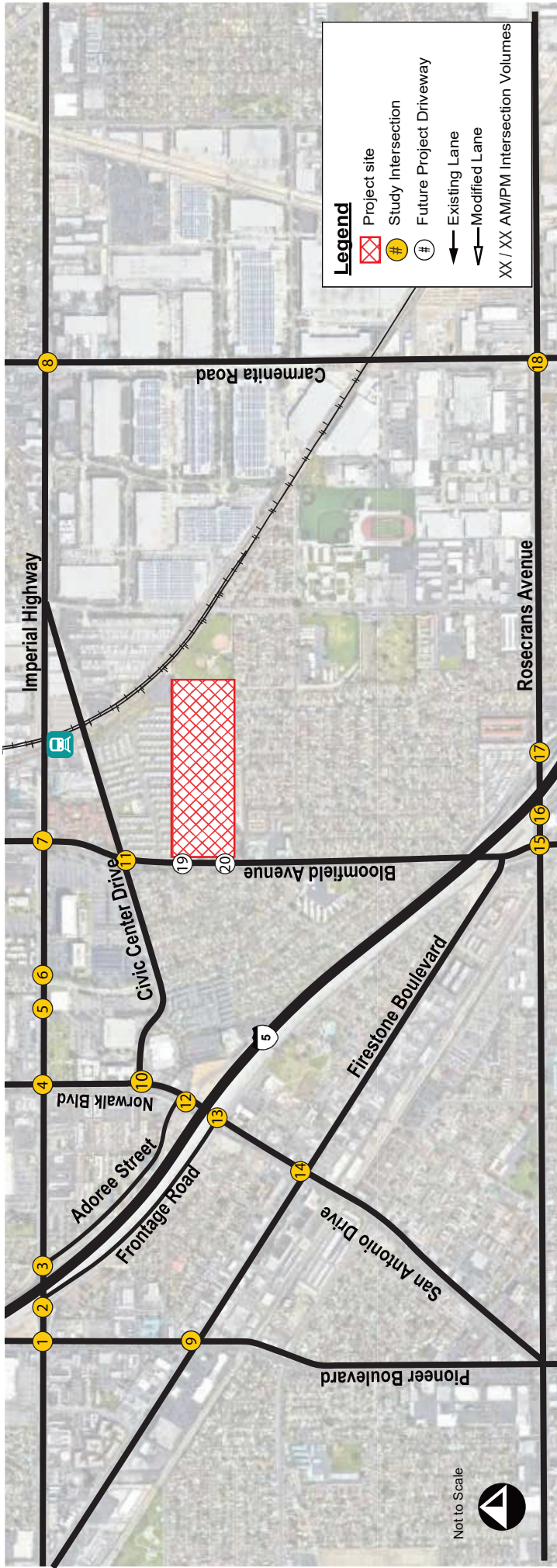
Note: Deficient intersection operation indicated in **bold**.

¹ Seconds of delay per vehicle.

LOS = level of service.

² This location is shown to operation at deficient LOS without and with the project.

³ North Project Driveway is assumed to be signalized when the project is built. South Project Driveway is assumed to be one-way stop controlled intersection.



Legend

- Project site
- Study Intersection
- Future Project Driveway
- Existing Lane
- Modified Lane
- XX / XX AM/PM Intersection Volumes



<p>1</p> <p>542 / 508 310 / 446 145 / 154</p> <p>294 / 94 1210 / 1287 72 / 290</p> <p>23 / 41 419 / 431 201 / 281</p> <p>Imperial Hwy</p>	<p>2</p> <p>168 / 143 109 / 171 499 / 364</p> <p>1264 / 1469 237 / 207</p> <p>158 / 126 1649 / 1545 115 / 156</p> <p>1-5 SB Off Ramp</p>	<p>3</p> <p>1181 / 1345</p> <p>Imperial Hwy</p>	<p>4</p> <p>123 / 216 421 / 802 130 / 159</p> <p>157 / 147 1312 / 1156 68 / 71</p> <p>115 / 208 597 / 564 126 / 134</p> <p>Imperial Hwy</p>	<p>5</p> <p>35 / 38 23 / 13 71 / 50</p> <p>59 / 63 1415 / 1403 124 / 82</p> <p>59 / 157 12 / 7 76 / 81</p> <p>Imperial Hwy</p>	<p>6</p> <p>23 / 20 49 / 14 46 / 38</p> <p>15 / 27 1329 / 1376 137 / 33</p> <p>41 / 64 1351 / 1522 53 / 47</p> <p>Imperial Hwy</p>	<p>7</p> <p>126 / 212 567 / 802 90 / 147</p> <p>209 / 193 879 / 1061 155 / 216</p> <p>86 / 52 1050 / 1089 340 / 322</p> <p>Imperial Hwy</p>	<p>8</p> <p>31 / 44 1010 / 934 100 / 99</p> <p>73 / 122 703 / 829 119 / 106</p> <p>79 / 91 902 / 698 185 / 154</p> <p>Imperial Hwy</p>	<p>9</p> <p>173 / 191 646 / 925 67 / 62</p> <p>213 / 216 345 / 361 44 / 55</p> <p>40 / 65 317 / 364 56 / 36</p> <p>Firestone Blvd</p>	<p>10</p> <p>1 / 0 525 / 902 92 / 143</p> <p>69 / 128 442 / 583</p> <p>3 / 2</p>
<p>11</p> <p>542 / 508 310 / 446 145 / 154</p> <p>294 / 94 1210 / 1287 72 / 290</p> <p>23 / 41 419 / 431 201 / 281</p> <p>Imperial Hwy</p>	<p>12</p> <p>168 / 143 109 / 171 499 / 364</p> <p>1264 / 1469 237 / 207</p> <p>158 / 126 1649 / 1545 115 / 156</p> <p>1-5 SB Off Ramp</p>	<p>13</p> <p>1181 / 1345</p> <p>Imperial Hwy</p>	<p>14</p> <p>123 / 216 421 / 802 130 / 159</p> <p>157 / 147 1312 / 1156 68 / 71</p> <p>115 / 208 597 / 564 126 / 134</p> <p>Imperial Hwy</p>	<p>15</p> <p>35 / 38 23 / 13 71 / 50</p> <p>59 / 63 1415 / 1403 124 / 82</p> <p>59 / 157 12 / 7 76 / 81</p> <p>Imperial Hwy</p>	<p>16</p> <p>23 / 20 49 / 14 46 / 38</p> <p>15 / 27 1329 / 1376 137 / 33</p> <p>41 / 64 1351 / 1522 53 / 47</p> <p>Imperial Hwy</p>	<p>17</p> <p>126 / 212 567 / 802 90 / 147</p> <p>209 / 193 879 / 1061 155 / 216</p> <p>86 / 52 1050 / 1089 340 / 322</p> <p>Imperial Hwy</p>	<p>18</p> <p>31 / 44 1010 / 934 100 / 99</p> <p>73 / 122 703 / 829 119 / 106</p> <p>79 / 91 902 / 698 185 / 154</p> <p>Imperial Hwy</p>	<p>19</p> <p>173 / 191 646 / 925 67 / 62</p> <p>213 / 216 345 / 361 44 / 55</p> <p>40 / 65 317 / 364 56 / 36</p> <p>Firestone Blvd</p>	<p>20</p> <p>1 / 0 525 / 902 92 / 143</p> <p>69 / 128 442 / 583</p> <p>3 / 2</p>

Opening Year 2026 With Project AM/PM Peak Hour Traffic Volumes

As shown in Table 10, the change in delay at the intersection of Imperial Highway and Bloomfield Avenue is 6.2 seconds and 21.1 seconds which exceeds the threshold of 4.0 seconds for intersections operating at LOS E without and with Project traffic. Therefore, improvements are needed to improve the operations to LOS D or better.

Recommended mitigation at the signalized intersection of Imperial Highway and Bloomfield Avenue would be to provide right-turn overlap phasing at the northbound, southbound and eastbound approaches. In addition, revise the signal phasing so that the eastbound left and northbound left turn phases are lagging. These improvements would reduce the overall delay at the intersection to 49.0 seconds LOS D during the AM peak hour and 51.4 seconds LOS D during the PM peak hour with the addition of Project traffic.

7.2 OPENING YEAR 2026 PLUS PROJECT ROADWAY SEGMENT ANALYSIS

Table 11 provides the roadway segment LOS analysis based on the LOS D capacities outlined in the City's General Plan. As shown, all of the study segments are currently under the LOS D roadway capacities.

TABLE 11– OPENING YEAR 2026 PLUS PROJECT ROADWAY SEGMENT LOS

Segment	Location	Classification (No. Lanes)	LOS D Capacity	Opening Year 2026 Plus Project		
				ADT	V/C	LOS
Bloomfield Avenue	Civic Center Drive to Foster Road	Secondary Highway (4 lanes divided)	30,000	29,464	0.98	D
	Foster Road to Markdale Avenue	Secondary Highway (4 lanes divided)	30,000	25,175	0.84	D
Imperial Highway	Pioneer Boulevard to Norwalk Boulevard	Major Highway (6 lanes divided)	50,600	45,178	0.89	D
	Norwalk Boulevard to Bloomfield Avenue	Major Highway (6 lanes divided)	50,600	41,711	0.82	D
	Bloomfield Avenue to Shoemaker Avenue	Major Highway (6 lanes divided)	50,600	41,681	0.82	D

Note: Deficient roadway segment operations shown in **bold**.

ADT= Average Daily Traffic

LOS= Level of Service

V/C= Volume to Capacity Ratio

8 FUTURE YEAR 2045 WITHOUT PROJECT CONDITIONS

Traffic volumes for the Future Year 2045 Without Project scenario were derived by applying the 0.5%/year growth rate to the Opening Year 2026 Without Project traffic volumes. This growth rate was applied for a period of 19 years (2026 to 2045) for a total growth of 9.5%. **Exhibit 13** shows the Future Year 2045 Without Project AM/PM peak hour traffic volumes at the study intersections.

8.1 FUTURE YEAR 2045 WITHOUT PROJECT INTERSECTION ANALYSIS

Table 12 summarizes the Future Year 2045 Without Project AM and PM peak hour levels of service for all study intersections. Detailed analysis sheets are contained in **Appendix E**.

TABLE 12 – FUTURE YEAR 2045 WITHOUT PROJECT AM/PM PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Future Year 2045 Without Project	
		AM	PM
		Delay ¹ - LOS	Delay ¹ - LOS
1 - Imperial Highway & Pioneer Boulevard	Signal	53.3 - D	58.1 - E
2 - Imperial Highway & I-5 SB Off-Ramp/Frontage	Signal	21.7 - C	20.5 - C
3 - Imperial Highway & I-5 NB On-Ramp/Adoree	Signal	13.3 - B	16.7 - B
4 - Imperial Highway & Norwalk Boulevard	Signal	51.8 - D	64.1 - E
5 - Imperial Highway & Avenida Manuel Salinas	Signal	15.3 - B	21.3 - C
6 - Imperial Highway & Volunteer Avenue	Signal	19.9 - B	13.9 - B
7 - Imperial Highway & Bloomfield Avenue	Signal	59.1 - E	83.2 - F
8 - Imperial Highway & Carmenita Road	Signal	62.5 - E	68.9 - E
9 - Pioneer Boulevard & Firestone Boulevard	Signal	52.8 - D	61.5 - E
10 - Norwalk Boulevard & Civic Center Drive	Signal	19.6 - B	22.0 - C
11 - Bloomfield Avenue & Civic Center Drive	Signal	34.2 - C	20.8 - C
12 - Norwalk Boulevard & I-5 NB Off-Ramp/Adoree St	Signal	64.1 - E	44.1 - D
13 - Norwalk Boulevard & I-5 SB On-Ramp/Frontage Rd	Signal	16.7 - B	36.7 - D
14 - San Antonio Drive & Firestone Boulevard	Signal	70.3 - E	69.3 - E
15 - Bloomfield Avenue & Rosecrans Avenue	Signal	42.3 - D	43.9 - D
16 - I-5 SB Ramps & Rosecrans Avenue	Signal	17.5 - B	17.5 - B
17 - I-5 NB Ramps & Rosecrans Avenue	Signal	25.8 - C	36.7 - D
18 - Carmenita Road & Rosecrans Avenue	Signal	61.2 - E	57.0 - E
19 - Bloomfield Avenue & North Project Driveway	Does Not Exist Without Project		
20 - Bloomfield Avenue & South Project Driveway	Does Not Exist Without Project		

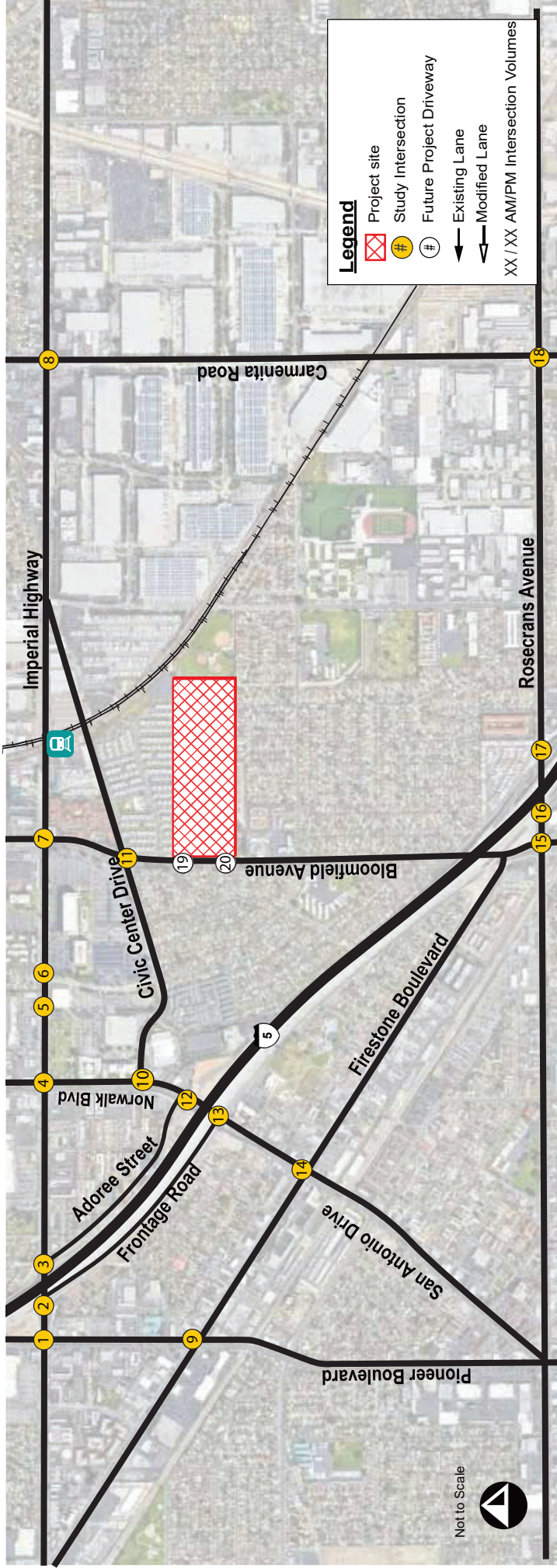
Note: Deficient intersection operation indicated in **bold**.

¹ Average seconds of delay per vehicle.

LOS = level of service.

As shown in **Table 12**, all study intersections are currently operating at an acceptable level of service for Existing conditions with the exception of the following intersections:

- Imperial Highway & Pioneer Boulevard (Int. 1) LOS E in PM Peak Hour
- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and LOS F in PM Peak Hour



<p>11</p> <p>Bloomfield Ave</p> <p>335 / 321</p> <p>11 / 16</p> <p>100 / 151</p> <p>208 / 232</p> <p>732 / 1006</p> <p>5 / 12</p> <p>8 / 5</p> <p>21 / 10</p> <p>37 / 9</p> <p>Civic Center Dr</p> <p>1049 / 907</p> <p>7 / 14</p> <p>173 / 102</p> <p>1185 / 1046</p> <p>80 / 70</p> <p>Rosecrans Ave</p> <p>I-5 SB Ramp</p> <p>223 / 221</p> <p>1 / 0</p> <p>425 / 379</p> <p>914 / 975</p> <p>416 / 391</p>	<p>12</p> <p>Adoree St</p> <p>90 / 107</p> <p>111 / 77</p> <p>62 / 124</p> <p>989 / 1493</p> <p>3 / 5</p> <p>I-5 NB On Ramp</p> <p>233 / 274</p> <p>1174 / 1110</p> <p>258 / 223</p> <p>1 / 1</p> <p>42 / 53</p> <p>Rosecrans Ave</p> <p>553 / 673</p> <p>982 / 882</p> <p>107 / 122</p> <p>942 / 917</p> <p>632 / 363</p> <p>95 / 114</p> <p>143 / 146</p> <p>I-5 NB Off Ramp</p> <p>960 / 1315</p> <p>267 / 451</p> <p>456 / 537</p> <p>1094 / 1141</p> <p>42 / 54</p> <p>343 / 370</p> <p>693 / 681</p> <p>71 / 59</p>	<p>13</p> <p>Frontage Rd</p> <p>56 / 51</p> <p>251 / 236</p> <p>99 / 136</p> <p>960 / 1315</p> <p>267 / 451</p> <p>456 / 537</p> <p>1094 / 1141</p> <p>42 / 54</p> <p>343 / 370</p> <p>693 / 681</p> <p>71 / 59</p> <p>San Antonio Dr</p> <p>964 / 929</p> <p>245 / 172</p> <p>52 / 52</p> <p>742 / 682</p> <p>86 / 102</p> <p>Rosecrans Ave</p> <p>85 / 124</p> <p>940 / 1080</p> <p>134 / 155</p>	<p>14</p> <p>San Antonio Dr</p> <p>80 / 80</p> <p>695 / 1007</p> <p>190 / 210</p> <p>234 / 237</p> <p>378 / 395</p> <p>47 / 60</p> <p>863 / 1158</p> <p>0 / 0</p> <p>863 / 1517</p> <p>0 / 0</p> <p>Bloomfield Ave</p> <p>1219 / 1017</p> <p>0 / 0</p> <p>New Project Driveway</p>	<p>15</p> <p>Bloomfield Ave</p> <p>119 / 109</p> <p>637 / 621</p> <p>312 / 352</p> <p>77 / 85</p> <p>704 / 611</p> <p>80 / 55</p> <p>678 / 719</p> <p>43 / 65</p> <p>276 / 353</p> <p>383 / 288</p> <p>745 / 771</p> <p>269 / 219</p> <p>Rosecrans Ave</p> <p>1219 / 1017</p> <p>0 / 0</p> <p>New Project Driveway</p>
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Future Year 2045 Without Project AM/PM Peak Hour Traffic Volumes

- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Pioneer Boulevard & Firestone Boulevard (Int. 9) LOS E in PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

It may be noted that Intersection 19 and Intersection 20 do not exist without the project and were not analyzed under Future Year 2045 Without Project conditions.

8.2 FUTURE YEAR 2045 WITHOUT PROJECT ROADWAY SEGMENT ANALYSIS

A roadway segment analysis was conducted along two segments of Bloomfield Avenue and three segments of Imperial Highway near the Project site. **Table 13** provides the roadway segment LOS analysis based on the LOS D capacities outlined in the City’s General Plan. As shown, all of the study segments are currently under the LOS D roadway capacities.

TABLE 13 – FUTURE YEAR 2045 WITHOUT PROJECT ROADWAY SEGMENT LOS

Segment	Location	Classification (No. Lanes)	LOS D Capacity	Future Year 2045 Without Project		
				ADT	V/C	LOS
Bloomfield Avenue	Civic Center Drive to Foster Road	Secondary Highway (4 lanes divided)	30,000	25,380	0.85	D
	Foster Road to Markdale Avenue	Secondary Highway (4 lanes divided)	30,000	24,341	0.81	D
Imperial Highway	Pioneer Boulevard to Norwalk Boulevard	Major Highway (6 lanes divided)	50,600	47,050	0.93	D
	Norwalk Boulevard to Bloomfield Avenue	Major Highway (6 lanes divided)	50,600	42,851	0.85	D
	Bloomfield Avenue to Shoemaker Avenue	Major Highway (6 lanes divided)	50,600	44,834	0.89	D

Note: Deficient roadway segment operations shown in **bold**.

ADT= Average Daily Traffic

LOS= Level of Service

V/C= Volume to Capacity Ratio

9 FUTURE YEAR 2045 PLUS PROJECT CONDITIONS

Traffic volumes for the Future Year 2045 Plus Project scenario were derived by adding Project traffic volumes to Future Year 2045 Without Project traffic volumes. **Exhibit 14** shows the Future Year 2045 Plus Project AM/PM peak hour traffic volumes at the study intersections.

9.1 FUTURE YEAR 2045 PLUS PROJECT INTERSECTION ANALYSIS

Table 14 compares the Future Year 2045 Without Project LOS to the Future Year 2045 Plus Project AM and PM peak hour LOS for all study intersections. Detailed analysis sheets are contained in **Appendix F**.

TABLE 14 – FUTURE YEAR 2045 WITHOUT & PLUS PROJECT AM/PM PEAK HOUR INT LOS

Study Intersection	Future Year 2045 Without Project Conditions		Future Year 2045 Plus Project Conditions		Change in Delay (sec.)		Improv. Required?	
	AM	PM	AM	PM	AM	PM	AM	PM
	Delay ¹ - LOS	Delay ¹ - LOS	Delay ¹ - LOS	Delay ¹ - LOS				
1 - Imperial Highway & Pioneer Blvd.	53.3 - D	58.1 - E	54.4 - D	59.9 - E	1.1	1.8	No	No
2 - Imperial Highway & I-5 SB Off-Ramp/Frontage Rd.	21.7 - C	20.5 - C	22.5 - C	22.0 - C	0.8	1.5	No	No
3 - Imperial Highway & I-5 NB On-Ramp/Adoree St.	13.3 - B	16.7 - B	14.5 - B	16.7 - B	1.2	0.0	No	No
4 - Imperial Highway & Norwalk Blvd.	51.8 - D	64.1 - E	53.0 - D	65.9 - E	1.2	1.8	No	No
5 - Imperial Highway & Avenida Manuel Salinas	15.3 - B	21.3 - C	15.7 - B	22.2 - C	0.4	0.9	No	No
6 - Imperial Highway & Volunteer Avenue	19.9 - B	13.9 - B	19.6 - B	17.0 - B	0.3	3.1	No	No
7 - Imperial Highway & Bloomfield Ave.	59.1 - E	83.2 - F	70.9 - E	108.5 - F	11.8	25.3	YES	YES
8 - Imperial Highway & Carmenita Rd.	62.5 - E	68.9 - E	64.0 - E	68.9 - E	1.5	0.0	No	No
9 - Pioneer Blvd. & Firestone Blvd.	52.8 - D	61.5 - E	52.8 - D	62.3 - E	0.0	0.8	No	No
10 - Norwalk Blvd. & Civic Center Dr.	19.6 - B	22.0 - C	20.3 - C	22.5 - C	0.7	0.5	No	No
11 - Bloomfield Ave. & Civic Center Dr.	34.2 - C	20.8 - C	45.9 - D	30.5 - C	11.7	9.7	No	No
12 - Norwalk Blvd. & I-5 NB Off-Ramp/Adoree St.	64.1 - E	44.1 - D	65.3 - E	44.6 - D	1.2	0.5	No	No
13 - Norwalk Blvd. & I-5 SB On-Ramp/Frontage Rd.	16.7 - B	36.7 - D	16.7 - B	40.1 - D	0.0	3.4	No	No
14 - San Antonio Dr. & Firestone Blvd.	70.3 - E	69.3 - E	71.3 - E	70.1 - E	1.0	0.8	No	No
15 - Bloomfield Ave. & Rosecrans Ave.	42.3 - D	43.9 - D	51.9 - D	49.3 - D	9.6	5.4	No	No
16 - I-5 SB Ramps & Rosecrans Ave.	17.5 - B	17.5 - B	17.5 - B	17.5 - B	0.0	0.0	No	No
17 - I-5 NB Ramps & Rosecrans Ave.	25.8 - C	36.7 - D	26.7 - C	38.1 - D	0.9	1.4	No	No
18 - Carmenita Rd. & Rosecrans Ave.	61.2 - E	57.0 - E	62.6 - E	57.0 - E	1.4	0.0	No	No
19 - Bloomfield Ave. & North Project Driveway ³	Does Not Exist Without Project		10.3 - B	23.4 - C	N/A	N/A	No	No
20 - Bloomfield Ave. & South Project Driveway ³	Does Not Exist Without Project		22.5 - C	17.9 - C	N/A	N/A	No	No

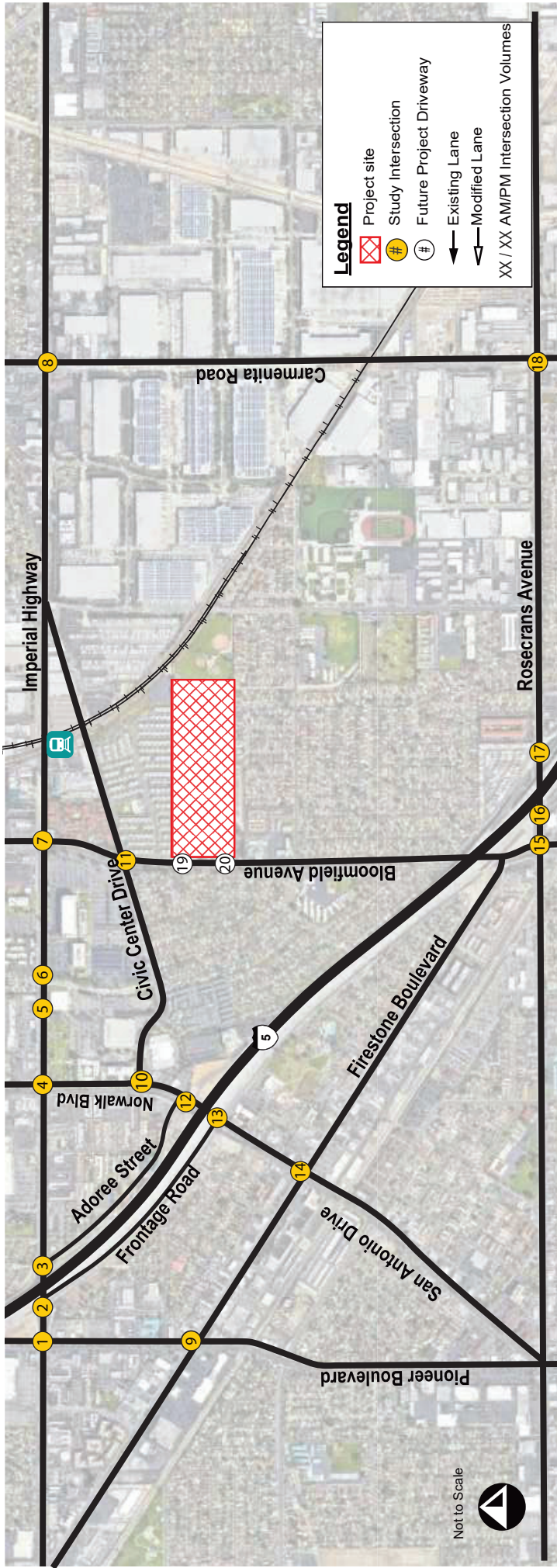
Note: Deficient intersection operation indicated in **bold**.

¹ Seconds of delay per vehicle.

LOS = level of service.

² This location is shown to operation at deficient LOS without and with the project.

³ North Project Driveway is assumed to be signalized when the project is built. South Project Driveway is a one-way stop controlled intersection.



Legend

- Project site
- Study Intersection
- Future Project Driveway
- Existing Lane
- Modified Lane
- XX / XX AM/PM Intersection Volumes

<p>1</p> <p>Volunteer Ave</p> <p>596 / 558</p> <p>341 / 490</p> <p>159 / 169</p> <p>323 / 103</p> <p>1327 / 1411</p> <p>79 / 319</p> <p>Imperial Hwy</p> <p>461 / 474</p> <p>220 / 307</p> <p>25 / 45</p> <p>188 / 231</p> <p>1194 / 1284</p> <p>120 / 143</p>	<p>2</p> <p>Frontage Rd</p> <p>185 / 157</p> <p>1385 / 1609</p> <p>261 / 228</p> <p>158 / 169</p> <p>118 / 86</p> <p>544 / 394</p> <p>1-5 SB Off Ramp</p> <p>Imperial Hwy</p> <p>1293 / 1474</p>	<p>3</p> <p>Adoree St</p> <p>1807 / 1694</p> <p>121 / 167</p> <p>64 / 139</p> <p>86 / 139</p> <p>141 / 167</p> <p>9 / 12</p> <p>Imperial Hwy</p> <p>454 / 738</p> <p>1208 / 1398</p> <p>1 / 0</p>	<p>4</p> <p>Shopping Center Driveway</p> <p>38 / 42</p> <p>25 / 15</p> <p>78 / 55</p> <p>65 / 69</p> <p>1543 / 1531</p> <p>136 / 90</p> <p>Imperial Hwy</p> <p>139 / 147</p> <p>656 / 620</p> <p>126 / 229</p> <p>131 / 161</p> <p>1380 / 1655</p> <p>60 / 92</p>	<p>5</p> <p>Manuel Salinas</p> <p>65 / 173</p> <p>13 / 8</p> <p>26 / 56</p> <p>84 / 89</p> <p>1434 / 1741</p> <p>35 / 48</p> <p>Imperial Hwy</p>
<p>6</p> <p>Volunteer Ave</p> <p>25 / 22</p> <p>54 / 15</p> <p>51 / 42</p> <p>16 / 30</p> <p>1448 / 1501</p> <p>151 / 36</p> <p>Imperial Hwy</p> <p>45 / 103</p> <p>1476 / 1658</p> <p>58 / 52</p> <p>20 / 63</p> <p>18 / 53</p> <p>35 / 126</p>	<p>7</p> <p>Bloomfield Ave</p> <p>139 / 233</p> <p>230 / 212</p> <p>966 / 1166</p> <p>161 / 223</p> <p>99 / 162</p> <p>622 / 880</p> <p>250 / 282</p> <p>889 / 642</p> <p>420 / 479</p> <p>Imperial Hwy</p> <p>95 / 57</p> <p>1154 / 1197</p> <p>371 / 350</p>	<p>8</p> <p>Carmentia Rd.</p> <p>110 / 109</p> <p>110 / 1027</p> <p>34 / 48</p> <p>80 / 134</p> <p>773 / 911</p> <p>131 / 117</p> <p>Imperial Hwy</p> <p>762 / 1127</p> <p>111 / 147</p> <p>136 / 146</p>	<p>9</p> <p>Pioneer Blvd</p> <p>190 / 210</p> <p>708 / 1015</p> <p>74 / 68</p> <p>234 / 237</p> <p>379 / 397</p> <p>48 / 60</p> <p>Imperial Hwy</p> <p>44 / 71</p> <p>349 / 400</p> <p>62 / 40</p>	<p>10</p> <p>Norwalk Blvd</p> <p>1 / 0</p> <p>577 / 992</p> <p>101 / 157</p> <p>899 / 819</p> <p>716 / 512</p> <p>Civic Center Dr</p>

Future Year 2045 With Project AM/PM Peak Hour Traffic Volumes

As shown in Table 14, the change in delay at the intersection of Imperial Highway and Bloomfield Avenue is 11.8 seconds and 25.3 seconds which exceeds the threshold of 4.0 seconds for intersections operating at LOS E without and with Project traffic during the AM and PM peak hours, respectively. Therefore, improvements are needed to improve the operations to LOS D or better.

Recommended mitigation at the signalized intersection of Imperial Highway and Bloomfield Avenue would be to provide right-turn overlap phasing at the northbound, southbound and eastbound approaches. In addition, revise the signal phasing so that the eastbound left and northbound left turn phases are lagging. These improvements would reduce the overall delay at the intersection to 49.7 seconds LOS D during the AM peak hour and 54.6 seconds LOS D during the PM peak hour with the addition of Project traffic.

9.2 FUTURE YEAR 2045 PLUS PROJECT ROADWAY SEGMENT ANALYSIS

Table 15 provides the roadway segment LOS analysis based on the LOS D capacities outlined in the City's General Plan. As shown, all of the study segments are currently under the LOS D roadway capacities.

TABLE 15– FUTURE YEAR 2045 PLUS PROJECT ROADWAY SEGMENT LOS

Segment	Location	Classification (No. Lanes)	LOS D Capacity	Future Year 2045 Plus Project		
				ADT	V/C	LOS
Bloomfield Avenue	Civic Center Drive to Foster Road	Secondary Highway (4 lanes divided)	30,000	29,800	0.99	D
	Foster Road to Markdale Avenue	Secondary Highway (4 lanes divided)	30,000	27,287	0.91	D
Imperial Highway	Pioneer Boulevard to Norwalk Boulevard	Major Highway (6 lanes divided)	50,600	49,260	0.97	D
	Norwalk Boulevard to Bloomfield Avenue	Major Highway (6 lanes divided)	50,600	45,429	0.90	D
	Bloomfield Avenue to Shoemaker Avenue	Major Highway (6 lanes divided)	50,600	45,571	0.90	D

Note: Deficient roadway segment operations shown in **bold**.

ADT= Average Daily Traffic

LOS= Level of Service

V/C= Volume to Capacity Ratio

10 VEHICLE MILES TRAVELED (CEQA ANALYSIS)

In December 2018, new California Environmental Quality Act (CEQA) guidelines were approved that shifted traffic analysis from delay and operations to VMT when evaluating Transportation Impacts under CEQA. This change in methodology is a result of Senate Bill 743 (SB743), which was signed into law in September 2013. SB743 “creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires OPR to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must ‘promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.’¹ ²

Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.”³ According to SB743, projects should aim to reduce VMT and mitigate potential VMT impacts through the implementation of TDM strategies.

As part of the development of the new CEQA guidelines, the Governor’s Office of Planning and Research (OPR) prepared a Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018 (Technical Advisory). The Technical Advisory provides guidance for local jurisdictions in developing methodologies and thresholds for evaluating VMT. The Technical Advisory provides VMT thresholds for residential, employment and other uses. For all projects, the Technical Advisory recommends establishing the VMT threshold at 85% or less of an adopted VMT threshold including VMT/capita for residential projects, VMT/employee for employment projects and total VMT for all other uses.

In July 2020, Los Angeles County Public Works developed their own VMT guidelines, thresholds and screening criteria for development projects which the City of Norwalk currently uses. VMT screening criteria outlined in the LA County VMT guidelines have been used to determine if the Project is screened out from needing to prepare a detailed VMT analysis. If the Project is screened out, the Project would be considered to have a less-than-significant VMT impact on the environment and no mitigation measures would be required. **Table 16** summarizes the VMT Screening Criteria.

The Project meets the Proximity To Transit screening criteria. Therefore, the Project is considered to have a less-than-significant VMT impact on the environment and no mitigation measures are required.

¹ Public Resources Code Section 21099(b)(1)

² Office of Planning and Research, <http://www.opr.ca.gov/ceqa/updates/sb-743/>

³ Public Resources Code Section 21099(b)(1)

TABLE 16 – VMT SCREENING CRITERIA

Category (County Guidelines)	Description	Project Assessment	Result
Non-Retail Project Trip Generation	Does the development project generate a net increase of 110 or more daily vehicle trips?	Yes, the Project is expected to generate approximately 7,455 daily vehicle trips which exceeds the 110 daily trip threshold.	Does Not Meet Criteria
Retail Project Site Plan	Does the project contain retail uses that exceed 50,000 square feet of gross floor area?	Yes, the Project consists of 67,000 SF of commercial space in Planning Area 1 and an additional 13,500 SF of strip retail in the ground floor area of each of the multi-family residential buildings.	Does Not Meet Criteria
Proximity to Transit	<p>Is the project located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor?</p> <ul style="list-style-type: none"> • Does the project have a Floor Area Ratio less than 0.75? • Does the project provide more parking than required by the City Code? • Is the project inconsistent with the SCAG RTP/SCS? • Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units? 	<p>Yes, the Project is located approximately 0.2 miles from the Norwalk / Santa Fe Springs Metrolink Station.</p> <ul style="list-style-type: none"> • No, the Project does not have a FAR less than 0.75. • No, the project is not providing more parking than required by City Code. • No, the project is consistent with the SCAG RTP/SCS. • No, the Project is not replacing affordable units with market-rate units. 	Criteria Is Met

11 CONSTRUCTION ANALYSIS

It is anticipated the proposed Project would be constructed in one phase over a period of two years with construction estimated to begin in the second quarter of 2024 and completed in second quarter of 2026. The following construction activities would occur:

- Demolition (approximately 3 months)
- Grading (approximately 3 months)
- Paving (approximately 7 months)
- Construction (approximately 6 months)
- Painting / Architectural Treatments (approximately 3 months)

The Project would require the demolition of 35 structures, which would result in approximately 90,586 tons of demolished materials. Proposed grading would involve approximately 35,252 cubic yards of cut and 2,348 cubic yards of fill, with approximately 60,510 cubic yards of soil to be exported. **Table 17** presents the vehicle trip estimates during construction of the Project.

TABLE 17 – CONSTRUCTION TRIP ESTIMATES

Construction Phase	Employees (Maximum)	Vendor Trips	Truck Hauling Trips	Working Days	Total Daily Trip Estimates ¹
Demolition	15	0	8,957	120	105
Grading	20	0	8,664	86	141
Paving	689	0	0	175	1,378
Construction	15	141	0	154	312
Architectural	138	0	0	87	276

¹ Demolition Truck Hauling Trips per Day is 8957 trips / 120 total days which equates to approx. 75 trips per day.
Grading Truck Hauling Trips per Day is 8,664 trips / 86 total days which equates to approx. 101 trips per day.
Employee trips is the number of employees multiplied by 2 trips per day (1 inbound and 1 outbound).

As shown in Table 17, the highest amount of daily traffic expected during construction is Paving with an estimated 1,378 vehicles. This is less than the 7,455 daily Project trips and therefore, no impacts to the surrounding roadway network are anticipated. In addition, construction is expected to start at 7:00 AM or earlier and end by 3:00 PM in the afternoon which is outside the typical AM (7 – 9) peak hour and PM (4 – 6) peak hour. While the majority of construction related trips are expected to fall outside of the normal AM peak period, there may be some travel during the morning peak period (7:00 to 9:00 AM). If construction related traffic causes congestion or safety concerns during peak periods, the contractor should consult with City staff to determine appropriate measures to improve traffic flow or to manage the construction schedule accordingly.

12 FINDINGS AND RECOMMENDATIONS

This study analyzes the forecast traffic conditions associated with the proposed development of the Norwalk Transit Village (Project) located at 13200 Bloomfield Avenue, in the City of Norwalk. The Project proposes to construct 328 market rate apartments, 322 affordable apartments, 120 townhomes, 150 room hotel, 13,500 square feet (SF) of active commercial, 66,647 SF of neighborhood commercial, and 3.62 acres of park. The Project is anticipated to be built out by Year 2026.

The Project is forecast to generate approximately approximately 7,455 new daily trips which include approximately 653 AM peak hour trips and 771 PM peak hour trips.

12.1 LEVEL OF SERVICE ANALYSIS RESULTS

This study evaluates traffic conditions that include AM and PM peak hour intersections level of service (LOS) analysis. The results of the of the level of service analysis is as follows:

Existing Conditions - The results of the Existing conditions analysis show that all study intersections currently operate at acceptable levels of service (LOS D or better) with the exception of the following intersections:

- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

Opening Year 2026 Without Project Conditions – The results of the Opening Year 2026 Without Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersections:

- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

Opening Year 2026 Plus Project Conditions - With the addition of project-related traffic, all study intersections continue to operate at acceptable LOS D or better for the Existing With Project conditions the exception of the following intersections:

- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and LOS F in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

At the intersection of Imperial Highway & Bloomfield Avenue (Int. 7), the change in delay exceeds the delay and LOS thresholds when project traffic is added to this location. Therefore, mitigation is required at this intersection to improve the operations during the AM and PM peak hour.

Recommended Mitigation at the signalized intersection of Imperial Highway and Bloomfield Avenue would be to provide right-turn overlap phasing at the northbound, southbound and eastbound approaches. In addition, revise the signal phasing so that the eastbound left and northbound left turn phases are lagging. These improvements would reduce the overall delay at the intersection to 49.0 seconds LOS D during the AM peak hour and 51.4 seconds LOS D during the PM peak hour with the addition of Project traffic.

Future Year 2045 Without Project Conditions – The results of the Future Year 2045 Without Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersections:

- Imperial Highway & Pioneer Boulevard (Int. 1) LOS E in PM Peak Hour
- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and LOS F in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Pioneer Boulevard & Firestone Boulevard (Int. 9) LOS E in PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

Future Year 2045 Plus Project Conditions – The results of the Future Year 2045 Plus Project conditions analysis shows that all study intersections currently operate at acceptable LOS D or better with the exception of the following intersections:

- Imperial Highway & Pioneer Boulevard (Int. 1) LOS E in PM Peak Hour
- Imperial Highway & Norwalk Boulevard (Int. 4) LOS E in the PM Peak Hour
- Imperial Highway & Bloomfield Avenue (Int. 7) LOS E in AM and LOS F in PM Peak Hour
- Imperial Highway & Carmenita Road (Int. 8) LOS E in AM and PM Peak Hour
- Pioneer Boulevard & Firestone Boulevard (Int. 9) LOS E in PM Peak Hour
- Norwalk Blvd & I-5NB On-Ramp/Androree (Int. 12) LOS E in the AM Peak Hour
- San Antonio Drive & Firestone Boulevard (Int. 14) LOS E in AM and PM Peak Hour
- Carmenita Road & Rosecrans Avenue (Int. 18) LOS E in AM Peak Hour

At the intersection of Imperial Highway & Bloomfield Avenue (Int. 7), the change in delay exceeds the delay and LOS thresholds when project traffic is added to this location. Therefore, mitigation is required at this intersection to improve the operations during the AM and PM peak hour.

Recommended Mitigation at the signalized intersection of Imperial Highway and Bloomfield Avenue would be to provide right-turn overlap phasing at the northbound, southbound and eastbound approaches. In addition, revise the signal phasing so that the eastbound left and northbound left turn phases are lagging. These improvements would reduce the overall delay at

the intersection to 49.0 seconds LOS D during the AM peak hour and 51.4 seconds LOS D during the PM peak hour with the addition of Project traffic.

The analysis also included a roadway segment evaluation to determine if there is adequate capacity on the existing roadway network to accommodate the additional Project traffic. The roadway segment analysis results show that all five (5) roadway segments operate at acceptable LOS D or better under all study scenarios from Existing Conditions to Future Year 2045 Plus Project Conditions.

12.2 VEHICLE MILES TRAVELED

As part of the California Environmental Quality Act (CEQA) analysis, a VMT assessment was conducted for this Project. The VMT assessment shows that the Project is screened out based on the Proximity To Transit criteria. Therefore, the Project is considered to have a less-than-significant transportation impact and no mitigation measures are required. The VMT assessment has been included in **Chapter 10** of this report.

Appendix A: Traffic Count Data & Signal Timing

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Imperial Highway
 Weather: Clear

File Name : 01_NWK_Pioneer_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

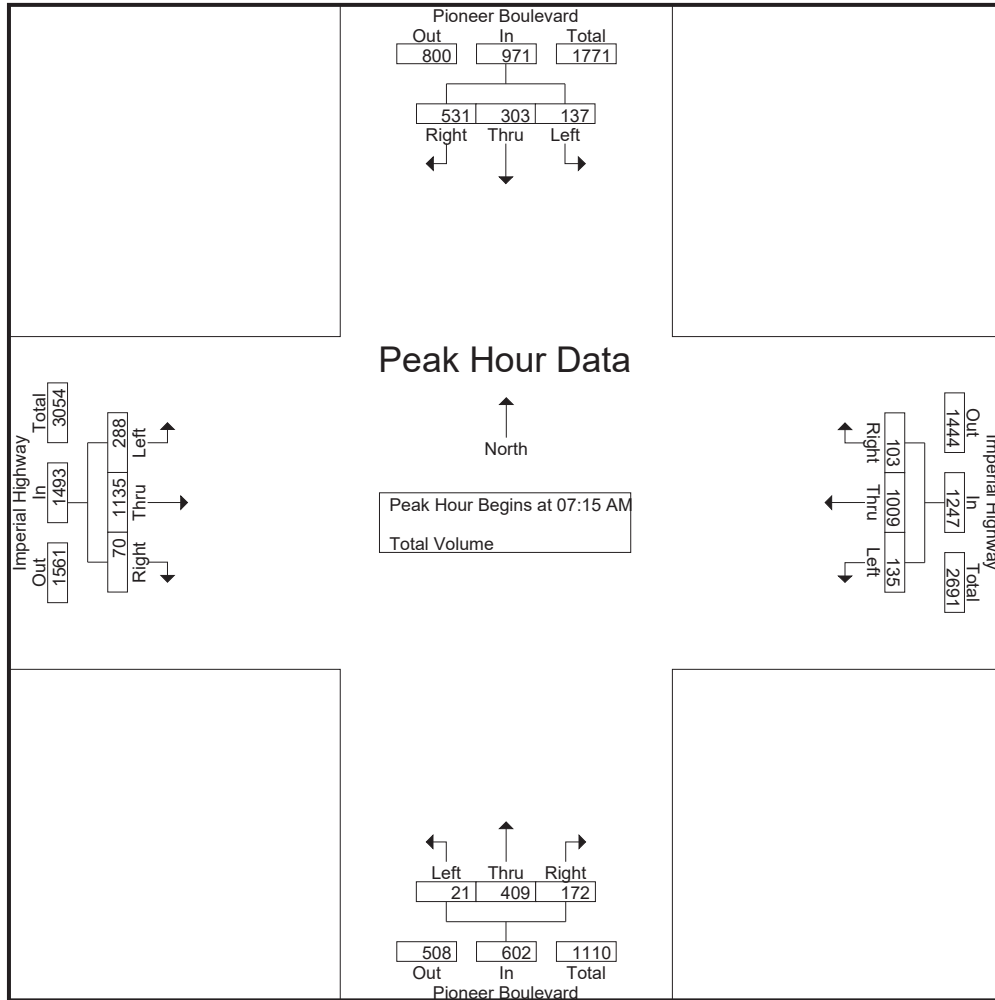
Groups Printed- Total Volume

Start Time	Pioneer Boulevard Southbound				Imperial Highway Westbound				Pioneer Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	28	51	121	200	29	200	12	241	6	53	43	102	68	179	9	256	799
07:15 AM	31	63	118	212	36	298	20	354	4	86	57	147	70	248	15	333	1046
07:30 AM	36	72	135	243	30	257	23	310	3	113	26	142	68	291	13	372	1067
07:45 AM	35	96	161	292	35	251	39	325	8	112	44	164	74	343	16	433	1214
Total	130	282	535	947	130	1006	94	1230	21	364	170	555	280	1061	53	1394	4126
08:00 AM	35	72	117	224	34	203	21	258	6	98	45	149	76	253	26	355	986
08:15 AM	36	73	97	206	26	231	21	278	5	89	34	128	78	220	20	318	930
08:30 AM	26	42	66	134	16	220	30	266	7	69	27	103	64	224	18	306	809
08:45 AM	15	50	66	131	30	241	21	292	8	62	30	100	41	220	21	282	805
Total	112	237	346	695	106	895	93	1094	26	318	136	480	259	917	85	1261	3530
Grand Total	242	519	881	1642	236	1901	187	2324	47	682	306	1035	539	1978	138	2655	7656
Apprch %	14.7	31.6	53.7		10.2	81.8	8		4.5	65.9	29.6		20.3	74.5	5.2		
Total %	3.2	6.8	11.5	21.4	3.1	24.8	2.4	30.4	0.6	8.9	4	13.5	7	25.8	1.8	34.7	

Start Time	Pioneer Boulevard Southbound				Imperial Highway Westbound				Pioneer Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	31	63	118	212	36	298	20	354	4	86	57	147	70	248	15	333	1046
07:30 AM	36	72	135	243	30	257	23	310	3	113	26	142	68	291	13	372	1067
07:45 AM	35	96	161	292	35	251	39	325	8	112	44	164	74	343	16	433	1214
08:00 AM	35	72	117	224	34	203	21	258	6	98	45	149	76	253	26	355	986
Total Volume	137	303	531	971	135	1009	103	1247	21	409	172	602	288	1135	70	1493	4313
% App. Total	14.1	31.2	54.7		10.8	80.9	8.3		3.5	67.9	28.6		19.3	76	4.7		
PHF	.951	.789	.825	.831	.938	.846	.660	.881	.656	.905	.754	.918	.947	.827	.673	.862	.888

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Imperial Higway
 Weather: Clear

File Name : 01_NWK_Pioneer_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	31	63	118	212	36	298	20	354	4	86	57	147	70	248	15	333
+15 mins.	36	72	135	243	30	257	23	310	3	113	26	142	68	291	13	372
+30 mins.	35	96	161	292	35	251	39	325	8	112	44	164	74	343	16	433
+45 mins.	35	72	117	224	34	203	21	258	6	98	45	149	76	253	26	355
Total Volume	137	303	531	971	135	1009	103	1247	21	409	172	602	288	1135	70	1493
% App. Total	14.1	31.2	54.7		10.8	80.9	8.3		3.5	67.9	28.6		19.3	76	4.7	
PHF	.951	.789	.825	.831	.938	.846	.660	.881	.656	.905	.754	.918	.947	.827	.673	.862

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Imperial Highway
 Weather: Clear

File Name : 01_NWK_Pioneer_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

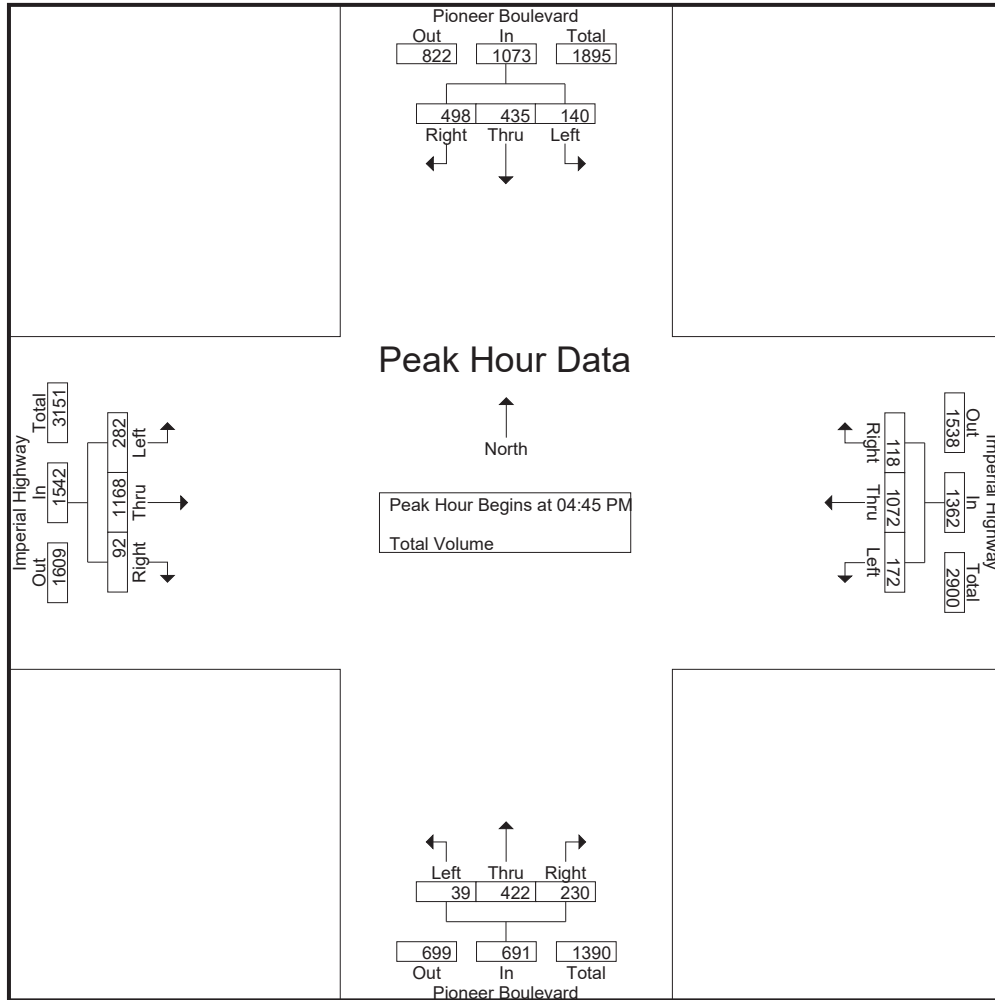
Groups Printed- Total Volume

Start Time	Pioneer Boulevard Southbound				Imperial Highway Westbound				Pioneer Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	34	90	120	244	42	279	33	354	10	103	66	179	76	298	25	399	1176
04:15 PM	32	95	91	218	43	221	26	290	14	122	65	201	62	266	13	341	1050
04:30 PM	37	97	117	251	44	237	16	297	16	103	50	169	73	290	19	382	1099
04:45 PM	39	137	147	323	39	285	30	354	12	110	60	182	64	287	24	375	1234
Total	142	419	475	1036	168	1022	105	1295	52	438	241	731	275	1141	81	1497	4559
05:00 PM	30	95	128	253	36	285	38	359	4	95	59	158	76	292	28	396	1166
05:15 PM	45	120	102	267	48	240	19	307	13	108	62	183	75	277	12	364	1121
05:30 PM	26	83	121	230	49	262	31	342	10	109	49	168	67	312	28	407	1147
05:45 PM	24	78	89	191	41	242	23	306	11	96	49	156	55	305	13	373	1026
Total	125	376	440	941	174	1029	111	1314	38	408	219	665	273	1186	81	1540	4460
Grand Total	267	795	915	1977	342	2051	216	2609	90	846	460	1396	548	2327	162	3037	9019
Apprch %	13.5	40.2	46.3		13.1	78.6	8.3		6.4	60.6	33		18	76.6	5.3		
Total %	3	8.8	10.1	21.9	3.8	22.7	2.4	28.9	1	9.4	5.1	15.5	6.1	25.8	1.8	33.7	

Start Time	Pioneer Boulevard Southbound				Imperial Highway Westbound				Pioneer Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	39	137	147	323	39	285	30	354	12	110	60	182	64	287	24	375	1234
05:00 PM	30	95	128	253	36	285	38	359	4	95	59	158	76	292	28	396	1166
05:15 PM	45	120	102	267	48	240	19	307	13	108	62	183	75	277	12	364	1121
05:30 PM	26	83	121	230	49	262	31	342	10	109	49	168	67	312	28	407	1147
Total Volume	140	435	498	1073	172	1072	118	1362	39	422	230	691	282	1168	92	1542	4668
% App. Total	13	40.5	46.4		12.6	78.7	8.7		5.6	61.1	33.3		18.3	75.7	6		
PHF	.778	.794	.847	.830	.878	.940	.776	.948	.750	.959	.927	.944	.928	.936	.821	.947	.946

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Imperial Highway
 Weather: Clear

File Name : 01_NWK_Pioneer_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:00 PM				04:45 PM			
+0 mins.	37	97	117	251	39	285	30	354	10	103	66	179	64	287	24	375
+15 mins.	39	137	147	323	36	285	38	359	14	122	65	201	76	292	28	396
+30 mins.	30	95	128	253	48	240	19	307	16	103	50	169	75	277	12	364
+45 mins.	45	120	102	267	49	262	31	342	12	110	60	182	67	312	28	407
Total Volume	151	449	494	1094	172	1072	118	1362	52	438	241	731	282	1168	92	1542
% App. Total	13.8	41	45.2		12.6	78.7	8.7		7.1	59.9	33		18.3	75.7	6	
PHF	.839	.819	.840	.847	.878	.940	.776	.948	.813	.898	.913	.909	.928	.936	.821	.947

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 02_NWK_Pioneer_Firestone AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

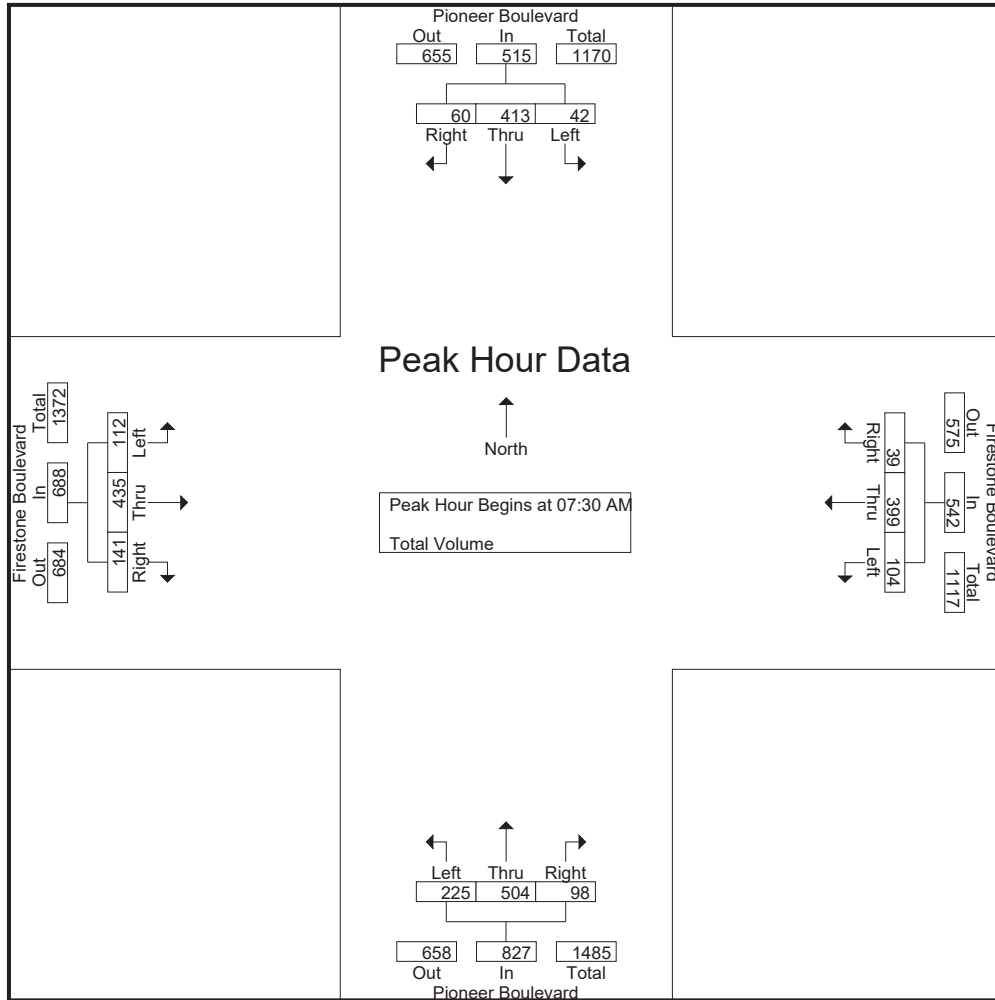
Groups Printed- Total Volume

Start Time	Pioneer Boulevard Southbound				Firestone Boulevard Westbound				Pioneer Boulevard Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	12	74	7	93	21	73	17	111	19	70	10	99	14	77	19	110	413
07:15 AM	13	84	11	108	8	80	7	95	38	116	17	171	16	74	28	118	492
07:30 AM	14	104	9	127	25	104	9	138	48	115	27	190	22	107	31	160	615
07:45 AM	10	132	18	160	23	95	9	127	52	171	27	250	31	105	41	177	714
Total	49	394	45	488	77	352	42	471	157	472	81	710	83	363	119	565	2234
08:00 AM	10	101	17	128	33	97	12	142	66	117	23	206	37	110	33	180	656
08:15 AM	8	76	16	100	23	103	9	135	59	101	21	181	22	113	36	171	587
08:30 AM	10	54	22	86	13	128	19	160	46	77	31	154	25	82	32	139	539
08:45 AM	6	61	11	78	19	123	13	155	36	75	21	132	22	73	22	117	482
Total	34	292	66	392	88	451	53	592	207	370	96	673	106	378	123	607	2264
Grand Total	83	686	111	880	165	803	95	1063	364	842	177	1383	189	741	242	1172	4498
Apprch %	9.4	78	12.6		15.5	75.5	8.9		26.3	60.9	12.8		16.1	63.2	20.6		
Total %	1.8	15.3	2.5	19.6	3.7	17.9	2.1	23.6	8.1	18.7	3.9	30.7	4.2	16.5	5.4	26.1	

Start Time	Pioneer Boulevard Southbound				Firestone Boulevard Westbound				Pioneer Boulevard Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	14	104	9	127	25	104	9	138	48	115	27	190	22	107	31	160	615
07:45 AM	10	132	18	160	23	95	9	127	52	171	27	250	31	105	41	177	714
08:00 AM	10	101	17	128	33	97	12	142	66	117	23	206	37	110	33	180	656
08:15 AM	8	76	16	100	23	103	9	135	59	101	21	181	22	113	36	171	587
Total Volume	42	413	60	515	104	399	39	542	225	504	98	827	112	435	141	688	2572
% App. Total	8.2	80.2	11.7		19.2	73.6	7.2		27.2	60.9	11.9		16.3	63.2	20.5		
PHF	.750	.782	.833	.805	.788	.959	.813	.954	.852	.737	.907	.827	.757	.962	.860	.956	.901

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 02_NWK_Pioneer_Firestone AM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:30 AM				07:30 AM			
+0 mins.	13	84	11	108	33	97	12	142	48	115	27	190	22	107	31	160
+15 mins.	14	104	9	127	23	103	9	135	52	171	27	250	31	105	41	177
+30 mins.	10	132	18	160	13	128	19	160	66	117	23	206	37	110	33	180
+45 mins.	10	101	17	128	19	123	13	155	59	101	21	181	22	113	36	171
Total Volume	47	421	55	523	88	451	53	592	225	504	98	827	112	435	141	688
% App. Total	9	80.5	10.5		14.9	76.2	9		27.2	60.9	11.9		16.3	63.2	20.5	
PHF	.839	.797	.764	.817	.667	.881	.697	.925	.852	.737	.907	.827	.757	.962	.860	.956

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 02_NWK_Pioneer_Firestone PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

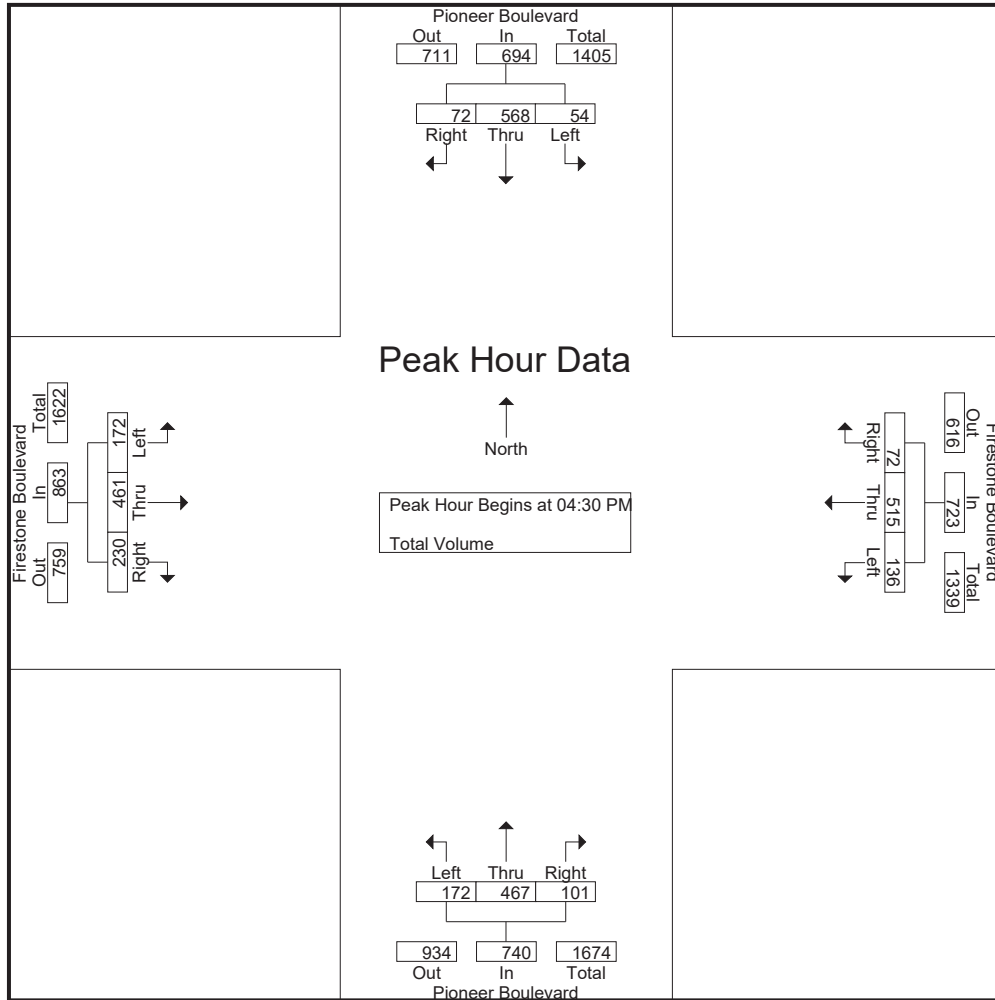
Groups Printed- Total Volume

Start Time	Pioneer Boulevard Southbound				Firestone Boulevard Westbound				Pioneer Boulevard Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	14	126	16	156	23	98	15	136	38	152	18	208	24	106	58	188	688
04:15 PM	9	130	23	162	30	128	19	177	49	108	26	183	39	102	55	196	718
04:30 PM	17	121	17	155	28	127	19	174	46	118	31	195	41	123	81	245	769
04:45 PM	18	166	21	205	29	124	22	175	43	113	21	177	45	124	48	217	774
Total	58	543	77	678	110	477	75	662	176	491	96	763	149	455	242	846	2949
05:00 PM	10	126	21	157	42	149	17	208	50	115	27	192	50	92	45	187	744
05:15 PM	9	155	13	177	37	115	14	166	33	121	22	176	36	122	56	214	733
05:30 PM	11	125	11	147	29	113	10	152	51	124	23	198	41	105	51	197	694
05:45 PM	20	99	13	132	31	107	15	153	38	97	21	156	44	103	36	183	624
Total	50	505	58	613	139	484	56	679	172	457	93	722	171	422	188	781	2795
Grand Total	108	1048	135	1291	249	961	131	1341	348	948	189	1485	320	877	430	1627	5744
Apprch %	8.4	81.2	10.5		18.6	71.7	9.8		23.4	63.8	12.7		19.7	53.9	26.4		
Total %	1.9	18.2	2.4	22.5	4.3	16.7	2.3	23.3	6.1	16.5	3.3	25.9	5.6	15.3	7.5	28.3	

Start Time	Pioneer Boulevard Southbound				Firestone Boulevard Westbound				Pioneer Boulevard Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	17	121	17	155	28	127	19	174	46	118	31	195	41	123	81	245	769
04:45 PM	18	166	21	205	29	124	22	175	43	113	21	177	45	124	48	217	774
05:00 PM	10	126	21	157	42	149	17	208	50	115	27	192	50	92	45	187	744
05:15 PM	9	155	13	177	37	115	14	166	33	121	22	176	36	122	56	214	733
Total Volume	54	568	72	694	136	515	72	723	172	467	101	740	172	461	230	863	3020
% App. Total	7.8	81.8	10.4		18.8	71.2	10		23.2	63.1	13.6		19.9	53.4	26.7		
PHF	.750	.855	.857	.846	.810	.864	.818	.869	.860	.965	.815	.949	.860	.929	.710	.881	.975

City of Norwalk
 N/S: Pioneer Boulevard
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 02_NWK_Pioneer_Firestone PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				04:00 PM				04:30 PM			
+0 mins.	17	121	17	155	30	128	19	177	38	152	18	208	41	123	81	245
+15 mins.	18	166	21	205	28	127	19	174	49	108	26	183	45	124	48	217
+30 mins.	10	126	21	157	29	124	22	175	46	118	31	195	50	92	45	187
+45 mins.	9	155	13	177	42	149	17	208	43	113	21	177	36	122	56	214
Total Volume	54	568	72	694	129	528	77	734	176	491	96	763	172	461	230	863
% App. Total	7.8	81.8	10.4		17.6	71.9	10.5		23.1	64.4	12.6		19.9	53.4	26.7	
PHF	.750	.855	.857	.846	.768	.886	.875	.882	.898	.808	.774	.917	.860	.929	.710	.881

City of Norwalk
 N/S: I-5 Southbound Off Ramp/Frontage Rd
 E/W: Imperial Highway
 Weather: Clear

File Name : 03_NWK_5S Off_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

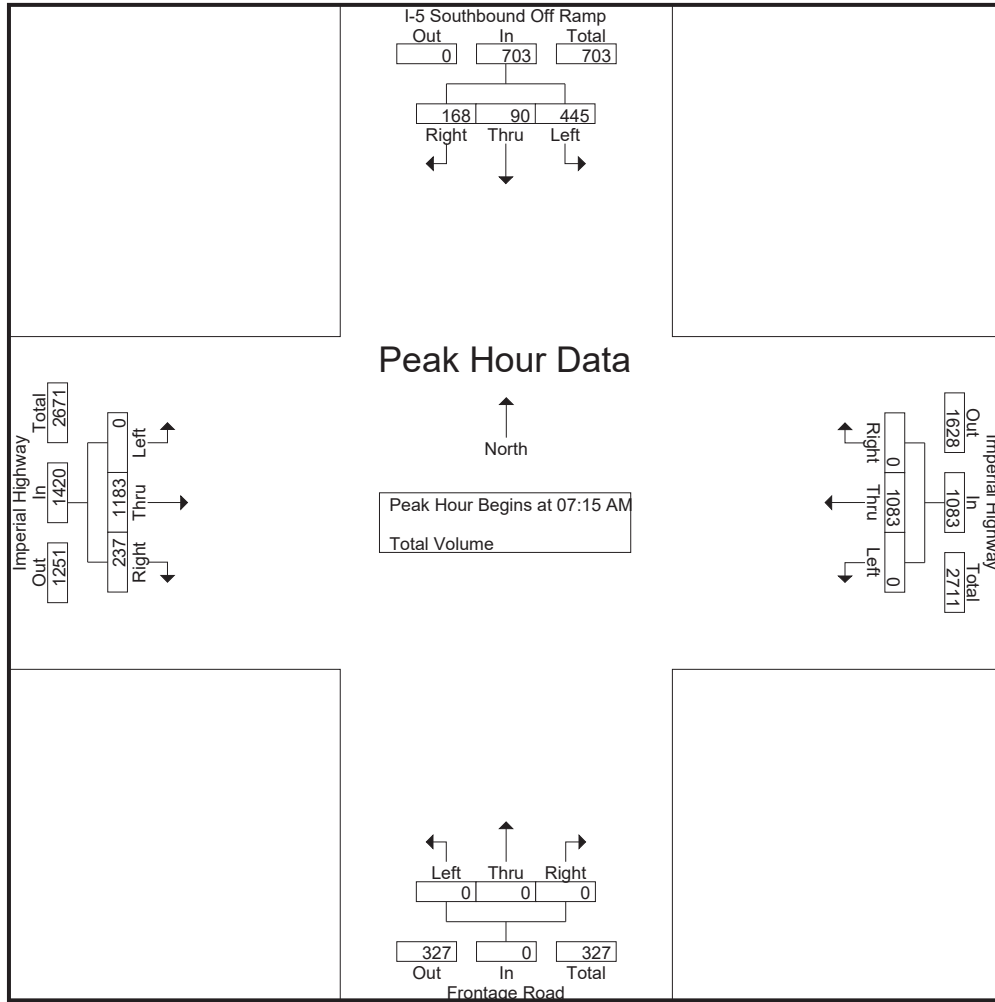
Groups Printed- Total Volume

Start Time	I-5 Southbound Off Ramp Southbound				Imperial Highway Westbound				Frontage Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	85	21	23	129	0	213	0	213	0	0	0	0	0	193	38	231	573
07:15 AM	111	19	49	179	0	313	0	313	0	0	0	0	0	269	63	332	824
07:30 AM	83	15	41	139	0	277	0	277	0	0	0	0	0	303	60	363	779
07:45 AM	134	31	43	208	0	276	0	276	0	0	0	0	0	344	61	405	889
Total	413	86	156	655	0	1079	0	1079	0	0	0	0	0	1109	222	1331	3065
08:00 AM	117	25	35	177	0	217	0	217	0	0	0	0	0	267	53	320	714
08:15 AM	102	26	37	165	0	259	0	259	0	0	0	0	0	255	49	304	728
08:30 AM	93	15	25	133	0	244	0	244	0	0	0	0	0	206	60	266	643
08:45 AM	83	33	31	147	0	254	0	254	0	0	0	0	0	211	36	247	648
Total	395	99	128	622	0	974	0	974	0	0	0	0	0	939	198	1137	2733
Grand Total	808	185	284	1277	0	2053	0	2053	0	0	0	0	0	2048	420	2468	5798
Apprch %	63.3	14.5	22.2		0	100	0		0	0	0	0	0	83	17		
Total %	13.9	3.2	4.9	22	0	35.4	0	35.4	0	0	0	0	0	35.3	7.2	42.6	

Start Time	I-5 Southbound Off Ramp Southbound				Imperial Highway Westbound				Frontage Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	111	19	49	179	0	313	0	313	0	0	0	0	0	269	63	332	824
07:30 AM	83	15	41	139	0	277	0	277	0	0	0	0	0	303	60	363	779
07:45 AM	134	31	43	208	0	276	0	276	0	0	0	0	0	344	61	405	889
08:00 AM	117	25	35	177	0	217	0	217	0	0	0	0	0	267	53	320	714
Total Volume	445	90	168	703	0	1083	0	1083	0	0	0	0	0	1183	237	1420	3206
% App. Total	63.3	12.8	23.9		0	100	0		0	0	0	0	0	83.3	16.7		
PHF	.830	.726	.857	.845	.000	.865	.000	.865	.000	.000	.000	.000	.000	.860	.940	.877	.902

City of Norwalk
 N/S: I-5 Southbound Off Ramp/Frontage Rd
 E/W: Imperial Highway
 Weather: Clear

File Name : 03_NWK_5S Off_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	111	19	49	179	0	313	0	313	0	0	0	0	0	269	63	332
+15 mins.	83	15	41	139	0	277	0	277	0	0	0	0	0	303	60	363
+30 mins.	134	31	43	208	0	276	0	276	0	0	0	0	0	344	61	405
+45 mins.	117	25	35	177	0	217	0	217	0	0	0	0	0	267	53	320
Total Volume	445	90	168	703	0	1083	0	1083	0	0	0	0	0	1183	237	1420
% App. Total	63.3	12.8	23.9		0	100	0		0	0	0	0	0	83.3	16.7	
PHF	.830	.726	.857	.845	.000	.865	.000	.865	.000	.000	.000	.000	.000	.860	.940	.877

City of Norwalk
 N/S: I-5 Southbound Off Ramp/Frontage Rd
 E/W: Imperial Highway
 Weather: Clear

File Name : 03_NWK_5S Off_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

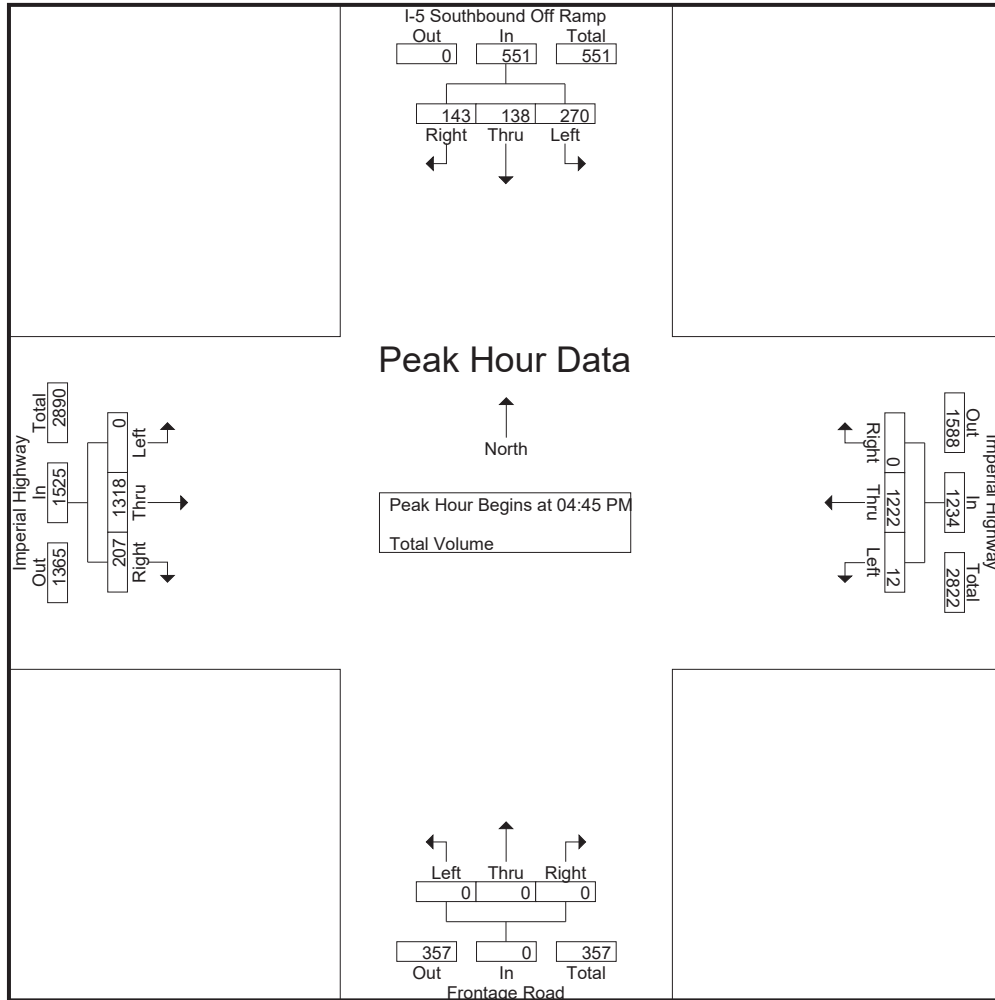
Start Time	I-5 Southbound Off Ramp Southbound				Imperial Highway Westbound				Frontage Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	52	25	47	124	0	317	0	317	0	0	0	0	0	360	46	406	847
04:15 PM	54	21	42	117	2	254	0	256	0	0	0	0	0	337	31	368	741
04:30 PM	58	23	32	113	2	252	0	254	0	0	0	0	0	309	50	359	726
04:45 PM	62	34	38	134	4	320	0	324	0	0	0	0	0	346	60	406	864
Total	226	103	159	488	8	1143	0	1151	0	0	0	0	0	1352	187	1539	3178
05:00 PM	63	31	33	127	3	345	0	348	0	0	0	0	0	328	52	380	855
05:15 PM	64	29	30	123	0	273	0	273	0	0	0	0	0	320	48	368	764
05:30 PM	81	44	42	167	5	284	0	289	0	0	0	0	0	324	47	371	827
05:45 PM	54	23	44	121	0	273	0	273	0	0	0	0	0	325	43	368	762
Total	262	127	149	538	8	1175	0	1183	0	0	0	0	0	1297	190	1487	3208
Grand Total	488	230	308	1026	16	2318	0	2334	0	0	0	0	0	2649	377	3026	6386
Apprch %	47.6	22.4	30		0.7	99.3	0		0	0	0	0	0	87.5	12.5		
Total %	7.6	3.6	4.8	16.1	0.3	36.3	0	36.5	0	0	0	0	0	41.5	5.9	47.4	

Start Time	I-5 Southbound Off Ramp Southbound				Imperial Highway Westbound				Frontage Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	62	34	38	134	4	320	0	324	0	0	0	0	0	346	60	406	864
05:00 PM	63	31	33	127	3	345	0	348	0	0	0	0	0	328	52	380	855
05:15 PM	64	29	30	123	0	273	0	273	0	0	0	0	0	320	48	368	764
05:30 PM	81	44	42	167	5	284	0	289	0	0	0	0	0	324	47	371	827
Total Volume	270	138	143	551	12	1222	0	1234	0	0	0	0	0	1318	207	1525	3310
% App. Total	49	25	26		1	99	0		0	0	0	0	0	86.4	13.6		
PHF	.833	.784	.851	.825	.600	.886	.000	.886	.000	.000	.000	.000	.000	.952	.863	.939	.958

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Norwalk
 N/S: I-5 Southbound Off Ramp/Frontage Rd
 E/W: Imperial Highway
 Weather: Clear

File Name : 03_NWK_5S Off_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:00 PM				04:00 PM			
+0 mins.	62	34	38	134	4	320	0	324	0	0	0	0	0	360	46	406
+15 mins.	63	31	33	127	3	345	0	348	0	0	0	0	0	337	31	368
+30 mins.	64	29	30	123	0	273	0	273	0	0	0	0	0	309	50	359
+45 mins.	81	44	42	167	5	284	0	289	0	0	0	0	0	346	60	406
Total Volume	270	138	143	551	12	1222	0	1234	0	0	0	0	0	1352	187	1539
% App. Total	49	25	26		1	99	0		0	0	0	0	0	87.8	12.2	
PHF	.833	.784	.851	.825	.600	.886	.000	.886	.000	.000	.000	.000	.000	.939	.779	.948

City of Norwalk
 N/S: I-5 Northbound On Ramp/Adoree St
 E/W: Imperial Highway
 Weather: Clear

File Name : 04_NWK_5N N_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

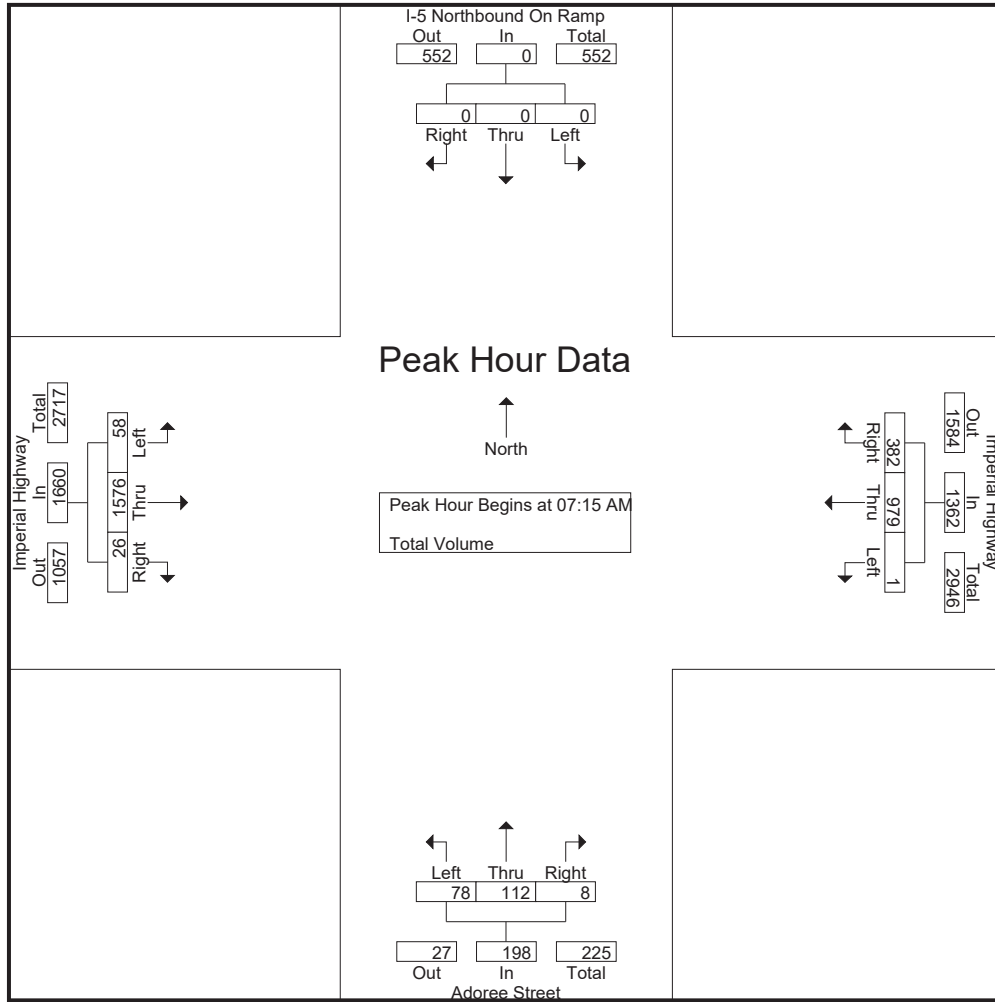
Start Time	I-5 Northbound On Ramp Southbound				Imperial Highway Westbound				Adoree Street Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	1	224	142	367	6	30	0	36	18	261	4	283	686
07:15 AM	0	0	0	0	0	281	122	403	13	32	1	46	25	357	7	389	838
07:30 AM	0	0	0	0	0	250	92	342	17	27	4	48	12	377	8	397	787
07:45 AM	0	0	0	0	0	242	83	325	26	28	1	55	9	464	7	480	860
Total	0	0	0	0	1	997	439	1437	62	117	6	185	64	1459	26	1549	3171
08:00 AM	0	0	0	0	1	206	85	292	22	25	2	49	12	378	4	394	735
08:15 AM	0	0	0	0	2	218	79	299	29	26	0	55	26	330	7	363	717
08:30 AM	0	0	0	0	0	217	62	279	29	18	6	53	14	284	8	306	638
08:45 AM	0	0	0	0	2	224	83	309	23	17	1	41	9	293	7	309	659
Total	0	0	0	0	5	865	309	1179	103	86	9	198	61	1285	26	1372	2749
Grand Total	0	0	0	0	6	1862	748	2616	165	203	15	383	125	2744	52	2921	5920
Apprch %	0	0	0		0.2	71.2	28.6		43.1	53	3.9		4.3	93.9	1.8		
Total %	0	0	0		0.1	31.5	12.6	44.2	2.8	3.4	0.3	6.5	2.1	46.4	0.9	49.3	

Start Time	I-5 Northbound On Ramp Southbound				Imperial Highway Westbound				Adoree Street Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	281	122	403	13	32	1	46	25	357	7	389	838
07:30 AM	0	0	0	0	0	250	92	342	17	27	4	48	12	377	8	397	787
07:45 AM	0	0	0	0	0	242	83	325	26	28	1	55	9	464	7	480	860
08:00 AM	0	0	0	0	1	206	85	292	22	25	2	49	12	378	4	394	735
Total Volume	0	0	0	0	1	979	382	1362	78	112	8	198	58	1576	26	1660	3220
% App. Total	0	0	0		0.1	71.9	28		39.4	56.6	4		3.5	94.9	1.6		
PHF	.000	.000	.000	.000	.250	.871	.783	.845	.750	.875	.500	.900	.580	.849	.813	.865	.936

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

City of Norwalk
 N/S: I-5 Northbound On Ramp/Adoree St
 E/W: Imperial Highway
 Weather: Clear

File Name : 04_NWK_5N N_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:45 AM				07:15 AM			
+0 mins.	0	0	0	0	1	224	142	367	26	28	1	55	25	357	7	389
+15 mins.	0	0	0	0	0	281	122	403	22	25	2	49	12	377	8	397
+30 mins.	0	0	0	0	0	250	92	342	29	26	0	55	9	464	7	480
+45 mins.	0	0	0	0	0	242	83	325	29	18	6	53	12	378	4	394
Total Volume	0	0	0	0	1	997	439	1437	106	97	9	212	58	1576	26	1660
% App. Total	0	0	0	0	0.1	69.4	30.5		50	45.8	4.2		3.5	94.9	1.6	
PHF	.000	.000	.000	.000	.250	.887	.773	.891	.914	.866	.375	.964	.580	.849	.813	.865

City of Norwalk
 N/S: I-5 Northbound On Ramp/Adoree St
 E/W: Imperial Highway
 Weather: Clear

File Name : 04_NWK_5N N_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

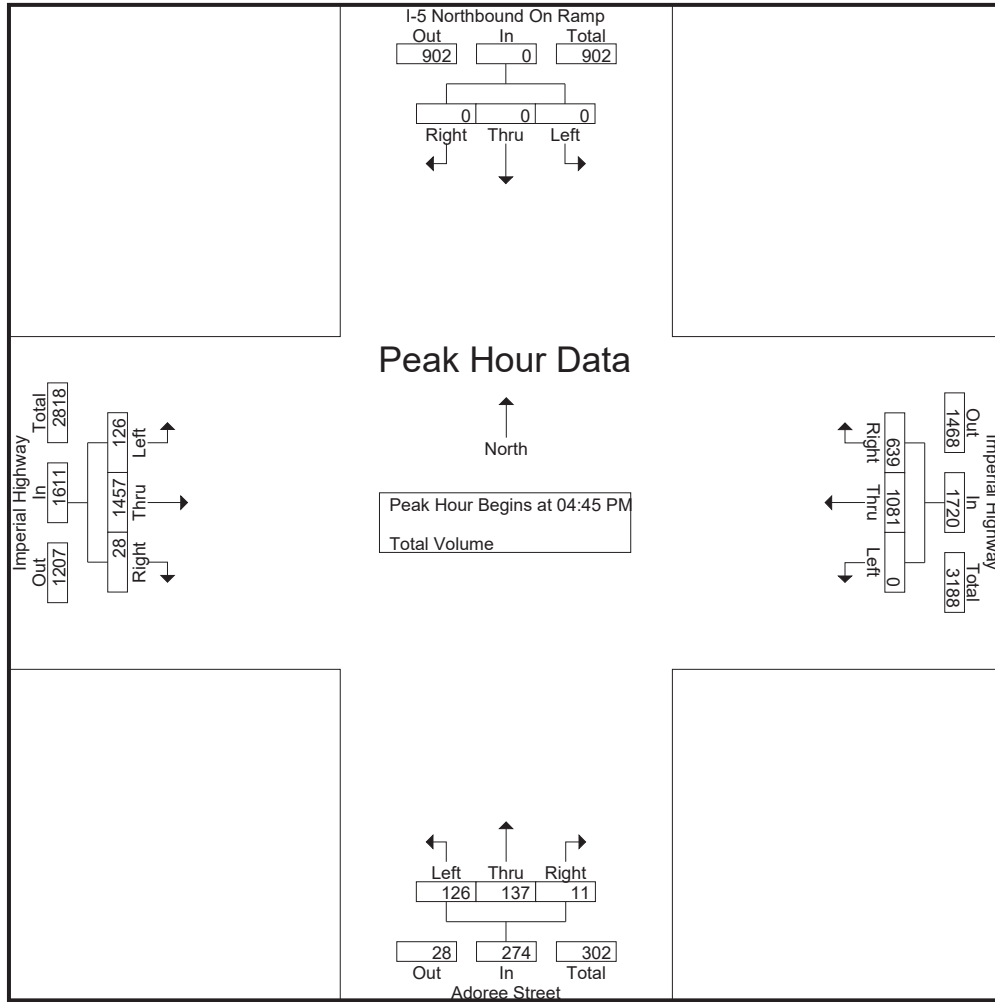
Groups Printed- Total Volume

Start Time	I-5 Northbound On Ramp Southbound				Imperial Highway Westbound				Adoree Street Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	1	303	150	454	25	26	3	54	26	394	8	428	936
04:15 PM	0	0	0	0	0	230	123	353	22	23	3	48	26	370	9	405	806
04:30 PM	0	0	0	0	0	245	121	366	26	30	1	57	26	328	7	361	784
04:45 PM	0	0	0	0	0	280	132	412	30	27	3	60	33	375	7	415	887
Total	0	0	0	0	1	1058	526	1585	103	106	10	219	111	1467	31	1609	3413
05:00 PM	0	0	0	0	0	305	209	514	36	46	2	84	35	356	10	401	999
05:15 PM	0	0	0	0	0	264	178	442	22	30	5	57	27	343	4	374	873
05:30 PM	0	0	0	0	0	232	120	352	38	34	1	73	31	383	7	421	846
05:45 PM	0	0	0	0	0	239	113	352	24	21	2	47	23	348	8	379	778
Total	0	0	0	0	0	1040	620	1660	120	131	10	261	116	1430	29	1575	3496
Grand Total	0	0	0	0	1	2098	1146	3245	223	237	20	480	227	2897	60	3184	6909
Apprch %	0	0	0	0	0	64.7	35.3		46.5	49.4	4.2		7.1	91	1.9		
Total %	0	0	0	0	0	30.4	16.6	47	3.2	3.4	0.3	6.9	3.3	41.9	0.9	46.1	

Start Time	I-5 Northbound On Ramp Southbound				Imperial Highway Westbound				Adoree Street Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	280	132	412	30	27	3	60	33	375	7	415	887
05:00 PM	0	0	0	0	0	305	209	514	36	46	2	84	35	356	10	401	999
05:15 PM	0	0	0	0	0	264	178	442	22	30	5	57	27	343	4	374	873
05:30 PM	0	0	0	0	0	232	120	352	38	34	1	73	31	383	7	421	846
Total Volume	0	0	0	0	0	1081	639	1720	126	137	11	274	126	1457	28	1611	3605
% App. Total	0	0	0	0	0	62.8	37.2		46	50	4		7.8	90.4	1.7		
PHF	.000	.000	.000	.000	.000	.886	.764	.837	.829	.745	.550	.815	.900	.951	.700	.957	.902

City of Norwalk
 N/S: I-5 Northbound On Ramp/Adoree St
 E/W: Imperial Highway
 Weather: Clear

File Name : 04_NWK_5N N_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	245	121	366	30	27	3	60	33	375	7	415
+15 mins.	0	0	0	0	0	280	132	412	36	46	2	84	35	356	10	401
+30 mins.	0	0	0	0	0	305	209	514	22	30	5	57	27	343	4	374
+45 mins.	0	0	0	0	0	264	178	442	38	34	1	73	31	383	7	421
Total Volume	0	0	0	0	0	1094	640	1734	126	137	11	274	126	1457	28	1611
% App. Total	0	0	0	0	0	63.1	36.9		46	50	4		7.8	90.4	1.7	
PHF	.000	.000	.000	.000	.000	.897	.766	.843	.829	.745	.550	.815	.900	.951	.700	.957

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Imperial Highway
 Weather: Clear

File Name : 05_NWK_Norwalk_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

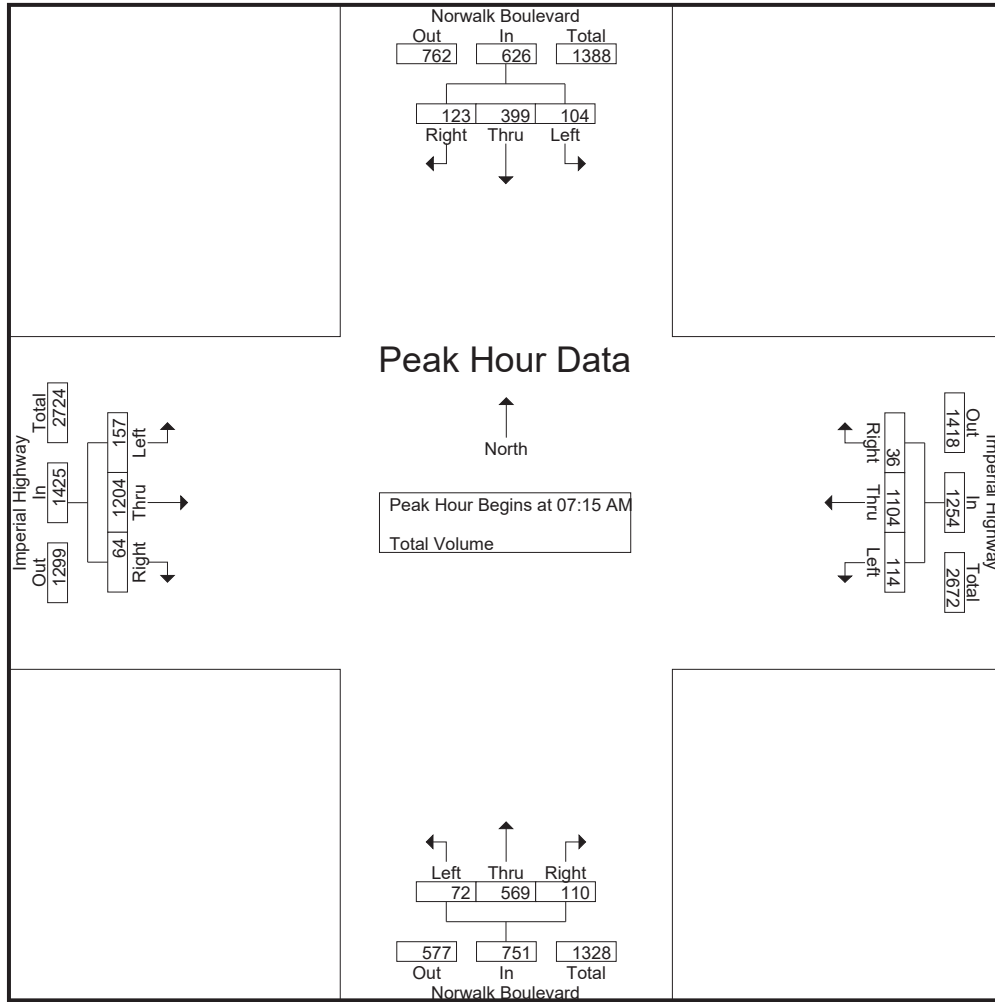
Groups Printed- Total Volume

Start Time	Norwalk Boulevard Southbound				Imperial Highway Westbound				Norwalk Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	18	76	31	125	18	328	6	352	12	102	16	130	37	260	7	304	911
07:15 AM	28	102	38	168	18	335	7	360	21	126	21	168	28	265	10	303	999
07:30 AM	13	94	27	134	35	244	6	285	13	154	27	194	41	291	17	349	962
07:45 AM	31	109	28	168	31	257	14	302	20	150	32	202	44	349	16	409	1081
Total	90	381	124	595	102	1164	33	1299	66	532	96	694	150	1165	50	1365	3953
08:00 AM	32	94	30	156	30	268	9	307	18	139	30	187	44	299	21	364	1014
08:15 AM	39	108	17	164	31	243	13	287	22	162	26	210	31	251	23	305	966
08:30 AM	32	78	21	131	22	236	18	276	26	132	35	193	21	204	14	239	839
08:45 AM	17	90	15	122	28	213	13	254	14	131	34	179	39	236	25	300	855
Total	120	370	83	573	111	960	53	1124	80	564	125	769	135	990	83	1208	3674
Grand Total	210	751	207	1168	213	2124	86	2423	146	1096	221	1463	285	2155	133	2573	7627
Apprch %	18	64.3	17.7		8.8	87.7	3.5		10	74.9	15.1		11.1	83.8	5.2		
Total %	2.8	9.8	2.7	15.3	2.8	27.8	1.1	31.8	1.9	14.4	2.9	19.2	3.7	28.3	1.7	33.7	

Start Time	Norwalk Boulevard Southbound				Imperial Highway Westbound				Norwalk Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	28	102	38	168	18	335	7	360	21	126	21	168	28	265	10	303	999
07:30 AM	13	94	27	134	35	244	6	285	13	154	27	194	41	291	17	349	962
07:45 AM	31	109	28	168	31	257	14	302	20	150	32	202	44	349	16	409	1081
08:00 AM	32	94	30	156	30	268	9	307	18	139	30	187	44	299	21	364	1014
Total Volume	104	399	123	626	114	1104	36	1254	72	569	110	751	157	1204	64	1425	4056
% App. Total	16.6	63.7	19.6		9.1	88	2.9		9.6	75.8	14.6		11	84.5	4.5		
PHF	.813	.915	.809	.932	.814	.824	.643	.871	.857	.924	.859	.929	.892	.862	.762	.871	.938

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Imperial Highway
 Weather: Clear

File Name : 05_NWK_Norwalk_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	28	102	38	168	18	328	6	352	13	154	27	194	41	291	17	349
+15 mins.	13	94	27	134	18	335	7	360	20	150	32	202	44	349	16	409
+30 mins.	31	109	28	168	35	244	6	285	18	139	30	187	44	299	21	364
+45 mins.	32	94	30	156	31	257	14	302	22	162	26	210	31	251	23	305
Total Volume	104	399	123	626	102	1164	33	1299	73	605	115	793	160	1190	77	1427
% App. Total	16.6	63.7	19.6		7.9	89.6	2.5		9.2	76.3	14.5		11.2	83.4	5.4	
PHF	.813	.915	.809	.932	.729	.869	.589	.902	.830	.934	.898	.944	.909	.852	.837	.872

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Imperial Highway
 Weather: Clear

File Name : 05_NWK_Norwalk_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

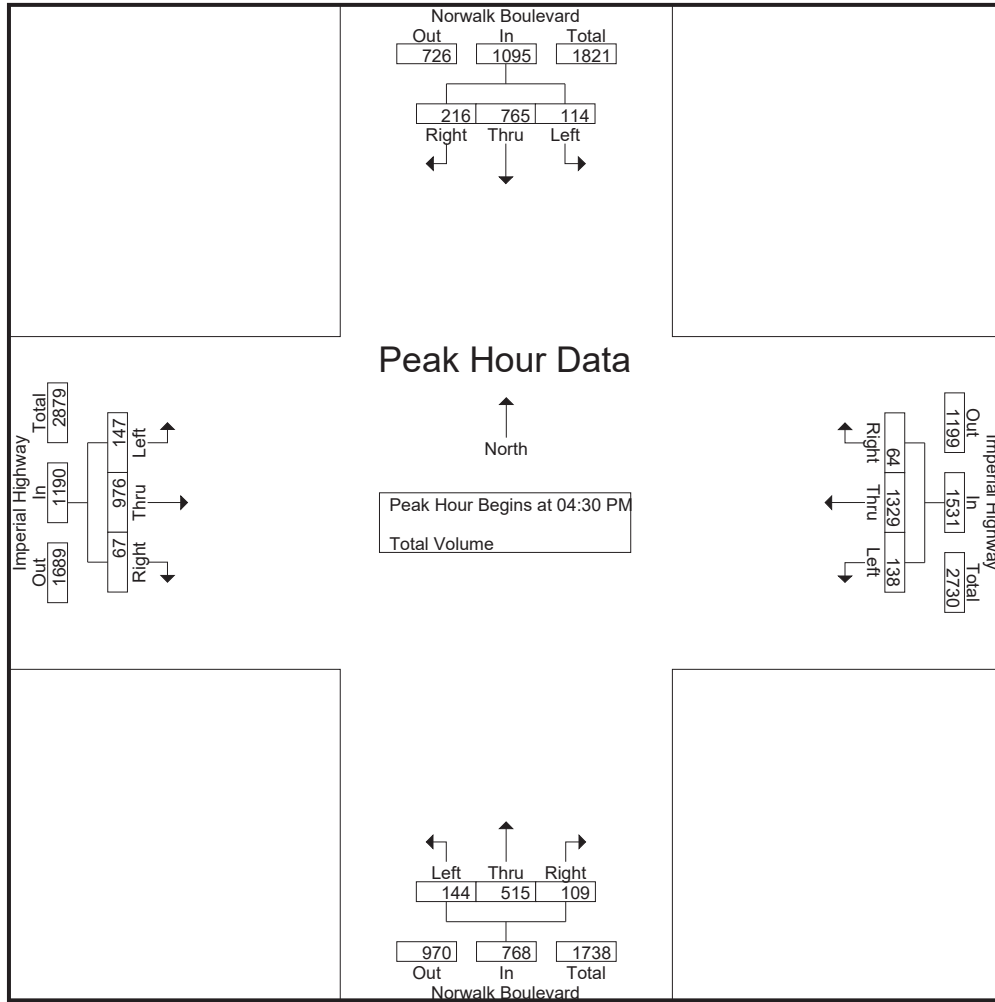
Groups Printed- Total Volume

Start Time	Norwalk Boulevard Southbound				Imperial Highway Westbound				Norwalk Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	36	177	37	250	30	326	29	385	34	130	30	194	44	277	16	337	1166
04:15 PM	30	153	30	213	38	268	18	324	30	115	30	175	36	266	13	315	1027
04:30 PM	27	185	47	259	37	324	15	376	24	136	26	186	43	246	9	298	1119
04:45 PM	26	192	59	277	48	284	25	357	43	141	30	214	35	233	22	290	1138
Total	119	707	173	999	153	1202	87	1442	131	522	116	769	158	1022	60	1240	4450
05:00 PM	24	180	64	268	25	415	11	451	36	111	25	172	37	274	20	331	1222
05:15 PM	37	208	46	291	28	306	13	347	41	127	28	196	32	223	16	271	1105
05:30 PM	26	132	38	196	24	284	15	323	31	131	25	187	38	297	17	352	1058
05:45 PM	26	130	29	185	22	270	18	310	30	102	24	156	43	273	11	327	978
Total	113	650	177	940	99	1275	57	1431	138	471	102	711	150	1067	64	1281	4363
Grand Total	232	1357	350	1939	252	2477	144	2873	269	993	218	1480	308	2089	124	2521	8813
Apprch %	12	70	18.1		8.8	86.2	5		18.2	67.1	14.7		12.2	82.9	4.9		
Total %	2.6	15.4	4	22	2.9	28.1	1.6	32.6	3.1	11.3	2.5	16.8	3.5	23.7	1.4	28.6	

Start Time	Norwalk Boulevard Southbound				Imperial Highway Westbound				Norwalk Boulevard Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	27	185	47	259	37	324	15	376	24	136	26	186	43	246	9	298	1119
04:45 PM	26	192	59	277	48	284	25	357	43	141	30	214	35	233	22	290	1138
05:00 PM	24	180	64	268	25	415	11	451	36	111	25	172	37	274	20	331	1222
05:15 PM	37	208	46	291	28	306	13	347	41	127	28	196	32	223	16	271	1105
Total Volume	114	765	216	1095	138	1329	64	1531	144	515	109	768	147	976	67	1190	4584
% App. Total	10.4	69.9	19.7		9	86.8	4.2		18.8	67.1	14.2		12.4	82	5.6		
PHF	.770	.919	.844	.941	.719	.801	.640	.849	.837	.913	.908	.897	.855	.891	.761	.899	.938

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Imperial Highway
 Weather: Clear

File Name : 05_NWK_Norwalk_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:00 PM				05:00 PM			
+0 mins.	27	185	47	259	37	324	15	376	34	130	30	194	37	274	20	331
+15 mins.	26	192	59	277	48	284	25	357	30	115	30	175	32	223	16	271
+30 mins.	24	180	64	268	25	415	11	451	24	136	26	186	38	297	17	352
+45 mins.	37	208	46	291	28	306	13	347	43	141	30	214	43	273	11	327
Total Volume	114	765	216	1095	138	1329	64	1531	131	522	116	769	150	1067	64	1281
% App. Total	10.4	69.9	19.7		9	86.8	4.2		17	67.9	15.1		11.7	83.3	5	
PHF	.770	.919	.844	.941	.719	.801	.640	.849	.762	.926	.967	.898	.872	.898	.800	.910

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Civic Center Drive
 Weather: Clear

File Name : 06_NWK_Norwalk_Civic AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

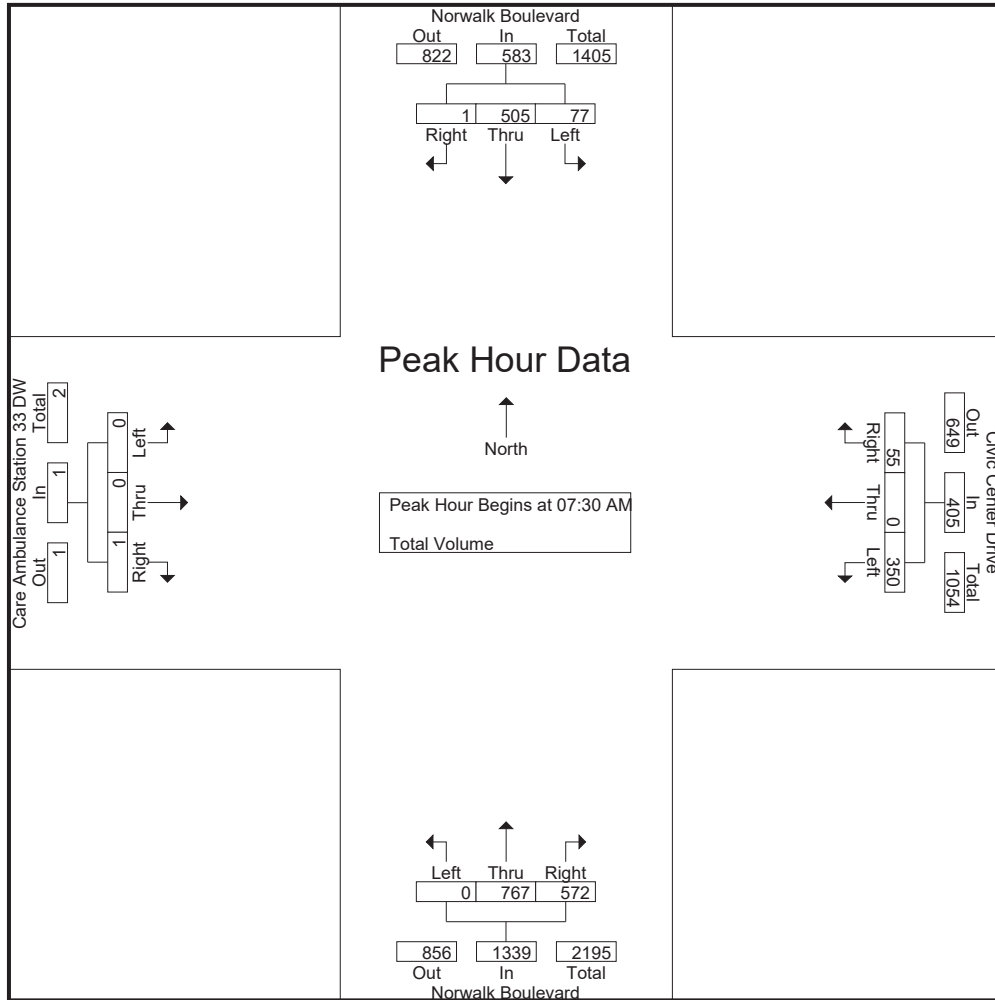
Groups Printed- Total Volume

Start Time	Norwalk Boulevard Southbound				Civic Center Drive Westbound				Norwalk Boulevard Northbound				Care Ambulance Station 33 DW Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	8	103	0	111	50	1	14	65	0	139	75	214	0	0	2	2	392
07:15 AM	14	120	0	134	57	0	14	71	0	156	90	246	0	0	2	2	453
07:30 AM	16	104	0	120	101	0	16	117	0	157	133	290	0	0	0	0	527
07:45 AM	15	150	0	165	112	0	17	129	0	247	191	438	0	0	1	1	733
Total	53	477	0	530	320	1	61	382	0	699	489	1188	0	0	5	5	2105
08:00 AM	18	126	0	144	91	0	13	104	0	165	132	297	0	0	0	0	545
08:15 AM	28	125	1	154	46	0	9	55	0	198	116	314	0	0	0	0	523
08:30 AM	17	98	0	115	50	0	14	64	0	184	88	272	0	0	0	0	451
08:45 AM	17	129	0	146	45	0	14	59	0	177	68	245	0	0	0	0	450
Total	80	478	1	559	232	0	50	282	0	724	404	1128	0	0	0	0	1969
Grand Total	133	955	1	1089	552	1	111	664	0	1423	893	2316	0	0	5	5	4074
Apprch %	12.2	87.7	0.1		83.1	0.2	16.7		0	61.4	38.6		0	0	100		
Total %	3.3	23.4	0	26.7	13.5	0	2.7	16.3	0	34.9	21.9	56.8	0	0	0.1	0.1	

Start Time	Norwalk Boulevard Southbound				Civic Center Drive Westbound				Norwalk Boulevard Northbound				Care Ambulance Station 33 DW Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	16	104	0	120	101	0	16	117	0	157	133	290	0	0	0	0	527
07:45 AM	15	150	0	165	112	0	17	129	0	247	191	438	0	0	1	1	733
08:00 AM	18	126	0	144	91	0	13	104	0	165	132	297	0	0	0	0	545
08:15 AM	28	125	1	154	46	0	9	55	0	198	116	314	0	0	0	0	523
Total Volume	77	505	1	583	350	0	55	405	0	767	572	1339	0	0	1	1	2328
% App. Total	13.2	86.6	0.2		86.4	0	13.6		0	57.3	42.7		0	0	100		
PHF	.688	.842	.250	.883	.781	.000	.809	.785	.000	.776	.749	.764	.000	.000	.250	.250	.794

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Civic Center Drive
 Weather: Clear

File Name : 06_NWK_Norwalk_Civic AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:30 AM				07:00 AM			
+0 mins.	16	104	0	120	57	0	14	71	0	157	133	290	0	0	2	2
+15 mins.	15	150	0	165	101	0	16	117	0	247	191	438	0	0	2	2
+30 mins.	18	126	0	144	112	0	17	129	0	165	132	297	0	0	0	0
+45 mins.	28	125	1	154	91	0	13	104	0	198	116	314	0	0	1	1
Total Volume	77	505	1	583	361	0	60	421	0	767	572	1339	0	0	5	5
% App. Total	13.2	86.6	0.2		85.7	0	14.3		0	57.3	42.7		0	0	100	
PHF	.688	.842	.250	.883	.806	.000	.882	.816	.000	.776	.749	.764	.000	.000	.625	.625

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Civic Center Drive
 Weather: Clear

File Name : 06_NWK_Norwalk_Civic PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

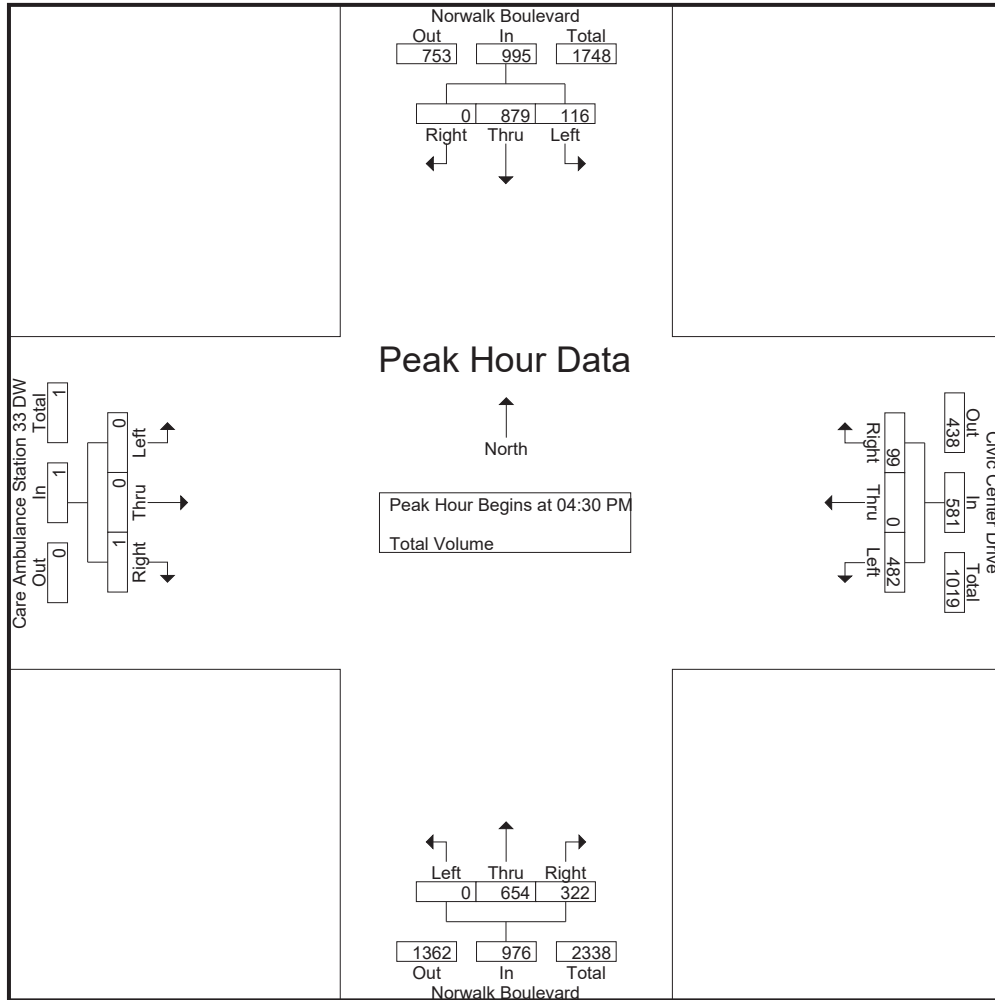
Groups Printed- Total Volume

Start Time	Norwalk Boulevard Southbound				Civic Center Drive Westbound				Norwalk Boulevard Northbound				Care Ambulance Station 33 DW Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	29	181	0	210	109	1	14	124	0	168	77	245	0	0	0	0	579
04:15 PM	22	196	0	218	80	0	10	90	0	169	74	243	0	0	0	0	551
04:30 PM	30	226	0	256	80	0	32	112	0	157	77	234	0	0	1	1	603
04:45 PM	29	218	0	247	111	0	18	129	0	176	81	257	0	0	0	0	633
Total	110	821	0	931	380	1	74	455	0	670	309	979	0	0	1	1	2366
05:00 PM	35	214	0	249	171	0	33	204	0	153	70	223	0	0	0	0	676
05:15 PM	22	221	0	243	120	0	16	136	0	168	94	262	0	0	0	0	641
05:30 PM	26	160	0	186	97	0	14	111	0	161	96	257	0	0	0	0	554
05:45 PM	30	161	0	191	73	0	11	84	0	158	60	218	0	1	0	1	494
Total	113	756	0	869	461	0	74	535	0	640	320	960	0	1	0	1	2365
Grand Total	223	1577	0	1800	841	1	148	990	0	1310	629	1939	0	1	1	2	4731
Apprch %	12.4	87.6	0		84.9	0.1	14.9		0	67.6	32.4		0	50	50		
Total %	4.7	33.3	0	38	17.8	0	3.1	20.9	0	27.7	13.3	41	0	0	0	0	

Start Time	Norwalk Boulevard Southbound				Civic Center Drive Westbound				Norwalk Boulevard Northbound				Care Ambulance Station 33 DW Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	30	226	0	256	80	0	32	112	0	157	77	234	0	0	1	1	603
04:45 PM	29	218	0	247	111	0	18	129	0	176	81	257	0	0	0	0	633
05:00 PM	35	214	0	249	171	0	33	204	0	153	70	223	0	0	0	0	676
05:15 PM	22	221	0	243	120	0	16	136	0	168	94	262	0	0	0	0	641
Total Volume	116	879	0	995	482	0	99	581	0	654	322	976	0	0	1	1	2553
% App. Total	11.7	88.3	0		83	0	17		0	67	33		0	0	100		
PHF	.829	.972	.000	.972	.705	.000	.750	.712	.000	.929	.856	.931	.000	.000	.250	.250	.944

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Civic Center Drive
 Weather: Clear

File Name : 06_NWK_Norwalk_Civic PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	30	226	0	256	80	0	32	112	0	176	81	257	0	0	0	0
+15 mins.	29	218	0	247	111	0	18	129	0	153	70	223	0	0	0	0
+30 mins.	35	214	0	249	171	0	33	204	0	168	94	262	0	0	1	1
+45 mins.	22	221	0	243	120	0	16	136	0	161	96	257	0	0	0	0
Total Volume	116	879	0	995	482	0	99	581	0	658	341	999	0	0	1	1
% App. Total	11.7	88.3	0		83	0	17		0	65.9	34.1		0	0	100	
PHF	.829	.972	.000	.972	.705	.000	.750	.712	.000	.935	.888	.953	.000	.000	.250	.250

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Adoree St/I-5 Northbound On Ramp
 Weather: Clear

File Name : 07_NWK_Norwalk_5N AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	Norwalk Boulevard Southbound				I-5 Northbound On Ramp Westbound				Norwalk Boulevard Northbound				Adoree Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	155	11	166	15	4	110	129	23	118	0	141	3	0	12	15	451
07:15 AM	0	155	7	162	29	12	92	133	19	136	0	155	8	0	18	26	476
07:30 AM	0	217	9	226	30	14	120	164	26	192	0	218	17	0	20	37	645
07:45 AM	0	246	19	265	37	19	154	210	19	263	0	282	15	0	25	40	797
Total	0	773	46	819	111	49	476	636	87	709	0	796	43	0	75	118	2369
08:00 AM	0	194	15	209	38	24	129	191	21	173	0	194	7	0	20	27	621
08:15 AM	0	168	10	178	25	29	147	201	27	170	0	197	9	0	29	38	614
08:30 AM	0	131	10	141	65	37	150	252	12	130	0	142	7	0	21	28	563
08:45 AM	0	157	16	173	76	21	105	202	16	124	0	140	10	0	10	20	535
Total	0	650	51	701	204	111	531	846	76	597	0	673	33	0	80	113	2333
Grand Total	0	1423	97	1520	315	160	1007	1482	163	1306	0	1469	76	0	155	231	4702
Apprch %	0	93.6	6.4		21.3	10.8	67.9		11.1	88.9	0		32.9	0	67.1		
Total %	0	30.3	2.1	32.3	6.7	3.4	21.4	31.5	3.5	27.8	0	31.2	1.6	0	3.3	4.9	

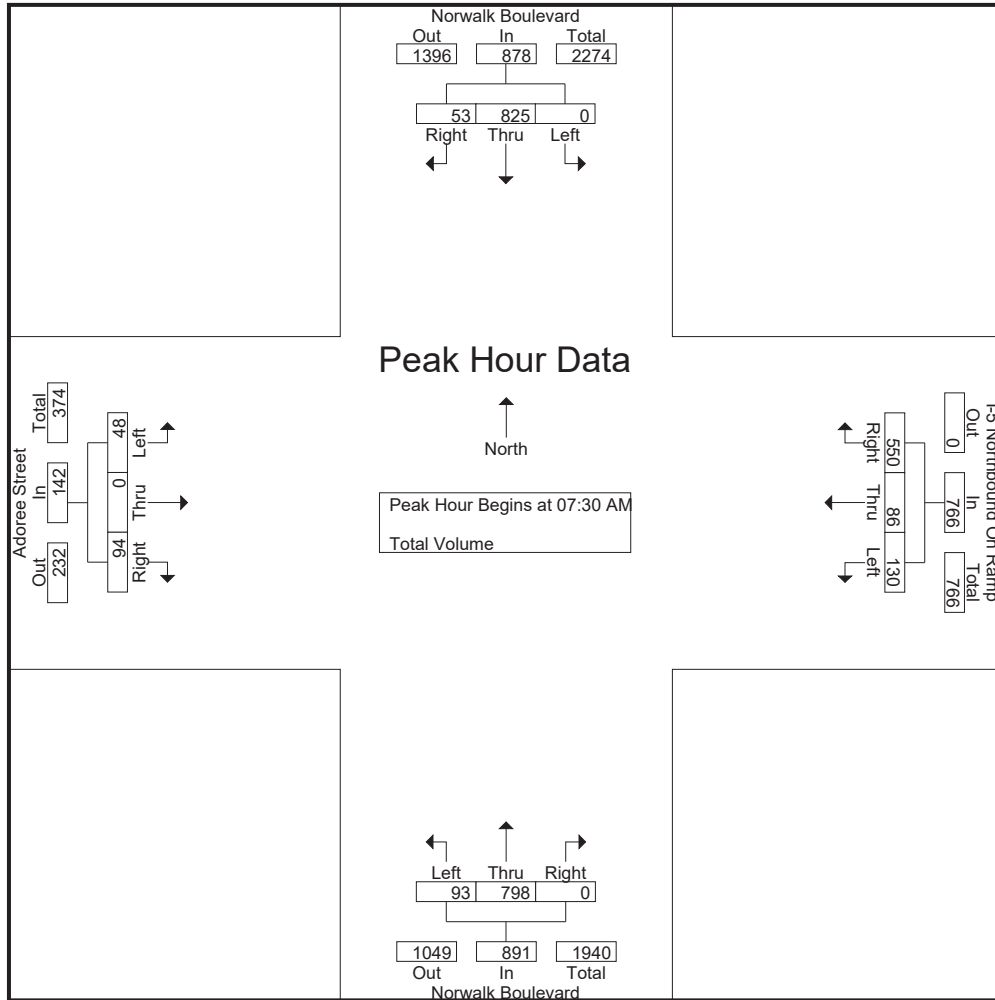
Start Time	Norwalk Boulevard Southbound				I-5 Northbound On Ramp Westbound				Norwalk Boulevard Northbound				Adoree Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	217	9	226	30	14	120	164	26	192	0	218	17	0	20	37	645
07:45 AM	0	246	19	265	37	19	154	210	19	263	0	282	15	0	25	40	797
08:00 AM	0	194	15	209	38	24	129	191	21	173	0	194	7	0	20	27	621
08:15 AM	0	168	10	178	25	29	147	201	27	170	0	197	9	0	29	38	614
Total Volume	0	825	53	878	130	86	550	766	93	798	0	891	48	0	94	142	2677
% App. Total	0	94	6		17	11.2	71.8		10.4	89.6	0		33.8	0	66.2		
PHF	.000	.838	.697	.828	.855	.741	.893	.912	.861	.759	.000	.790	.706	.000	.810	.888	.840

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Adoree St/I-5 Northbound On Ramp
 Weather: Clear

File Name : 07_NWK_Norwalk_5N AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:30 AM				07:30 AM			
+0 mins.	0	217	9	226	37	19	154	210	26	192	0	218	17	0	20	37
+15 mins.	0	246	19	265	38	24	129	191	19	263	0	282	15	0	25	40
+30 mins.	0	194	15	209	25	29	147	201	21	173	0	194	7	0	20	27
+45 mins.	0	168	10	178	65	37	150	252	27	170	0	197	9	0	29	38
Total Volume	0	825	53	878	165	109	580	854	93	798	0	891	48	0	94	142
% App. Total	0	94	6		19.3	12.8	67.9		10.4	89.6	0		33.8	0	66.2	
PHF	.000	.838	.697	.828	.635	.736	.942	.847	.861	.759	.000	.790	.706	.000	.810	.888

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Adoree St/I-5 Northbound On Ramp
 Weather: Clear

File Name : 07_NWK_Norwalk_5N PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

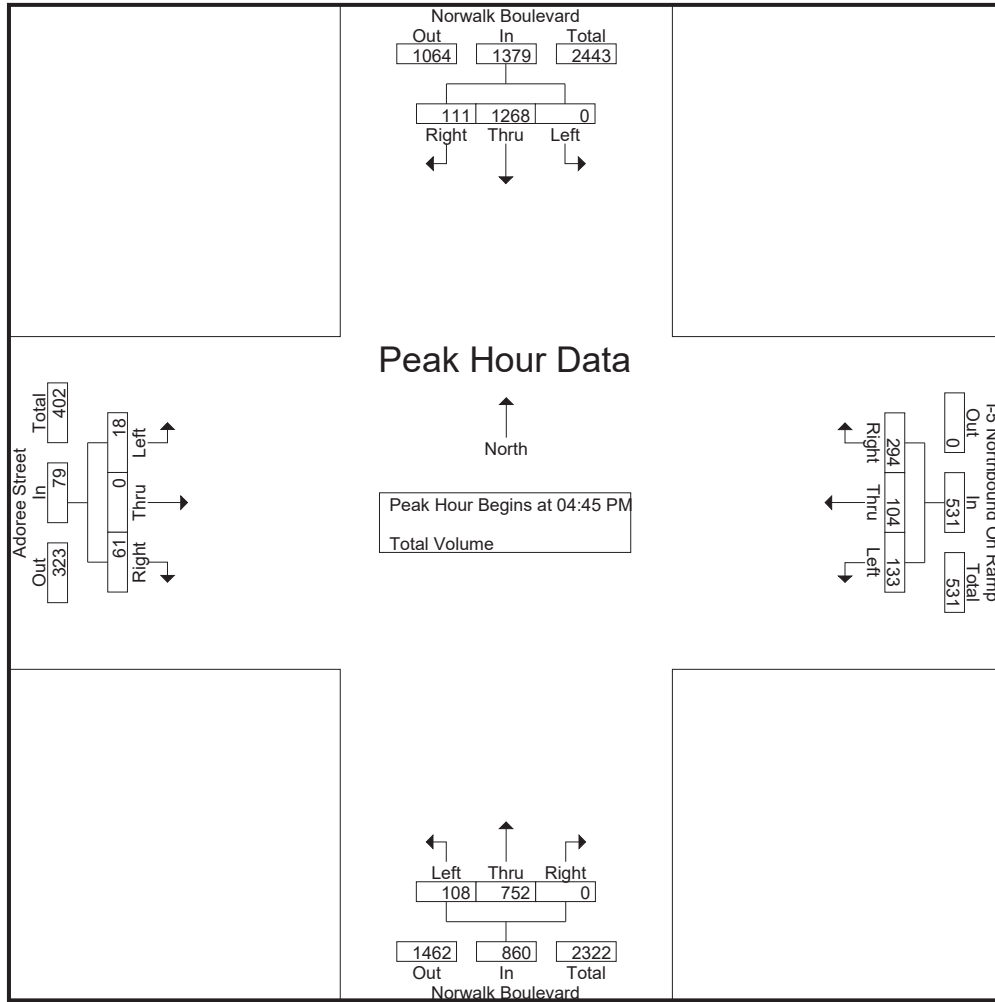
Start Time	Norwalk Boulevard Southbound				I-5 Northbound On Ramp Westbound				Norwalk Boulevard Northbound				Adoree Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	282	15	297	32	22	67	121	22	187	0	209	7	0	10	17	644
04:15 PM	0	265	21	286	28	23	52	103	19	193	0	212	7	0	15	22	623
04:30 PM	0	308	14	322	41	24	77	142	31	162	0	193	5	0	12	17	674
04:45 PM	0	324	24	348	31	22	64	117	22	190	0	212	7	0	14	21	698
Total	0	1179	74	1253	132	91	260	483	94	732	0	826	26	0	51	77	2639
05:00 PM	0	350	45	395	46	31	75	152	30	171	0	201	5	0	18	23	771
05:15 PM	0	328	22	350	26	29	68	123	26	183	0	209	3	0	16	19	701
05:30 PM	0	266	20	286	30	22	87	139	30	208	0	238	3	0	13	16	679
05:45 PM	0	218	16	234	32	32	60	124	31	154	0	185	6	0	19	25	568
Total	0	1162	103	1265	134	114	290	538	117	716	0	833	17	0	66	83	2719
Grand Total	0	2341	177	2518	266	205	550	1021	211	1448	0	1659	43	0	117	160	5358
Apprch %	0	93	7		26.1	20.1	53.9		12.7	87.3	0		26.9	0	73.1		
Total %	0	43.7	3.3	47	5	3.8	10.3	19.1	3.9	27	0	31	0.8	0	2.2	3	

Start Time	Norwalk Boulevard Southbound				I-5 Northbound On Ramp Westbound				Norwalk Boulevard Northbound				Adoree Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	0	324	24	348	31	22	64	117	22	190	0	212	7	0	14	21	698
05:00 PM	0	350	45	395	46	31	75	152	30	171	0	201	5	0	18	23	771
05:15 PM	0	328	22	350	26	29	68	123	26	183	0	209	3	0	16	19	701
05:30 PM	0	266	20	286	30	22	87	139	30	208	0	238	3	0	13	16	679
Total Volume	0	1268	111	1379	133	104	294	531	108	752	0	860	18	0	61	79	2849
% App. Total	0	92	8		25	19.6	55.4		12.6	87.4	0		22.8	0	77.2		
PHF	.000	.906	.617	.873	.723	.839	.845	.873	.900	.904	.000	.903	.643	.000	.847	.859	.924

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Norwalk
 N/S: Norwalk Boulevard
 E/W: Adoree St/I-5 Northbound On Ramp
 Weather: Clear

File Name : 07_NWK_Norwalk_5N PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:45 PM				04:15 PM			
+0 mins.	0	308	14	322	46	31	75	152	22	190	0	212	7	0	15	22
+15 mins.	0	324	24	348	26	29	68	123	30	171	0	201	5	0	12	17
+30 mins.	0	350	45	395	30	22	87	139	26	183	0	209	7	0	14	21
+45 mins.	0	328	22	350	32	32	60	124	30	208	0	238	5	0	18	23
Total Volume	0	1310	105	1415	134	114	290	538	108	752	0	860	24	0	59	83
% App. Total	0	92.6	7.4		24.9	21.2	53.9		12.6	87.4	0		28.9	0	71.1	
PHF	.000	.936	.583	.896	.728	.891	.833	.885	.900	.904	.000	.903	.857	.000	.819	.902

City of Norwalk
 N/S: Norwalk Boulevard/San Antonio Drive
 E/W: Frontage Rd/I-5 Southbound On Ramp
 Weather: Clear

File Name : 08_NWK_San A_5S AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

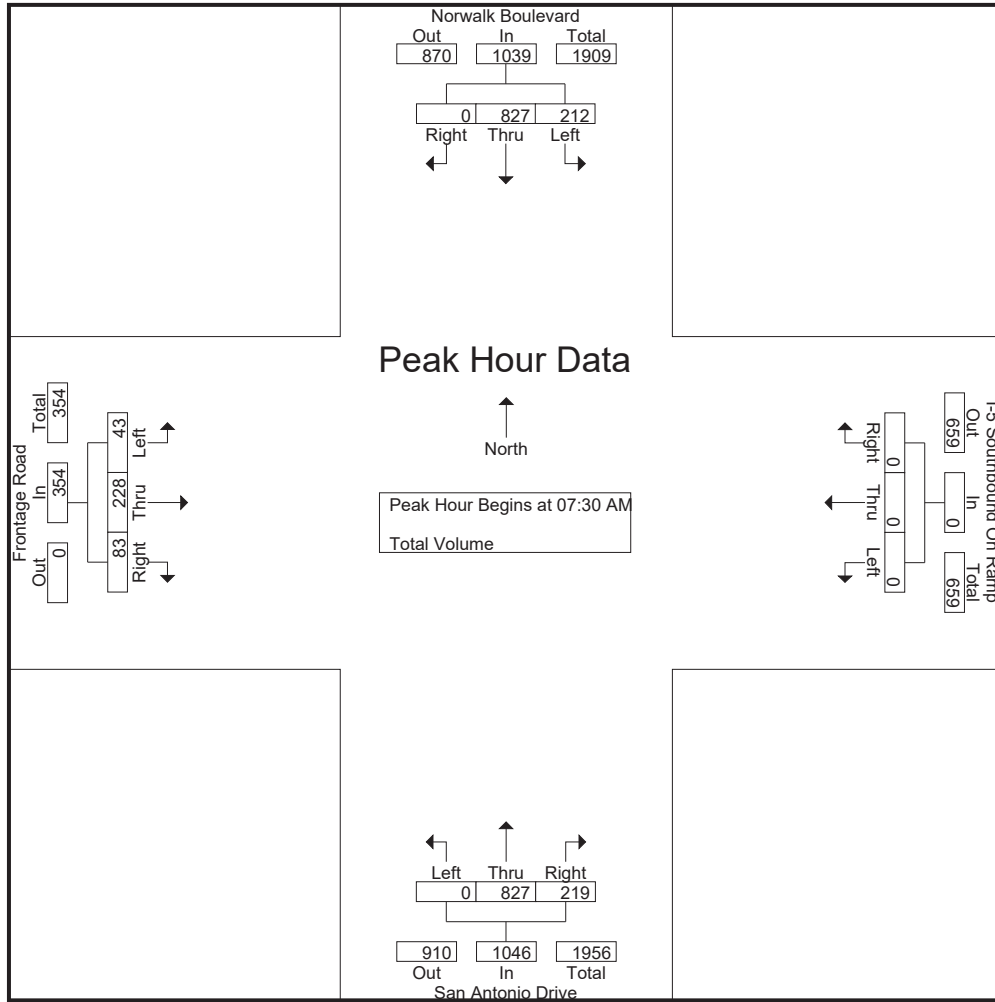
Groups Printed- Total Volume

Start Time	Norwalk Boulevard Southbound				I-5 Southbound On Ramp Westbound				San Antonio Drive Northbound				Frontage Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	50	125	0	175	0	0	0	0	0	131	46	177	8	38	15	61	413
07:15 AM	42	152	0	194	0	0	0	0	0	144	43	187	4	73	15	92	473
07:30 AM	58	205	0	263	0	0	0	0	0	213	63	276	8	57	14	79	618
07:45 AM	57	249	0	306	0	0	0	0	0	255	56	311	14	65	21	100	717
Total	207	731	0	938	0	0	0	0	0	743	208	951	34	233	65	332	2221
08:00 AM	49	205	0	254	0	0	0	0	0	189	46	235	11	53	23	87	576
08:15 AM	48	168	0	216	0	0	0	0	0	170	54	224	10	53	25	88	528
08:30 AM	50	171	0	221	0	0	0	0	0	137	33	170	6	68	14	88	479
08:45 AM	51	194	0	245	0	0	0	0	0	129	38	167	5	34	22	61	473
Total	198	738	0	936	0	0	0	0	0	625	171	796	32	208	84	324	2056
Grand Total	405	1469	0	1874	0	0	0	0	0	1368	379	1747	66	441	149	656	4277
Apprch %	21.6	78.4	0		0	0	0		0	78.3	21.7		10.1	67.2	22.7		
Total %	9.5	34.3	0	43.8	0	0	0	0	0	32	8.9	40.8	1.5	10.3	3.5	15.3	

Start Time	Norwalk Boulevard Southbound				I-5 Southbound On Ramp Westbound				San Antonio Drive Northbound				Frontage Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	58	205	0	263	0	0	0	0	0	213	63	276	8	57	14	79	618
07:45 AM	57	249	0	306	0	0	0	0	0	255	56	311	14	65	21	100	717
08:00 AM	49	205	0	254	0	0	0	0	0	189	46	235	11	53	23	87	576
08:15 AM	48	168	0	216	0	0	0	0	0	170	54	224	10	53	25	88	528
Total Volume	212	827	0	1039	0	0	0	0	0	827	219	1046	43	228	83	354	2439
% App. Total	20.4	79.6	0		0	0	0		0	79.1	20.9		12.1	64.4	23.4		
PHF	.914	.830	.000	.849	.000	.000	.000	.000	.000	.811	.869	.841	.768	.877	.830	.885	.850

City of Norwalk
 N/S: Norwalk Boulevard/San Antonio Drive
 E/W: Frontage Rd/I-5 Southbound On Ramp
 Weather: Clear

File Name : 08_NWK_San A_5S AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				07:45 AM			
+0 mins.	58	205	0	263	0	0	0	0	0	213	63	276	14	65	21	100
+15 mins.	57	249	0	306	0	0	0	0	0	255	56	311	11	53	23	87
+30 mins.	49	205	0	254	0	0	0	0	0	189	46	235	10	53	25	88
+45 mins.	48	168	0	216	0	0	0	0	0	170	54	224	6	68	14	88
Total Volume	212	827	0	1039	0	0	0	0	0	827	219	1046	41	239	83	363
% App. Total	20.4	79.6	0		0	0	0	0	0	79.1	20.9		11.3	65.8	22.9	
PHF	.914	.830	.000	.849	.000	.000	.000	.000	.000	.811	.869	.841	.732	.879	.830	.908

City of Norwalk
 N/S: Norwalk Boulevard/San Antonio Drive
 E/W: Frontage Rd/I-5 Southbound On Ramp
 Weather: Clear

File Name : 08_NWK_San A_5S PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

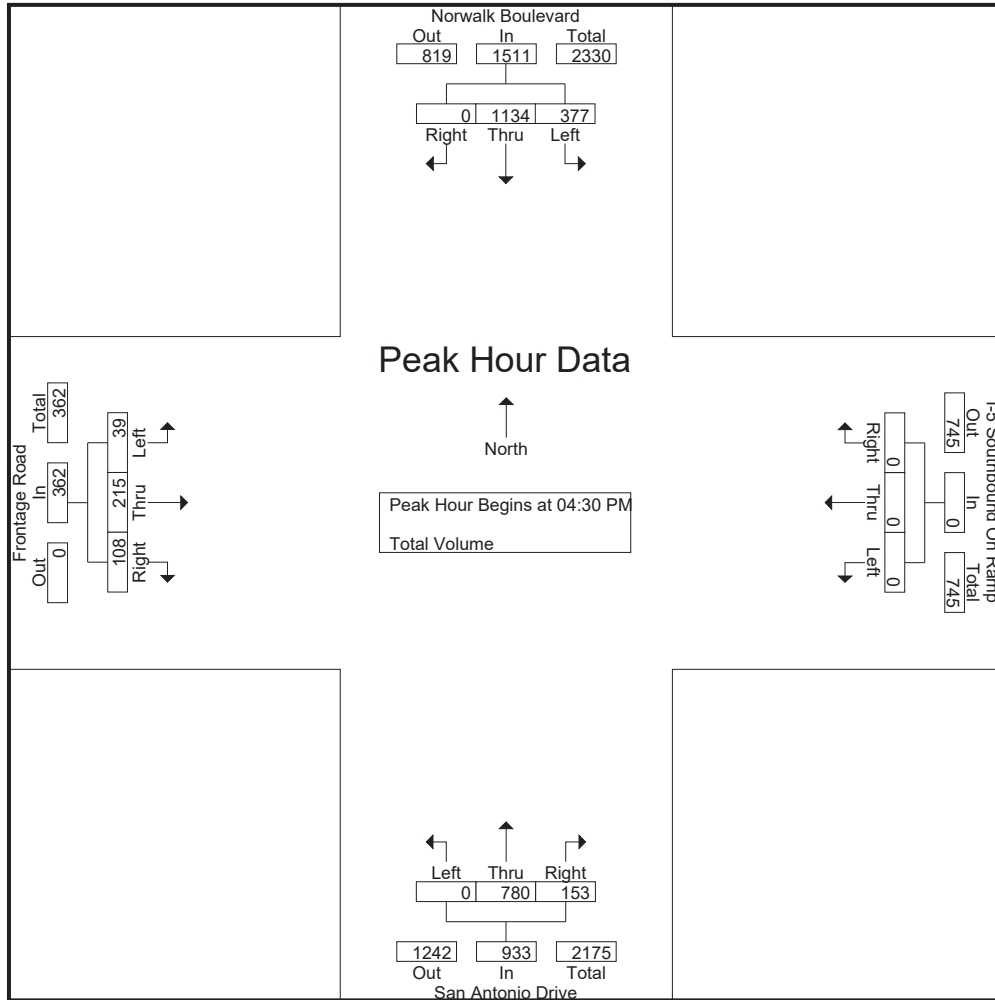
Groups Printed- Total Volume

Start Time	Norwalk Boulevard Southbound				I-5 Southbound On Ramp Westbound				San Antonio Drive Northbound				Frontage Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	75	236	0	311	0	0	0	0	0	198	36	234	8	44	22	74	619
04:15 PM	70	226	0	296	0	0	0	0	0	206	33	239	8	33	24	65	600
04:30 PM	105	264	0	369	0	0	0	0	0	186	33	219	9	50	22	81	669
04:45 PM	89	265	0	354	0	0	0	0	0	212	49	261	8	55	36	99	714
Total	339	991	0	1330	0	0	0	0	0	802	151	953	33	182	104	319	2602
05:00 PM	91	316	0	407	0	0	0	0	0	187	30	217	10	47	29	86	710
05:15 PM	92	289	0	381	0	0	0	0	0	195	41	236	12	63	21	96	713
05:30 PM	61	229	0	290	0	0	0	0	0	227	41	268	8	43	40	91	649
05:45 PM	65	214	0	279	0	0	0	0	0	176	35	211	5	40	18	63	553
Total	309	1048	0	1357	0	0	0	0	0	785	147	932	35	193	108	336	2625
Grand Total	648	2039	0	2687	0	0	0	0	0	1587	298	1885	68	375	212	655	5227
Apprch %	24.1	75.9	0		0	0	0		0	84.2	15.8		10.4	57.3	32.4		
Total %	12.4	39	0	51.4	0	0	0	0	0	30.4	5.7	36.1	1.3	7.2	4.1	12.5	

Start Time	Norwalk Boulevard Southbound				I-5 Southbound On Ramp Westbound				San Antonio Drive Northbound				Frontage Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	105	264	0	369	0	0	0	0	0	186	33	219	9	50	22	81	669
04:45 PM	89	265	0	354	0	0	0	0	0	212	49	261	8	55	36	99	714
05:00 PM	91	316	0	407	0	0	0	0	0	187	30	217	10	47	29	86	710
05:15 PM	92	289	0	381	0	0	0	0	0	195	41	236	12	63	21	96	713
Total Volume	377	1134	0	1511	0	0	0	0	0	780	153	933	39	215	108	362	2806
% App. Total	25	75	0		0	0	0		0	83.6	16.4		10.8	59.4	29.8		
PHF	.898	.897	.000	.928	.000	.000	.000	.000	.000	.920	.781	.894	.813	.853	.750	.914	.982

City of Norwalk
 N/S: Norwalk Boulevard/San Antonio Drive
 E/W: Frontage Rd/I-5 Southbound On Ramp
 Weather: Clear

File Name : 08_NWK_San A_5S PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:45 PM				04:45 PM			
+0 mins.	105	264	0	369	0	0	0	0	0	212	49	261	8	55	36	99
+15 mins.	89	265	0	354	0	0	0	0	0	187	30	217	10	47	29	86
+30 mins.	91	316	0	407	0	0	0	0	0	195	41	236	12	63	21	96
+45 mins.	92	289	0	381	0	0	0	0	0	227	41	268	8	43	40	91
Total Volume	377	1134	0	1511	0	0	0	0	0	821	161	982	38	208	126	372
% App. Total	25	75	0		0	0	0	0	0	83.6	16.4		10.2	55.9	33.9	
PHF	.898	.897	.000	.928	.000	.000	.000	.000	.000	.904	.821	.916	.792	.825	.788	.939

City of Norwalk
 N/S: San Antonio Drive
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 09_NWK_San A_Firestone AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	San Antonio Drive Southbound				Firestone Boulevard Westbound				San Antonio Drive Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	78	26	109	5	55	11	71	9	116	7	132	37	51	6	94	406
07:15 AM	7	117	24	148	12	58	10	80	13	169	8	190	27	78	4	109	527
07:30 AM	13	142	41	196	21	72	4	97	7	208	14	229	54	73	10	137	659
07:45 AM	21	181	46	248	15	81	17	113	10	233	20	263	56	94	12	162	786
Total	46	518	137	701	53	266	42	361	39	726	49	814	174	296	32	502	2378
08:00 AM	17	142	48	207	10	90	7	107	16	177	13	206	50	83	10	143	663
08:15 AM	16	128	38	182	10	72	12	94	14	182	8	204	53	94	10	157	637
08:30 AM	6	105	66	177	6	74	4	84	17	151	9	177	30	59	7	96	534
08:45 AM	9	109	73	191	7	76	13	96	15	125	11	151	29	64	12	105	543
Total	48	484	225	757	33	312	36	381	62	635	41	738	162	300	39	501	2377
Grand Total	94	1002	362	1458	86	578	78	742	101	1361	90	1552	336	596	71	1003	4755
Apprch %	6.4	68.7	24.8		11.6	77.9	10.5		6.5	87.7	5.8		33.5	59.4	7.1		
Total %	2	21.1	7.6	30.7	1.8	12.2	1.6	15.6	2.1	28.6	1.9	32.6	7.1	12.5	1.5	21.1	

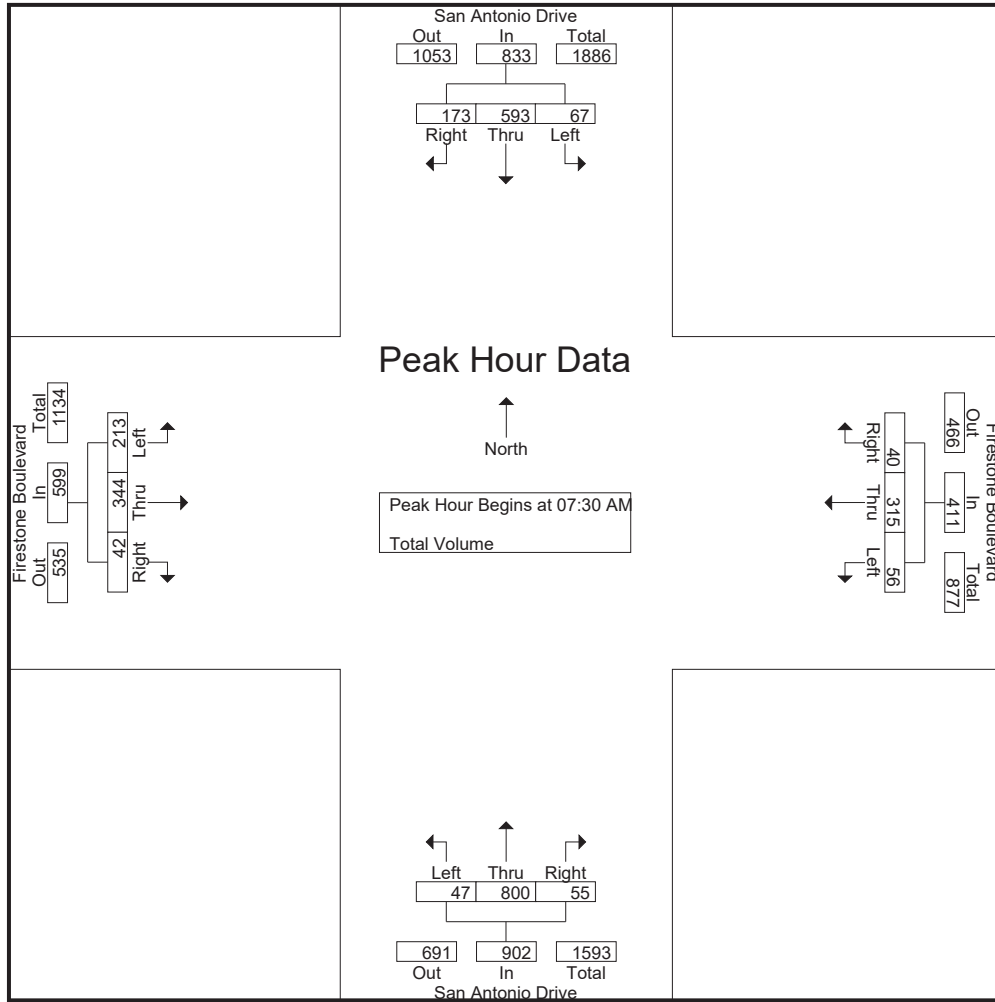
Start Time	San Antonio Drive Southbound				Firestone Boulevard Westbound				San Antonio Drive Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	13	142	41	196	21	72	4	97	7	208	14	229	54	73	10	137	659
07:45 AM	21	181	46	248	15	81	17	113	10	233	20	263	56	94	12	162	786
08:00 AM	17	142	48	207	10	90	7	107	16	177	13	206	50	83	10	143	663
08:15 AM	16	128	38	182	10	72	12	94	14	182	8	204	53	94	10	157	637
Total Volume	67	593	173	833	56	315	40	411	47	800	55	902	213	344	42	599	2745
% App. Total	8	71.2	20.8		13.6	76.6	9.7		5.2	88.7	6.1		35.6	57.4	7		
PHF	.798	.819	.901	.840	.667	.875	.588	.909	.734	.858	.688	.857	.951	.915	.875	.924	.873

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Norwalk
 N/S: San Antonio Drive
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 09_NWK_San A_Firestone AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	13	142	41	196	21	72	4	97	7	208	14	229	54	73	10	137
+15 mins.	21	181	46	248	15	81	17	113	10	233	20	263	56	94	12	162
+30 mins.	17	142	48	207	10	90	7	107	16	177	13	206	50	83	10	143
+45 mins.	16	128	38	182	10	72	12	94	14	182	8	204	53	94	10	157
Total Volume	67	593	173	833	56	315	40	411	47	800	55	902	213	344	42	599
% App. Total	8	71.2	20.8		13.6	76.6	9.7		5.2	88.7	6.1		35.6	57.4	7	
PHF	.798	.819	.901	.840	.667	.875	.588	.909	.734	.858	.688	.857	.951	.915	.875	.924

City of Norwalk
 N/S: San Antonio Drive
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 09_NWK_San A_Firestone PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

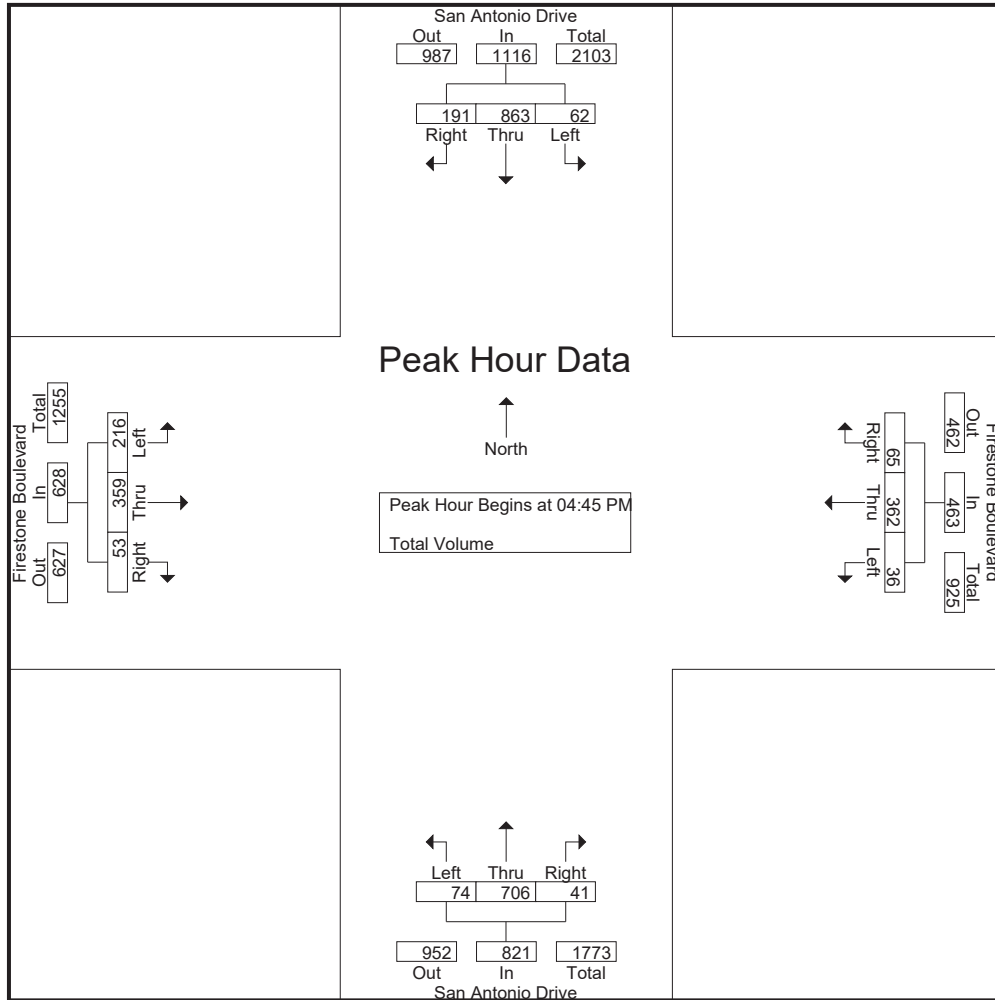
Groups Printed- Total Volume

Start Time	San Antonio Drive Southbound				Firestone Boulevard Westbound				San Antonio Drive Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	15	168	45	228	16	67	12	95	17	181	8	206	49	72	12	133	662
04:15 PM	8	181	42	231	13	105	15	133	14	177	9	200	43	82	11	136	700
04:30 PM	11	194	46	251	15	94	18	127	20	156	5	181	42	89	15	146	705
04:45 PM	20	224	50	294	11	91	18	120	21	170	8	199	51	97	16	164	777
Total	54	767	183	1004	55	357	63	475	72	684	30	786	185	340	54	579	2844
05:00 PM	10	231	57	298	7	96	14	117	22	178	13	213	41	85	10	136	764
05:15 PM	14	233	39	286	9	80	16	105	13	150	10	173	62	88	15	165	729
05:30 PM	18	175	45	238	9	95	17	121	18	208	10	236	62	89	12	163	758
05:45 PM	9	156	39	204	16	68	13	97	18	162	7	187	39	96	15	150	638
Total	51	795	180	1026	41	339	60	440	71	698	40	809	204	358	52	614	2889
Grand Total	105	1562	363	2030	96	696	123	915	143	1382	70	1595	389	698	106	1193	5733
Apprch %	5.2	76.9	17.9		10.5	76.1	13.4		9	86.6	4.4		32.6	58.5	8.9		
Total %	1.8	27.2	6.3	35.4	1.7	12.1	2.1	16	2.5	24.1	1.2	27.8	6.8	12.2	1.8	20.8	

Start Time	San Antonio Drive Southbound				Firestone Boulevard Westbound				San Antonio Drive Northbound				Firestone Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	20	224	50	294	11	91	18	120	21	170	8	199	51	97	16	164	777
05:00 PM	10	231	57	298	7	96	14	117	22	178	13	213	41	85	10	136	764
05:15 PM	14	233	39	286	9	80	16	105	13	150	10	173	62	88	15	165	729
05:30 PM	18	175	45	238	9	95	17	121	18	208	10	236	62	89	12	163	758
Total Volume	62	863	191	1116	36	362	65	463	74	706	41	821	216	359	53	628	3028
% App. Total	5.6	77.3	17.1		7.8	78.2	14		9	86	5		34.4	57.2	8.4		
PHF	.775	.926	.838	.936	.818	.943	.903	.957	.841	.849	.788	.870	.871	.925	.828	.952	.974

City of Norwalk
 N/S: San Antonio Drive
 E/W: Firestone Boulevard
 Weather: Clear

File Name : 09_NWK_San A_Firestone PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				04:45 PM				04:45 PM			
+0 mins.	11	194	46	251	13	105	15	133	21	170	8	199	51	97	16	164
+15 mins.	20	224	50	294	15	94	18	127	22	178	13	213	41	85	10	136
+30 mins.	10	231	57	298	11	91	18	120	13	150	10	173	62	88	15	165
+45 mins.	14	233	39	286	7	96	14	117	18	208	10	236	62	89	12	163
Total Volume	55	882	192	1129	46	386	65	497	74	706	41	821	216	359	53	628
% App. Total	4.9	78.1	17		9.3	77.7	13.1		9	86	5		34.4	57.2	8.4	
PHF	.688	.946	.842	.947	.767	.919	.903	.934	.841	.849	.788	.870	.871	.925	.828	.952

City of Norwalk
 N/S: Avenida Manuel Salinas
 E/W: Imperial Highway
 Weather: Clear

File Name : 10_NWK_AMS_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	Civic Center Plaza Driveway Southbound				Imperial Highway Westbound				Avenida Manuel Salinas Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	16	7	6	29	0	338	16	354	1	2	0	3	8	271	7	286	672
07:15 AM	12	4	9	25	1	342	16	359	2	1	1	4	9	277	14	300	688
07:30 AM	18	5	7	30	2	297	30	329	3	4	0	7	17	317	17	351	717
07:45 AM	26	10	9	45	7	298	16	321	1	6	3	10	20	350	35	405	781
Total	72	26	31	129	10	1275	78	1363	7	13	4	24	54	1215	73	1342	2858
08:00 AM	15	4	8	27	4	269	14	287	5	1	1	7	12	325	30	367	688
08:15 AM	14	7	7	28	2	281	11	294	4	1	1	6	7	298	11	316	644
08:30 AM	14	7	9	30	3	306	20	329	2	5	1	8	9	264	11	284	651
08:45 AM	14	3	6	23	8	220	17	245	3	4	4	11	14	257	16	287	566
Total	57	21	30	108	17	1076	62	1155	14	11	7	32	42	1144	68	1254	2549
Grand Total	129	47	61	237	27	2351	140	2518	21	24	11	56	96	2359	141	2596	5407
Apprch %	54.4	19.8	25.7		1.1	93.4	5.6		37.5	42.9	19.6		3.7	90.9	5.4		
Total %	2.4	0.9	1.1	4.4	0.5	43.5	2.6	46.6	0.4	0.4	0.2	1	1.8	43.6	2.6	48	

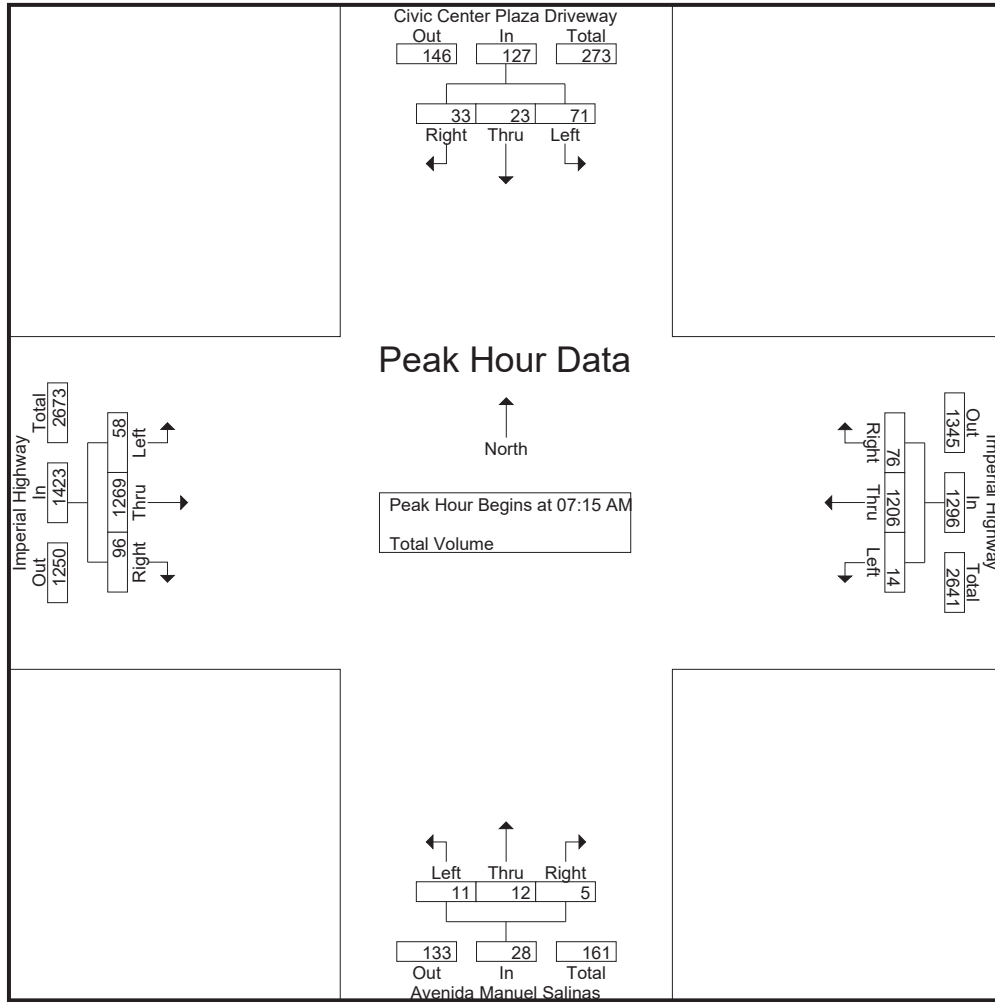
Start Time	Civic Center Plaza Driveway Southbound				Imperial Highway Westbound				Avenida Manuel Salinas Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	12	4	9	25	1	342	16	359	2	1	1	4	9	277	14	300	688
07:30 AM	18	5	7	30	2	297	30	329	3	4	0	7	17	317	17	351	717
07:45 AM	26	10	9	45	7	298	16	321	1	6	3	10	20	350	35	405	781
08:00 AM	15	4	8	27	4	269	14	287	5	1	1	7	12	325	30	367	688
Total Volume	71	23	33	127	14	1206	76	1296	11	12	5	28	58	1269	96	1423	2874
% App. Total	55.9	18.1	26		1.1	93.1	5.9		39.3	42.9	17.9		4.1	89.2	6.7		
PHF	.683	.575	.917	.706	.500	.882	.633	.903	.550	.500	.417	.700	.725	.906	.686	.878	.920

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Norwalk
 N/S: Avenida Manuel Salinas
 E/W: Imperial Higway
 Weather: Clear

File Name : 10_NWK_AMS_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	18	5	7	30	0	338	16	354	5	1	1	7	17	317	17	351
+15 mins.	26	10	9	45	1	342	16	359	4	1	1	6	20	350	35	405
+30 mins.	15	4	8	27	2	297	30	329	2	5	1	8	12	325	30	367
+45 mins.	14	7	7	28	7	298	16	321	3	4	4	11	7	298	11	316
Total Volume	73	26	31	130	10	1275	78	1363	14	11	7	32	56	1290	93	1439
% App. Total	56.2	20	23.8		0.7	93.5	5.7		43.8	34.4	21.9		3.9	89.6	6.5	
PHF	.702	.650	.861	.722	.357	.932	.650	.949	.700	.550	.438	.727	.700	.921	.664	.888

City of Norwalk
 N/S: Avenida Manuel Salinas
 E/W: Imperial Highway
 Weather: Clear

File Name : 10_NWK_AMS_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	Civic Center Plaza Driveway Southbound				Imperial Highway Westbound				Avenida Manuel Salinas Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	9	7	13	29	3	344	26	373	20	3	2	25	12	359	7	378	805
04:15 PM	12	2	4	18	2	302	21	325	4	1	2	7	13	339	6	358	708
04:30 PM	9	0	13	22	0	367	20	387	4	1	4	9	22	307	4	333	751
04:45 PM	17	4	8	29	1	378	22	401	11	1	0	12	14	291	4	309	751
Total	47	13	38	98	6	1391	89	1486	39	6	8	53	61	1296	21	1378	3015
05:00 PM	12	7	11	30	1	387	18	406	59	4	12	75	12	322	4	338	849
05:15 PM	10	2	9	21	3	319	22	344	8	4	6	18	20	294	11	325	708
05:30 PM	10	9	13	32	6	302	26	334	6	3	2	11	13	320	3	336	713
05:45 PM	14	2	16	32	4	300	21	325	4	3	5	12	22	300	4	326	695
Total	46	20	49	115	14	1308	87	1409	77	14	25	116	67	1236	22	1325	2965
Grand Total	93	33	87	213	20	2699	176	2895	116	20	33	169	128	2532	43	2703	5980
Apprch %	43.7	15.5	40.8		0.7	93.2	6.1		68.6	11.8	19.5		4.7	93.7	1.6		
Total %	1.6	0.6	1.5	3.6	0.3	45.1	2.9	48.4	1.9	0.3	0.6	2.8	2.1	42.3	0.7	45.2	

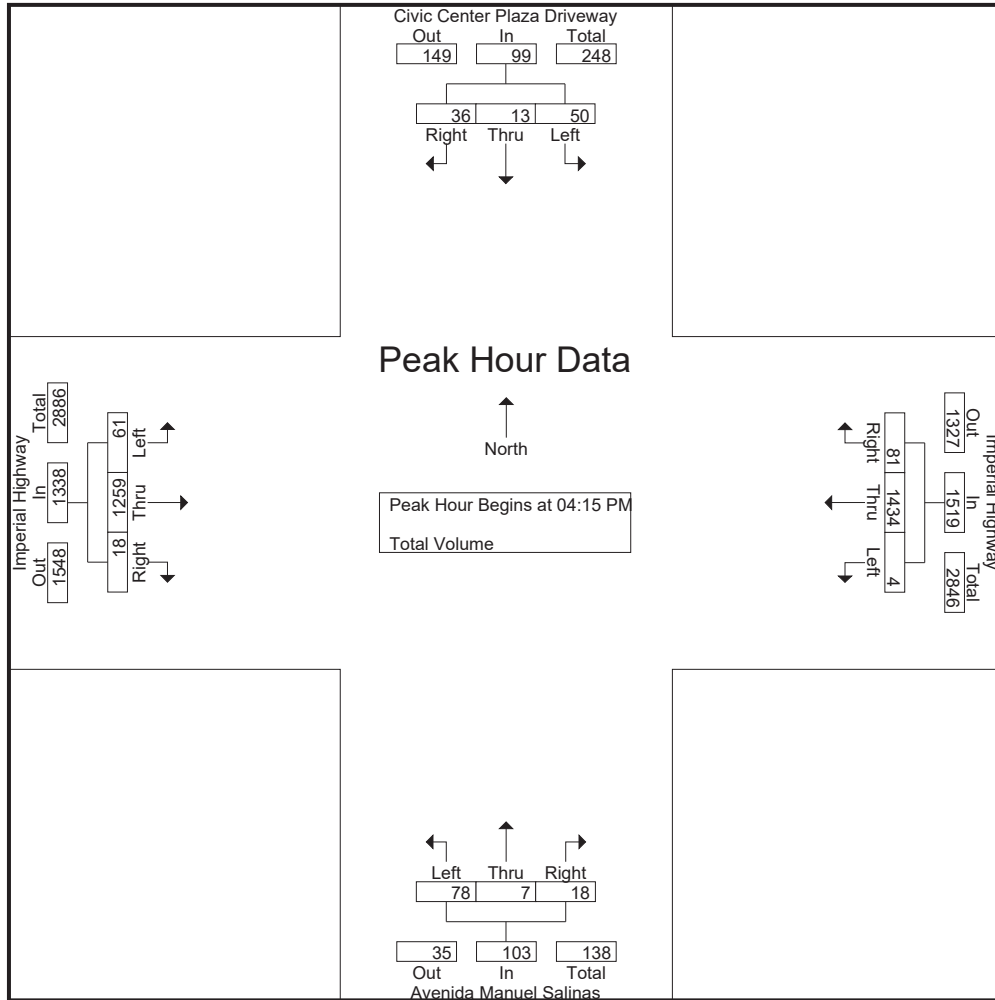
Start Time	Civic Center Plaza Driveway Southbound				Imperial Highway Westbound				Avenida Manuel Salinas Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	12	2	4	18	2	302	21	325	4	1	2	7	13	339	6	358	708
04:30 PM	9	0	13	22	0	367	20	387	4	1	4	9	22	307	4	333	751
04:45 PM	17	4	8	29	1	378	22	401	11	1	0	12	14	291	4	309	751
05:00 PM	12	7	11	30	1	387	18	406	59	4	12	75	12	322	4	338	849
Total Volume	50	13	36	99	4	1434	81	1519	78	7	18	103	61	1259	18	1338	3059
% App. Total	50.5	13.1	36.4		0.3	94.4	5.3		75.7	6.8	17.5		4.6	94.1	1.3		
PHF	.735	.464	.692	.825	.500	.926	.920	.935	.331	.438	.375	.343	.693	.928	.750	.934	.901

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Norwalk
 N/S: Avenida Manuel Salinas
 E/W: Imperial Higway
 Weather: Clear

File Name : 10_NWK_AMS_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	12	7	11	30	0	367	20	387	11	1	0	12	12	359	7	378
+15 mins.	10	2	9	21	1	378	22	401	59	4	12	75	13	339	6	358
+30 mins.	10	9	13	32	1	387	18	406	8	4	6	18	22	307	4	333
+45 mins.	14	2	16	32	3	319	22	344	6	3	2	11	14	291	4	309
Total Volume	46	20	49	115	5	1451	82	1538	84	12	20	116	61	1296	21	1378
% App. Total	40	17.4	42.6		0.3	94.3	5.3		72.4	10.3	17.2		4.4	94	1.5	
PHF	.821	.556	.766	.898	.417	.937	.932	.947	.356	.750	.417	.387	.693	.903	.750	.911

City of Norwalk
 N/S: Volunteer Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 11_NWK_Volunteer_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

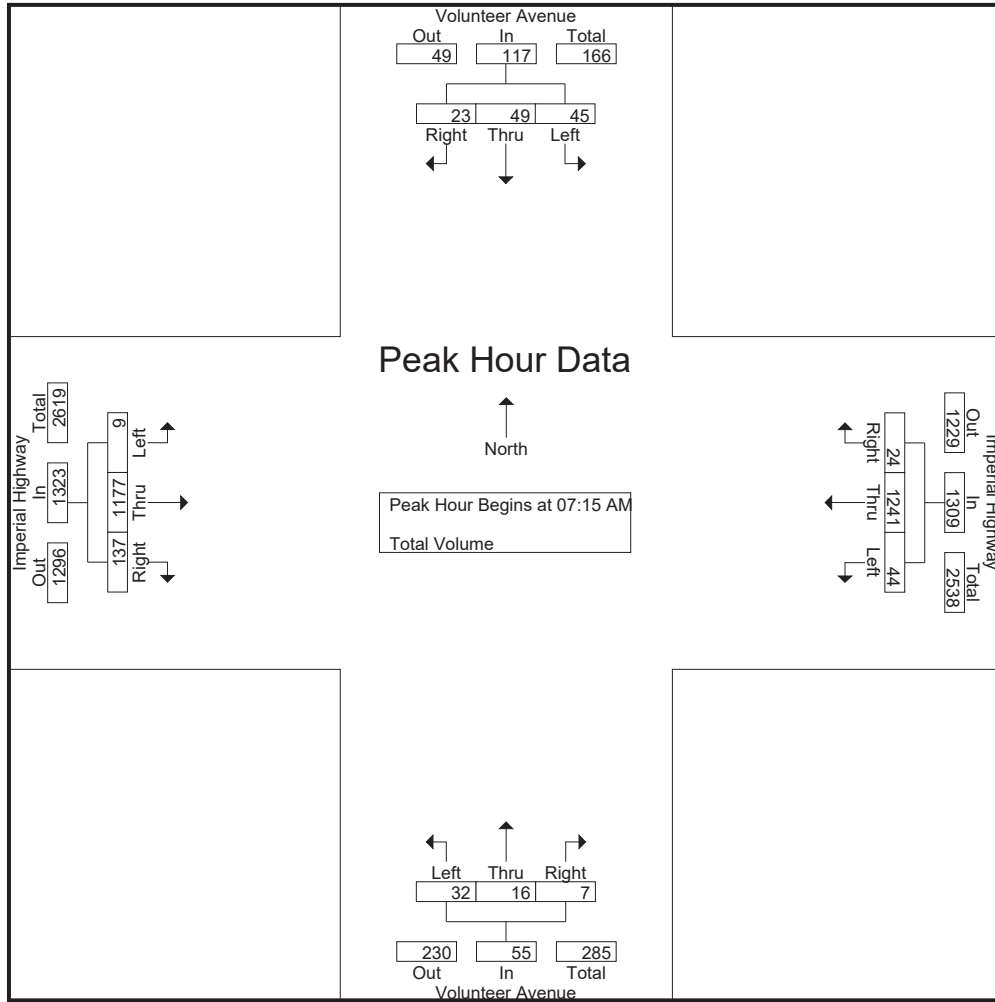
Groups Printed- Total Volume

Start Time	Volunteer Avenue Southbound				Imperial Highway Westbound				Volunteer Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	7	2	5	14	5	338	4	347	6	3	1	10	3	257	19	279	650
07:15 AM	11	14	8	33	6	348	2	356	9	3	0	12	1	276	13	290	691
07:30 AM	10	12	3	25	13	321	5	339	2	3	1	6	1	295	37	333	703
07:45 AM	7	16	4	27	14	300	7	321	9	7	1	17	2	309	58	369	734
Total	35	44	20	99	38	1307	18	1363	26	16	3	45	7	1137	127	1271	2778
08:00 AM	17	7	8	32	11	272	10	293	12	3	5	20	5	297	29	331	676
08:15 AM	14	5	6	25	9	275	8	292	3	2	6	11	3	281	21	305	633
08:30 AM	9	7	6	22	11	294	5	310	17	0	3	20	5	253	16	274	626
08:45 AM	8	2	6	16	8	232	5	245	22	4	6	32	2	247	14	263	556
Total	48	21	26	95	39	1073	28	1140	54	9	20	83	15	1078	80	1173	2491
Grand Total	83	65	46	194	77	2380	46	2503	80	25	23	128	22	2215	207	2444	5269
Apprch %	42.8	33.5	23.7		3.1	95.1	1.8		62.5	19.5	18		0.9	90.6	8.5		
Total %	1.6	1.2	0.9	3.7	1.5	45.2	0.9	47.5	1.5	0.5	0.4	2.4	0.4	42	3.9	46.4	

Start Time	Volunteer Avenue Southbound				Imperial Highway Westbound				Volunteer Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	11	14	8	33	6	348	2	356	9	3	0	12	1	276	13	290	691
07:30 AM	10	12	3	25	13	321	5	339	2	3	1	6	1	295	37	333	703
07:45 AM	7	16	4	27	14	300	7	321	9	7	1	17	2	309	58	369	734
08:00 AM	17	7	8	32	11	272	10	293	12	3	5	20	5	297	29	331	676
Total Volume	45	49	23	117	44	1241	24	1309	32	16	7	55	9	1177	137	1323	2804
% App. Total	38.5	41.9	19.7		3.4	94.8	1.8		58.2	29.1	12.7		0.7	89	10.4		
PHF	.662	.766	.719	.886	.786	.892	.600	.919	.667	.571	.350	.688	.450	.952	.591	.896	.955

City of Norwalk
 N/S: Volunteer Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 11_NWK_Volunteer_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	11	14	8	33	5	338	4	347	12	3	5	20	1	295	37	333
+15 mins.	10	12	3	25	6	348	2	356	3	2	6	11	2	309	58	369
+30 mins.	7	16	4	27	13	321	5	339	17	0	3	20	5	297	29	331
+45 mins.	17	7	8	32	14	300	7	321	22	4	6	32	3	281	21	305
Total Volume	45	49	23	117	38	1307	18	1363	54	9	20	83	11	1182	145	1338
% App. Total	38.5	41.9	19.7		2.8	95.9	1.3		65.1	10.8	24.1		0.8	88.3	10.8	
PHF	.662	.766	.719	.886	.679	.939	.643	.957	.614	.563	.833	.648	.550	.956	.625	.907

City of Norwalk
 N/S: Volunteer Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 11_NWK_Volunteer_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	Volunteer Avenue Southbound				Imperial Highway Westbound				Volunteer Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	9	5	5	19	7	325	10	342	36	12	8	56	5	339	11	355	772
04:15 PM	6	3	6	15	4	292	17	313	14	4	4	22	3	320	11	334	684
04:30 PM	12	4	5	21	9	359	16	384	16	10	7	33	5	294	7	306	744
04:45 PM	11	6	5	22	10	355	10	375	29	12	12	53	4	286	10	300	750
Total	38	18	21	77	30	1331	53	1414	95	38	31	164	17	1239	39	1295	2950
05:00 PM	8	1	4	13	11	337	13	361	56	22	16	94	2	326	5	333	801
05:15 PM	13	2	7	22	6	320	8	334	8	2	8	18	3	288	4	295	669
05:30 PM	11	4	8	23	6	291	10	307	28	8	5	41	3	315	4	322	693
05:45 PM	11	2	7	20	11	291	15	317	13	5	2	20	9	298	3	310	667
Total	43	9	26	78	34	1239	46	1319	105	37	31	173	17	1227	16	1260	2830
Grand Total	81	27	47	155	64	2570	99	2733	200	75	62	337	34	2466	55	2555	5780
Apprch %	52.3	17.4	30.3		2.3	94	3.6		59.3	22.3	18.4		1.3	96.5	2.2		
Total %	1.4	0.5	0.8	2.7	1.1	44.5	1.7	47.3	3.5	1.3	1.1	5.8	0.6	42.7	1	44.2	

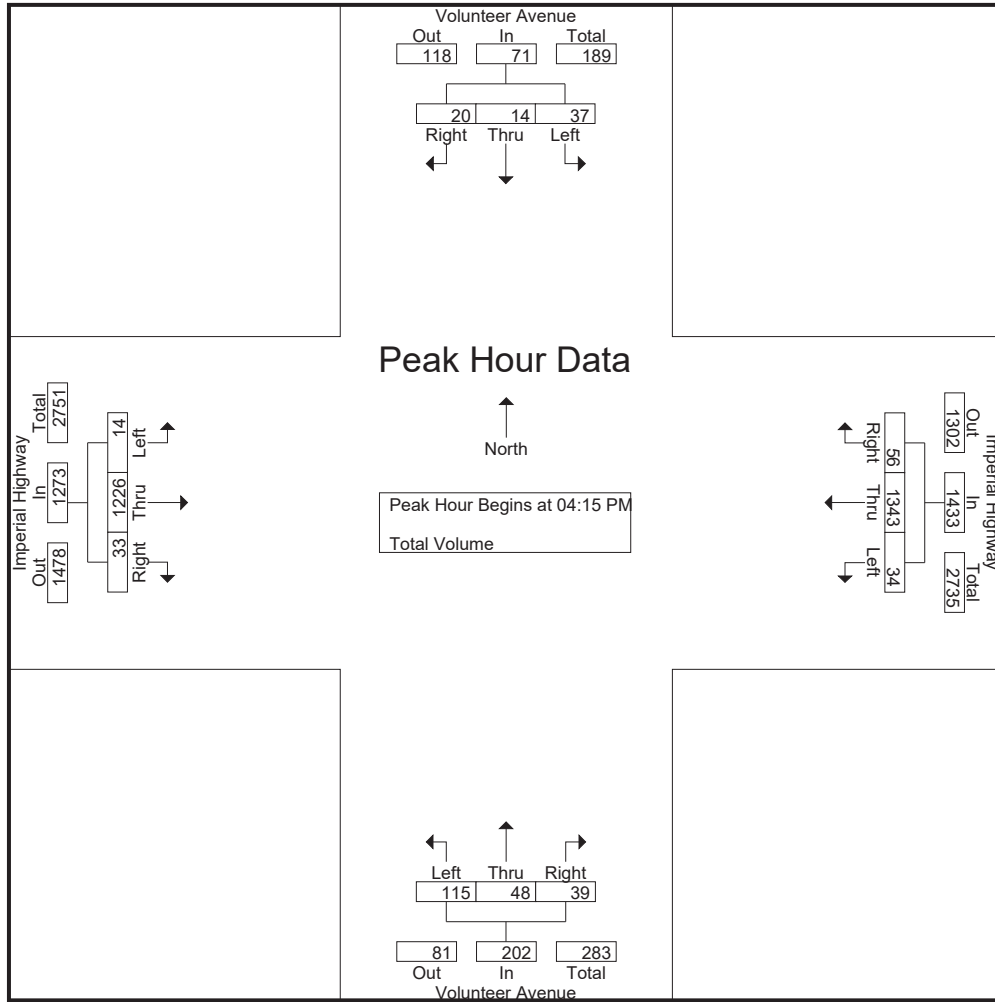
Start Time	Volunteer Avenue Southbound				Imperial Highway Westbound				Volunteer Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	6	3	6	15	4	292	17	313	14	4	4	22	3	320	11	334	684
04:30 PM	12	4	5	21	9	359	16	384	16	10	7	33	5	294	7	306	744
04:45 PM	11	6	5	22	10	355	10	375	29	12	12	53	4	286	10	300	750
05:00 PM	8	1	4	13	11	337	13	361	56	22	16	94	2	326	5	333	801
Total Volume	37	14	20	71	34	1343	56	1433	115	48	39	202	14	1226	33	1273	2979
% App. Total	52.1	19.7	28.2		2.4	93.7	3.9		56.9	23.8	19.3		1.1	96.3	2.6		
PHF	.771	.583	.833	.807	.773	.935	.824	.933	.513	.545	.609	.537	.700	.940	.750	.953	.930

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Norwalk
 N/S: Volunteer Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 11_NWK_Volunteer_Imperial PM
 Site Code : 12222203
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	11	6	5	22	9	359	16	384	29	12	12	53	5	339	11	355
+15 mins.	8	1	4	13	10	355	10	375	56	22	16	94	3	320	11	334
+30 mins.	13	2	7	22	11	337	13	361	8	2	8	18	5	294	7	306
+45 mins.	11	4	8	23	6	320	8	334	28	8	5	41	4	286	10	300
Total Volume	43	13	24	80	36	1371	47	1454	121	44	41	206	17	1239	39	1295
% App. Total	53.8	16.2	30		2.5	94.3	3.2		58.7	21.4	19.9		1.3	95.7	3	
PHF	.827	.542	.750	.870	.818	.955	.734	.947	.540	.500	.641	.548	.850	.914	.886	.912

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 12_NWK_Bloomfield_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

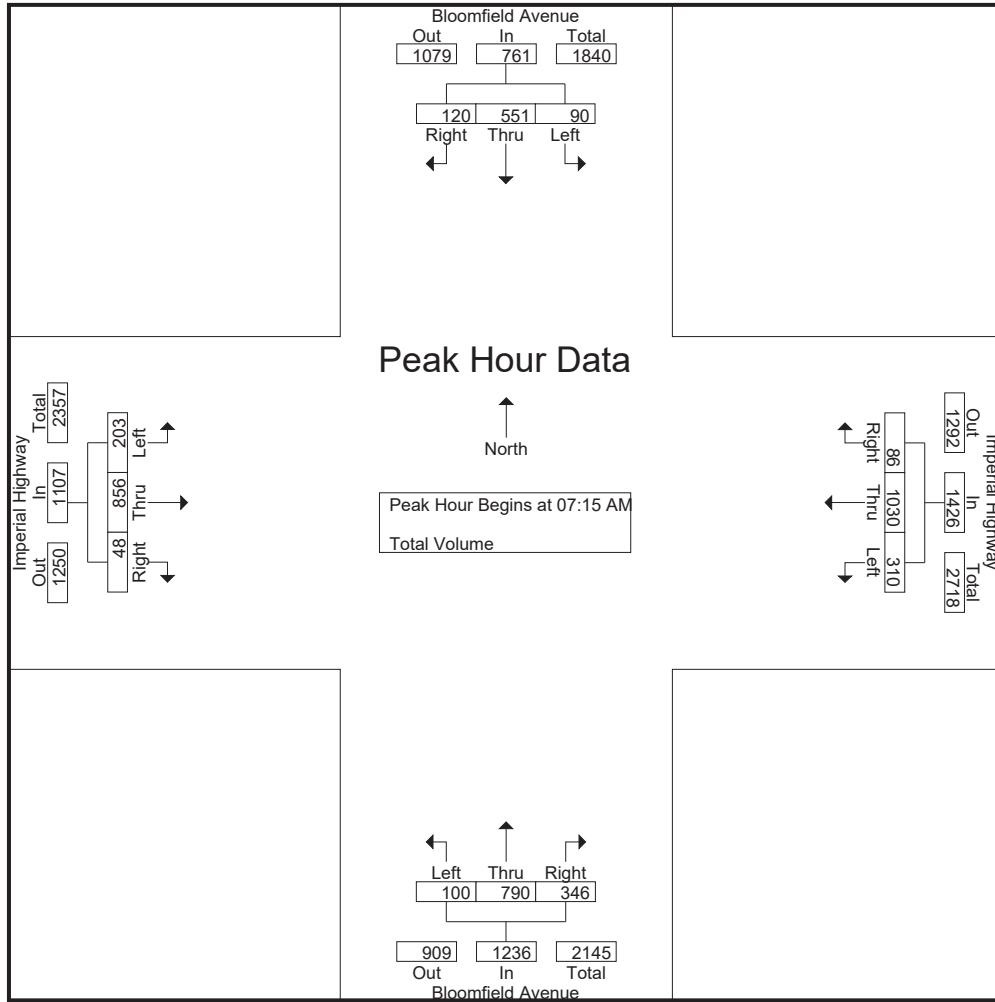
Groups Printed- Total Volume

Start Time	Bloomfield Avenue Southbound				Imperial Highway Westbound				Bloomfield Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	20	94	25	139	60	290	12	362	36	139	64	239	44	147	7	198	938
07:15 AM	14	130	33	177	65	271	25	361	20	173	87	280	59	196	16	271	1089
07:30 AM	24	141	36	201	84	299	19	402	25	203	82	310	52	228	11	291	1204
07:45 AM	29	150	33	212	85	212	21	318	24	231	100	355	64	181	12	257	1142
Total	87	515	127	729	294	1072	77	1443	105	746	333	1184	219	752	46	1017	4373
08:00 AM	23	130	18	171	76	248	21	345	31	183	77	291	28	251	9	288	1095
08:15 AM	34	132	29	195	72	222	21	315	16	170	60	246	47	194	12	253	1009
08:30 AM	20	95	20	135	58	245	17	320	29	154	67	250	35	175	17	227	932
08:45 AM	24	98	22	144	61	188	21	270	16	123	65	204	52	203	13	268	886
Total	101	455	89	645	267	903	80	1250	92	630	269	991	162	823	51	1036	3922
Grand Total	188	970	216	1374	561	1975	157	2693	197	1376	602	2175	381	1575	97	2053	8295
Apprch %	13.7	70.6	15.7		20.8	73.3	5.8		9.1	63.3	27.7		18.6	76.7	4.7		
Total %	2.3	11.7	2.6	16.6	6.8	23.8	1.9	32.5	2.4	16.6	7.3	26.2	4.6	19	1.2	24.7	

Start Time	Bloomfield Avenue Southbound				Imperial Highway Westbound				Bloomfield Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	14	130	33	177	65	271	25	361	20	173	87	280	59	196	16	271	1089
07:30 AM	24	141	36	201	84	299	19	402	25	203	82	310	52	228	11	291	1204
07:45 AM	29	150	33	212	85	212	21	318	24	231	100	355	64	181	12	257	1142
08:00 AM	23	130	18	171	76	248	21	345	31	183	77	291	28	251	9	288	1095
Total Volume	90	551	120	761	310	1030	86	1426	100	790	346	1236	203	856	48	1107	4530
% App. Total	11.8	72.4	15.8		21.7	72.2	6		8.1	63.9	28		18.3	77.3	4.3		
PHF	.776	.918	.833	.897	.912	.861	.860	.887	.806	.855	.865	.870	.793	.853	.750	.951	.941

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 12_NWK_Bloomfield_Imperial AM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	24	141	36	201	60	290	12	362	20	173	87	280	59	196	16	271
+15 mins.	29	150	33	212	65	271	25	361	25	203	82	310	52	228	11	291
+30 mins.	23	130	18	171	84	299	19	402	24	231	100	355	64	181	12	257
+45 mins.	34	132	29	195	85	212	21	318	31	183	77	291	28	251	9	288
Total Volume	110	553	116	779	294	1072	77	1443	100	790	346	1236	203	856	48	1107
% App. Total	14.1	71	14.9		20.4	74.3	5.3		8.1	63.9	28		18.3	77.3	4.3	
PHF	.809	.922	.806	.919	.865	.896	.770	.897	.806	.855	.865	.870	.793	.853	.750	.951

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 12_NWK_Bloomfield_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

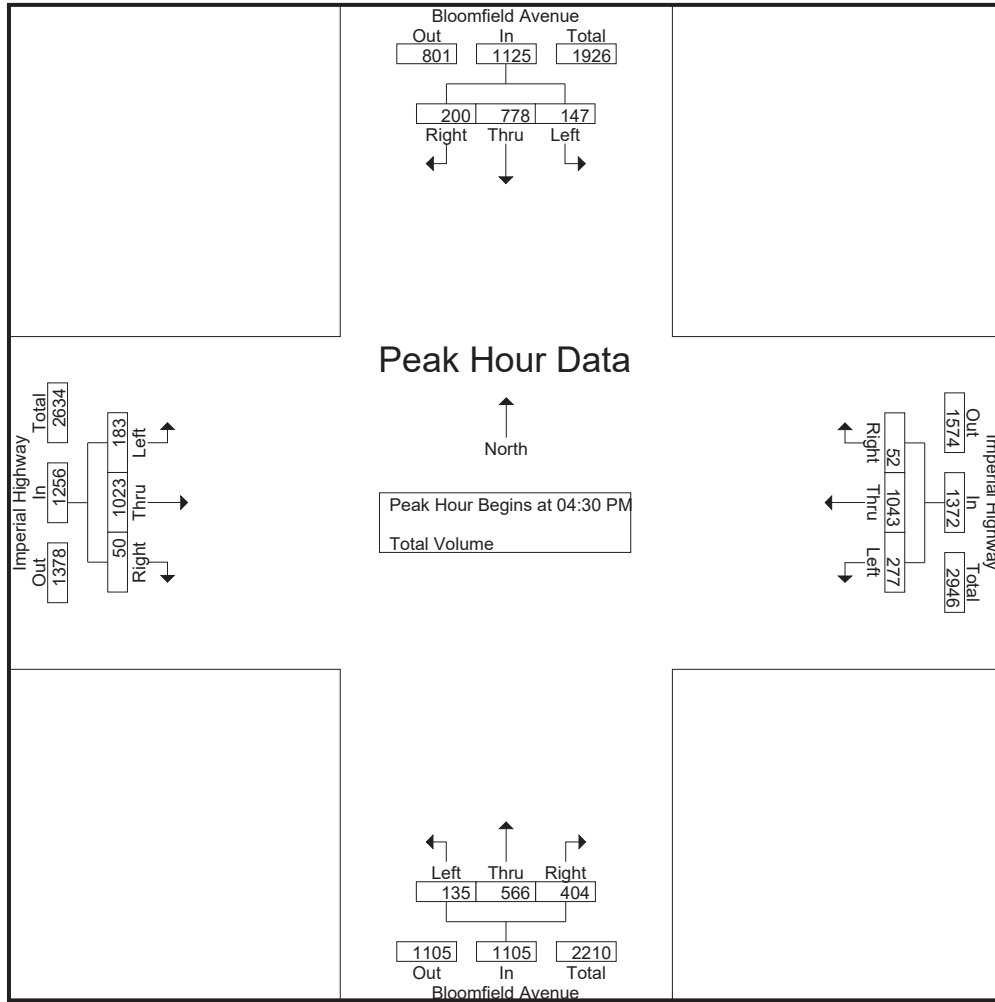
Groups Printed- Total Volume

Start Time	Bloomfield Avenue Southbound				Imperial Highway Westbound				Bloomfield Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	27	194	48	269	80	268	17	365	25	121	91	237	47	269	8	324	1195
04:15 PM	33	191	44	268	52	220	12	284	28	129	91	248	46	256	10	312	1112
04:30 PM	27	170	63	260	70	292	8	370	32	129	85	246	38	273	18	329	1205
04:45 PM	54	224	63	341	64	246	14	324	36	152	101	289	45	205	11	261	1215
Total	141	779	218	1138	266	1026	51	1343	121	531	368	1020	176	1003	47	1226	4727
05:00 PM	33	191	44	268	84	291	14	389	28	138	110	276	55	284	12	351	1284
05:15 PM	33	193	30	256	59	214	16	289	39	147	108	294	45	261	9	315	1154
05:30 PM	34	154	30	218	57	226	9	292	33	109	95	237	45	272	21	338	1085
05:45 PM	32	163	20	215	60	228	12	300	42	110	83	235	24	218	22	264	1014
Total	132	701	124	957	260	959	51	1270	142	504	396	1042	169	1035	64	1268	4537
Grand Total	273	1480	342	2095	526	1985	102	2613	263	1035	764	2062	345	2038	111	2494	9264
Apprch %	13	70.6	16.3		20.1	76	3.9		12.8	50.2	37.1		13.8	81.7	4.5		
Total %	2.9	16	3.7	22.6	5.7	21.4	1.1	28.2	2.8	11.2	8.2	22.3	3.7	22	1.2	26.9	

Start Time	Bloomfield Avenue Southbound				Imperial Highway Westbound				Bloomfield Avenue Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	27	170	63	260	70	292	8	370	32	129	85	246	38	273	18	329	1205
04:45 PM	54	224	63	341	64	246	14	324	36	152	101	289	45	205	11	261	1215
05:00 PM	33	191	44	268	84	291	14	389	28	138	110	276	55	284	12	351	1284
05:15 PM	33	193	30	256	59	214	16	289	39	147	108	294	45	261	9	315	1154
Total Volume	147	778	200	1125	277	1043	52	1372	135	566	404	1105	183	1023	50	1256	4858
% App. Total	13.1	69.2	17.8		20.2	76	3.8		12.2	51.2	36.6		14.6	81.4	4		
PHF	.681	.868	.794	.825	.824	.893	.813	.882	.865	.931	.918	.940	.832	.901	.694	.895	.946

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Imperial Highway
 Weather: Clear

File Name : 12_NWK_Bloomfield_Imperial PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:30 PM				05:00 PM			
+0 mins.	27	194	48	269	70	292	8	370	32	129	85	246	55	284	12	351
+15 mins.	33	191	44	268	64	246	14	324	36	152	101	289	45	261	9	315
+30 mins.	27	170	63	260	84	291	14	389	28	138	110	276	45	272	21	338
+45 mins.	54	224	63	341	59	214	16	289	39	147	108	294	24	218	22	264
Total Volume	141	779	218	1138	277	1043	52	1372	135	566	404	1105	169	1035	64	1268
% App. Total	12.4	68.5	19.2		20.2	76	3.8		12.2	51.2	36.6		13.3	81.6	5	
PHF	.653	.869	.865	.834	.824	.893	.813	.882	.865	.931	.918	.940	.768	.911	.727	.903

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Civic Center Drive
 Weather: Clear

File Name : 13_NWK_Bloomfield_Civic AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	Bloomfield Avenue Southbound				Civic Center Drive Westbound				Bloomfield Avenue Northbound				Civic Center Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	119	27	146	5	5	4	14	11	174	2	187	47	1	14	62	409
07:15 AM	1	165	35	201	5	4	0	9	23	231	0	254	57	0	17	74	538
07:30 AM	0	156	52	208	16	5	2	23	39	224	0	263	83	5	32	120	614
07:45 AM	3	159	53	215	8	7	4	19	50	280	4	334	88	2	13	103	671
Total	4	599	167	770	34	21	10	65	123	909	6	1038	275	8	76	359	2232
08:00 AM	1	173	42	216	5	3	1	9	36	203	2	241	71	3	22	96	562
08:15 AM	2	159	31	192	6	7	2	15	16	182	0	198	59	2	19	80	485
08:30 AM	0	134	27	161	5	5	1	11	24	184	2	210	50	3	13	66	448
08:45 AM	0	150	28	178	1	5	2	8	18	175	3	196	31	6	6	43	425
Total	3	616	128	747	17	20	6	43	94	744	7	845	211	14	60	285	1920
Grand Total	7	1215	295	1517	51	41	16	108	217	1653	13	1883	486	22	136	644	4152
Apprch %	0.5	80.1	19.4		47.2	38	14.8		11.5	87.8	0.7		75.5	3.4	21.1		
Total %	0.2	29.3	7.1	36.5	1.2	1	0.4	2.6	5.2	39.8	0.3	45.4	11.7	0.5	3.3	15.5	

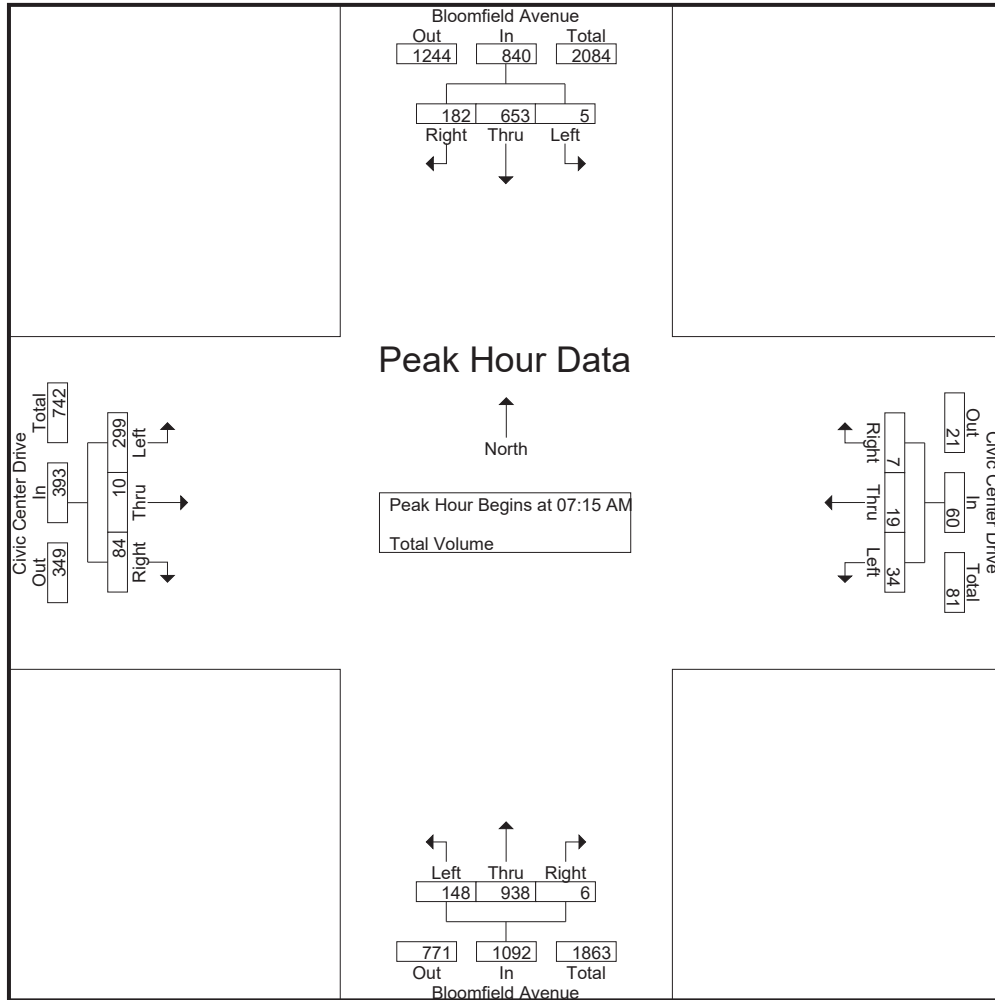
Start Time	Bloomfield Avenue Southbound				Civic Center Drive Westbound				Bloomfield Avenue Northbound				Civic Center Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	1	165	35	201	5	4	0	9	23	231	0	254	57	0	17	74	538
07:30 AM	0	156	52	208	16	5	2	23	39	224	0	263	83	5	32	120	614
07:45 AM	3	159	53	215	8	7	4	19	50	280	4	334	88	2	13	103	671
08:00 AM	1	173	42	216	5	3	1	9	36	203	2	241	71	3	22	96	562
Total Volume	5	653	182	840	34	19	7	60	148	938	6	1092	299	10	84	393	2385
% App. Total	0.6	77.7	21.7		56.7	31.7	11.7		13.6	85.9	0.5		76.1	2.5	21.4		
PHF	.417	.944	.858	.972	.531	.679	.438	.652	.740	.838	.375	.817	.849	.500	.656	.819	.889

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Civic Center Drive
 Weather: Clear

File Name : 13_NWK_Bloomfield_Civic AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	1	165	35	201	16	5	2	23	23	231	0	254	83	5	32	120
+15 mins.	0	156	52	208	8	7	4	19	39	224	0	263	88	2	13	103
+30 mins.	3	159	53	215	5	3	1	9	50	280	4	334	71	3	22	96
+45 mins.	1	173	42	216	6	7	2	15	36	203	2	241	59	2	19	80
Total Volume	5	653	182	840	35	22	9	66	148	938	6	1092	301	12	86	399
% App. Total	0.6	77.7	21.7		53	33.3	13.6		13.6	85.9	0.5		75.4	3	21.6	
PHF	.417	.944	.858	.972	.547	.786	.563	.717	.740	.838	.375	.817	.855	.600	.672	.831

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Civic Center Drive
 Weather: Clear

File Name : 13_NWK_Bloomfield_Civic PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

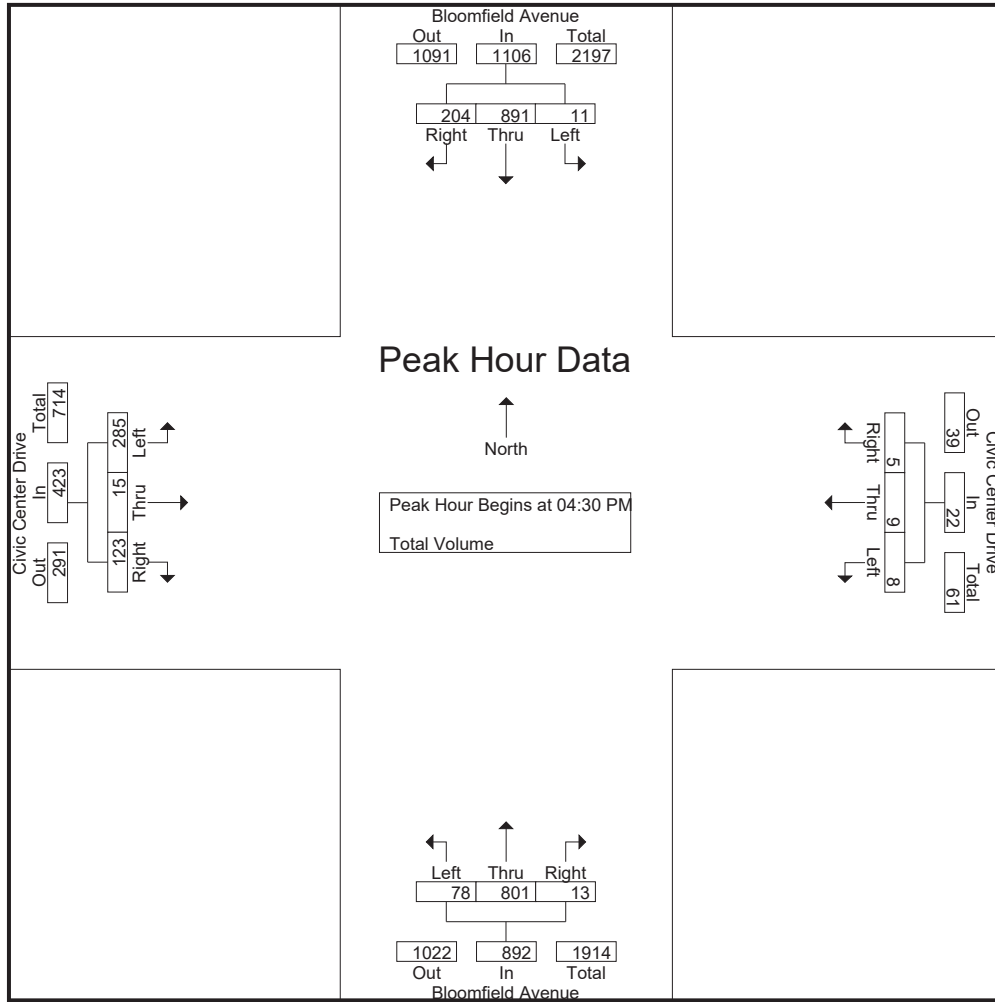
Groups Printed- Total Volume

Start Time	Bloomfield Avenue Southbound				Civic Center Drive Westbound				Bloomfield Avenue Northbound				Civic Center Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	220	65	285	0	0	3	3	14	146	1	161	60	0	30	90	539
04:15 PM	3	209	38	250	2	3	2	7	13	178	2	193	54	4	20	78	528
04:30 PM	3	216	42	261	4	2	2	8	21	183	3	207	65	3	25	93	569
04:45 PM	3	232	54	289	2	2	0	4	19	213	3	235	66	6	20	92	620
Total	9	877	199	1085	8	7	7	22	67	720	9	796	245	13	95	353	2256
05:00 PM	3	249	59	311	0	1	1	2	18	193	1	212	87	2	49	138	663
05:15 PM	2	194	49	245	2	4	2	8	20	212	6	238	67	4	29	100	591
05:30 PM	3	188	56	247	5	2	2	9	9	162	2	173	74	3	23	100	529
05:45 PM	0	178	48	226	5	3	2	10	21	166	1	188	53	5	32	90	514
Total	8	809	212	1029	12	10	7	29	68	733	10	811	281	14	133	428	2297
Grand Total	17	1686	411	2114	20	17	14	51	135	1453	19	1607	526	27	228	781	4553
Apprch %	0.8	79.8	19.4		39.2	33.3	27.5		8.4	90.4	1.2		67.3	3.5	29.2		
Total %	0.4	37	9	46.4	0.4	0.4	0.3	1.1	3	31.9	0.4	35.3	11.6	0.6	5	17.2	

Start Time	Bloomfield Avenue Southbound				Civic Center Drive Westbound				Bloomfield Avenue Northbound				Civic Center Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	216	42	261	4	2	2	8	21	183	3	207	65	3	25	93	569
04:45 PM	3	232	54	289	2	2	0	4	19	213	3	235	66	6	20	92	620
05:00 PM	3	249	59	311	0	1	1	2	18	193	1	212	87	2	49	138	663
05:15 PM	2	194	49	245	2	4	2	8	20	212	6	238	67	4	29	100	591
Total Volume	11	891	204	1106	8	9	5	22	78	801	13	892	285	15	123	423	2443
% App. Total	1	80.6	18.4		36.4	40.9	22.7		8.7	89.8	1.5		67.4	3.5	29.1		
PHF	.917	.895	.864	.889	.500	.563	.625	.688	.929	.940	.542	.937	.819	.625	.628	.766	.921

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Civic Center Drive
 Weather: Clear

File Name : 13_NWK_Bloomfield_Civic PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				05:00 PM				04:30 PM				04:45 PM			
+0 mins.	3	209	38	250	0	1	1	2	21	183	3	207	66	20	92	
+15 mins.	3	216	42	261	2	4	2	8	19	213	3	235	87	6	49	138
+30 mins.	3	232	54	289	5	2	2	9	18	193	1	212	67	4	29	100
+45 mins.	3	249	59	311	5	3	2	10	20	212	6	238	74	3	23	100
Total Volume	12	906	193	1111	12	10	7	29	78	801	13	892	294	15	121	430
% App. Total	1.1	81.5	17.4		41.4	34.5	24.1		8.7	89.8	1.5		68.4	3.5	28.1	
PHF	1.000	.910	.818	.893	.600	.625	.875	.725	.929	.940	.542	.937	.845	.625	.617	.779

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 14_NWK_Bloomfield_Rose AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

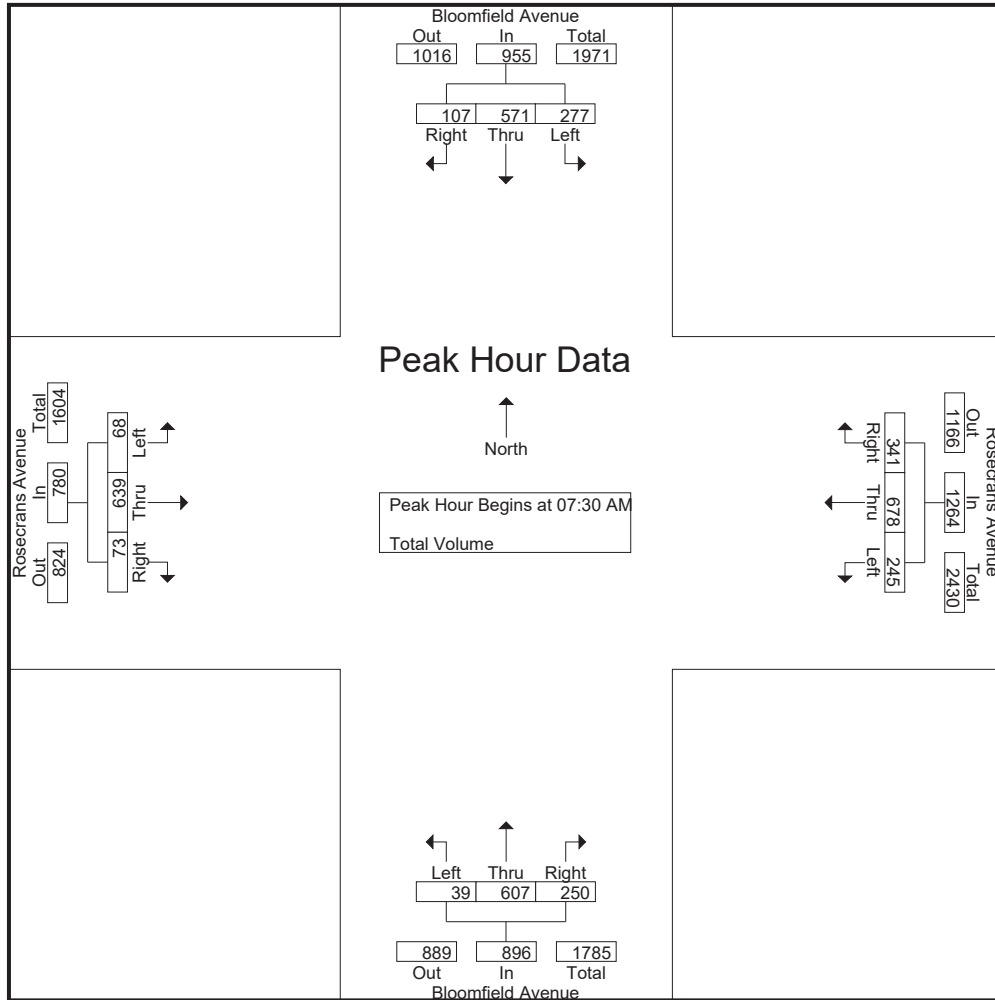
Groups Printed- Total Volume

Start Time	Bloomfield Avenue Southbound				Rosecrans Avenue Westbound				Bloomfield Avenue Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	74	94	17	185	49	138	72	259	10	106	69	185	11	148	18	177	806
07:15 AM	61	124	20	205	64	156	66	286	3	150	63	216	28	152	21	201	908
07:30 AM	82	135	20	237	69	165	80	314	9	167	77	253	14	175	18	207	1011
07:45 AM	52	153	28	233	67	184	103	354	4	180	57	241	25	176	21	222	1050
Total	269	506	85	860	249	643	321	1213	26	603	266	895	78	651	78	807	3775
08:00 AM	70	153	30	253	55	158	77	290	10	130	68	208	12	129	15	156	907
08:15 AM	73	130	29	232	54	171	81	306	16	130	48	194	17	159	19	195	927
08:30 AM	71	97	26	194	59	133	75	267	13	159	54	226	24	109	18	151	838
08:45 AM	61	89	18	168	44	142	65	251	14	137	46	197	31	131	23	185	801
Total	275	469	103	847	212	604	298	1114	53	556	216	825	84	528	75	687	3473
Grand Total	544	975	188	1707	461	1247	619	2327	79	1159	482	1720	162	1179	153	1494	7248
Apprch %	31.9	57.1	11		19.8	53.6	26.6		4.6	67.4	28		10.8	78.9	10.2		
Total %	7.5	13.5	2.6	23.6	6.4	17.2	8.5	32.1	1.1	16	6.7	23.7	2.2	16.3	2.1	20.6	

Start Time	Bloomfield Avenue Southbound				Rosecrans Avenue Westbound				Bloomfield Avenue Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	82	135	20	237	69	165	80	314	9	167	77	253	14	175	18	207	1011
07:45 AM	52	153	28	233	67	184	103	354	4	180	57	241	25	176	21	222	1050
08:00 AM	70	153	30	253	55	158	77	290	10	130	68	208	12	129	15	156	907
08:15 AM	73	130	29	232	54	171	81	306	16	130	48	194	17	159	19	195	927
Total Volume	277	571	107	955	245	678	341	1264	39	607	250	896	68	639	73	780	3895
% App. Total	29	59.8	11.2		19.4	53.6	27		4.4	67.7	27.9		8.7	81.9	9.4		
PHF	.845	.933	.892	.944	.888	.921	.828	.893	.609	.843	.812	.885	.680	.908	.869	.878	.927

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 14_NWK_Bloomfield_Rose AM
 Site Code : 12222203
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:15 AM				07:00 AM			
+0 mins.	82	135	20	237	69	165	80	314	3	150	63	216	11	148	18	177
+15 mins.	52	153	28	233	67	184	103	354	9	167	77	253	28	152	21	201
+30 mins.	70	153	30	253	55	158	77	290	4	180	57	241	14	175	18	207
+45 mins.	73	130	29	232	54	171	81	306	10	130	68	208	25	176	21	222
Total Volume	277	571	107	955	245	678	341	1264	26	627	265	918	78	651	78	807
% App. Total	29	59.8	11.2		19.4	53.6	27		2.8	68.3	28.9		9.7	80.7	9.7	
PHF	.845	.933	.892	.944	.888	.921	.828	.893	.650	.871	.860	.907	.696	.925	.929	.909

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 14_NWK_Bloomfield_Rose PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

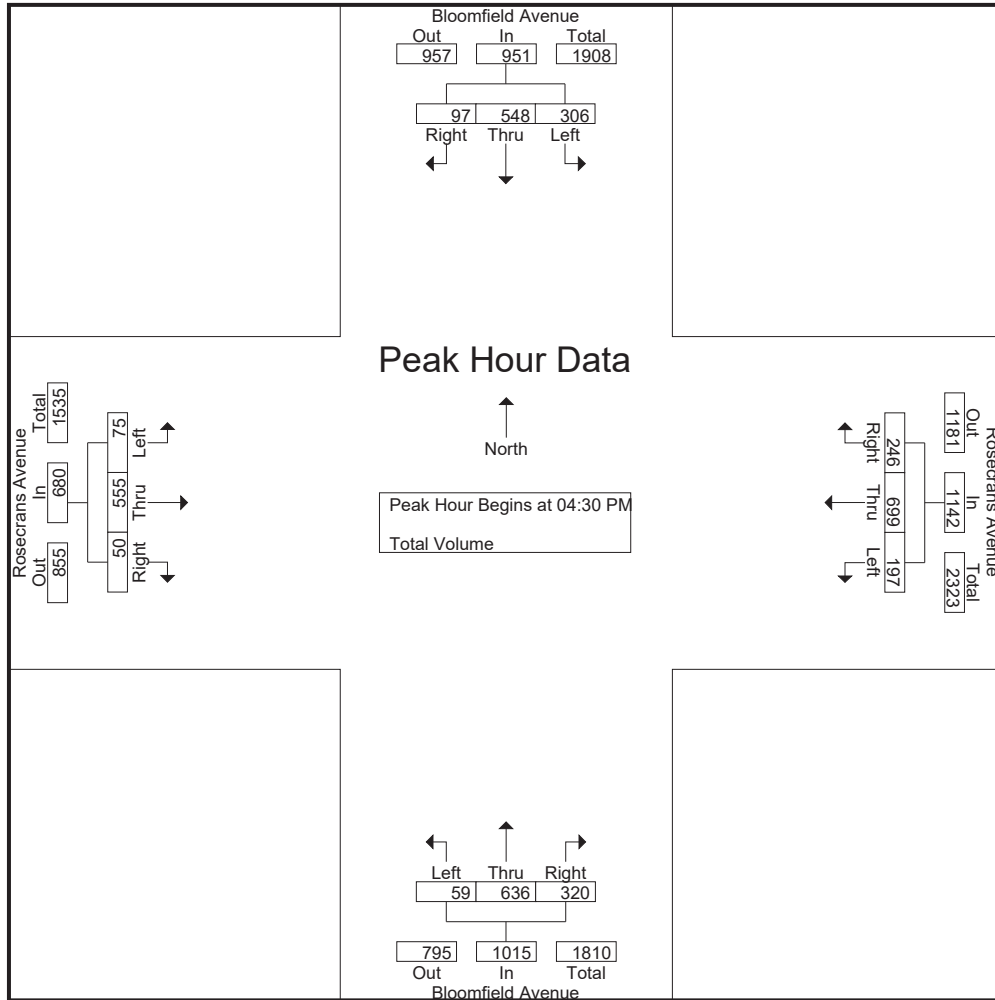
Groups Printed- Total Volume

Start Time	Bloomfield Avenue Southbound				Rosecrans Avenue Westbound				Bloomfield Avenue Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	66	111	27	204	56	156	59	271	18	115	87	220	19	137	19	175	870
04:15 PM	66	146	27	239	64	141	63	268	16	154	83	253	21	139	22	182	942
04:30 PM	85	119	31	235	47	184	65	296	13	143	92	248	22	145	11	178	957
04:45 PM	67	147	31	245	49	197	66	312	17	166	72	255	21	128	10	159	971
Total	284	523	116	923	216	678	253	1147	64	578	334	976	83	549	62	694	3740
05:00 PM	90	144	18	252	55	147	68	270	11	138	79	228	17	124	14	155	905
05:15 PM	64	138	17	219	46	171	47	264	18	189	77	284	15	158	15	188	955
05:30 PM	73	133	36	242	68	161	61	290	14	136	80	230	26	143	9	178	940
05:45 PM	71	150	32	253	64	128	58	250	11	170	79	260	19	132	9	160	923
Total	298	565	103	966	233	607	234	1074	54	633	315	1002	77	557	47	681	3723
Grand Total	582	1088	219	1889	449	1285	487	2221	118	1211	649	1978	160	1106	109	1375	7463
Apprch %	30.8	57.6	11.6		20.2	57.9	21.9		6	61.2	32.8		11.6	80.4	7.9		
Total %	7.8	14.6	2.9	25.3	6	17.2	6.5	29.8	1.6	16.2	8.7	26.5	2.1	14.8	1.5	18.4	

Start Time	Bloomfield Avenue Southbound				Rosecrans Avenue Westbound				Bloomfield Avenue Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	85	119	31	235	47	184	65	296	13	143	92	248	22	145	11	178	957
04:45 PM	67	147	31	245	49	197	66	312	17	166	72	255	21	128	10	159	971
05:00 PM	90	144	18	252	55	147	68	270	11	138	79	228	17	124	14	155	905
05:15 PM	64	138	17	219	46	171	47	264	18	189	77	284	15	158	15	188	955
Total Volume	306	548	97	951	197	699	246	1142	59	636	320	1015	75	555	50	680	3788
% App. Total	32.2	57.6	10.2		17.3	61.2	21.5		5.8	62.7	31.5		11	81.6	7.4		
PHF	.850	.932	.782	.943	.895	.887	.904	.915	.819	.841	.870	.893	.852	.878	.833	.904	.975

City of Norwalk
 N/S: Bloomfield Avenue
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 14_NWK_Bloomfield_Rose PM
 Site Code : 12222203
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	66	146	27	239	56	156	59	271	13	143	92	248	19	137	19	175
+15 mins.	85	119	31	235	64	141	63	268	17	166	72	255	21	139	22	182
+30 mins.	67	147	31	245	47	184	65	296	11	138	79	228	22	145	11	178
+45 mins.	90	144	18	252	49	197	66	312	18	189	77	284	21	128	10	159
Total Volume	308	556	107	971	216	678	253	1147	59	636	320	1015	83	549	62	694
% App. Total	31.7	57.3	11		18.8	59.1	22.1		5.8	62.7	31.5		12	79.1	8.9	
PHF	.856	.946	.863	.963	.844	.860	.958	.919	.819	.841	.870	.893	.943	.947	.705	.953

City of Norwalk
 N/S: I-5 Southbound Ramps
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 15_NWK_5S_Rose AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	I-5 Southbound Off Ramp Southbound				Rosecrans Avenue Westbound				I-5 Southbound On Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	90	0	52	142	15	234	0	249	0	0	0	0	0	214	100	314	705
07:15 AM	88	0	43	131	23	214	0	237	0	0	0	0	0	181	79	260	628
07:30 AM	91	0	38	129	29	296	0	325	0	0	0	0	0	252	107	359	813
07:45 AM	124	1	56	181	21	289	0	310	0	0	0	0	0	202	82	284	775
Total	393	1	189	583	88	1033	0	1121	0	0	0	0	0	849	368	1217	2921
08:00 AM	77	0	54	131	10	249	0	259	0	0	0	0	0	178	99	277	667
08:15 AM	95	0	55	150	13	235	0	248	0	0	0	0	0	193	85	278	676
08:30 AM	70	0	37	107	7	260	0	267	0	0	0	0	0	161	90	251	625
08:45 AM	137	1	58	196	8	178	0	186	0	0	0	0	0	149	65	214	596
Total	379	1	204	584	38	922	0	960	0	0	0	0	0	681	339	1020	2564
Grand Total	772	2	393	1167	126	1955	0	2081	0	0	0	0	0	1530	707	2237	5485
Apprch %	66.2	0.2	33.7		6.1	93.9	0		0	0	0	0	0	68.4	31.6		
Total %	14.1	0	7.2	21.3	2.3	35.6	0	37.9	0	0	0	0	0	27.9	12.9	40.8	

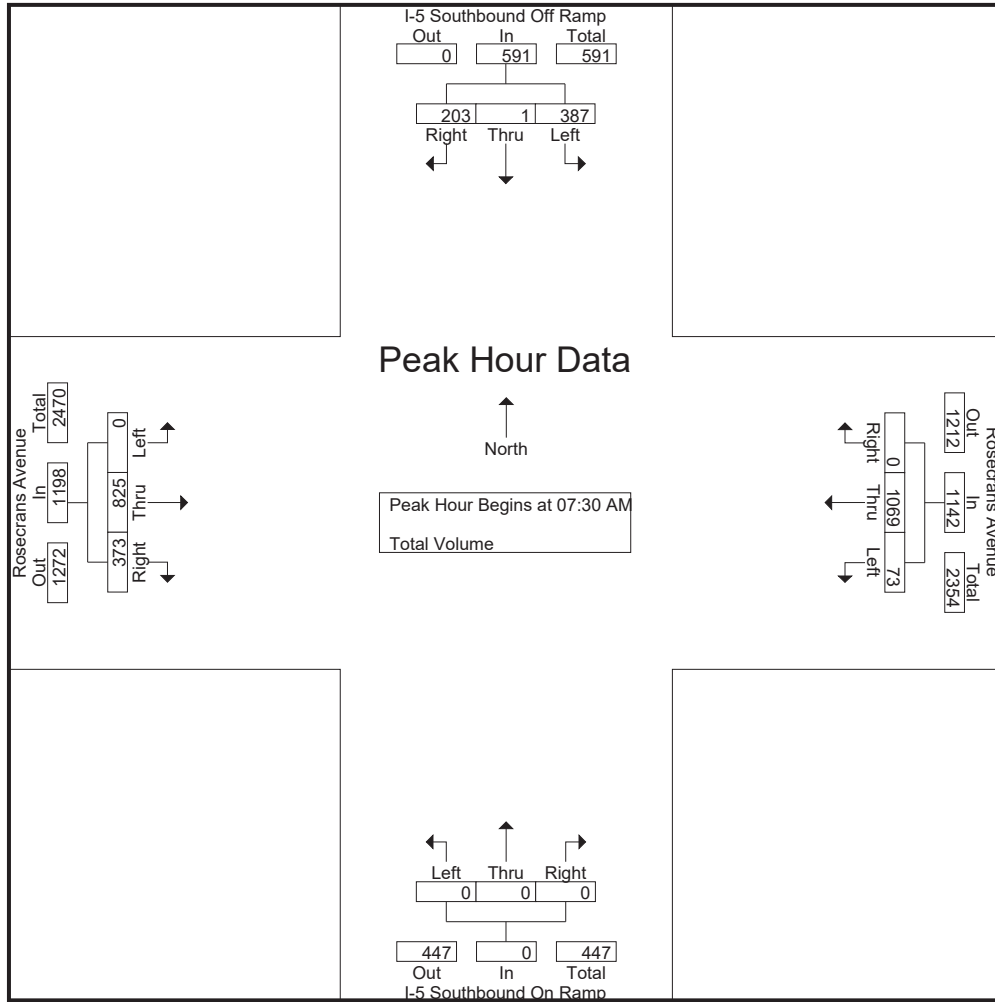
Start Time	I-5 Southbound Off Ramp Southbound				Rosecrans Avenue Westbound				I-5 Southbound On Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	91	0	38	129	29	296	0	325	0	0	0	0	0	252	107	359	813
07:45 AM	124	1	56	181	21	289	0	310	0	0	0	0	0	202	82	284	775
08:00 AM	77	0	54	131	10	249	0	259	0	0	0	0	0	178	99	277	667
08:15 AM	95	0	55	150	13	235	0	248	0	0	0	0	0	193	85	278	676
Total Volume	387	1	203	591	73	1069	0	1142	0	0	0	0	0	825	373	1198	2931
% App. Total	65.5	0.2	34.3		6.4	93.6	0		0	0	0	0	0	68.9	31.1		
PHF	.780	.250	.906	.816	.629	.903	.000	.878	.000	.000	.000	.000	.000	.818	.871	.834	.901

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Norwalk
 N/S: I-5 Southbound Ramps
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 15_NWK_5S_Rose AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:00 AM				07:00 AM			
+0 mins.	91	0	38	129	29	296	0	325	0	0	0	0	0	214	100	314
+15 mins.	124	1	56	181	21	289	0	310	0	0	0	0	0	181	79	260
+30 mins.	77	0	54	131	10	249	0	259	0	0	0	0	0	252	107	359
+45 mins.	95	0	55	150	13	235	0	248	0	0	0	0	0	202	82	284
Total Volume	387	1	203	591	73	1069	0	1142	0	0	0	0	0	849	368	1217
% App. Total	65.5	0.2	34.3		6.4	93.6	0		0	0	0	0	0	69.8	30.2	
PHF	.780	.250	.906	.816	.629	.903	.000	.878	.000	.000	.000	.000	.000	.842	.860	.847

City of Norwalk
 N/S: I-5 Southbound Ramps
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 15_NWK_5S_Rose PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	I-5 Southbound Off Ramp Southbound				Rosecrans Avenue Westbound				I-5 Southbound On Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	69	0	38	107	14	227	0	241	0	0	0	0	0	224	81	305	653
04:15 PM	90	0	40	130	14	213	0	227	0	0	0	0	0	192	80	272	629
04:30 PM	86	0	49	135	12	239	0	251	0	0	0	0	0	244	93	337	723
04:45 PM	101	0	41	142	16	243	0	259	0	0	0	0	0	198	72	270	671
Total	346	0	168	514	56	922	0	978	0	0	0	0	0	858	326	1184	2676
05:00 PM	70	0	53	123	16	233	0	249	0	0	0	0	0	214	108	322	694
05:15 PM	88	0	58	146	20	216	0	236	0	0	0	0	0	226	72	298	680
05:30 PM	108	0	53	161	13	216	0	229	0	0	0	0	0	222	82	304	694
05:45 PM	107	0	65	172	9	205	0	214	0	0	0	0	0	201	96	297	683
Total	373	0	229	602	58	870	0	928	0	0	0	0	0	863	358	1221	2751
Grand Total	719	0	397	1116	114	1792	0	1906	0	0	0	0	0	1721	684	2405	5427
Apprch %	64.4	0	35.6		6	94	0		0	0	0	0	0	71.6	28.4		
Total %	13.2	0	7.3	20.6	2.1	33	0	35.1	0	0	0	0	0	31.7	12.6	44.3	

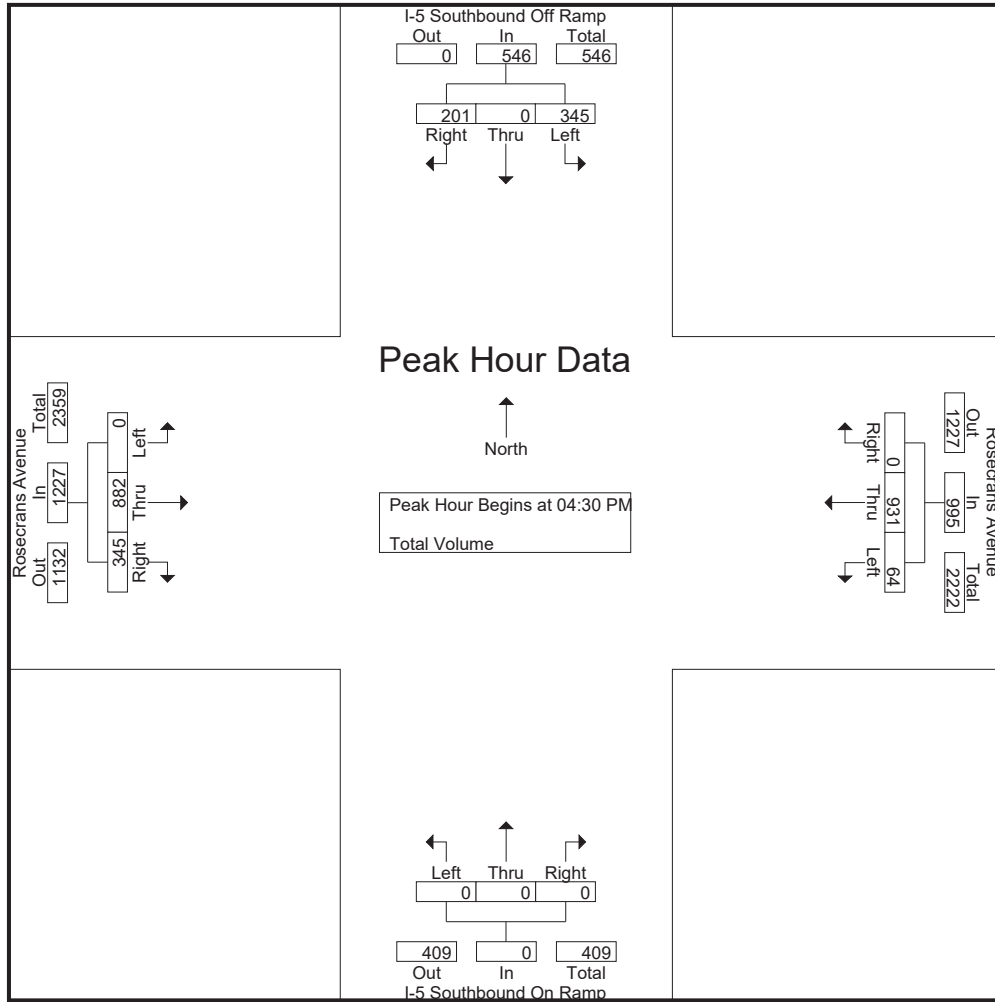
Start Time	I-5 Southbound Off Ramp Southbound				Rosecrans Avenue Westbound				I-5 Southbound On Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	86	0	49	135	12	239	0	251	0	0	0	0	0	244	93	337	723
04:45 PM	101	0	41	142	16	243	0	259	0	0	0	0	0	198	72	270	671
05:00 PM	70	0	53	123	16	233	0	249	0	0	0	0	0	214	108	322	694
05:15 PM	88	0	58	146	20	216	0	236	0	0	0	0	0	226	72	298	680
Total Volume	345	0	201	546	64	931	0	995	0	0	0	0	0	882	345	1227	2768
% App. Total	63.2	0	36.8		6.4	93.6	0		0	0	0	0	0	71.9	28.1		
PHF	.854	.000	.866	.935	.800	.958	.000	.960	.000	.000	.000	.000	.000	.904	.799	.910	.957

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

City of Norwalk
 N/S: I-5 Southbound Ramps
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 15_NWK_5S_Rose PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:00 PM				04:30 PM			
+0 mins.	70	0	53	123	12	239	0	251	0	0	0	0	0	244	93	337
+15 mins.	88	0	58	146	16	243	0	259	0	0	0	0	0	198	72	270
+30 mins.	108	0	53	161	16	233	0	249	0	0	0	0	0	214	108	322
+45 mins.	107	0	65	172	20	216	0	236	0	0	0	0	0	226	72	298
Total Volume	373	0	229	602	64	931	0	995	0	0	0	0	0	882	345	1227
% App. Total	62	0	38		6.4	93.6	0		0	0	0		0	71.9	28.1	
PHF	.863	.000	.881	.875	.800	.958	.000	.960	.000	.000	.000	.000	.000	.904	.799	.910

City of Norwalk
 N/S: I-5 Northbound Ramps
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 16_NWK_5N_Rose AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

Groups Printed- Total Volume

Start Time	I-5 Northbound On Ramp Southbound				Rosecrans Avenue Westbound				I-5 Northbound Off Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	195	166	361	47	0	10	57	76	233	0	309	727
07:15 AM	0	0	0	0	0	198	133	331	44	1	9	54	53	223	0	276	661
07:30 AM	0	0	0	0	0	242	114	356	75	0	10	85	53	294	0	347	788
07:45 AM	0	0	0	0	0	254	90	344	64	0	9	73	30	312	0	342	759
Total	0	0	0	0	0	889	503	1392	230	1	38	269	212	1062	0	1274	2935
08:00 AM	0	0	0	0	0	193	88	281	61	2	23	86	32	228	0	260	627
08:15 AM	0	0	0	0	0	180	91	271	64	1	11	76	29	268	0	297	644
08:30 AM	0	0	0	0	0	201	85	286	65	2	14	81	24	218	0	242	609
08:45 AM	0	0	0	0	0	133	49	182	47	1	9	57	29	239	0	268	507
Total	0	0	0	0	0	707	313	1020	237	6	57	300	114	953	0	1067	2387
Grand Total	0	0	0	0	0	1596	816	2412	467	7	95	569	326	2015	0	2341	5322
Apprch %	0	0	0	0	0	66.2	33.8		82.1	1.2	16.7		13.9	86.1	0		
Total %	0	0	0	0	0	30	15.3	45.3	8.8	0.1	1.8	10.7	6.1	37.9	0	44	

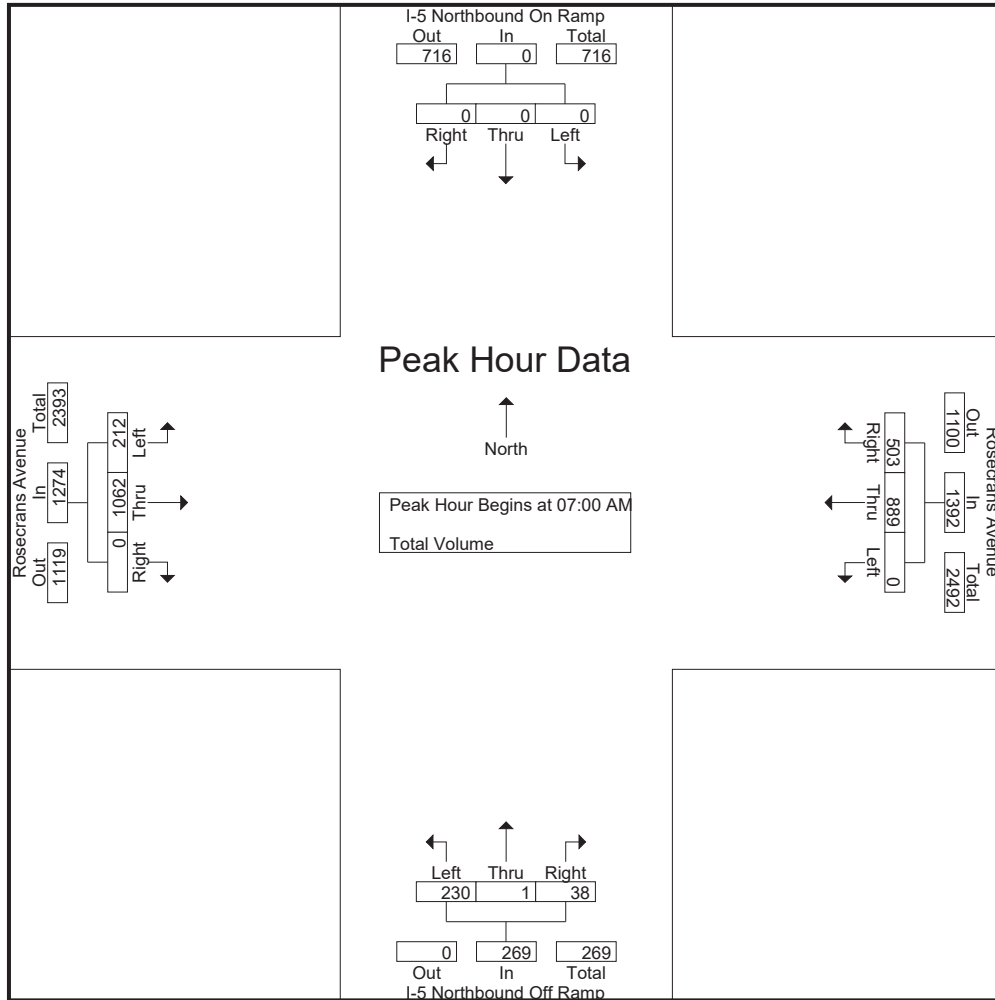
Start Time	I-5 Northbound On Ramp Southbound				Rosecrans Avenue Westbound				I-5 Northbound Off Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	195	166	361	47	0	10	57	76	233	0	309	727
07:15 AM	0	0	0	0	0	198	133	331	44	1	9	54	53	223	0	276	661
07:30 AM	0	0	0	0	0	242	114	356	75	0	10	85	53	294	0	347	788
07:45 AM	0	0	0	0	0	254	90	344	64	0	9	73	30	312	0	342	759
Total Volume	0	0	0	0	0	889	503	1392	230	1	38	269	212	1062	0	1274	2935
% App. Total	0	0	0	0	0	63.9	36.1		85.5	0.4	14.1		16.6	83.4	0		
PHF	.000	.000	.000	.000	.000	.875	.758	.964	.767	.250	.950	.791	.697	.851	.000	.918	.931

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

City of Norwalk
 N/S: I-5 Northbound Ramps
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 16_NWK_5N_Rose AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:00 AM							
+0 mins.	0	0	0	0	0	195	166	361	75	0	10	85	76	233	0	309
+15 mins.	0	0	0	0	0	198	133	331	64	0	9	73	53	223	0	276
+30 mins.	0	0	0	0	0	242	114	356	61	2	23	86	53	294	0	347
+45 mins.	0	0	0	0	0	254	90	344	64	1	11	76	30	312	0	342
Total Volume	0	0	0	0	0	889	503	1392	264	3	53	320	212	1062	0	1274
% App. Total	0	0	0	0	0	63.9	36.1		82.5	0.9	16.6		16.6	83.4	0	
PHF	.000	.000	.000	.000	.000	.875	.758	.964	.880	.375	.576	.930	.697	.851	.000	.918

City of Norwalk
 N/S: I-5 Northbound Ramps
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 16_NWK_5N_Rose PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

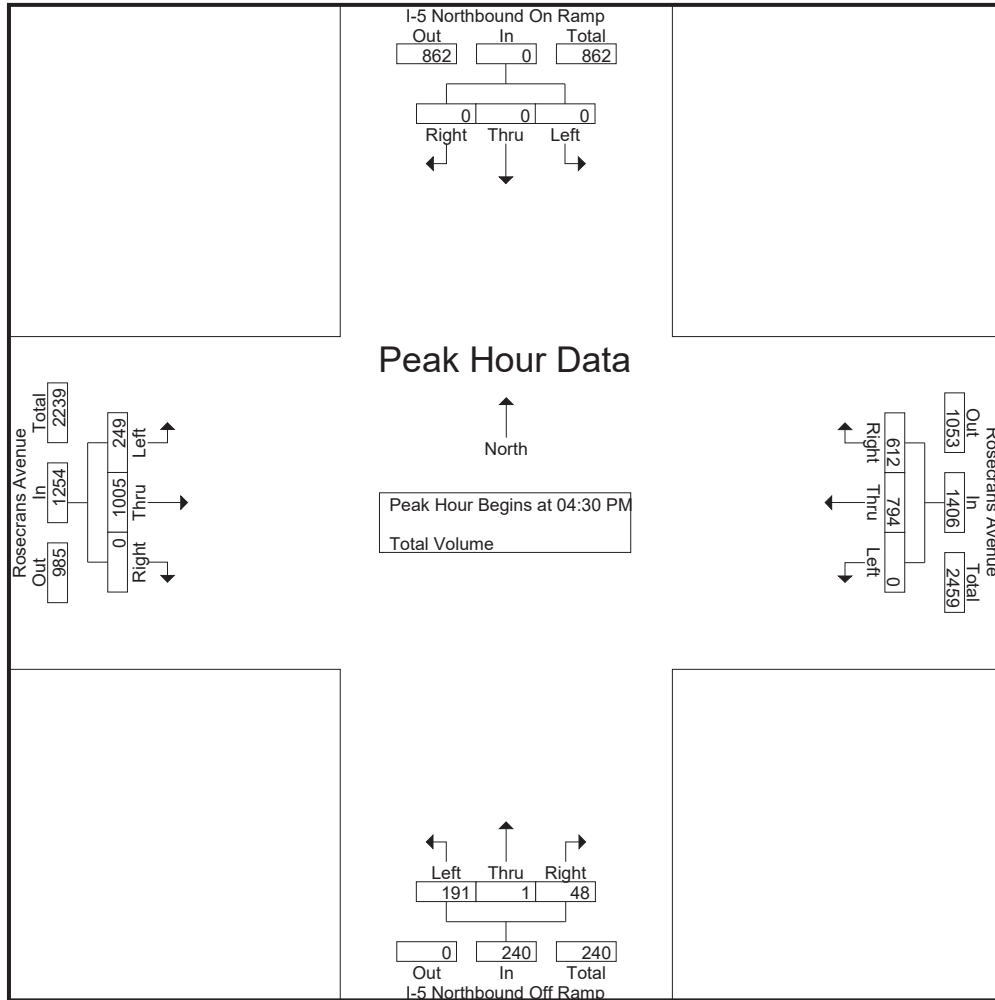
Groups Printed- Total Volume

Start Time	I-5 Northbound On Ramp Southbound				Rosecrans Avenue Westbound				I-5 Northbound Off Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	186	163	349	48	0	23	71	63	236	0	299	719
04:15 PM	0	0	0	0	0	196	131	327	42	0	13	55	66	225	0	291	673
04:30 PM	0	0	0	0	0	205	156	361	44	1	9	54	71	270	0	341	756
04:45 PM	0	0	0	0	0	207	167	374	44	0	9	53	45	260	0	305	732
Total	0	0	0	0	0	794	617	1411	178	1	54	233	245	991	0	1236	2880
05:00 PM	0	0	0	0	0	195	170	365	57	0	11	68	69	219	0	288	721
05:15 PM	0	0	0	0	0	187	119	306	46	0	19	65	64	256	0	320	691
05:30 PM	0	0	0	0	0	170	132	302	50	0	13	63	58	268	0	326	691
05:45 PM	0	0	0	0	0	169	113	282	41	0	18	59	45	275	0	320	661
Total	0	0	0	0	0	721	534	1255	194	0	61	255	236	1018	0	1254	2764
Grand Total	0	0	0	0	0	1515	1151	2666	372	1	115	488	481	2009	0	2490	5644
Apprch %	0	0	0		0	56.8	43.2		76.2	0.2	23.6		19.3	80.7	0		
Total %	0	0	0		0	26.8	20.4	47.2	6.6	0	2	8.6	8.5	35.6	0	44.1	

Start Time	I-5 Northbound On Ramp Southbound				Rosecrans Avenue Westbound				I-5 Northbound Off Ramp Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	0	0	0	0	205	156	361	44	1	9	54	71	270	0	341	756
04:45 PM	0	0	0	0	0	207	167	374	44	0	9	53	45	260	0	305	732
05:00 PM	0	0	0	0	0	195	170	365	57	0	11	68	69	219	0	288	721
05:15 PM	0	0	0	0	0	187	119	306	46	0	19	65	64	256	0	320	691
Total Volume	0	0	0	0	0	794	612	1406	191	1	48	240	249	1005	0	1254	2900
% App. Total	0	0	0		0	56.5	43.5		79.6	0.4	20		19.9	80.1	0		
PHF	.000	.000	.000	.000	.000	.959	.900	.940	.838	.250	.632	.882	.877	.931	.000	.919	.959

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				05:00 PM				04:30 PM			
+0 mins.	0	0	0	0	0	196	131	327	57	0	11	68	71	270	0	341
+15 mins.	0	0	0	0	0	205	156	361	46	0	19	65	45	260	0	305
+30 mins.	0	0	0	0	0	207	167	374	50	0	13	63	69	219	0	288
+45 mins.	0	0	0	0	0	195	170	365	41	0	18	59	64	256	0	320
Total Volume	0	0	0	0	0	803	624	1427	194	0	61	255	249	1005	0	1254
% App. Total	0	0	0	0	0	56.3	43.7		76.1	0	23.9		19.9	80.1	0	
PHF	.000	.000	.000	.000	.000	.970	.918	.954	.851	.000	.803	.938	.877	.931	.000	.919

City of Norwalk
 N/S: Carmenita Road
 E/W: Imperial Highway
 Weather: Clear

File Name : 17_NWK_Carmenita_Imp AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

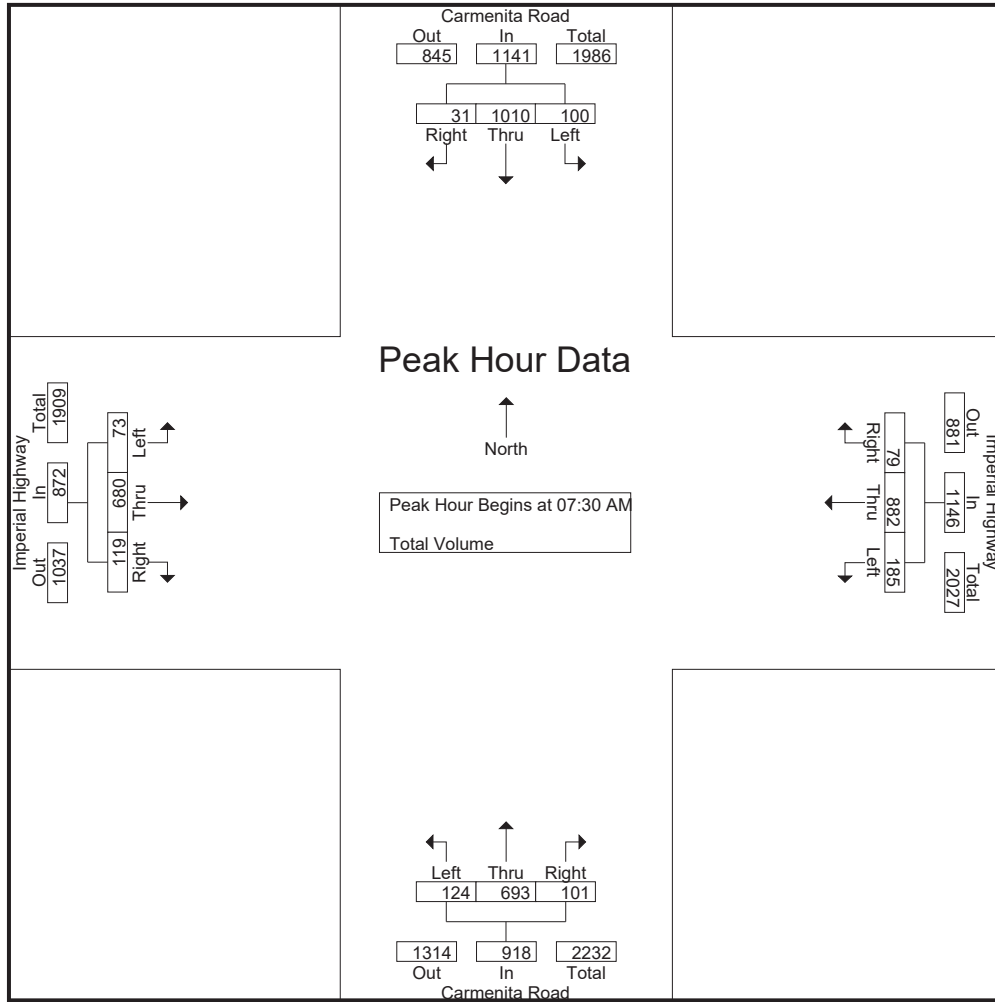
Groups Printed- Total Volume

Start Time	Carmenita Road Southbound				Imperial Highway Westbound				Carmenita Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	14	241	7	262	39	221	13	273	17	113	13	143	16	118	27	161	839
07:15 AM	18	259	4	281	37	184	15	236	25	168	23	216	18	150	23	191	924
07:30 AM	23	266	3	292	60	221	16	297	30	180	17	227	16	192	29	237	1053
07:45 AM	24	292	6	322	45	224	17	286	24	169	29	222	21	175	33	229	1059
Total	79	1058	20	1157	181	850	61	1092	96	630	82	808	71	635	112	818	3875
08:00 AM	26	203	10	239	36	210	29	275	37	182	30	249	17	163	28	208	971
08:15 AM	27	249	12	288	44	227	17	288	33	162	25	220	19	150	29	198	994
08:30 AM	18	186	5	209	34	179	20	233	29	178	32	239	21	131	40	192	873
08:45 AM	30	171	10	211	26	135	17	178	34	148	18	200	15	141	19	175	764
Total	101	809	37	947	140	751	83	974	133	670	105	908	72	585	116	773	3602
Grand Total	180	1867	57	2104	321	1601	144	2066	229	1300	187	1716	143	1220	228	1591	7477
Apprch %	8.6	88.7	2.7		15.5	77.5	7		13.3	75.8	10.9		9	76.7	14.3		
Total %	2.4	25	0.8	28.1	4.3	21.4	1.9	27.6	3.1	17.4	2.5	23	1.9	16.3	3	21.3	

Start Time	Carmenita Road Southbound				Imperial Highway Westbound				Carmenita Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	23	266	3	292	60	221	16	297	30	180	17	227	16	192	29	237	1053
07:45 AM	24	292	6	322	45	224	17	286	24	169	29	222	21	175	33	229	1059
08:00 AM	26	203	10	239	36	210	29	275	37	182	30	249	17	163	28	208	971
08:15 AM	27	249	12	288	44	227	17	288	33	162	25	220	19	150	29	198	994
Total Volume	100	1010	31	1141	185	882	79	1146	124	693	101	918	73	680	119	872	4077
% App. Total	8.8	88.5	2.7		16.1	77	6.9		13.5	75.5	11		8.4	78	13.6		
PHF	.926	.865	.646	.886	.771	.971	.681	.965	.838	.952	.842	.922	.869	.885	.902	.920	.962

City of Norwalk
 N/S: Carmenita Road
 E/W: Imperial Highway
 Weather: Clear

File Name : 17_NWK_Carmenita_Imp AM
 Site Code : 12222203
 Start Date : 3/10/2022
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:45 AM				07:30 AM			
+0 mins.	14	241	7	262	60	221	16	297	24	169	29	222	16	192	29	237
+15 mins.	18	259	4	281	45	224	17	286	37	182	30	249	21	175	33	229
+30 mins.	23	266	3	292	36	210	29	275	33	162	25	220	17	163	28	208
+45 mins.	24	292	6	322	44	227	17	288	29	178	32	239	19	150	29	198
Total Volume	79	1058	20	1157	185	882	79	1146	123	691	116	930	73	680	119	872
% App. Total	6.8	91.4	1.7		16.1	77	6.9		13.2	74.3	12.5		8.4	78	13.6	
PHF	.823	.906	.714	.898	.771	.971	.681	.965	.831	.949	.906	.934	.869	.885	.902	.920

City of Norwalk
 N/S: Carmenita Road
 E/W: Imperial Highway
 Weather: Clear

File Name : 17_NWK_Carmenita_Imp PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

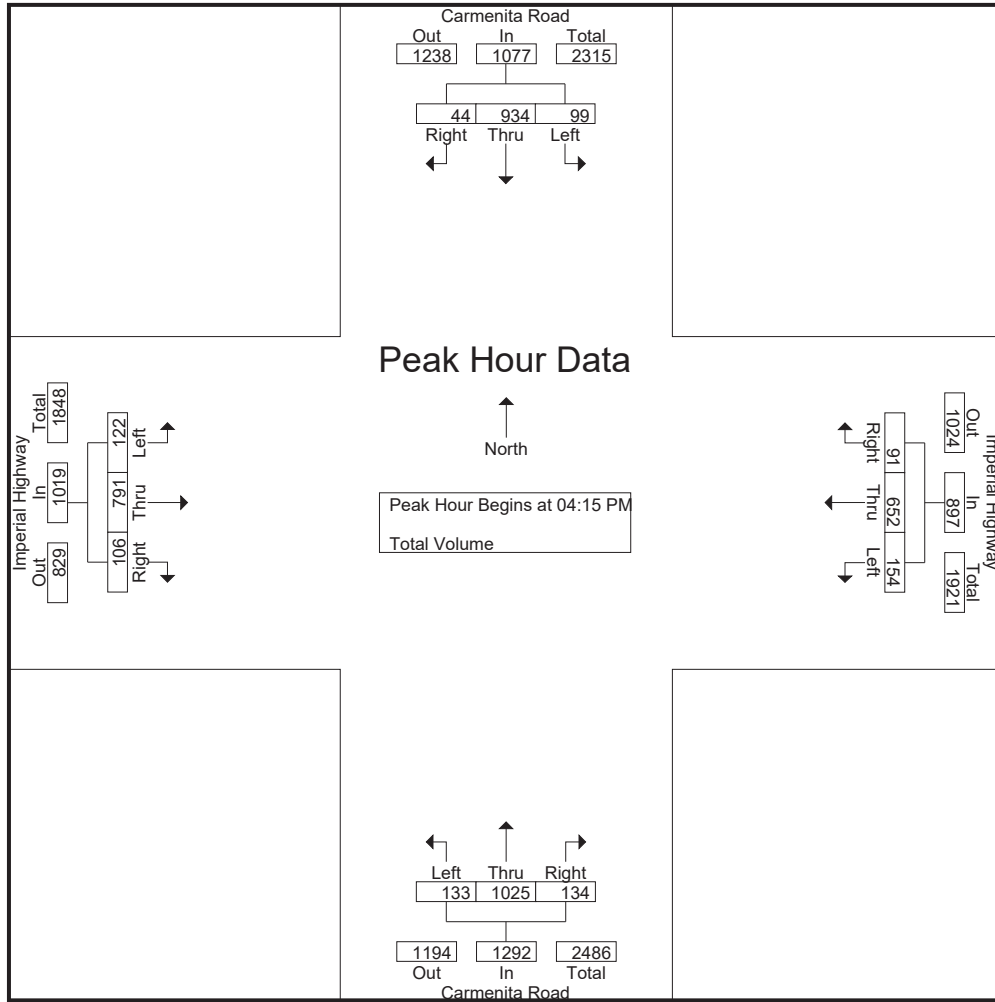
Groups Printed- Total Volume

Start Time	Carmenita Road Southbound				Imperial Highway Westbound				Carmenita Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	24	225	9	258	41	146	25	212	35	242	24	301	31	199	38	268	1039
04:15 PM	29	237	11	277	47	144	26	217	23	236	43	302	36	218	27	281	1077
04:30 PM	22	255	12	289	28	176	22	226	35	279	27	341	23	163	22	208	1064
04:45 PM	26	196	12	234	37	161	24	222	30	236	25	291	39	203	31	273	1020
Total	101	913	44	1058	153	627	97	877	123	993	119	1235	129	783	118	1030	4200
05:00 PM	22	246	9	277	42	171	19	232	45	274	39	358	24	207	26	257	1124
05:15 PM	21	223	11	255	44	152	30	226	25	235	23	283	30	241	33	304	1068
05:30 PM	30	207	8	245	32	140	25	197	19	288	29	336	26	177	27	230	1008
05:45 PM	27	191	18	236	35	158	21	214	30	265	24	319	30	184	22	236	1005
Total	100	867	46	1013	153	621	95	869	119	1062	115	1296	110	809	108	1027	4205
Grand Total	201	1780	90	2071	306	1248	192	1746	242	2055	234	2531	239	1592	226	2057	8405
Apprch %	9.7	85.9	4.3		17.5	71.5	11		9.6	81.2	9.2		11.6	77.4	11		
Total %	2.4	21.2	1.1	24.6	3.6	14.8	2.3	20.8	2.9	24.4	2.8	30.1	2.8	18.9	2.7	24.5	

Start Time	Carmenita Road Southbound				Imperial Highway Westbound				Carmenita Road Northbound				Imperial Highway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	29	237	11	277	47	144	26	217	23	236	43	302	36	218	27	281	1077
04:30 PM	22	255	12	289	28	176	22	226	35	279	27	341	23	163	22	208	1064
04:45 PM	26	196	12	234	37	161	24	222	30	236	25	291	39	203	31	273	1020
05:00 PM	22	246	9	277	42	171	19	232	45	274	39	358	24	207	26	257	1124
Total Volume	99	934	44	1077	154	652	91	897	133	1025	134	1292	122	791	106	1019	4285
% App. Total	9.2	86.7	4.1		17.2	72.7	10.1		10.3	79.3	10.4		12	77.6	10.4		
PHF	.853	.916	.917	.932	.819	.926	.875	.967	.739	.918	.779	.902	.782	.907	.855	.907	.953

City of Norwalk
 N/S: Carmenita Road
 E/W: Imperial Highway
 Weather: Clear

File Name : 17_NWK_Carmenita_Imp PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:30 PM				05:00 PM				04:45 PM			
+0 mins.	29	237	11	277	28	176	22	226	45	274	39	358	39	203	31	273
+15 mins.	22	255	12	289	37	161	24	222	25	235	23	283	24	207	26	257
+30 mins.	26	196	12	234	42	171	19	232	19	288	29	336	30	241	33	304
+45 mins.	22	246	9	277	44	152	30	226	30	265	24	319	26	177	27	230
Total Volume	99	934	44	1077	151	660	95	906	119	1062	115	1296	119	828	117	1064
% App. Total	9.2	86.7	4.1		16.7	72.8	10.5		9.2	81.9	8.9		11.2	77.8	11	
PHF	.853	.916	.917	.932	.858	.938	.792	.976	.661	.922	.737	.905	.763	.859	.886	.875

City of Norwalk
 N/S: Carmenita Road
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 18_NWK_Carmenita_Rose AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

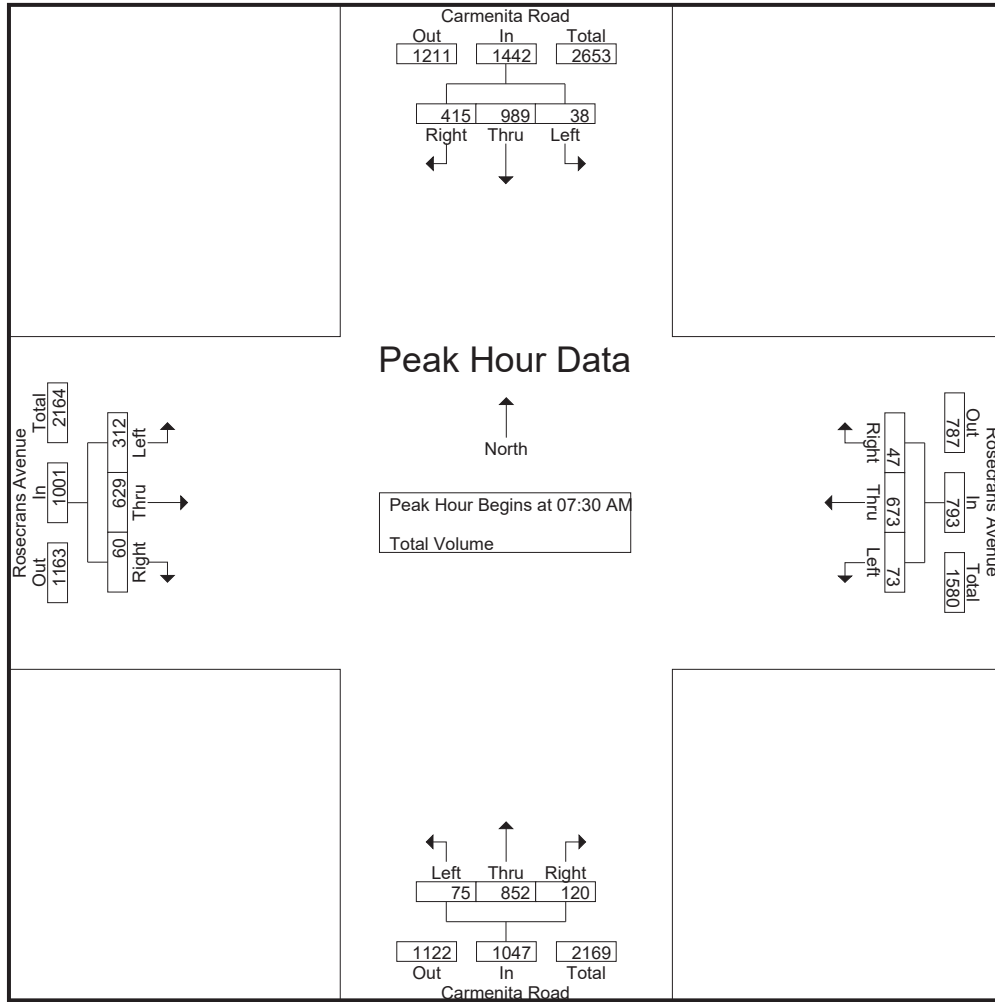
Groups Printed- Total Volume

Start Time	Carmenita Road Southbound				Rosecrans Avenue Westbound				Carmenita Road Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	222	127	354	12	212	8	232	10	164	29	203	69	122	25	216	1005
07:15 AM	17	229	108	354	18	183	9	210	16	200	24	240	56	127	12	195	999
07:30 AM	5	276	136	417	26	143	11	180	19	207	24	250	72	160	7	239	1086
07:45 AM	16	267	93	376	13	180	9	202	15	217	26	258	92	182	17	291	1127
Total	43	994	464	1501	69	718	37	824	60	788	103	951	289	591	61	941	4217
08:00 AM	11	196	87	294	13	170	11	194	22	217	40	279	83	142	15	240	1007
08:15 AM	6	250	99	355	21	180	16	217	19	211	30	260	65	145	21	231	1063
08:30 AM	10	217	88	315	19	151	7	177	21	182	26	229	73	126	18	217	938
08:45 AM	12	175	62	249	20	87	13	120	16	182	32	230	67	136	7	210	809
Total	39	838	336	1213	73	588	47	708	78	792	128	998	288	549	61	898	3817
Grand Total	82	1832	800	2714	142	1306	84	1532	138	1580	231	1949	577	1140	122	1839	8034
Apprch %	3	67.5	29.5		9.3	85.2	5.5		7.1	81.1	11.9		31.4	62	6.6		
Total %	1	22.8	10	33.8	1.8	16.3	1	19.1	1.7	19.7	2.9	24.3	7.2	14.2	1.5	22.9	

Start Time	Carmenita Road Southbound				Rosecrans Avenue Westbound				Carmenita Road Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	276	136	417	26	143	11	180	19	207	24	250	72	160	7	239	1086
07:45 AM	16	267	93	376	13	180	9	202	15	217	26	258	92	182	17	291	1127
08:00 AM	11	196	87	294	13	170	11	194	22	217	40	279	83	142	15	240	1007
08:15 AM	6	250	99	355	21	180	16	217	19	211	30	260	65	145	21	231	1063
Total Volume	38	989	415	1442	73	673	47	793	75	852	120	1047	312	629	60	1001	4283
% App. Total	2.6	68.6	28.8		9.2	84.9	5.9		7.2	81.4	11.5		31.2	62.8	6		
PHF	.594	.896	.763	.865	.702	.935	.734	.914	.852	.982	.750	.938	.848	.864	.714	.860	.950

City of Norwalk
 N/S: Carmenita Road
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 18_NWK_Carmenita_Rose AM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	5	222	127	354	12	212	8	232	19	207	24	250	72	160	7	239
+15 mins.	17	229	108	354	18	183	9	210	15	217	26	258	92	182	17	291
+30 mins.	5	276	136	417	26	143	11	180	22	217	40	279	83	142	15	240
+45 mins.	16	267	93	376	13	180	9	202	19	211	30	260	65	145	21	231
Total Volume	43	994	464	1501	69	718	37	824	75	852	120	1047	312	629	60	1001
% App. Total	2.9	66.2	30.9		8.4	87.1	4.5		7.2	81.4	11.5		31.2	62.8	6	
PHF	.632	.900	.853	.900	.663	.847	.841	.888	.852	.982	.750	.938	.848	.864	.714	.860

City of Norwalk
 N/S: Carmenita Road
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 18_NWK_Carmenita_Rose PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 1

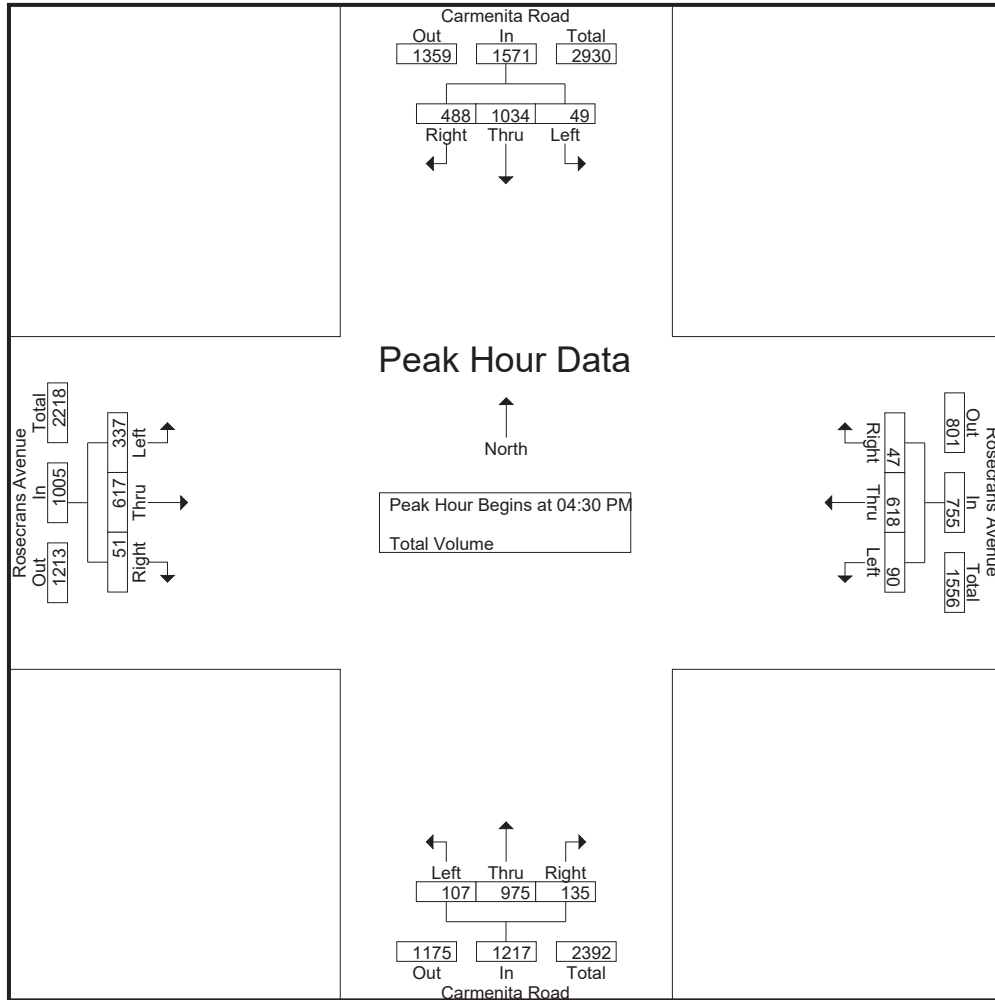
Groups Printed- Total Volume

Start Time	Carmenita Road Southbound				Rosecrans Avenue Westbound				Carmenita Road Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	18	218	125	361	29	175	20	224	30	207	23	260	75	176	14	265	1110
04:15 PM	13	220	110	343	12	166	17	195	25	234	18	277	101	146	15	262	1077
04:30 PM	9	283	128	420	21	180	10	211	23	229	29	281	92	149	13	254	1166
04:45 PM	9	229	102	340	25	150	13	188	26	228	35	289	93	188	14	295	1112
Total	49	950	465	1464	87	671	60	818	104	898	105	1107	361	659	56	1076	4465
05:00 PM	20	263	138	421	26	146	10	182	34	268	32	334	71	118	10	199	1136
05:15 PM	11	259	120	390	18	142	14	174	24	250	39	313	81	162	14	257	1134
05:30 PM	14	216	108	338	21	140	11	172	12	241	31	284	79	180	12	271	1065
05:45 PM	18	235	82	335	18	103	12	133	15	225	26	266	92	163	11	266	1000
Total	63	973	448	1484	83	531	47	661	85	984	128	1197	323	623	47	993	4335
Grand Total	112	1923	913	2948	170	1202	107	1479	189	1882	233	2304	684	1282	103	2069	8800
Apprch %	3.8	65.2	31		11.5	81.3	7.2		8.2	81.7	10.1		33.1	62	5		
Total %	1.3	21.9	10.4	33.5	1.9	13.7	1.2	16.8	2.1	21.4	2.6	26.2	7.8	14.6	1.2	23.5	

Start Time	Carmenita Road Southbound				Rosecrans Avenue Westbound				Carmenita Road Northbound				Rosecrans Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	9	283	128	420	21	180	10	211	23	229	29	281	92	149	13	254	1166
04:45 PM	9	229	102	340	25	150	13	188	26	228	35	289	93	188	14	295	1112
05:00 PM	20	263	138	421	26	146	10	182	34	268	32	334	71	118	10	199	1136
05:15 PM	11	259	120	390	18	142	14	174	24	250	39	313	81	162	14	257	1134
Total Volume	49	1034	488	1571	90	618	47	755	107	975	135	1217	337	617	51	1005	4548
% App. Total	3.1	65.8	31.1		11.9	81.9	6.2		8.8	80.1	11.1		33.5	61.4	5.1		
PHF	.613	.913	.884	.933	.865	.858	.839	.895	.787	.910	.865	.911	.906	.820	.911	.852	.975

City of Norwalk
 N/S: Carmenita Road
 E/W: Rosecrans Avenue
 Weather: Clear

File Name : 18_NWK_Carmenita_Rose PM
 Site Code : 12222203
 Start Date : 3/10/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:45 PM				04:00 PM			
+0 mins.	9	283	128	420	29	175	20	224	26	228	35	289	75	176	14	265
+15 mins.	9	229	102	340	12	166	17	195	34	268	32	334	101	146	15	262
+30 mins.	20	263	138	421	21	180	10	211	24	250	39	313	92	149	13	254
+45 mins.	11	259	120	390	25	150	13	188	12	241	31	284	93	188	14	295
Total Volume	49	1034	488	1571	87	671	60	818	96	987	137	1220	361	659	56	1076
% App. Total	3.1	65.8	31.1		10.6	82	7.3		7.9	80.9	11.2		33.6	61.2	5.2	
PHF	.613	.913	.884	.933	.750	.932	.750	.913	.706	.921	.878	.913	.894	.876	.933	.912

Counts Unlimited, Inc.

City of Norwalk
 Bloomfield Avenue
 B/ Civic Center Drive - Foster Road
 24 Hour Directional Volume Count

PO Box 1178
 Corona, CA 92878
 (951) 268-6268
 email: counts@countsunlimited.com

NWK004
 Site Code: 122-22203

Start Time	3/10/22 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		17	147			26	165				
12:15		23	146			30	151				
12:30		7	148			19	170				
12:45		13	159	60	600	20	161	95	647	155	1247
01:00		7	147			8	204				
01:15		10	163			10	148				
01:30		5	190			12	200				
01:45		11	176	33	676	9	193	39	745	72	1421
02:00		8	155			8	186				
02:15		11	222			6	188				
02:30		10	188			11	229				
02:45		13	198	42	763	7	228	32	831	74	1594
03:00		13	199			8	188				
03:15		15	208			12	179				
03:30		20	187			18	235				
03:45		28	188	76	782	21	232	59	834	135	1616
04:00		18	167			9	214				
04:15		46	187			20	213				
04:30		72	203			55	222				
04:45		88	214	224	771	68	216	152	865	376	1636
05:00		63	208			46	286				
05:15		64	234			59	196				
05:30		86	176			78	204				
05:45		117	182	330	800	94	191	277	877	607	1677
06:00		91	194			91	211				
06:15		114	175			110	182				
06:30		174	149			135	170				
06:45		184	124	563	642	165	154	501	717	1064	1359
07:00		172	126			151	135				
07:15		223	106			186	119				
07:30		249	131			239	133				
07:45		309	108	953	471	185	96	761	483	1714	954
08:00		217	96			205	88				
08:15		196	91			175	92				
08:30		191	84			162	79				
08:45		193	65	797	336	159	79	701	338	1498	674
09:00		138	83			144	72				
09:15		121	64			125	68				
09:30		131	59			137	74				
09:45		119	51	509	257	123	65	529	279	1038	536
10:00		138	54			108	50				
10:15		114	37			123	44				
10:30		131	46			106	63				
10:45		146	50	529	187	134	38	471	195	1000	382
11:00		102	38			136	48				
11:15		137	27			149	47				
11:30		144	21			141	46				
11:45		124	25	507	111	141	34	567	175	1074	286
Total		4623	6396	4623	6396	4184	6986	4184	6986	8807	13382
Combined Total		11019		11019		11170		11170		22189	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	998	-	-	-	815	-	-	-	-	-
P.H.F.		0.807				0.853					
PM Peak	-	-	04:30	-	-	-	04:15	-	-	-	-
Vol.	-	-	859	-	-	-	937	-	-	-	-
P.H.F.			0.918				0.819				
Percentage		42.0%	58.0%			37.5%	62.5%				
ADT/AADT		ADT 22,189		AADT 22,189							

Counts Unlimited, Inc.

City of Norwalk
 Bloomfield Avenue
 B/ Foster Road - Markdale Avenue
 24 Hour Directional Volume Count

PO Box 1178
 Corona, CA 92878
 (951) 268-6268
 email: counts@countsunlimited.com

NWK005
 Site Code: 122-22203

Start Time	3/10/22 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		16	124			23	141				
12:15		22	126			32	141				
12:30		8	128			19	159				
12:45		15	143	61	521	21	153	95	594	156	1115
01:00		8	124			8	184				
01:15		12	161			10	141				
01:30		6	158			10	183				
01:45		6	181	32	624	11	172	39	680	71	1304
02:00		8	152			7	174				
02:15		11	186			6	202				
02:30		11	164			9	183				
02:45		10	187	40	689	10	202	32	761	72	1450
03:00		11	183			9	197				
03:15		17	186			12	168				
03:30		17	147			19	192				
03:45		27	164	72	680	21	203	61	760	133	1440
04:00		16	166			13	164				
04:15		41	170			19	209				
04:30		68	174			54	214				
04:45		87	206	212	716	67	194	153	781	365	1497
05:00		59	195			46	244				
05:15		63	195			64	164				
05:30		86	173			84	169				
05:45		101	182	309	745	90	194	284	771	593	1516
06:00		86	184			93	186				
06:15		125	169			104	168				
06:30		167	153			134	141				
06:45		203	121	581	627	153	149	484	644	1065	1271
07:00		156	112			153	113				
07:15		236	110			173	124				
07:30		250	122			214	126				
07:45		274	98	916	442	203	91	743	454	1659	896
08:00		177	90			194	80				
08:15		183	89			146	78				
08:30		175	73			166	76				
08:45		189	70	724	322	144	73	650	307	1374	629
09:00		122	67			143	71				
09:15		100	69			131	59				
09:30		118	54			135	56				
09:45		119	58	459	248	128	61	537	247	996	495
10:00		124	49			105	53				
10:15		101	38			108	41				
10:30		113	49			102	61				
10:45		135	51	473	187	130	34	445	189	918	376
11:00		106	32			128	45				
11:15		123	23			149	46				
11:30		124	26			147	43				
11:45		115	30	468	111	138	25	562	159	1030	270
Total		4347	5912	4347	5912	4085	6347	4085	6347	8432	12259
Combined Total		10259		10259		10432		10432		20691	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	937	-	-	-	784	-	-	-	-	-
P.H.F.	-	0.855				0.916					
PM Peak	-	-	04:30	-	-	-	04:15	-	-	-	-
Vol.	-	-	770	-	-	-	861	-	-	-	-
P.H.F.	-	-	0.934				0.882				
Percentage		42.4%	57.6%			39.2%	60.8%				
ADT/AADT		ADT 20,691		AADT 20,691							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
(951) 268-6268

email: counts@countsunlimited.com

City of Norwalk
Imperial Highway
B/ Pioneer Boulevard - San Antonio Drive
24 Hour Directional Volume Count

NWK001
Site Code: 122-22203

Start Time	3/10/22 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		63	246			61	304				
12:15		46	259			55	296				
12:30		40	267			40	300				
12:45		28	311	177	1083	50	280	206	1180	383	2263
01:00		42	290			43	309				
01:15		35	270			39	304				
01:30		38	268			29	328				
01:45		44	285	159	1113	44	289	155	1230	314	2343
02:00		37	311			34	305				
02:15		53	304			37	278				
02:30		38	310			46	338				
02:45		46	263	174	1188	25	325	142	1246	316	2434
03:00		40	306			42	389				
03:15		41	334			60	317				
03:30		46	306			84	466				
03:45		70	355	197	1301	70	364	256	1536	453	2837
04:00		63	330			83	410				
04:15		94	337			112	326				
04:30		112	279			151	360				
04:45		137	358	406	1304	149	427	495	1523	901	2827
05:00		121	312			214	481				
05:15		127	302			246	413				
05:30		190	315			241	349				
05:45		196	306	634	1235	209	316	910	1559	1544	2794
06:00		144	268			257	307				
06:15		163	267			307	350				
06:30		255	229			277	251				
06:45		336	260	898	1024	362	223	1203	1131	2101	2155
07:00		247	245			364	238				
07:15		332	211			379	204				
07:30		337	186			287	177				
07:45		401	194	1317	836	308	213	1338	832	2655	1668
08:00		339	171			326	215				
08:15		307	173			271	170				
08:30		262	157			293	154				
08:45		294	179	1202	680	253	166	1143	705	2345	1385
09:00		298	136			292	134				
09:15		203	127			241	152				
09:30		246	108			284	125				
09:45		221	122	968	493	259	103	1076	514	2044	1007
10:00		268	109			225	153				
10:15		219	79			257	116				
10:30		234	100			285	114				
10:45		269	85	990	373	290	74	1057	457	2047	830
11:00		268	94			276	89				
11:15		231	77			274	88				
11:30		236	77			297	96				
11:45		259	64	994	312	288	72	1135	345	2129	657
Total		8116	10942	8116	10942	9116	12258	9116	12258	17232	23200
Combined Total		19058		19058		21374		21374		40432	
AM Peak	-	07:15	-	-	-	06:45	-	-	-	-	-
Vol.	-	1409	-	-	-	1392	-	-	-	-	-
P.H.F.		0.878				0.918					
PM Peak	-	-	03:30	-	-	-	04:30	-	-	-	-
Vol.	-	-	1328	-	-	-	1681	-	-	-	-
P.H.F.			0.935				0.874				
Percentage		42.6%	57.4%			42.6%	57.4%				
ADT/AADT		ADT 40,432		AADT 40,432							

SIGNAL TIMING SHEETS

INTERSECTION: 172.22.1.41 - ASC/2

PRINTED BY: jtran

CONTROLLER TYPE: Econolite/ASC2

1. CONFIGURATION SUBMENU

1. CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
RING1	1	2	3	4	9	10	0	0	0	0	0	0
RING2	5	6	7	8	11	12	0	0	0	0	0	0
CG			X		X		X					

2. PHASES IN USE

	PHASE NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE	X	X	X	X	X	X	X	X				
EXCLUSIVE PED												

3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LSMMU ¹	SDG ²		LSMMU ¹	SDG ²	
	PH/OLAP	PED		CHANNEL	PH/OLAP	PED
1	1		9	2	X
2	2		10	4	X
3	3		11	6	X
4	4		12	8	X
5	5		13	A	
6	6		14	B	
7	7		15	C	
8	8		16	D	

¹LOAD SWITCH (MMU)

²SIGNAL DRIVER GROUP

4. SDLC OPTIONS/ENABLES

	BIU NUMBER									
	1	2	3	4	5	6	7	8	9	10
TERM & FACIL										
DET RACK	X									
TYPE 2 RUNS AS TYPE 1										
MMU DISABLE										
DIAGNOSTIC ENABLE (TEST FIXTURE)										
PEER TO PEER ENABLE										
PEER TO PEER ADDRESS:										
1)	255	2)	255	3)	255	4)	255	5)	255	
6)	255	7)	255	8)	255	9)	255	10)	255	

5. PORT2 CONFIGURATION

PORT2 PROTOCOL	Telemetry
PORT2 ENABLE	No
NTCIP ADDRESS	0
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	0
NTCIP SINGLE FLAG ENABLE	NO
NTCIP DROP-OUT TIME	0
NTCIP BACKUP TIME	0

6. PORT3 CONFIGURATION

PORT3 PROTOCOL	NTCIP
PORT3 ENABLE	Yes
TELEMETRY ADDRESS	0
SYSTEM DETECTOR 9-16 ADDRESS	0
TELEMETRY RESPONSE DELAY	0
DUPLEX - HALF OR FULL	FULL
MODEM DATA RATE (BPS)	19.2 K
DATA, PARITY, STOP	8, N, 1
NTCIP ADDRESS	1
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	1
NTCIP SINGLE FLAG ENABLE	No
NTCIP DROP-OUT TIME	50
NTCIP BACKUP TIME	0
ADDITIONAL SCREENS(S)	

7. ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TF)	X
NON-CRITICAL RFE'S (DET/TEST)	X
DETECTOR ERRORS	X
COORDINATION ERRORS	
MMU FLASH FAULTS	X
LOCAL FLASH FAULTS	X
PREEMPT	X
POWER ON/OFF	X
LOW BATTERY	X
SPARE	X
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

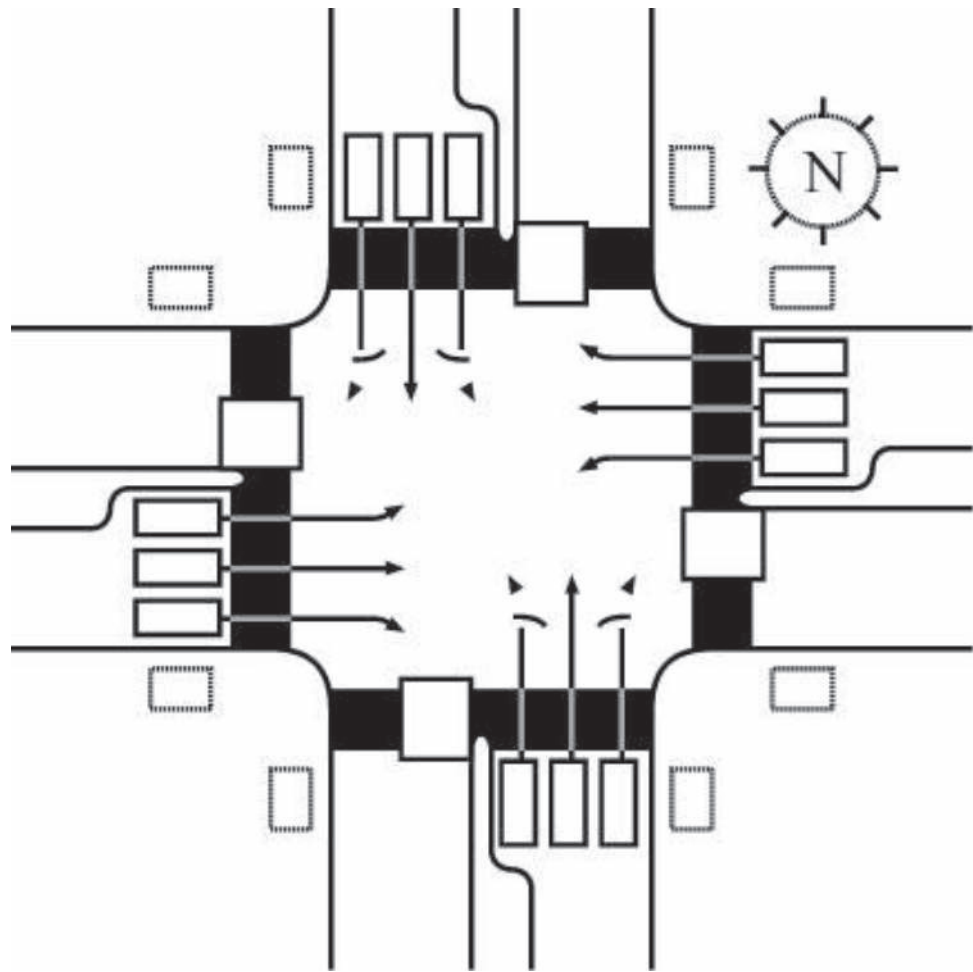
8. OPTIONS

SUPERVISOR ACCESS CODE	
DATA CHANGE ACCESS CODE	
KEY CLICK ENABLE	
BACKLIGHT ENABLE	

9. MMU PROGRAM

CAN SERVE WITH

	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															



2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	4	8	4	6	4	8	4	6	5	5	5	5
BIKE GRN	0	0	0	0	0	0	0	0	0	0	0	0
CS MGRN	0	0	0	0	0	0	0	0	0	0	0	0
WALK	0	7	0	7	0	7	0	7	0	10	0	10
PED CLR	0	18	0	18	0	19	0	22	0	16	0	16
VEH EXT	1.5	5.5	1.5	4.5	1.5	5.5	1.5	4.5	5.0	5.0	5.0	5.0
VEH EXT 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX EXT	0	0	0	0	0	0	0	0	0	0	0	0
MAX1	20	50	20	40	20	50	20	40	35	35	35	35
MAX2	20	130	20	40	20	130	20	40	40	40	40	40
MAX3	0	0	0	0	0	0	0	0	0	0	0	0
DET MAX	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW	3.0	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0	3.0	3.0	3.0
RED CLR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
RED RVT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAX INI	0	0	0	0	0	0	0	0	30	30	30	30
TIME B4	0	10	0	0	0	10	0	0	0	0	0	0
CARS WT	0	255	0	0	0	255	0	0	0	0	0	0
TTREDUC	0	15	0	0	0	15	0	0	0	0	0	0
MIN GAP	1.5	4.5	1.5	4.5	1.5	3.5	1.5	4.5	0.0	0.0	0.0	0.0

2. PHASE OVERLAP ASSIGNMENTS

OVERLAP CONSISTS OF PHASES:												
OVLPHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10										X		
11											X	
12												X

3. PED TIMING CARRYOVER

PHASE	CARRYOVR PHS	PHASE	CARRYOVR PHS
1	0	7	0
2	0	8	0
3	0	9	0
4	0	10	0
5	0	11	0
6	0	12	0

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY		X		X		X		X				
VEHICLE RECALL		X				X						
PED RECALL												
RECALL TO MAX												
SOFT RECALL												
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0
OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0
OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0
OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												0.0
LAG/LEAD GREEN TIMER												0.0
LAG/LEAD YELLOW TIMER												0.0
LAG/LEAD RED TIMER												0.0

PED OVERLAP ASSIGNMENTS - OVERLAP CONSISTS OF PHASES:												
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
POWER START		X				X						
EXTERNAL START												
ENTRY REM FLASH		X				X						
EXIT REM FLASH		X				X						
REM FLASH YELLOW												
FL TOGETHER PHS		X		X		X		X		X		X
FL TOGETHER OVLPs	A:			B:	X	C:				D:	X	
STARTUP INTERVAL RING 1									YELLOW			
STARTUP INTERVAL RING 2									YELLOW			
POWER START ALL RED TIME									0			
POWER START FLASH TIME									0			
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED												
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												
YELLOW FLASH MAIN STREET												

7. NO SERVER PHASES

CANNOT SERVER WITH:											
PHASE	12	11	10	9	8	7	6	5	4	3	2
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
GUAR PASSAGE												
NONACTUATED I												
NONACTUATED II												
DUAL ENTRY		X		X		X		X				
COND SERVICE	X		X		X		X					
COND RESERVICE												
REST IN WALK												
FLASHING WALK												
FIVE SECTION LEFT TURN HEADS												
5-2				7-4				1-6				
3-8				11-10				9-12				
DUAL ENTRY				X	RESERVED							
COND SERVICE ENABLE				X	BACKUP PROTECTION GRP 1							
COND SERVICE DET X SWITCH				BACKUP PROTECTION GRP 2								
PED CLR PROTECT				BACKUP PROTECTION GRP 3								
SPEC PREPMT OVLP FLASH				SIMULTANEOUS GAP GROUP 1			X					
LOCK DET IN RED ONLY				SIMULTANEOUS GAP GROUP 2			X					
RESERVED				SIMULTANEOUS GAP GROUP 3								

3. COORDINATOR SUBMENU

1. COORDINATOR OPTIONS

SPLIT UNITS	SECONDS	ACT CRD PHASE	X
OFFSET UNITS	SECONDS	ACT WALK/REST	
INTERCNT FMT	STANDARD	INHIBIT MAX	
INTERCNT SRC	TELEMETRY	MAX2 SELECT	X
RESYNC COUNT	255	MULTISYNC	
TRANSITION	SMOOTH	FLOAT FORCE OFF	
DWELL PERIOD	255		
	A	B	C
	D	E	F
FREE ALTERNATE SEQUENCE			

2. COORD MANUAL AND SPLIT DEMAND

MANUAL ENABLE		MANUAL PATTERN	0
SPLIT DEMAND:		DEMAND 1	DEMAND 2
DEMAND CALL TIME		0	0
DEMAND CYCLE COUNT		0	0
DEMAND PHASES	1	2	3
	4	5	6
	7	8	9
	10	11	12
DEMAND 1 PHASE			
DEMAND 2 PHASE			

3. COORD AUTO PERM MIN GREEN

PHASE	AUTO PERM MIN GRN	PHASE	AUTO PERM MIN GRN
1	7	7	7
2	7	8	7
3	7	9	0
4	7	10	0
5	7	11	0
6	7	12	0

4. PATTERN DATA

COORD PATTERN	1	OFFSET	82
CYCLE LENGTH	120	C/O/S	111
SPLITS:			
1)	19	2)	19
		3)	19
		4)	43
5)	19	6)	19
		7)	19
		8)	43
9)	0	10)	0
		11)	0
		12)	0
VEH PERMISSIVE	[1]	0	[2]
			0
VEH PERM 2 DISP			0
PHASE RESERVICE			
SPLIT EXTENSION/RING	[1]	19	[2]
			19
SPL DMD PATTERN	[1]	0	[2]
			0
XARTERY PATTERN			
PHASE	1	2	3
	4	5	6
	7	8	9
	10	11	12
COORD PHASES	X		X
VEHICLE RECALL	X		X
VEH MAX RECALL			
PED RECALL			
PHASE OMIT			
	A	B	C
	D	E	F
ALT SEQUENCE			

4. PREEMPTOR SUBMENU

1. PRIORITY PREEMPTOR 1

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE					PED DARK							
PRIORITY					PED ACTIVE							
DET LOCK					ZERO PC TIME							
HOLD FLASH					PC THRU YELLOW							
TERM OVLP ASAP					TERM PHASES							
DON'T OVERRIDE FLASH					ACTIVE ONLY DURING HOLD							
FLASH ALL OUTPUTS					NO CVM IN FLASH							
YELLOW-RED GOES GREEN					FAST FLASH GRN ON HOLD							
ENABLE MAX PREEMPT TIME					OUT OF FLASH				GREEN			
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN				YELLOW				RED			
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					

2. PRIORITY PREEMPTOR 2

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE					PED DARK							
PRIORITY					PED ACTIVE							
DET LOCK					ZERO PC TIME							
HOLD FLASH					PC THRU YELLOW							
TERM OVLP ASAP					TERM PHASES							
DON'T OVERRIDE FLASH					ACTIVE ONLY DURING HOLD							
FLASH ALL OUTPUTS					NO CVM IN FLASH							
YELLOW-RED GOES GREEN					FAST FLASH GRN ON HOLD							
ENABLE MAX PREEMPT TIME					OUT OF FLASH				GREEN			
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN				YELLOW				RED			
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					
LINKED PREEMPTOR										0		

3. PRIORITY PREEMPTOR 3

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE					PED DARK							
PRIORITY					PED ACTIVE							
DET LOCK					ZERO PC TIME							
HOLD FLASH					PC THRU YELLOW							
TERM OVLP ASAP					TERM PHASES							
DON'T OVERRIDE FLASH					ACTIVE ONLY DURING HOLD							
FLASH ALL OUTPUTS					NO CVM IN FLASH							
YELLOW-RED GOES GREEN					FAST FLASH GRN ON HOLD							
ENABLE MAX PREEMPT TIME					OUT OF FLASH				GREEN			
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN				YELLOW				RED			
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					
LINKED PREEMPTOR										0		

4. PRIORITY PREEMPTOR 4

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE					PED DARK							
PRIORITY					PED ACTIVE							
DET LOCK					ZERO PC TIME							
HOLD FLASH					PC THRU YELLOW							
TERM OVLP ASAP					TERM PHASES							
DON'T OVERRIDE FLASH					ACTIVE ONLY DURING HOLD							
FLASH ALL OUTPUTS					NO CVM IN FLASH							
YELLOW-RED GOES GREEN					FAST FLASH GRN ON HOLD							
ENABLE MAX PREEMPT TIME					OUT OF FLASH				GREEN			
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN				YELLOW				RED			
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					
LINKED PREEMPTOR										0		

5. PRIORITY PREEMPTOR 5

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE				PED DARK								
PRIORITY				PED ACTIVE								
DET LOCK				ZERO PC TIME								
HOLD FLASH				PC THRU YELLOW								
TERM OVLP ASAP				TERM PHASES								
DON'T OVERRIDE FLASH				ACTIVE ONLY DURING HOLD								
FLASH ALL OUTPUTS				NO CVM IN FLASH								
YELLOW-RED GOES GREEN				FAST FLASH GRN ON HOLD								
ENABLE MAX PREEMPT TIME				OUT OF FLASH						GREEN		
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN			YELLOW			RED					
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					
LINKED PREEMPTOR										0		

7. BUS PREEMPTORS

	BUS PREEMPTOR											
	1	2	3	4								
PREEMPTOR ACTIVE												
DETECTOR LOCK												
MAXIMUM TIME	0	0	0	0								
RESERVICE TIME	0	0	0	0								
DELAY TIME	0	0	0	0								
INHIBIT TIME	0	0	0	0								
ENTRANCE GREEN	0	0	0	0								
ENTRANCE PED CLR	0	0	0	0								
ENTRANCE YELLOW	0.0	0.0	0.0	0.0								
ENTRANCE RED	0.0	0.0	0.0	0.0								
MIN HOLD TIME	0	0	0	0								
HOLD PHASE	1	2	3	4	5	6	7	8	9	10	11	12
PREEMPTOR 1												
PREEMPTOR 2												
PREEMPTOR 3												
PREEMPTOR 4												

6. PRIORITY PREEMPTOR 6

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE				PED DARK								
PRIORITY				PED ACTIVE								
DET LOCK				ZERO PC TIME								
HOLD FLASH				PC THRU YELLOW								
TERM OVLP ASAP				TERM PHASES								
DON'T OVERRIDE FLASH				ACTIVE ONLY DURING HOLD								
FLASH ALL OUTPUTS				NO CVM IN FLASH								
YELLOW-RED GOES GREEN				FAST FLASH GRN ON HOLD								
ENABLE MAX PREEMPT TIME				OUT OF FLASH						GREEN		
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN			YELLOW			RED					
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					
LINKED PREEMPTOR										0		

5. NIC/TOD SUBMENU

1. NIC/TOD CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL NIC PROGRAM STEP	0
MANUAL TOD PROGRAM STEP	0
SYNC REFERENCE TIME	12:00:00 AM
SYNC REFERENCE	REFERENCE TIME
WEEK 1 BEGINS ON 1ST SUNDAY	
DISABLE DAYLIGHT SAVINGS	
DST BEGINS LAST SUNDAY	

2. NIC/TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRI	SAT
1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1

3. NIC/TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	49	50	51	52	53			
WEEKLY	1	1	1	1	1			

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PROG
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6	FIXED	0	0	0	0
7	FIXED	0	0	0	0
8	FIXED	0	0	0	0
9	FIXED	0	0	0	0
10	FIXED	0	0	0	0
11	FIXED	0	0	0	0
12	FIXED	0	0	0	0
13	FIXED	0	0	0	0
14	FIXED	0	0	0	0
15	FIXED	0	0	0	0
16	FIXED	0	0	0	0
17	FIXED	0	0	0	0
18	FIXED	0	0	0	0
19	FIXED	0	0	0	0
20	FIXED	0	0	0	0
21	FIXED	0	0	0	0
22	FIXED	0	0	0	0
23	FIXED	0	0	0	0
24	FIXED	0	0	0	0
25	FIXED	0	0	0	0
26	FIXED	0	0	0	0
27	FIXED	0	0	0	0
28	FIXED	0	0	0	0
29	FIXED	0	0	0	0
30	FIXED	0	0	0	0
31	FIXED	0	0	0	0
32	FIXED	0	0	0	0
33	FIXED	0	0	0	0
34	FIXED	0	0	0	0
35	FIXED	0	0	0	0
36	FIXED	0	0	0	0

5. CALENDAR

January 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ³⁰	1 ³¹	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1
2	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1
3	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1
4	1 ²⁰	1 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1
5	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1
6	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1

February 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1
2	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1
3	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1
4	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1 ²³	1
5	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ¹	1 ²	1
6	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1

March 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ¹	1 ²	1
2	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1
3	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1
4	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1 ²³	1
5	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1
6	1 ³¹	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1

April 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ³¹	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1
2	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1
3	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1
4	1 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1
5	1 ²⁸	1 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1
6	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1

May 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ²⁸	1 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1
2	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1
3	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1
4	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1
5	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1
6	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1

June 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1
2	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1
3	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1
4	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1
5	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1
6	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1

July 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1
2	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1
3	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1
4	1 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1
5	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1 ³	1
6	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1

August 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1 ³	1
2	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1
3	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1
4	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1 ²³	1 ²⁴	1
5	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1
6	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1

September 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1
2	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1
3	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1
4	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1
5	1 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1
6	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1

October 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1
2	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1
3	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1
4	1 ²⁰	1 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1
5	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1
6	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1

November 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1
2	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1
3	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1
4	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1 ²³	1
5	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1
6	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1

December 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1
2	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1
3	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1
4	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1
5	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1 ³	1 ⁴	1
6	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1

^{FX}Fixed Holiday
^{FL}Floating Holiday

6. NIC PROGRAM STEP

STEP	PGM	TIME	PATTERN	OVERRIDE
1	1	00:00	0	
2	2	00:00	0	
3	1	06:00	2	
4	2	06:00	1	
5	1	09:00	1	
6	1	15:00	3	
7	1	18:00	0	
8	2	18:00	0	
9	0	00:00	0	
10	0	00:00	0	
11	0	00:00	0	
12	0	00:00	0	
13	0	00:00	0	
14	0	00:00	0	
15	0	00:00	0	
16	0	00:00	0	
17	0	00:00	0	
18	0	00:00	0	
19	0	00:00	0	
20	0	00:00	0	
21	0	00:00	0	
22	0	00:00	0	
23	0	00:00	0	
24	0	00:00	0	
25	0	00:00	0	
26	0	00:00	0	
27	0	00:00	0	
28	0	00:00	0	
29	0	00:00	0	
30	0	00:00	0	
31	0	00:00	0	
32	0	00:00	0	
33	0	00:00	0	
34	0	00:00	0	
35	0	00:00	0	
36	0	00:00	0	
37	0	00:00	0	
38	0	00:00	0	
39	0	00:00	0	
40	0	00:00	0	
41	0	00:00	0	
42	0	00:00	0	
43	0	00:00	0	
44	0	00:00	0	
45	0	00:00	0	
46	0	00:00	0	
47	0	00:00	0	
48	0	00:00	0	
49	0	00:00	0	
50	0	00:00	0	

51	0	00:00	0	
52	0	00:00	0	
53	0	00:00	0	
54	0	00:00	0	
55	0	00:00	0	
56	0	00:00	0	
57	0	00:00	0	
58	0	00:00	0	
59	0	00:00	0	
60	0	00:00	0	
61	0	00:00	0	
62	0	00:00	0	
63	0	00:00	0	
64	0	00:00	0	
65	0	00:00	0	
66	0	00:00	0	
67	0	00:00	0	
68	0	00:00	0	
69	0	00:00	0	
70	0	00:00	0	
71	0	00:00	0	
72	0	00:00	0	
73	0	00:00	0	
74	0	00:00	0	
75	0	00:00	0	
76	0	00:00	0	
77	0	00:00	0	
78	0	00:00	0	
79	0	00:00	0	
80	0	00:00	0	
81	0	00:00	0	
82	0	00:00	0	
83	0	00:00	0	
84	0	00:00	0	
85	0	00:00	0	
86	0	00:00	0	
87	0	00:00	0	
88	0	00:00	0	
89	0	00:00	0	
90	0	00:00	0	
91	0	00:00	0	
92	0	00:00	0	
93	0	00:00	0	
94	0	00:00	0	
95	0	00:00	0	
96	0	00:00	0	
97	0	00:00	0	
98	0	00:00	0	
99	0	00:00	0	
100	0	00:00	0	

101	0	00:00	0	
102	0	00:00	0	
103	0	00:00	0	
104	0	00:00	0	
105	0	00:00	0	
106	0	00:00	0	
107	0	00:00	0	
108	0	00:00	0	
109	0	00:00	0	
110	0	00:00	0	
111	0	00:00	0	
112	0	00:00	0	
113	0	00:00	0	
114	0	00:00	0	
115	0	00:00	0	
116	0	00:00	0	
117	0	00:00	0	
118	0	00:00	0	
119	0	00:00	0	
120	0	00:00	0	
121	0	00:00	0	
122	0	00:00	0	
123	0	00:00	0	
124	0	00:00	0	
125	0	00:00	0	
126	0	00:00	0	
127	0	00:00	0	
128	0	00:00	0	
129	0	00:00	0	
130	0	00:00	0	
131	0	00:00	0	
132	0	00:00	0	
133	0	00:00	0	
134	0	00:00	0	
135	0	00:00	0	
136	0	00:00	0	
137	0	00:00	0	
138	0	00:00	0	
139	0	00:00	0	
140	0	00:00	0	
141	0	00:00	0	
142	0	00:00	0	
143	0	00:00	0	
144	0	00:00	0	
145	0	00:00	0	
146	0	00:00	0	
147	0	00:00	0	
148	0	00:00	0	
149	0	00:00	0	
150	0	00:00	0	

151	0	00:00	0	
152	0	00:00	0	
153	0	00:00	0	
154	0	00:00	0	
155	0	00:00	0	
156	0	00:00	0	
157	0	00:00	0	
158	0	00:00	0	
159	0	00:00	0	
160	0	00:00	0	
161	0	00:00	0	
162	0	00:00	0	
163	0	00:00	0	
164	0	00:00	0	
165	0	00:00	0	
166	0	00:00	0	
167	0	00:00	0	
168	0	00:00	0	
169	0	00:00	0	
170	0	00:00	0	
171	0	00:00	0	
172	0	00:00	0	
173	0	00:00	0	
174	0	00:00	0	
175	0	00:00	0	
176	0	00:00	0	
177	0	00:00	0	
178	0	00:00	0	
179	0	00:00	0	
180	0	00:00	0	
181	0	00:00	0	
182	0	00:00	0	
183	0	00:00	0	
184	0	00:00	0	
185	0	00:00	0	
186	0	00:00	0	
187	0	00:00	0	
188	0	00:00	0	
189	0	00:00	0	
190	0	00:00	0	
191	0	00:00	0	
192	0	00:00	0	
193	0	00:00	0	
194	0	00:00	0	
195	0	00:00	0	
196	0	00:00	0	
197	0	00:00	0	
198	0	00:00	0	
199	0	00:00	0	
200	0	00:00	0	

7. TOD PROGRAM STEP

TOD PROGRAM STEP														1	
DAY PGM NUM														0	
STEP BEGINS														12:00:00 AM	
DIMMING ENABLE				FLASH											
RED REST				ALT VEHICLE EXT											
DET LOG ENABLE				SPARE 5											
SPARE 4				SPARE 3											
DET DIAG PLAN														0	
ALT SEQUENCE		A		B		C		D		E		F			
PHASE	1	2	3	4	5	6	7	8	9	10	11	12			
MAX2 ENABLE															
MAX3 ENABLE															
VEH RECALL															
VEH MAX RECALL															
PED RECALL															
COND SERV INH															
PHASE OMIT															
SPECIAL FCTNS															

DAILY PROGRAM # 9				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 10				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 11				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 12				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 13				
Step	Time	Pattern	Override	TOD Step

8. DAILY PROGRAM

DAILY PROGRAM # 1				
Step	Time	Pattern	Override	TOD Step
1	00:00	0		
2	06:00	2		
3	09:00	1		
4	15:00	3		
5	18:00	0		

DAILY PROGRAM # 14				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 15				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 2				
Step	Time	Pattern	Override	TOD Step
1	00:00	0		
2	06:00	1		
3	18:00	0		

DAILY PROGRAM # 16				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 3				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 4				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 5				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 6				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 7				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 8				
Step	Time	Pattern	Override	TOD Step

6. DETECTORS

1. SETUP

#	TYPE	EXTEND	DELAY	Q LIMIT	FAIL TIME	FAIL ACT	ERR CNT
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	5	1	0	0	0	0	0
5	5	1	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	5	2	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0
13	5	2	0	0	0	0	0
14	5	2	0	0	0	0	0
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	5	2	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0

55	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0

#	QUEUE	YLW LCK	PASSAGE	SYSTEM	CALL DET	ADD INIT	RD LOCK
1			X				
2			X				
3			X				
4			X				
5			X				
6			X				
7			X				
8			X				
9			X				
10			X				
11			X				
12			X				
13			X				
14			X				
15			X				
16			X				
17			X				
18			X				
19			X				
20			X				
21			X				
22			X				
23			X				
24			X				
25			X				
26			X				
27			X				
28			X				
29			X				
30			X				
31			X				
32			X				
33			X				
34			X				
35			X				
36			X				
37			X				
38			X				
39			X				
40			X				
41			X				
42			X				
43			X				
44			X				
45			X				
46			X				

INTERSECTION: 172.22.1.28 - ASC/2

PRINTED BY: jtran

CONTROLLER TYPE: Econolite/ASC2

1. CONFIGURATION SUBMENU

1. CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
RING1	1	2	3	4	9	10	0	0	0	0	0	0
RING2	5	6	7	8	11	12	0	0	0	0	0	0
CG			X		X		X					

2. PHASES IN USE

	PHASE NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE		X		X		X						
EXCLUSIVE PED												

3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LSMMU ¹	SDG ²		LSMMU ¹	SDG ²	
	PH/OLAP	PED		CHANNEL	PH/OLAP	PED
1	0		9	2	X
2	2		10	4	X
3	0		11	0	
4	4		12	0	
5	0		13	0	
6	0		14	0	
7	0		15	0	
8	0		16	0	

¹LOAD SWITCH (MMU)

²SIGNAL DRIVER GROUP

4. SDLC OPTIONS/ENABLES

	BIU NUMBER									
	1	2	3	4	5	6	7	8	9	10
TERM & FACIL										
DET RACK	X									
TYPE 2 RUNS AS TYPE 1										
MMU DISABLE										
DIAGNOSTIC ENABLE (TEST FIXTURE)										
PEER TO PEER ENABLE										
PEER TO PEER ADDRESS:										
1)	255	2)	255	3)	255	4)	255	5)	255	
6)	255	7)	255	8)	255	9)	255	10)	255	

5. PORT2 CONFIGURATION

PORT2 PROTOCOL	Telemetry
PORT2 ENABLE	No
NTCIP ADDRESS	0
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	0
NTCIP SINGLE FLAG ENABLE	NO
NTCIP DROP-OUT TIME	0
NTCIP BACKUP TIME	0

6. PORT3 CONFIGURATION

PORT3 PROTOCOL	NTCIP
PORT3 ENABLE	Yes
TELEMETRY ADDRESS	0
SYSTEM DETECTOR 9-16 ADDRESS	0
TELEMETRY RESPONSE DELAY	0
DUPLEX - HALF OR FULL	FULL
MODEM DATA RATE (BPS)	19.2 K
DATA, PARITY, STOP	8, N, 1
NTCIP ADDRESS	1
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	1
NTCIP SINGLE FLAG ENABLE	No
NTCIP DROP-OUT TIME	50
NTCIP BACKUP TIME	0
ADDITIONAL SCREENS(S)	

7. ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TF)	X
NON-CRITICAL RFE'S (DET/TEST)	X
DETECTOR ERRORS	X
COORDINATION ERRORS	
MMU FLASH FAULTS	X
LOCAL FLASH FAULTS	X
PREEMPT	X
POWER ON/OFF	X
LOW BATTERY	X
SPARE	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

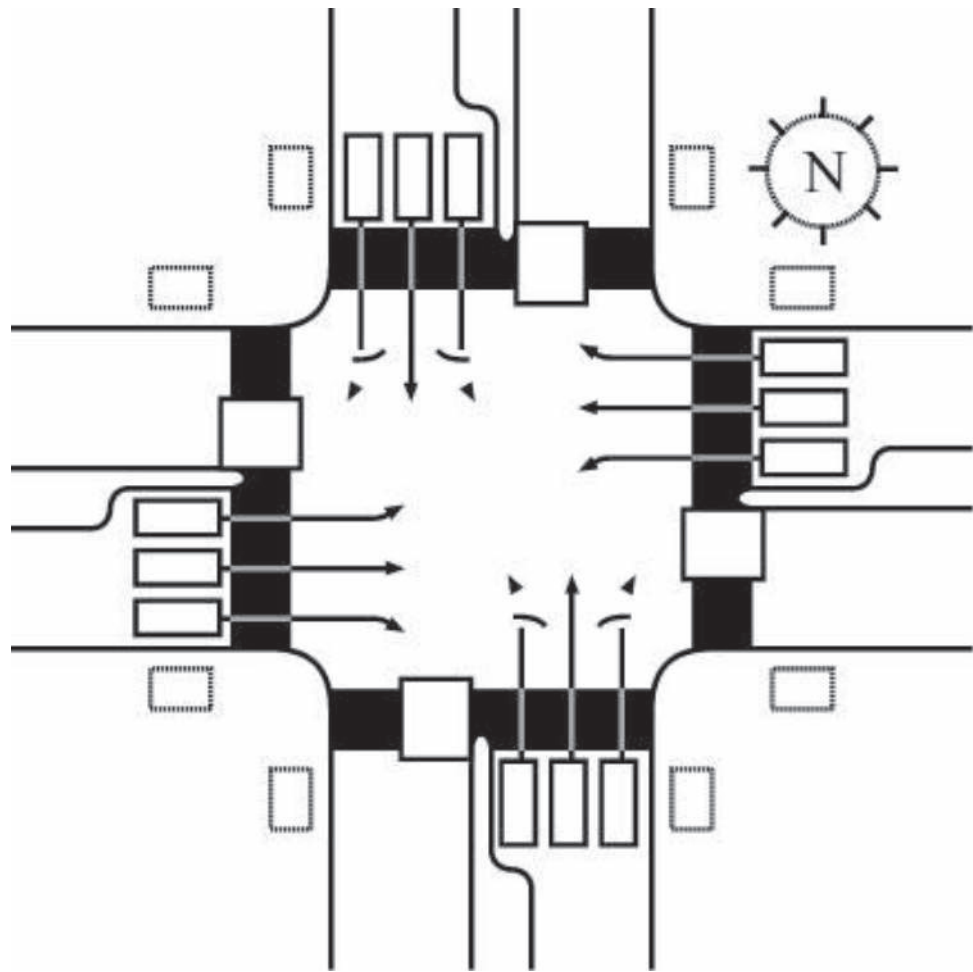
8. OPTIONS

SUPERVISOR ACCESS CODE	
DATA CHANGE ACCESS CODE	
KEY CLICK ENABLE	
BACKLIGHT ENABLE	

9. MMU PROGRAM

CAN SERVE WITH

	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															



PED OVERLAP ASSIGNMENTS - OVERLAP CONSISTS OF PHASES:												
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
POWER START		X				X						
EXTERNAL START												
ENTRY REM FLASH												
EXIT REM FLASH												
REM FLASH YELLOW												
FL TOGETHER PHS		X		X		X		X		X		X
FL TOGETHER OVLPS	A:			B:	X	C:				D:	X	
STARTUP INTERVAL RING 1									YELLOW			
STARTUP INTERVAL RING 2									YELLOW			
POWER START ALL RED TIME									6			
POWER START FLASH TIME									0			
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED												
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												
YELLOW FLASH MAIN STREET												

7. NO SERVER PHASES

CANNOT SERVER WITH:											
PHASE	12	11	10	9	8	7	6	5	4	3	2
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	
GUAR PASSAGE													
NONACTUATED I													
NONACTUATED II													
DUAL ENTRY													
COND SERVICE													
COND RESERVICE													
REST IN WALK		X											
FLASHING WALK													
FIVE SECTION LEFT TURN HEADS													
5-2				7-4				1-6					
3-8				11-10				9-12					
DUAL ENTRY							RESERVED						
COND SERVICE ENABLE							BACKUP PROTECTION GRP 1						
COND SERVICE DET X SWITCH							BACKUP PROTECTION GRP 2						
PED CLR PROTECT							BACKUP PROTECTION GRP 3						
SPEC PREPMT OVLP FLASH							SIMULTANEOUS GAP GROUP 1						X
LOCK DET IN RED ONLY							SIMULTANEOUS GAP GROUP 2						
RESERVED							SIMULTANEOUS GAP GROUP 3						

5. PRIORITY PREEMPTOR 5

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE				PED DARK								
PRIORITY				PED ACTIVE								
DET LOCK				ZERO PC TIME								
HOLD FLASH				PC THRU YELLOW								
TERM OVLP ASAP				TERM PHASES								
DON'T OVERRIDE FLASH				ACTIVE ONLY DURING HOLD								
FLASH ALL OUTPUTS				NO CVM IN FLASH								
YELLOW-RED GOES GREEN				FAST FLASH GRN ON HOLD								
ENABLE MAX PREEMPT TIME				OUT OF FLASH						GREEN		
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN			YELLOW			RED					
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					
LINKED PREEMPTOR										0		

7. BUS PREEMPTORS

	BUS PREEMPTOR											
	1	2	3	4								
PREEMPTOR ACTIVE												
DETECTOR LOCK												
MAXIMUM TIME	0	0	0	0								
RESERVICE TIME	0	0	0	0								
DELAY TIME	0	0	0	0								
INHIBIT TIME	0	0	0	0								
ENTRANCE GREEN	0	0	0	0								
ENTRANCE PED CLR	0	0	0	0								
ENTRANCE YELLOW	0.0	0.0	0.0	0.0								
ENTRANCE RED	0.0	0.0	0.0	0.0								
MIN HOLD TIME	0	0	0	0								
HOLD PHASE	1	2	3	4	5	6	7	8	9	10	11	12
PREEMPTOR 1												
PREEMPTOR 2												
PREEMPTOR 3												
PREEMPTOR 4												

6. PRIORITY PREEMPTOR 6

	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
TERM OVERLAP	A:			B:			C:			D:		
ACTIVE				PED DARK								
PRIORITY				PED ACTIVE								
DET LOCK				ZERO PC TIME								
HOLD FLASH				PC THRU YELLOW								
TERM OVLP ASAP				TERM PHASES								
DON'T OVERRIDE FLASH				ACTIVE ONLY DURING HOLD								
FLASH ALL OUTPUTS				NO CVM IN FLASH								
YELLOW-RED GOES GREEN				FAST FLASH GRN ON HOLD								
ENABLE MAX PREEMPT TIME				OUT OF FLASH						GREEN		
MAX TIME	0			DURATION TIME						0		
MIN HOLD TIME	0			DELAY TIME						0		
MIN PED CLEAR	0			INHIBIT TIME						0		
MAX EXIT	0			HLD DELAY TIME						0		
	GREEN			YELLOW			RED					
MINIMUM	0			0.0			0.0					
TRACK CLEAR	0			0.0			0.0					
HOLD				0.0			0.0					
LINKED PREEMPTOR										0		

5. NIC/TOD SUBMENU

1. NIC/TOD CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL NIC PROGRAM STEP	0
MANUAL TOD PROGRAM STEP	0
SYNC REFERENCE TIME	3:30:00 AM
SYNC REFERENCE	REFERENCE TIME
WEEK 1 BEGINS ON 1ST SUNDAY	
DISABLE DAYLIGHT SAVINGS	X
DST BEGINS LAST SUNDAY	

2. NIC/TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRI	SAT
1	2	1	1	1	1	1	2
2	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1

3. NIC/TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY	1	1	1	1	1	1	1	1
WEEK OF YEAR	49	50	51	52	53			
WEEKLY	1	1	1	1	1			

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PROG
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6	FIXED	1	2	0	2
7	FIXED	2	2	0	2
8	FIXED	5	2	0	2
9	FIXED	9	2	0	2
10	FIXED	11	5	0	2
11	FIXED	11	6	0	2
12	FIXED	0	0	0	0
13	FIXED	0	0	0	0
14	FIXED	0	0	0	0
15	FIXED	0	0	0	0
16	FIXED	0	0	0	0
17	FIXED	0	0	0	0
18	FIXED	0	0	0	0
19	FIXED	0	0	0	0
20	FIXED	0	0	0	0
21	FIXED	0	0	0	0
22	FIXED	0	0	0	0
23	FIXED	0	0	0	0
24	FIXED	0	0	0	0
25	FIXED	0	0	0	0
26	FIXED	0	0	0	0
27	FIXED	0	0	0	0
28	FIXED	0	0	0	0
29	FIXED	0	0	0	0
30	FIXED	0	0	0	0
31	FIXED	0	0	0	0
32	FIXED	0	0	0	0
33	FIXED	0	0	0	0
34	FIXED	0	0	0	0
35	FIXED	0	0	0	0
36	FIXED	0	0	0	0

5. CALENDAR

January 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ³⁰	1 ³¹	1 ¹	1 ²	1 ³	1 ⁴	2 ⁵	1
2	2 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	2 ¹²	1
3	2 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	2 ¹⁹	1
4	2 ²⁰	1 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	2 ²⁶	1
5	2 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	2 ²	1
6	2 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	2 ⁹	1

February 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	2 ²	1
2	2 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	2 ⁹	1
3	2 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	2 ¹⁶	1
4	2 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	2 ²³	1
5	2 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ¹	2 ²	1
6	2 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	2 ⁹	1

March 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ¹	2 ²	1
2	2 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	2 ⁹	1
3	2 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	2 ¹⁶	1
4	2 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	2 ²³	1
5	2 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	2 ³⁰	1
6	2 ³¹	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	2 ⁶	1

April 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ³¹	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	2 ⁶	1
2	2 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	2 ¹³	1
3	2 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	2 ²⁰	1
4	2 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	2 ²⁷	1
5	2 ²⁸	1 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	2 ⁴	1
6	2 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	2 ¹¹	1

May 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ²⁸	1 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	2 ⁴	1
2	2 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	2 ¹¹	1
3	2 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	2 ¹⁸	1
4	2 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1 ²³	1 ²⁴	2 ²⁵	1
5	2 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	2 ¹	1
6	2 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	2 ⁸	1

June 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	2 ¹	1
2	2 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	2 ⁸	1
3	2 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	2 ¹⁵	1
4	2 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	2 ²²	1
5	2 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	2 ²⁹	1
6	2 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	2 ⁶	1

July 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	1 ⁵	2 ⁶	1
2	2 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	2 ¹³	1
3	2 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	2 ²⁰	1
4	2 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	2 ²⁷	1
5	2 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	2 ³	1
6	2 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	2 ¹⁰	1

August 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	2 ³	1
2	2 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	2 ¹⁰	1
3	2 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	2 ¹⁷	1
4	2 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	1 ²³	2 ²⁴	1
5	2 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	2 ³¹	1
6	2 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	2 ⁷	1

September 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	2 ⁷	1
2	2 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	2 ¹⁴	1
3	2 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	2 ²¹	1
4	2 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	2 ²⁸	1
5	2 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	2 ⁵	1
6	2 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	2 ¹²	1

October 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ²⁹	1 ³⁰	1 ¹	1 ²	1 ³	1 ⁴	2 ⁵	1
2	2 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	2 ¹²	1
3	2 ¹³	1 ¹⁴	1 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	2 ¹⁹	1
4	2 ²⁰	1 ²¹	1 ²²	1 ²³	1 ²⁴	1 ²⁵	2 ²⁶	1
5	2 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	2 ²	1
6	2 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	2 ⁹	1

November 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ²⁷	1 ²⁸	1 ²⁹	1 ³⁰	1 ³¹	1 ¹	2 ²	1
2	2 ³	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁸	2 ⁹	1
3	2 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	1 ¹⁴	1 ¹⁵	2 ¹⁶	1
4	2 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	1 ²¹	1 ²²	2 ²³	1
5	2 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	1 ²⁸	1 ²⁹	2 ³⁰	1
6	2 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	2 ⁷	1

December 2013								
Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	W.P.
1	2 ¹	1 ²	1 ³	1 ⁴	1 ⁵	1 ⁶	2 ⁷	1
2	2 ⁸	1 ⁹	1 ¹⁰	1 ¹¹	1 ¹²	1 ¹³	2 ¹⁴	1
3	2 ¹⁵	1 ¹⁶	1 ¹⁷	1 ¹⁸	1 ¹⁹	1 ²⁰	2 ²¹	1
4	2 ²²	1 ²³	1 ²⁴	1 ²⁵	1 ²⁶	1 ²⁷	2 ²⁸	1
5	2 ²⁹	1 ³⁰	1 ³¹	1 ¹	1 ²	1 ³	2 ⁴	1
6	2 ⁵	1 ⁶	1 ⁷	1 ⁸	1 ⁹	1 ¹⁰	2 ¹¹	1

^{FX}Fixed Holiday

^{FL}Floating Holiday

6. NIC PROGRAM STEP

STEP	PGM	TIME	PATTERN	OVERRIDE
1	1	00:00	0	
2	2	00:00	0	
3	1	06:00	2	
4	2	09:00	0	
5	1	09:30	0	
6	1	15:00	3	
7	1	18:30	1	
8	1	22:00	0	
9	2	22:00	0	
10	0	00:00	0	
11	0	00:00	0	
12	0	00:00	0	
13	0	00:00	0	
14	0	00:00	0	
15	0	00:00	0	
16	0	00:00	0	
17	0	00:00	0	
18	0	00:00	0	
19	0	00:00	0	
20	0	00:00	0	
21	0	00:00	0	
22	0	00:00	0	
23	0	00:00	0	
24	0	00:00	0	
25	0	00:00	0	
26	0	00:00	0	
27	0	00:00	0	
28	0	00:00	0	
29	0	00:00	0	
30	0	00:00	0	
31	0	00:00	0	
32	0	00:00	0	
33	0	00:00	0	
34	0	00:00	0	
35	0	00:00	0	
36	0	00:00	0	
37	0	00:00	0	
38	0	00:00	0	
39	0	00:00	0	
40	0	00:00	0	
41	0	00:00	0	
42	0	00:00	0	
43	0	00:00	0	
44	0	00:00	0	
45	0	00:00	0	
46	0	00:00	0	
47	0	00:00	0	
48	0	00:00	0	
49	0	00:00	0	
50	0	00:00	0	

51	0	00:00	0	
52	0	00:00	0	
53	0	00:00	0	
54	0	00:00	0	
55	0	00:00	0	
56	0	00:00	0	
57	0	00:00	0	
58	0	00:00	0	
59	0	00:00	0	
60	0	00:00	0	
61	0	00:00	0	
62	0	00:00	0	
63	0	00:00	0	
64	0	00:00	0	
65	0	00:00	0	
66	0	00:00	0	
67	0	00:00	0	
68	0	00:00	0	
69	0	00:00	0	
70	0	00:00	0	
71	0	00:00	0	
72	0	00:00	0	
73	0	00:00	0	
74	0	00:00	0	
75	0	00:00	0	
76	0	00:00	0	
77	0	00:00	0	
78	0	00:00	0	
79	0	00:00	0	
80	0	00:00	0	
81	0	00:00	0	
82	0	00:00	0	
83	0	00:00	0	
84	0	00:00	0	
85	0	00:00	0	
86	0	00:00	0	
87	0	00:00	0	
88	0	00:00	0	
89	0	00:00	0	
90	0	00:00	0	
91	0	00:00	0	
92	0	00:00	0	
93	0	00:00	0	
94	0	00:00	0	
95	0	00:00	0	
96	0	00:00	0	
97	0	00:00	0	
98	0	00:00	0	
99	0	00:00	0	
100	0	00:00	0	

101	0	00:00	0	
102	0	00:00	0	
103	0	00:00	0	
104	0	00:00	0	
105	0	00:00	0	
106	0	00:00	0	
107	0	00:00	0	
108	0	00:00	0	
109	0	00:00	0	
110	0	00:00	0	
111	0	00:00	0	
112	0	00:00	0	
113	0	00:00	0	
114	0	00:00	0	
115	0	00:00	0	
116	0	00:00	0	
117	0	00:00	0	
118	0	00:00	0	
119	0	00:00	0	
120	0	00:00	0	
121	0	00:00	0	
122	0	00:00	0	
123	0	00:00	0	
124	0	00:00	0	
125	0	00:00	0	
126	0	00:00	0	
127	0	00:00	0	
128	0	00:00	0	
129	0	00:00	0	
130	0	00:00	0	
131	0	00:00	0	
132	0	00:00	0	
133	0	00:00	0	
134	0	00:00	0	
135	0	00:00	0	
136	0	00:00	0	
137	0	00:00	0	
138	0	00:00	0	
139	0	00:00	0	
140	0	00:00	0	
141	0	00:00	0	
142	0	00:00	0	
143	0	00:00	0	
144	0	00:00	0	
145	0	00:00	0	
146	0	00:00	0	
147	0	00:00	0	
148	0	00:00	0	
149	0	00:00	0	
150	0	00:00	0	

151	0	00:00	0	
152	0	00:00	0	
153	0	00:00	0	
154	0	00:00	0	
155	0	00:00	0	
156	0	00:00	0	
157	0	00:00	0	
158	0	00:00	0	
159	0	00:00	0	
160	0	00:00	0	
161	0	00:00	0	
162	0	00:00	0	
163	0	00:00	0	
164	0	00:00	0	
165	0	00:00	0	
166	0	00:00	0	
167	0	00:00	0	
168	0	00:00	0	
169	0	00:00	0	
170	0	00:00	0	
171	0	00:00	0	
172	0	00:00	0	
173	0	00:00	0	
174	0	00:00	0	
175	0	00:00	0	
176	0	00:00	0	
177	0	00:00	0	
178	0	00:00	0	
179	0	00:00	0	
180	0	00:00	0	
181	0	00:00	0	
182	0	00:00	0	
183	0	00:00	0	
184	0	00:00	0	
185	0	00:00	0	
186	0	00:00	0	
187	0	00:00	0	
188	0	00:00	0	
189	0	00:00	0	
190	0	00:00	0	
191	0	00:00	0	
192	0	00:00	0	
193	0	00:00	0	
194	0	00:00	0	
195	0	00:00	0	
196	0	00:00	0	
197	0	00:00	0	
198	0	00:00	0	
199	0	00:00	0	
200	0	00:00	0	

7. TOD PROGRAM STEP

TOD PROGRAM STEP													1											
DAY PGM NUM													0											
STEP BEGINS													12:00:00 AM											
DIMMING ENABLE				FLASH																				
RED REST				ALT VEHICLE EXT																				
DET LOG ENABLE				SPARE 5																				
SPARE 4				SPARE 3																				
DET DIAG PLAN													0											
ALT SEQUENCE													A	B	C	D	E	F						
PHASE													1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE																								
MAX3 ENABLE																								
VEH RECALL																								
VEH MAX RECALL																								
PED RECALL																								
COND SERV INH																								
PHASE OMIT																								
SPECIAL FCTNS																								

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DAILY PROGRAM # 9				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 10				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 11				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 12				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 13				
Step	Time	Pattern	Override	TOD Step

8. DAILY PROGRAM

DAILY PROGRAM # 1				
Step	Time	Pattern	Override	TOD Step
1	00:00	0		
2	06:00	2		
3	09:30	0		
4	15:00	3		
5	18:30	1		
6	22:00	0		

DAILY PROGRAM # 14				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 2				
Step	Time	Pattern	Override	TOD Step
1	00:00	0		
2	09:00	0		
3	22:00	0		

DAILY PROGRAM # 15				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 16				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 3				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 4				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 5				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 6				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 7				
Step	Time	Pattern	Override	TOD Step

DAILY PROGRAM # 8				
Step	Time	Pattern	Override	TOD Step

6. DETECTORS

1. SETUP

#	TYPE	EXTEND	DELAY	Q LIMIT	FAIL TIME	FAIL ACT	ERR CNT
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	1	0	2	0	0	0	0
7	1	0	2	0	0	0	0
8	0	0	0	0	0	0	0
9	1	2	0	0	0	0	0
10	1	0	0	0	0	0	0
11	1	0	0	0	0	0	0
12	5	2	0	0	0	0	0
13	1	0	0	0	0	0	0
14	1	0	0	0	0	0	0
15	1	0	0	0	0	0	0
16	5	2	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0

55	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0

#	QUEUE	YLW LCK	PASSAGE	SYSTEM	CALL DET	ADD INIT	RD LOCK
1			X				
2			X				
3			X				
4			X				
5			X				
6			X				
7			X				
8			X				
9			X				
10			X				
11			X				
12			X				
13			X				
14			X				
15			X				
16			X				
17			X				
18			X				
19			X				
20			X				
21			X				
22			X				
23			X				
24			X				
25			X				
26			X				
27			X				
28			X				
29			X				
30			X				
31			X				
32			X				
33			X				
34			X				
35			X				
36			X				
37			X				
38			X				
39			X				
40			X				
41			X				
42			X				
43			X				
44			X				
45			X				
46			X				

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64																			

5. SPEED DETECTORS

		ONE DETECTOR SPEED																	
SPEED DET NUMBER		1	2	3	4	5	6	7	8										
LOCAL DET NUMBER		0	0	0	0	0	0	0	0										
VEHICLE LENGTH		0	0	0	0	0	0	0	0										
LOOP LENGTH		0	0	0	0	0	0	0	0										
SPEED DET NUMBER		9	10	11	12	13	14	15	16										
LOCAL DET NUMBER		0	0	0	0	0	0	0	0										
VEHICLE LENGTH		0	0	0	0	0	0	0	0										
LOOP LENGTH		0	0	0	0	0	0	0	0										
		TWO DETECTOR SPEED																	
SPEED DET NUMBER		1	2	3	4	5	6	7	8										
LOCAL DET NUMBER		0	0	0	0	0	0	0	0										
SPEED TRAP LENGTH		0	0	0	0	0	0	0	0										
SPEED DET NUMBER		9	10	11	12	13	14	15	16										
LOCAL DET NUMBER		0	0	0	0	0	0	0	0										
SPEED TRAP LENGTH		0	0	0	0	0	0	0	0										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
ENABLE LOG																			
UNITS		INCHES																	
LOG INTERVAL		0																	

4. PEDESTRIAN DETECTORS

#	Phase	No Activity	Max Prsence	Erratic Counts	Scale
1	1	0	0	0	1
2	2	0	0	0	1
3	3	0	0	0	1
4	4	0	0	0	1
5	5	0	0	0	1
6	6	0	0	0	1
7	7	0	0	0	1
8	8	0	0	0	1
9	9	0	0	0	1
10	10	0	0	0	1
11	11	0	0	0	1
12	12	0	0	0	1

Norwalk, CA

44 - Pioneer & Excelsior - 172.22.1.46 - ASC/3 - Econolite Type - ASC3

Controller Timing Plan (MM)2-1 Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	4	10	4	5	4	10	4	5	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	1.5	5.0	2.0	3.0	1.5	5.0	2.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	20	50	15	30	20	50	15	30	35	35	35	35	35	35	35	35
Max 2	40	70	40	40	40	70	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	20	0	0	0	20	0	0	0	0	0	0	0	0	0	0
Time B4	0	15	0	0	0	15	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	255	0	0	0	255	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

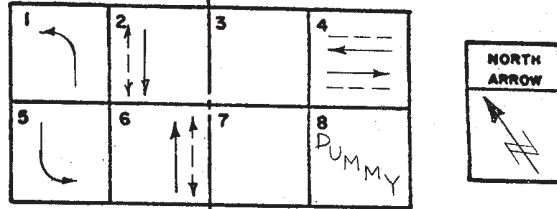
PROGRAM REFERENCE CARD

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMINGINTERSECTION: SAN ANTONIO DR @ FOSTER RD
TS No: NONEDATE REQUESTED: 12-15-92 KAK BY: TIA / AGD
DATE COMPLETED: 5-14-93 BY: 265

CONTROLLER

MAIN MENU			CONTROLLER SUBMENU				
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. TIMING DATA	2. OVERLAP DATA	3. RECALL DATA	4. START/FLASH DATA	5. OPTION DATA
2. COORDINATOR	5. TELEMETRY	8. UTILITIES					
3. PREEMPTOR	6. DETECTORS	9. OPTIONS					
TIMING DATA							
PHASE	1	2	3	4	5	6	7
MIN GRN	4	10		4	4	10	4
WALK	0	7		7	0	7	0
PED CLR	0	14		14	0	14	0
VEH EXT	2.0	4.0		4.0	2.0	4.0	2.0
MAX EXT	0	0		0	0	0	0
MAX1	2.0	5.0		4.0	2.0	5.0	4.0
MAX2	2.0	12.0		5.0	2.0	12.0	5.0
MAX3	0	0		0	0	0	0
YELLOW	3.0	3.5		3.5	3.0	3.5	3.5
RED CLR	0.0	0.0		0.0	0.0	0.0	0.0
RED RVT	2.0	2.0		2.0	2.0	2.0	2.0
ACT BA	0	6		0	6	0	6
SEC/ACT	0.0	1.5		0.0	0.0	1.5	0.0
MAX RI	0	25		0	0	25	0
TAKE BA	0	17		12	0	17	0
CARS WT	0	255		255	0	255	0
TTREDDC	0	23		13	0	23	0
MIN GAP	2.0	3.0		3.0	2.0	3.0	2.0
CS MGRN	7	10		0	7	10	0

PHASE DIAGRAM



TELEMETRY

MAIN MENU			TELEMETRY SUBMENU	
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. ADDRESS	2. SPEED TRAPS
2. COORDINATOR	5. TELEMETRY	8. UTILITIES		
3. PREEMPTOR	6. DETECTORS	9. OPTIONS		
ADDRESS				
TELEMETRY ADDRESS				
SPEED TRAPS				
SPEED TRAP LENGTH A				
SPEED TRAP LENGTH B				

MAIN MENU			CONTROLLER SUBMENU				
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. TIMING DATA	2. OVERLAP DATA	3. RECALL DATA	4. START/FLASH DATA	5. OPTION DATA
2. COORDINATOR	5. TELEMETRY	8. UTILITIES					
3. PREEMPTOR	6. DETECTORS	9. OPTIONS					
OVERLAP DATA							
PHASE	1	2	3	4	5	6	7
OVERLAP A							
STANDARD							
PROTECTED							
PERMISSIVE							
OVERLAP B							
STANDARD							
PROTECTED							
PERMISSIVE							
ENABLE TIMED OVERLAPS							
OVERLAP A							
OVERLAP B							
OVERLAP C							
OVERLAP D							

DETECTORS

MAIN MENU			DETECTOR SUBMENU	
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. TYPE	4. CROSS SWITCHING
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	2. PHASE ASSIGNMENT	3. TRIPS
3. PREEMPTOR	6. DETECTORS	9. OPTIONS		
TYPE				
DETECTOR	1	2	3	4
DETECTOR TYPE	0	0	3	0
ESP DETECTOR				
DETECTOR	1	2	3	4
DETECTOR TYPE				
PHASE ASSIGNMENT				
DETECTOR 1	1	2	3	4
DETECTOR 2				
DETECTOR 3				
DETECTOR 4				
DETECTOR 5				
DETECTOR 6				
DETECTOR 7				
DETECTOR 8				
TIMERS				
DETECTOR	1	2	3	4
EXTEND			20.0	
DELAY			0	
CROSS SWITCHING				
DETECTOR 1	1	2	3	4
DETECTOR 2				
DETECTOR 3				
DETECTOR 4				
DETECTOR 5				
DETECTOR 6				
DETECTOR 7				
DETECTOR 8				

MAIN MENU			CONTROLLER SUBMENU				
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. TIMING DATA	2. OVERLAP DATA	3. RECALL DATA	4. START/FLASH DATA	5. OPTION DATA
2. COORDINATOR	5. TELEMETRY	8. UTILITIES					
3. PREEMPTOR	6. DETECTORS	9. OPTIONS					
RECALL DATA							
PHASE	1	2	3	4	5	6	7
PHASES IN USE							
LOCKING MEMORY							
VEHICLE RECALL							
PED RECALL							
RECALL TO MAX							
SOFT RECALL							

MAIN MENU			CONTROLLER SUBMENU				
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. TIMING DATA	2. OVERLAP DATA	3. RECALL DATA	4. START/FLASH DATA	5. OPTION DATA
2. COORDINATOR	5. TELEMETRY	8. UTILITIES					
3. PREEMPTOR	6. DETECTORS	9. OPTIONS					
START/FLASH DATA							
PHASE	1	2	3	4	5	6	7
POWER START							
EXTERNAL START							
RMT FLASH PHASES							
INTERVAL	GREEN	YELLOW	RED	YELLOW OVERLAP	POWER START TIMING		
POWER START					ALL RED	0	
EXTERNAL START					FLASH	0	

MAIN MENU			CONTROLLER SUBMENU				
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. TIMING DATA	2. OVERLAP DATA	3. RECALL DATA	4. START/FLASH DATA	5. OPTION DATA
2. COORDINATOR	5. TELEMETRY	8. UTILITIES					
3. PREEMPTOR	6. DETECTORS	9. OPTIONS					
OPTION DATA							
PHASE	1	2	3	4	5	6	7
QUIR PASSAGE							
NONACTUATED 1							
NONACTUATED 2							
DUAL ENTRY							
COND SERVICE							
COND RESERVE							
ACT REST IN WALK							
FLASHING WALK							
DUAL ENTRY							
COND SERVICE							
PED CLR PROTECT							
SPARE							

OPTIONS

MAIN MENU			OPTIONS SUBMENU	
1. CONTROLLER	4. N/C/O/D	7. STATUS DISP	1. ACCESS CODE	4. TERMINAL
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	2. GSN/RSPLN	3. DIBBING
3. PREEMPTOR	6. DETECTORS	9. OPTIONS		
RMT/RSPLN				
AUDIO FEEDBACK ENABLED				
DISPLAY BOLD/LIT ENABLED				
DIBBING				
PHASE	1	2	3	4
GREEN				
YELLOW				
RED				
OVERLAP				
OVERLAP GREEN				
OVERLAP YELLOW				
OVERLAP RED				
TERMINAL				
BAUD RATE	1	2	3	4
CONTROL WORD	PO	PE	PL	PS

INTERSECTION: SAN ANTONIO DR @ FOSTER RD
 TS No: NONE

DATE REQUESTED: 8-10-92 HCH BY: TH
 DATE COMPLETED: 5-14-93 BY: JSS

PRIORITY PREEMPTORS

MAIN MENU			
1. CONTROLLER	4. N/C/TOD	7. STATUS DISP.	
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	
3. PREEMPTOR	6. DETECTORS	9. OPTIONS	

PREEMPTOR SUBMENU	
1-4 PRIORITY PREEMPTORS	
7. BUS PREEMPTORS	

PREEMPTOR 1

ACTIVE	PED DARK	TERM OLAP A	NO YEL TO GRN					
PRIORITY	PED ACTIVE	TERM OLAP B	SPARE					
DET LOCK	ZERO PC TIME	TERM OLAP C	SPARE					
HLD FLSH	PC THRU YEL	TERM OLAP D	SPARE					
DURATION TIME	MINIMUM	TRACK CLEAR	HOLD					
DELAY TIME	GREEN							
INHIBIT TIME	YELLOW							
MINIMUM PED CLEAR	RED							
PHASE	1	2	3	4	5	6	7	8
TRACK CLEARANCE								
HOLD PHASES								
EXIT PHASES								
EXIT CALLS								

LINKED PREEMPTOR _____

PREEMPTOR 2

ACTIVE	PED DARK	TERM OLAP A	NO YEL TO GRN					
PRIORITY	PED ACTIVE	TERM OLAP B	SPARE					
DET LOCK	ZERO PC TIME	TERM OLAP C	SPARE					
HLD FLSH	PC THRU YEL	TERM OLAP D	SPARE					
DURATION TIME	MINIMUM	TRACK CLEAR	HOLD					
DELAY TIME	GREEN							
INHIBIT TIME	YELLOW							
MINIMUM PED CLEAR	RED							
PHASE	1	2	3	4	5	6	7	8
TRACK CLEARANCE								
HOLD PHASES								
EXIT PHASES								
EXIT CALLS								

LINKED PREEMPTOR _____

PREEMPTOR 3

ACTIVE	PED DARK	TERM OLAP A	NO YEL TO GRN					
PRIORITY	PED ACTIVE	TERM OLAP B	SPARE					
DET LOCK	ZERO PC TIME	TERM OLAP C	SPARE					
HLD FLSH	PC THRU YEL	TERM OLAP D	SPARE					
DURATION TIME	MINIMUM	TRACK CLEAR	HOLD					
DELAY TIME	GREEN							
INHIBIT TIME	YELLOW							
MINIMUM PED CLEAR	RED							
PHASE	1	2	3	4	5	6	7	8
TRACK CLEARANCE								
HOLD PHASES								
EXIT PHASES								
EXIT CALLS								

LINKED PREEMPTOR _____

PREEMPTOR 4

ACTIVE	PED DARK	TERM OLAP A	NO YEL TO GRN					
PRIORITY	PED ACTIVE	TERM OLAP B	SPARE					
DET LOCK	ZERO PC TIME	TERM OLAP C	SPARE					
HLD FLSH	PC THRU YEL	TERM OLAP D	SPARE					
DURATION TIME	MINIMUM	TRACK CLEAR	HOLD					
DELAY TIME	GREEN							
INHIBIT TIME	YELLOW							
MINIMUM PED CLEAR	RED							
PHASE	1	2	3	4	5	6	7	8
TRACK CLEARANCE								
HOLD PHASES								
EXIT PHASES								
EXIT CALLS								

LINKED PREEMPTOR _____

PREEMPTOR 5

ACTIVE	PED DARK	TERM OLAP A	NO YEL TO GRN					
PRIORITY	PED ACTIVE	TERM OLAP B	SPARE					
DET LOCK	ZERO PC TIME	TERM OLAP C	SPARE					
HLD FLSH	PC THRU YEL	TERM OLAP D	SPARE					
DURATION TIME	MINIMUM	TRACK CLEAR	HOLD					
DELAY TIME	GREEN							
INHIBIT TIME	YELLOW							
MINIMUM PED CLEAR	RED							
PHASE	1	2	3	4	5	6	7	8
TRACK CLEARANCE								
HOLD PHASES								
EXIT PHASES								
EXIT CALLS								

LINKED PREEMPTOR _____

PREEMPTOR 6

ACTIVE	PED DARK	TERM OLAP A	NO YEL TO GRN					
PRIORITY	PED ACTIVE	TERM OLAP B	SPARE					
DET LOCK	ZERO PC TIME	TERM OLAP C	SPARE					
HLD FLSH	PC THRU YEL	TERM OLAP D	SPARE					
DURATION TIME	MINIMUM	TRACK CLEAR	HOLD					
DELAY TIME	GREEN							
INHIBIT TIME	YELLOW							
MINIMUM PED CLEAR	RED							
PHASE	1	2	3	4	5	6	7	8
TRACK CLEARANCE								
HOLD PHASES								
EXIT PHASES								
EXIT CALLS								

LINKED PREEMPTOR _____

BUS PREEMPTORS

MAIN MENU			
1. CONTROLLER	4. N/C/TOD	7. STATUS DISP.	
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	
3. PREEMPTOR	6. DETECTORS	9. OPTIONS	

PREEMPTOR SUBMENU	
1-4 PRIORITY PREEMPTORS	
7. BUS PREEMPTORS	

BUS PREEMPTOR	1	2	3	4
ACTIVE				
DETECTOR LOCK				
RESERVICE TIME				
DELAY TIME				
INHIBIT TIME				
ENTRANCE GREEN				
ENTRANCE PED CLR				
ENTRANCE YELLOW				
ENTRANCE RED				
HOLD GREEN				

HOLD PHASE	1	2	3	4	5	6	7	8
BUS PREEMPTOR 1								
BUS PREEMPTOR 2								
BUS PREEMPTOR 3								
BUS PREEMPTOR 4								

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PAGE 3 OF 5

INTERSECTION: SAN ANTONIO DR @ FOSTER RD

COORDINATOR

DATE REQUESTED: 4-6-93 KAK

BY: TB/ADP

DATE COMPLETED: 5-14-93

BY: LEAS

TS No: None

MAIN MENU			COORDINATOR SUBMENU			
1. CONTROLLER	4. NIC/TOD	7. STATUS DISP.	1-4. CYCLE/SPLIT DATA	9. MANUAL COMMAND		
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	7. CYC/OPT/PERM DATA			
3. PREEMPTOR	6. DETECTORS	9. OPTIONS	8. OPTION DATA			

CYCLE/SPLIT DATA

SPLIT 1

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT	11	13		26	11	13		26

SPLIT 2

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 3

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 4

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT

COORD PHASE SPLIT EXT	1	2	3	4
	50	0	0	0

PHASE	1	2	3	4	5	6	7	8
COORD PHASES		X				X		
LAG PHASES		X		X		X		X
OMIT PHASES								
VEHICLE RECALL		X				X		
PED RECALL								
RECALL TO MAX								

SPLIT 1

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT	13	19		26	13	19		26

SPLIT 2

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 3

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 4

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT

COORD PHASE SPLIT EXT	1	2	3	4
	42	0	0	0

PHASE	1	2	3	4	5	6	7	8
COORD PHASES		X				X		
LAG PHASES		X		X		X		X
OMIT PHASES								
VEHICLE RECALL		X				X		
PED RECALL								
RECALL TO MAX								

SPLIT 1

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT	10	47		26	16	47		26

SPLIT 2

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 3

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 4

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT

COORD PHASE SPLIT EXT	1	2	3	4
	11	0	0	0

PHASE	1	2	3	4	5	6	7	8
COORD PHASES		X				X		
LAG PHASES		X		X		X		X
OMIT PHASES								
VEHICLE RECALL		X				X		
PED RECALL								
RECALL TO MAX								

SPLIT 1

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 2

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 3

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 4

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT

COORD PHASE SPLIT EXT	1	2	3	4

PHASE	1	2	3	4	5	6	7	8
COORD PHASES								
LAG PHASES								
OMIT PHASES								
VEHICLE RECALL								
PED RECALL								
RECALL TO MAX								

SPLIT 1

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 2

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 3

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 4

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT

COORD PHASE SPLIT EXT	1	2	3	4

PHASE	1	2	3	4	5	6	7	8
COORD PHASES								
LAG PHASES								
OMIT PHASES								
VEHICLE RECALL								
PED RECALL								
RECALL TO MAX								

SPLIT 1

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 2

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 3

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT 4

PHASE	1	2	3	4	5	6	7	8
PHASE SPLIT								

SPLIT

COORD PHASE SPLIT EXT	1	2	3	4

PHASE	1	2	3	4	5	6	7	8
COORD PHASES								
LAG PHASES								
OMIT PHASES								
VEHICLE RECALL								
PED RECALL								
RECALL TO MAX								

MAIN MENU			COORDINATOR SUBMENU			
1. CONTROLLER	4. NIC/TOD	7. STATUS DISP.	1-4. CYCLE/SPLIT DATA	9. MANUAL COMMAND		
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	7. CYC/OPT/PERM DATA			
3. PREEMPTOR	6. DETECTORS	9. OPTIONS	8. OPTION DATA			

CYCLE/OFFSET/PERMISSIVE DATA

CYCLE	1	2	3	4	5	6
CYCLE LENGTH	120	120	120			
AUTO PERM MIN	0	0	0			
OFFSET 1	90	96	23			
OFFSET 2						
OFFSET 3						
OFFSET 4						
OFFSET 5						
VEH PERM 1	67	59	28			
VEH PERM 2	0	0	0			
PERM 2 DISP	0	0	0			

MAIN MENU			COORDINATOR SUBMENU			
1. CONTROLLER	4. NIC/TOD	7. STATUS DISP.	1-4. CYCLE/SPLIT DATA	9. MANUAL COMMAND		
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	7. CYC/OPT/PERM DATA			
3. PREEMPTOR	6. DETECTORS	9. OPTIONS	8. OPTION DATA			

OPTION DATA

CROSSING ARTERY SPLIT		SPLIT DEMAND CALL TIME						
SPLIT DEMAND SPLIT		SPLIT DEMAND CYCLE COUNT						
INTERCONNECT TYPE	0	RESYNCH COUNT						
PHASE	1	2	3	4	5	6	7	8
ENABLE SPLIT DMND								
FREE LAG PHASES		X		X		X		X
SPARE								
OFFSET ASSIGNMENT	1	2	3	4	5			
DIRECTION 1								
DIRECTION 2								
ACT. COORD PHASE	YES	WALK REST	NO	DWELL PERIOD				
INHIBIT MAX	NO	SET MAX 2	YES					
SMOOTH TRANSITION	YES	ADD ONLY	NO					
DWELL	NO	SPARE						

MAIN MENU			COORDINATOR SUBMENU			
1. CONTROLLER	4. NIC/TOD	7. STATUS DISP.	1-4. CYCLE/SPLIT DATA	9. MANUAL COMMAND		
2. COORDINATOR	5. TELEMETRY	8. UTILITIES	7. CYC/OPT/PERM DATA			
3. PREEMPTOR	6. DETECTORS	9. OPTIONS	8. OPTION DATA			

MANUAL COMMAND

MANUAL CMD0	OFF	SPARE	-	MANUAL CYCLE	0
MANUAL FREE	OFF	SPARE	-	MANUAL OFFSET	0
SPARE	-	SPARE	-	MANUAL SPLIT	0
SPARE	-	SPARE	-		

ASC-8000

DETECTOR ASSIGNMENTS

BST CONSULTANTS, INC.

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INTERSECTION: SAN ANTONIO DR @ FOSTER RD
 T.S. NO. NONE

DATE REQUESTED: ^{KAL} 12-15-97 BY: TH/AGD
 DATE COMPLETED: 5-14-98 BY: JSS

SENSOR	PHASE	APPROACH	LANES	DETECTOR ASSIGNMENT	DESCRIPTION (TYPE)	TIME DELAY	CARRYOVER	QUEUE MAX	EXTERNAL LOGIC	REMARKS
1	S	N	LT	1-N-05	Normal					LT, 6'x50' STO 5
2	Z	N	1/2 RT	1-N-02	Normal					Adv STO 2
3	1	S	LT	1-S-01	Normal					LT, 6'x50' STO 1
4	6	S	1,2	1-S-06	Normal					Adv STO 6
5	4	E	1,2	1-E-04	Normal	5*				Adv STO 4
6	4	W	1	1-W-04	Normal					Adv STO 4
7	4	E	1	2-E-04	STOP BAR		1.0**	20.0		Q, 6'x25' STO 3
8	4	E	RT	3-E-04	STOP BAR	10*	1.0**	20.0		Q, 6'x25' STO 3
9	8	E	LT	1-E-08	Normal					H, 6'x25' STO 8
10	8	W	LT	1-W-08	Normal					H, 6'x25' STO 8
11	4	W	1	2-W-04	STOP BAR		1.0**	20.0		Q, 6'x25' STO 3
12	4	W	RT	3-W-04	STOP BAR	10*	1.5**	20.0		Q, 2-6'x8' STO 3
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										

REMARKS: Q = QUEUE CLEARING
 H = HOLDING
 * = TIME DELAY ON EXTERNAL SENSOR
 ** = EXTENDED CALL ON EXTERNAL SENSOR

12
13
14
15
16
17
18
19
20
21
22
23
24
25

ASC/2

PROGRAM REFERENCE CARD

INTERSECTION Bloomfield & Foster
 CONTROLLER NUMBER 30332 ENTERED BY: Pat Deppen DATE 2-19-13

1. CONFIGURATION SUBMENU

1. CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
RING 1	1	2	3	4	9	10						
RING 2	5	6	7	8	11	13						
CG												

	PHASE NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE		X		X		X		X				
EXCLUSIVE												

3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP		LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP	
	PH/OLAP	PED		PH/OLAP	PED
1			9	2	X
2	2		10	4	X
3			11	6	X
4	4		12	8	X
5			13		
6	6		14		
7			15		
8	8		16		

4. SDLC OPTIONS/ENABLES

	BIU NUMBER							
	1	2	3	4	5	6	7	8
TERM & FACIL DETECTOR	X							
TYPE 2 RUNS AS TYPE 1								
MMU DISABLE								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
PEER TO PEER ENABLE								
PEER TO PEER ADDRESS:								
1)	2)	3)	4)	5)				
6)	7)	8)	9)	10)				

6. PORT3 CONFIGURATION

PORT3 PROTOCOL	
PORT3 ENABLE	10/20 yes
TELEMETRY ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY	8000
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
ADDITIONAL SCREEN(S)	
DUPLEX - HALF OR FULL	Full
MODEM DATA RATE (BPS)	1200
DATA, PARITY, STOP	8, 0, 1

7. ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TF)	X
NON-CRITICAL RFE'S (DET/TEST)	X
DETECTOR ERRORS	X
COORDINATION ERRORS	X
MMU FLASH FAULTS	X
LOCAL FLASH FAULTS	X
PREEMPT	X
POWER ON/OFF	X
LOW BATTERY	X
SPARE	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

8. OPTIONS

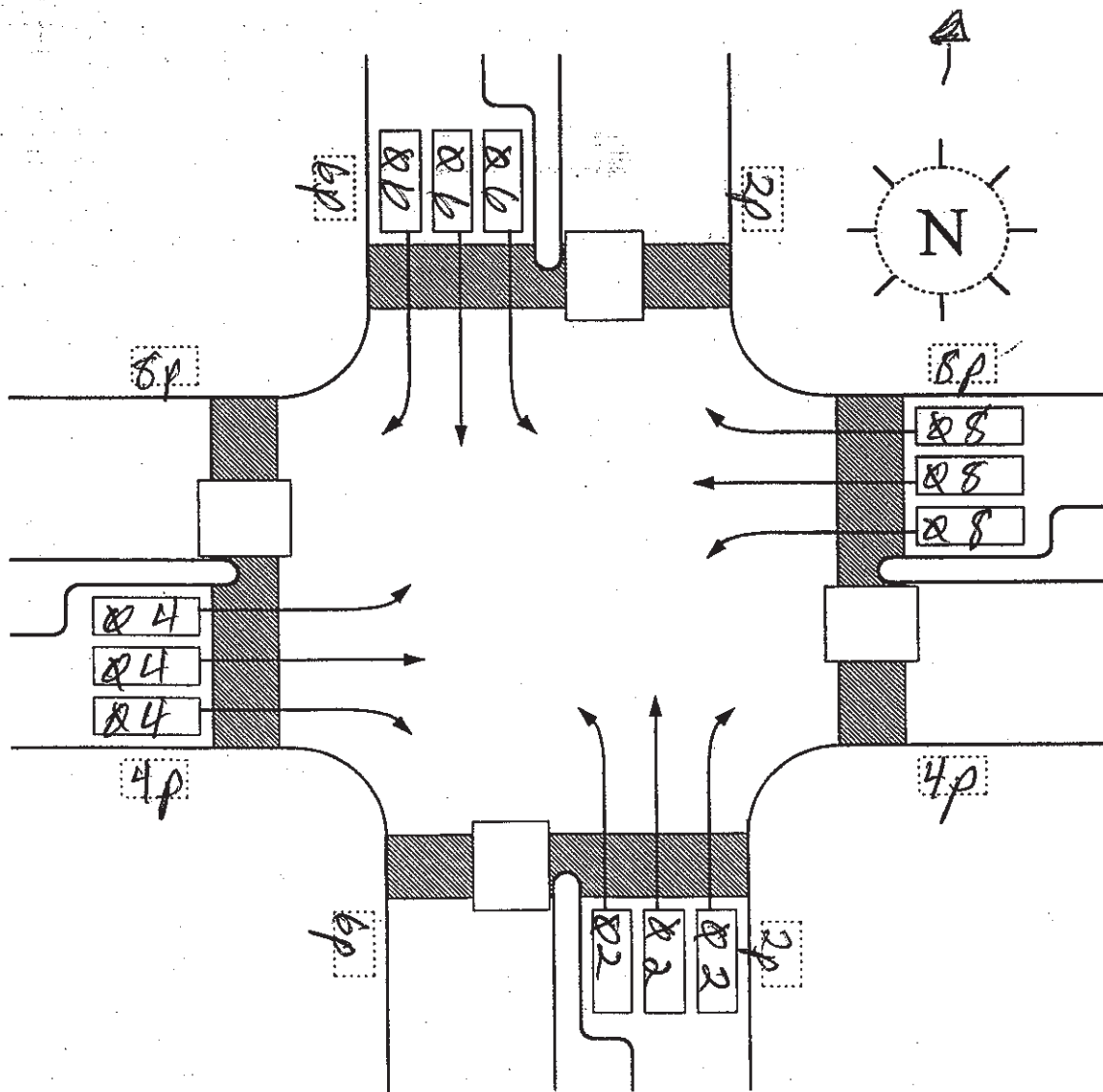
SUPERVISOR ACCESS CODE	
DATA CHANGE ACCESS CODE	
KEY CLICK ENABLE	
BACKLIGHT ENABLE	

5. PORT2 CONFIGURATION

PORT2 PROTOCOL	Term
PORT2 ENABLE	no
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	no
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
DATA RATE (BPS)	1200
DATA, PARITY, STOP	7, 0, 1

1. MMU PROGRAM
CAN SERVE WITH

PHASE	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															



6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
POWER START		X				X						
EXTERNAL START		X				X						
ENTRY REM FLASH		X				X						
EXIT REM.FLASH		X				X						
REM FLASH YEL												
FL TOGETHER PHS												
FL TOGETHER OVLPS	A:											D:
POWER START	<i>yellow yellow 2.0</i>											
EXTERNAL START												
POWER START ALL RED TIME	<i>2.0</i>											
POWER START FLASH TIME	<i>2.0</i>											
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED												
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												

7. NO SERVE PHASES

CANNOT SERVE WITH:												
PHASE	12	11	10	9	8	7	6	5	4	3	2	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
GUAR PASSAGE												
NONACTUATED I		X				X						
NONACTUATED II				X				X				
DUAL ENTRY		X		X		X		X				
COND SERVICE												
COND RESERVICE												
REST IN WALK												
FLASHING WALK												
FIVE SECTION LEFT TURN HEADS												
5-2				7-4					1-6			
3-8				11-10					9-12			
DUAL ENTRY				<i>ON</i>					RESERVED			
COND SERVICE ENABLE									BACKUP PROTECTION GROUP 1			
COND SERVICE DET X SWITCHING									BACKUP PROTECTION GROUP 2			
PED CLR PROTECT									BACKUP PROTECTION GROUP 3			
SPEC PREEMPT OVLP FLASH									SIMULTANEOUS GAP GROUP 1			
LOCK DETECTORS IN RED ONLY									SIMULTANEOUS GAP GROUP 2			
RESERVED									SIMULTANEOUS GAP GROUP 3			

ASC/2

PROGRAM REFERENCE CARD

INTERSECTION Carmenita & Lowe's
 CONTROLLER NUMBER _____ ENTERED BY: Pat Duggan DATE 5-28-99

1. CONFIGURATION SUBMENU

1. CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
RING 1	1	2	3	4	9	10						
RING 2	5	6	7	8	11	12						
CG	1	4	1	1		1						

PHASE NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE	X	X		X	X	X		X				
EXCLUSIVE												

3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP			LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP		
CHANNEL	PH/OLAP	PED	CHANNEL	PH/OLAP	PED		
1	1		9	2	X		
2	2		10	0			
3	0		11	6	X		
4	4		12	0			
5	5		13	0			
6	6		14	0			
7	7		15	0			
8	8		16	0			

4. SDLC OPTIONS/ENABLES

TERM & FACIL	BIU NUMBER									
	1	2	3	4	5	6	7	8		
DETECTOR	X									
TYPE 2 RUNS AS TYPE 1										
MMU DISABLE										
DIAGNOSTIC ENABLE (TEST FIXTURE)										
PEER TO PEER ENABLE										
PEER TO PEER ADDRESS:										
1)		2)		3)		4)		5)		
6)		7)		8)		9)		10)		

5. PORT2 CONFIGURATION

PORT2 PROTOCOL	Terminal
PORT2 ENABLE	NO
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	NO
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
DATA RATE (BPS)	1200
DATA, PARITY, STOP	7E1

6. PORT3 CONFIGURATION

PORT3 PROTOCOL	Terminal
PORT3 ENABLE	NO
TELEMETRY ADDRESS	1
SYSTEM DETECTOR 9-16 ADDRESS	0
TELEMETRY RESPONSE DELAY	8000
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	NO
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
ADDITIONAL SCREEN(S)	
DUPLEX - HALF OR FULL	Full
MODEM DATA RATE (BPS)	1200
DATA, PARITY, STOP	8,0,1

7. ENABLE EVENT LOGS

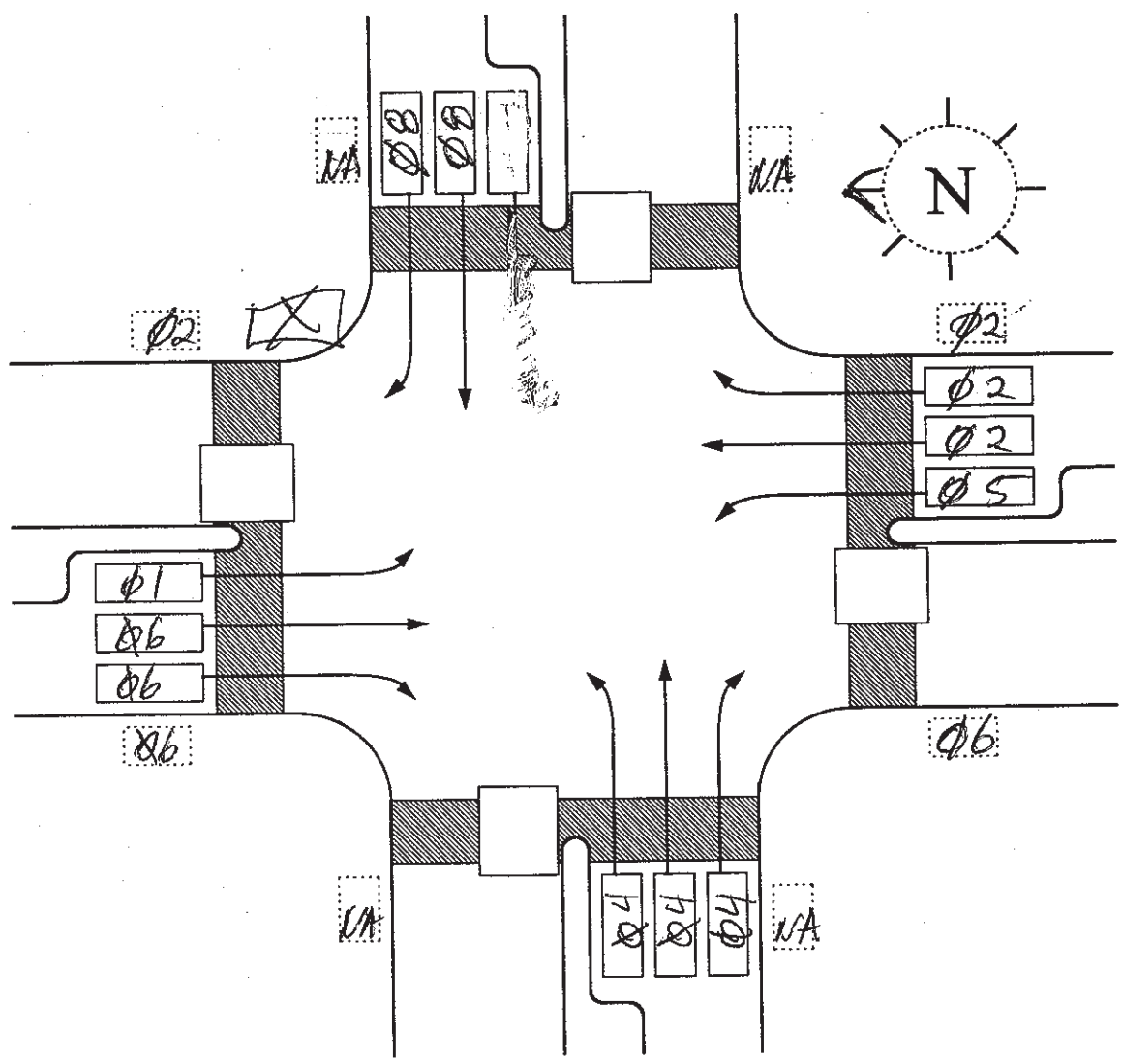
CRITICAL RFE'S (MMU/TF)	X
NON-CRITICAL RFE'S (DET/TEST)	X
DETECTOR ERRORS	X
COORDINATION ERRORS	X
MMU FLASH FAULTS	X
LOCAL FLASH FAULTS	X
PREEMPT	X
POWER ON/OFF	X
LOW BATTERY	X
SPARE	X
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

8. OPTIONS

SUPERVISOR ACCESS CODE	
DATA CHANGE ACCESS CODE	
KEY CLICK ENABLE	
BACKLIGHT ENABLE	

PROGRAM
 VE WITH

PHASE	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															



ROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	1
POWER START				X				X				
EXTERNAL START				X				X				
ENTRY REM FLASH				X				X				
EXIT REM FLASH				X				X				
REM FLASH YEL		X		X		X		X				
FL TOGETHER PHS												
FL TOGETHER	A:		B: X		C:		D: X					
POWER START	yellow											
EXTERNAL START	yellow											
POWER START ALL RED TIME	6 sec											
POWER START FLASH TIME	6 sec											
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED												
MINIMUM RECALL												
USE ALTERNATE FLASH												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												
YELLOW FLASH MAIN STREET												

7. NO SERVE PHASES

CANNOT SERVE WITH:												
PHASE	12	11	10	9	8	7	6	5	4	3	2	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												

8. DIMMING

LOAD	1	2	3	4	5	6	7	8
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								
LOAD	9	10	11	12	13	14	15	16
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
GUAR PASSAGE												
NONACTUATED I												
NONACTUATED II												
DUAL ENTRY		X		X		X		X		X		X
COND SERVICE	X				X							
COND RESERVICE												
REST IN WALK												
FLASHING WALK												
FIVE SECTION LEFT TURN HEADS												
5-2					7-4				1-6			
3-8					11-10				9-12			
DUAL ENTRY	on				RESERVED							
COND SERVICE					BACKUP PROTECTION				on			
COND SERVICE DET X SWITCHING					BACKUP PROTECTION GROUP 2							
PED CLR PROTECT					BACKUP PROTECTION							
SPEC PREEMPT OVLV FLASH					SIMULTANEOUS GAP GROUP 1				on			
LOCK DETECTORS IN RED ONLY					SIMULTANEOUS GAP GROUP 2				on			
RESERVED					SIMULTANEOUS GAP							

ASC/3

PROGRAM REFERENCE CARD

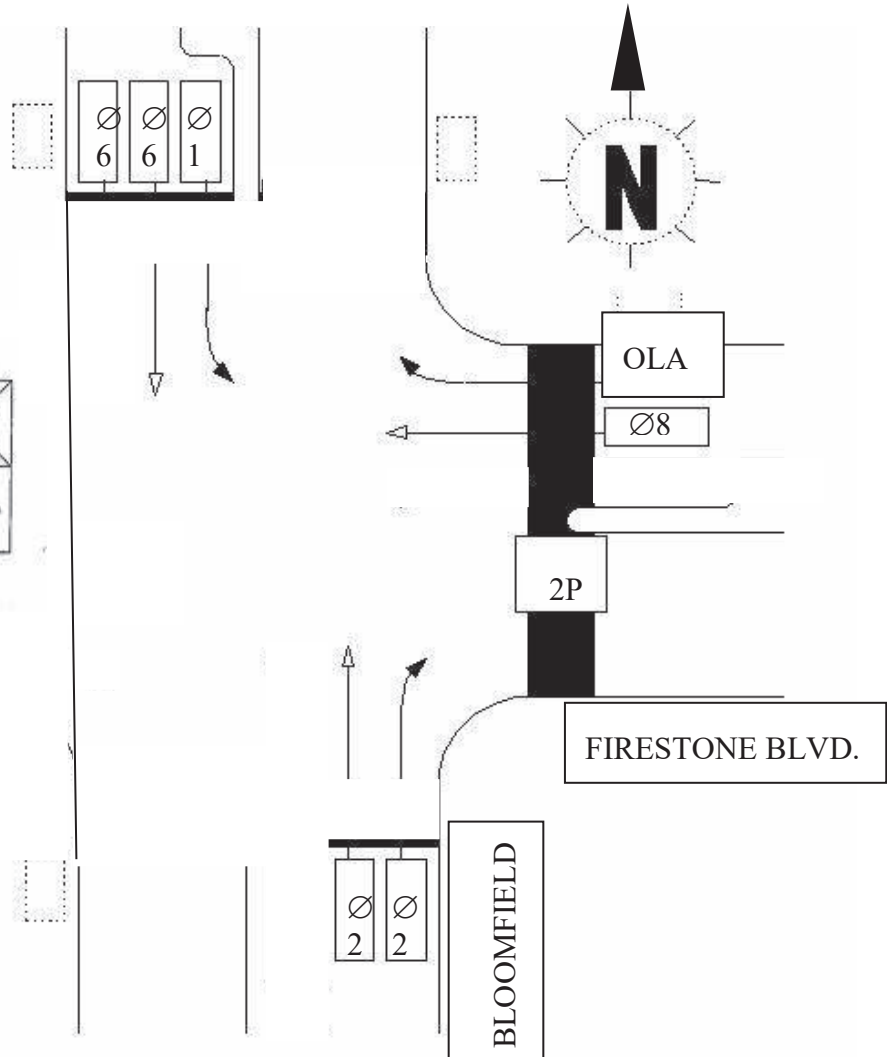
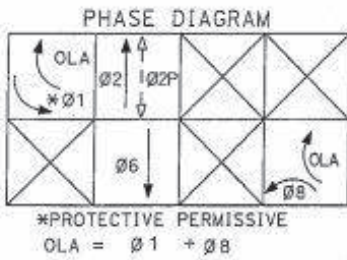


INTERSECTION: BLOOMFIELD AVENUE AND NORTH FIRESTORNE BLVD

CONTROLLER NUMBER: _____ ENTERED BY: _____ DATE: _____

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE: _____

***NOTE:** OLA= PHASE 1 + PHASE 8



1-4-1 SDLC OPTIONS

	BIU NUMBER								
TERM & FACIL	1	2	3	4	5	6	7	8	
ENABLE									
DETECTOR RACK	1	2	3	4	5	6	7	8	
ENABLE	x								
ENABLE TS2/MMU TYPE CABINET									NO
ENABLE MMU EXTENDED STATUS									NO
ENABLE SDLC STOP TIME									NO
ENABLE 3 CRITICAL RFEs LOCKUP									YES
MMU TO CU SDLC EXTERNAL START									ENABLE

1-4-2 MMU PROGRAM

MMU COMPATIBILITY															
CH2CH	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-3 COLOR CHECK ENABLE

ENABLE ALL COLOR CHECKS			X							
MMU CHANNEL	1	2	3	4	5	6	7	8		
GREEN / WALK										
YELLOW / PC										
RED / DW										
MMU CHANNEL	9	10	11	12	13	14	15	16		
GREEN / WALK										
YELLOW / PC										
RED / DW										

1-4-4 SECONDARY STATIONS/TESTS

SECONDARY TO SECONDARY ADDRESSING:									
T&F	01	02	03	04	05	06	07	08	MMU
D/R	09	10	11	12	13	14	15	16	DIAG
ENABLE SDLC DIAGNOSTIC TEST									

NOT USED

1-5-1 ETHERNET PORT CONFIGURATION

MAC ADDRESS					
CONTROLLER IP					
SUBNET MASK					
DEFAULT GATEWAY IP					
SERVER IP					
LINK SPEED / DUPLEX					
DROP-OUT TIME					

1-5-2 ASC/3 PORT 2 – ASC/3-2070 C50S

ENABLE	No	PROTOCOL	Telemetry
BIT RATE		ADDRESS	0
DATA/PARITY/STOP DATA/P/S		GROUP ADD / TDR	
DUPLEX HALF/ FULL		SIGNAL FLAG	No
FLOW CONTROL		DROP-OUT TIME	
INTERSECTION MONITOR			
MODEM SETUP STRING			
USER STRING			

1-5-3 ASC/3 PORT 3A – ASC/3-2070 C21S

ENABLE	yes	PROTOCOL	NTCIP
BIT RATE	19.2K	ADDRESS	
DATA/PARITY/STOP DATA/P/S	8, N, 1	GROUP ADD / TDR	
DUPLEX HALF/ FULL	Full	SIGNAL FLAG	No
FLOW CONTROL		DROP-OUT TIME	

1-5-4 ASC/3 PORT 3B – ASC/3-2070 C22S

ENABLE		PROTOCOL	
BIT RATE		ADDRESS	
DATA/PARITY/STOP DATA/P/S		GROUP ADD / TDR	
DUPLEX HALF/ FULL		SIGNAL FLAG	
FLOW CONTROL		DROP-OUT TIME	
RTS-CTS DELAY			
RTS TURN OFF			
EARLY RTS			

1-5-5 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	0
UDP PORT	
ETHERNET PRIORITY	
PORT 2/C50S PRIORITY	
PORT 3A/C21S PRIORITY	
PORT 3B/C22S PRIORITY	

1-5-6 ECPIP

CONTROLLER ADDRESS								
EXPANDED SYSTEM DETECTOR ADDRESS								
SYSTEM DETECTOR ASSIGNMENT:								
SYSTEM DET	1	2	3	4	5	6	7	8
LOCAL DET								
SYSTEM DET	9	10	11	12	13	14	15	16
LOCAL DET								

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/T&F)	X	3 CRITICAL RFE ERRORS IN 24 HOURS	
MMU FLASH FAULTS	X	LOCAL FLASH FAULTS	X
NON-CRITICAL RFE'S (DET/TEST)	X	DETECTOR ERRORS	X
COORDINATION ERRORS		CONTROLLER DOWNLOAD	
PREEMPT		TSP/SCP	
POWER ON/OFF	X	LOW BATTERY	X
ACCESS		DATA CHANGE	
ALARM 1		ALARM 2	
ALARM 3		ALARM 4	
ALARM 5		ALARM 6	
ALARM 7		ALARM 8	
ALARM 9		ALARM 10	
ALARM 11		ALARM 12	
ALARM 13		ALARM 14	
ALARM 15		ALARM 16	
SNAPSHOT			

1-7-1 ADMINISTRATION

ENABLE CU/CABINET INTERLOCK CRC	
CU/CABINET INTERLOCK CRC VALUE	
CU/CABINET INTERLOCK HW VALUE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	
CONTROLLER DATA SUMCHECK (CRC) #	
ENABLE AUTOMATIC BACKUP TO DATAKEY	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-8-2 LOGIC PROCESSOR STATEMENTS,
Continued

NOT USED

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				
LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

2-2 VEHICLE OVERLAP

TIMING VEHICLE OVERLAP [A]	TYPE - Normal															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED								X								
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP [B]	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP [C]	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

NOT USED

2-2 VEHICLE OVERLAP - Continued

TIMING VEHICLE OVERLAP	TYPE -																
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PRTC																	
NO OVLP																	
FLSH GRN																	
LAG X PH																	
LAG 2 PH																	
	LAG GRN					LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP	TYPE -																
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PRTC																	
NO OVLP																	
FLSH GRN																	
LAG X PH																	
LAG 2 PH																	
	LAG GRN					LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP	TYPE -																
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PRTC																	
NO OVLP																	
FLSH GRN																	
LAG X PH																	
LAG 2 PH																	
	LAG GRN					LAG YEL				LAG RED				ADV GRN			

2-4 GUARANTEED MINIMUM TIMES

OL/PHASE	A01	B02	C03	D04	E05	F06	G07	H08
MIN GRN								
WALK								
PED CLR								
YELLOW								
RED CLR								
OVL GRN								
OL/PHASE	I09	J10	K11	L12	M13	N14	O15	P16
MIN GRN								
WALK								
PED CLR								
YELLOW								
RED CLR								
OVL GRN								

2-5 START / FLASH DATA

START UP																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE		x				x										
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
OVERLAP																
FLASH>MON.						FLASH TIME			ALL RED TIME							
PWR START SEQ.																
AUTOMATIC FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY		x				x										
EXIT		x				x										
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
FLASH>MON.						EXIT FLASH			MIN FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

NOT USED

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

COORD OPTIONS			
MANUAL PATTERN		ECPI COORD	
SYSTEM SOURCE		SYSTEM FORMAT	
SPLITS IN		OFFSET IN	
TRANSITION		MAX SELECT	
DWELL/ADD TIME		ENABLE MAN SYNC	
DLY COORD WK-LZ		FORCE OFF	
OFFSET REF		CAL USE PED TM	
PED RECALL		PED RESERVE	
LOCAL ZERO OVRD		FO ADD INI GRN	
RE-SYNC COUNT		MULTISYNC	

NOT USED

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN															
USE SPLIT PATTERN 1															
TS2 PATTERN / OFFSET															
CYCLE															
STD (COS)															
OFFSET VAL															
ACTUATED COORD															
TIMING PLAN															
ACT WALK REST0															
SEQUENCE															
PHASE RESRVCE 0															
ACTION PLAN															
SPLIT PREFERENCE PHASES															
PHASE[s]															
01 02 03 04 05 06 07 08															
SPT															
PREF 1															
PREF 2															
SPLT EXT															
VEH PERM															
DISP															
RING DISP															
(RING 2-4)															
SPLIT PREFERENCE PHASES															
PHASE															
09 10 11 12 13 14 15 16															
SPT															
PREF 1															
PREF 2															
1 2															
SPLIT DEMAND PTRN															
XART PTRN															
PHASE															
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16															
COORD															
VE RCALL															
PD RCALL															
MX RCALL															
OMIT															
SF OUT															
(1-8)															

3-2 COORDINATOR PATTERN, Continued

NOT USED

COORDINATOR PATTERN															
USE SPLIT PATTERN 1															
TS2 PATTERN / OFFSET															
CYCLE															
STD (COS)															
OFFSET VAL															
ACTUATED COORD															
TIMING PLAN															
ACT WALK REST0															
SEQUENCE															
PHASE RESRVCE 0															
ACTION PLAN															
SPLIT PREFERENCE PHASES															
PHASE[s]															
01 02 03 04 05 06 07 08															
SPT															
PREF 1															
PREF 2															
SPLT EXT															
VEH PERM															
DISP															
RING DISP															
(RING 2-4)															
SPLIT PREFERENCE PHASES															
PHASE															
09 10 11 12 13 14 15 16															
SPT															
PREF 1															
PREF 2															
1 2															
SPLIT DEMAND PTRN															
XART PTRN															
PHASE															
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16															
COORD															
VE RCALL															
PD RCALL															
MX RCALL															
OMIT															
SF OUT															
(1-8)															

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

NOT USED

PHASE	1	2	3	4	5	6	7	8
MIN GRN								
PHASE	9	10	11	12	13	14	15	16
MIN GRN								

3-5 SPLIT DEMAND

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DEMAND 1																
DEMAND 2																
DEMAND		1		2												
DETECTOR																
CALL TIME (SEC)																
CYCLE COUNT																

PREEMPTOR SUBMENU

NOT USED

4-1 PREEMPTOR

PREEMPTOR NUMBER						1													
VEH/PED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
TRACKCLR V																			
TRACKCLR O																			
ENA TRL																			
DWEL VEH																			
DWEL PED																			
DWEL OLP																			
CYC VEH																			
CYC PED																			
CYC OLP																			
EXIT PH																			
EXIT CAL																			
SP FUNC																			
ENABLE				PREEMPTION OVERRIDE						INTERLOCK ENABLE									
NON-LOCK INPUT				DELAY TIME (SECONDS)						INHIBIT TIME (SECONDS)									
AUTOMATIC FLASH HAS PRIORITY				DURATION TIME (SECONDS)						RED CLEAR GOES GREEN									
TERMINATE OVERLAPS ASAP				PED CLEAR THROUGH YELLOW						TERM PH									
PED DARK				TRACK CLEARANCE RESERVICE						DWELL FL									
LINKED PREEMPTOR				FLASH EXIT COLOR						PREEMPTION TO COORDINATION									
EXIT TIMING PLAN				RESERVICE TIME															
FREE DURING PREEMPTION						RING 1				RING 2				RING 3				RING 4	
TIMING				WALK		PED CLEAR		GREEN		YELLOW		RED							
ENTRANCE																			
				MIN GREEN		EXT GREEN		MAX GREEN		YELLOW		RED							
TRACK CLEAR																			
				MIN DWELL		PMT EXT		MAX TIME		YELLOW		RED							
DWELL/CYCLE - EXIT																			
PREEMPTOR ACTIVE OUT								PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT								NON-PRIORITY PREEMPTOR OUT											

4-1 PREEMPTOR, Continued

NOT USED

PREEMPTOR NUMBER																_____
VEH/PED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACKCLR V																
TRACKCLR O																
ENA TRL																
DWEL VEH																
DWEL PED																
DWEL OLP																
CYC VEH																
CYC PED																
CYC OLP																
EXIT PH																
EXIT CAL																
SP FUNC																
ENABLE				PREEMPTION OVERRIDE				INTERLOCK ENABLE								
NON-LOCK INPUT				DELAY TIME (SECONDS)				INHIBIT TIME (SECONDS)								
AUTOMATIC FLASH HAS PRIORITY				DURATION TIME (SECONDS)				RED CLEAR GOES GREEN								
TERMINATE OVERLAPS ASAP				PED CLEAR THROUGH YELLOW				TERM PH								
PED DARK				TRACK CLEARANCE RESERVICE				DWELL FL								
LINKED PREEMPTOR				FLASH EXIT COLOR				PREEMPTION TO COORDINATION								
EXIT TIMING PLAN				RESERVICE TIME												
FREE DURING PREEMPTION								RING 1		RING 2		RING 3		RING 4		
TIMING				WALK		PED CLEAR		GREEN		YELLOW		RED				
ENTRANCE																
				MIN GREEN		EXT GREEN		MAX GREEN		YELLOW		RED				
TRACK CLEAR																
				MIN DWELL		PMT EXT		MAX TIME		YELLOW		RED				
DWELL/CYCLE - EXIT																
PREEMPTOR ACTIVE OUT						PREEMPTOR ACTIVE OUT IN DWELL										
OTHER PRIORITY PREEMPTOR OUT						NON-PRIORITY PREEMPTOR OUT										

5-2 ACTION PLAN, continued

NOT USED

ACTION PLAN EVENT																	
PATTERN																SYSTEM OVERRIDE	
TIMING PLAN																SEQUENCE	
VEHICLE DETECTOR PLAN																DETECTOR LOG	
FLASH																RED REST	
VEHICLE DET DIAGNOSTIC PLAN																PED DET DIAGNOSTIC PLAN	
DIMMING ENABLE																	
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																	
WALK 2																	
VEH EXT 2																	
VEH RECALL																	
MAX RECALL																	
MAX 2																	
MAX 3																	
CS INHIBIT																	
PHASE OMIT																	
SPEC FUNCTION										(1-8)							
AUX FUNCTION				(1-3)													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 01-15																	
LP 16-30																	
LP 31-45																	
LP 46-60																	
LP 61-75																	
LP 76-90																	
LP 91-100																	

5-2 ACTION PLAN, continued

NOT USED

ACTION PLAN EVENT																	
PATTERN																SYSTEM OVERRIDE	
TIMING PLAN																SEQUENCE	
VEHICLE DETECTOR PLAN																DETECTOR LOG	
FLASH																RED REST	
VEHICLE DET DIAGNOSTIC PLAN																PED DET DIAGNOSTIC PLAN	
DIMMING ENABLE																	
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																	
WALK 2																	
VEH EXT 2																	
VEH RECALL																	
MAX RECALL																	
MAX 2																	
MAX 3																	
CS INHIBIT																	
PHASE OMIT																	
SPEC FUNCTION									(1-8)								
AUX FUNCTION				(1-3)													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 01-15																	
LP 16-30																	
LP 31-45																	
LP 46-60																	
LP 61-75																	
LP 76-90																	
LP 91-100																	

5-3 DAY PLAN

NOT USED

DAY PLAN #	EVENT #	ACTION PLAN #	START TIME
	1		:
	2		:
	3		:
	4		:
	5		:
	6		:
	7		:
	8		:
	9		:
	10		:
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	12		:
	13		:
	14		:
	15		:
	16		:
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	48		:
	49		:
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DAY PLAN #	EVENT #	ACTION PLAN #	START TIME
	1		:
	2		:
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	7		:
	8		:
	9		:
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5-4 SCHEDULE

NOT USED

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY		AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY		AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY		AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

5-4 SCHEDULE, Continued

NOT USED

SCHEDULE NUMBER	
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SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

DAY PLAN NUMBER	
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MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

5-5 EXCEPTION DAY PROGRAM

NOT USED

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
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36					

DETECTOR SUBMENU

NOT USED

6-1. VEH DET ASSIGNMENT

VEHICLE DETECTOR PLAN NUMBER [1]																	
DET	PH	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01																	
02																	
03																	
04																	
05																	
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64																	

6-1. VEH DET ASSIGNMENT, Continued

NOT USED

VEHICLE DETECTOR PLAN NUMBER []																	
DET	PH	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01																	
02																	
03																	
04																	
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6-2 VEHICLE DETECTOR SETUP

DETECTOR NUMBER		212U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		213L		TS2 DETECTOR													
ECPI TYPE		5		ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		214L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J2U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		212L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		214U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		418U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1					X												
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J2L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALLOPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

6-2 VEHICLE DETECTOR SETUP, Continued

DETECTOR NUMBER		6J3L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J4L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1									X								
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J4U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

6-3 PED DETECTOR PHASE ASSIGNMENT (NTCIP MODE)

NOT USED

DETECTOR INPUT TO PED PHASE ASSIGNMENT								
PHASE	01	02	03	04	05	06	07	08
DETECTOR								
PHASE	09	10	11	12	13	14	15	16
DETECTOR								

6-3 PED DETECTOR INPUT ASSIGNMENT (ECONOLITE MODE)

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D E T E C T O R	1															
	2															
	3															
	4															
	5															
	6															
	7															
	8															
	9															
	10															
	11															
	12															
	13															
	14															
	15															
	16															

6-4 LOG – SPEED DETECTOR SET UP

NTCIP LOG.	ECPI LOG.			LENGTH UNIT				
SPEED DET	1	2	3	4	5	6	7	8
LOCAL DET								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DET	9	10	11	12	13	14	15	16
LOCAL DET								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

NOT USED

6-5 VEH DET DIAG

VEHICLE DIAGNOSTIC PLAN NUMBER				1	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
03							
04							
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11							
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64							

VEHICLE DIAGNOSTIC PLAN NUMBER				2	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
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NOT USED

6-5 VEH DET DIAG, Continued

VEHICLE DIAGNOSTIC PLAN NUMBER				3	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
03							
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64							

VEHICLE DIAGNOSTIC PLAN NUMBER				4	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
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62							
63							
64							

6-6 PED DETECTOR DIAG

NOT USED

PED DETECTOR DIAG PLAN					1	PED DETECTOR DIAG PLAN					2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER		DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1						1					
2						2					
3						3					
4						4					
5						5					
6						6					
7						7					
8						8					
9						9					
10						10					
11						11					
12						12					
13						13					
14						14					
15						15					
16						16					

PED DETECTOR DIAG PLAN					3	PED DETECTOR DIAG PLAN					4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER		DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1	A	A	A	A		1					
2						2					
3						3					
4						4					
5						5					
6						6					
7						7					
8						8					
9						9					
10						10					
11						11					
12						12					
13						13					
14						14					
15						15					
16						16					

Farhad Iranitalab

ASC/3

Farhad Iranitalab, PE, TE

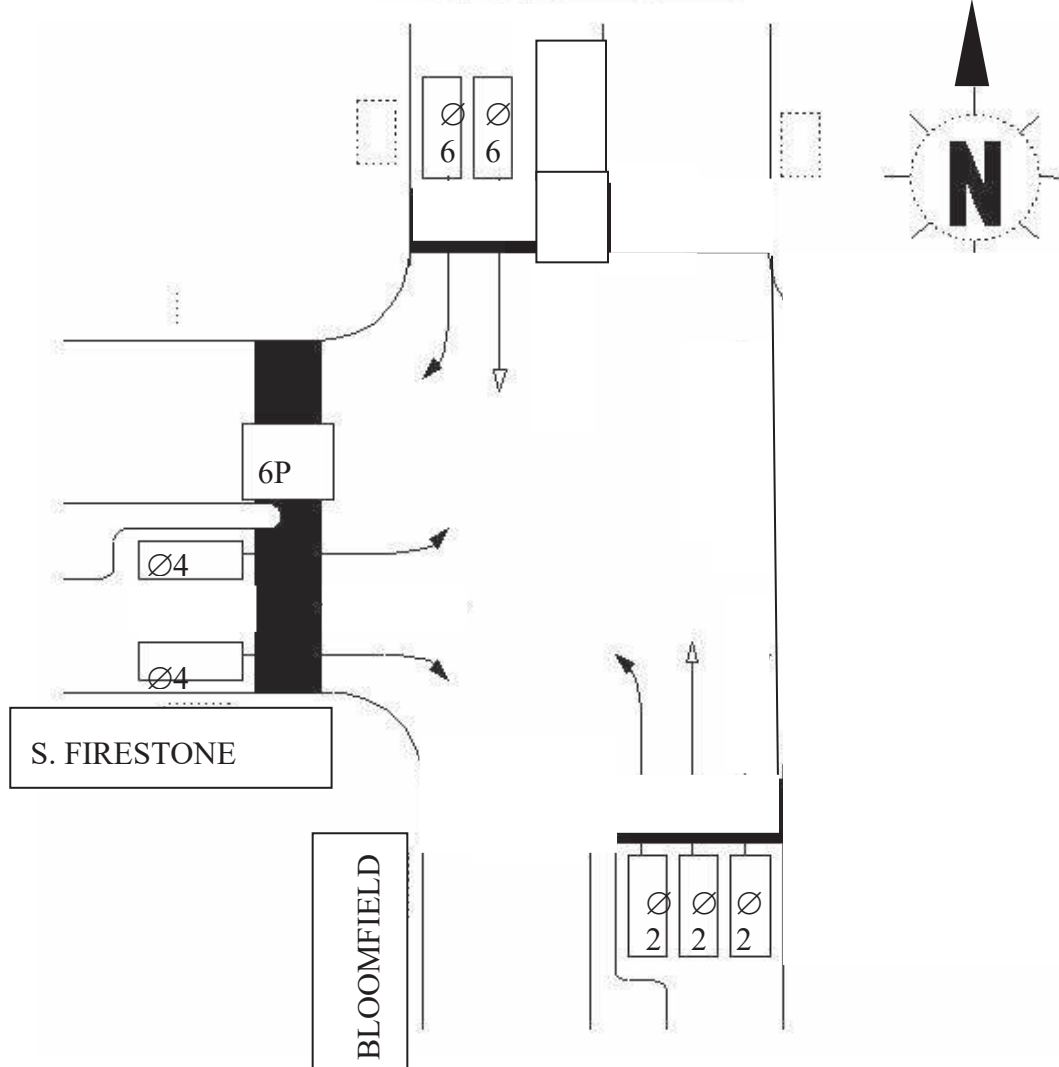
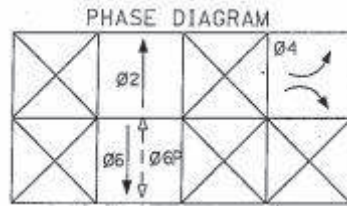
PROGRAM REFERENCE CARD



INTERSECTION: BLOOMFIELD AVENUE AND SOUTH FIRESTONE BLVD

CONTROLLER NUMBER: _____ ENTERED BY: _____ DATE: _____

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE: _____



1-4-1 SDLC OPTIONS

	BIU NUMBER								
TERM & FACIL	1	2	3	4	5	6	7	8	
ENABLE									
DETECTOR RACK	1	2	3	4	5	6	7	8	
ENABLE	x								
ENABLE TS2/MMU TYPE CABINET									NO
ENABLE MMU EXTENDED STATUS									NO
ENABLE SDLC STOP TIME									NO
ENABLE 3 CRITICAL RFEs LOCKUP									YES
MMU TO CU SDLC EXTERNAL START									ENABLE

1-4-2 MMU PROGRAM

MMU COMPATIBILITY															
CH2CH	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
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8															
9															
10															
11															
12															
13															
14															
15															

1-4-3 COLOR CHECK ENABLE

ENABLE ALL COLOR CHECKS	X							
MMU CHANNEL	1	2	3	4	5	6	7	8
GREEN / WALK								
YELLOW / PC								
RED / DW								
MMU CHANNEL	9	10	11	12	13	14	15	16
GREEN / WALK								
YELLOW / PC								
RED / DW								

1-4-4 SECONDARY STATIONS/TESTS

SECONDARY TO SECONDARY ADDRESSING:									
T&F	01	02	03	04	05	06	07	08	MMU
D/R	09	10	11	12	13	14	15	16	DIAG
ENABLE SDLC DIAGNOSTIC TEST									

NOT USED

1-5-1 ETHERNET PORT CONFIGURATION

MAC ADDRESS					
CONTROLLER IP					
SUBNET MASK					
DEFAULT GATEWAY IP					
SERVER IP					
LINK SPEED / DUPLEX					
DROP-OUT TIME					

1-5-2 ASC/3 PORT 2 – ASC/3-2070 C50S

ENABLE	No	PROTOCOL	Telemetry
BIT RATE		ADDRESS	0
DATA/PARITY/STOP DATA/P/S		GROUP ADD / TDR	
DUPLEX HALF/ FULL		SIGNAL FLAG	No
FLOW CONTROL		DROP-OUT TIME	
INTERSECTION MONITOR			
MODEM SETUP STRING			
USER STRING			

1-5-3 ASC/3 PORT 3A – ASC/3-2070 C21S

ENABLE	yes	PROTOCOL	NTCIP
BIT RATE	19.2K	ADDRESS	
DATA/PARITY/STOP DATA/P/S	8, N, 1	GROUP ADD / TDR	
DUPLEX HALF/ FULL	Full	SIGNAL FLAG	No
FLOW CONTROL		DROP-OUT TIME	

1-5-4 ASC/3 PORT 3B – ASC/3-2070 C22S

ENABLE		PROTOCOL	
BIT RATE		ADDRESS	
DATA/PARITY/STOP DATA/P/S		GROUP ADD / TDR	
DUPLEX HALF/ FULL		SIGNAL FLAG	
FLOW CONTROL		DROP-OUT TIME	
RTS-CTS DELAY			
RTS TURN OFF			
EARLY RTS			

1-5-5 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	0
UDP PORT	
ETHERNET PRIORITY	
PORT 2/C50S PRIORITY	
PORT 3A/C21S PRIORITY	
PORT 3B/C22S PRIORITY	

1-5-6 ECPIP

CONTROLLER ADDRESS								
EXPANDED SYSTEM DETECTOR ADDRESS								
SYSTEM DETECTOR ASSIGNMENT:								
SYSTEM DET	1	2	3	4	5	6	7	8
LOCAL DET								
SYSTEM DET	9	10	11	12	13	14	15	16
LOCAL DET								

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/T&F)	X	3 CRITICAL RFE ERRORS IN 24 HOURS	
MMU FLASH FAULTS	X	LOCAL FLASH FAULTS	X
NON-CRITICAL RFE'S (DET/TEST)	X	DETECTOR ERRORS	X
COORDINATION ERRORS		CONTROLLER DOWNLOAD	
PREEMPT		TSP/SCP	
POWER ON/OFF	X	LOW BATTERY	X
ACCESS		DATA CHANGE	
ALARM 1		ALARM 2	
ALARM 3		ALARM 4	
ALARM 5		ALARM 6	
ALARM 7		ALARM 8	
ALARM 9		ALARM 10	
ALARM 11		ALARM 12	
ALARM 13		ALARM 14	
ALARM 15		ALARM 16	
SNAPSHOT			

1-7-1 ADMINISTRATION

ENABLE CU/CABINET INTERLOCK CRC	
CU/CABINET INTERLOCK CRC VALUE	
CU/CABINET INTERLOCK HW VALUE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	
CONTROLLER DATA SUMCHECK (CRC) #	
ENABLE AUTOMATIC BACKUP TO DATAKEY	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-8-2 LOGIC PROCESSOR STATEMENTS,
Continued

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				
LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

NOT USED

2-2 VEHICLE OVERLAP

NOT USED

TIMING VEHICLE OVERLAP [A]	TYPE -																
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PRTC																	
NO OVLP																	
FLSH GRN																	
LAG X PH																	
LAG 2 PH																	
	LAG GRN					LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP [B]	TYPE -																
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PRTC																	
NO OVLP																	
FLSH GRN																	
LAG X PH																	
LAG 2 PH																	
	LAG GRN					LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP [C]	TYPE -																
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PRTC																	
NO OVLP																	
FLSH GRN																	
LAG X PH																	
LAG 2 PH																	
	LAG GRN					LAG YEL				LAG RED				ADV GRN			

NOT USED

2-2 VEHICLE OVERLAP - Continued

TIMING VEHICLE OVERLAP	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN			LAG YEL			LAG RED			ADV GRN						

TIMING VEHICLE OVERLAP	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN			LAG YEL			LAG RED			ADV GRN						

TIMING VEHICLE OVERLAP	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN			LAG YEL			LAG RED			ADV GRN						

2-4 GUARANTEED MINIMUM TIMES

OL/PHASE	A01	B02	C03	D04	E05	F06	G07	H08
MIN GRN								
WALK								
PED CLR								
YELLOW								
RED CLR								
OVL GRN								
OL/PHASE	I09	J10	K11	L12	M13	N14	O15	P16
MIN GRN								
WALK								
PED CLR								
YELLOW								
RED CLR								
OVL GRN								

2-5 START / FLASH DATA

START UP																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE		x				x										
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
OVERLAP																
FLASH>MON.						FLASH TIME			ALL RED TIME							
PWR START SEQ.																
AUTOMATIC FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY		x				x										
EXIT		x				x										
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
FLASH>MON.						EXIT FLASH			MIN FLASH							
MINIMUM RECALL								CYCLE THROUGH PHASES								

NOT USED

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

COORD OPTIONS			
MANUAL PATTERN		ECPI COORD	
SYSTEM SOURCE		SYSTEM FORMAT	
SPLITS IN		OFFSET IN	
TRANSITION		MAX SELECT	
DWELL/ADD TIME		ENABLE MAN SYNC	
DLY COORD WK-LZ		FORCE OFF	
OFFSET REF		CAL USE PED TM	
PED RECALL		PED RESERVE	
LOCAL ZERO OVRD		FO ADD INI GRN	
RE-SYNC COUNT		MULTISYNC	

NOT USED

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN															
USE SPLIT PATTERN 1															
TS2 PATTERN / OFFSET															
CYCLE															
STD (COS)															
OFFSET VAL															
ACTUATED COORD															
TIMING PLAN															
ACT WALK REST0															
SEQUENCE															
PHASE RESRVCE 0															
ACTION PLAN															
SPLIT PREFERENCE PHASES															
PHASE[s]															
01 02 03 04 05 06 07 08															
SPT															
PREF 1															
PREF 2															
SPLT EXT															
VEH PERM															
DISP															
RING DISP															
(RING 2-4)															
SPLIT PREFERENCE PHASES															
PHASE															
09 10 11 12 13 14 15 16															
SPT															
PREF 1															
PREF 2															
1 2															
SPLIT DEMAND PTRN															
XART PTRN															
PHASE															
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16															
COORD															
VE RCALL															
PD RCALL															
MX RCALL															
OMIT															
SF OUT															
(1-8)															

3-2 COORDINATOR PATTERN, Continued

NOT USED

COORDINATOR PATTERN																
USE SPLIT PATTERN 1																
TS2 PATTERN / OFFSET																
CYCLE																
STD (COS)																
OFFSET VAL																
ACTUATED COORD																
TIMING PLAN																
ACT WALK REST0																
SEQUENCE																
PHASE RESRVCE 0																
ACTION PLAN																
SPLIT PREFERENCE PHASES																
PHASE[s]																
01 02 03 04 05 06 07 08																
SPT																
PREF 1																
PREF 2																
SPLT EXT																
VEH PERM																
DISP																
RING DISP																
(RING 2-4)																
SPLIT PREFERENCE PHASES																
PHASE																
09 10 11 12 13 14 15 16																
SPT																
PREF 1																
PREF 2																
1 2																
SPLIT DEMAND PTRN																
XART PTRN																
PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
COORD																
VE RCALL																
PD RCALL																
MX RCALL																
OMIT																
SF OUT																
										(1-8)						

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

NOT USED

PHASE	1	2	3	4	5	6	7	8
MIN GRN								
PHASE	9	10	11	12	13	14	15	16
MIN GRN								

3-5 SPLIT DEMAND

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DEMAND 1																
DEMAND 2																
DEMAND		1		2												
DETECTOR																
CALL TIME (SEC)																
CYCLE COUNT																

PREEMPTOR SUBMENU

NOT USED

4-1 PREEMPTOR

PREEMPTOR NUMBER						1										
VEH/PED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACKCLR V																
TRACKCLR O																
ENA TRL																
DWEL VEH																
DWEL PED																
DWEL OLP																
CYC VEH																
CYC PED																
CYC OLP																
EXIT PH																
EXIT CAL																
SP FUNC																
ENABLE			PREEMPTION OVERRIDE				INTERLOCK ENABLE									
NON-LOCK INPUT			DELAY TIME (SECONDS)				INHIBIT TIME (SECONDS)									
AUTOMATIC FLASH HAS PRIORITY			DURATION TIME (SECONDS)				RED CLEAR GOES GREEN									
TERMINATE OVERLAPS ASAP			PED CLEAR THROUGH YELLOW				TERM PH									
PED DARK			TRACK CLEARANCE RESERVICE				DWELL FL									
LINKED PREEMPTOR			FLASH EXIT COLOR				PREEMPTION TO COORDINATION									
EXIT TIMING PLAN			RESERVICE TIME													
FREE DURING PREEMPTION							RING 1		RING 2		RING 3		RING 4			
TIMING				WALK		PED CLEAR		GREEN		YELLOW		RED				
ENTRANCE																
				MIN GREEN		EXT GREEN		MAX GREEN		YELLOW		RED				
TRACK CLEAR																
				MIN DWELL		PMT EXT		MAX TIME		YELLOW		RED				
DWELL/CYCLE - EXIT																
PREEMPTOR ACTIVE OUT						PREEMPTOR ACTIVE OUT IN DWELL										
OTHER PRIORITY PREEMPTOR OUT						NON-PRIORITY PREEMPTOR OUT										

4-1 PREEMPTOR, Continued

NOT USED

PREEMPTOR NUMBER																_____
VEH/PED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACKCLR V																
TRACKCLR O																
ENA TRL																
DWEL VEH																
DWEL PED																
DWEL OLP																
CYC VEH																
CYC PED																
CYC OLP																
EXIT PH																
EXIT CAL																
SP FUNC																
ENABLE				PREEMPTION OVERRIDE				INTERLOCK ENABLE								
NON-LOCK INPUT				DELAY TIME (SECONDS)				INHIBIT TIME (SECONDS)								
AUTOMATIC FLASH HAS PRIORITY				DURATION TIME (SECONDS)				RED CLEAR GOES GREEN								
TERMINATE OVERLAPS ASAP				PED CLEAR THROUGH YELLOW				TERM PH								
PED DARK				TRACK CLEARANCE RESERVICE				DWELL FL								
LINKED PREEMPTOR				FLASH EXIT COLOR				PREEMPTION TO COORDINATION								
EXIT TIMING PLAN				RESERVICE TIME												
FREE DURING PREEMPTION								RING 1		RING 2		RING 3		RING 4		
TIMING				WALK		PED CLEAR		GREEN		YELLOW		RED				
ENTRANCE																
				MIN GREEN		EXT GREEN		MAX GREEN		YELLOW		RED				
TRACK CLEAR																
				MIN DWELL		PMT EXT		MAX TIME		YELLOW		RED				
DWELL/CYCLE - EXIT																
PREEMPTOR ACTIVE OUT						PREEMPTOR ACTIVE OUT IN DWELL										
OTHER PRIORITY PREEMPTOR OUT						NON-PRIORITY PREEMPTOR OUT										

5-2 ACTION PLAN, continued

NOT USED

ACTION PLAN EVENT																	
PATTERN																SYSTEM OVERRIDE	
TIMING PLAN																SEQUENCE	
VEHICLE DETECTOR PLAN																DETECTOR LOG	
FLASH																RED REST	
VEHICLE DET DIAGNOSTIC PLAN																PED DET DIAGNOSTIC PLAN	
DIMMING ENABLE																	
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																	
WALK 2																	
VEH EXT 2																	
VEH RECALL																	
MAX RECALL																	
MAX 2																	
MAX 3																	
CS INHIBIT																	
PHASE OMIT																	
SPEC FUNCTION									(1-8)								
AUX FUNCTION				(1-3)													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 01-15																	
LP 16-30																	
LP 31-45																	
LP 46-60																	
LP 61-75																	
LP 76-90																	
LP 91-100																	

5-2 ACTION PLAN, continued

NOT USED

ACTION PLAN EVENT																	
PATTERN																SYSTEM OVERRIDE	
TIMING PLAN																SEQUENCE	
VEHICLE DETECTOR PLAN																DETECTOR LOG	
FLASH																RED REST	
VEHICLE DET DIAGNOSTIC PLAN																PED DET DIAGNOSTIC PLAN	
DIMMING ENABLE																	
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED RECALL																	
WALK 2																	
VEH EXT 2																	
VEH RECALL																	
MAX RECALL																	
MAX 2																	
MAX 3																	
CS INHIBIT																	
PHASE OMIT																	
SPEC FUNCTION									(1-8)								
AUX FUNCTION				(1-3)													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 01-15																	
LP 16-30																	
LP 31-45																	
LP 46-60																	
LP 61-75																	
LP 76-90																	
LP 91-100																	

5-3 DAY PLAN

NOT USED

DAY PLAN #	EVENT #	ACTION PLAN #	START TIME
	1		:
	2		:
	3		:
	4		:
	5		:
	6		:
	7		:
	8		:
	9		:
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	12		:
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	50		:

DAY PLAN #	EVENT #	ACTION PLAN #	START TIME
	1		:
	2		:
	3		:
	4		:
	5		:
	6		:
	7		:
	8		:
	9		:
	10		:
	11		:
	12		:
	13		:
	14		:
	15		:
	16		:
	17		:
	18		:
	19		:
	20		:
	21		:
	22		:
	23		:
	24		:
	25		:
	26		:
	27		:
	28		:
	29		:
	30		:
	31		:
	32		:
	33		:
	34		:
	35		:
	36		:
	37		:
	38		:
	39		:
	40		:
	41		:
	42		:
	43		:
	44		:
	45		:
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5-4 SCHEDULE

NOT USED

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

5-4 SCHEDULE, Continued

NOT USED

SCHEDULE NUMBER	
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SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

DAY PLAN NUMBER	
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MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

5-5 EXCEPTION DAY PROGRAM

NOT USED

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
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36					

DETECTOR SUBMENU

NOT USED

6-1. VEH DET ASSIGNMENT

VEHICLE DETECTOR PLAN NUMBER [1]																	
DET	PH	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01																	
02																	
03																	
04																	
05																	
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63																	
64																	

6-1. VEH DET ASSIGNMENT, Continued

NOT USED

VEHICLE DETECTOR PLAN NUMBER []																	
DET	PH	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01																	
02																	
03																	
04																	
05																	
06																	
07																	
08																	
09																	
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6-2 VEHICLE DETECTOR SETUP

DETECTOR NUMBER		212U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		212L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		213L		TS2 DETECTOR													
ECPI TYPE		5		ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		214U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		214L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1			X														
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		418U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1					X												
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J2U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J2L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALLOPTION				PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

6-2 VEHICLE DETECTOR SETUP, Continued

DETECTOR NUMBER		6J3L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J4U		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1							X										
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER		6J4L		TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #		1		ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1									X								
EXTEND TIME				DELAY TIME													
CALL OPTION		X		PASSAGE OPTION		X											
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER				TS2 DETECTOR													
ECPI TYPE				ECPI LOG													
VEH DET PLAN #				ECPI LOG													
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

6-3 PED DETECTOR PHASE ASSIGNMENT (NTCIP MODE)

NOT USED

DETECTOR INPUT TO PED PHASE ASSIGNMENT								
PHASE	01	02	03	04	05	06	07	08
DETECTOR								
PHASE	09	10	11	12	13	14	15	16
DETECTOR								

6-3 PED DETECTOR INPUT ASSIGNMENT (ECONOLITE MODE)

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D E T E C T O R	1															
	2															
	3															
	4															
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	14															
	15															
	16															

6-4 LOG – SPEED DETECTOR SET UP

NTCIP LOG.	ECPI LOG.			LENGTH UNIT				
SPEED DET	1	2	3	4	5	6	7	8
LOCAL DET								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DET	9	10	11	12	13	14	15	16
LOCAL DET								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

NOT USED

6-5 VEH DET DIAG

VEHICLE DIAGNOSTIC PLAN NUMBER				1	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
03							
04							
05							
06							
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10							
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VEHICLE DIAGNOSTIC PLAN NUMBER				2	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
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NOT USED

6-5 VEH DET DIAG, Continued

VEHICLE DIAGNOSTIC PLAN NUMBER				3	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
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63							
64							

VEHICLE DIAGNOSTIC PLAN NUMBER				4	FAILED		
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY	
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
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64							

6-6 PED DETECTOR DIAG

NOT USED

PED DETECTOR DIAG PLAN					1	PED DETECTOR DIAG PLAN					2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER		DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1						1					
2						2					
3						3					
4						4					
5						5					
6						6					
7						7					
8						8					
9						9					
10						10					
11						11					
12						12					
13						13					
14						14					
15						15					
16						16					

PED DETECTOR DIAG PLAN					3	PED DETECTOR DIAG PLAN					4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER		DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1	A	A	A	A		1					
2						2					
3						3					
4						4					
5						5					
6						6					
7						7					
8						8					
9						9					
10						10					
11						11					
12						12					
13						13					
14						14					
15						15					
16						16					

18. APPENDIX D: PROGRAM REFERENCE CARD

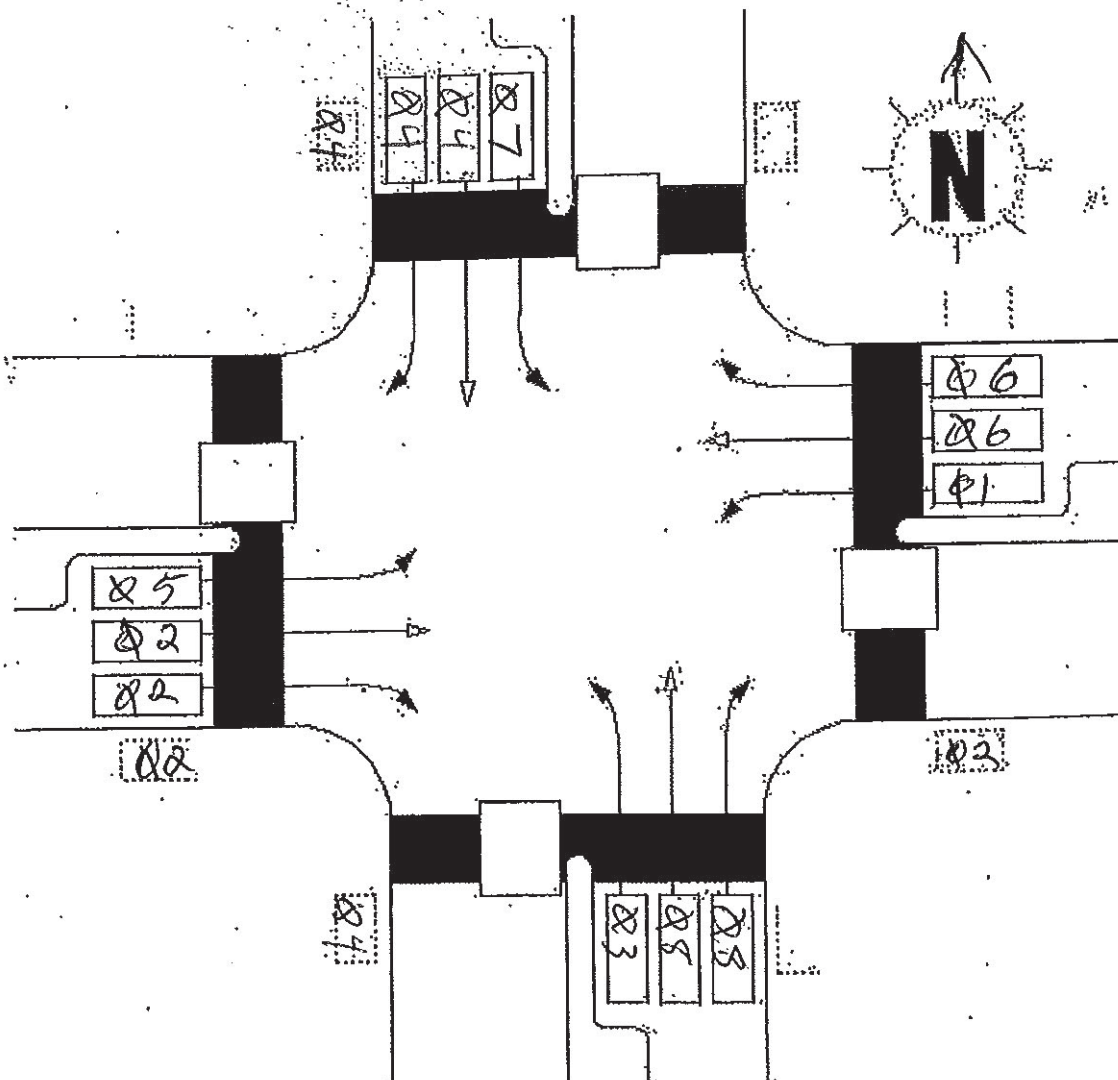
ASC/3 COBAHT

PROGRAM REFERENCE CARD

INTERSECTION Bloomfield & Rosecrans

CONTROLLER NUMBER _____ ENTERED BY: _____ DATE 1/1

BOOT: _____ MAIN: _____ HBLP: _____ DATA _____
BASE _____



CONFIGURATION SUBMENU

1-1-1. PHASE RING ASSIGNMENT

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RING	5	6	7	8												

1-1-2. PHASE COMPATIBILITY

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
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10																
11																
12																
13																
14																
15																
16																

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE	X	X	X	X	X	X	X	X								
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
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5																
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11																
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13																
14																
15																
16																

1-1-5. SIMULTANEOUS GAP

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
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13																
14																
15																
16																

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1		SEQUENCE 1											
RING 1													
RING 2													
RING 3													
RING 4													
CONTROLLER 1		SEQUENCE 2											
RING 1													
RING 2													
RING 3													
RING 4													
CONTROLLER 1		SEQUENCE 3											
RING 1													
RING 2													
RING 3													
RING 4													
CONTROLLER 1		SEQUENCE 4											
RING 1													
RING 2													
RING 3													
RING 4													
CONTROLLER 1		SEQUENCE 5											
RING 1													
RING 2													
RING 3													
RING 4													
CONTROLLER 1		SEQUENCE 6											
RING 1													
RING 2													
RING 3													
RING 4													
CONTROLLER 1		SEQUENCE 7											
RING 1													
RING 2													
RING 3													
RING 4													
CONTROLLER 1		SEQUENCE 8											
RING 1													
RING 2													
RING 3													
RING 4													

1-3 PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERL AP	TYPE	DIMMING			AUTO FLASH	
			RED	YELLOW	GREEN	COLO R	TOGE THER
1	1	✓					
2	2	✓					
3	3	✓					
4	4	✓					
5	5	✓					
6	6	✓					
7	7	✓					
8	8	✓					
9	9	✓					
10	10	✓					
11							
12							
13							
14							
15							
16							

1-4-2. MMU PROGRAM

PHASE	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-1. SDLC OPTIONS

	BIU NUMBER							
TERM & FACIL	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE	X	X	X					
PEER-PEER EN								
MMU ENABLE	Yes							
MMU STOP TIME	NO							
DIAGNOSTIC ENABLE (TEST FIXTURE)								
CONTROLLER PEER TO PEER ENABLE								
DISABLE 3 CRITICAL RFES LOCKUP								

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS									
MMU CHANNEL	1	2	3	4	5	6	7	8	
GREEN / WALK									
YELLOW / PC									
RED / DW									
MMU CHANNEL	9	10	11	12	13	14	15	16	
GREEN / WALK									
YELLOW / PC									
RED / DW									

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA PARITY, STOP	
MODEM SETUP STRING	

USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (n seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (n seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (n seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS				
ADDRESS MASK				
FTP SERVER ADDRESS				
DEFAULT GATEWAY ADDRESS				

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MM/ITE)	X
3 CRITICAL RFE ERRORS IN 24 HOURS	X
NON-CRITICAL RFE'S (DET/TEST)	X
DETECTOR ERRORS	X
COORDINATION ERRORS	X
MMU FLASH FAULTS	X
LOCAL FLASH FAULTS	X
PREEMPT	X
POWER ON/OFF	X
LOW BATTERY	X
ACCESS	X
DATA CHANGE	X
CONTROLLER DOWNLOAD	X
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	
ALARM 17	
ALARM 18	

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	8	15	8	13	8	15	8	12								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7												
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		20		18												
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION		20	20	25	50	25	50	25	50							
VEHICLE EXTENSION 2																
MAX1		25	50	25	40	25	50	25	40							
MAX2		40	40	40	40	40	40	40	40							
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STRP																
YELLOW CHANGE		4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5							
RED CLRANCE		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0							
RED MAX																
RED REVERT		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0							
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																

NOT OVERLAP	TRAILING YELLOW									TRAILING RED						
TRAILING GREEN	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
TRAILING LEADING																
ADVANCE GREEN	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
FLASH GREEN																

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																
TRAILING GREEN																
TRAILING YELLOW																
TRAILING RED																
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
TRAILING																
LEADING																
ADVANCE GREEN																
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
FLASH GREEN																

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																
TRAILING GREEN																
TRAILING YELLOW																
TRAILING RED																
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
TRAILING																
LEADING																
ADVANCE GREEN																
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
FLASH GREEN																

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
INCLUDED																
PROTECTED																
MODIFIER																
PEDESTRIAN PROTECT																
NOT OVERLAP																
TRAILING GREEN																
TRAILING YELLOW																
TRAILING RED																
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
TRAILING																
LEADING																
ADVANCE GREEN																
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
FLASH GREEN																

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
INCLUDED															
PROTECTED															
MODIFIER															
PEDESTRIAN PROTECT															
NOT OVERLAP															
TRAILING GREEN															
TRAILING YELLOW															
TRAILING RED															
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
TRAILING															
LEADING															
ADVANCE GREEN															
PHASES	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
FLASH GREEN															

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES 75																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
PHASE				Y				Y								
OVERLAP	X	X	X	X												
POWER START RED									6.0							6.0
REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
ENTRY				X				X								
EXIT				X				X								
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT	X	X	X	X												
EXIT REMOTE FLASH								Y								
MINIMUM RECALL								NO								
MINIMUM AUTOMATIC FLASH																8
CYCLE THROUGH PHASES																NO

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECTS																
UNIT RED REVERT																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GUARANTEED PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
RED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION																
PRB INPUT DISABLED PRE-TIMED																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PRB TIMED																

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

MANUAL PATTERN			
INTERCONNECT SOURCE		INTERCONNECT FORMAT	
TRANSITION		BCPI COORDINATION	
OFFSET REFERENCE		DWELL / ADD TIME	
DELAY COORD WALK TO LOCAL ZERO		FORCE OFF	
FORCE OFF ADDBD INITIAL GREEN		USE PRD TIME FOR SMOOTH TRANSITION	
PEDESTRIAN RECALL		PEDESTRIAN RESERVE	
ENABLE MANUAL SYNC INPUT		LOCAL ZERO OVERRIDE	
RE-SYNC COUNT		MAX SELECT	
MULTISYNC			

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN SEQUENCE	
OFFSET VALUE		OFFSETS IN ...	
SPLITS IN			
CROSSING ARTERY PATTERN		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 1 LENGTH		ACTION PLAN	
VEHICLE PERMISSIVE 2 DISPLACEMENT		TIMING PLAN	
ACTUATED COORDINATION		PHASE RESERVE	
ACTUATED RST IN WALK			
			1 2 3 4
RING SPLIT EXTENSION (SECONDS)			
SPLIT DEMAND PATTERN			
			1 2 3 4 5 6
RING DISPLACEMENT			
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6		
PREFERENC B 1 PHASES			
PREFERENC B 2 PHASES			
			1 2 3 4 5 6 7 8
SPECIAL FUNCTION			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN SEQUENCE	
OFFSET VALUE		OFFSETS IN ...	
SPLITS IN			
CROSSING ARTERY PATTERN		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 1 LENGTH		ACTION PLAN	
VEHICLE PERMISSIVE 2 DISPLACEMENT		TIMING PLAN	
ACTUATED COORDINATION		PHASE RESERVE	
ACTUATED RST IN WALK			
			1 2 3 4
RING SPLIT EXTENSION (SECONDS)			
SPLIT DEMAND PATTERN			
			1 2 3 4 5 6
RING DISPLACEMENT			
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6		
PREFERENC B 1 PHASES			
PREFERENC B 2 PHASES			
			1 2 3 4 5 6 7 8
SPECIAL FUNCTION			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN SEQUENCE	
OFFSET VALUE		OFFSETS IN ...	
SPLITS IN			
CROSSING ARTERY PATTERN		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 1 LENGTH		ACTION PLAN	
VEHICLE PERMISSIVE 2 DISPLACEMENT		TIMING PLAN	
ACTUATED COORDINATION		PHASE RESERVE	
ACTUATED RST IN WALK			
			1 2 3 4
RING SPLIT EXTENSION (SECONDS)			
SPLIT DEMAND PATTERN			
			1 2 3 4 5 6
RING DISPLACEMENT			
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6		
PREFERENC B 1 PHASES			
PREFERENC B 2 PHASES			
			1 2 3 4 5 6 7 8
SPECIAL FUNCTION			

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER: 1		NON-LOCK INPUT	
ACTIVE		INTERLOCK ENABLE	
PREEMPTION OVERRIDE		INHIBIT TIME (SECONDS)	
DELAY TIME (SECONDS)		MAX PRESENCE TIME (SECONDS)	
EXTEND INPUT (SECONDS)		TRACK CLEARANCE RESERVE	
DURATION TIME (SECONDS)		RESERVE TIME	
PED DARK		RED CLEAR GOES GREEN	
AUTOMATIC FLASH HAS PRIORITY		PED CLEAR THROUGH YELLOW	
TERMINATE OVERLAPS ASAP			
RING		1 2 3 4	
FREE DURING PREEMPTION		WALK PED CLEAR GREEN YELLOW RED	
ENTERING MINIMUM TIME			
TRACK CLEARANCE TIME			
MIN DWELL - CYCLE GREEN/EXIT YELLOW/RED			
DWELL FLASH		FLASH EXIT COLOR	
PHASE	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6		
TRACK CLEAR PHASE			
DWELL PHASE			
DWELL PEDESTRIAN			
CYCLING PHASE			
CYCLING PEDESTRIAN			
EXIT PHASE			
EXIT CALLS			
SPECIAL FUNCTION			
PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS		PREEMPTOR ACTIVE OUT IN DWELL	
PREEMPTOR ACTIVE OUT		NON-PRIORITY PREEMPTOR OUT	
OTHER PRIORITY PREEMPTOR OUT			
OVERLAP	A B C D E F G H I J K L M N O P		
TRACK CLEAR OVERLAP			
DWELL OVERLAP			
CYCLING OVERLAP			

PREEMPTOR NUMBER: 2		NON-LOCK INPUT	
ACTIVE		INTERLOCK ENABLE	
PREEMPTION OVERRIDE		INHIBIT TIME (SECONDS)	
DELAY TIME (SECONDS)		MAX PRESENCE TIME (SECONDS)	
EXTEND INPUT (SECONDS)		TRACK CLEARANCE RESERVE	
DURATION TIME (SECONDS)		RESERVE TIME	
PED DARK		RED CLEAR GOES GREEN	
AUTOMATIC FLASH HAS PRIORITY		PED CLEAR THROUGH YELLOW	
TERMINATE OVERLAPS ASAP			
RING		1 2 3 4	
FREE DURING PREEMPTION		WALK PED CLEAR GREEN YELLOW RED	
ENTERING MINIMUM TIME			
TRACK CLEARANCE TIME			
MIN DWELL - CYCLE GREEN/EXIT YELLOW/RED			
DWELL FLASH		FLASH EXIT COLOR	
PHASE	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6		
TRACK CLEAR PHASE			
DWELL PHASE			
DWELL PEDESTRIAN			
CYCLING PHASE			
CYCLING PEDESTRIAN			
EXIT PHASE			
EXIT CALLS			
SPECIAL FUNCTION			
PREEMPTION TO COORDINATION		EXIT TIMING PLAN	
LINKED PREEMPTOR			
PREEMPTOR ACTIVE OUTPUTS		PREEMPTOR ACTIVE OUT IN DWELL	
PREEMPTOR ACTIVE OUT		NON-PRIORITY PREEMPTOR OUT	
OTHER PRIORITY PREEMPTOR OUT			
OVERLAP	A B C D E F G H I J K L M N O P		
TRACK CLEAR OVERLAP			
DWELL OVERLAP			
CYCLING OVERLAP			

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

PREEMPTOR NUMBER	3
ACTIVE	NON-LOCK INPUT
PREEMPTION OVERRIDE	INTERLOCK ENABLE
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVE
PED DARK	RESERVE TIME
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW
RING	1 2 3 4
FREE DURING PREEMPTION	WALK PED CLEAR GREEN YELLOW RED
ENTERING MINIMUM TIME	
TRACK CLEARANCE TIME	
MIN DWELL - CYCLE GREEN/EXIT YELLOW/RED	
DWELL FLASH	FLASH EXIT COLOR
PHASE	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6
TRACK CLEAR PHASE	
DWELL PHASE	
DWELL PEDESTRIAN	
CYCLING PHASE	
CYCLING PEDESTRIAN	
EXIT PHASE	
EXIT CALLS	
SPECIAL FUNCTION	
PREEMPTION TO COORDINATION	EXIT TIMING PLAN
LINKED PREEMPTOR	
PREEMPTOR ACTIVE OUTPUTS	
PREEMPTOR ACTIVE OUT	PREEMPTOR ACTIVE OUT IN DWELL
OTHER PRIORITY PREEMPTOR OUT	NON-PRIORITY PREEMPTOR OUT
OVERLAP	A B C D E F G H I J K L M N O P
TRACK CLEAR OVERLAP	
DWELL OVERLAP	
CYCLING OVERLAP	

PREEMPTOR NUMBER	4
ACTIVE	NON-LOCK INPUT
PREEMPTION OVERRIDE	INTERLOCK ENABLE
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVE
PED DARK	RESERVE TIME
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW
RING	1 2 3 4
FREE DURING PREEMPTION	WALK PED CLEAR GREEN YELLOW RED
ENTERING MINIMUM TIME	
TRACK CLEARANCE TIME	
MIN DWELL - CYCLE GREEN/EXIT YELLOW/RED	
DWELL FLASH	FLASH EXIT COLOR
PHASE	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6
TRACK CLEAR PHASE	
DWELL PHASE	
DWELL PEDESTRIAN	
CYCLING PHASE	
CYCLING PEDESTRIAN	
EXIT PHASE	
EXIT CALLS	
SPECIAL FUNCTION	
PREEMPTION TO COORDINATION	EXIT TIMING PLAN
LINKED PREEMPTOR	
PREEMPTOR ACTIVE OUTPUTS	
PREEMPTOR ACTIVE OUT	PREEMPTOR ACTIVE OUT IN DWELL
OTHER PRIORITY PREEMPTOR OUT	NON-PRIORITY PREEMPTOR OUT
OVERLAP	A B C D E F G H I J K L M N O P
TRACK CLEAR OVERLAP	
DWELL OVERLAP	
CYCLING OVERLAP	

PREEMPTOR NUMBER	5															
ACTIVE	NON-LOCK INPUT															
PREEMPTION OVERRIDE	INTERLOCK ENABLE															
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)															
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)															
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVE															
PED DARK	RESERVE TIME															
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN															
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW															
RING	1				2				3				4			
FREE DURING PREEMPTION	WALK PED CLEAR GREEN YELLOW RED															
ENTERING MINIMUM TIME	WALK PED CLEAR GREEN YELLOW RED															
TRACK CLEARANCE TIME																
MIN DWELL - CYCLE GREEN/EXIT YELLOW/RED																
DWELL FLASH	FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																
PREEMPTION TO COORDINATION	EXIT TIMING PLAN															
LINKED PREEMPTOR																
PREEMPTOR ACTIVE OUTPUTS																
PREEMPTOR ACTIVE OUT	PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT	NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

PREEMPTOR NUMBER	6															
ACTIVE	NON-LOCK INPUT															
PREEMPTION OVERRIDE	INTERLOCK ENABLE															
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)															
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)															
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVE															
PED DARK	RESERVE TIME															
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN															
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW															
RING	1				2				3				4			
FREE DURING PREEMPTION	WALK PED CLEAR GREEN YELLOW RED															
ENTERING MINIMUM TIME	WALK PED CLEAR GREEN YELLOW RED															
TRACK CLEARANCE TIME																
MIN DWELL - CYCLE GREEN/EXIT YELLOW/RED																
DWELL FLASH	FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	6	7	8	9	0	1	1	1	1	1
TRACK CLEAR PHASE																
DWELL PHASE																
DWELL PEDESTRIAN																
CYCLING PHASE																
CYCLING PEDESTRIAN																
EXIT PHASE																
EXIT CALLS																
SPECIAL FUNCTION																
PREEMPTION TO COORDINATION	EXIT TIMING PLAN															
LINKED PREEMPTOR																
PREEMPTOR ACTIVE OUTPUTS																
PREEMPTOR ACTIVE OUT	PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT	NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACK CLEAR OVERLAP																
DWELL OVERLAP																
CYCLING OVERLAP																

ASC/3

SIGNAL TIMING CHART

(Reference: Econolite ASC/3 Programming Manual – Appendix D)

INTERSECTION: **Bloomfield Boulevard at Civic Center Drive**

CONTROLLER
NUMBER:

PREPARED BY: **HLG**

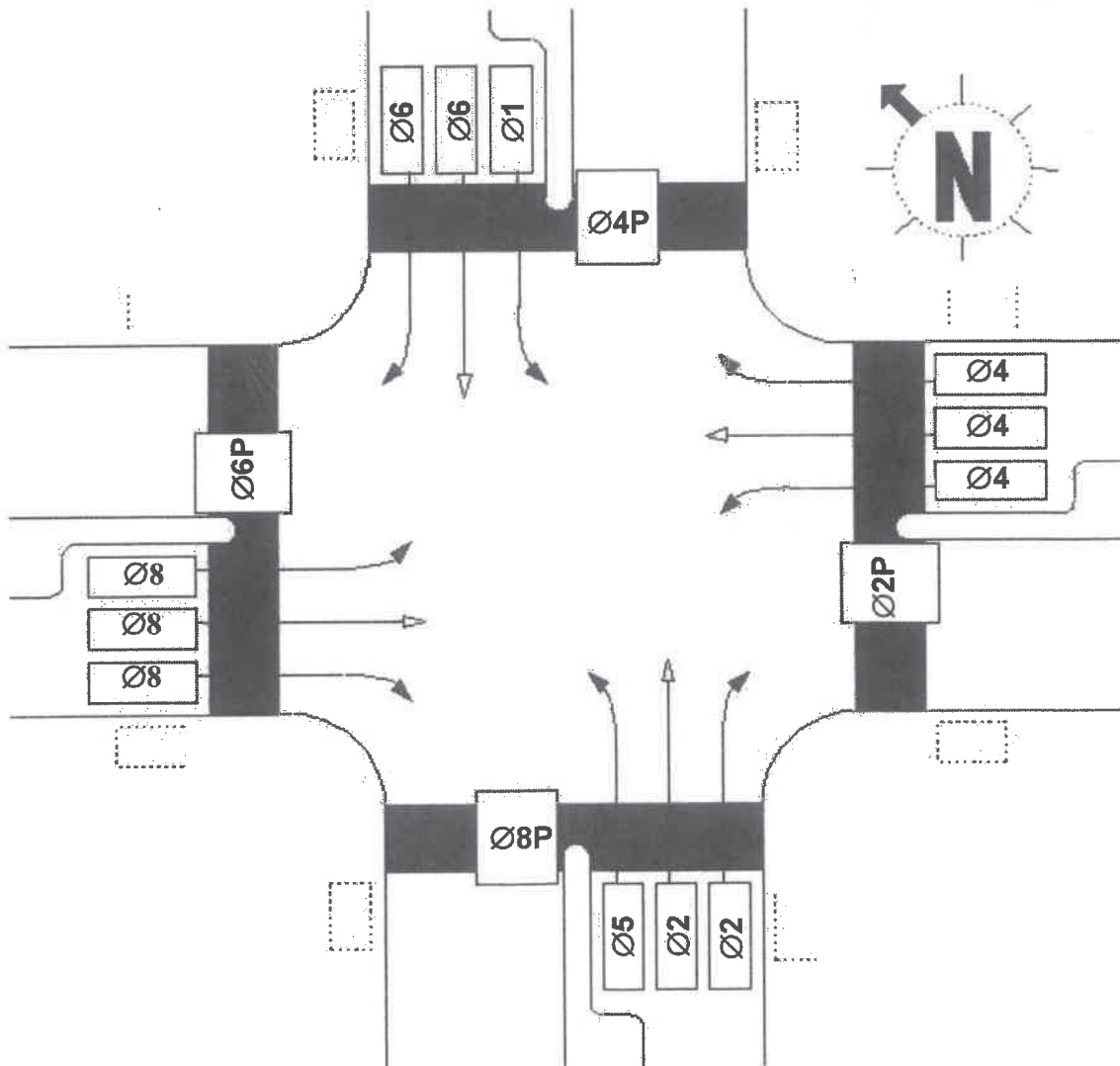
DATE: **11/10/13**

BOOT:

MAIN:

HELP:

DATA
BASE:



CONFIGURATION SUBMENU

1-1-1 PHASE RING ASSIGNMENT

Sequence 1

PRI	CONFIGURE UTILITY					ENA HW ALT SEQ.					NO					
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
BC	B		B		B		B									
R1	1	2	3	4	9	10	13	14								
R2	5	6	7	8	11	12	15	16								
R3																
R4																

Sequence 02

PRI	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
BC																
R1																
R2																
R3																
R4																

Sequence 03

PRI	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
BC																
R1																
R2																
R3																
R4																

Sequence 04

PRI	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
BC																
R1																
R2																
R3																
R4																

Sequence 05

PRI	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
BC																
R1																
R2																
R3																
R4																

Sequence 06

PRI	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
BC																
R1																
R2																
R3																
R4																

1-1-2 PHASE COMPATIBILITY

PHASE	16	15	14	13	12	11	10	09	08	07	06	05	04	03	02
-------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

1-1-4 SIMULTANEOUS GAP

GAP\PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2						X										
3																
4								X								
5																
6		X														
7																
8				X												
9																
10																
11																
12																
13																
14																
15																
16																
DISABLE																

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
PHASES IN USE	X	X		X	X	X		X								
EXCLUSIVE PED																

1-3 PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP 1-16	TYPE VPO	DIMMING				AUTOMATIC FLASH		
			RED	YELLOW	GREEN	DIMMING PHASE +	RED	YELLOW	FLASH TOGETHER
1	1	V					X		X
2	2	V					X		X
3									
4	4	V					X		X
5	5	V					X		X
6	6	V					X		X
7									
8	8	V					X		X
9	2	P							
10	4	P							
11	6	P							
12	8	P							
13									
14									
15									
16									

1-4-1 SDLC OPTIONS

	BIU NUMBER							
TERM & FACIL	1	2	3	4	5	6	7	8
ENABLE	X	X						
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE	X							
ENABLE TS2 /MMU TYPE CABINET								Y
ENABLE MMU EXTENDED STATUS								N
ENABLE SDLC STOP TIME								N
ENABLE 3 CRITICAL RFEs LOCKUP								N
MMU TO CU SDLC EXTERNAL START								N

1-4-3 COLOR CHECK ENABLE

ENABLE ALL COLOR CHECKS		X							
MMU CHANNEL	1	2	3	4	5	6	7	8	
GREEN / WALK		X		X		X		X	
YELLOW / PC		X		X		X		X	
RED / DW		X		X		X		X	
MMU CHANNEL	9	10	11	12	13	14	15	16	
GREEN / WALK									
YELLOW / PC									
RED / DW									

1-4-2 MMU PROGRAM

MMU COMPATIBILITY															
CH2CH	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-4 SECONDARY STATIONS/TESTS

SECONDARY TO SECONDARY ADDRESSING:									
T&F	01	02	03	04	05	06	07	08	MMU
D/R	09	10	11	12	13	14	15	16	DIAG
ENABLE SDLC DIAGNOSTIC TEST									NO

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

1-5-1 ETHERNET PORT CONFIGURATION

MAC ADDRESS					
CONTROLLER IP					
SUBNET MASK					
DEFAULT GATEWAY IP					
SERVER IP					
LINK SPEED / DUPLEX					
DROP-OUT TIME					

1-5-6 ECPIP

CONTROLLER ADDRESS								
EXPANDED SYSTEM DETECTOR ADDRESS								
SYSTEM DETECTOR ASSIGNMENT:								
SYSTEM DET	1	2	3	4	5	6	7	8
LOCAL DET								
SYSTEM DET	9	10	11	12	13	14	15	16
LOCAL DET								

1-5-2 ASC/3 PORT 2 – ASC/3-2070 C50S

ENABLE	NO	PROTOCOL	TERMINAL
BIT RATE	9600	ADDRESS	
DATA/PARITY/STOP DATA/P/S	8,N,1	GROUP ADD / TDR	
DUPLEX HALF/ FULL	HALF	SIGNAL FLAG	
FLOW CONTROL		DROP-OUT TIME	
INTERSECTION MONITOR			
MODEM SETUP STRING			
USER STRING			

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/T&F)	YES	3 CRITICAL RFE ERRORS IN 24 HOURS	NO
MMU FLASH FAULTS	YES	LOCAL FLASH FAULTS	YES
NON-CRITICAL RFE'S (DEF/TEST)	NO	DETECTOR ERRORS	YES
COORDINATION ERRORS	YES	CONTROLLER DOWNLOAD	YES
PREEMPT	YES	TSP/SCP	YES
POWER ON/OFF	YES	LOW BATTERY	YES
ACCESS	YES	DATA CHANGE	YES
ALARM 1	YES	ALARM 2	NO
ALARM 3	NO	ALARM 4	NO
ALARM 5	NO	ALARM 6	NO
ALARM 7	NO	ALARM 8	NO
ALARM 9	NO	ALARM 10	NO
ALARM 11	NO	ALARM 12	NO
ALARM 13	NO	ALARM 14	NO
ALARM 15	NO	ALARM 16	NO
SNAPSHOT	NO		

1-5-3 ASC/3 PORT 3A – ASC/3-2070 C21S

ENABLE	NO	PROTOCOL	AB 3418
BIT RATE	19200	ADDRESS	0
DATA/PARITY/STOP DATA/P/S	8,N,1	GROUP ADD / TDR	0
DUPLEX HALF/ FULL	FULL	SIGNAL FLAG	YES
FLOW CONTROL		DROP-OUT TIME	10

1-5-4 ASC/3 PORT 3B – ASC/3-2070 C22S

ENABLE	YES	PROTOCOL	AB 3418
BIT RATE	1200	ADDRESS	
DATA/PARITY/STOP DATA/P/S	8,N,1	GROUP ADD / TDR	
DUPLEX HALF/ FULL	FULL	SIGNAL FLAG	
FLOW CONTROL		DROP-OUT TIME	
RTS-CTS DELAY	3		
RTS TURN OFF	2		
EARLY RTS	NO		

1-5-5 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	0
UDP PORT	
ETHERNET PRIORITY	4
PORT 2/C50S PRIORITY	3
PORT 3A/C21S PRIORITY	2
PORT 3B/C22S PRIORITY	1

1-7-1 ADMINISTRATION

ENABLE CU/CABINET INTERLOCK CRC	NO
CU/CABINET INTERLOCK CRC VALUE	0000
CU/CABINET INTERLOCK HW VALUE	0000
REQUEST DOWNLOAD OF PROGRAMMED DATA	NO
CONTROLLER DATA SUMCHECK (CRC) #	
ENABLE AUTOMATIC BACKUP TO DATAKEY	NO

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	YES
BACKLIGHT ENABLE	YES
LED MODE	AUTO
MAIN STATUS DISPLAY MODE	ADVANCE

1-8-1 LOGIC STATEMENT CONTROL

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 01-15															
LP 16-30															
LP 31-45															
LP 46-60															
LP 61-75															
LP 76-90															
LP 91-100															

1-8-2 LOGIC PROCESSOR STATEMENTS 1-4

LOGIC GATE NUMBER															1
IF															
THEN															
ELSE															
LOGIC GATE NUMBER															2
IF															
THEN															
ELSE															

LOGIC GATE NUMBER															3
IF															
THEN															
ELSE															
LOGIC GATE NUMBER															4
IF															
THEN															
ELSE															

CONTROLLER SUBMENU

2-2 CONTROLLER TIMING DATA

TIMING PLAN 1																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	2	10		6	2	10		6								
BICYCLE MINIMUM GREEN	0	0		0	0	0		0								
CONDITIONAL SERVICE MINIMUM GREEN	0	0		0	0	0		0								
DELAYED GREEN	0	0		0	0	0		0								
WALK	0	10		10	0	10		10								
WALK 2	0	0		0	0	0		0								
WALK MAX	0	0		0	0	0		0								
PEDESTRIAN CLEARANCE	0	17		30	0	17		28								
PEDESTRIAN CLEARANCE 2	0	0		0	0	0		0								
PEDESTRIAN CLEARANCE MAX	0	0		0	0	0		0								
PEDESTRIAN CARRY OVER	0	0		0	0	0		0								
VEHICLE EXTENSION	1.5	2.0		2.5	1.5	2.0		2.5								
VEHICLE EXTENSION 2	0.0	0.0		0.0	0.0	0.0		0.0								
MAX1	20	40		40	20	40		40								
MAX2	0	0		0	0	0		0								
MAX3	0	0		0	0	0		0								
DYNAMIC MAX	0	0		0	0	0		0								
DYNAMIC MAX STEP	0.0	0.0		0.0	0.0	0.0		0.0								
YELLOW CHANGE	3.0	4.0		3.6	3.0	4.0		3.5								
RED CLEARANCE	0.0	1.0		1.0	0.0	1.0		1.0								
RED MAX	0.0	0.0		0.0	0.0	0.0		0.0								
RED REVERT	2.0	2.0		2.0	2.0	2.0		2.0								
ACTUATIONS BEFORE GAP REDUCTION	0	0		0	0	0		0								
SECONDS PER ACTIONS ADDED TO INITIAL	0.0	0.0		0.0	0.0	0.0		0.0								
MAXIMUM ADDED INITIAL GREEN	0	0		0	0	0		0								
TIME BEFORE GAP REDUCTION	0	0		0	0	0		0								
CARS WAITING BEFORE GAP REDUCTION	0	0		0	0	0		0								
STEP TO REDUCE	0.0	0.0		0.0	0.0	0.0		0.0								
TIME TO REDUCE TO MINIMUM	0	0		0	0	0		0								
MINIMUM GAP	1.5	2.0		2.5	1.5	2.0		2.5								

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

2-2 CONTROLLER TIMING DATA - Continued

TIMING PLAN _____																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK																
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE																
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION																
VEHICLE EXTENSION 2																
MAX1																
MAX2																
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE																
RED CLRANCE																
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

2-2 VEHICLE OVERLAP

TIMING VEHICLE OVERLAP [A]	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP [B]	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP [C]	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

Location: Bloomfield Boulevard at Civic Center Drive

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2-2 VEHICLE OVERLAP - Continued

TIMING VEHICLE OVERLAP	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

TIMING VEHICLE OVERLAP	TYPE -															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PRTC																
NO OVLP																
FLSH GRN																
LAG X PH																
LAG 2 PH																
	LAG GRN				LAG YEL				LAG RED				ADV GRN			

Location: Bloomfield Boulevard at Civic Center Drive

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2-3 VEH/PED OVERLAP

VEH OLPHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VEH OL A																
VEH OL B																
VEH OL C																
VEH OL D																
VEH OL E																
VEH OL F																
VEH OL G																
VEH OL H																
VEH OL I																
VEH OL J																
VEH OL K																
VEH OL L																
VEH OL M																
VEH OL N																
VEH OL O																
VEH OL P																
PED OLPHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED OL 1																
PED OL 2																
PED OL 3																
PED OL 4																
PED OL 5																
PED OL 6																
PED OL 7																
PED OL 8																
PED OL 9																
PED OL 10																
PED OL 11																
PED OL 12																
PED OL 13																
PED OL 14																
PED OL 15																
PED OL 16																

Location: Bloomfield Boulevard at Civic Center Drive

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2-4 GUARANTEED MINIMUM TIMES

OL/PHASE	A01	B02	C03	D04	E05	F06	G07	H08
MIN GRN		2		2		2		2
WALK		4				4		4
PED CLR		8		10		8		10
YELLOW		4.0		3.6		4.0		3.6
RED CLR		1.0		1.0		1.0		1.0
OVL GRN								
OL/PHASE	I09	J10	K11	L12	M13	N14	O15	P16
MIN GRN								
WALK								
PED CLR								
YELLOW								
RED CLR								
OVL GRN								

2-5 START / FLASH DATA

START UP																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PHASE		Y				Y											
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
OVERLAP																	
FLASH>MON.	NO		FLASH TIME				10		ALL RED TIME				6.0				
PWR START SEQ.																	
AUTOMATIC FLASH																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
ENTRY		X				X											
EXIT		X				X											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
EXIT																	
FLASH>MON.	NO		EXIT FLASH				NO		MIN FLASH				10				
MINIMUM RECALL								NO		CYCLE THROUGH PHASES				NO			

Location: Bloomfield Boulevard at Civic Center Drive

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2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT															OFF	
UNIT RED REVERT															2.0	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FLASHING GRN PH																
GUAR PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY		X		X		X		X								
COND SERVICE	X				X											
COND RESERVICE																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR>YELLOW																
PED CLEAR>ALL RED																
IGRN + VEH EXT																

2-7 ACTUATED PRE-TIMED MODE

ENABLE PRE-TIMED OPERATION															NO	
FREE INPUT DISABLED PRE-TIMED															NO	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PRETIMED																

2-8 PHASE RECALL OPTIONS

TIMING PLAN NUMBER [1]																
PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
LOCK DET		X				X										
VE RCALL		X				X										
PD RCALL																
MX RCALL																
SF RCALL																
NO REST																
AI CALC																

2-8 PHASE RECALL OPTIONS - Continued

TIMING PLAN NUMBER [2]																
PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
LOCK DET																
VE RCALL																
PD RCALL																
MX RCALL																
SF RCALL																
NO REST																
AI CALC																

TIMING PLAN NUMBER [3]																
PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
LOCK DET																
VE RCALL																
PD RCALL																
MX RCALL																
SF RCALL																
NO REST																
AI CALC																

TIMING PLAN NUMBER [4]																
PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
LOCK DET																
VE RCALL																
PD RCALL																
MX RCALL																
SF RCALL																
NO REST																
AI CALC																

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COORDINATOR SUBMENU

NOT USED

3-1 COORDINATOR OPTIONS

COORD OPTIONS			
MANUAL PATTERN		ECPI COORD	
SYSTEM SOURCE		SYSTEM FORMAT	
SPLITS IN		OFFSET IN	
TRANSITION		MAX SELECT	
DWELL/ADD TIME		ENABLE MAN SYNC	
DLY COORD WK-LZ		FORCE OFF	
OFFSET REF		CAL USE PED TM	
PED RECALL		PED RESERVE	
LOCAL ZERO OVRD		FO ADD INI GRN	
RE-SYNC COUNT		MULTISYNC	

Location: Bloomfield Boulevard at Civic Center Drive

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NOT USED

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN																
USE SPLIT PATTERN 1																
TS2 PATTERN / OFFSET																
CYCLE										STD (COS)						
OFFSET VAL																
ACTUATED COORD										TIMING PLAN						
ACT WALK REST0										SEQUENCE						
PHASE RESRVCE 0										ACTION PLAN						
SPLIT PREFERENCE PHASES																
PHASE[s]			01	02	03	04	05	06	07	08						
SPT																
PREF 1																
PREF 2																
SPLT EXT																
VEH PERM										DISP						
RING DISP										(RING 2-4)						
SPLIT PREFERENCE PHASES																
PHASE			09	10	11	12	13	14	15	16						
SPT																
PREF 1																
PREF 2																
					1	2										
SPLIT DEMAND PTRN										XART PTRN						
PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
COORD																
VE RCALL																
PD RCALL																
MX RCALL																
OMIT																
SF OUT										(1-8)						

Location: Bloomfield Boulevard at Civic Center Drive

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NOT USED

3-2 COORDINATOR PATTERN, Continued

COORDINATOR PATTERN																
USE SPLIT PATTERN 1																
TS2 PATTERN / OFFSET																
CYCLE										STD (COS)						
OFFSET VAL																
ACTUATED COORD										TIMING PLAN						
ACT WALK REST0										SEQUENCE						
PHASE RESRVCE 0										ACTION PLAN						
SPLIT PREFERENCE PHASES																
PHASE[s]			01	02	03	04	05	06	07	08						
SPT																
PREF 1																
PREF 2																
SPLT EXT																
VEH PERM										DISP						
RING DISP										(RING 2-4)						
SPLIT PREFERENCE PHASES																
PHASE			09	10	11	12	13	14	15	16						
SPT																
PREF 1																
PREF 2																
					1	2										
SPLIT DEMAND PTRN										XART PTRN						
PHASE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
COORD																
VE RCALL																
PD RCALL																
MX RCALL																
OMIT																
SF OUT										(1-8)						

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER																
PHASES	1		2		3		4		5		6		7		8	
SPLIT																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORD																
VE RCALL																
PD RCALL																
MX RCALL																
OMIT																

SPLIT PATTERN NUMBER																
PHASES	1		2		3		4		5		6		7		8	
SPLIT																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORD																
VE RCALL																
PD RCALL																
MX RCALL																
OMIT																

SPLIT PATTERN NUMBER																
PHASES	1		2		3		4		5		6		7		8	
SPLIT																
PHASE	9		10		11		12		13		14		15		16	
SPLIT VALUE																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORD																
VE RCALL																
PD RCALL																
MX RCALL																
OMIT																

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

3-3 SPLIT PATTERN - Continued

SPLIT PATTERN NUMBER																								
PHASES	1		2		3		4		5		6		7		8									
SPLIT																								
PHASE	9			10			11			12			13			14			15			16		
SPLIT VALUE																								
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16								
COORD																								
VE RCALL																								
PD RCALL																								
MX RCALL																								
OMIT																								

SPLIT PATTERN NUMBER																								
PHASES	1		2		3		4		5		6		7		8									
SPLIT																								
PHASE	9			10			11			12			13			14			15			16		
SPLIT VALUE																								
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16								
COORD																								
VE RCALL																								
PD RCALL																								
MX RCALL																								
OMIT																								

SPLIT PATTERN NUMBER																								
PHASES	1		2		3		4		5		6		7		8									
SPLIT																								
PHASE	9			10			11			12			13			14			15			16		
SPLIT VALUE																								
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16								
COORD																								
VE RCALL																								
PD RCALL																								
MX RCALL																								
OMIT																								

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

PHASE	1	2	3	4	5	6	7	8
MIN GRN								
PHASE	9	10	11	12	13	14	15	16
MIN GRN								

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

3-5 SPLIT DEMAND

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DEMAND 1																
DEMAND 2																
DEMAND			1	2												
DETECTOR																
CALL TIME (SEC)																
CYCLE COUNT																

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

PREEMPTOR SUBMENU

NOT USED

4-1 PREEMPTOR

PREEMPTOR NUMBER						1										
VEH/PED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TRACKCLR V																
TRACKCLR O																
ENA TRL																
DWEL VEH																
DWEL PED																
DWEL OLP																
CYC VEH																
CYC PED																
CYC OLP																
EXIT PH																
EXIT CAL																
SP FUNC																
ENABLE						PREEMPTION OVERRIDE					INTERLOCK ENABLE					
NON-LOCK INPUT						DELAY TIME (SECONDS)					INHIBIT TIME (SECONDS)					
AUTOMATIC FLASH HAS PRIORITY						DURATION TIME (SECONDS)					RED CLEAR GOES GREEN					
TERMINATE OVERLAPS ASAP						PED CLEAR THROUGH YELLOW					TERM PH					
PED DARK						TRACK CLEARANCE RESERVICE					DWELL FL					
LINKED PREEMPTOR						FLASH EXIT COLOR					PREEMPTION TO COORDINATION					
EXIT TIMING PLAN						RESERVICE TIME										
FREE DURING PREEMPTION							RING 1		RING 2		RING 3		RING 4			
TIMING				WALK		PED CLEAR		GREEN		YELLOW		RED				
ENTRANCE																
				MIN GREEN		EXT GREEN		MAX GREEN		YELLOW		RED				
TRACK CLEAR																
				MIN DWELL		PMT EXT		MAX TIME		YELLOW		RED				
DWELL/CYCLE - EXIT																
PREEMPTOR ACTIVE OUT						PREEMPTOR ACTIVE OUT IN DWELL										
OTHER PRIORITY PREEMPTOR OUT						NON-PRIORITY PREEMPTOR OUT										

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

4-1 PREEMPTOR, Continued

PREEMPTOR NUMBER																	
VEH/PED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACKCLR V																	
TRACKCLR O																	
ENA TRL																	
DWEL VEH																	
DWEL PED																	
DWEL OLP																	
CYC VEH																	
CYC PED																	
CYC OLP																	
EXIT PH																	
EXIT CAL																	
SP FUNC																	
ENABLE				PREEMPTION OVERRIDE				INTERLOCK ENABLE									
NON-LOCK INPUT				DELAY TIME (SECONDS)				INHIBIT TIME (SECONDS)									
AUTOMATIC FLASH HAS PRIORITY				DURATION TIME (SECONDS)				RED CLEAR GOES GREEN									
TERMINATE OVERLAPS ASAP				PED CLEAR THROUGH YELLOW				TERM PH									
PED DARK				TRACK CLEARANCE RESERVICE				DWELL FL									
LINKED PREEMPTOR				FLASH EXIT COLOR				PREEMPTION TO COORDINATION									
EXIT TIMING PLAN				RESERVICE TIME													
FREE DURING PREEMPTION							RING 1		RING 2		RING 3		RING 4				
TIMING			WALK		PED CLEAR		GREEN			YELLOW			RED				
ENTRANCE																	
			MIN GREEN		EXT GREEN		MAX GREEN			YELLOW			RED				
TRACK CLEAR																	
			MIN DWELL		PMT EXT		MAX TIME			YELLOW			RED				
DWELL/CYCLE - EXIT																	
PREEMPTOR ACTIVE OUT								PREEMPTOR ACTIVE OUT IN DWELL									
OTHER PRIORITY PREEMPTOR OUT								NON-PRIORITY PREEMPTOR OUT									

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-3 TSP/SCP PLAN (OPTIONAL)

TSP/SCP PLAN	1	2	3	4	5	6
TSP/SCP ENA						
SIGNAL TYPE						
DET LOCK						
DELAY TIME						
MAX PRESENCE						
PMT ENA RESERVICE						
NO DELAY IN TSP						
ACT SF INHIBIT						
RESERVICE CYCLS						
BUS HEADING						
TSP OR SCP						TSP FREE DEFAULT PTN
HEADWAY ALLOWANCE						

TSP/SCP PHASE																
VEH/PED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TSP/SCP1																
TSP/SCP2																
TSP/SCP3																
TSP/SCP4																
TSP/SCP5																
TSP/SCP6																

4-4 TSP/SCP SPLIT PATTERN (OPTIONAL)

TSP/SCP SPLIT PATTERN	O SPL DM							
IN EFFECT TIMING PLAN								
PHASE	1	2	3	4	5	6	7	8
MAX RDTN								
MIN GRN								
MAX EXTN								
PHASE	9	10	11	12	13	14	15	16
MAX RDTN								
MIN GRN								
MAX EXTN								

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

TIME BASE SUBMENU

NOT USED

5-1 CLOCK/CALENDAR DATA

DATE SET:		TIME SET:	
MANUAL ACTION PLAN			
SYNC REFERENCE TIME		SYNC REFERENCE	
STANDARD TIME FROM GMT		DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET			

5-2 ACTION PLAN

ACTION PLAN EVENT																	
PATTERN								SYSTEM OVERRIDE									
TIMING PLAN								SEQUENCE									
VEHICLE DETECTOR PLAN								DETECTOR LOG									
FLASH								RED REST									
VEHICLE DET DIAGNOSTIC PLAN								PED DET DIAGNOSTIC PLAN									
DIMMING ENABLE																	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PED RECALL																	
WALK 2																	
VEH EXT 2																	
VEH RECALL																	
MAX RECALL																	
MAX 2																	
MAX 3																	
CS INHIBIT																	
PHASE OMIT																	
SPEC FUNCTION									(1-8)								
AUX FUNCTION				(1-3)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
LP 01-15																	
LP 16-30																	
LP 31-45																	
LP 46-60																	
LP 61-75																	
LP 76-90																	
LP 91-100																	

NOT USED

5-2 ACTION PLAN - Continued

ACTION PLAN EVENT																	
PATTERN																SYSTEM OVERRIDE	
TIMING PLAN																SEQUENCE	
VEHICLE DETECTOR PLAN																DETECTOR LOG	
FLASH																RED REST	
VEHICLE DET DIAGNOSTIC PLAN																PED DET DIAGNOSTIC PLAN	
DIMMING ENABLE																	
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED																	
WALK 2																	
VEH EXT 2																	
VEH																	
MAX																	
MAX 2																	
MAX 3																	
CS																	
PHASE																	
SPEC										(1-							
AUX				(1-													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 01-15																	
LP 16-30																	
LP 31-45																	
LP 46-60																	
LP 61-75																	
LP 76-90																	
LP 91-100																	

NOT USED

5-2 ACTION PLAN - Continued

ACTION PLAN EVENT																	
PATTERN																SYSTEM OVERRIDE	
TIMING PLAN																SEQUENCE	
VEHICLE DETECTOR PLAN																DETECTOR LOG	
FLASH																RED REST	
VEHICLE DET DIAGNOSTIC PLAN																PED DET DIAGNOSTIC PLAN	
DIMMING ENABLE																	
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PED																	
WALK 2																	
VEH EXT 2																	
VEH																	
MAX																	
MAX 2																	
MAX 3																	
CS																	
PHASE																	
SPEC									(1-								
AUX				(1-													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 01-15																	
LP 16-30																	
LP 31-45																	
LP 46-60																	
LP 61-75																	
LP 76-90																	
LP 91-100																	

NOT USED

5-3 DAY PLAN

DAY PLAN #	EVENT #	ACTION PLAN #	START TIME
	1		:
	2		:
	3		:
	4		:
	5		:
	6		:
	7		:
	8		:
	9		:
	10		:
	11		:
	12		:
	13		:
	14		:
	15		:
	16		:
	17		:
	18		:
	19		:
	20		:
	21		:
	22		:
	23		:
	24		:
	25		:
	26		:
	27		:
	28		:
	29		:
	30		:
	31		:
	32		:
	33		:
	34		:
	35		:
	36		:
	37		:
	38		:
	39		:
	40		:
	41		:
	42		:
	43		:
	44		:
	45		:
	46		:
	47		:
	48		:
	49		:
	50		:

DAY PLAN #	EVENT #	ACTION PLAN #	START TIME
	1		:
	2		:
	3		:
	4		:
	5		:
	6		:
	7		:
	8		:
	9		:
	10		:
	11		:
	12		:
	13		:
	14		:
	15		:
	16		:
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	35		:
	36		:
	37		:
	38		:
	39		:
	40		:
	41		:
	42		:
	43		:
	44		:
	45		:
	46		:
	47		:
	48		:
	49		:
	50		:

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

5-4 SCHEDULE

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

5-4 SCHEDULE - Continued

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

NOT USED

5-5 EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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29					
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31					
32					
33					
34					
35					
36					

DETECTOR SUBMENU

6-1. VEH DET ASSIGNMENT

VEHICLE DETECTOR PLAN NUMBER 1																	
DET	PH	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01	1	X															
02	2		X														
03																	
04	4				X												
05	5					X											
06	6						X										
07																	
08	8								X								
09																	
10	2		X														
11																	
12	4				X												
13	5					X											
14	6						X										
15																	
16	8								x								
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
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60																	
61																	
62																	
63																	
64																	

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

6-1. VEH DET ASSIGNMENT - Continued

VEHICLE DETECTOR PLAN NUMBER																	
DET	PH	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01																	
02																	
03																	
04																	
05																	
06																	
07																	
08																	
09																	
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62																	
63																	
64																	

6-2 VEHICLE DETECTOR SETUP

DETECTOR NUMBER	1	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
1	1	X
EXTEND TIME	0.0	DELAY TIME 0.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

DETECTOR NUMBER	2	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
2	2	X
EXTEND TIME	0.0	DELAY TIME 0.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

DETECTOR NUMBER	4	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
4	4	X
EXTEND TIME	0.0	DELAY TIME 0.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

DETECTOR NUMBER	5	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
5	5	X
EXTEND TIME	0.0	DELAY TIME 0.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

DETECTOR NUMBER	6	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
6	6	X
EXTEND TIME	0.0	DELAY TIME 0.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

DETECTOR NUMBER	8	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
8	8	X
EXTEND TIME	0.0	DELAY TIME 0.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

DETECTOR NUMBER	10	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
10	2	X
EXTEND TIME	1.5	DELAY TIME 0.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

DETECTOR NUMBER	12	
ECPI TYPE	1	TS2 DETECTOR
VEH DET PLAN #	1	ECPI LOG NO
DET	PH	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
12	4	X
EXTEND TIME	0.0	DELAY TIME 8.0
CALL OPTION	YES	PASSAGE OPTION YES
ADDED OPTION	NO	X SWITCH PHASE 0
QUEUE OPTION	NO	QUEUE LIMIT 0
NTCIP OCCUPANCY	NO	NTCIP VOLUME NO
YELLOW LOCK	NO	RED LOCK NO

6-2 VEHICLE DETECTOR SETUP - Continued

DETECTOR NUMBER		13															
ECPI TYPE		1	TS2 DETECTOR														
VEH DET PLAN #		1	ECPI LOG														NO
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
13	5					X											
EXTEND TIME		0.0		DELAY TIME		0.0											
CALL OPTION		YES		PASSAGE OPTION		YES											
ADDED OPTION		NO		X SWITCH PHASE		0											
QUEUE OPTION		NO		QUEUE LIMIT		0											
NTCIP OCCUPANCY		NO		NTCIP VOLUME		NO											
YELLOW LOCK		NO		RED LOCK		NO											

DETECTOR NUMBER		14															
ECPI TYPE		1	TS2 DETECTOR														
VEH DET PLAN #		1	ECPI LOG														NO
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
14	2		X														
EXTEND TIME		1.5		DELAY TIME		0.0											
CALL OPTION		YES		PASSAGE OPTION		YES											
ADDED OPTION		NO		X SWITCH PHASE		0											
QUEUE OPTION		NO		QUEUE LIMIT		0											
NTCIP OCCUPANCY		NO		NTCIP VOLUME		NO											
YELLOW LOCK		NO		RED LOCK		NO											

DETECTOR NUMBER		16															
ECPI TYPE		1	TS2 DETECTOR														
VEH DET PLAN #		1	ECPI LOG														NO
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16	8								X								
EXTEND TIME		0.0		DELAY TIME		8.0											
CALL OPTION		YES		PASSAGE OPTION		YES											
ADDED OPTION		NO		X SWITCH PHASE		0											
QUEUE OPTION		NO		QUEUE LIMIT		0											
NTCIP OCCUPANCY		NO		NTCIP VOLUME		NO											
YELLOW LOCK		NO		RED LOCK		NO											

DETECTOR NUMBER																	
ECPI TYPE			TS2 DETECTOR														
VEH DET PLAN #			ECPI LOG														
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER																	
ECPI TYPE			TS2 DETECTOR														
VEH DET PLAN #			ECPI LOG														
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER																	
ECPI TYPE			TS2 DETECTOR														
VEH DET PLAN #			ECPI LOG														
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER																	
ECPI TYPE			TS2 DETECTOR														
VEH DET PLAN #			ECPI LOG														
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

DETECTOR NUMBER																	
ECPI TYPE			TS2 DETECTOR														
VEH DET PLAN #			ECPI LOG														
DET	PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
EXTEND TIME				DELAY TIME													
CALL OPTION				PASSAGE OPTION													
ADDED OPTION				X SWITCH PHASE													
QUEUE OPTION				QUEUE LIMIT													
NTCIP OCCUPANCY				NTCIP VOLUME													
YELLOW LOCK				RED LOCK													

**6-3 PED DETECTOR PHASE ASSIGNMENT
(NTCIP MODE)**

DETECTOR INPUT TO PED PHASE ASSIGNMENT								
PHASE	01	02	03	04	05	06	07	08
DETECTOR		2		4		6		8
PHASE	09	10	11	12	13	14	15	16
DETECTOR								

**6-3 PED DETECTOR INPUT ASSIGNMENT
(ECONOLITEMODE)**

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2	X															
3																
4			X													
5																
6						X										
7																
8								X								
9																
10																
11																
12																
13																
14																
15																
16																

6-4 LOG – SPEED DETECTOR SET UP

NTCIP LOG.	ECPI LOG.			LENGTH UNIT				
SPEED DET	1	2	3	4	5	6	7	8
LOCAL DET								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DET	9	10	11	12	13	14	15	16
LOCAL DET								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-5 VEH DET DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER				1	FAILED	
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY
01	0	0	0	1	0	0
02	0	0	0	1	0	0
03						
04	0	0	0	1	0	0
05	0	0	0	1	0	0
06	0	0	0	1	0	0
07						
08	0	0	0	1	0	0
09						
10	0	0	0	1	0	0
11						
12	0	0	0	1	0	0
13	0	0	0	1	0	0
14	0	0	0	1	0	0
15						
16	0	0	0	1	0	0
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
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55						
56						
57						
58						
59						
60						
61						
62						
63						
64						

VEHICLE DIAGNOSTIC PLAN NUMBER				2	FAILED	
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
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59						
60						
61						
62						
63						
64						

Location: Bloomfield Boulevard at Civic Center Drive

Date: 11/10/13

6-5 VEH DET DIAGNOSTICS – Continued

VEHICLE DIAGNOSTIC PLAN NUMBER				3	FAILED	
DET	COUNTS	ACT	PRES	X's	TIME	CL DELAY
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
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21						
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54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						

6-6 PED DETECTOR DIAGNOSTICS

PED DETECTOR DIAG PLAN 1					PED DETECTOR DIAG PLAN 2				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2	0	0	0	1	2				
3					3				
4	0	0	0	1	4				
5					5				
6	0	0	0	1	6				
7					7				
8	0	0	0	1	8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

PED DETECTOR DIAG PLAN 3					PED DETECTOR DIAG PLAN 4				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				



3 - - Econolite Type - Cobalt

Configuration Controller Sequence

Phase Ring Sequence and Assignment (MM) 1-1-1

Hardware Alternate Sequence Enable: No

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B	B	B	B	B											
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 6																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 7																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 8																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 9																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 10																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 11																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 12																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.

Sequence 13

Ring 1	| 1	2	| 3	4	| 9	10	| 13	14	| .	.	.	.	.	.	.	.
Ring 2	| 6	5	| 8	7	| 12	11	| 16	15	| .	.	.	.	.	.	.	.

Sequence 14

Ring 1	| 2	1	| 3	4	| 10	9	| 13	14	| .	.	.	.	.	.	.	.
Ring 2	| 6	5	| 8	7	| 12	11	| 16	15	| .	.	.	.	.	.	.	.

Sequence 15

Ring 1	| 1	2	| 4	3	| 9	10	| 14	13	| .	.	.	.	.	.	.	.
Ring 2	| 6	5	| 8	7	| 12	11	| 16	15	| .	.	.	.	.	.	.	.

Sequence 16

Ring 1	| 2	1	| 4	3	| 10	9	| 14	13	| .	.	.	.	.	.	.	.
Ring 2	| 6	5	| 8	7	| 12	11	| 16	15	| .	.	.	.	.	.	.	.

Phases In Use/Exclusive Ped (MM) 1-2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phases In Use	X	X	X	X	X	X	X	X								
Exclusive Ped																

Phase Compatibility (MM) 1-1-2

Phase	
n/a	Barrier Mode

Phase and Overlap Descriptions

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Approach	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Movement																
Associated PED																
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Approach	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Movement																

Administration (MM) 1-7-1

Enable Controller/Cabinet Interlock CRC No
 CRC (16 bit) 7E92
 Enable Automatic Backup to Datakey No

Backup Prevent (MM) 1-1-3

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Timing	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phases	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Simultaneous Gap (MM) 1-1-4

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	2	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phase	6	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Must	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Gap	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
With	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phase	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Load Switch Assignments (MM) 1-3

	Phase / Overlap	Type	Dimming				Power Up	Auto		Flash Together
			Red	Yellow	Green	Dark		Red	Yellow	
1	1	V				-	Auto	X		
2	2	V				-	Auto	X		X
3	3	V				-	Auto	X		
4	4	V				-	Auto	X		X
5	5	V				+	Auto	X		
6	6	V				+	Auto	X		X
7	7	V				+	Auto	X		
8	8	V				+	Auto	X		X
9	2	P				-	Auto			

10	4	P				-	Auto			
11	6	P				+	Auto			
12	0	.				+	Auto			
13	0	.				-	Auto	X		
14	0	.				+	Auto	X		X
15	0	.				-	Auto	X		
16	0	.				+	Auto	X		X



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack	X	X	X					

Enable TS2/MMU Type Cabinet: Yes
 Enable MMU Extended Status: Yes
 Enable SDLC Stop Time: No
 Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	Channel 2

Color Check Enable (MM) 1-4-3

Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green	X	X	X	X	X	X	X	X	X	X	X					
Yellow	X	X	X	X	X	X	X	X								
Red	X	X	X	X	X	X	X	X	X	X	X					

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Configuration Communications 1 (SDLC)**Ethernet Port Configuration (MM) 1-5-1**

DHCP Enable: No
 Controller IP: 10.70.10.51
 Subnet Mask: 255.255.255.0
 Default Gateway IP: 10.70.10.1
 Server IP: 10.70.10.1

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec): 0
 NTCIP UDP Port: 501
 Ethernet Priority: 1
 Port 2 Priority (Port C50S for 2070): 4
 Port 3A Priority (Port C21S for 2070): 2
 Port 3B Priority (Port C22S for 2070): 3

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	TERMINAL	NTCIP	ECPIP
Enable	No	No	No
Data Rate (BPS)	9600	19.2K	1200
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	0	0	0
Telemetry Response Delay	0.0	0.0	0.9
Duplex - Half or Full	Half	Full	Full
Flow Control	Yes	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	14.0
RTS Turn Off Delay	n/a	n/a	2.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address: 0
 Expanded System Detector Address: 0

**System Detector
Assignment**

System Detector	Local Detector
----------------------------	---------------------------

Wireless Configuration (MM) 1-5-7

Wireless Channel Number: 6

Wireless Access Code: 327723274



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X															

Display Options (MM) 1-7-2

Key Click Enable:	Yes
Switch to Graphics Mode:	No
LED Mode:	Auto
Display Mode:	Basic
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Rosecrans & Bloomfield
 Sign On Message Line 2: City of Norwalk

Software Modules (MM) 8-7

Application Version: 12.68.10
 OS (Boot) Version:



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Logic Processor Page 1
Logic Statement Control (MM) 1-8-1

Logic #	Statement Control
---------	-------------------

City of Norwalk



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Min Green	8	15	8	12	8	15	8	12	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	10	0	7	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	27	0	28	0	27	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.5	5.0	2.5	5.0	2.5	5.0	2.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	25	50	20	50	20	50	25	50	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	15	15	15	15	15	15	15	15	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	15	15	15	15	15	15	15	15	0	0	0	0	0	0	0	0
Min Gap	3.7	3.0	3.2	3.0	1.7	3.0	2.8	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

City of Norwalk



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Controller Overlaps

Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green
---------	------	-----------	--------	-----	------------

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green
---------	-------	----------	---------	-------------	-------------	----------	--------------	--------------	-------------

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable
---------	-----------------------------	----------------------------------	-----------------------	--------------------------	--------------------	--------------------------	----------------------------	----------------------

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	4.1	1.0	5
B02	5	0	7	4.4	1.0	5
C03	5	0	7	4.1	1.0	5
D04	5	0	7	4.4	1.0	5
E05	5	0	7	4.1	1.0	5
F06	5	0	7	4.4	1.0	5
G07	5	0	7	4.1	1.0	5
H08	5	0	7	4.4	1.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps
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City of Norwalk



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	.
3	.
4	Y
5	.
6	.
7	.
8	Y
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: Yes
 Flash Time: 6
 All Red: 6
 Power Start Seq: 1
 MUTCD Enabled: No
 Y->G: n/a

Automatic Flash

Entry
4
8

Exit
4
8

Overlap Exit	
A	
B	
C	
D	

Flash Thru Mon: No
Exit Flash: Y
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I																
Non-Act II																
Dual Entry	X	X	X	X												
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector	X	X	X	X												X
Vehicle Recall	X			X												
Ped Recall																
Max Recall																
Soft Recall																
No Rest																
AI Calc																

City of Norwalk



MOVING TRAFFIC FORWARD

3 -- Econolite Type - Cobalt

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases																
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	No	Duration	0	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	0	4.0	1.0

Preemption Active On Out
 Other - Priority Preempt Off
 Inhibit Extension Time 0.0
 Veh Priority Return Off
 Conditional Delay Off
 Preempt Act Dwell No
 Non-Priority Pmt Off
 Ped Priority Return Off
 Queue Delay Off

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases																
Exit Calls																
Special Function																

Enable Yes Preempt Override Yes Interlock Enable No
 Det Lock Yes Delay 0 Inhibit 0
 Override Flash No Duration 0 CLR > GRN No
 Term Ovp Asap No PC Through Yel No Terminate Phase No
 Ped Dark No Track Clear Rsrv No Dwell Flash Off
 Linked Pmt 0 FL Exit Color Grm Exit Options Off
 Exit Timing Plan 0 Reservice 0 Fault Type Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red

Dwell / Cycle-Exit	0	0.0	0	4.0	1.0
--------------------	---	-----	---	-----	-----

Preemption Active On Preempt Act No
 Out Dwell
 Other - Priority Off Non-Priority Pmt Off
 Preempt
 Inhibit Extension 0.0 Ped Priority Off
 Time Return
 Veh Priority Off Queue Delay Off
 Return
 Conditional Delay Off

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases																
Exit Calls																
Special Function																

Enable Yes Preempt Override Yes Interlock Enable No
 Det Lock Yes Delay 0 Inhibit 0
 Override Flash No Duration 0 CLR > GRN No
 Term Ovlp No PC Through Yel No Terminate Phase No
 Ped Dark No Track Clear Rsrv No Dwell Flash Off
 Linked Pmt 0 FL Exit Color Grn Exit Options Off
 Exit Timing Plan 0 Reservice 0 Fault Type Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
				Yellow	Red

	Min Dwell	Pmt Ext	Max Time		
Dwell / Cycle-Exit	0	0.0	0	4.0	1.0

Preemption Active On
 Out No
 Other - Priority Off
 Preempt Non-Priority Pmt Off
 Inhibit Extension 0.0
 Time Ped Priority Return Off
 Veh Priority Off
 Return Queue Delay Off
 Conditional Delay Off

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases																
Exit Calls																
Special Function																

Enable Yes Preempt Override Yes Interlock Enable No
 Det Lock Yes Delay 0 Inhibit 0
 Override Flash No Duration 0 CLR > GRN No
 Term Ovp No PC Through No Terminate No
 Asap Yel Phase
 Ped Dark No Track Clear No Dwell Flash Off
 Rsrv
 Linked Pmt 0 FL Exit Color Grn Exit Options Off
 Exit Timing 0 Reservice 0 Fault Type Hard
 Plan

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red

Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	0	4.0	1.0

Preemption Active Out On Preempt Act Dwell No
 Other - Priority Preempt Off Non-Priority Pmt Off
 Inhibit Extension Time 0.0 Ped Priority Return Off
 Veh Priority Return Off Queue Delay Off
 Conditional Delay Off

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



MOVING TRAFFIC FORWARD

3 - - Econolite Type - Cobalt

Detectors**Detectors - Pg 1****Veh Det Phase Assignment (MM) 6-1****Vehicle Detector Plan Number - 1**

Veh Detector	Assigned Phase	Called Phase	Type
1	2		S
2	2		S
7	2		S
9	4		S
10	4		S
13	1		S
14	3		S
15	4		S
17	6		S
18	6		S
23	6		S
24	6		S
25	8		S
26	8		S
29	5		S
30	7		S
31	8		S
33	1		S
34	2		S
35	3		S
36	4		S
37	5		S
38	6		S
39	7		S
40	8		S
41	1		S
42	2		S
44	4		S
46	6		S
47	7		S
48	8		S

Vehicle Detector Plan Number - 2

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S

4	4		S
5	5		S
6	6		S
7	7		S
8	8		S
9	9		S
10	10		S
11	11		S
12	12		S
13	13		S
14	14		S
15	15		S
16	16		S

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	

35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	N-NTCIP	Yes	
50	N-NTCIP	Yes	
51	N-NTCIP	Yes	
52	N-NTCIP	Yes	
53	N-NTCIP	Yes	
54	N-NTCIP	Yes	
55	N-NTCIP	Yes	
56	N-NTCIP	Yes	
57	N-NTCIP	Yes	
58	N-NTCIP	Yes	
59	N-NTCIP	Yes	
60	N-NTCIP	Yes	
61	N-NTCIP	Yes	
62	N-NTCIP	Yes	
63	N-NTCIP	Yes	
64	N-NTCIP	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

15	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	2	No	Yes	12.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	4	No	Yes	12.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	6	No	Yes	12.0	Passage	0.0	0	No	0	None	No	No	No
47	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	8	No	Yes	12.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

Called Phase	Detector
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

PROGRAM REFERENCE CARD

TERSECTION Civic Center & Ave Manuel Salinas

CONTROLLER NUMBER 1497 ENTERED BY: Pat Duggan DATE 4-22-2021

NOT VER. MAIN VER. HELP VER. CONFIG

1. CONFIGURATION SUBMENU

CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
VG 1	1	2	3	4								
VG 2	5	6	7	8								

PHASE NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE	X	X	X	X	X	X						
EXCLUSIVE PED												

PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU) CHANNEL	SIGNAL DRIVER GROUP		LOAD SWITCH (MMU) CHANNEL	SIGNAL DRIVER	
	PH/OLAP	PED		PH/OLAP	PED
1	1		9		X
2	2		10		X
3	3		11		X
4	4		12		X
5	5		13		
6	6		14		
7	7		15		
8	8		16		

SDLC OPTIONS/ENABLES

	BIU NUMBER							
	1	2	3	4	5	6	7	8
TERM & FACIL	X	X						
DETECTOR RACK	X							
TYPE 2 RUNS AS TYPE 1								
MMU DISABLE								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
PEER TO PEER ENABLE								
PEER TO PEER ADDRESS								
	2)		3)		4)		5)	
	7)		8)		9)		10)	

PORT2 CONFIGURATION

PORT 2 PROTOCOL	
PORT 2 ENABLE	
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
DATA RATE (BPS)	
DATA, PARITY, STOP	

6. PORT3 CONFIGURATION

PORT 3 PROTOCOL	
PORT 3 ENABLE	
TELEMETRY ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY	
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
ADDITIONAL SCREEN(S)	
DUPLEX - HALF OR FULL	
MODEM DATA RATE (BPS)	
DATA, PARITY, STOP	

7. ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TF)	X
NON-CRITICAL RFE'S (DET/TEST)	X
DETECTOR ERRORS	X
COORDINATION ERRORS	
MMU FLASH FAULTS	X
LOCAL FLASH FAULTS	X
PREEMPT	
POWER ON/OFF	X
LOW BATTERY	X
SPARE	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

8. OPTIONS

SUPERVISOR ACCESS CODE	
DATA CHANGE ACCESS CODE	
KEY CLICK ENABLE	
BACKLIGHT ENABLE	

6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
POWER START		X				X						
EXTERNAL START		X				X						
ENTRY REM FLASH		X				X						
EXT REM FLASH		X				X						
REM FLASH YEL												
FL TOGETHER PHS		X		X		X		X				
FL TOGETHER OVLPS	A:	X				X		X				
POWER START	YELLOW											
EXTERNAL START	Yellow											
POWER START ALL RED TIME	4' sec											
POWER START FLASH TIME	10' sec											
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED												
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												

7. NO SERVE PHASES

PHASE	CANNOT SERVE WITH:										
	12	11	10	9	8	7	6	5	4	3	2
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
GUAR PASSAGE												
NONACTUATED I		X				X						
NONACTUATED II				X				X				
DUAL ENTRY		X				X						
COND SERVICE												
COND RESERVICE												
REST IN WALK		X				X						
FLASHING WALK												
FIVE SECTION LEFT TURN HEADS												
5-2						7-4					1-6	
3-8						11-10					9-12	
DUAL ENTRY	ON						RESERVED					
COND SERVICE ENABLE	ON						BACKUP PROTECTION GROUP 1					
COND SERVICE DET X SWITCHING							BACKUP PROTECTION GROUP 2					
PED CLR PROTECT							BACKUP PROTECTION GROUP 3					
SPEC PREEMPT OVL P FLASH							SIMULTANEOUS GAP GROUP 1					
LOCK DETECTORS IN RED ONLY							SIMULTANEOUS GAP GROUP 2					
RESERVED							SIMULTANEOUS GAP GROUP 3					

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

FORMAT			
ORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

STD FORMAT			
COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

I FORMAT			
ORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

PLAN FORMAT			
COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

P FORMAT			
ORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

TS2 FORMAT			
COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

I FORMAT			
ORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

STD FORMAT			
COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

I FORMAT			
ORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

PLAN FORMAT			
COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

P FORMAT			
ORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

TS2 FORMAT			
COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
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VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
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SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
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VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
		A	B	C	D	E	F					
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
		A	B	C	D	E	F					
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
		A	B	C	D	E	F					
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
		A	B	C	D	E	F					
ALT SEQUENCE												

5. NIC/TOD SUBMENU

3. TOD CLOCK/CALENDAR DATA

TIME SET:	
DATE SET:	
ANNUAL NIC PROGRAM STEP	
ANNUAL TOD PROGRAM STEP	
NC REFERENCE TIME	
NC REFERENCE	
WEEK 1 BEGINS ON 1ST SUNDAY	
STABLE DAYLIGHT SAVINGS	
STANDARD TIME BEGINS LAST SUNDAY	

3. TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRI	SAT
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

3. TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY								
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY								
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY								
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY								
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY								
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY								
WEEK OF YEAR				49	50	51	52	53
WEEKLY								

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PROG
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

8. DETECTOR DIAGNOSTIC INTERVAL

DETECTOR DIAGNOSTIC INTERVAL			
DIAGNOSTIC NUMBER	NO ACTIVITY	MAX PRESENCE	ERRATIC COUNTS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH							DIM ENABLE					
RED REST							ALT VEH EXTSN					
SPARE 5							DET LOG ENABLE					
SPARE 3							SPARE 4					
TYPE 0 DELAY EN							SPARE 2					
DET DIAG PLAN												
ALTERNATE SEQUENCE	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH							DIM ENABLE					
RED REST							ALT VEH EXTSN					
SPARE 5							DET LOG ENABLE					
SPARE 3							SPARE 4					
TYPE 0 DELAY EN							SPARE 2					
DET DIAG PLAN												
ALTERNATE SEQUENCE	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH							DIM ENABLE					
RED REST							ALT VEH EXTSN					
SPARE 5							DET LOG ENABLE					
SPARE 3							SPARE 4					
TYPE 0 DELAY EN							SPARE 2					
DET DIAG PLAN												
ALTERNATE SEQUENCE	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH							DIM ENABLE					
RED REST							ALT VEH EXTSN					
SPARE 5							DET LOG ENABLE					
SPARE 3							SPARE 4					
TYPE 0 DELAY EN							SPARE 2					
DET DIAG PLAN												
ALTERNATE SEQUENCE	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH							DIM ENABLE					
RED REST							ALT VEH EXTSN					
SPARE 5							DET LOG ENABLE					
SPARE 3							SPARE 4					
TYPE 0 DELAY EN							SPARE 2					
DET DIAG PLAN												
ALTERNATE SEQUENCE	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH							DIM ENABLE					
RED REST							ALT VEH EXTSN					
SPARE 5							DET LOG ENABLE					
SPARE 3							SPARE 4					
TYPE 0 DELAY EN							SPARE 2					
DET DIAG PLAN												
ALTERNATE SEQUENCE	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

6. DETECTORS

1. DETECTOR TYPE/TIMERS

DET	TYPE	LOCK	EXTEND	DELAY	NO RESET	LOG ENABLE
1	1					
2	0					
3	1			5		
4	1			5		
5	1		2.0			
6	1		2.0			
7	1		2.0			
8	1		2.0			
9	1					
10	5		3.0			
11	0					
12	0					
13	1			5		
14	1					
15	0					
16	5		3.0			
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

2. DETECTOR PHASE ASSIGNMENT

DETECTOR	PHASE ASSIGNMENT											
	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												

3. PED AND SYSTEM DETECTOR LOCAL ASSIGNMENT

LOCAL PED DET NUMBER	DETECTOR LOG INTERVAL						MINUTES					
	PHASE PED DETECTOR											
	1	2	3	4	5	6						
NUMBER	7	8	9	10	11	12						
	LOCAL SYSTEM DET NUMBER											
	1	2	3	4	5	6						
NUMBER	7	8	9	10	11	12						

ASCIZ

PROGRAM REFERENCE CARD

SECTION Firestone at Target Center

CONTROLLER NUMBER _____ ENTERED BY: _____ DATE 6-14-00

LOT _____ VER. _____ MAIN _____ VER. _____ HELP _____ VER. _____ CONFIG _____

1. CONFIGURATION SUBMENU

CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
LOG 1	1	2	3	4								
LOG 2	5	6	7	8								

PHASE NUMBER

PHASES IN USE	1	2	3	4	5	6	7	8	9	10	11	12
EXCLUSIVE PED	X	X		X	X	X		X				

PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU) CHANNEL	SIGNAL DRIVER GROUP		LOAD SWITCH (MMU) CHANNEL	SIGNAL DRIVER	
	PHI/LAP	PED		PHI/LAP	PED
1	1		9		
2	2		10		
3			11		
4	4		12		
5	5		13	2	X
6	6		14	4	X
7			15	6	X
8	8		16		

SDLC OPTIONS/ENABLES

	BIU NUMBER							
	1	2	3	4	5	6	7	8
FORM & FACIL								
DETECTOR RACK	X							
TYPE 2 RUNS AS TYPE 1								
MMU DISABLE								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
PEER TO PEER ENABLE								
PEER TO PEER ADDRESS								
	2)		3)		4)		5)	
	7)		8)		9)		10)	

PORT2 CONFIGURATION

PORT 2 PROTOCOL	<u>Termin</u>
PORT 2 ENABLE	<u>YES</u>
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	
AB3418 DROP-OUT TIME	<u>NO</u>
AB3418 TOD SF SELECT	
DATA RATE (BPS)	<u>9600</u>
DATA, PARITY, STOP	<u>7, E, 1</u>

6. PORT3 CONFIGURATION

PORT 3 PROTOCOL	<u>AB3418</u>
PORT 3 ENABLE	<u>YES</u>
TELEMETRY ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY	<u>6000</u>
AB3418 ADDRESS	<u>3</u>
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	<u>5</u>
AB3418 SINGLE FLAG ENABLE	<u>NO</u>
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
ADDITIONAL SCREEN(S)	
DUPLEX - HALF OR FULL	<u>FULL</u>
MODEM DATA RATE (BPS)	<u>1200</u>
DATA, PARITY, STOP	<u>8, N, 1</u>

7. ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TF)	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
SPARE	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

8. OPTIONS

SUPERVISOR ACCESS CODE	
DATA CHANGE ACCESS CODE	
KEY CLICK ENABLE	
BACKLIGHT ENABLE	

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

5. NIC/TOD SUBMENU

TOD CLOCK/CALENDAR DATA

E SET:	
E SET:	
QUARTAL NIC PROGRAM STEP	
QUARTAL TOD PROGRAM STEP	
NIC REFERENCE TIME	
NIC REFERENCE	
WEEK 1 BEGINS ON 1ST SUNDAY	
ABLE DAYLIGHT SAVINGS	
BEGINS LAST SUNDAY	

TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRI	SAT
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY								
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY								
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY								
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY								
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY								
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY								
WEEK OF YEAR				49	50	51	52	53
WEEKLY								

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PROG
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

D PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH			DIM ENABLE									
RED REST			ALT VEH EXTSN									
SPARE 5			DET LOG ENABLE									
SPARE 3			SPARE 4									
TYPE 0 DELAY EN			SPARE 2									
DET DIAG PLAN												
ALTERNATE SEQUENCE			A	B	C	D	E	F				
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH			DIM ENABLE									
RED REST			ALT VEH EXTSN									
SPARE 5			DET LOG ENABLE									
SPARE 3			SPARE 4									
TYPE 0 DELAY EN			SPARE 2									
DET DIAG PLAN												
ALTERNATE SEQUENCE			A	B	C	D	E	F				
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

D PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH			DIM ENABLE									
RED REST			ALT VEH EXTSN									
SPARE 5			DET LOG ENABLE									
SPARE 3			SPARE 4									
TYPE 0 DELAY EN			SPARE 2									
DET DIAG PLAN												
ALTERNATE SEQUENCE			A	B	C	D	E	F				
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH			DIM ENABLE									
RED REST			ALT VEH EXTSN									
SPARE 5			DET LOG ENABLE									
SPARE 3			SPARE 4									
TYPE 0 DELAY EN			SPARE 2									
DET DIAG PLAN												
ALTERNATE SEQUENCE			A	B	C	D	E	F				
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

D PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH			DIM ENABLE									
RED REST			ALT VEH EXTSN									
SPARE 5			DET LOG ENABLE									
SPARE 3			SPARE 4									
TYPE 0 DELAY EN			SPARE 2									
DET DIAG PLAN												
ALTERNATE SEQUENCE			A	B	C	D	E	F				
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH			DIM ENABLE									
RED REST			ALT VEH EXTSN									
SPARE 5			DET LOG ENABLE									
SPARE 3			SPARE 4									
TYPE 0 DELAY EN			SPARE 2									
DET DIAG PLAN												
ALTERNATE SEQUENCE			A	B	C	D	E	F				
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

6. DETECTORS

1. DETECTOR TYPE/TIMERS

DET	TYPE	LOCK	EXTEND	DELAY	NO RESET	LOG ENABLE
1	0					
2	0		1.5			
3	0					
4	0					
5	0					
6	1		1.5			
7	0					
8	0					
9	0					
10	0					
11	0					
12						
13						
14	0					
15						
16	0					
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

2. DETECTOR PHASE ASSIGNMENT

DETECTOR	PHASE ASSIGNMENT											
	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3		X										
4				X								
5				X								
6					X							
7					X							
8								X				
9	X											
10		X										
11		X										
12												
13												
14						X						
15						X						
16								X				
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												

3. PED AND SYSTEM DETECTOR LOCAL ASSIGNMENT

LOCAL PED DET NUMBER	DETECTOR LOG INTERVAL						MINUTES
	1	2	3	4	5	6	
NUMBER							
LOCAL DETECTOR NUMBER	LOCAL SYSTEM DET NUMBER						
	1	2	3	4	5	6	
NUMBER							

8. DETECTOR DIAGNOSTIC INTERVAL

DETECTOR DIAGNOSTIC INTERVAL			
DIAGNOSTIC NUMBER	NO ACTIVITY	MAX PRESENCE	ERRATIC COUNTS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13/HCH By: DFA
T.S. No.: 6033 Date Implemented: _____ By: _____

1. CONFIGURATION SUBMENU

1. CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
RING 1	1	2	3	4								
RING 2	5	6	7	8								
CG (CONCURRENT GROUPS)		X			X							

2. PHASES IN USE

	PHASE NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE	X	X	X	X	X	X	X	X				
EXCLUSIVE PED												

3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP		LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP	
CHANNEL	PHASE/OVLP	PED	CHANNEL	PHASE/OVLP	PED
1	1		9	2	X
2	2		10	4	X
3	3		11	6	X
4	4		12	8	X
5	5		13		
6	6		14		
7	7		15		
8	8		16		

4. SDLC OPTIONS/ENABLES

	BIU NUMBER								
	1	2	3	4	5	6	7	8	
TERM & FACIL									
DETECTOR RACK	X								
TYPE 2 RUNS AS TYPE 1									
MMU DISABLE									
DIAGNOSTIC ENABLE (TEST FIXTURE)									
PEER TO PEER ENABLE									
PEER TO PEER ADDRESS:									
1)	255	2)	255	3)	255	4)	255	5)	255
6)	255	7)	255	8)	255	9)	255	10)	255

8. UTILITIES SUBMENU

5. SIGN ON

SOFTWARE ASSY	VERSION
BOOT	32783 1.28
MAIN PROGRAM	35901 1.07
HELP	34547 1.16
CONFIGURATION	34526 N1000C

5. PORT 2 CONFIGURATION

PORT 2 PROTOCOL	TERML
PORT 2 ENABLE	NO
DATA RATE (BPS)	9600
DATA, PARITY, STOP	8,N,1
NTCIP ADDRESS	0
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	0
NTCIP SINGLE FLAG ENABLE	NO
NTCIP BACKUP TIME	0
PORT 2 DROP-OUT TIME	0
NTCIP RTS TIMING	NO
NTCIP RTS TO CTS DELAY	0
NTCIP RTS TURN-OFF DELAY	0
NTCIP EARLY RTS	NO

6. PORT 3 CONFIGURATION

PORT 3 PROTOCOL	NTCIP
PORT 3 ENABLE	YES
PORT 3 MILLISEC TIMING	NO
PORT 3 RTS TO CTS DELAY	0
PORT 3 RTS TURN-OFF DELAY	0
DUPLEX - HALF OR FULL	FULL
MODEM DATA RATE (BPS)	9600
DATA, PARITY, STOP	8,N,1
TELEMETRY ADDRESS	1
SYSTEM DETECTOR 9-16 ADDRESS	0
TELEMETRY RESPONSE DELAY	1
NTCIP ADDRESS	0
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	0
NTCIP SINGLE FLAG ENABLE	NO
NTCIP BACKUP TIME	0
NTCIP DROP-OUT TIME	50
NTCIP EARLY RTS	NO

REMARKS:

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

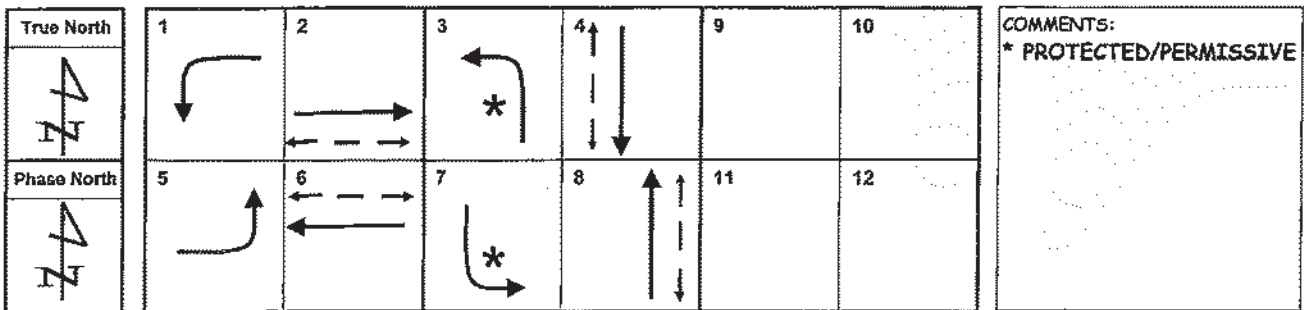
INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6033 Date Implemented: _____ By: _____

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GREEN	4	6	4	4	4	6	4	4				
BIKE GREEN	0	0	0	0	0	0	0	0				
CS MIN GREEN	0	0	0	0	0	0	0	0				
WALK	0	7	0	7	0	7	0	7				
PED CLEAR	0	11	0	25	0	13	0	23				
VEH EXT	1.5	4.5	3.0	3.0	1.5	4.5	3.0	3.0				
VEH EXT 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
MAX EXT	0	0	0	0	0	0	0	0				
MAX 1	20	50	20	30	20	50	20	30				
MAX 2	20	140	20	30	20	140	20	30				
MAX 3	0	0	0	0	0	0	0	0				
DET MAX	0	0	0	0	0	0	0	0				
YELLOW	3.0	4.5	3.0	3.5	3.0	4.5	3.0	3.5				
RED CLEAR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
RED REVERT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
ACT B4	0	0	0	0	0	0	0	0				
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
MAX INITIAL	0	0	0	0	0	0	0	0				
TIME B4 REDUCTION	0	15	0	0	0	15	0	0				
CARS WT	0	255	0	0	0	255	0	0				
TIME TO REDUCE	0	15	0	0	0	15	0	0				
MIN GAP	1.5	3.0	3.0	3.0	1.5	3.0	3.0	3.0				



ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13 / KCH By: DFA
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2. CONTROLLER SUBMENU (Continued)

6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
PHASE STARTUP		X				X						
ENTRY REM FLASH		X				X						
EXIT REM FLASH												
REM FLASH YELLOW												
FL TOGETHER PHS		X		X		X		X				
FL TOGETHER OVLPS	A			B				C				D
STARTUP INTERVAL RING 1	YELLOW											
STARTUP INTERVAL RING 2	YELLOW											
POWER START ALL RED TIME												
POWER START FLASH TIME												
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED	6.0 SEC											
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												

7. NO SERVE PHASE

PHASE	12	11	10	9	8	7	6	5	4	3	2
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WALK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WALK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
GUAR PASSAGE												
NON ACTUATED I												
NON ACTUATED II												
DUAL ENTRY				X				X				
COND SERVICE												
COND RESERVE												
REST IN WALK												
FLASHING WALK												
FIVE SECTION LEFT TURN HEADS (SPECIAL PROGRAM OPTION FOR STATE OF ILLINOIS)												
5-2												
3-8												
7-4												
1-6												
11-10												
9-12												
DUAL ENTRY	ON		RESERVED							OFF		
COND SERVICE ENABLE	OFF		BACKUP PROTECTION GROUP 1							OFF		
COND SERVICE DET X SWITCHING	OFF		BACKUP PROTECTION GROUP 2							ON		
AUTO PED CLEAR	OFF		BACKUP PROTECTION GROUP 3							OFF		
SPEC PREEMPT OVL P FLASH	OFF		SIMULTANEOUS GAP GROUP 1							ON		
LOCK DETECTORS IN RED ONLY	OFF		SIMULTANEOUS GAP GROUP 2							ON		
RESERVED	OFF		SIMULTANEOUS GAP GROUP 3							OFF		
Unit Backup Time												0
Unit Redrevert												2.0

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INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13/HCH By: DFA
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3. COORDINATOR SUBMENU

TIME OF DAY OPERATION SUMMARY					
PLAN 1	ALL OTHER TIMES	PLAN 4	WB PROGRESSION (AS NEEDED)	PLAN 7	
PLAN 2	0600-0900 M-F	PLAN 5	EB PROGRESSION (AS NEEDED)	PLAN 8	
PLAN 3	1500-1900 M-F	PLAN 6		PLAN 9	
FREE	2100-0600 M-F, 1900-0900 S-S				

1. COORDINATOR OPTIONS

SPLIT UNITS	SEC	ACTUATED COORD PHASE(S)	X
OFFSET UNITS	SEC	ACTUATED WALK/REST	
INTERCONNECT FORMAT	STD	INHIBIT MAX	
INTERCONNECT SOURCE	NIC	MAX 2 SELECT	X
RESYNC COUNT	255	MULTISYNC	
TRANSITION	SMOOTH	FLOAT FORCE OFF	
DWELL PERIOD	0s		
FREE ALTERNATE SEQUENCE	A	B	C
	D	E	F

2. COORD MANUAL AND SPLIT DEMAND

MANUAL ENABLE	OFF	MANUAL PATTERN	0
SPLIT DEMAND:			
	DEMAND 1		DEMAND 2
DEMAND CALL TIME	0s		0s
DEMAND CYCLE COUNT	0		0
DEMAND PHASE	1	2	3
	4	5	6
	7	8	9
	10	11	12
DEMAND 1 PHASES			
DEMAND 2 PHASES			

3. COORD AUTO PERM MIN GREEN

PHASE	AUTO PERM MIN GREEN	PHASE	AUTO PERM MIN GRN
1	7	7	7
2	7	8	7
3	7	9	
4	7	10	
5	7	11	
6	7	12	

ASC/2S - NTCIP
 PROGRAM REFERENCE CARD

TERSECTION: Imperial Hwy @ Avenida Manuel Salinas

Date Prepared: 2-19-13 Hch By: DPA

S. No.: 6033

Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

PATTERN DATA

(AM-PEAK)	COORD PATTERN	1	2	3	4	5	6	7	8	9	10	11	12
	CYCLE LENGTH	130	130	130	130	130	130	130	130	130	130	130	130
	OFFSET	115	115	115	115	115	115	115	115	115	115	115	115

(AM-PEAK)	COORD PATTERN	2	3	4	5	6	7	8	9	10	11	12
	CYCLE LENGTH	130	130	130	130	130	130	130	130	130	130	130
	OFFSET	115	115	115	115	115	115	115	115	115	115	115

SPLITS	PHASES											
	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	PHASE 9	PHASE 10	PHASE 11	PHASE 12
PHASE 1	20	43	15	38								
PHASE 5	20	43	15	38								
PHASE 9												
VEH PERMISSIVE	[1]	0	[2]									
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSION/RING	[1]	14	[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES	X	X				X	X					
VEHICLE RECALL	X	X				X	X					
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE	A	B	C	D	E	F						

SPLITS	PHASES											
	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	PHASE 9	PHASE 10	PHASE 11	PHASE 12
PHASE 1	20	43	15	38								
PHASE 5	20	43	15	38								
PHASE 9												
VEH PERMISSIVE	[1]	0	[2]									
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSION/RING	[1]	14	[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES	X	X				X	X					
VEHICLE RECALL	X	X				X	X					
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE	A	B	C	D	E	F						

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

TERSECTION: Imperial Hwy @ Avenida Manuel Salinas

Date Prepared: 2-19-13 ACH By: DFA

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Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

PATTERN DATA (Continued)
PROGRESSION (AS NEEDED)

COORD PATTERN	5				
CYCLE LENGTH	150				
OFFSET	101				

COORD PATTERN					
CYCLE LENGTH					
OFFSET					

SPLITS												
PHASE 1	20	PHASE 2	26	PHASE 3	15	PHASE 4	38					
PHASE 5	20	PHASE 6	26	PHASE 7	15	PHASE 8	38					
PHASE 9		PHASE 10		PHASE 11		PHASE 12						
VEH PERMISSIVE	[1]		0	[2]	0							
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSION/RING	[1]	51		[2]	51							
SPL DMD PATTERN	[1]			[2]								
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES		X				X						
VEHICLE RECALL		X				X						
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE	A	B	C	D	E	F						

SPLITS												
PHASE 1		PHASE 2		PHASE 3		PHASE 4						
PHASE 5		PHASE 6		PHASE 7		PHASE 8						
PHASE 9		PHASE 10		PHASE 11		PHASE 12						
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE	A	B	C	D	E	F						

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

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T.S. No.: 6033 Date Implemented: _____ By: _____

4. PREEMPTOR SUBMENU (Continued)

5. PRIORITY PREEMPTOR 5

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVL												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
SPARE												
TERM OVERLAP	A		B		C		D					
ACTIVE												
PRIORITY												
DET LOCK												
HOLD FLASH												
TERM OVL ASAP												
DON'T OVERRIDE FLASH												
FLASH ALL OUTPUTS												
YELLOW-RED GOES GREEN												
ENABLE MAX PREEMPT TIME												
MAX TIME												
MIN HOLD TIME												
MIN PED CLEAR												
EXIT MAX												
	GREEN		YELLOW		RED							
MINIMUM												
TRACK CLEAR												
HOLD												
LINKED PREEMPTOR												

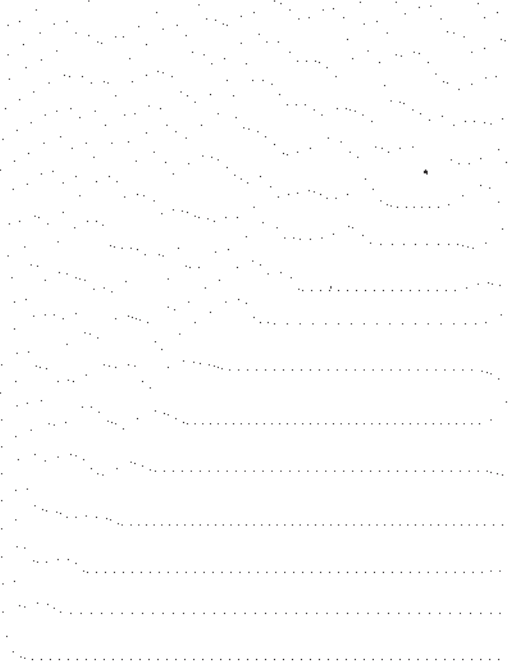
6. PRIORITY PREEMPTOR 6

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVL												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
SPARE												
TERM OVERLAP	A		B		C		D					
ACTIVE												
PRIORITY												
DET LOCK												
HOLD FLASH												
TERM OVL ASAP												
DON'T OVERRIDE FLASH												
FLASH ALL OUTPUTS												
YELLOW-RED GOES GREEN												
ENABLE MAX PREEMPT TIME												
MAX TIME												
MIN HOLD TIME												
MIN PED CLEAR												
EXIT MAX												
	GREEN		YELLOW		RED							
MINIMUM												
TRACK CLEAR												
HOLD												

7. BUS PREEMPTORS

	BUS PREEMPTOR											
	1	2	3	4								
PREEMPTOR ACTIVE												
DETECTOR LOCK												
MAXIMUM TIME												
RESERVICE TIME												
DELAY TIME												
INHIBIT TIME												
ENTRANCE GREEN												
ENTRANCE PED CLEAR												
ENTRANCE YELLOW												
ENTRANCE RED												
MIN HOLD TIME												
	HOLD PHASE											
	1	2	3	4	5	6	7	8	9	10	11	12
PREEMPTOR 1												
PREEMPTOR 2												
PREEMPTOR 3												
PREEMPTOR 4												

FOR INFORMATION ONLY	
_____	BUS PRIORITY CONTROL
CITY CODE	_____
PRIMARY ADDRESS	_____



ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13/HCH By: DFA
T.S. No.: 6033 Date Implemented: _____ By: _____

5. NIC/TOD SUBMENU

1. NIC/TOD CLOCK/CALENDAR DATA

DATE SET	
TIME SET	
MANUAL NIC PROGRAM STEP	0
MANUAL TOD PROGRAM STEP	0
SYNC REFERENCE TIME	** 00:00
SYNC REFERENCE	REFERENCE TIME
WEEK 1 BEGINS ON 1ST SUNDAY	
DISABLE DAYLIGHT SAVINGS	
DST BEGINS LAST SUNDAY	

2. NIC/TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRI	SAT
1	2	1	1	1	1	1	2
2							
3							
4							
5							
6							
7							
8							
9							
10							

3. NIC/TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR				49	50	51	52	53
WEEKLY PROGRAM				1	1	1	1	1

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PROG
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

****NOTE:** When using an RCTB Unit, in order for the controller clock to be properly updated, the RCTB Unit must be designed for a 03:30AM Sync Pulse.

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6033 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	1	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	3	TYPE	1
EXTEND TIME	0.0	DELAY TIME	10
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	2	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	4	TYPE	1
EXTEND TIME	0.0	DELAY TIME	10
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas

Date Prepared: 2-19-13/HCH By: DEB

T.S. No.: 6033

Date Implemented: By:

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	5	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	7	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	6	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	8	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6033 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	9	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	11	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	10	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	12	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6033 Date implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	13	TYPE	1
EXTEND TIME	0.0	DELAY TIME	5
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			X
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	15	TYPE	1
EXTEND TIME	0.0	DELAY TIME	5
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE		X	
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	14	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	16	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION:

Imperial Hwy @ Avenida Manuel Salinas

Date Prepared: 2-19-13/HCH By: DFA

T.S. No.: 6033

Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	17	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	19	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	18	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	0

DETECTOR	20	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas

Date Prepared: 2-19-13/HeH By: DPA

T.S. No.: 6033

Date Implemented: By:

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	21	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	23	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	22	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	24	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas Date Prepared: 2-19-13 HCH By: DEA

T.S. No.: 6033 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	25	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL	0	MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	27	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	26	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	28	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Avenida Manuel Salinas

Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6033

Date Implemented: By:

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	29	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	31	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	30	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS	0	FAIL ACTION	

DETECTOR	32	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

Up to 64 Vehicle Detectors Available

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

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T.S. No.: 6033 Date Implemented: _____ By: _____

6. DETECTORS SUBMENU (Continued)

2. SPEED DETECTORS

SPEED DETECTOR NUMBERS	1	2	3	4	5	6	7	8
ONE DETECTOR SPEED:								
LOCAL DET NUMBER								
VEHICLE LENGTH								
LOOP LENGTH								
TWO DETECTOR SPEED:								
LOCAL DET NUMBER								
SPEED TRAP LENGTH								
ENABLE LOG								
DETECTOR LOG INTERVAL	0				MINUTES			
UNITS:								
SPEED DETECTOR NUMBERS	9	10	11	12	13	14	15	16
ONE DETECTOR SPEED:								
LOCAL DET NUMBER								
VEHICLE LENGTH								
LOOP LENGTH								
TWO DETECTOR SPEED:								
LOCAL DET NUMBER								
SPEED TRAP LENGTH								
ENABLE LOG								
DETECTOR LOG INTERVAL	0				MINUTES			
UNITS:								

3. PEDESTRIAN DETECTOR SETUP

PEDESTRIAN DETECTOR SETUP					
DETECTOR	PHASE	ERRATIC COUNTS	NO ACTIVITY	MAX PRESENCE	SCALE
1					
2	2				
3					
4	4				
5					
6	6				
7					
8	8				
9					
10					
11					
12					

PROGRAM REFERENCE CARD

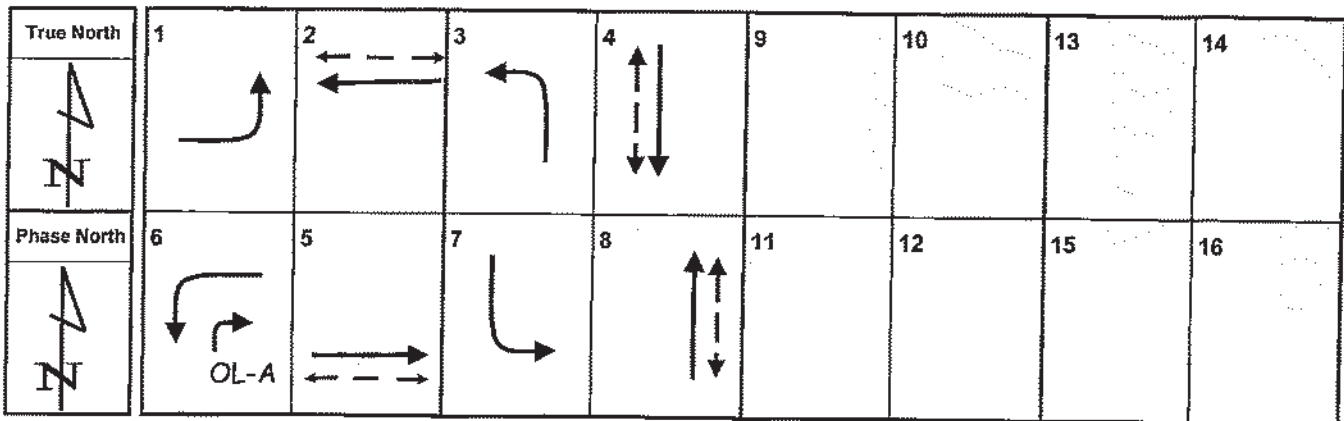
INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6032 Date Implemented: _____ By: _____

UTILITIES SUBMENU

8-7. SOFTWARE MODULES

NAME	PART NUMBER	VERSION
BOOT	100-1047-212	V1.12.05
APPLICATION	100-1082-249	02.49.00
CONFIGURATION	100-1049-001	N3000, 8
HELP	100-1050-001	01.00.00
DEFINITIONS	100-1051-001	02.10.00
TEXT	100-1052-001	02.10.00
TELEMETRY		

PHASE DIAGRAM



Comments:

OLA= φ6

CONFIGURE VIDEO ZONES AND THEIR CONTROLLER INPUT ASSIGNMENTS PER ATTACHED SKETCH.

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

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CONFIGURATION SUBMENU

1-1-1. PHASE RING SEQUENCE AND ASSIGNMENT

CONTROLLER SEQUENCE																1		
SEQUENCE COMMANDS																HARDWARE ALTERNATE SEQUENCE ENABLE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
BARRIER CONTROL	B		B		B													
RING 1	1	2	3	4														
RING 2	6	5	7	8														
RING 3																		
RING 4																		

CONTROLLER SEQUENCE																2		
SEQUENCE COMMANDS																HARDWARE ALTERNATE SEQUENCE ENABLE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
BARRIER CONTROL																		
RING 1																		
RING 2																		
RING 3																		
RING 4																		

CONTROLLER SEQUENCE																3		
SEQUENCE COMMANDS																HARDWARE ALTERNATE SEQUENCE ENABLE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
BARRIER CONTROL																		
RING 1																		
RING 2																		
RING 3																		
RING 4																		

CONTROLLER SEQUENCE																4		
SEQUENCE COMMANDS																HARDWARE ALTERNATE SEQUENCE ENABLE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
BARRIER CONTROL																		
RING 1																		
RING 2																		
RING 3																		
RING 4																		

UP TO 16 CONTROL SEQUENCES AVAILABLE.

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

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CONFIGURATION SUBMENU

1-1-4. SIMULTANEOUS GAP PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1					X	X										
2					X	X										
3							X	X								
4							X	X								
5	X	X														
6	X	X														
7			X	X												
8			X	X												
9																
10																
11																
12																
13																
14																
15																
16																
DISABLE																

1-1-5. DIAMOND SEQUENCE (Controller Must Be Programmed for Diamond Sequence Operation)

1-2. PHASE IN USE / EXCLUSIVE PEDESTRIAN

PHASE	1	2	3	4	5	6	7	8
PHASES IN USE	X	X	X	X	X	X	X	X
EXCLUSIVE PED								

PHASE	9	10	11	12	13	14	15	16
PHASES IN USE								
EXCLUSIVE PED								

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				FLASH		
			RED	YELLOW	GREEN	DIMMING	POWER	AUTO	TOGETHER
1	1	V					A		
2	2	V					A	R	X
3	3	V					A	R	
4	4	V					A	R	X
5	5	V					A	R	
6	6	V					A	R	X
7	7	V					A	R	
8	8	V					A	R	X
9	2	P					A		
10	4	P					A		
11	5	P					A		
12	8	P					A		
13	1	O					A		
14	2	O					A		
15	3	O					A		
16	4	O					A		

PROGRAM REFERENCE CARD

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CONFIGURATION SUBMENU

1-4-1. SDLC OPTIONS

BIU	1	2	3	4	5	6	7	8
TERM & FACILITY								
DETECTOR RACK								
ENABLE TS2/MMU TYPE CABINET								NO
ENABLE MMU EXTENDED STATUS								NO
ENABLE SDLC STOP TIME								NO
ENABLE 3 CRITICAL RPE'S LOCKUP								YES
MMU TO CU SDLC EXTERNAL START								ENABLED

1-4-2. MMU PROGRAM

CHANNEL	CHANNEL CAN SERVE WITH														
	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-3. COLOR CHECK ENABLE

ENABLE COLOR CHECK	X															
MMU CHANNEL / LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RED	X	X	X	X	X	X	X	X								
YELLOW	X	X	X	X	X	X	X	X								
GREEN	X	X	X	X	X	X	X	X								

1-4-4. SECONDARY TO SECONDARY ADDRESSING

TERM & FACILITY	1	2	3	4	5	6	7	8	MMU
DETECTOR RACK	1	2	3	4	5	6	7	8	DIAG
ENABLE SDLC DIAGNOSTIC TEST									NO

PROGRAM REFERENCE CARD

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T.S. No.: 6032 Date Implemented: _____ By: _____

CONFIGURATION SUBMENU

1-8-2. LOGIC STATEMENTS

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032

Date Implemented: By:

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

TIMING PLAN	1	PHASE DATA																
		PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN		10	8	10	9	8	10	10	9									
BICYCLE MIN GREEN		0	0	0	0	0	0	0	0									
CONDITIONAL SERVICE MIN GRN		0	0	0	0	0	0	0	0									
DELAY GREEN		0	0	0	0	0	0	0	0									
WALK		0	8	0	8	7	0	0	9									
WALK 2		0	0	0	0	0	0	0	0									
WALK MAX		0	0	0	0	0	0	0	0									
PEDESTRIAN CLEARANCE		0	25	0	26	22	0	0	27									
PEDESTRIAN CLEARANCE 2		0	0	0	0	0	0	0	0									
PEDESTRIAN CLEARANCE MAX		0	0	0	0	0	0	0	0									
PEDESTRIAN CARRY OVER		0	0	0	0	0	0	0	0									
VEHICLE EXTENSION		2.0	4.5	2.0	4.5	4.5	2.0	2.0	4.5									
VEHICLE EXTENSION 2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
MAX 1		25	50	25	45	50	25	25	45									
MAX 2		25	140	25	45	140	25	25	45									
MAX 3		0	0	0	0	0	0	0	0									
DYNAMIC MAX		0	0	0	0	0	0	0	0									
DYNAMIC STEP		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
YELLOW		4.0	4.5	4.0	4.5	4.5	4.0	4.0	4.5									
RED CLEARANCE		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
RED MAX		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
RED REVERT		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
ACTUATIONS BEFORE (ACT B4)		0	0	0	0	0	0	0	0									
SEC/ACTUATION		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
MAX ADDED INITIAL (MAX INI)		0	0	0	0	0	0	0	0									
TIME BEFORE GAP REDUCTION		0	15	0	15	15	0	0	15									
CARS WAITING B4 REDUCTION		0	255	0	255	255	0	0	255									
STEP TO REDUCE (STPTDUC)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
TIME TO REDUCE (TTREDUC)		0	15	0	15	15	0	0	15									
MINIMUM GAP		2.0	3.0	2.0	3.0	3.0	2.0	2.0	3.0									

Comments:

INTERSECTION:

Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: JFA

T.S. No.: 6032

Date Implemented: By:

CONTROLLER SUBMENU

2-2. VEHICLE OVERLAP

VEHICLE OVERLAP	A																TYPE				NORMAL											
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED						X																										
PROTECT																																
MODIFIER																																
PED PROTECT																																
NOT OVLP																																
FLASH GRN																																
LAG X PHASE																																
LAG 2 PHASE																																
LAG GREEN	LAG YELLOW				LAG RED				ADV GREEN																							
PROTECTED PHASE (LEFT TURN)																																
PERMISSIVE PHASE (OPPOSING THROUGH)																																
FLASHING ARROW OUTPUT																CH																
DELAY START OF FYA:																CLEARANCE:																
ACTION PLAN SF BIT DISABLE																																

VEHICLE OVERLAP	TYPE																		
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
INCLUDED																			
PROTECT																			
MODIFIER																			
PED PROTECT																			
NOT OVLP																			
FLASH GRN																			
LAG X PHASE																			
LAG 2 PHASE																			
LAG GREEN	LAG YELLOW				LAG RED				ADV GREEN										
PROTECTED PHASE (LEFT TURN)																			
PERMISSIVE PHASE (OPPOSING THROUGH)																			
FLASHING ARROW OUTPUT																CH			
DELAY START OF FYA:																CLEARANCE:			
ACTION PLAN SF BIT DISABLE																			

VEHICLE OVERLAP	TYPE																		
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
INCLUDED																			
PROTECT																			
MODIFIER																			
PED PROTECT																			
NOT OVLP																			
FLASH GRN																			
LAG X PHASE																			
LAG 2 PHASE																			
LAG GREEN	LAG YELLOW				LAG RED				ADV GREEN										
PROTECTED PHASE (LEFT TURN)																			
PERMISSIVE PHASE (OPPOSING THROUGH)																			
FLASHING ARROW OUTPUT																CH			
DELAY START OF FYA:																CLEARANCE:			
ACTION PLAN SF BIT DISABLE																			

VEHICLE OVERLAP	TYPE																		
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
INCLUDED																			
PROTECT																			
MODIFIER																			
PED PROTECT																			
NOT OVLP																			
FLASH GRN																			
LAG X PHASE																			
LAG 2 PHASE																			
LAG GREEN	LAG YELLOW				LAG RED				ADV GREEN										
PROTECTED PHASE (LEFT TURN)																			
PERMISSIVE PHASE (OPPOSING THROUGH)																			
FLASHING ARROW OUTPUT																CH			
DELAY START OF FYA:																CLEARANCE:			
ACTION PLAN SF BIT DISABLE																			

VEHICLE OVERLAP	TYPE																		
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
INCLUDED																			
PROTECT																			
MODIFIER																			
PED PROTECT																			
NOT OVLP																			
FLASH GRN																			
LAG X PHASE																			
LAG 2 PHASE																			
LAG GREEN	LAG YELLOW				LAG RED				ADV GREEN										
PROTECTED PHASE (LEFT TURN)																			
PERMISSIVE PHASE (OPPOSING THROUGH)																			
FLASHING ARROW OUTPUT																CH			
DELAY START OF FYA:																CLEARANCE:			
ACTION PLAN SF BIT DISABLE																			

VEHICLE OVERLAP	TYPE																		
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
INCLUDED																			
PROTECT																			
MODIFIER																			
PED PROTECT																			
NOT OVLP																			
FLASH GRN																			
LAG X PHASE																			
LAG 2 PHASE																			
LAG GREEN	LAG YELLOW				LAG RED				ADV GREEN										
PROTECTED PHASE (LEFT TURN)																			
PERMISSIVE PHASE (OPPOSING THROUGH)																			
FLASHING ARROW OUTPUT																CH			
DELAY START OF FYA:																CLEARANCE:			
ACTION PLAN SF BIT DISABLE																			

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DEA
T.S. No.: 6032 Date Implemented: _____ By: _____

CONTROLLER SUBMENU

2-2. VEHICLE OVERLAP

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW					LAG RED					ADV GREEN					
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT														CH			
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW					LAG RED					ADV GREEN					
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT														CH			
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW					LAG RED					ADV GREEN					
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT														CH			
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW					LAG RED					ADV GREEN					
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT														CH			
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032 Date Implemented: _____ By: _____

CONTROLLER SUBMENU

2-5. START / FLASH DATA

POWER START																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PHASE		Y			Y															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
OVERLAP																				
FLASH>MON	NO				FLASH TIME				0				ALL RED				6.0			
POWER START SEQ																				
AUTOMATIC FLASH																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
ENTRY																				
EXIT																				
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
EXIT																				
FLASH>MON	NO				EXIT FLASH				R				MIN AUTO FLASH				10			
MINIMUM RECALL	NO				CYCLE THRU PHASE				NO											

2-6-1. CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT								UNIT RED REVERT								
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FLASHING GREEN PHASE																
GUARANTEED PASSAGE																
NON-ACT I																
NON-ACT II																
DUAL ENTRY																
COND SERVICE																
COND RESERVICE																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEH EXT																

2-6-2. EXTENDED OPTIONS [Not Available]

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032 Date Implemented: _____ By: _____

COORDINATION SUBMENU

3-2. COORDINATOR PATTERN

COORDINATOR PATTERN	1	
USE SPLIT PATTERN	1	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	130	STD (COS) 111
OFFSET VALUE	41	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICES	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT	18	48 16 48 48 18 21 43
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	33	33
VEH PERM	0	0 0 DISP
RING DISP	(RING 2-4)	
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN X-ARTERIAL PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

COORDINATOR PATTERN	2	
USE SPLIT PATTERN	2	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	130	STD (COS) 211
OFFSET VALUE	37	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICES	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT	21	45 21 43 45 21 21 43
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	30	30
VEH PERM	0	0 0 DISP
RING DISP	(RING 2-4)	
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN X-ARTERIAL PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032

Date Implemented: _____ By: _____

COORDINATION SUBMENU

3-2. COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	3	
USE SPLIT PATTERN	3	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	130	STD (COS) 311
OFFSET VALUE	39	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICE	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT	24	45 18 43 45 24 18 43
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	30	30
VEH PERM	0	0 0 DISP
RING DISP		(RING 2-4)
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

COORDINATOR PATTERN	4	
USE SPLIT PATTERN	4	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	150	STD (COS) 411
OFFSET VALUE	38	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICE	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT	24	62 21 43 62 24 21 43
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	25	25
VEH PERM	0	0 0 DISP
RING DISP		(RING 2-4)
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HcH By: DFA

T.S. No.: 6032

Date Implemented: _____ By: _____

COORDINATION SUBMENU

3-2. COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	5															
USE SPLIT PATTERN	5	SPLIT SUM														
TS2 (PAT - OFF)																
CYCLE	150	STD (COS) 511														
OFFSET VALUE	142															
ACTUATED COORD	YES	TIMING PLAN 1														
ACT WALK REST	NO	SEQUENCE 1														
PHASE RESERVICES	NO	ACTION PLAN 0														
SPLIT PREFERENCE PHASES																
PHASE(S)	1	2	3	4	5	6	7	8								
SPLIT	24	62	21	43	62	24	21	43								
PREFERENCE 1																
PREFERENCE 2																
SPLIT EXT (SEC)	27	27														
VEH PERM	0	0	0	DISP												
RING DISP				(RING 2-4)												
PHASE(S)	9	10	11	12	13	14	15	16								
SPLIT																
PREFERENCE 1																
PREFERENCE 2																
SPLIT DEMAND PATTERN			X-ARTERIAL PATTERN													
PHASE(S)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORD		X			X											
VEH RECALL		X			X											
PED RECALL																
MAX RECALL																
OMIT									X	X	X	X	X	X	X	X
SPECIAL FUNCTION OUTPUTS																

COORDINATOR PATTERN	6															
USE SPLIT PATTERN	6	SPLIT SUM														
TS2 (PAT - OFF)																
CYCLE		STD (COS) 161														
OFFSET VALUE																
ACTUATED COORD		TIMING PLAN														
ACT WALK REST		SEQUENCE														
PHASE RESERVICES		ACTION PLAN														
SPLIT PREFERENCE PHASES																
PHASE(S)	1	2	3	4	5	6	7	8								
SPLIT																
PREFERENCE 1																
PREFERENCE 2																
SPLIT EXT (SEC)																
VEH PERM				DISP												
RING DISP				(RING 2-4)												
PHASE(S)	9	10	11	12	13	14	15	16								
SPLIT																
PREFERENCE 1																
PREFERENCE 2																
SPLIT DEMAND PATTERN			X-ARTERIAL PATTERN													
PHASE(S)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORD																
VEH RECALL																
PED RECALL																
MAX RECALL																
OMIT																
SPECIAL FUNCTION OUTPUTS																

120 COORDINATION PATTERNS AVAILABLE

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFH

T.S. No.: 6032

Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-1. PREEMPTOR

PREEMPT PLAN		1																ENABLE											
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16												
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P												
TRACK CLEAR VEH																													
TRACK CLEAR OVERLAP																													
ENABLE TRAILING OLP																													
DWELL VEH																													
DWELL PED																													
DWELL OVERLAP																													
CYCLING VEH																													
CYCLING PED																													
CYCLING OVERLAP																													
EXIT PHASE																													
EXIT CALLS																													
SPECIAL FUNCTION																													
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE																					
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)																					
VERRIDE FL		DURATION						RED CLEAR GOES GREEN																					
TERMINATE OLVPS ASAP		PC THRU YELLOW						TERMINATE PHASES																					
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH																					
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES																					
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE																					
RING		1																2			3			4					
FREE DURING PREEMPTION																													
ENTRANCE TIMES		WALK																PED CL			MIN GRN			YELLOW			RED		
TRACK CLEARANCE TIMES		MIN GRN																EXT GRN			MX GRN			YELLOW			RED		
DWL/CYC-EXIT		MIN DL																PMT EXT			MX TM			YELLOW			RED		
--PREEMPT ACTIVE OUTPUTS--																													
PREEMPT ACTIVE OUTPUT						PREEMPT ACTIVE OUTPUT IN DWELL																							
OTHER PRIORITY PREEMPT OUTPUT						NON-PRIORITY PREEMPT OUTPUT																							

PREEMPT PLAN		2																ENABLE											
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16												
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P												
TRACK CLEAR VEH																													
TRACK CLEAR OVERLAP																													
ENABLE TRAILING OLP																													
DWELL VEH																													
DWELL PED																													
DWELL OVERLAP																													
CYCLING VEH																													
CYCLING PED																													
CYCLING OVERLAP																													
EXIT PHASE																													
EXIT CALLS																													
SPECIAL FUNCTION																													
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE																					
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)																					
VERRIDE FL		DURATION						RED CLEAR GOES GREEN																					
TERMINATE OLVPS ASAP		PC THRU YELLOW						TERMINATE PHASES																					
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH																					
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES																					
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE																					
RING		1																2			3			4					
FREE DURING PREEMPTION																													
ENTRANCE TIMES		WALK																PED CL			MIN GRN			YELLOW			RED		
TRACK CLEARANCE TIMES		MIN GRN																EXT GRN			MX GRN			YELLOW			RED		
DWL/CYC-EXIT		MIN DL																PMT EXT			MX TM			YELLOW			RED		
--PREEMPT ACTIVE OUTPUTS--																													
PREEMPT ACTIVE OUTPUT						PREEMPT ACTIVE OUTPUT IN DWELL																							
OTHER PRIORITY PREEMPT OUTPUT						NON-PRIORITY PREEMPT OUTPUT																							

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA
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PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN		3																ENABLE			
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																					
TRACK CLEAR OVERLAP																					
ENABLE TRAILING OLP																					
DWELL VEH																					
DWELL PED																					
DWELL OVERLAP																					
CYCLING VEH																					
CYCLING PED																					
CYCLING OVERLAP																					
EXIT PHASE																					
EXIT CALLS																					
SPECIAL FUNCTION																					
ENABLE		PREEMPT OVERRIDE								INTERLOCK ENABLE											
DET LOCK		DELAY TIME (SEC)								INHIBIT TIME (SEC)											
OVERRIDE FL		DURATION								RED CLEAR GOES GREEN											
TERMINATE OLVPS ASAP		PC THRU YELLOW								TERMINATE PHASES											
PED DARK		TRACK CLEAR RESERVICE								DWELL FLASH											
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR								PREEMPTION EXITS TO COORD PHASES											
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME								FLT TYPE											
RING		1				2				3				4							
FREE DURING PREEMPTION																					
ENTRANCE TIMES		WALK				PED CL				MIN GRN				YELLOW				RED			
TRACK CLEARANCE TIMES		MIN GRN				EXT GRN				MX GRN				YELLOW				RED			
DWL/CYC-EXIT		MIN DL				PMT EXT				MX TM				YELLOW				RED			
---PREEMPT ACTIVE OUTPUTS---																					
PREEMPT ACTIVE OUTPUT										PREEMPT ACTIVE OUTPUT IN DWELL											
OTHER PRIORITY PREEMPT OUTPUT										NON-PRIORITY PREEMPT OUTPUT											

PREEMPT PLAN		4																ENABLE			
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																					
TRACK CLEAR OVERLAP																					
ENABLE TRAILING OLP																					
DWELL VEH																					
DWELL PED																					
DWELL OVERLAP																					
CYCLING VEH																					
CYCLING PED																					
CYCLING OVERLAP																					
EXIT PHASE																					
EXIT CALLS																					
SPECIAL FUNCTION																					
ENABLE		PREEMPT OVERRIDE								INTERLOCK ENABLE											
DET LOCK		DELAY TIME (SEC)								INHIBIT TIME (SEC)											
OVERRIDE FL		DURATION								RED CLEAR GOES GREEN											
TERMINATE OLVPS ASAP		PC THRU YELLOW								TERMINATE PHASES											
PED DARK		TRACK CLEAR RESERVICE								DWELL FLASH											
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR								PREEMPTION EXITS TO COORD PHASES											
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME								FLT TYPE											
RING		1				2				3				4							
FREE DURING PREEMPTION																					
ENTRANCE TIMES		WALK				PED CL				MIN GRN				YELLOW				RED			
TRACK CLEARANCE TIMES		MIN GRN				EXT GRN				MX GRN				YELLOW				RED			
DWL/CYC-EXIT		MIN DL				PMT EXT				MX TM				YELLOW				RED			
---PREEMPT ACTIVE OUTPUTS---																					
PREEMPT ACTIVE OUTPUT										PREEMPT ACTIVE OUTPUT IN DWELL											
OTHER PRIORITY PREEMPT OUTPUT										NON-PRIORITY PREEMPT OUTPUT											

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T.S. No.: 6032 Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN	5																ENABLE
VEH/PED PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR VEH																	
TRACK CLEAR OVERLAP																	
ENABLE TRAILING OLP																	
DWELL VEH																	
DWELL PED																	
DWELL OVERLAP																	
CYCLING VEH																	
CYCLING PED																	
CYCLING OVERLAP																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
ENABLE		PREEMPT OVERRIDE					INTERLOCK ENABLE										
DET LOCK		DELAY TIME (SEC)					INHIBIT TIME (SEC)										
OVERRIDE FL		DURATION					RED CLEAR GOES GREEN										
TERMINATE OLVPS ASAP		PC THRU YELLOW					TERMINATE PHASES										
PED DARK		TRACK CLEAR RESERVICE					DWELL FLASH										
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR					PREEMPTION EXITS TO COORD PHASES										
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME					FLT TYPE										
RING																	
FREE DURING PREEMPTION																	
WALK PED CL MIN GRN YELLOW RED																	
ENTRANCE TIMES																	
MIN GRN EXT GRN MX GRN YELLOW RED																	
TRACK CLEARANCE TIMES																	
MIN DL PMT EXT MX TM YELLOW RED																	
DWL/CYC-EXIT																	
--PREEMPT ACTIVE OUTPUTS--																	
PREEMPT ACTIVE OUTPUT																	
PREEMPT ACTIVE OUTPUT IN DWELL																	
OTHER PRIORITY PREEMPT OUTPUT																	
NON-PRIORITY PREEMPT OUTPUT																	

PREEMPT PLAN	6																ENABLE
VEH/PED PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR VEH																	
TRACK CLEAR OVERLAP																	
ENABLE TRAILING OLP																	
DWELL VEH																	
DWELL PED																	
DWELL OVERLAP																	
CYCLING VEH																	
CYCLING PED																	
CYCLING OVERLAP																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
ENABLE		PREEMPT OVERRIDE					INTERLOCK ENABLE										
DET LOCK		DELAY TIME (SEC)					INHIBIT TIME (SEC)										
OVERRIDE FL		DURATION					RED CLEAR GOES GREEN										
TERMINATE OLVPS ASAP		PC THRU YELLOW					TERMINATE PHASES										
PED DARK		TRACK CLEAR RESERVICE					DWELL FLASH										
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR					PREEMPTION EXITS TO COORD PHASES										
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME					FLT TYPE										
RING																	
FREE DURING PREEMPTION																	
WALK PED CL MIN GRN YELLOW RED																	
ENTRANCE TIMES																	
MIN GRN EXT GRN MX GRN YELLOW RED																	
TRACK CLEARANCE TIMES																	
MIN DL PMT EXT MX TM YELLOW RED																	
DWL/CYC-EXIT																	
--PREEMPT ACTIVE OUTPUTS--																	
PREEMPT ACTIVE OUTPUT																	
PREEMPT ACTIVE OUTPUT IN DWELL																	
OTHER PRIORITY PREEMPT OUTPUT																	
NON-PRIORITY PREEMPT OUTPUT																	

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032 Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN	7																ENABLE							
VEH/PED PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16								
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P								
TRACK CLEAR VEH																								
TRACK CLEAR OVERLAP																								
ENABLE TRAILING OLP																								
DWELL VEH																								
DWELL PED																								
DWELL OVERLAP																								
CYCLING VEH																								
CYCLING PED																								
CYCLING OVERLAP																								
EXIT PHASE																								
EXIT CALLS																								
SPECIAL FUNCTION																								
ENABLE	PREEMPT OVERRIDE				INTERLOCK ENABLE																			
DET LOCK	DELAY TIME (SEC)				INHIBIT TIME (SEC)																			
OVERRIDE FL	DURATION				RED CLEAR GOES GREEN																			
TERMINATE OLVPS ASAP	PC THRU YELLOW				TERMINATE PHASES																			
PED DARK	TRACK CLEAR RESERVICE				DWELL FLASH																			
LINKED PREEMPTOR	DWELL FLASH EXIT COLOR				PREEMPTION EXITS TO COORD PHASES																			
PREEMPT EXIT TIMING PLAN	PREEMPT RESERVICE TIME				FLT TYPE																			
RING																1	2	3	4					
FREE DURING PREEMPTION																								
ENTRANCE TIMES																WALK	PED CL	MIN GRN	YELLOW	RED				
TRACK CLEARANCE TIMES																MIN GRN	EXT GRN	MX GRN	YELLOW	RED				
DWL/CYC-EXIT																MIN DL	PMT EXT	MX TM	YELLOW	RED				
---PREEMPT ACTIVE OUTPUTS---																								
PREEMPT ACTIVE OUTPUT				PREEMPT ACTIVE OUTPUT IN DWELL																				
OTHER PRIORITY PREEMPT OUTPUT				NON-PRIORITY PREEMPT OUTPUT																				

PREEMPT PLAN	B																ENABLE							
VEH/PED PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16								
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P								
TRACK CLEAR VEH																								
TRACK CLEAR OVERLAP																								
ENABLE TRAILING OLP																								
DWELL VEH																								
DWELL PED																								
DWELL OVERLAP																								
CYCLING VEH																								
CYCLING PED																								
CYCLING OVERLAP																								
EXIT PHASE																								
EXIT CALLS																								
SPECIAL FUNCTION																								
ENABLE	PREEMPT OVERRIDE				INTERLOCK ENABLE																			
DET LOCK	DELAY TIME (SEC)				INHIBIT TIME (SEC)																			
OVERRIDE FL	DURATION				RED CLEAR GOES GREEN																			
TERMINATE OLVPS ASAP	PC THRU YELLOW				TERMINATE PHASES																			
PED DARK	TRACK CLEAR RESERVICE				DWELL FLASH																			
LINKED PREEMPTOR	DWELL FLASH EXIT COLOR				PREEMPTION EXITS TO COORD PHASES																			
PREEMPT EXIT TIMING PLAN	PREEMPT RESERVICE TIME				FLT TYPE																			
RING																1	2	3	4					
FREE DURING PREEMPTION																								
ENTRANCE TIMES																WALK	PED CL	MIN GRN	YELLOW	RED				
TRACK CLEARANCE TIMES																MIN GRN	EXT GRN	MX GRN	YELLOW	RED				
DWL/CYC-EXIT																MIN DL	PMT EXT	MX TM	YELLOW	RED				
---PREEMPT ACTIVE OUTPUTS---																								
PREEMPT ACTIVE OUTPUT				PREEMPT ACTIVE OUTPUT IN DWELL																				
OTHER PRIORITY PREEMPT OUTPUT				NON-PRIORITY PREEMPT OUTPUT																				

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6032 Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN	9																ENABLE			
VEH/PED PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE	PREEMPT OVERRIDE					INTERLOCK ENABLE														
DET LOCK	DELAY TIME (SEC)					INHIBIT TIME (SEC)														
OVERRIDE FL	DURATION					RED CLEAR GOES GREEN														
TERMINATE OLVPS ASAP	PC THRU YELLOW					TERMINATE PHASES														
PED DARK	TRACK CLEAR RESERVICE					DWELL FLASH														
LINKED PREEMPTOR	DWELL FLASH EXIT COLOR					PREEMPTION EXITS TO COORD PHASES														
PREEMPT EXIT TIMING PLAN	PREEMPT RESERVICE TIME					FLT TYPE														
RING																	1	2	3	4
FREE DURING PREEMPTION																				
ENTRANCE TIMES	WALK PED CL MIN GRN YELLOW RED																			
TRACK CLEARANCE TIMES	MIN GRN EXT GRN MX GRN YELLOW RED																			
DWL/CYC-EXIT	MIN DL PMT EXT MX TM YELLOW RED																			
---PREEMPT ACTIVE OUTPUTS---																				
PREEMPT ACTIVE OUTPUT																	PREEMPT ACTIVE OUTPUT IN DWELL			
OTHER PRIORITY PREEMPT OUTPUT																	NON-PRIORITY PREEMPT OUTPUT			

PREEMPT PLAN	10																ENABLE			
VEH/PED PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE	PREEMPT OVERRIDE					INTERLOCK ENABLE														
DET LOCK	DELAY TIME (SEC)					INHIBIT TIME (SEC)														
OVERRIDE FL	DURATION					RED CLEAR GOES GREEN														
TERMINATE OLVPS ASAP	PC THRU YELLOW					TERMINATE PHASES														
PED DARK	TRACK CLEAR RESERVICE					DWELL FLASH														
LINKED PREEMPTOR	DWELL FLASH EXIT COLOR					PREEMPTION EXITS TO COORD PHASES														
PREEMPT EXIT TIMING PLAN	PREEMPT RESERVICE TIME					FLT TYPE														
RING																	1	2	3	4
FREE DURING PREEMPTION																				
ENTRANCE TIMES	WALK PED CL MIN GRN YELLOW RED																			
TRACK CLEARANCE TIMES	MIN GRN EXT GRN MX GRN YELLOW RED																			
DWL/CYC-EXIT	MIN DL PMT EXT MX TM YELLOW RED																			
---PREEMPT ACTIVE OUTPUTS---																				
PREEMPT ACTIVE OUTPUT																	PREEMPT ACTIVE OUTPUT IN DWELL			
OTHER PRIORITY PREEMPT OUTPUT																	NON-PRIORITY PREEMPT OUTPUT			

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6032 Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-2. ENABLE PREEMPT FILTERING / TSP / SCP

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-3. TSP / SCP PLAN

TSP / SCP PLAN	1	2	3	4	5	6										
TSP / SCP ENABLE																
SIGNAL TYPE																
DET LOCK																
DELAY TIME																
MAX PRESENCE																
PREEMPT ENABLES RESERVICE																
NO DELAY IN TSP																
ACT SF INHIBIT																
RESERVICE CYCLES																
BUS HEADING																
TSP OR SCP	FREE DEFAULT PATTERN															
HEADWAY ALLOWANCE																
TSP / SCP PHASE																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TSP / SCP1																
TSP / SCP2																
TSP / SCP3																
TSP / SCP4																
TSP / SCP5																
TSP / SCP6																

8-5.

CITY		INTERSECTION	
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4-4. TSP / SCP SPLIT PATTERN

TSP / SCP SPLIT PATTERN	SPL DM							
IN EFFECT TIMING PLAN								
PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN								
MIN GREEN								
PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN								
MIN GREEN								

TSP / SCP SPLIT PATTERN	SPL DM							
IN EFFECT TIMING PLAN								
PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN								
MIN GREEN								
PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN								
MIN GREEN								

TSP / SCP SPLIT PATTERN	SPL DM							
IN EFFECT TIMING PLAN								
PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN								
MIN GREEN								
PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN								
MIN GREEN								

TSP / SCP SPLIT PATTERN	SPL DM							
IN EFFECT TIMING PLAN								
PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN								
MIN GREEN								
PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN								
MIN GREEN								

120 TSP / SCP SPLIT PATTERNS AVAILABLE

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6032 Date Implemented: _____ By: _____

TIME BASE SUBMENU

5-1. CLOCK / CALENDAR DATA

DATE SET		TIME SET	
ENABLE MANUAL ACTION PLAN	0		
SYNC REFERENCE TIME	00:00	SYNC REFERENCE	REFERENCE TIME
STANDARD TIME FROM GMT	- 08	DAYLIGHT SAVINGS	USDLS
TIME TO RESET INPUT SET TIME			03:30:00

5-2. ACTION PLAN

ACTION PLAN	1		
PATTERN	1	SYSTEM OVERRIDE	YES
TIMING PLAN	1	DETECTOR LOG	NONE
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE	1	2	3
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE	1	2	3
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-3)
AUX FUNCTION		(1-3)	
1	2	3	4
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN	2		
PATTERN	2	SYSTEM OVERRIDE	YES
TIMING PLAN	1	DETECTOR LOG	NONE
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE	1	2	3
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE	1	2	3
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION		(1-3)	
1	2	3	4
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032

Date Implemented: By:

TIME BASE SUBMENU

5-2. ACTION PLAN (CONTINUED)

ACTION PLAN		3	
PATTERN	3	SYSTEM OVERRIDE	YES
TIMING PLAN	1	DETECTOR LOG	NONE
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION			(1-3)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15			
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN		4	
PATTERN	254	SYSTEM OVERRIDE	YES
TIMING PLAN	1	CONTROLLER SEQUENCE	1
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION			(1-3)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15			
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN		5	
PATTERN		SYSTEM OVERRIDE	
TIMING PLAN		DETECTOR LOG	
VEHICLE DETECTOR PLAN		RED REST	
FLASH		PED DETECTOR DIAG PLAN	
VEH DETECTOR DIAG PLAN			
DIMMING ENABLE			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION			(1-3)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15			
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN		100	
PATTERN		SYSTEM OVERRIDE	
TIMING PLAN		DETECTOR LOG	
VEHICLE DETECTOR PLAN		RED REST	
FLASH		PED DETECTOR DIAG PLAN	
VEH DETECTOR DIAG PLAN			
DIMMING ENABLE			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION			(1-3)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15			
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

100 ACTION PLANS AVAILABLE

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DPA

T.S. No.: 6032

Date Implemented: By:

TIME BASE SUBMENU

5-3. DAY PLAN

DAY PLAN IN EFFECT		
DAY PLAN		1
EVENT	ACTION PLAN	START TIME
1	4	00:00
2	2	06:00
3	1	09:00
4	3	15:00
5	1	19:00
6	4	21:00
7		
8		
9		
10		
11		
12		
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DAY PLAN IN EFFECT		
DAY PLAN		2
EVENT	ACTION PLAN	START TIME
1	4	00:00
2	1	09:00
3	4	19:00
4		
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9		
10		
11		
12		
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DAY PLAN IN EFFECT		
DAY PLAN		3
EVENT	ACTION PLAN	START TIME
1		
2		
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PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-14-13 HCH By: DFA

T.S. No.: 6032 Date Implemented: _____ By: _____

TIME BASE SUBMENU

5-5. EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6					
7					
8					
9					
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36					

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032 Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-1. VEHICLE DETECTOR PHASE ASSIGNMENT

VEHICLE DETECTOR PLAN NUMBER		1																TYPE*
DETECTOR	PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	1	X																S
2	2		X															P
3	3			X														S
4	4				X													P
5	5					X												P
6	6						X											S
7	7							X										S
8	8								X									P
9	2		X															P
10	2		X															S
11	8									X								P
12	8									X								S
13	5					X												P
14	5					X												S
15	4				X													P
16	4				X													S
17																		
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64																		

- *DETECTOR TYPE
S - STANDARD
D - DISCONNECT
P - PASSAGE
TYPE Q/STOP BAR
P - PASSAGE
TYPE Q/STOP BAR
C - CALLING
R - RED EXTENSION
G - GREEN EXTENSION/ DELAY
N - NTCIP
B - BIKE

FOUR VEHICLE DETECTOR PLANS AVAILABLE

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032

Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		1	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE		0.0	
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	

DETECTOR NUMBER		5	
TYPE		P	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE			
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	
		2.0	

DETECTOR NUMBER		2	
TYPE		P	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE			
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	
		2.0	

DETECTOR NUMBER		6	
TYPE		5	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE		0.0	
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	

DETECTOR NUMBER		3	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE		0.0	
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	

DETECTOR NUMBER		7	
TYPE		5	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE		0.0	
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	

DETECTOR NUMBER		4	
TYPE		P	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE			
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	
		2.0	

DETECTOR NUMBER		8	
TYPE		P	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS		EXTENSION TIME	
PASSAGE			
QUEUE		QUEUE LIMIT	
NONE			
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		0.0	
NONE		NTCIP VOL	
DISCONNECT TIME		OCC.	
		PASSAGE TIME	
		2.0	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
 B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENTION / DELAY
 TYPE Q / STOP BAR

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DFA

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Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		9	
TYPE	P	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	2.0

DETECTOR NUMBER		13	
TYPE	P	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	2.0

DETECTOR NUMBER		10	
TYPE	S	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	0.0
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	0.0
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		14	
TYPE	S	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	0.0
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	0.0
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		11	
TYPE	P	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	2.0

DETECTOR NUMBER		15	
TYPE	P	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	2.0

DETECTOR NUMBER		12	
TYPE	S	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	0.0
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	0.0
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		16	
TYPE	S	VEH DETECTOR PLAN #	1
TS2 DETECTOR		ECPI LOG	NO
CALL OPTION		DELAY TIME	0.0
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	0.0
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	0.0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
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PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

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DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		17	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		21	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		18	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		22	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		19	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		23	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		20	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		24	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
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 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DPA

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DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		25	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		29	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		26	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		30	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		27	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		31	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		28	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		32	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
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TYPE Q / STOP BAR

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

Date Prepared: 2-19-13 HCH By: DFA

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DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		33	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		37	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		34	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		38	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		35	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		39	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		36	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		40	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
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TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13/HCH By: DFA

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DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		41	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		45	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		42	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		46	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		43	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		47	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		44	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		48	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
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TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

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DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		49	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		53	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		50	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		54	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		51	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		55	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		52	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		56	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
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 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard

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DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		57	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		61	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		58	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		62	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		59	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		63	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		60	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		64	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENTION / DELAY

TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032 Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-6. PEDESTRIAN DETECTOR DIAGNOSTICS

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				1
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				3
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				2
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				4
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DEA

T.S. No.: 6032 Date Implemented: _____ By: _____

DETECTOR ASSIGNMENT SUMMARY WORKSHEET
 (INFORMATION ONLY WORKSHEET)

APPR	LANE(S)	DESCRIPTION	DESIGNATION	DETECTOR NUMBER	DETECTOR TYPE	ASSIGNED PHASE(S)	DELAY TIME	EXTEND TIME	QUEUE LIMIT TIME
W	LT	1ST VEH.	1-W-φ1	1	S	1			
E	1,2,3	QUEUE CL.	1-E-φ2	2	P	2		2.0	
S	LT	1ST VEH.	1-S-φ3	3	S	3			
N	1,2,3	QUEUE CL.	1-N-φ4	4	P	4		2.0	
W	1,2,3	QUEUE CL.	1-W-φ5	5	P	5		2.0	
E	LT	1ST VEH.	1-E-φ6	6	S	6			
N	LT	1ST VEH.	1-N-φ7	7	S	7			
S	1,2	QUEUE CL.	1-S-φ8	8	P	8		2.0	
E	RT	QUEUE CL.	2-E-φ2	9	P	2		2.0	
E	1,2,3	ADVANCE	3-E-φ2	10	S	2			
S	RT	QUEUE CL.	2-S-φ8	11	P	8		2.0	
S	1,2	ADVANCE	3-N-φ8	12	S	8			
W	RT	QUEUE CL.	2-W-φ5	13	P	5		2.0	
W	1,2,3	ADVANCE	3-W-φ5	14	S	5			
N	RT	QUEUE CL.	2-N-φ4	15	P	4		2.0	
N	1,2,3	ADVANCE	3-N-φ4	16	S	4			
				17					
				18					
				19					
				20					
				21					
				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					

COMMENTS:

ASC/3
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Norwalk Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6032 Date Implemented: _____ By: _____

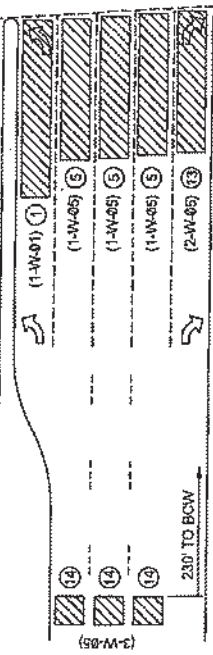
DETECTOR ASSIGNMENT SUMMARY WORKSHEET
 (INFORMATION ONLY WORKSHEET)

APPR	LANE(S)	DESCRIPTION	DESIGNATION	DETECTOR NUMBER	DETECTOR TYPE	ASSIGNED PHASE(S)	DELAY TIME	EXTEND TIME	QUEUE LIMIT TIME
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					
				41					
				42					
				43					
				44					
				45					
				46					
				47					
				48					
				49					
				50					
				51					
				52					
				53					
				54					
				55					
				56					
				57					
				58					
				59					
				60					
				61					
				62					
				63					
				64					

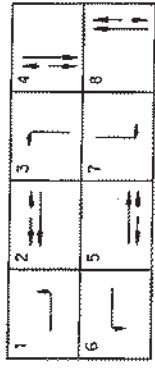
COMMENTS:



IMPERIAL HIGHWAY



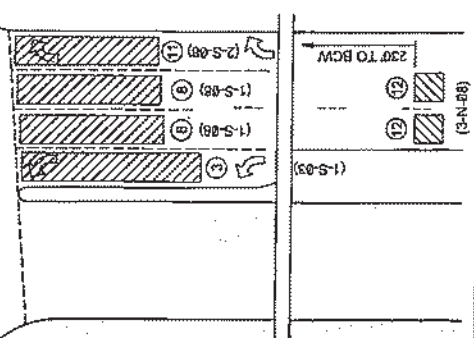
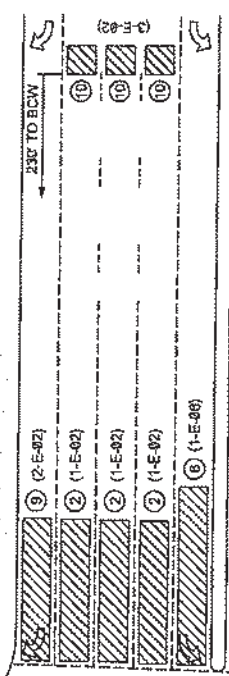
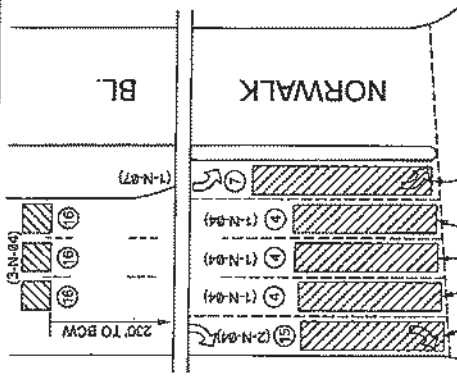
SIGNAL PHASE DIAGRAM



- ▨ VIDEO DETECTION ZONE
- CONTROLLER INPUT ASSIGNMENT

BL.

NORWALK



ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard

Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6030

Date Implemented: By:

1. CONFIGURATION SUBMENU

1. CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
RING 1	1	2	3	4								
RING 2	5	6	7	8								
CG (CONFLICT GROUPS)		X		X								

2. PHASES IN USE

	PHASE NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE	X	X	X	X	X	X	X	X				
EXCLUSIVE PED												

3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP		LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP	
CHANNEL	PHASE/OVLP	PED	CHANNEL	PHASE/OVLP	PED
1	1		9	2	X
2	2		10	4	X
3	3		11	6	X
4	4		12	7	X
5	5		13		
6	6		14		
7	7		15		
8	8		16		

4. SDLC OPTIONS/ENABLES

	BIU NUMBER								
	1	2	3	4	5	6	7	8	
TERM & FACIL									
DETECTOR RACK	X	X							
TYPE 2 RUNS AS TYPE 1									
MMU DISABLE									
DIAGNOSTIC ENABLE (TEST FIXTURE)									
PEER TO PEER ENABLE									
PEER TO PEER ADDRESS:									
1)	255	2)	255	3)	255	4)	255	5)	255
6)	255	7)	255	8)	255	9)	255	10)	255

8. UTILITIES SUBMENU

5. SIGN ON

SOFTWARE ASSY		VERSION
BOOT	32783	1.28
MAIN PROGRAM	35901	1.07
HELP	34547	1.16
CONFIGURATION	34526	N1000C

5. PORT 2 CONFIGURATION

PORT 2 PROTOCOL	TERML
PORT 2 ENABLE	NO
DATA RATE (BPS)	9600
DATA, PARITY, STOP	8,N,1
NTCIP ADDRESS	0
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	0
NTCIP SINGLE FLAG ENABLE	NO
NTCIP BACKUP TIME	0
PORT 2 DROP-OUT TIME	0
NTCIP RTS TIMING	NO
NTCIP RTS TO CTS DELAY	0
NTCIP RTS TURN-OFF DELAY	0
NTCIP EARLY RTS	NO

6. PORT 3 CONFIGURATION

PORT 3 PROTOCOL	NTCIP
PORT 3 ENABLE	YES
PORT 3 MILLISEC TIMING	NO
PORT 3 RTS TO CTS DELAY	0
PORT 3 RTS TURN-OFF DELAY	0
DUPLEX - HALF OR FULL	FULL
MODEM DATA RATE (BPS)	9600
DATA, PARITY, STOP	8,N,1
TELEMETRY ADDRESS	1
SYSTEM DETECTOR 9-16 ADDRESS	0
TELEMETRY RESPONSE DELAY	1
NTCIP ADDRESS	0
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	0
NTCIP SINGLE FLAG ENABLE	NO
NTCIP BACKUP TIME	0
NTCIP DROP-OUT TIME	50
NTCIP EARLY RTS	NO

REMARKS:

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

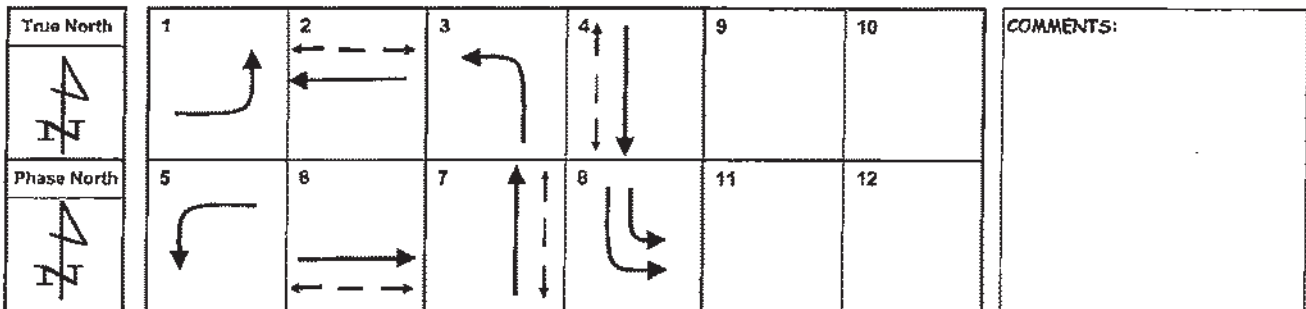
INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GREEN	4	6	4	6	4	6	6	4				
BIKE GREEN	0	0	0	0	0	0	0	0				
CS MIN GREEN	0	0	0	0	0	0	0	0				
WALK	0	7	0	7	0	7	10	0				
PED CLEAR	0	26	0	26	0	22	25	0				
VEH EXT	1.5	4.0	1.5	4.0	1.5	4.0	4.0	1.5				
VEH EXT 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
MAX EXT	0	0	0	0	0	0	0	0				
MAX 1	25	50	20	50	20	50	50	30				
MAX 2	25	140	20	50	20	140	50	30				
MAX 3	0	0	0	0	0	0	0	0				
DET MAX	0	0	0	0	0	0	0	0				
YELLOW	3.0	4.5	3.0	4.5	3.0	4.5	4.5	3.0				
RED CLEAR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
RED REVERT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
ACT B4	0	0	0	0	0	0	0	0				
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
MAX INITIAL	0	0	0	0	0	0	0	0				
TIME B4 REDUCTION	0	15	0	15	0	15	15	0				
CARS WT	0	255	0	255	0	255	255	0				
TIME TO REDUCE	0	15	0	15	0	15	15	0				
MIN GAP	1.5	3.0	1.5	3.0	1.5	3.0	3.0	1.5				



ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6030 Date Implemented: _____ By: _____

2. CONTROLLER SUBMENU (Continued)

6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
PHASE STARTUP		X				X						
ENTRY REM FLASH		X				X						
EXIT REM FLASH												
REM FLASH YELLOW												
FL TOGETHER PHS		X		X		X		X				
FL TOGETHER OVLPS	A			B				C			D	
STARTUP INTERVAL RING 1	YELLOW											
STARTUP INTERVAL RING 2	YELLOW											
POWER START ALL RED TIME												
POWER START FLASH TIME												
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED	6.0 SEC											
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												

7. NO SERVE PHASE

PHASE	12	11	10	9	8	7	6	5	4	3	2
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WALK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WALK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	
GUAR PASSAGE													
NON ACTUATED I													
NON ACTUATED II													
DUAL ENTRY				X				X					
COND SERVICE													
COND RESERVICE													
REST IN WALK													
FLASHING WALK													
FIVE SECTION LEFT TURN HEADS (SPECIAL PROGRAM OPTION FOR STATE OF ILLINOIS)													
5-2				7-4				1-6					
3-8				11-10				9-12					
DUAL ENTRY	ON		RESERVED							OFF			
COND SERVICE ENABLE	OFF		BACKUP PROTECTION GROUP 1							OFF			
COND SERVICE DET X SWITCHING	OFF		BACKUP PROTECTION GROUP 2							OFF			
AUTO PED CLEAR	OFF		BACKUP PROTECTION GROUP 3							OFF			
SPEC PREEMPT OVL P FLASH	OFF		SIMULTANEOUS GAP GROUP 1							ON			
LOCK DETECTORS IN RED ONLY	OFF		SIMULTANEOUS GAP GROUP 2							ON			
RESERVED	OFF		SIMULTANEOUS GAP GROUP 3							OFF			
Unit Backup Time												0	
Unit Redvert												2.0	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU

TIME OF DAY OPERATION SUMMARY					
PLAN 1	ALL OTHER TIMES	PLAN 4	WB PROGRESSION (AS NEEDED)	PLAN 7	
PLAN 2	0600-0900 M-F	PLAN 5	EB PROGRESSION (AS NEEDED)	PLAN 8	
PLAN 3	1500-1900 M-F	PLAN 6		PLAN 9	
FREE	2100-0600 M-F, 1900-0900 S-S				

1. COORDINATOR OPTIONS

SPLIT UNITS	SEC	ACTUATED COORD PHASE(S)	X
OFFSET UNITS	SEC	ACTUATED WALK/REST	
INTERCONNECT FORMAT	STD	INHIBIT MAX	
INTERCONNECT SOURCE	NIC	MAX 2 SELECT	X
RESYNC COUNT	255	MULTISYNC	
TRANSITION	SMOOTH	FLOAT FORCE OFF	
DWELL PERIOD	0s		
FREE ALTERNATE SEQUENCE	A	B	C
	D	E	F

2. COORD MANUAL AND SPLIT DEMAND

MANUAL ENABLE	OFF	MANUAL PATTERN	0
SPLIT DEMAND:		DEMAND 1	DEMAND 2
DEMAND CALL TIME		0s	0s
DEMAND CYCLE COUNT		0	0
DEMAND PHASE	1	2	3
	4	5	6
	7	8	9
	10	11	12
DEMAND 1 PHASES			
DEMAND 2 PHASES			

3. COORD AUTO PERM MIN GREEN

PHASE	AUTO PERM MIN GREEN	PHASE	AUTO PERM MIN GRN
1	7	7	7
2	7	8	7
3	7	9	
4	7	10	
5	7	11	
6	7	12	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard

Date Prepared: 2/19/13 Heli By: DFD

S. No.: 6030

Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

L. PATTERN DATA
OFF-PEAK

COORD PATTERN	1	PHASE 2	20	PHASE 3	18	PHASE 4	47
CYCLE LENGTH	130	PHASE 6	20	PHASE 7	42	PHASE 8	23
OFFSET	68	PHASE 10		PHASE 11		PHASE 12	
		VEH PERMISSIVE	[1]	[2]	0		
		VEH PERM 2 DISP					
		PHASE RESERVE					
		SPLIT EXTENSION/RNG	[1]	0	[2]	0	
		SPL DMD PATTERN	[1]	[2]	[2]	[2]	
		XARTERY PATTERN					
		PHASE	1	2	3	4	5
		COORD PHASES	X	X	X	X	X
		VEHICLE RECALL	X	X	X	X	X
		VEH MAX RECALL					
		PED RECALL					
		PHASE OMIT					
		SPARE					
		ALTERNATE SEQUENCE	A	B	C	D	E
			X				

(AM-PEAK)							
COORD PATTERN	2	PHASE 2	20	PHASE 3	17	PHASE 4	50
CYCLE LENGTH	130	PHASE 6	20	PHASE 7	42	PHASE 8	25
OFFSET	70	PHASE 10		PHASE 11		PHASE 12	
		VEH PERMISSIVE	[1]	0	[2]	0	
		VEH PERM 2 DISP					
		PHASE RESERVE					
		SPLIT EXTENSION/RNG	[1]	0	[2]	0	
		SPL DMD PATTERN	[1]	[2]	[2]	[2]	
		XARTERY PATTERN					
		PHASE	1	2	3	4	5
		COORD PHASES	X	X	X	X	X
		VEHICLE RECALL	X	X	X	X	X
		VEH MAX RECALL					
		PED RECALL					
		PHASE OMIT					
		SPARE					
		ALTERNATE SEQUENCE	A	B	C	D	E
			X				

PHASE 1	25	PHASE 2	20	PHASE 3	18	PHASE 4	47
PHASE 5	20	PHASE 6	20	PHASE 7	42	PHASE 8	23
PHASE 9		PHASE 10		PHASE 11		PHASE 12	
VEH PERMISSIVE	[1]	[2]	0	[2]	0		
VEH PERM 2 DISP							
PHASE RESERVE							
SPLIT EXTENSION/RNG	[1]	0	[2]	0	[2]	0	
SPL DMD PATTERN	[1]	[2]	[2]	[2]	[2]	[2]	
XARTERY PATTERN							
PHASE	1	2	3	4	5	6	7
COORD PHASES	X	X	X	X	X	X	X
VEHICLE RECALL	X	X	X	X	X	X	X
VEH MAX RECALL							
PED RECALL							
PHASE OMIT							
SPARE							
ALTERNATE SEQUENCE	A	B	C	D	E	F	
	X						

PHASE 1	23	PHASE 2	20	PHASE 3	17	PHASE 4	50
PHASE 5	20	PHASE 6	20	PHASE 7	42	PHASE 8	25
PHASE 9		PHASE 10		PHASE 11		PHASE 12	
VEH PERMISSIVE	[1]	0	[2]	0			
VEH PERM 2 DISP							
PHASE RESERVE							
SPLIT EXTENSION/RNG	[1]	0	[2]	0	[2]	0	
SPL DMD PATTERN	[1]	[2]	[2]	[2]	[2]	[2]	
XARTERY PATTERN							
PHASE	1	2	3	4	5	6	7
COORD PHASES	X	X	X	X	X	X	X
VEHICLE RECALL	X	X	X	X	X	X	X
VEH MAX RECALL							
PED RECALL							
PHASE OMIT							
SPARE							
ALTERNATE SEQUENCE	A	B	C	D	E	F	
	X						

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard

Date Prepared: 2/19/13 HCH By: DFA

T.S. No.: 6030

Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

1. PATTERN DATA (Continued)

COORD PATTERN	3	PHASE 3	18	PHASE 4	47
CYCLE LENGTH	130	PHASE 7	42	PHASE 8	23
OFFSET	68	PHASE 11		PHASE 12	
		VEH PERMISSIVE	[1] 0	[2] 0	
		VEH PERM 2 DISP			
		PHASE RESERVE			
		SPLIT EXTENSION/RING	[1] 0	[2] 0	
		SPL DMND PATTERN	[1] 0	[2] 0	
		XARTERY PATTERN			

WB PROGRESSION (AS NEEDED)		4	PHASE 3	21	PHASE 4	47
COORD PATTERN		150	PHASE 7	42	PHASE 8	26
CYCLE LENGTH		52	PHASE 11		PHASE 12	
OFFSET			VEH PERMISSIVE	[1] 0	[2] 0	
			VEH PERM 2 DISP			
			PHASE RESERVE			
			SPLIT EXTENSION/RING	[1] 0	[2] 0	
			SPL DMND PATTERN	[1] 0	[2] 0	
			XARTERY PATTERN			

SPLITS													
PHASE 1	25	PHASE 2	20	PHASE 3	18	PHASE 4	47						
PHASE 5	20	PHASE 6	20	PHASE 7	42	PHASE 8	23						
PHASE 9		PHASE 10		PHASE 11		PHASE 12							
VEH PERMISSIVE	[1] 0			[2] 0									
VEH PERM 2 DISP													
PHASE RESERVE													
SPLIT EXTENSION/RING	[1] 0			[2] 0									
SPL DMND PATTERN	[1] 0			[2] 0									
XARTERY PATTERN													
PHASE		1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES			X				X						
VEHICLE RECALL			X				X						
VEH MAX RECALL													
PED RECALL													
PHASE OMIT													
SPARE													
ALTERNATE SEQUENCE		A	B	C	D	E	F						

PHASE		1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES			X				X						
VEHICLE RECALL			X				X						
VEH MAX RECALL													
PED RECALL													
PHASE OMIT													
SPARE													
ALTERNATE SEQUENCE		A	B	C	D	E	F						

ASC/2S - NTCIP
 PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard

Date Prepared: 2-19-13 Hcd By: DEA

S. No.: 6030

Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

PATTERN DATA (Continued)
 B. PROGRESSION (AS NEEDED)

COORD PATTERN	5	C/O/S	5/1/1
CYCLE LENGTH	150		
OFFSET	42		

COORD PATTERN		C/O/S	
CYCLE LENGTH			
OFFSET			

SPLITS												
PHASE 1	28	PHASE 2	34	PHASE 3	21	PHASE 4	47					
PHASE 5	20	PHASE 6	34	PHASE 7	42	PHASE 8	26					
PHASE 9		PHASE 10		PHASE 11		PHASE 12						
VEH PERMISSIVE	[1]	0	[2]	0								
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSION/RING	[1]	0	[2]	0								
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES	X	X			X	X						
VEHICLE RECALL		X			X							
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE	X	A	B	C	D	E	F					

SPLITS												
PHASE 1		PHASE 2		PHASE 3		PHASE 4						
PHASE 5		PHASE 6		PHASE 7		PHASE 8						
PHASE 9		PHASE 10		PHASE 11		PHASE 12						
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE		A	B	C	D	E	F					

ASCIS - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: _____

Imperial Hwy @ Pioneer Boulevard

Date Prepared: 2-19-13 HCA By: DPA

T.S. No.: 6030

Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

4. PATTERN DATA (Continued)

COORD PATTERN	C/O/S
CYCLE LENGTH	
OFFSET	
SPLITS	
PHASE 1	PHASE 2
PHASE 3	PHASE 4
PHASE 5	PHASE 6
PHASE 7	PHASE 8
PHASE 9	PHASE 10
PHASE 11	PHASE 12
VEH PERMISSIVE [1]	[2]
VEH PERM 2 DISP	
PHASE RESERVE	
SPLIT EXTENSION/RING [1]	[2]
SPL DMD PATTERN [1]	[2]
XARTERY PATTERN	
PHASE	
COORD PHASES	1 2 3 4 5 6 7 8 9 10 11 12
VEHICLE RECALL	
VEH MAX RECALL	
PED RECALL	
PHASE OMIT	
SPARE	
ALTERNATE SEQUENCE	A B C D E F

COORD PATTERN	C/O/S
CYCLE LENGTH	
OFFSET	
SPLITS	
PHASE 1	PHASE 2
PHASE 3	PHASE 4
PHASE 5	PHASE 6
PHASE 7	PHASE 8
PHASE 9	PHASE 10
PHASE 11	PHASE 12
VEH PERMISSIVE [1]	[2]
VEH PERM 2 DISP	
PHASE RESERVE	
SPLIT EXTENSION/RING [1]	[2]
SPL DMD PATTERN [1]	[2]
XARTERY PATTERN	
PHASE	
COORD PHASES	1 2 3 4 5 6 7 8 9 10 11 12
VEHICLE RECALL	
VEH MAX RECALL	
PED RECALL	
PHASE OMIT	
SPARE	
ALTERNATE SEQUENCE	A B C D E F

Up to 64 Coordination Patterns Available.

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

4. PREEMPTOR SUBMENU (Continued)

5. PRIORITY PREEMPTOR 5

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
SPARE												
TERM OVERLAP	A		B		C		D					
ACTIVE				PED DARK								
PRIORITY				PED ACTIVE								
DET LOCK				ZERO PC TIME								
HOLD FLASH				PC THRU YELLOW								
TERM OVLP ASAP				TERM PHASES								
DON'T OVERRIDE FLASH				ACTIVE ONLY DURING HOLD								
FLASH ALL OUTPUTS				NO CVM IN FLASH								
YELLOW-RED GOES GREEN				FAST FLASH GRN ON HOLD								
ENABLE MAX PREEMPT TIME				OUT OF FLASH								
MAX TIME				DURATION TIME								
MIN HOLD TIME				DELAY TIME								
MIN PED CLEAR				INHIBIT TIME								
EXIT MAX				HOLD DELAY TIME								
MINIMUM	GREEN			YELLOW			RED					
TRACK CLEAR												
HOLD												
LINKED PREEMPTOR												

6. PRIORITY PREEMPTOR 6

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
SPARE												
TERM OVERLAP	A		B		C		D					
ACTIVE				PED DARK								
PRIORITY				PED ACTIVE								
DET LOCK				ZERO PC TIME								
HOLD FLASH				PC THRU YELLOW								
TERM OVLP ASAP				TERM PHASES								
DON'T OVERRIDE FLASH				ACTIVE ONLY DURING HOLD								
FLASH ALL OUTPUTS				NO CVM IN FLASH								
YELLOW-RED GOES GREEN				FAST FLASH GRN ON HOLD								
ENABLE MAX PREEMPT TIME				OUT OF FLASH								
MAX TIME				DURATION TIME								
MIN HOLD TIME				DELAY TIME								
MIN PED CLEAR				INHIBIT TIME								
EXIT MAX				HOLD DELAY TIME								
MINIMUM	GREEN			YELLOW			RED					
TRACK CLEAR												
HOLD												
LINKED PREEMPTOR												

7. BUS PREEMPTORS

	BUS PREEMPTOR											
	1	2	3	4								
PREEMPTOR ACTIVE												
DETECTOR LOCK												
MAXIMUM TIME												
RESERVICE TIME												
DELAY TIME												
INHIBIT TIME												
ENTRANCE GREEN												
ENTRANCE PED CLEAR												
ENTRANCE YELLOW												
ENTRANCE RED												
MIN HOLD TIME												
	HOLD PHASE											
	1	2	3	4	5	6	7	8	9	10	11	12
PREEMPTOR 1												
PREEMPTOR 2												
PREEMPTOR 3												
PREEMPTOR 4												

FOR INFORMATION ONLY	
BUS PRIORITY CONTROL	
CITY CODE	
PRIMARY ADDRESS	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-14-13 HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

5. NIC/TOD SUBMENU

1. NIC/TOD CLOCK/CALENDAR DATA

DATE SET	
TIME SET	
MANUAL NIC PROGRAM STEP	0
MANUAL TOD PROGRAM STEP	0
SYNC REFERENCE TIME	** 00:00
SYNC REFERENCE	REFERENCE TIME
WEEK 1 BEGINS ON 1ST SUNDAY	
DISABLE DAYLIGHT SAVINGS	
DST BEGINS LAST SUNDAY	

2. NIC/TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRI	SAT
1	2	1	1	1	1	1	2
2							
3							
4							
5							
6							
7							
8							
9							
10							

3. NIC/TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR				49	50	51	52	53
WEEKLY PROGRAM				1	1	1	1	1

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PRDG
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

**NOTE: When using an RCTB Unit, in order for the controller clock to be properly updated, the RCTB Unit must be designed for a 03:30AM Sync Pulse.

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA
 T.S. No.: 6030 Date Implemented: _____ By: _____

5. NIC/TOD SUBMENU (Continued)

5. NIC PROGRAM STEP

STEP	PGM	TIME	PATTERN	OVERRIDE
1	1	0000	0	
2	2	0000	0	
3	1	0600	2	
4	1	0900	1	
5	2	0900	1	
6	1	1500	3	
7	1	1900	1	
8	2	1900	0	
9	1	2100	0	

Up to 200 NIC Program Steps Available.

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard

Date Prepared: 2-19-13 HCH By: DFR

T.S. No.: 6030

Date Implemented: _____ By: _____

5. NIC/TOD SUBMENU (Continued)

TOD PROGRAM STEP	5																
DAY PGM NUMBER	0																
STEP BEGINS	0:00																
FLASH																	
RED REST																	
SPARE 5																	
SPARE 3																	
TYPE 0 DELAY ENABLE																	
DET DIAG PLAN																	
ALTERNATE SEQUENCE	A	B	C	D	E	F											
PHASE	1	2	3	4	5	6	7	8	9	10	11	12					
MAX 2 ENABLE																	
MAX 3 ENABLE																	
VEH RECALL																	
VEH MAX RECALL																	
PED RECALL																	
COND SERV INHIBIT																	
PHASE OMIT																	
SPECIAL FUNCTIONS													(1-8)				

TOD PROGRAM STEP	7																
DAY PGM NUMBER	0																
STEP BEGINS	0:00																
FLASH																	
RED REST																	
SPARE 5																	
SPARE 3																	
TYPE 0 DELAY ENABLE																	
DET DIAG PLAN																	
ALTERNATE SEQUENCE	A	B	C	D	E	F											
PHASE	1	2	3	4	5	6	7	8	9	10	11	12					
MAX 2 ENABLE																	
MAX 3 ENABLE																	
VEH RECALL																	
VEH MAX RECALL																	
PED RECALL																	
COND SERV INHIBIT																	
PHASE OMIT																	
SPECIAL FUNCTIONS													(1-8)				

TOD PROGRAM STEP	6																
DAY PGM NUMBER	0																
STEP BEGINS	0:00																
FLASH																	
RED REST																	
SPARE 5																	
SPARE 3																	
TYPE 0 DELAY ENABLE																	
DET DIAG PLAN																	
ALTERNATE SEQUENCE	A	B	C	D	E	F											
PHASE	1	2	3	4	5	6	7	8	9	10	11	12					
MAX 2 ENABLE																	
MAX 3 ENABLE																	
VEH RECALL																	
VEH MAX RECALL																	
PED RECALL																	
COND SERV INHIBIT																	
PHASE OMIT																	
SPECIAL FUNCTIONS													(1-8)				

TOD PROGRAM STEP	8																
DAY PGM NUMBER	0																
STEP BEGINS	0:00																
FLASH																	
RED REST																	
SPARE 5																	
SPARE 3																	
TYPE 0 DELAY ENABLE																	
DET DIAG PLAN																	
ALTERNATE SEQUENCE	A	B	C	D	E	F											
PHASE	1	2	3	4	5	6	7	8	9	10	11	12					
MAX 2 ENABLE																	
MAX 3 ENABLE																	
VEH RECALL																	
VEH MAX RECALL																	
PED RECALL																	
COND SERV INHIBIT																	
PHASE OMIT																	
SPECIAL FUNCTIONS													(1-8)				

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DEA

T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	1	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	3	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	2	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	4	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	5	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	7	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	6	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	8	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION:

Imperial Hwy @ Pioneer Boulevard

Date Prepared: 2-19-13/HCH By: DFB

T.S. No.: 6030

Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	9	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	11	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	10	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	12	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13/hcl By: DEA
T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	13	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	15	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	14	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	16	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	17	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	19	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	18	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	0

DETECTOR	20	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13/HCH By: DFA
T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	21	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	23	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	22	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0.0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	24	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	25	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL	0	MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	27	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	26	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	28	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13/HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	29	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	31	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	30	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS	0	FAIL ACTION	

DETECTOR	32	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3 4 5 6 7 8 9 10 11 12
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

Up to 64 Vehicle Detectors Available

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6030 Date Implemented: _____ By: _____

6. DETECTORS SUBMENU (Continued)

2. SPEED DETECTORS

SPEED DETECTOR NUMBERS	1	2	3	4	5	6	7	8
ONE DETECTOR SPEED:								
LOCAL DET NUMBER								
VEHICLE LENGTH								
LOOP LENGTH								
TWO DETECTOR SPEED:								
LOCAL DET NUMBER								
SPEED TRAP LENGTH								
ENABLE LOG								
DETECTOR LOG INTERVAL	0			MINUTES				
UNITS:								
SPEED DETECTOR NUMBERS	9	10	11	12	13	14	15	16
ONE DETECTOR SPEED:								
LOCAL DET NUMBER								
VEHICLE LENGTH								
LOOP LENGTH								
TWO DETECTOR SPEED:								
LOCAL DET NUMBER								
SPEED TRAP LENGTH								
ENABLE LOG								
DETECTOR LOG INTERVAL	0			MINUTES				
UNITS:								

3. PEDESTRIAN DETECTOR SETUP

PEDESTRIAN DETECTOR SETUP					
DETECTOR	PHASE	ERRATIC COUNTS	NO ACTIVITY	MAX PRESENCE	SCALE
1					
2	2				
3					
4	4				
5					
6	6				
7	7				
8					
9					
10					
11					
12					

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Pioneer Boulevard Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6030 Date Implemented: _____ By: _____

DETECTOR ASSIGNMENT WORK SHEET

LOOP LOCATION	LANE	DET ASSIGN	DET TYP #	PHASE												DET DELAY	DET EXTEND	QUEUE MAX	REMARKS
				1	2	3	4	5	6	7	8	9	10	11	12				
1-W-φ1	LT	1	0	X															F
1-E-φ2	1,2,3	2	0		X														A
1-S-φ3	LT	3	0			X													F
1-N-φ4	1,2	4	0				X												A
1-E-φ5	LT	5	0					X											F
1-W-φ6	1,2,3	6	0						X										A
1-S-φ7	1,2	7	0							X									A
1-N-φ8	LT-1	8	0								X								F
2-E-φ2	1,2	10	5		X												2.0		Q
2-N-φ4	1,2	12	5			X											2.0		Q
2-W-φ6	1,2	14	5					X									2.0		Q
2-S-φ7	1,2	15	5						X								2.0		Q
2-N-φ8	LT-2	16	0							X									F
3-E-φ2	3	18	5		X												2.0		Q
3-N-φ4	RT	20	5			X											2.0		Q
3-W-φ6	3	22	5					X									2.0		Q
3-S-φ7	RT	23	5						X								2.0		Q

DETECTOR ASSIGNMENT DEFINITIONS

CONTROLLER	CONNECTOR'S A,B,C								CONNECTOR D								CONNECTOR TELEMETRY								CONNECTOR TYPE 1							
	DETECTOR								DETECTOR								DETECTOR								INPUT TYPE 1 ONLY							
ASC-2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
* = DELAY Time or EXTEND Time set on External Sensor																																
** = When the Detector Input is set to be a TYPE 4 Detector, the EXTEND value set in the Controller becomes the QUEUE MAX value and any Extension Time needed must be set externally on the Sensor. If the Detector Input is set to be a TYPE 5, the EXTEND value becomes a Reset (Gap) Timer value and the Extension Time is set Externally on the Sensor Unit.																																
Q = QUEUE CLEARING LOOP																F = FIRST VEHICLE LOOP																
H = HOLDING LOOP																A = ADVANCE LOOP																

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 2-14-13 HCH By: DEA

T.S. No.: 6034

Date Implemented: _____ By: _____

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

TIMING PLAN	PHASE DATA															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN		10	4	4		10										
BICYCLE MIN GREEN		0	0	0		0										
CONDITIONAL SERVICE MIN GRN		0	0	0		0										
DELAY GREEN		0	0	0		0										
WALK		7	0	7		7										
WALK 2		0	0	0		0										
WALK MAX		0	0	0		0										
PEDESTRIAN CLEARANCE		9	0	19		79										
PEDESTRIAN CLEARANCE 2		0	0	0		0										
PEDESTRIAN CLEARANCE MAX		0	0	0		0										
PEDESTRIAN CARRY OVER		0	0	0		0										
VEHICLE EXTENSION		4.5	3.0	3.0		4.5										
VEHICLE EXTENSION 2		0.0	0.0	0.0		0.0										
MAX 1		50	20	35		50										
MAX 2		140	20	35		140										
MAX 3		0	0	0		0										
DYNAMIC MAX		0	0	0		0										
DYNAMIC STEP		0.0	0.0	0.0		0.0										
YELLOW		4.5	3.0	4.0		4.5										
RED CLEARANCE		2.0	2.0	2.0		2.0										
RED MAX		0.0	0.0	0.0		0.0										
RED REVERT		2.0	2.0	2.0		2.0										
ACTUATIONS BEFORE (ACT B4)		0	0	0		0										
SEC/ACTUATION		15	0.0	0.0		15										
MAX ADDED INITIAL (MAX INI)		25	0	0		25										
TIME BEFORE GAP REDUCTION		15	0	0		15										
CARS WAITING B4 REDUCTION		255	0	0		255										
STEP TO REDUCE (STPTDUC)		0.0	0.0	0.0		0.0										
TIME TO REDUCE (TTREDUC)		15	0	0		15										
MINIMUM GAP		3.0	3.0	3.0		3.0										

Comments:



PROGRAM REFERENCE CARD

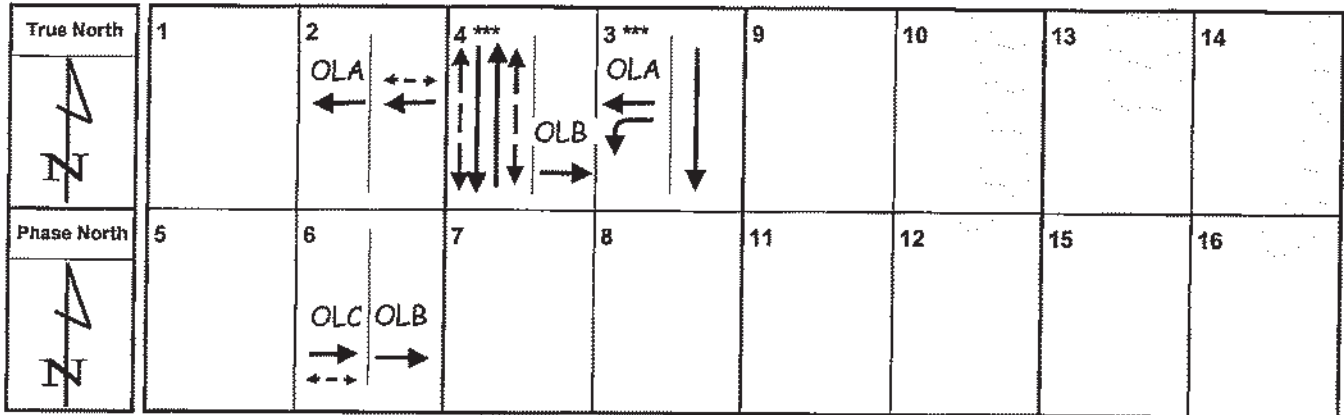
INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA
T.S. No.: 6034 Date Implemented: _____ By: _____

UTILITIES SUBMENU

8-7. SOFTWARE MODULES

NAME	PART NUMBER	VERSION
BOOT	100-1047-212	V1.12.05
APPLICATION	100-1082-249	02.48.00
CONFIGURATION	100-1049-001	N3000, 8
HELP	100-1050-001	01.00.00
DEFINITIONS	100-1051-001	02.10.00
TEXT	100-1052-001	02.10.00
TELEMETRY		

PHASE DIAGRAM



Comments:

OLA= $\phi 2 + \phi 3$ *

OLB= $\phi 6 + \phi 4$

OLC= $\phi 6$ *

OLD= $\phi 3 + \phi 4$ **

* OLA & OLC have green extension.

** OLD is a dummy OL to allow $\phi 3$ check to call $\phi 4$ during OLD red via external relay.

*** $\phi 4$ red grounds $\phi 3$ phase omit.

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

CONFIGURATION SUBMENU

1-1-1. PHASE RING SEQUENCE AND ASSIGNMENT

CONTROLLER SEQUENCE															1		
SEQUENCE COMMANDS															HARDWARE ALTERNATE SEQUENCE ENABLE		NO
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
BARRIER CONTROL	B		B		B												
RING 1	1	2	4	3													
RING 2	5	6	7	8													
RING 3																	
RING 4																	

CONTROLLER SEQUENCE															2		
SEQUENCE COMMANDS															HARDWARE ALTERNATE SEQUENCE ENABLE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
BARRIER CONTROL																	
RING 1																	
RING 2																	
RING 3																	
RING 4																	

CONTROLLER SEQUENCE															3		
SEQUENCE COMMANDS															HARDWARE ALTERNATE SEQUENCE ENABLE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
BARRIER CONTROL																	
RING 1																	
RING 2																	
RING 3																	
RING 4																	

CONTROLLER SEQUENCE															4		
SEQUENCE COMMANDS															HARDWARE ALTERNATE SEQUENCE ENABLE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
BARRIER CONTROL																	
RING 1																	
RING 2																	
RING 3																	
RING 4																	

UP TO 16 CONTROL SEQUENCES AVAILABLE.

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

CONFIGURATION SUBMENU

1-1-4. SIMULTANEOUS GAP PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1					X	X										
2					X	X										
3							X	X								
4							X	X								
5	X	X														
6	X	X														
7			X	X												
8			X	X												
9																
10																
11																
12																
13																
14																
15																
16																
DISABLE																

1-1-5. DIAMOND SEQUENCE (Controller Must Be Programmed for Diamond Sequence Operation)

1-2. PHASE IN USE / EXCLUSIVE PEDESTRIAN

PHASE	1	2	3	4	5	6	7	8
PHASES IN USE		X	X	X		X		
EXCLUSIVE PED								

PHASE	9	10	11	12	13	14	15	16
PHASES IN USE								
EXCLUSIVE PED								

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				POWER	FLASH	
			RED	YELLOW	GREEN	DIMMING		AUTO	TOGETHER
1	1								
2	2	V						R	X
3	3	V						R	
4	4	V						R	X
5	5								
6	6								
7	7								
8	8								
9	2	P							
10	4	P							
11	6	P							
12	8								
13	1	O						R	
14	2	O						R	X
15	3	O						R	
16	4	O						R	X

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034 Date Implemented: _____ By: _____

CONFIGURATION SUBMENU

1-4-1. SDLC OPTIONS

BIU	1	2	3	4	5	6	7	8
TERM & FACILITY								
DETECTOR RACK								
ENABLE TS2/MMU TYPE CABINET								NO
ENABLE MMU EXTENDED STATUS								NO
ENABLE SDLC STOP TIME								NO
ENABLE 3 CRITICAL RFE'S LOCKUP								YES
MMU TO CU SDLC EXTERNAL START								ENABLED

1-4-2. MMU PROGRAM

CHANNEL	CHANNEL CAN SERVE WITH														
	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-3. COLOR CHECK ENABLE

ENABLE COLOR CHECK	X															
MMU CHANNEL / LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RED		X	X	X									X	X	X	
YELLOW		X	X	X									X	X	X	
GREEN		X	X	X									X	X	X	

1-4-4. SECONDARY TO SECONDARY ADDRESSING

TERM & FACILITY	1	2	3	4	5	6	7	8	MMU
DETECTOR RACK	1	2	3	4	5	6	7	8	DIAG
ENABLE SDLC DIAGNOSTIC TEST									NO

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

CONFIGURATION SUBMENU

1-5-1. ETHERNET PORT CONFIGURATION

MAC ADDRESS	00:04:81:02:04:A2
CONTROLLER IP ADDRESS	172.22.1.9
SUBNET MASK	255.255.252.0
DEFAULT GATEWAY IP ADDRESS	0.0.0.0
SERVER IP ADDRESS	122.22.1.254
LINK SPEED/DUPLEX	AUTO
DROP-OUT TIME	10

1-5-2. PORT 2/C50S

ENABLE	NO	PROTOCOL*	TERM
DATA BIT RATE (BPS)	9600	ADDRESS	
DATA, PARITY, STOP	8,N,1	GROUP ADDRESS	
DUPLEX - HALF OR FULL	HALF	SINGLE FLAGGED	
FLOW CONTROL	YES	DROP OUT TIME	
INTERSECTION MONITOR:		ATCS RAILROAD	
MODEM SETUP STRING		ATCS RAILROAD LINE	
USER STRING		ATCS GROUP	
		WAYSIDE	ATC
DEVICE			
SUBNODE			

1-5-3. PORT 3A/C21S

ENABLE	NO	PROTOCOL**	NTCIP
DATA BIT RATE (BPS)	19200	ADDRESS	0
DATA, PARITY, STOP	8,N,1	GROUP ADDRESS	0
DUPLEX - HALF OR FULL	FULL	SINGLE FLAGGED	YES
FLOW CONTROL	YES	TRD (ms)	0.0
		DROP-OUT TIME (in sec)	10

*PORT 2/C50S PROTOCOL TYPES

- TERM
- NTCIP
- ECPIP
- AB3418
- METRO RAPID
- IEEE 1570

** PORT 3A/C21S & PORT 3B/C22S

PROTOCOL TYPES

- TERM
- NTCIP
- ECPI
- AB3418

1-5-4. PORT 3B/C22S

ENABLE	YES	PROTOCOL**	ECPIP
DATA BIT RATE (BPS)	1200	ADDRESS	
DATA, PARITY, STOP	8,0,1	GROUP ADDRESS	
DUPLEX - HALF OR FULL	FULL	SINGLE FLAGGED	
FLOW CONTROL	YES	TRD (ms)	0.0
RTS TO CTS DELAY (in ms)	3.0	DROP-OUT TIME	300
RTS TURN OFF DELAY (in ms)	2.0		
EARLY RTS	NO		
FSK HARDWARE	YES		

1-5-5. NTCIP

BACKUP TIME (in seconds)	0
ETHERNET UDP PORT	50009
ETHERNET PRIORITY	1
PORT 2 PRIORITY	4
PORT 3A PRIORITY	2
PORT 3B PRIORITY	3

1-5-6. ECPIP

CONTROLLER ADDRESS	1							
EXPANDED SYSTEM DETECTOR ADDRESS								
SYSTEM DETECTOR ASSIGNMENT:								
SYSTEM DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
SYSTEM DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HGH By: DFA

T.S. No.: 6034 Date Implemented: _____ By: _____

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

TIMING PLAN	1	PHASE DATA																
		PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN			10	4	4		10											
BICYCLE MIN GREEN			0	0	0		0											
CONDITIONAL SERVICE MIN GRN			0	0	0		0											
DELAY GREEN			0	0	0		0											
WALK			7	0	7		7											
WALK 2			0	0	0		0											
WALK MAX			0	0	0		0											
PEDESTRIAN CLEARANCE			9	0	19		9											
PEDESTRIAN CLEARANCE 2			0	0	0		0											
PEDESTRIAN CLEARANCE MAX			0	0	0		0											
PEDESTRIAN CARRY OVER			0	0	0		0											
VEHICLE EXTENSION			4.5	3.0	3.0		4.5											
VEHICLE EXTENSION 2			0.0	0.0	0.0		0.0											
MAX 1			50	20	35		50											
MAX 2			140	20	35		140											
MAX 3			0	0	0		0											
DYNAMIC MAX			0	0	0		0											
DYNAMIC STEP			0.0	0.0	0.0		0.0											
YELLOW			4.5	3.0	4.0		4.5											
RED CLEARANCE			2.0	2.0	2.0		2.0											
RED MAX			0.0	0.0	0.0		0.0											
RED REVERT			2.0	2.0	2.0		2.0											
ACTUATIONS BEFORE (ACT B4)			0	0	0		0											
SEC/ACTUATION			15	0.0	0.0		15											
MAX ADDED INITIAL (MAX INI)			25	0	0		25											
TIME BEFORE GAP REDUCTION			15	0	0		15											
CARS WAITING B4 REDUCTION			255	0	0		255											
STEP TO REDUCE (STPTDUC)			0.0	0.0	0.0		0.0											
TIME TO REDUCE (TTREDUC)			15	0	0		15											
MINIMUM GAP			3.0	3.0	3.0		3.0											

Comments:

ASC/3
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DEA
T.S. No.: 6034 Date Implemented: _____ By: _____

CONTROLLER SUBMENU

2-2. VEHICLE OVERLAP

VEHICLE OVERLAP	A				TYPE								NORMAL			
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED		X	X													
PROTECT																
MODIFIER																
PED PROTECT																
NOT OVLP																
FLASH GRN																
LAG X PHASE																
LAG 2 PHASE																
LAG GREEN	3.0		LAG YELLOW		4.5		LAG RED		2.0		ADV GREEN					
PROTECTED PHASE (LEFT TURN)																
PERMISSIVE PHASE (OPPOSING THROUGH)																
FLASHING ARROW OUTPUT												CH				
DELAY START OF FYA:								CLEARANCE:								
ACTION PLAN SF BIT DISABLE																

VEHICLE OVERLAP	D				TYPE								NORMAL			
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED			X	X												
PROTECT																
MODIFIER																
PED PROTECT																
NOT OVLP																
FLASH GRN																
LAG X PHASE																
LAG 2 PHASE																
LAG GREEN	0.0		LAG YELLOW		3.0		LAG RED		0.0		ADV GREEN					
PROTECTED PHASE (LEFT TURN)																
PERMISSIVE PHASE (OPPOSING THROUGH)																
FLASHING ARROW OUTPUT												CH				
DELAY START OF FYA:								CLEARANCE:								
ACTION PLAN SF BIT DISABLE																

VEHICLE OVERLAP	B				TYPE								NORMAL			
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED				X		X										
PROTECT																
MODIFIER																
PED PROTECT																
NOT OVLP																
FLASH GRN																
LAG X PHASE																
LAG 2 PHASE																
LAG GREEN	3.0		LAG YELLOW		4.5		LAG RED		2.0		ADV GREEN					
PROTECTED PHASE (LEFT TURN)																
PERMISSIVE PHASE (OPPOSING THROUGH)																
FLASHING ARROW OUTPUT												CH				
DELAY START OF FYA:								CLEARANCE:								
ACTION PLAN SF BIT DISABLE																

VEHICLE OVERLAP	TYPE															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PROTECT																
NOT OVLP																
FLASH GRN																
LAG X PHASE																
LAG 2 PHASE																
LAG GREEN					LAG YELLOW				LAG RED				ADV GREEN			
PROTECTED PHASE (LEFT TURN)																
PERMISSIVE PHASE (OPPOSING THROUGH)																
FLASHING ARROW OUTPUT												CH				
DELAY START OF FYA:								CLEARANCE:								
ACTION PLAN SF BIT DISABLE																

VEHICLE OVERLAP	C				TYPE								NORMAL			
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED						X										
PROTECT																
MODIFIER																
PED PROTECT																
NOT OVLP																
FLASH GRN																
LAG X PHASE																
LAG 2 PHASE																
LAG GREEN	3.0		LAG YELLOW		4.5		LAG RED		2.0		ADV GREEN					
PROTECTED PHASE (LEFT TURN)																
PERMISSIVE PHASE (OPPOSING THROUGH)																
FLASHING ARROW OUTPUT												CH				
DELAY START OF FYA:								CLEARANCE:								
ACTION PLAN SF BIT DISABLE																

VEHICLE OVERLAP	TYPE															
PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																
PROTECT																
MODIFIER																
PED PROTECT																
NOT OVLP																
FLASH GRN																
LAG X PHASE																
LAG 2 PHASE																
LAG GREEN					LAG YELLOW				LAG RED				ADV GREEN			
PROTECTED PHASE (LEFT TURN)																
PERMISSIVE PHASE (OPPOSING THROUGH)																
FLASHING ARROW OUTPUT												CH				
DELAY START OF FYA:								CLEARANCE:								
ACTION PLAN SF BIT DISABLE																

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

CONTROLLER SUBMENU

2-2. VEHICLE OVERLAP

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW				LAG RED				ADV GREEN							
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT											CH						
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW				LAG RED				ADV GREEN							
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT											CH						
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW				LAG RED				ADV GREEN							
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT											CH						
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

VEHICLE OVERLAP		TYPE															
PHASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INCLUDED																	
PROTECT																	
MODIFIER																	
PED PROTECT																	
NOT OVLP																	
FLASH GRN																	
LAG X PHASE																	
LAG 2 PHASE																	
LAG GREEN		LAG YELLOW				LAG RED				ADV GREEN							
PROTECTED PHASE (LEFT TURN)																	
PERMISSIVE PHASE (OPPOSING THROUGH)																	
FLASHING ARROW OUTPUT											CH						
DELAY START OF FYA:						CLEARANCE:											
ACTION PLAN SF BIT DISABLE																	

PROGRAM REFERENCE CARD

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CONTROLLER SUBMENU

2-5. START / FLASH DATA

POWER START																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PHASE		Y				Y														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
OVERLAP																				
FLASH>MON	NO				FLASH TIME				0				ALL RED				6.0			
POWER START SEQ	1																			
AUTOMATIC FLASH																				
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
ENTRY																				
EXIT																				
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
EXIT																				
FLASH>MON	NO				EXIT FLASH				R				MIN AUTO FLASH				10			
MINIMUM RECALL	NO				CYCLE THRU PHASE				NO											

2-6-1. CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT								UNIT RED REVERT								
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FLASHING GREEN PHASE																
GUARANTEED PASSAGE																
NON-ACT I																
NON-ACT II																
DUAL ENTRY																
COND SERVICE																
COND RESERVICE																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEH EXT																

2-6-2. EXTENDED OPTIONS [Not Available]

ASC/3
PROGRAM REFERENCE CARD

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COORDINATION SUBMENU

3-2. COORDINATOR PATTERN

COORDINATOR PATTERN	1	
USE SPLIT PATTERN	1	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	130	STD (COS) 111
OFFSET VALUE	43	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICE	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT		62 26 42 62
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	19	19
VEH PERM	0	0 0 DISP
RING DISP		0 0 0 (RING 2-4)
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN X-ARTERIAL PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

COORDINATOR PATTERN	2	
USE SPLIT PATTERN	2	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	130	STD (COS) 211
OFFSET VALUE	43	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICE	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT		62 26 42 62
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	15	15
VEH PERM	0	0 0 DISP
RING DISP		0 0 0 (RING 2-4)
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN X-ARTERIAL PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

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COORDINATION SUBMENU

3-2. COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	3	
USE SPLIT PATTERN	3	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	130	STD (COS) 311
OFFSET VALUE	43	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICE	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT		62 26 42 62
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	17	17
VEH PERM	0	0 0 DISP
RING DISP		0 0 0 (RING 2-4)
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN X-ARTERIAL PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

COORDINATOR PATTERN	4	
USE SPLIT PATTERN	4	SPLIT SUM
TS2 (PAT - OFF)		
CYCLE	150	STD (COS) 411
OFFSET VALUE	48	
ACTUATED COORD	YES	TIMING PLAN 1
ACT WALK REST	NO	SEQUENCE 1
PHASE RESERVICE	NO	ACTION PLAN 0
SPLIT PREFERENCE PHASES		
PHASE(S)	1	2 3 4 5 6 7 8
SPLIT		82 26 42 82
PREFERENCE 1		
PREFERENCE 2		
SPLIT EXT (SEC)	60	60
VEH PERM	0	0 0 DISP
RING DISP		0 0 0 (RING 2-4)
PHASE(S)	9	10 11 12 13 14 15 16
SPLIT		
PREFERENCE 1		
PREFERENCE 2		
SPLIT DEMAND PATTERN X-ARTERIAL PATTERN		
PHASE(S)	1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
COORD	X	X
VEH RECALL	X	X
PED RECALL		
MAX RECALL		
OMIT		X X X X X X X X
SPECIAL FUNCTION OUTPUTS		

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PROGRAM REFERENCE CARD

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COORDINATION SUBMENU

3-2. COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	5															
USE SPLIT PATTERN	5															
TS2 (PAT - OFF)																
CYCLE	150				STD (COS)				511							
OFFSET VALUE	42															
ACTUATED COORD	YES				TIMING PLAN				1							
ACT WALK REST	NO				SEQUENCE				1							
PHASE RESERVICE	NO				ACTION PLAN				0							
SPLIT PREFERENCE PHASES																
PHASE(S)	1	2	3	4	5	6	7	8								
SPLIT		82	26	42		82										
PREFERENCE 1																
PREFERENCE 2																
SPLIT EXT (SEC)	60	60														
VEH PERM	0	0	0	DISP												
RING DISP		0	0	0	(RING 2-4)											
PHASE(S)	9	10	11	12	13	14	15	16								
SPLIT																
PREFERENCE 1																
PREFERENCE 2																
SPLIT DEMAND PATTERN																
PHASE(S)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORD		X				X										
VEH RECALL		X				X										
PED RECALL																
MAX RECALL																
OMIT								X	X	X	X	X	X	X	X	X
SPECIAL FUNCTION OUTPUTS																

COORDINATOR PATTERN	6															
USE SPLIT PATTERN	6															
TS2 (PAT - OFF)																
CYCLE					STD (COS)				611							
OFFSET VALUE																
ACTUATED COORD					TIMING PLAN											
ACT WALK REST					SEQUENCE											
PHASE RESERVICE					ACTION PLAN											
SPLIT PREFERENCE PHASES																
PHASE(S)	1	2	3	4	5	6	7	8								
SPLIT																
PREFERENCE 1																
PREFERENCE 2																
SPLIT EXT (SEC)																
VEH PERM				DISP												
RING DISP				(RING 2-4)												
PHASE(S)	9	10	11	12	13	14	15	16								
SPLIT																
PREFERENCE 1																
PREFERENCE 2																
SPLIT DEMAND PATTERN																
PHASE(S)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COORD																
VEH RECALL																
PED RECALL																
MAX RECALL																
OMIT																
SPECIAL FUNCTION OUTPUTS																

120 COORDINATION PATTERNS AVAILABLE

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

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PREEMPT SUBMENU

4-1. PREEMPTOR

PREEMPT PLAN		1																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE												
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)												
OVERRIDE FL		DURATION						RED CLEAR GOES GREEN												
TERMINATE OLVPs ASAP		PC THRU YELLOW						TERMINATE PHASES												
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH												
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES												
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE												
RING		1		2		3		4												
FREE DURING PREEMPTION		WALK		PED CL		MIN GRN		YELLOW		RED										
ENTRANCE TIMES		MIN GRN		EXT GRN		MX GRN		YELLOW		RED										
TRACK CLEARANCE TIMES		MIN DL		PMT EXT		MX TM		YELLOW		RED										
DWL/CYC-EXIT																				
---PREEMPT ACTIVE OUTPUTS---																				
PREEMPT ACTIVE OUTPUT		PREEMPT ACTIVE OUTPUT IN DWELL																		
OTHER PRIORITY PREEMPT OUTPUT		NON-PRIORITY PREEMPT OUTPUT																		

PREEMPT PLAN		2																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE												
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)												
OVERRIDE FL		DURATION						RED CLEAR GOES GREEN												
TERMINATE OLVPs ASAP		PC THRU YELLOW						TERMINATE PHASES												
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH												
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES												
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE												
RING		1		2		3		4												
FREE DURING PREEMPTION		WALK		PED CL		MIN GRN		YELLOW		RED										
ENTRANCE TIMES		MIN GRN		EXT GRN		MX GRN		YELLOW		RED										
TRACK CLEARANCE TIMES		MIN DL		PMT EXT		MX TM		YELLOW		RED										
DWL/CYC-EXIT																				
---PREEMPT ACTIVE OUTPUTS---																				
PREEMPT ACTIVE OUTPUT		PREEMPT ACTIVE OUTPUT IN DWELL																		
OTHER PRIORITY PREEMPT OUTPUT		NON-PRIORITY PREEMPT OUTPUT																		

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

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PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN		3																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE	PREEMPT OVERRIDE	INTERLOCK ENABLE																		
DET LOCK	DELAY TIME (SEC)	INHIBIT TIME (SEC)																		
OVERRIDE FL	DURATION	RED CLEAR GOES GREEN																		
TERMINATE OLVPS ASAP	PC THRU YELLOW	TERMINATE PHASES																		
PED DARK	TRACK CLEAR RESERVICE	DWELL FLASH																		
LINKED PREEMPTOR	DWELL FLASH EXIT COLOR	PREEMPTION EXITS TO COORD PHASES																		
PREEMPT EXIT TIMING PLAN	PREEMPT RESERVICE TIME	FLT TYPE																		
RING		1	2	3	4															
FREE DURING PREEMPTION																				
ENTRANCE TIMES		WALK	PED CL	MIN GRN	YELLOW	RED														
TRACK CLEARANCE TIMES		MIN GRN	EXT GRN	MX GRN	YELLOW	RED														
DWL/CYC-EXIT		MIN DL	PMT EXT	MX TM	YELLOW	RED														
--PREEMPT ACTIVE OUTPUTS--																				
PREEMPT ACTIVE OUTPUT		PREEMPT ACTIVE OUTPUT IN DWELL																		
OTHER PRIORITY PREEMPT OUTPUT		NON-PRIORITY PREEMPT OUTPUT																		

PREEMPT PLAN		4																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE	PREEMPT OVERRIDE	INTERLOCK ENABLE																		
DET LOCK	DELAY TIME (SEC)	INHIBIT TIME (SEC)																		
OVERRIDE FL	DURATION	RED CLEAR GOES GREEN																		
TERMINATE OLVPS ASAP	PC THRU YELLOW	TERMINATE PHASES																		
PED DARK	TRACK CLEAR RESERVICE	DWELL FLASH																		
LINKED PREEMPTOR	DWELL FLASH EXIT COLOR	PREEMPTION EXITS TO COORD PHASES																		
PREEMPT EXIT TIMING PLAN	PREEMPT RESERVICE TIME	FLT TYPE																		
RING		1	2	3	4															
FREE DURING PREEMPTION																				
ENTRANCE TIMES		WALK	PED CL	MIN GRN	YELLOW	RED														
TRACK CLEARANCE TIMES		MIN GRN	EXT GRN	MX GRN	YELLOW	RED														
DWL/CYC-EXIT		MIN DL	PMT EXT	MX TM	YELLOW	RED														
--PREEMPT ACTIVE OUTPUTS--																				
PREEMPT ACTIVE OUTPUT		PREEMPT ACTIVE OUTPUT IN DWELL																		
OTHER PRIORITY PREEMPT OUTPUT		NON-PRIORITY PREEMPT OUTPUT																		

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PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN		5																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE		PREEMPT OVERRIDE					INTERLOCK ENABLE													
DET LOCK		DELAY TIME (SEC)					INHIBIT TIME (SEC)													
OVERRIDE FL		DURATION					RED CLEAR GOES GREEN													
TERMINATE OLVPs ASAP		PC THRU YELLOW					TERMINATE PHASES													
PED DARK		TRACK CLEAR RESERVICE					DWELL FLASH													
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR					PREEMPTION EXITS TO COORD PHASES													
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME					FLT TYPE													
RING			1	2	3	4														
FREE DURING PREEMPTION																				
ENTRANCE TIMES			WALK	PED CL	MIN GRN	YELLOW	RED													
TRACK CLEARANCE TIMES			MIN GRN	EXT GRN	MX GRN	YELLOW	RED													
DWL/CYC-EXIT			MIN DL	PMT EXT	MX TM	YELLOW	RED													
--PREEMPT ACTIVE OUTPUTS--																				
PREEMPT ACTIVE OUTPUT			PREEMPT ACTIVE OUTPUT IN DWELL																	
OTHER PRIORITY PREEMPT OUTPUT			NON-PRIORITY PREEMPT OUTPUT																	

PREEMPT PLAN		6																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE		PREEMPT OVERRIDE					INTERLOCK ENABLE													
DET LOCK		DELAY TIME (SEC)					INHIBIT TIME (SEC)													
OVERRIDE FL		DURATION					RED CLEAR GOES GREEN													
TERMINATE OLVPs ASAP		PC THRU YELLOW					TERMINATE PHASES													
PED DARK		TRACK CLEAR RESERVICE					DWELL FLASH													
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR					PREEMPTION EXITS TO COORD PHASES													
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME					FLT TYPE													
RING			1	2	3	4														
FREE DURING PREEMPTION																				
ENTRANCE TIMES			WALK	PED CL	MIN GRN	YELLOW	RED													
TRACK CLEARANCE TIMES			MIN GRN	EXT GRN	MX GRN	YELLOW	RED													
DWL/CYC-EXIT			MIN DL	PMT EXT	MX TM	YELLOW	RED													
--PREEMPT ACTIVE OUTPUTS--																				
PREEMPT ACTIVE OUTPUT			PREEMPT ACTIVE OUTPUT IN DWELL																	
OTHER PRIORITY PREEMPT OUTPUT			NON-PRIORITY PREEMPT OUTPUT																	

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN		7																ENABLE			
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																					
TRACK CLEAR OVERLAP																					
ENABLE TRAILING CLP																					
DWELL VEH																					
DWELL PED																					
DWELL OVERLAP																					
CYCLING VEH																					
CYCLING PED																					
CYCLING OVERLAP																					
EXIT PHASE																					
EXIT CALLS																					
SPECIAL FUNCTION																					
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE													
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)													
OVERRIDE FL		DURATION						RED CLEAR GOES GREEN													
TERMINATE OLVP ASAP		PC THRU YELLOW						TERMINATE PHASES													
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH													
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES													
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE													
RING			1	2	3	4															
FREE DURING PREEMPTION																					
ENTRANCE TIMES			WALK	PED CL	MIN GRN	YELLOW	RED														
TRACK CLEARANCE TIMES			MIN GRN	EXT GRN	MX GRN	YELLOW	RED														
DWL/CYC-EXIT			MIN DL	PMT EXT	MX TM	YELLOW	RED														
--PREEMPT ACTIVE OUTPUTS--																					
PREEMPT ACTIVE OUTPUT			PREEMPT ACTIVE OUTPUT IN DWELL																		
OTHER PRIORITY PREEMPT OUTPUT			NON-PRIORITY PREEMPT OUTPUT																		

PREEMPT PLAN		8																ENABLE			
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
OVERLAP PHASE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																					
TRACK CLEAR OVERLAP																					
ENABLE TRAILING CLP																					
DWELL VEH																					
DWELL PED																					
DWELL OVERLAP																					
CYCLING VEH																					
CYCLING PED																					
CYCLING OVERLAP																					
EXIT PHASE																					
EXIT CALLS																					
SPECIAL FUNCTION																					
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE													
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)													
OVERRIDE FL		DURATION						RED CLEAR GOES GREEN													
TERMINATE OLVP ASAP		PC THRU YELLOW						TERMINATE PHASES													
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH													
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES													
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE													
RING			1	2	3	4															
FREE DURING PREEMPTION																					
ENTRANCE TIMES			WALK	PED CL	MIN GRN	YELLOW	RED														
TRACK CLEARANCE TIMES			MIN GRN	EXT GRN	MX GRN	YELLOW	RED														
DWL/CYC-EXIT			MIN DL	PMT EXT	MX TM	YELLOW	RED														
--PREEMPT ACTIVE OUTPUTS--																					
PREEMPT ACTIVE OUTPUT			PREEMPT ACTIVE OUTPUT IN DWELL																		
OTHER PRIORITY PREEMPT OUTPUT			NON-PRIORITY PREEMPT OUTPUT																		

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

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Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN		9																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE												
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)												
OVERRIDE FL		DURATION						RED CLEAR GOES GREEN												
TERMINATE OLVPs ASAP		PC THRU YELLOW						TERMINATE PHASES												
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH												
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES												
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE												
RING						1	2	3	4											
FREE DURING PREEMPTION																				
		WALK				PED CL	MIN GRN	YELLOW	RED											
ENTRANCE TIMES																				
		MIN GRN				EXT GRN	MX GRN	YELLOW	RED											
TRACK CLEARANCE TIMES																				
		MIN DL				PMT EXT	MX TM	YELLOW	RED											
DWL/CYC-EXIT																				
---PREEMPT ACTIVE OUTPUTS---																				
PREEMPT ACTIVE OUTPUT								PREEMPT ACTIVE OUTPUT IN DWELL												
OTHER PRIORITY PREEMPT OUTPUT								NON-PRIORITY PREEMPT OUTPUT												

PREEMPT PLAN		10																ENABLE		
VEH/PED PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
OVERLAP PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR VEH																				
TRACK CLEAR OVERLAP																				
ENABLE TRAILING OLP																				
DWELL VEH																				
DWELL PED																				
DWELL OVERLAP																				
CYCLING VEH																				
CYCLING PED																				
CYCLING OVERLAP																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
ENABLE		PREEMPT OVERRIDE						INTERLOCK ENABLE												
DET LOCK		DELAY TIME (SEC)						INHIBIT TIME (SEC)												
OVERRIDE FL		DURATION						RED CLEAR GOES GREEN												
TERMINATE OLVPs ASAP		PC THRU YELLOW						TERMINATE PHASES												
PED DARK		TRACK CLEAR RESERVICE						DWELL FLASH												
LINKED PREEMPTOR		DWELL FLASH EXIT COLOR						PREEMPTION EXITS TO COORD PHASES												
PREEMPT EXIT TIMING PLAN		PREEMPT RESERVICE TIME						FLT TYPE												
RING						1	2	3	4											
FREE DURING PREEMPTION																				
		WALK				PED CL	MIN GRN	YELLOW	RED											
ENTRANCE TIMES																				
		MIN GRN				EXT GRN	MX GRN	YELLOW	RED											
TRACK CLEARANCE TIMES																				
		MIN DL				PMT EXT	MX TM	YELLOW	RED											
DWL/CYC-EXIT																				
---PREEMPT ACTIVE OUTPUTS---																				
PREEMPT ACTIVE OUTPUT								PREEMPT ACTIVE OUTPUT IN DWELL												
OTHER PRIORITY PREEMPT OUTPUT								NON-PRIORITY PREEMPT OUTPUT												

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA
T.S. No.: 6034 Date Implemented: _____ By: _____

PREEMPT SUBMENU

4-2. ENABLE PREEMPT FILTERING / TSP / SCP

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-3. TSP / SCP PLAN

TSP / SCP PLAN	1	2	3	4	5	6										
TSP / SCP ENABLE																
SIGNAL TYPE																
DET LOCK																
DELAY TIME																
MAX PRESENCE																
PREEMPT ENABLES RESERVICE																
NO DELAY IN TSP																
ACT SF INHIBIT																
RESERVICE CYCLES																
BUS HEADING																
TSP OR SCP	FREE DEFAULT PATTERN															
HEADWAY ALLOWANCE																
TSP / SCP PHASE																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TSP / SCP1																
TSP / SCP2																
TSP / SCP3																
TSP / SCP4																
TSP / SCP5																
TSP / SCP6																

4-4. TSP / SCP SPLIT PATTERN

TSP / SCP SPLIT PATTERN		SPL DM							
IN EFFECT TIMING PLAN	PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN									
MIN GREEN									
IN EFFECT TIMING PLAN	PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN									
MIN GREEN									

TSP / SCP SPLIT PATTERN		SPL DM							
IN EFFECT TIMING PLAN	PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN									
MIN GREEN									
IN EFFECT TIMING PLAN	PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN									
MIN GREEN									

TSP / SCP SPLIT PATTERN		SPL DM							
IN EFFECT TIMING PLAN	PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN									
MIN GREEN									
IN EFFECT TIMING PLAN	PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN									
MIN GREEN									

TSP / SCP SPLIT PATTERN		SPL DM							
IN EFFECT TIMING PLAN	PHASE	1	2	3	4	5	6	7	8
TSP / SCP MAX RDTN									
MIN GREEN									
IN EFFECT TIMING PLAN	PHASE	9	10	11	12	13	14	15	16
TSP / SCP MAX RDTN									
MIN GREEN									

8-5.

CITY		INTERSECTION	
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120 TSP / SCP SPLIT PATTERNS AVAILABLE

ASC/3
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DEA
T.S. No.: 6034 Date Implemented: _____ By: _____

TIME BASE SUBMENU

5-1. CLOCK / CALENDAR DATA

DATE SET		TIME SET	
ENABLE MANUAL ACTION PLAN	0		
SYNC REFERENCE TIME	00:00	SYNC REFERENCE	REFERENCE TIME
STANDARD TIME FROM GMT	-08	DAYLIGHT SAVINGS	USDLS
TIME TO RESET INPUT SET TIME			03:30:00

5-2. ACTION PLAN

ACTION PLAN	1		
PATTERN	1	SYSTEM OVERRIDE	YES
TIMING PLAN	0	DETECTOR LOG	NONE
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE	1	2	3
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE	1	2	3
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION		(1-3)	
1	2	3	4
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN	2		
PATTERN	2	SYSTEM OVERRIDE	YES
TIMING PLAN	0	DETECTOR LOG	NONE
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE	1	2	3
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE	1	2	3
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION		(1-3)	
1	2	3	4
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13/HCH By: DEA

T.S. No.: 6034

Date Implemented: _____ By: _____

TIME BASE SUBMENU

5-2. ACTION PLAN (CONTINUED)

ACTION PLAN		3	
PATTERN	3	SYSTEM OVERRIDE	YES
TIMING PLAN	0	DETECTOR LOG	NONE
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION		(1-3)	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN		4	
PATTERN	254	SYSTEM OVERRIDE	YES
TIMING PLAN	0	CONTROLLER SEQUENCE	NONE
VEHICLE DETECTOR PLAN	0	RED REST	NO
FLASH	NO	PED DETECTOR DIAG PLAN	0
VEH DETECTOR DIAG PLAN	0		
DIMMING ENABLE	NO		
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION		(1-3)	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN		5	
PATTERN		SYSTEM OVERRIDE	
TIMING PLAN		DETECTOR LOG	
VEHICLE DETECTOR PLAN		RED REST	
FLASH		PED DETECTOR DIAG PLAN	
VEH DETECTOR DIAG PLAN			
DIMMING ENABLE			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION		(1-3)	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

ACTION PLAN		100	
PATTERN		SYSTEM OVERRIDE	
TIMING PLAN		DETECTOR LOG	
VEHICLE DETECTOR PLAN		RED REST	
FLASH		PED DETECTOR DIAG PLAN	
VEH DETECTOR DIAG PLAN			
DIMMING ENABLE			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
PED RECALL			
WALK 2			
VEH EXT 2			
VEH RECALL			
MAX RECALL			
MAX 2			
PHASE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			
MAX 3			
COND SERV INHIBIT			
OMIT			
SPECIAL FUNCTION			(1-8)
AUX FUNCTION		(1-3)	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		
LP 1-15			
LP 16-30			
LP 31-45			
LP 46-60			
LP 61-75			
LP 76-90			
LP 91-100			

100 ACTION PLANS AVAILABLE

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

TIME BASE SUBMENU

5-3. DAY PLAN

DAY PLAN IN EFFECT		
DAY PLAN		1
EVENT	ACTION PLAN	START TIME
1	4	00:00
2	2	06:00
3	1	09:00
4	3	15:00
5	1	19:00
6	4	21:00
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
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DAY PLAN IN EFFECT		
DAY PLAN		2
EVENT	ACTION PLAN	START TIME
1	4	00:00
2	1	09:00
3	4	19:00
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DAY PLAN IN EFFECT		
DAY PLAN		3
EVENT	ACTION PLAN	START TIME
1		
2		
3		
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PROGRAM REFERENCE CARD

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TIME BASE SUBMENU

5-5. EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6					
7					
8					
9					
10					
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36					

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA
T.S. No.: 6034 Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-1. VEHICLE DETECTOR PHASE ASSIGNMENT

VEHICLE DETECTOR PLAN NUMBER		1																TYPE*
DETECTOR	PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1																		
2	2		X															S
3	3			X														S
4	4				X													D
5																		
6	6						X											S
7																		
8																		
9																		
10	2		X															S
11	3			X														S
12	4				X													S
13	4				X													S
14	6						X											S
15	4				X			X										S
16																		
17																		
18																		
19																		
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62																		
63																		
64																		

- *DETECTOR TYPE
S - STANDARD
D - DISCONNECT
 TYPE Q/STOP BAR
P - PASSAGE
 TYPE Q/STOP BAR
C - CALLING
R - RED EXTENSION
G - GREEN EXTENSION/
 DELAY
N - NTCIP
B - BIKE

DETECTOR 4 = DUMMY
 CALL DETECTOR FOR
 PHASE 3 CHECK

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		1	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		5	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		2	
TYPE		5	VEH DETECTOR PLAN # 1
TS2 DETECTOR		ECPI LOG NO	
CALL OPTION		DELAY TIME 0.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME 0.0	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		ON	CROSS SWITCH PHASE 0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		6	
TYPE		5	VEH DETECTOR PLAN # 1
TS2 DETECTOR		ECPI LOG NO	
CALL OPTION		DELAY TIME 0.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME 0.0	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		ON	CROSS SWITCH PHASE 0
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		3	
TYPE		5	VEH DETECTOR PLAN # 1
TS2 DETECTOR		ECPI LOG NO	
CALL OPTION		DELAY TIME 5.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME 0.0	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE 0	
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		7	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		4	
TYPE		D	VEH DETECTOR PLAN # 1
TS2 DETECTOR		ECPI LOG NO	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE 0	
LOCK IN	NONE	NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		8	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
 B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENSION / DELAY
 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13/HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		9	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		13	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
		5.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		10	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		ECPI LOG	
		NO	
CALL OPTION		DELAY TIME	
		0.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		OFF	CROSS SWITCH PHASE
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		14	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		ECPI LOG	
		NO	
CALL OPTION		DELAY TIME	
		0.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		OFF	CROSS SWITCH PHASE
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		11	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		ECPI LOG	
		NO	
CALL OPTION		DELAY TIME	
		10.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		15	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		ECPI LOG	
		NO	
CALL OPTION		DELAY TIME	
		10.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		12	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		ECPI LOG	
		NO	
CALL OPTION		DELAY TIME	
		10.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		16	
TYPE		S	
VEH DETECTOR PLAN #		1	
TS2 DETECTOR		ECPI LOG	
		NO	
CALL OPTION		DELAY TIME	
		10.0	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NONE	NTCIP VOL | OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENSION / DELAY

TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: By:

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		17	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		21	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		18	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		22	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		19	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		23	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		20	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		24	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENSION / DELAY

TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		25	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		29	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		26	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		30	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		27	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		31	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		28	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		32	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
 B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENTION / DELAY
 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: By:

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		33	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		37	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		34	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		38	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		35	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		39	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		36	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		40	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
 B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENTION / DELAY
 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HeH By: DFA

T.S. No.: 6034

Date implemented: By:

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		41	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		45	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		42	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		46	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		43	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		47	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		44	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		48	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
 B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENSION / DELAY
 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: By:

DETECTOR SUBMENU

8-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		49	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		53	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		50	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		54	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		51	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		55	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		52	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		56	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC.
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
 B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENTION / DELAY
 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue

Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034

Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP

DETECTOR NUMBER		57	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		61	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		58	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		62	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		59	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		63	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		60	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR NUMBER		64	
TYPE		VEH DETECTOR PLAN #	
TS2 DETECTOR		ECPI LOG	
CALL OPTION		DELAY TIME	
EXTEND OPTIONS	PASSAGE	EXTENSION TIME	
	QUEUE	QUEUE LIMIT	
	NONE		
USE ADDED INITIAL		CROSS SWITCH PHASE	
LOCK IN		NTCIP VOL	OCC
DISCONNECT TIME		PASSAGE TIME	

DETECTOR TYPES: N - NTCIP S - STANDARD P - PASSAGE TYPE Q / STOP BAR R - RED EXTENSION
 B - BIKE C - CALLING D - DISCONNECT G - GREEN EXTENSION / DELAY
 TYPE Q / STOP BAR

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034 Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-5. VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER						FAILED								FAILED	
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER	TIME	CL DELAY		DETECTOR	COUNTS	ACT	PRES	MULTIPLIER	TIME	CL DELAY	
1								33							
2								34							
3								35							
4								36							
5								37							
6								38							
7								39							
8								40							
9								41							
10								42							
11								43							
12								44							
13								45							
14								46							
15								47							
16								48							
17								49							
18								50							
19								51							
20								52							
21								53							
22								54							
23								55							
24								56							
25								57							
26								58							
27								59							
28								60							
29								61							
30								62							
31								63							
32								64							

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034 Date Implemented: _____ By: _____

DETECTOR SUBMENU

6-6. PEDESTRIAN DETECTOR DIAGNOSTICS

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				1
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				3
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				2
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				4
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034 Date Implemented: _____ By: _____

DETECTOR ASSIGNMENT SUMMARY WORKSHEET

(INFORMATION ONLY WORKSHEET)

APPR	LANE(S)	DESCRIPTION	DESIGNATION	DETECTOR NUMBER	DETECTOR TYPE	ASSIGNED PHASE(S)	DELAY TIME	EXTEND TIME	QUEUE LIMIT TIME
				1					
E	1,2,3	ADVANCE	1-E-φ2	2	S	2			
N	LT	F- 2-6'X6'	1-N-φ3	3	S	3	5.0		
		DUMMY CALL DET. FOR φ3 CHECK	φ3 CALLS φ4	4	D	4			
				5					
W	1,2,3	ADVANCE	1-W-φ6	6	S	6			
				7					
				8					
				9					
E	LT	HOLDING	2-E-φ2	10	S	2			
N	1	F- 2-6'X6'	2-N-φ3	11	S	3	10.0		
N	ALL	F- 2-6'X6'	1-N-φ4	12	S	4	10.0		
S	LT	F- 2-6'X6'	1-S-φ4	13	S	4	5.0		
W	LT	HOLDING	2-W-φ6	14	S	6			
S	RT/THRU	F- 2-6'X6'	2-S-φ4	15	S	4	10.0		
				16					
				17					
				18					
				19					
				20					
				21					
				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					

COMMENTS:

PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Volunteer Avenue Date Prepared: 3-6-13 HCH By: DFA

T.S. No.: 6034 Date Implemented: _____ By: _____

DETECTOR ASSIGNMENT SUMMARY WORKSHEET

(INFORMATION ONLY WORKSHEET)

APPR	LANE(S)	DESCRIPTION	DESIGNATION	DETECTOR NUMBER	DETECTOR TYPE	ASSIGNED PHASE(S)	DELAY TIME	EXTEND TIME	QUEUE LIMIT TIME
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					
				41					
				42					
				43					
				44					
				45					
				46					
				47					
				48					
				49					
				50					
				51					
				52					
				53					
				54					
				55					
				56					
				57					
				58					
				59					
				60					
				61					
				62					
				63					
				64					

COMMENTS:

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 KCH By: DFA
T.S. No.: 6029 Date Implemented: _____ By: _____

1. CONFIGURATION SUBMENU

1. CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
RING 1	1	2	4	8								
RING 2	5	6	0	0								
CG (CONCURRENT GROUPS)		X		X								

2. PHASES IN USE

	PHASE NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE	X	X		X	X	X		X				
EXCLUSIVE PED												

3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP		LOAD SWITCH (MMU)	SIGNAL DRIVER GROUP	
	CHANNEL	PHASE/OVLP PED		CHANNEL	PHASE/OVLP PED
1	1		9	2	X
2	2		10		
3			11	6	X
4	4		12	8	X
5	5		13		
6	6		14		
7			15		
8	8		16		

4. SDLC OPTIONS/ENABLES

	BIU NUMBER							
	1	2	3	4	5	6	7	8
TERM & FACIL								
DETECTOR RACK	X							
TYPE 2 RUNS AS TYPE 1								
MMU DISABLE								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
PEER TO PEER ENABLE								
PEER TO PEER ADDRESS:								
1) 255	2) 255	3) 255	4) 255	5) 255	6) 255	7) 255	8) 255	
9) 255	10) 255							

8. UTILITIES SUBMENU

5. SIGN ON

SOFTWARE ASSY		VERSION
BOOT	32763	1.28
MAIN PROGRAM	36901	1.07
HELP	34547	1.16
CONFIGURATION	34528	N1000C

5. PORT 2 CONFIGURATION

PORT 2 PROTOCOL	TERML
PORT 2 ENABLE	NO
DATA RATE (BPS)	9600
DATA, PARITY, STOP	8,N,1
NTCIP ADDRESS	0
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	0
NTCIP SINGLE FLAG ENABLE	NO
NTCIP BACKUP TIME	0
PORT 2 DROP-OUT TIME	0
NTCIP RTS TIMING	NO
NTCIP RTS TO CTS DELAY	0
NTCIP RTS TURN-OFF DELAY	0
NTCIP EARLY RTS	NO

5. PORT 3 CONFIGURATION

PORT 3 PROTOCOL	NTCIP
PORT 3 ENABLE	YES
PORT 3 MILLISEC TIMING	NO
PORT 3 RTS TO CTS DELAY	0
PORT 3 RTS TURN-OFF DELAY	0
DUPLEX - HALF OR FULL	FULL
MODEM DATA RATE (BPS)	9600
DATA, PARITY, STOP	8,N,1
TELEMETRY ADDRESS	0
SYSTEM DETECTOR 9-16 ADDRESS	0
TELEMETRY RESPONSE DELAY	0
NTCIP ADDRESS	1
NTCIP GROUP ADDRESS	0
NTCIP RESPONSE DELAY	1
NTCIP SINGLE FLAG ENABLE	NO
NTCIP BACKUP TIME	0
NTCIP DROP-OUT TIME	50
NTCIP EARLY RTS	NO

REMARKS:

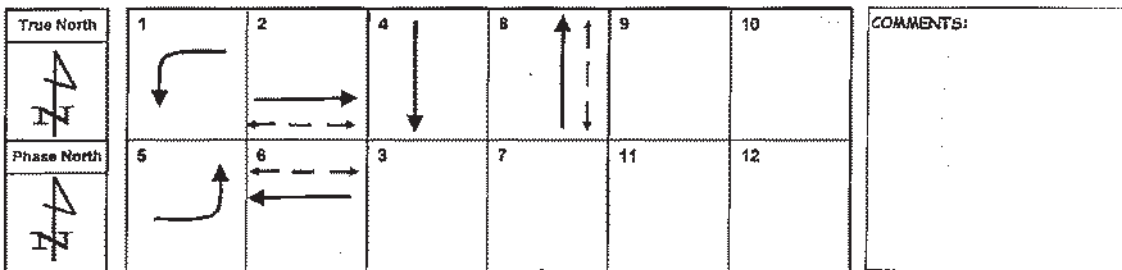
ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6029 Date Implemented: _____ By: _____

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GREEN	4	6		4	4	6		4				
BIKE GREEN	0	0		0	0	0		0				
CS MIN GREEN	0	0		0	0	0		0				
WALK	0	7		0	0	7		7				
PED CLEAR	0	18		0	0	17		24				
VEH EXT	1.5	4.5		3.0	1.5	4.5		3.0				
VEH EXT 2	0.0	0.0		0.0	0.0	0.0		0.0				
MAX EXT	0	0		0	0	0		0				
MAX 1	20	50		35	20	50		35				
MAX 2	20	140		35	20	140		35				
MAX 3	0	0		0	0	0		0				
DET MAX	0	0		0	0	0		0				
YELLOW	3.5	4.5		4.0	3.5	4.5		4.0				
RED CLEAR	2.0	2.0		2.0	2.0	2.0		2.0				
RED REVERT	2.0	2.0		2.0	2.0	2.0		2.0				
ACT B4	0	0		0	0	0		0				
SECIACT	0.0	0.0		0.0	0.0	0.0		0.0				
MAX INITIAL	0	0		0	0	0		0				
TIME B4 REDUCTION	0	15		0	0	15		0				
CARS WT	0	255		0	0	255		0				
TIME TO REDUCE	0	15		0	0	15		0				
MIN GAP	1.5	3.0		3.0	1.5	3.0		3.0				



ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DEA
T.S. No.: 6029 Date Implemented: _____ By: _____

2. CONTROLLER SUBMENU (Continued)

6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
PHASE STARTUP		X				X						
ENTRY REM FLASH		X				X						
EXIT REM FLASH												
REM FLASH YELLOW												
FL TOGETHER PHS		X		X		X		X				
FL TOGETHER OVLPS	A			B				C				D
STARTUP INTERVAL RING 1	YELLOW											
STARTUP INTERVAL RING 2	YELLOW											
POWER START ALL RED TIME												
POWER START FLASH TIME												
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED	6.0 SEC											
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												

7. NO SERVE PHASE

PHASE	12	11	10	9	8	7	6	5	4	3	2
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WALK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WALK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
GUAR PASSAGE												
NON ACTUATED I												
NON ACTUATED II												
DUAL ENTRY												
COND SERVICE												
COND RESERVICE												
REST IN WALK												
FLASHING WALK												
FIVE SECTION LEFT TURN HEADS (SPECIAL PROGRAM OPTION FOR STATE OF ILLINOIS)												
5-2												
7-4												
1-6												
3-8												
11-10												
9-12												
DUAL ENTRY	OFF		RESERVED							OFF		
COND SERVICE ENABLE	OFF		BACKUP PROTECTION GROUP 1							OFF		
COND SERVICE DEF X SWITCHING	OFF		BACKUP PROTECTION GROUP 2							OFF		
AUTO PED CLEAR	OFF		BACKUP PROTECTION GROUP 3							OFF		
SPEC PREEMPT OVL P FLASH	OFF		SIMULTANEOUS GAP GROUP 1							ON		
LOCK DETECTORS IN RED ONLY	OFF		SIMULTANEOUS GAP GROUP 2							ON		
RESERVED	OFF		SIMULTANEOUS GAP GROUP 3							OFF		
Unit Backup Time												0
Unit Redvert												2.0

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6029 Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU

TIME OF DAY OPERATION SUMMARY					
PLAN 1	ALL OTHER TIMES	PLAN 4	WB PROGRESSION (AS NEEDED)	PLAN 7	
PLAN 2	0600-0900 M-F	PLAN 5	EB PROGRESSION (AS NEEDED)	PLAN 8	
PLAN 3	1500-1900 M-F	PLAN 6		PLAN 9	
FREE	2100-0600 M-F, 1900-0900 S-S				

1. COORDINATOR OPTIONS

SPLIT UNITS	SEC	ACTUATED COORD PHASE(S)	X
OFFSET UNITS	SEC	ACTUATED WALK/REST	
INTERCONNECT FORMAT	STD	INHIBIT MAX	
INTERCONNECT SOURCE	NIC	MAX 2 SELECT	X
RESYNC COUNT	255	MULTISYNC	
TRANSITION	SMOOTH	FLOAT FORCE OFF	
DWELL PERIOD	0s		
FREE ALTERNATE SEQUENCE	A	B	C
	D	E	F

2. COORD MANUAL AND SPLIT DEMAND

MANUAL ENABLE	OFF	MANUAL PATTERN	0
SPLIT DEMAND:		DEMAND 1	DEMAND 2
DEMAND CALL TIME		0s	0s
DEMAND CYCLE COUNT		0	0
DEMAND PHASE	1	2	3
DEMAND 1 PHASES	4	5	6
DEMAND 2 PHASES	7	8	9
	10	11	12

3. COORD AUTO PERM MIN GREEN

PHASE	AUTO PERM MIN GREEN	PHASE	AUTO PERM MIN GRN
1	7	7	
2	7	8	7
3		9	
4	7	10	
5	7	11	
6	7	12	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 8-19-13 By: DFR
T.S. No.: 602P Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

4. PATTERN DATA

(OFF-PEAK)	COORD PATTERN	1	COORDS	1/1/1
	CYCLE LENGTH	130		
	OFFSET	61		

(AM-PEAK)	COORD PATTERN	2	COORDS	2/1/1
	CYCLE LENGTH	130		
	OFFSET	58		

SPLITS	PHASE 1	20	PHASE 2	25	PHASE 3	PHASE 4	26					
	PHASE 5	20	PHASE 6	25	PHASE 7	PHASE 8	38					
	PHASE 9		PHASE 10		PHASE 11	PHASE 12						
VEH PERMISSIVE	[1]	0	[2]	0								
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSIONING	[1]	21	[2]	21								
SPL DMG PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES	X	X			X	X						
VEHICLE RECALL		X			X							
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE	A	B	C	D	E	F						

SPLITS	PHASE 1	17	PHASE 2	29	PHASE 3	PHASE 4	26					
	PHASE 5	17	PHASE 6	29	PHASE 7	PHASE 8	38					
	PHASE 9		PHASE 10		PHASE 11	PHASE 12						
VEH PERMISSIVE	[1]	0	[2]	0								
VEH PERM 2 DISP												
PHASE RESERVE												
SPLIT EXTENSIONING	[1]	20	[2]	20								
SPL DMG PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES		X	X			X	X					
VEHICLE RECALL		X				X						
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
ALTERNATE SEQUENCE	A	B	C	D	E	F						

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 MLL By: DFA
 T.S. No.: 6029 Date Implemented: _____ By: _____

3. COORDINATOR SUBMENU (Continued)

4. PATTERN DATA (Continued)

PM-PEAK		3		3/1/1	
COORD PATTERN	COORD PATTERN	PHASE 2	PHASE 3	PHASE 4	PHASE 5
CYCLE LENGTH	130	28	28	26	38
OFFSET	58	0	0	0	0
VEH PERMISSIVE [1] [2] [2] [2] [2]					
VEH PERM 2 DISP					
PHASE RESERVE					
SPLIT EXTENSION/RING [1] [2] [2] [2] [2]					
SPL DND PATTERN [1] [2] [2] [2] [2]					
XARTERY PATTERN					
PHASE	1	2	3	4	5
COORD PHASES	X	X	X	X	X
VEHICLE RECALL					
VEH MAX RECALL					
PED RECALL					
PHASE OMIT					
SPARE					
ALTERNATE SEQUENCE					
	A	B	C	D	E

PM-PEAK		4		4/1	
COORD PATTERN	COORD PATTERN	PHASE 2	PHASE 3	PHASE 4	PHASE 5
CYCLE LENGTH	150	49	49	26	38
OFFSET	41	0	0	0	0
VEH PERMISSIVE [1] [2] [2] [2] [2]					
VEH PERM 2 DISP					
PHASE RESERVE					
SPLIT EXTENSION/RING [1] [2] [2] [2] [2]					
SPL DND PATTERN [1] [2] [2] [2] [2]					
XARTERY PATTERN					
PHASE	1	2	3	4	5
COORD PHASES	X	X	X	X	X
VEHICLE RECALL					
VEH MAX RECALL					
PED RECALL					
PHASE OMIT					
SPARE					
ALTERNATE SEQUENCE					
	A	B	C	D	E

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 By: JEA
I.S. No.: 602P Date Implemented: _____

3. COORDINATOR SUBMENU (Continued)

4. PATTERN DATA (Continued)

COORD PATTERN	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	PHASE 9	PHASE 10	PHASE 11	PHASE 12	COORD
COORD PATTERN	5												
CYCLE LENGTH	150												
OFFSET	28												

SPLITS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	PHASE 9	PHASE 10	PHASE 11	PHASE 12	
PHASE 1	20	27											26
PHASE 5	20	27											38
PHASE 9													
VEH PERMISSIVE [1]		0											
VEH PERM 2 DISP													
PHASE RESERVE													
SPLIT EXTENSION/RING [1]		39											
SPL DMD PATTERN [1]													
ARTERY PATTERN													
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	
COORD PHASES		X				X							
VEHICLE RECALL		X				X							
VEH MAX RECALL													
RED RECALL													
PHASE OMIT													
SPARE													
ALTERNATE SEQUENCE	A	B	C	D	E	F							

COORD PATTERN	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	PHASE 9	PHASE 10	PHASE 11	PHASE 12	COORD
COORD PATTERN													
CYCLE LENGTH													
OFFSET													
SPLITS													
PHASE 1													
PHASE 5													
PHASE 9													
VEH PERMISSIVE [1]													
VEH PERM 2 DISP													
PHASE RESERVE													
SPLIT EXTENSION/RING [1]													
SPL DMD PATTERN [1]													
ARTERY PATTERN													
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	
COORD PHASES													
VEHICLE RECALL													
VEH MAX RECALL													
RED RECALL													
PHASE OMIT													
SPARE													
ALTERNATE SEQUENCE	A	B	C	D	E	F							

INTERSECTION: _____ Date Prepared: 2-19-13 HEU By: DEA
 T.S. No.: 6029 Date Implemented: _____ By: _____
 Imperial Hwy @ Woods Avenue

3. COORDINATOR SUBMENU (Continued)

4. PATTERN DATA (Continued)

COORD PATTERN	CYCLE LENGTH	OFFSET	C/O/S
SPLITS			
PHASE 1			
PHASE 2			
PHASE 3			
PHASE 4			
PHASE 5			
PHASE 6			
PHASE 7			
PHASE 8			
PHASE 9			
PHASE 10			
PHASE 11			
PHASE 12			
VEH PERMISSIVE	[1]		
VEH PERM 2 DISP			
PHASE RESERVE			
SPLIT EXTENSIONING	[1]		
SPL DMD PATTERN	[1]		
XARTERY PATTERN			
PHASE	1	2	3
COORD PHASES	4	5	6
VEHICLE RECALL	7	8	9
VEH MAX RECALL	10	11	12
VEH RECALL			
PIED RECALL			
PHASE OMIT			
SPARE			
ALTERNATE SEQUENCE	A	B	C
	D	E	F

COORD PATTERN	CYCLE LENGTH	OFFSET	C/O/S
SPLITS			
PHASE 1			
PHASE 2			
PHASE 3			
PHASE 4			
PHASE 5			
PHASE 6			
PHASE 7			
PHASE 8			
PHASE 9			
PHASE 10			
PHASE 11			
PHASE 12			
VEH PERMISSIVE	[1]		
VEH PERM 1 DISP			
PHASE RESERVE			
SPLIT EXTENSIONING	[1]		
SPL DMD PATTERN	[1]		
XARTERY PATTERN			
PHASE	1	2	3
COORD PHASES	4	5	6
VEHICLE RECALL	7	8	9
VEH MAX RECALL	10	11	12
VEH RECALL			
PIED RECALL			
PHASE OMIT			
SPARE			
ALTERNATE SEQUENCE	A	B	C
	D	E	F

Up to 84 Coordination Patterns Available.

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DEA
T.S. No.: 6029 Date Implemented: _____ By: _____

4. PREEMPTOR SUBMENU (Continued)

5. PRIORITY PREEMPTOR 5

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
SPARE												
TERM OVERLAP	A		B		C		D					
ACTIVE					PED DARK							
PRIORITY					PED ACTIVE							
DET LOCK					ZERO PC TIME							
HOLD FLASH					PC THRU YELLOW							
TERM OVLP ASAP					TERM PHASES							
DONT OVERRIDE FLASH					ACTIVE ONLY DURING HOLD							
FLASH ALL OUTPUTS					NO CVM IN FLASH							
YELLOW-RED GOES GREEN					FAST FLASH GRN ON HOLD							
ENABLE MAX PREEMPT TIME					OUT OF FLASH							
MAX TIME					DURATION TIME							
MIN HOLD TIME					DELAY TIME							
MIN PED CLEAR					INHIBIT TIME							
EXIT MAX					HOLD DELAY TIME							
MINIMUM	GREEN				YELLOW				RED			
TRACK CLEAR												
HOLD												
LINKED PREEMPTOR												

7. BUS PREEMPTORS

	BUS PREEMPTOR											
	1	2	3	4								
PREEMPTOR ACTIVE												
DETECTOR LOCK												
MAXIMUM TIME												
RESERVE TIME												
DELAY TIME												
INHIBIT TIME												
ENTRANCE GREEN												
ENTRANCE PED CLEAR												
ENTRANCE YELLOW												
ENTRANCE RED												
MIN HOLD TIME												
	HOLD PHASE											
	1	2	3	4	5	6	7	8	9	10	11	12
PREEMPTOR 1												
PREEMPTOR 2												
PREEMPTOR 3												
PREEMPTOR 4												

FOR INFORMATION ONLY	
<input type="checkbox"/>	BUS PRIORITY CONTROL
CITY CODE	
PRIMARY ADDRESS	

6. PRIORITY PREEMPTOR 6

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
TERM PHASE OVLP												
TRK CLR PHASE												
HOLD PHASES												
EXIT PHASES												
EXIT CALLS												
SPARE												
TERM OVERLAP	A		B		C		D					
ACTIVE					PED DARK							
PRIORITY					PED ACTIVE							
DET LOCK					ZERO PC TIME							
HOLD FLASH					PC THRU YELLOW							
TERM OVLP ASAP					TERM PHASES							
DONT OVERRIDE FLASH					ACTIVE ONLY DURING HOLD							
FLASH ALL OUTPUTS					NO CVM IN FLASH							
YELLOW-RED GOES GREEN					FAST FLASH GRN ON HOLD							
ENABLE MAX PREEMPT TIME					OUT OF FLASH							
MAX TIME					DURATION TIME							
MIN HOLD TIME					DELAY TIME							
MIN PED CLEAR					INHIBIT TIME							
EXIT MAX					HOLD DELAY TIME							
MINIMUM	GREEN				YELLOW				RED			
TRACK CLEAR												
HOLD												
LINKED PREEMPTOR												

**ASC/2S - NTCIP
PROGRAM REFERENCE CARD**

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6029 Date Implemented: _____ By: _____

5. NIC/TOD SUBMENU

1. NIC/TOD CLOCK/CALENDAR DATA

DATE SET	
TIME SET	
MANUAL NIC PROGRAM STEP	0
MANUAL TOD PROGRAM STEP	0
SYNC REFERENCE TIME	** 00:00
SYNC REFERENCE	REFERENCE TIME
WEEK 1 BEGINS ON 1ST SUNDAY	
DISABLE DAYLIGHT SAVINGS	
DST BEGINS LAST SUNDAY	

2. NIC/TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRI	SAT
1	2	1	1	1	1	1	2
2							
3							
4							
5							
6							
7							
8							
9							
10							

3. NIC/TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY PROGRAM	1	1	1	1	1	1	1	1
WEEK OF YEAR				49	50	51	52	53
WEEKLY PROGRAM				1	1	1	1	1

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PROG
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

**NOTE: When using an RCTB Unit, in order for the controller clock to be properly updated, the RCTB Unit must be designed for a 03:30AM Sync Pulse.

INTERSECTION: _____

Imperial Hwy @ Woods Avenue

Date Prepared: 2-19-13 HCH By: DEA

I.S. No.: 602P

Date Implemented: _____ By: _____

5. NCTOD SUBMENU (Continued)

1. TOD PROGRAM STEPS												
TOD PROGRAM STEP	1											
DAY PGM NUMBER	0											
STEP BEGINS	0:00											
FLASH												
RED REST												
SPARE 5												
SPARE 3												
TYPE 0 DELAY ENABLE												
DET DIAG PLAN												
ALTERNATE SEQUENCE												
	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE												
MAX 3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INHIBIT												
PHASE OMIT												
SPECIAL FUNCTIONS	(1-8)											

3												
TOD PROGRAM STEP	3											
DAY PGM NUMBER	0											
STEP BEGINS	0:00											
FLASH												
RED REST												
SPARE 5												
SPARE 3												
TYPE 0 DELAY ENABLE												
DET DIAG PLAN												
ALTERNATE SEQUENCE												
	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE												
MAX 3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INHIBIT												
PHASE OMIT												
SPECIAL FUNCTIONS	(1-8)											

2												
TOD PROGRAM STEP	2											
DAY PGM NUMBER	0											
STEP BEGINS	0:00											
FLASH												
RED REST												
SPARE 5												
SPARE 3												
TYPE 0 DELAY ENABLE												
DET DIAG PLAN												
ALTERNATE SEQUENCE												
	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE												
MAX 3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INHIBIT												
PHASE OMIT												
SPECIAL FUNCTIONS	(1-8)											

4												
TOD PROGRAM STEP	4											
DAY PGM NUMBER	0											
STEP BEGINS	0:00											
FLASH												
RED REST												
SPARE 5												
SPARE 3												
TYPE 0 DELAY ENABLE												
DET DIAG PLAN												
ALTERNATE SEQUENCE												
	A	B	C	D	E	F						
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE												
MAX 3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INHIBIT												
PHASE OMIT												
SPECIAL FUNCTIONS	(1-8)											

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

Imperial Hwy @ Woods Avenue

INTERSECTION: _____
T.S. No.: 6029
Date Prepared: 2-14-13 HCH By: DFA
Date Implemented: _____ By: _____

5. NIC/TOD SUBMENU (Continued)

TOD PROGRAM STEP	5												
DAY PGM NUMBER	0												
STEP BEGINS	0:00												
FLASH													
RED REST													
SPARE 5													
SPARE 3													
TYPE 0 DELAY ENABLE													
DET DIAG PLAN													
ALTERNATE SEQUENCE		A	B	C	D	E	F						
PHASE		1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE													
MAX 3 ENABLE													
VEH RECALL													
VEH MAX RECALL													
PED RECALL													
COND SERV INHIBIT													
PHASE OMIT													
SPECIAL FUNCTIONS													(1-8)

TOD PROGRAM STEP	6												
DAY PGM NUMBER	0												
STEP BEGINS	0:00												
FLASH													
RED REST													
SPARE 5													
SPARE 3													
TYPE 0 DELAY ENABLE													
DET DIAG PLAN													
ALTERNATE SEQUENCE		A	B	C	D	E	F						
PHASE		1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE													
MAX 3 ENABLE													
VEH RECALL													
VEH MAX RECALL													
PED RECALL													
COND SERV INHIBIT													
PHASE OMIT													
SPECIAL FUNCTIONS													(1-8)

TOD PROGRAM STEP	7												
DAY PGM NUMBER	0												
STEP BEGINS	0:00												
FLASH													
RED REST													
SPARE 5													
SPARE 3													
TYPE 0 DELAY ENABLE													
DET DIAG PLAN													
ALTERNATE SEQUENCE		A	B	C	D	E	F						
PHASE		1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE													
MAX 3 ENABLE													
VEH RECALL													
VEH MAX RECALL													
PED RECALL													
COND SERV INHIBIT													
PHASE OMIT													
SPECIAL FUNCTIONS													(1-8)

TOD PROGRAM STEP	8												
DAY PGM NUMBER	0												
STEP BEGINS	0:00												
FLASH													
RED REST													
SPARE 5													
SPARE 3													
TYPE 0 DELAY ENABLE													
DET DIAG PLAN													
ALTERNATE SEQUENCE		A	B	C	D	E	F						
PHASE		1	2	3	4	5	6	7	8	9	10	11	12
MAX 2 ENABLE													
MAX 3 ENABLE													
VEH RECALL													
VEH MAX RECALL													
PED RECALL													
COND SERV INHIBIT													
PHASE OMIT													
SPECIAL FUNCTIONS													(1-8)

Up to 100 TOD Programs Available.

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DER
T.S. No.: 6029 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	1	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
		1	2
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	3	TYPE	1
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
		1	2
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	2	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
		1	2
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	4	TYPE	1
EXTEND TIME	0.0	DELAY TIME	10
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE		X	
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
		1	2
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue
T.S. No.: 6029

Date Prepared: 2-19-13 HCH By: DFR
Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	5	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	7	TYPE	1
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	6	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	8	TYPE	1
EXTEND TIME	0.0	DELAY TIME	10
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE	X	ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DFA
T.S. No.: 6029 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	9	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	11	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	0
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	10	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE	X		
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	12	TYPE	0
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE	1	1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13/HCH By: DEA
T.S. No.: 6029 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	13	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
NO ACTIVITY		1	2
MAX PRESENCE			
SCALE		1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	15	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
NO ACTIVITY		1	2
MAX PRESENCE			
SCALE		1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	14	TYPE	5
EXTEND TIME	2.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			X
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
NO ACTIVITY		1	2
MAX PRESENCE			
SCALE		1	1
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	16	TYPE	0
EXTEND TIME	0.0	DELAY TIME	0
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS		TOD PLAN	
NO ACTIVITY		1	2
MAX PRESENCE			
SCALE		1	1
ERRATIC COUNTS		FAIL ACTION	

ASC/25 - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DCA
T.S. No.: 6029 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	17	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	19	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	18	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	0

DETECTOR	20	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
	1	2	3
NO ACTIVITY			
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DF4
T.S. No.: 6029 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	21	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	23	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	22	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	24	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13/HCH By: DFA
T.S. No.: 6029 Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	25	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL	0	MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	27	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	26	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	28	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue

Date Prepared: 2-19-12 HCA By: DFA

T.S. No.: 6029

Date Implemented: _____ By: _____

6. DETECTOR SUBMENU

1. VEHICLE DETECTOR SETUP

DETECTOR	29	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	31	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

DETECTOR	30	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS	0	FAIL ACTION	

DETECTOR	32	TYPE	
EXTEND TIME		DELAY TIME	
QUEUE		QUEUE LIMIT	
YELLOW LOCK		RED LOCK	
PASSAGE		ADDED INITIAL	
SYSTEM		CALL DETECTOR	
FAIL ACTION		FAIL TIME	
DETECTOR LOG INTERVAL		MINUTES	
PHASE ASSIGNMENTS	1	2	3
CALL PHASE			
SWITCH PHASE			
DIAGNOSTICS	TOD PLAN		
NO ACTIVITY	1	2	3
MAX PRESENCE			
SCALE			
ERRATIC COUNTS		FAIL ACTION	

Up to 64 Vehicle Detectors Available

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DEA
T.S. No.: 6029 Date Implemented: _____ By: _____

6. DETECTORS SUBMENU (Continued)

2. SPEED DETECTORS

SPEED DETECTOR NUMBERS	1	2	3	4	5	6	7	8
ONE DETECTOR SPEED:								
LOCAL DET NUMBER								
VEHICLE LENGTH								
LOOP LENGTH								
TWO DETECTOR SPEED:								
LOCAL DET NUMBER								
SPEED TRAP LENGTH								
ENABLE LOG								
DETECTOR LOG INTERVAL	0			MINUTES				
UNITS:								
SPEED DETECTOR NUMBERS	9	10	11	12	13	14	15	16
ONE DETECTOR SPEED:								
LOCAL DET NUMBER								
VEHICLE LENGTH								
LOOP LENGTH								
TWO DETECTOR SPEED:								
LOCAL DET NUMBER								
SPEED TRAP LENGTH								
ENABLE LOG								
DETECTOR LOG INTERVAL	0			MINUTES				
UNITS:								

3. PEDESTRIAN DETECTOR SETUP

PEDESTRIAN DETECTOR SETUP					
DETECTOR	PHASE	ERRATIC COUNTS	NO ACTIVITY	MAX PRESENCE	SCALE
1					
2	2				
3					
4					
5					
6	6				
7					
8	8				
9					
10					
11					
12					

ASC/2S - NTCIP
PROGRAM REFERENCE CARD

INTERSECTION: Imperial Hwy @ Woods Avenue Date Prepared: 2-19-13 HCH By: DFA

T.S. No.: 6029 Date Implemented: _____ By: _____

DETECTOR ASSIGNMENT WORK SHEET

LOOP LOCATION	LANE	DET ASSIGN	DET TYP #	PHASE												DET DELAY	DET EXTEND	QUEUE MAX	REMARKS		
				1	2	3	4	5	6	7	8	9	10	11	12						
1-E-φ1	LT	1	0	X																	F
1-W-φ2	1,2,3	2	0		X																A
1-N-φ4	1	3	1			X															F
2-N-φ4	RT	4	1			X												10.0			F
1-W-φ5	LT	5	0				X														F
1-E-φ6	1,2,3	6	0					X													A
1-S-φ8	LT,1	7	1						X												F
2-S-φ8	RT	8	1							X								10.0			F
3-W-φ2	3	9	5	X															2.0		Q
2-W-φ2	1,2	10	5	X															2.0		Q
3-E-φ6	3	13	5					X											2.0		Q
2-E-φ6	1,2	14	5					X											2.0		Q

DETECTOR ASSIGNMENT DEFINITIONS

CONTROLLER	CONNECTOR'S A B C								CONNECTOR D								CONNECTOR TELEMETRY								CONNECTOR TYPE 1							
	DETECTOR								DETECTOR								DETECTOR								INPUT TYPE 1 ONLY							
ASC-2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
* = DELAY Time or EXTEND Time set on External Sensor																																
** = When the Detector Input is set to be a TYPE 4 Detector, the EXTEND value set in the Controller becomes the QUEUE MAX value and any Extension Time needed must be set externally on the Sensor. If the Detector Input is set to be a TYPE 5, the EXTEND value becomes a Reset (Gap) Timer value and the Extension Time is set Externally on the Sensor Unit.																																
Q = QUEUE CLEARING LOOP																F = FIRST VEHICLE LOOP																
H = HOLDING LOOP																A = ADVANCE LOOP																

Handwritten text on a page of lined paper. The text is written in cursive and is mostly illegible due to blurring and fading. The lines of the paper are visible, and the handwriting appears to be a continuous stream of text. There are some faint markings and a small dark spot on the right side of the page.

ASCI2

PROGRAM REFERENCE CARD

TERSECTION Norwalk & Excelsior
 CONTROLLER NUMBER _____ ENTERED BY: Pat Duggan DATE 10-15-20
 NOT _____ VER. _____ MAIN _____ VER. _____ HELP _____ VER. _____ CONFIG _____

1. CONFIGURATION SUBMENU

CONTROLLER SEQUENCE

PRIORITY	1	2	3	4	5	6	7	8	9	10	11	12
VG 1	1	2	3	4								
VG 2	5	6	7	8								

PHASE NUMBER

	1	2	3	4	5	6	7	8	9	10	11	12
PHASES IN USE		X		X								
EXCLUSIVE PED												

PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH (MMU) CHANNEL	SIGNAL DRIVER GROUP		LOAD SWITCH (MMU) CHANNEL	SIGNAL DRIVER	
	PHIOLAP	PED		PHIOLAP	PED
1	0		9	2	X
2	0		10	4	X
3	0		11		
4	0		12		
5	0		13		
6	0		14		
7	0		15		
8	0		16		

SDLC OPTIONS/ENABLES

	BIU NUMBER							
	1	2	3	4	5	6	7	8
TERM & FACIL								
DETECTOR RACK	X							
TYPE 2 RUNS AS TYPE 1								
MMU DISABLE								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
PEER TO PEER ENABLE								
PEER TO PEER ADDRESS								
)	2)	3)	4)	5)				
)	7)	8)	9)	10)				

PORT2 CONFIGURATION

PORT 2 PROTOCOL	
PORT 2 ENABLE	
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	
AB3418 DRDP-OUT TIME	
AB3418 TOD SF SELECT	
DATA RATE (BPS)	
DATA, PARITY, STOP	

6. PORT3 CONFIGURATION

PORT 3 PROTOCOL	
PORT 3 ENABLE	
TELEMETRY ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY	
AB3418 ADDRESS	
AB3418 GROUP ADDRESS	
AB3418 RESPONSE DELAY	
AB3418 SINGLE FLAG ENABLE	
AB3418 DROP-OUT TIME	
AB3418 TOD SF SELECT	
ADDITIONAL SCREEN(S)	
DUPLEX - HALF OR FULL	
MODEM DATA RATE (BPS)	
DATA, PARITY, STOP	

7. ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/F)	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
SPARE	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

8. OPTIONS

SUPERVISOR ACCESS CODE	
DATA CHANGE ACCESS CODE	
KEY CLICK ENABLE	
BACKLIGHT ENABLE	

6. CONTROLLER START/FLASH DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
POWER START		X										
EXTERNAL START		X										
ENTRY REM FLASH		X										
EXT.REM FLASH		X										
REM FLASH YEL		X										
FL TOGETHER PHS		X		X								
FL TOGETHER OVLPS	A:				B:	X		C:			D:	X
POWER START	YELLOW											
EXTERNAL START	YELLOW											
POWER START ALL RED TIME	16 sec											
POWER START FLASH TIME	6 sec											
REMOTE FLASH OPTIONS:												
OUT OF FLASH YELLOW												
OUT OF FLASH ALL RED												
MINIMUM RECALL												
SPARE												
FLASH THRU LOAD SWITCHES												
CYCLE THROUGH PHASES												

7. NO SERVE PHASES

PHASE	CANNOT SERVE WITH:											
	12	11	10	9	8	7	6	5	4	3	2	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												

8. DIMMING

LOAD SWITCH	1	2	3	4	5	6	7	8
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								
LOAD SWITCH	9	10	11	12	13	14	15	16
DIM GRN/WLK								
DIM YEL/PC								
DIM RED/DW								

9. CONTROLLER OPTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
GUAR PASSAGE												
NONACTUATED I												
NONACTUATED II												
DUAL ENTRY												
COND SERVICE												
COND RESERVICE												
REST IN WALK												
FLASHING WALK												
FIVE SECTION LEFT TURN HEADS												
5-2					7-4					1-6		
3-8					11-10					9-12		
DUAL ENTRY						RESERVED						
COND SERVICE ENABLE						BACKUP PROTECTION GROUP 1						
COND SERVICE DET X SWITCHING						BACKUP PROTECTION GROUP 2						
PED CLR PROTECT						BACKUP PROTECTION GROUP 3						
SPEC PREEMPT OVL P FLASH						SIMULTANEOUS GAP GROUP 1						
LOCK DETECTORS IN RED ONLY						SIMULTANEOUS GAP GROUP 2						
RESERVED						SIMULTANEOUS GAP GROUP 3						

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE			[1]			[2]						
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING			[1]			[2]						
SPL DMD PATTERN			[1]			[2]						
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE			[1]			[2]						
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING			[1]			[2]						
SPL DMD PATTERN			[1]			[2]						
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE			[1]			[2]						
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING			[1]			[2]						
SPL DMD PATTERN			[1]			[2]						
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 2 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE			[1]			[2]						
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING			[1]			[2]						
SPL DMD PATTERN			[1]			[2]						
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

FORMAT		OFFSET	
ORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

STD FORMAT		OFFSET	
COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT		OFFSET	
COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

PLAN FORMAT		OFFSET	
COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TIMING PLAN		1	2	3
ORD PATTERN		1	2	3
CYCLE LENGTH	OFFSTS			

TIMING PLAN		1	2	3
COORD PATTERN		1	2	3
CYCLE LENGTH	OFFSTS			

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
ARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
ARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT		OFFSET	
COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

STD FORMAT		OFFSET	
COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT		OFFSET	
COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

PLAN FORMAT		OFFSET	
COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TIMING PLAN		1	2	3
COORD PATTERN		1	2	3
CYCLE LENGTH	OFFSTS			

TIMING PLAN		1	2	3
COORD PATTERN		1	2	3
CYCLE LENGTH	OFFSTS			

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
ARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE		[1]	[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING		[1]	[2]									
SPL DMD PATTERN		[1]	[2]									
ARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

STD FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		C/O/S	

PLAN FORMAT

COORD PATTERN		OFFSET	
CYCLE LENGTH		PLAN	

TS2 FORMAT

COORD PATTERN		TIMING PLAN	
CYCLE LENGTH		OFFSTS	1 | 2 | 3

SPLITS:												
PHASE 1)	2)	3)	4)									
PHASE 5)	6)	7)	8)									
PHASE 9)	10)	11)	12)									
VEH PERMISSIVE	[1]		[2]									
VEH PERM 2 DISP												
PHASE RESERVICE												
SPLIT EXTENSION/RING	[1]		[2]									
SPL DMD PATTERN	[1]		[2]									
XARTERY PATTERN												
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
COORD PHASES												
VEHICLE RECALL												
VEH MAX RECALL												
PED RECALL												
PHASE OMIT												
SPARE												
	A	B	C	D	E	F						
ALT SEQUENCE												

5. NIC/TOD SUBMENU

3. TOD CLOCK/CALENDAR DATA

TIME SET:	
IE SET:	
NUJAL NIC PROGRAM STEP	
NUJAL TOD PROGRAM STEP	
VC REFERENCE TIME	
VC REFERENCE	
WEEK 1 BEGINS ON 1ST SUNDAY	
STANDARD DAYLIGHT SAVINGS	
TIME BEGINS LAST SUNDAY	

3. TOD WEEKLY PROGRAMS

WEEK	SUN	MON	TUE	WED	THU	FRJ	SAT
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

3. TOD YEARLY PROGRAMS

WEEK OF YEAR	1	2	3	4	5	6	7	8
WEEKLY								
WEEK OF YEAR	9	10	11	12	13	14	15	16
WEEKLY								
WEEK OF YEAR	17	18	19	20	21	22	23	24
WEEKLY								
WEEK OF YEAR	25	26	27	28	29	30	31	32
WEEKLY								
WEEK OF YEAR	33	34	35	36	37	38	39	40
WEEKLY								
WEEK OF YEAR	41	42	43	44	45	46	47	48
WEEKLY								
WEEK OF YEAR				49	50	51	52	53
WEEKLY								

4. NIC/TOD HOLIDAY PROGRAM

HOLIDAY	FLOAT/FIXED	MON/MON	DOW/DOM	WOM/YEAR	PROG
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

1. DETECTOR TYPE/TIMERS

DET	TYPE	LOCK	EXTEND	DELAY	NO RESET	LOG ENABLE
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

2. DETECTOR PHASE ASSIGNMENT

DETECTOR	PHASE ASSIGNMENT											
	1	2	3	4	5	6	7	8	9	10	11	12
1		X										
2		X										
3			X									
4			X									
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												

3. PED AND SYSTEM DETECTOR LOCAL ASSIGNMENT

DETECTOR LOG INTERVAL					MINUTES	
LOCAL PED DET NUMBER	PHASE PED DETECTOR					
	1	2	3	4	5	6
	7	8	9	10	11	12
NUMBER						
LOCAL DETECTOR NUMBER	LOCAL SYSTEM DET NUMBER					
	1	2	3	4	5	6
	7	8	9	10	11	12
NUMBER						

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH												DIM ENABLE
RED REST												ALT VEH EXTSN
SPARE 5												DET LOG ENABLE
SPARE 3												SPARE 4
TYPE 0 DELAY EN												SPARE 2
DET DIAG PLAN												
ALTERNATE SEQUENCE	A		B		C		D		E		F	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH												DIM ENABLE
RED REST												ALT VEH EXTSN
SPARE 5												DET LOG ENABLE
SPARE 3												SPARE 4
TYPE 0 DELAY EN												SPARE 2
DET DIAG PLAN												
ALTERNATE SEQUENCE	A		B		C		D		E		F	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH												DIM ENABLE
RED REST												ALT VEH EXTSN
SPARE 5												DET LOG ENABLE
SPARE 3												SPARE 4
TYPE 0 DELAY EN												SPARE 2
DET DIAG PLAN												
ALTERNATE SEQUENCE	A		B		C		D		E		F	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH												DIM ENABLE
RED REST												ALT VEH EXTSN
SPARE 5												DET LOG ENABLE
SPARE 3												SPARE 4
TYPE 0 DELAY EN												SPARE 2
DET DIAG PLAN												
ALTERNATE SEQUENCE	A		B		C		D		E		F	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH												DIM ENABLE
RED REST												ALT VEH EXTSN
SPARE 5												DET LOG ENABLE
SPARE 3												SPARE 4
TYPE 0 DELAY EN												SPARE 2
DET DIAG PLAN												
ALTERNATE SEQUENCE	A		B		C		D		E		F	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

TOD PROGRAM STEP												
DAY PGM NUM												
STEP BEGINS												
FLASH												DIM ENABLE
RED REST												ALT VEH EXTSN
SPARE 5												DET LOG ENABLE
SPARE 3												SPARE 4
TYPE 0 DELAY EN												SPARE 2
DET DIAG PLAN												
ALTERNATE SEQUENCE	A		B		C		D		E		F	
PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MAX2 ENABLE												
MAX3 ENABLE												
VEH RECALL												
VEH MAX RECALL												
PED RECALL												
COND SERV INH												
PHASE OMIT												
SPECIAL FCTNS												(1-8)

6. DETECTORS

8. DETECTOR DIAGNOSTIC INTERVAL

DETECTOR DIAGNOSTIC INTERVAL			
DIAGNOSTIC NUMBER	NO ACTIVITY	MAX PRESENCE	ERRATIC COUNTS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

PROGRAM REFERENCE CARD
LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

PAGE 1 OF 5

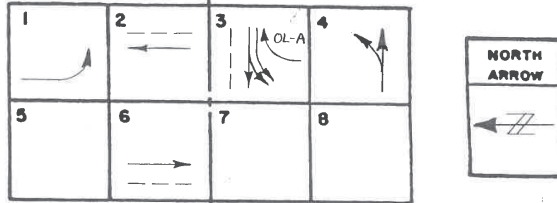
INTERSECTION: NORWALK BL @ CIVIC CENTER DR
TS No: NONE

DATE REQUESTED: 8-10-92 HCH BY: JH
DATE COMPLETED: 4-2-93 BY: JSS

CONTROLLER

Table with 4 columns: MAIN MENU, CONTROLLER SUBMENU, TIMING DATA, and various parameters like MIN GRN, WALK, PED CLR, etc.

PHASE DIAGRAM



TELEMETRY

Telemetry form with sections for MAIN MENU, TELEMETRY SUBMENU, ADDRESS, and SPEED TRAPS.

DETECTORS

Detectors form with sections for MAIN MENU, DETECTOR SUBMENU, TYPE, PHASE ASSIGNMENT, and THRESH.

Table for OVERLAP DATA with columns for PHASE and rows for STANDARD, PROTECTED, PERMISSIVE, etc.

Table for RECALL DATA with columns for PHASE and rows for PHASES IN USE, LOCKING MEMORY, etc.

Table for START/FLASH DATA with columns for PHASE and rows for POWER START, EXTERNAL START, etc.

Table for OPTION DATA with columns for PHASE and rows for GUAR PASSAGE, NONACTUATED I, etc.

Table for CROSS SWITCHING with columns for PHASE and rows for DETECTOR 1-8.

Table for OPTIONS with sections for MAIN MENU, OPTIONS SUBMENU, and various settings like AUDIO FEEDBACK, DISPLAY BACKLIGHT, etc.

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

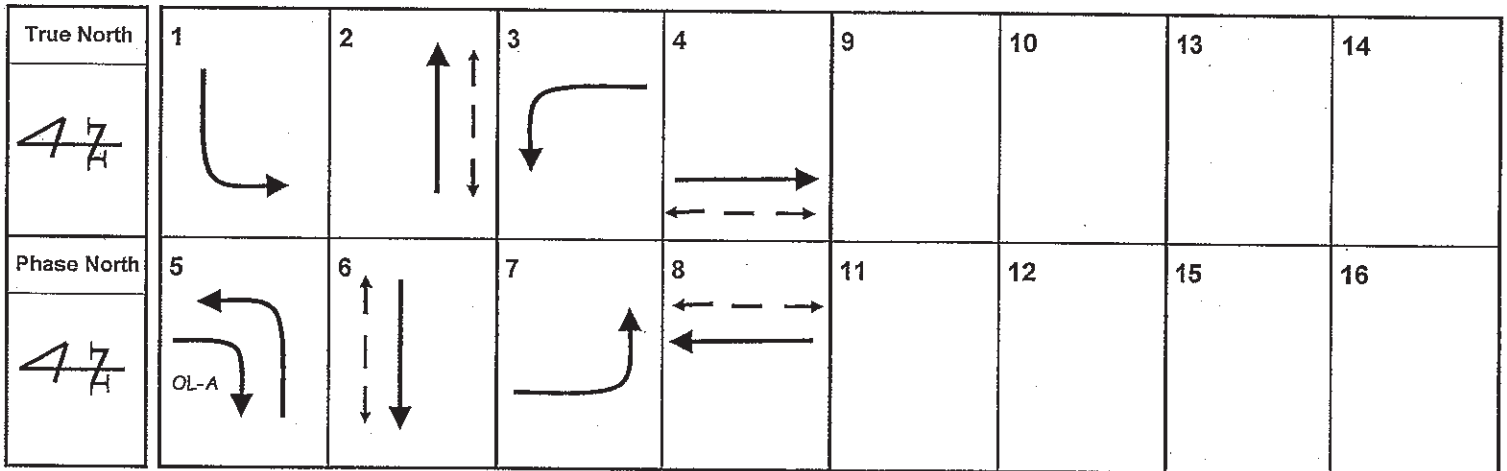
Date Implemented: 9-4-12 By: OP

UTILITIES SUBMENU

8-7. SOFTWARE MODULES

NAME	PART NUMBER	VERSION
BOOT	100-1047-209	V1.09.00
APPLICATION	100-1082-241	V2.41.00
CONFIGURATION	100-1049-001	N3000
HELP	100-1050-001	01.00.00
DEFINITIONS	100-1051-001	02.10.00
TEXT	100-1052-001	02.10.00
TELEMETRY	100-1032-501	V0.00.00

PHASE DIAGRAM



Comments: OLA = $\Phi 4 + \Phi 5$

OLA WIRE TO $\Phi 5$

CONTROL ON FUSE NOT WORKING PROPERLY -

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: DP

CONFIGURATION SUBMENU

1-4-1. SDLC OPTIONS

TERM & FACILITY	1	2	3	4	5	6	7	8
ENABLE								
PEER TO PEER ENABLE								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE	X							
PEER TO PEER ENABLE								
MMU ENABLE								X
MMU STOP TIME								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
CONTROLLER PEER TO PEER ENABLE								
DISABLE 3 CRITICAL RFE'S LOCKUP								

1-4-2. MMU PROGRAM

CHANNEL CAN SERVE WITH															
CHANNEL	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-3. COLOR CHECK ENABLE

ENABLE COLOR CHECK	X							
MMU CHANNEL	1	2	3	4	5	6	7	8
GREEN / WALK	X	X	X	X	X	X	X	X
YELLOW / PC	X	X	X	X	X	X	X	X
RED / DW	X	X	X	X	X	X	X	X
MMU CHANNEL	9	10	11	12	13	14	15	16
GREEN / WALK								
YELLOW / PC								
RED / DW								

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD
T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: BY

CONFIGURATION SUBMENU

1-5-1. GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (in seconds)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-2. PORT 2 (TERMINAL)

PROTOCOL	TERML
ENABLE	NO
DATA RATE (BPS)	9600
DATA, PARITY, STOP	8,N,1
MODEM SETUP STRING	
USER STRING	
MODEM CONTROL ENABLE	
COMM PORT ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY (in ms)	
DUPLEX - HALF OR FULL	HALF
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
RTS TO CTS DELAY (in ms)	
RTS TURN OFF DELAY (in ms)	
DROP-OUT TIME (in seconds)	
EARLY RTS	

1-5-3. PORT 3A (TELEMETRY)

PROTOCOL	NTCIP
ENABLE	NO
DATA RATE (BPS)	19200
DATA, PARITY, STOP	8,N,1
MODEM SETUP STRING	
USER STRING	
MODEM CONTROL ENABLE	
COMM PORT ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY (in ms)	
DUPLEX - HALF OR FULL	FULL
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	YES
RTS TO CTS DELAY (in ms)	
RTS TURN OFF DELAY (in ms)	
DROP-OUT TIME (in seconds)	
EARLY RTS	

1-5-4. PORT 3B

PROTOCOL	ECPIP
ENABLE	NO
DATA RATE (BPS)	1200
DATA, PARITY, STOP	8,N,1
MODEM SETUP STRING	
USER STRING	
MODEM CONTROL ENABLE	
COMM PORT ADDRESS	
SYSTEM DETECTOR 9-16 ADDRESS	
TELEMETRY RESPONSE DELAY (in ms)	0.9
DUPLEX - HALF OR FULL	FULL
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
RTS TO CTS DELAY (in ms)	
RTS TURN OFF DELAY (in ms)	
DROP-OUT TIME (in seconds)	
EARLY RTS	

1-5-5. ETHERNET PORT CONFIGURATION

MAC ADDRESS	
IP ADDRESS	172.22.1.13
ADDRESS MASK	255.255.252.0
FTP SERVER ADDRESS	
DEFAULT GATEWAY IP ADDRESS	
NTCIP UDP PORT	50013

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: ef

CONFIGURATION SUBMENU

1-6-1. EVENT LOGGING

CRITICAL RFE'S (MMU / TF)	YES
3 CRITICAL RFE ERRORS IN 24 HOURS	YES
NON-CRITICAL RFE'S (DET/TEST)	YES
DETECTOR ERRORS	YES
COORDINATION ERRORS	YES
MMU FLASH FAULTS	YES
LOCAL FLASH	YES
PREEMPT	YES
TSP	YES
POWER ON/OFF	YES
LOW BATTERY	YES
ACCESS	YES
DATA CHANGE	YES
CONTROLLER DOWNLOAD	YES

ALARM 1	ALARM 2
ALARM 3	ALARM 4
ALARM 5	ALARM 6
ALARM 7	ALARM 8
ALARM 9	ALARM 10
ALARM 11	ALARM 12
ALARM 13	ALARM 14
ALARM 15	ALARM 16

1-7-1. ADMINISTRATION

ENABLE IDOT CRC CHECK	NO
CONTROLLER DATABASE CRC	
HARDWIRED IDOT CRC	
COMPUTED IDOT CRC	
REQUEST DOWNLOAD OF PROGRAM DATA	

1-7-2. DISPLAY OPTIONS

KEY CLICK ENABLE	YES
BACKLIGHT ENABLE	YES

1-8-1. LOGIC STATEMENT CONTROL

	1	2	3	4	5	6	7	8	9	10
LP 1-10										
LP 11-20										
LP 21-30										
LP 31-40										
LP 41-50										
LP 51-60										
LP 61-70										
LP 71-80										
LP 81-90										
LP 90-100										

1-8-2. LOGIC STATEMENTS

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: ag

CONFIGURATION SUBMENU

1-8-2. LOGIC STATEMENTS (CONTINUED)

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

LOGIC #	ACTIVE			
IF				
THEN				
ELSE				

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: gy

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

TIMING PLAN	1	PHASE DATA															
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN		4	6	4	6	4	6	4	6								
BICYCLE MIN GREEN		0	0	0	0	0	0	0	0								
CONDITIONAL SERVICE MIN GRN		0	0	0	0	0	0	0	0								
DELAY GREEN		0	0	0	0	0	0	0	0								
WALK		0	7	0	7	0	7	0	7								
WALK 2		0	0	0	0	0	0	0	0								
WALK MAX		0	0	0	0	0	0	0	0								
PEDESTRIAN CLEARANCE		0	22	0	25	0	24	0	24								
PEDESTRIAN CLEARANCE 2		0	0	0	0	0	0	0	0								
PEDESTRIAN CLEARANCE MAX		0	0	0	0	0	0	0	0								
PEDESTRIAN CARRY OVER		0	0	0	0	0	0	0	0								
VEHICLE EXTENSION		1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0								
VEHICLE EXTENSION 2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
MAX 1		20	40	20	40	25	40	20	40								
MAX 2		20	130	20	130	25	130	20	130								
MAX 3		0	0	0	0	0	0	0	0								
DYNAMIC MAX		0	0	0	0	0	0	0	0								
DYNAMIC MAX STEP		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
YELLOW		4.0	5.0	3.0	4.5	4.0	5.0	3.0	4.5								
RED CLEARANCE		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0								
RED MAX		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
RED REVERT		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0								
ACTUATIONS BEFORE (ACT B4)		0	0	0	0	0	0	0	0								
SEC/ACTUATION		0.0	1.5	0.0	1.5	0.0	1.5	0.0	1.5								
MAX ADDED INITIAL (MAX INI)		0	25	0	25	0	25	0	25								
TIME BEFORE GAP REDUCTION		0	15	0	15	0	15	0	15								
CARS WAITING B4 REDUCTION		0	255	0	255	0	255	0	255								
STEP TO REDUCE (STPTDUC)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
TIME TO REDUCE (TTREDUC)		0	15	0	15	0	15	0	15								
MINIMUM GAP		1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0								

Comments:

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD
T.S. No.: 5046-NOR Date Implemented: 9-9-12 By: sp

CONTROLLER SUBMENU

2-5. START / FLASH DATA

POWER START																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PHASE		Y				Y											
OVERLAP																	
POWER START RED	4				FLASH TIME				0								
POWER START SEQ																	
REMOTE FLASH																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
ENTRY																	
EXIT																	
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
EXIT																	
EXIT REMOTE FLASH					MIN AUTO FLASH												
MINIMUM RECALL					CYCLE THRU PHASE												

2-6-1. CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT	ON															
UNIT RED REVERT	2.0															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GUARANTEED PASSAGE																
NON-ACT I																
NON-ACT II																
DUAL ENTRY				X				X								
COND SERVICE																
COND RESERVICE																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEH EXT																

2-6-2. EXTENDED OPTIONS [DEMO]

LP FEATURE 1		
LP FEATURE 2		

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD
T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: op

COORDINATION SUBMENU

3-2. COORDINATOR PATTERN

COORDINATOR PATTERN	1		
TS2 (PAT - OFF)		STD (COS)	111
CYCLE	120	SPLIT PATTERN	1
OFFSET VALUE	111	SEQUENCE	1
SPLITS IN	SEC	OFFSET IN	SEC
X-ING ARTERIAL PATTERN	0		
VEH PERM 1	0	VEH PERM 2	0
VEH PERM 2 DISP	0	ACTION PLAN	0
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	PHASE RESERVICE	NO
	1	2	3
RING SPLIT EXT (SEC)	30	30	
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
DIRECTED SPLIT PREFERENCE PHASES			
	1	2	3
PREFERENCE 1			
PREFERENCE 2			
	9	10	11
PREFERENCE 1			
PREFERENCE 2			
SPECIAL FUNCTION	1	2	3
OUTPUTS			

COORDINATOR PATTERN	2		
TS2 (PAT - OFF)		STD (COS)	211
CYCLE	120	SPLIT PATTERN	2
OFFSET VALUE	16	SEQUENCE	1
SPLITS IN	SEC	OFFSET IN	SEC
X-ING ARTERIAL PATTERN	0		
VEH PERM 1	0	VEH PERM 2	0
VEH PERM 2 DISP	0	ACTION PLAN	0
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	PHASE RESERVICE	NO
	1	2	3
RING SPLIT EXT (SEC)	30	30	
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
DIRECTED SPLIT PREFERENCE PHASES			
	1	2	3
PREFERENCE 1			
PREFERENCE 2			
	9	10	11
PREFERENCE 1			
PREFERENCE 2			
SPECIAL FUNCTION	1	2	3
OUTPUTS			

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: SP

COORDINATION SUBMENU

3-2. COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	3							
TS2 (PAT - OFF)		STD (COS)	311					
CYCLE	120	SPLIT PATTERN	3					
OFFSET VALUE	3	SEQUENCE	1					
SPLITS IN	SEC	OFFSET IN	SEC					
X-ING ARTERIAL PATTERN	0							
VEH PERM 1	0	VEH PERM 2	0					
VEH PERM 2 DISP	0	ACTION PLAN	0					
ACTUATED COORD	YES	TIMING PLAN	0					
ACT WALK REST	NO	PHASE RESERVICE	NO					
		1	2	3	4			
RING SPLIT EXT (SEC)		20	20					
SPLIT DEMAND PATTERN								
RING DISPLACEMENT								
DIRECTED SPLIT PREFERENCE PHASES								
	1	2	3	4	5	6	7	8
PREFERENCE 1								
PREFERENCE 2								
	9	10	11	12	13	14	15	16
PREFERENCE 1								
PREFERENCE 2								
SPECIAL FUNCTION								
OUTPUTS	1	2	3	4	5	6	7	8

COORDINATOR PATTERN	4							
TS2 (PAT - OFF)		STD (COS)						
CYCLE		SPLIT PATTERN						
OFFSET VALUE		SEQUENCE						
SPLITS IN		OFFSET IN						
X-ING ARTERIAL PATTERN								
VEH PERM 1		VEH PERM 2						
VEH PERM 2 DISP		ACTION PLAN						
ACTUATED COORD		TIMING PLAN						
ACT WALK REST		PHASE RESERVICE						
		1	2	3	4			
RING SPLIT EXT (SEC)								
SPLIT DEMAND PATTERN								
RING DISPLACEMENT								
DIRECTED SPLIT PREFERENCE PHASES								
	1	2	3	4	5	6	7	8
PREFERENCE 1								
PREFERENCE 2								
	9	10	11	12	13	14	15	16
PREFERENCE 1								
PREFERENCE 2								
SPECIAL FUNCTION								
OUTPUTS	1	2	3	4	5	6	7	8

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: af

COORDINATION SUBMENU

3-3. SPLIT PATTERN

SPLIT PATTERN		1															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
COORD PHASES		X				X											
PHASE	1				2				3				4				
SPLIT	20				44				17				39				
MODE																	
PHASE	5				6				7				8				
SPLIT	20				44				17				39				
MODE																	
PHASE	9				10				11				12				
SPLIT																	
MODE																	
PHASE	13				14				15				16				
SPLIT																	
MODE																	

SPLIT PATTERN		2															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
COORD PHASES		X				X											
PHASE	1				2				3				4				
SPLIT	17				49				16				38				
MODE																	
PHASE	5				6				7				8				
SPLIT	20				46				16				38				
MODE																	
PHASE	9				10				11				12				
SPLIT																	
MODE																	
PHASE	13				14				15				16				
SPLIT																	
MODE																	

SPLIT PATTERN		3															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
COORD PHASES		X				X											
PHASE	1				2				3				4				
SPLIT	17				46				16				41				
MODE																	
PHASE	5				6				7				8				
SPLIT	25				38				19				38				
MODE																	
PHASE	9				10				11				12				
SPLIT																	
MODE																	
PHASE	13				14				15				16				
SPLIT																	
MODE																	

SPLIT PATTERN		4															
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
COORD PHASES																	
PHASE	1				2				3				4				
SPLIT																	
MODE																	
PHASE	5				6				7				8				
SPLIT																	
MODE																	
PHASE	9				10				11				12				
SPLIT																	
MODE																	
PHASE	13				14				15				16				
SPLIT																	
MODE																	

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: [Signature]

PREEMPT SUBMENU

4-1. PREEMPTOR (CONTINUED)

PREEMPT PLAN		5		[REDACTED]															
ENABLE				DET-LOCK															
PREEMPT OVERRIDE				INTERLOCK ENABLE															
DELAY TIME (SECONDS)				INHIBIT TIME (SECONDS)															
EXTEND INPUT (SECONDS)				MAX PRESENCE (SECONDS)															
DURATION TIME (SECONDS)				TRACK CLEAR RESERVICE															
PED DARK				RESERVICE TIME															
AUTO FLASH HAS PRIORITY				YELLOW CLEAR GOES GRN															
TERMINATE OVLPS ASAP				PC THRU YELLOW															
RING				1	2	3	4												
FREE DURING PREEMPTION																			
[REDACTED]		WALK	PC	GREEN	YELLOW	RED													
ENTRANCE TIMES																			
TRACK CLEARANCE TIMES																			
MIN DWELL - CYCLE GREEN / EXIT YELLOW / RED																			
DWELL FLASH				FLASH EXIT COLOR															
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
TRACK CLEAR PHASE																			
DWELL PHASE																			
DWELL PED																			
CYCLING PHASE																			
CYCLING PED																			
EXIT PHASE																			
EXIT CALLS																			
SPECIAL FUNCTION		[REDACTED]																	
PREEMPTION TO COORD				EXIT TIMING PLAN															
LINKED PREEMPTOR				[REDACTED]															
--PREEMPT ACTIVE OUTPUTS--																			
PREEMPT ACTIVE OUTPUT				PREEMPT ACTIVE OUTPUT IN DWELL															
OTHER PRIORITY PREEMPT OUTPUT				NON-PRIORITY PREEMPT OUTPUT															
OVERLAP		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR																			
DWELL																			
CYCLING																			
DISABLE TRAIL OVL																			

PREEMPT PLAN		6		[REDACTED]															
ENABLE				DET-LOCK															
PREEMPT OVERRIDE				INTERLOCK ENABLE															
DELAY TIME (SECONDS)				INHIBIT TIME (SECONDS)															
EXTEND INPUT (SECONDS)				MAX PRESENCE (SECONDS)															
DURATION TIME (SECONDS)				TRACK CLEAR RESERVICE															
PED DARK				RESERVICE TIME															
AUTO FLASH HAS PRIORITY				YELLOW CLEAR GOES GRN															
TERMINATE OVLPS ASAP				PC THRU YELLOW															
RING				1	2	3	4												
FREE DURING PREEMPTION																			
[REDACTED]		WALK	PC	GREEN	YELLOW	RED													
ENTRANCE TIMES																			
TRACK CLEARANCE TIMES																			
MIN DWELL - CYCLE GREEN / EXIT YELLOW / RED																			
DWELL FLASH				FLASH EXIT COLOR															
PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
TRACK CLEAR PHASE																			
DWELL PHASE																			
DWELL PED																			
CYCLING PHASE																			
CYCLING PED																			
EXIT PHASE																			
EXIT CALLS																			
SPECIAL FUNCTION		[REDACTED]																	
PREEMPTION TO COORD				EXIT TIMING PLAN															
LINKED PREEMPTOR				[REDACTED]															
--PREEMPT ACTIVE OUTPUTS--																			
PREEMPT ACTIVE OUTPUT				PREEMPT ACTIVE OUTPUT IN DWELL															
OTHER PRIORITY PREEMPT OUTPUT				NON-PRIORITY PREEMPT OUTPUT															
OVERLAP		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR																			
DWELL																			
CYCLING																			
DISABLE TRAIL OVL																			

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: OP

PREEMPT SUBMENU

4-2. ENABLE PREEMPT FILTERING / TSP / SCP

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-4. TSP / SCP SPLIT PATTERN

TSP / SCP SPLIT PATTERN				
PHASE	1	2	3	4
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				
PHASE	5	6	7	8
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				
PHASE	9	10	11	12
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				
PHASE	13	14	15	16
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				

4-3. TSP / SCP PLAN

TSP / SCP PLAN																
ENABLE																NIC INHIBIT S/F
DET LOCK																DET SIGNAL
DELAY TIME																TSP FREE PTN
RESERVICE CYCS																TSP / SCP SPLIT PTN
PREEMPT ENABLES RESERVICE																
INHIBIT DELAY WHEN IN TSP / SCP PHASES																
MAX PRESENCE																
TSP / SCP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES																
PHS OMIT																
PED OMIT																

TSP / SCP SPLIT PATTERN				
PHASE	1	2	3	4
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				
PHASE	5	6	7	8
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				
PHASE	9	10	11	12
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				
PHASE	13	14	15	16
TSP / SCP MAX RDTN				
TSP MIN				
SCP MAX EXT				

Add additional sheets for more TSP / SCP Split Patterns

TSP / SCP PLAN																
ENABLE																NIC INHIBIT S/F
DET LOCK																DET SIGNAL
DELAY TIME																TSP FREE PTN
RESERVICE CYCS																TSP / SCP SPLIT PTN
PREEMPT ENABLES RESERVICE																
INHIBIT DELAY WHEN IN TSP / SCP PHASES																
MAX PRESENCE																
TSP / SCP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES																
PHS OMIT																
PED OMIT																

Add additional sheets for more TSP / SCP Plans

4-5. PREEMPT TSP / SCP OPTIONS

TSP OR SCP			
FREE DEFAULT PTN			

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: [Signature]

TIME BASE SUBMENU

5-1. CLOCK / CALENDAR DATA

DATE SET	TIME SET
MANUAL ACTION PLAN	0
SYNC REFERENCE TIME	00:00
SYNC REFERENCE	REFERENCE TIME
DAYLIGHT SAVINGS	USDLS
TIME TO RESET INPUT SET TIME	03:30:00
STANDARD TIME FROM GMT	-8

5-2. SCHEDULE

SCHEDULE NUMBER		1										
DAY PLAN NUMBER		1										
MONTH	JAN	FEB	MAR	APR	MAY	JUN						
	X	X	X	X	X	X						
	JUL	AUG	SEP	OCT	NOV	DEC						
	X	X	X	X	X	X						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
		X	X	X	X	X						
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	X	X	X	X	X	X	X	X	X	X		
	11	12	13	14	15	16	17	18	19	20		
	X	X	X	X	X	X	X	X	X	X		
	21	22	23	24	25	26	27	28	29	30		
X	X	X	X	X	X	X	X	X	X			
31												
X												

SCHEDULE NUMBER		2										
DAY PLAN NUMBER		2										
MONTH	JAN	FEB	MAR	APR	MAY	JUN						
	X	X	X	X	X	X						
	JUL	AUG	SEP	OCT	NOV	DEC						
	X	X	X	X	X	X						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
							X					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	X	X	X	X	X	X	X	X	X	X		
	11	12	13	14	15	16	17	18	19	20		
	X	X	X	X	X	X	X	X	X	X		
	21	22	23	24	25	26	27	28	29	30		
X	X	X	X	X	X	X	X	X	X			
31												
X												

SCHEDULE NUMBER		3										
DAY PLAN NUMBER		3										
MONTH	JAN	FEB	MAR	APR	MAY	JUN						
	X	X	X	X	X	X						
	JUL	AUG	SEP	OCT	NOV	DEC						
	X	X	X	X	X	X						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X											
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	X	X	X	X	X	X	X	X	X	X		
	11	12	13	14	15	16	17	18	19	20		
	X	X	X	X	X	X	X	X	X	X		
	21	22	23	24	25	26	27	28	29	30		
X	X	X	X	X	X	X	X	X	X			
31												
X												

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JAN	FEB	MAR	APR	MAY	JUN						
	JUL	AUG	SEP	OCT	NOV	DEC						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
31												

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: OP

TIME BASE SUBMENU

5-3. DAY PLAN

DAY PLAN		1	Monday-Friday
EVENT	ACTION PLAN		START TIME
1	4		00:00
2	2		06:00
3	1		09:00
4	3		15:00
5	1		19:00
6	4		21:00
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
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42			
43			
44			
45			
46			
47			
48			
49			
50			

DAY PLAN		2	Saturday
EVENT	ACTION PLAN		START TIME
1	4		00:00
2	1		10:00
3	4		19:00
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
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49			
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DAY PLAN		3	Sunday
EVENT	ACTION PLAN		START TIME
1	4		00:00
2	1		11:00
3	4		19:00
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
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PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD. Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: SP

TIME BASE SUBMENU

5-5. EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1	FIXED	1	1	0	2
2	FIXED	7	4	0	2
3	FIXED	11	11	0	2
4	FIXED	12	24	0	2
5	FIXED	12	25	0	2
6	FLOAT	1	2	3	2
7	FLOAT	2	2	3	2
8	FLOAT	5	2	5	2
9	FLOAT	9	2	1	2
10	FLOAT	11	5	4	2
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
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28					
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30					
31					
32					
33					
34					
35					
36					

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: OP

DETECTOR SUBMENU

6-1. VEHICLE DETECTOR TYPE / TS1 DETECTOR SELECT

DETECT NUMBER	DETECT TYPE	TS1 DETECT
1	0	
2	1	
3	0	
4	1	
5	0	
6	1	
7	0	
8	1	
9	1	
10	0	
11	0	
12	0	
13	0	
14	0	
15	0	
16	0	
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

DETECT NUMBER	DETECT TYPE	TS1 DETECT
33		
34		
35		
36		
37		
38		
39		
40		
41		
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45		
46		
47		
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PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: g

DETECTOR SUBMENU

6-2. VEHICLE DETECTOR SETUP (CONTINUED)

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	9																
ASSIGNED PHASE	5	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	10	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED				X													

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	13																
ASSIGNED PHASE	4	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	0	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED				X													

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	10																
ASSIGNED PHASE	6	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	0	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED						X											

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	14																
ASSIGNED PHASE	6	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	0	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED						X											

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	11																
ASSIGNED PHASE	2	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	0	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED		X															

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	15																
ASSIGNED PHASE	8	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	0	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED								X									

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	12																
ASSIGNED PHASE	2	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	0	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED		X															

VEHICLE PLAN NUMBER	1																
DETECTOR NUMBER	16																
ASSIGNED PHASE	8	ADDED OPTION	NO														
SWITCH PHASE	0	CALL OPTION	YES														
EXTEND TIME	0.0	PASSAGE OPTION	YES														
DELAY TIME	0	QUEUE OPTION	NO														
QUEUE LIMIT	0	NTCIP OCCUPANCY	NO														
FAIL TIME	0	NTCIP VOLUME	NO														
FAIL CALL DELAY	0	ECPI LOG	NO														
YELLOW LOCK	NO	RED LOCK	NO														
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
CALLED								X									

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD

Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR

Date Implemented: 9-4-12 By: Q

DETECTOR SUBMENU

6-6. VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER										
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER		DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1						33				
2						34				
3						35				
4						36				
5						37				
6						38				
7						39				
8						40				
9						41				
10						42				
11						43				
12						44				
13						45				
14						46				
15						47				
16						48				
17						49				
18						50				
19						51				
20						52				
21						53				
22						54				
23						55				
24						56				
25						57				
26						58				
27						59				
28						60				
29						61				
30						62				
31						63				
32						64				

PROGRAM REFERENCE CARD

INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD
 T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: cy

DETECTOR SUBMENU

6-7. PEDESTRIAN DETECTOR DIAGNOSTICS

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PEDESTRIAN DIAGNOSTIC PLAN NUMBER				
DETECTOR	COUNTS	ACT	PRES	MULTIPLIER
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

PROGRAM REFERENCE CARD

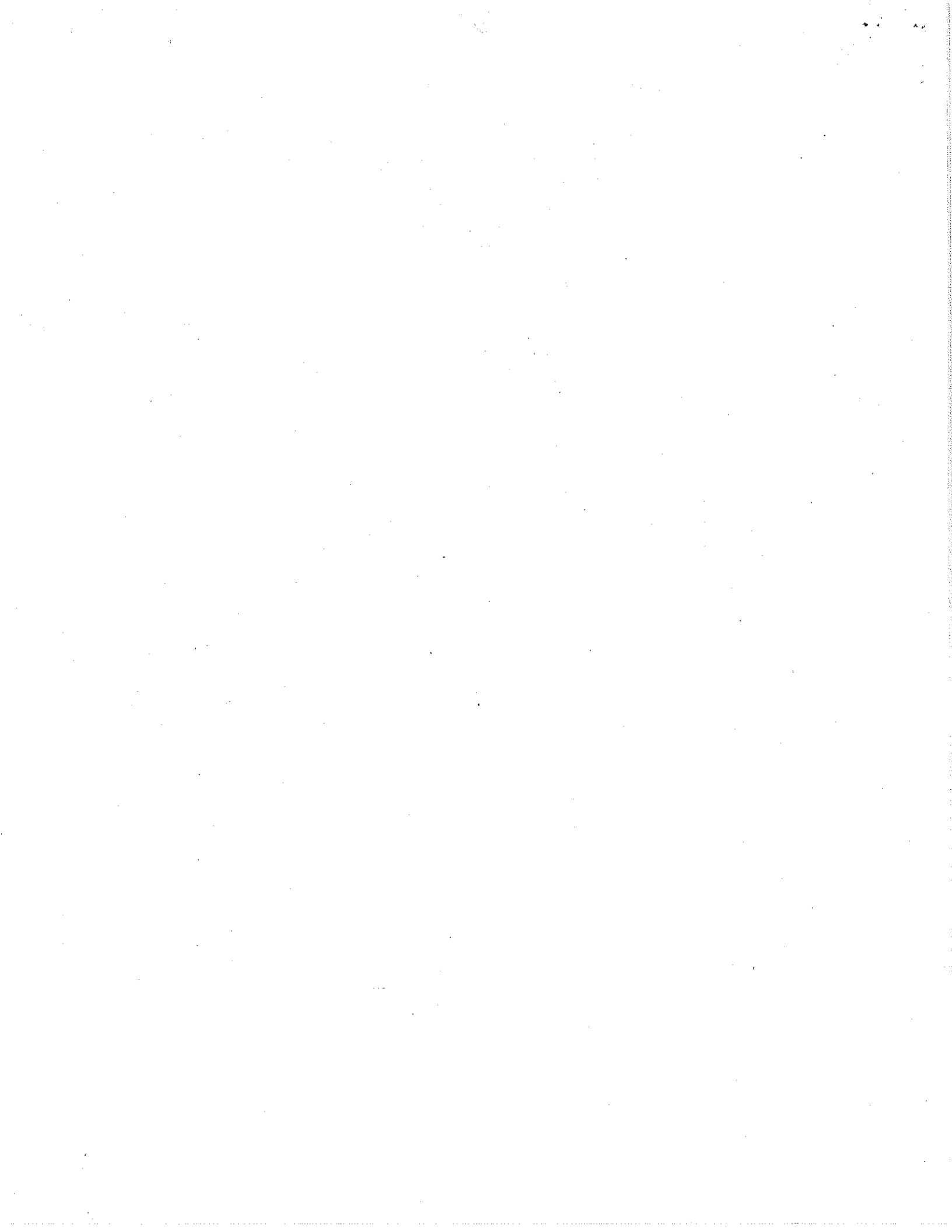
INTERSECTION: ROSECRANS AV @ CARMENITA RD Date Prepared: 7-2-12 PD By: SDD

T.S. No.: 5046-NOR Date Implemented: 9-4-12 By: af

DETECTOR ASSIGNMENT SUMMARY WORKSHEET
(INFORMATION ONLY WORKSHEET)

APPR	LANE(S)	DESCRIPTION	DESIGNATION	DETECTOR NUMBER	DETECTOR TYPE	ASSIGNED PHASE(S)	DELAY TIME	EXTEND TIME	QUEUE LIMIT TIME
E	LT	1st VEHICLE	1-E-Φ1	1	0	1			
W	1,2	ADVANCE	1-W-Φ2	2	1	2		2.0	
S	LT	1st VEHICLE	1-S-Φ3	3	0	3			
N	1,2	ADVANCE	1-N-Φ4	4	1	4		2.0	
W	LT1-2	1st VEHICLE	1-W-Φ5	5	0	5			
E	1,2	ADVANCE	1-E-Φ6	6	1	6		2.0	
N	LT	1st VEHICLE	1-N-Φ7	7	0	7			
S	1,2	ADVANCE	1-S-Φ8	8	1	8		2.0	
N	RT	1st VEHICLE	1-N-Φ5	9	1	5	10		
E	1	1st VEHICLE	2-E-Φ6	10	0	6			
W	1,2-1	1st VEHICLE	2-W-Φ2	11	0	2			
W	2-2	1st VEHICLE	4-W-Φ2	12	0	2			
N	1,2	1st VEHICLE	2-N-Φ4	13	0	4			
E	2	1st VEHICLE	3-E-Φ6	14	0	6			
S	1	1st VEHICLE	2-S-Φ8	15	0	8			
S	2	1st VEHICLE	3-S-Φ8	16	0	8			
				17					
				18					
				19					
				20					
				21					
				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					

COMMENTS:



Appendix B: Existing Synchro Worksheets

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	1135	70	135	1009	103	21	409	172	137	303	531
Future Volume (veh/h)	288	1135	70	135	1009	103	21	409	172	137	303	531
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	335	1320	81	153	1147	117	23	445	187	165	365	640
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	3140	975	257	3140	975	192	1048	468	443	1048	468
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	439	5106	1585	385	5106	1585	561	3554	1585	1542	3554	1585
Grp Volume(v), veh/h	335	1320	81	153	1147	117	23	445	187	165	365	640
Grp Sat Flow(s),veh/h/ln	439	1702	1585	385	1702	1585	561	1777	1585	771	1777	1585
Q Serve(g_s), s	50.3	13.4	2.1	34.3	11.2	3.1	3.4	10.1	9.4	9.7	8.1	29.5
Cycle Q Clear(g_c), s	61.5	13.4	2.1	47.7	11.2	3.1	11.4	10.1	9.4	19.7	8.1	29.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	3140	975	257	3140	975	192	1048	468	443	1048	468
V/C Ratio(X)	1.14	0.42	0.08	0.60	0.37	0.12	0.12	0.42	0.40	0.37	0.35	1.37
Avail Cap(c_a), veh/h	293	3140	975	257	3140	975	192	1048	468	443	1048	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	10.0	7.8	22.4	9.6	8.0	32.2	28.4	28.2	36.4	27.7	35.2
Incr Delay (d2), s/veh	97.3	0.1	0.0	3.7	0.1	0.1	0.3	0.3	0.6	0.5	0.2	179.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	4.6	0.7	3.2	3.9	1.0	0.5	4.3	3.6	1.8	3.4	34.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.3	10.1	7.8	26.1	9.6	8.1	32.5	28.7	28.7	36.9	27.9	214.4
LnGrp LOS	F	B	A	C	A	A	C	C	C	D	C	F
Approach Vol, veh/h		1736			1417			655			1170	
Approach Delay, s/veh		32.8			11.3			28.8			131.2	
Approach LOS		C			B			C			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		66.0		34.0		66.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.5		61.5		29.5		61.5				
Max Q Clear Time (g_c+I1), s		13.4		63.5		31.5		49.7				
Green Ext Time (p_c), s		3.5		0.0		0.0		7.8				
Intersection Summary												
HCM 6th Ctrl Delay				49.3								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

Existing AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	1183	237	0	1083	0	0	0	0	445	90	168
Future Volume (veh/h)	0	1183	237	0	1083	0	0	0	0	445	90	168
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1344	269	0	1245	0				524	106	198
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3789	1176	2	3789	0				684	359	304
Arrive On Green	0.00	0.74	0.74	0.00	0.74	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1344	269	0	1245	0				524	106	198
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	15.7	9.0	0.0	14.1	0.0				23.7	8.3	19.6
Cycle Q Clear(g_c), s	0.0	15.7	9.0	0.0	14.1	0.0				23.7	8.3	19.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3789	1176	2	3789	0				684	359	304
V/C Ratio(X)	0.00	0.35	0.23	0.00	0.33	0.00				0.77	0.30	0.65
Avail Cap(c_a), veh/h	0	3789	1176	183	3789	0				1270	667	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	0.00	0.96	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.7	6.8	0.0	7.5	0.0				65.0	58.8	63.4
Incr Delay (d2), s/veh	0.0	0.2	0.4	0.0	0.1	0.0				3.1	0.8	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	3.1	0.0	5.1	0.0				11.1	4.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.9	7.2	0.0	7.6	0.0				68.1	59.6	67.4
LnGrp LOS	A	A	A	A	A	A				E	E	E
Approach Vol, veh/h		1613			1245						828	
Approach Delay, s/veh		7.8			7.6						66.9	
Approach LOS		A			A						E	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	0.0	131.9		38.1		131.9						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	81.3		60.6		98.2						
Max Q Clear Time (g_c+I1), s	0.0	17.7		25.7		16.1						
Green Ext Time (p_c), s	0.0	35.8		7.0		29.4						
Intersection Summary												
HCM 6th Ctrl Delay				21.0								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↓		↖	↑↑↑	↗		↖↑	↗			
Traffic Volume (veh/h)	58	1576	26	1	979	382	78	112	8	0	0	0
Future Volume (veh/h)	58	1576	26	1	979	382	78	112	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	67	1811	30	1	1152	449	87	124	9			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	347	2554	42	238	2689	835	282	281	251			
Arrive On Green	0.10	0.49	0.49	0.13	0.53	0.53	0.16	0.16	0.16			
Sat Flow, veh/h	3456	5173	86	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	67	1191	650	1	1152	449	87	124	9			
Grp Sat Flow(s),veh/h/ln	1728	1702	1855	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	1.3	20.4	20.5	0.0	10.3	14.0	3.2	4.7	0.4			
Cycle Q Clear(g_c), s	1.3	20.4	20.5	0.0	10.3	14.0	3.2	4.7	0.4			
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	347	1680	916	238	2689	835	282	281	251			
V/C Ratio(X)	0.19	0.71	0.71	0.00	0.43	0.54	0.31	0.44	0.04			
Avail Cap(c_a), veh/h	465	1680	916	240	2689	835	285	284	254			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.91	0.70	0.70	0.70	1.00	1.00	1.00			
Uniform Delay (d), s/veh	31.0	14.8	14.8	28.2	10.9	11.7	27.9	28.6	26.7			
Incr Delay (d2), s/veh	0.2	2.3	4.2	0.0	0.1	0.5	0.7	1.3	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	7.6	8.7	0.0	3.5	4.5	1.4	2.1	0.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	17.1	19.0	28.2	10.9	12.2	28.7	29.9	26.8			
LnGrp LOS	C	B	B	C	B	B	C	C	C			
Approach Vol, veh/h		1908			1602			220				
Approach Delay, s/veh		18.3			11.3			29.3				
Approach LOS		B			B			C				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	14.9	42.8			12.4	45.3		17.3				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.1	36.8			10.1	* 38		12.0				
Max Q Clear Time (g_c+I1), s	2.0	22.5			3.3	16.0		6.7				
Green Ext Time (p_c), s	0.0	12.9			0.1	10.8		0.6				

Intersection Summary

HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

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

HCM Signalized Intersection Capacity Analysis

4: Norwalk Blvd & Imperial Hwy

Existing AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	1204	64	114	1104	36	72	569	110	104	399	123
Future Volume (vph)	157	1204	64	114	1104	36	72	569	110	104	399	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	180	1384	74	131	1269	41	77	612	118	112	429	132
RTOR Reduction (vph)	0	0	49	0	0	29	0	0	76	0	0	96
Lane Group Flow (vph)	180	1384	25	131	1269	12	77	612	42	112	429	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8		7	4	
Permitted Phases			5			2			8			4
Actuated Green, G (s)	16.9	38.6	38.6	12.3	34.0	34.0	8.0	29.1	41.4	10.0	31.1	31.1
Effective Green, g (s)	16.9	38.6	38.6	12.3	34.0	34.0	8.0	29.1	41.4	10.0	31.1	31.1
Actuated g/C Ratio	0.15	0.34	0.34	0.11	0.30	0.30	0.07	0.25	0.36	0.09	0.27	0.27
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	260	1706	531	189	1503	468	123	895	569	153	1375	428
v/s Ratio Prot	0.10	c0.27		0.07	c0.25		0.04	c0.17	0.01	c0.06	0.08	
v/s Ratio Perm			0.02			0.01			0.02			0.02
v/c Ratio	0.69	0.81	0.05	0.69	0.84	0.03	0.63	0.68	0.07	0.73	0.31	0.08
Uniform Delay, d1	46.6	34.9	25.8	49.5	38.0	28.7	52.0	38.8	24.2	51.2	33.4	31.3
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	6.3	3.4	0.1	18.9	6.0	0.1	7.0	2.5	0.1	14.4	0.2	0.1
Delay (s)	52.9	38.2	25.8	68.4	44.0	28.8	59.0	41.3	24.3	65.6	33.7	31.5
Level of Service	D	D	C	E	D	C	E	D	C	E	C	C
Approach Delay (s)		39.3			45.8			40.5			38.5	
Approach LOS		D			D			D			D	

Intersection Summary

HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

Existing AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↗		↘	↗	
Traffic Volume (veh/h)	58	1269	96	14	1206	76	11	12	5	71	23	33
Future Volume (veh/h)	58	1269	96	14	1206	76	11	12	5	71	23	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	1442	109	16	1340	84	16	17	7	101	33	47
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	2832	879	27	2669	828	198	65	27	271	70	100
Arrive On Green	0.05	0.55	0.55	0.02	0.52	0.52	0.02	0.05	0.05	0.06	0.10	0.10
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	1259	518	1781	698	994
Grp Volume(v), veh/h	66	1442	109	16	1340	84	16	0	24	101	0	80
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1777	1781	0	1691
Q Serve(g_s), s	2.6	12.3	2.3	0.6	11.9	1.9	0.6	0.0	0.9	3.7	0.0	3.1
Cycle Q Clear(g_c), s	2.6	12.3	2.3	0.6	11.9	1.9	0.6	0.0	0.9	3.7	0.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		0.59
Lane Grp Cap(c), veh/h	84	2832	879	27	2669	828	198	0	92	271	0	170
V/C Ratio(X)	0.79	0.51	0.12	0.59	0.50	0.10	0.08	0.00	0.26	0.37	0.00	0.47
Avail Cap(c_a), veh/h	115	2832	879	115	2669	828	285	0	457	271	0	435
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)	0.56	0.56	0.56	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	9.7	7.5	34.2	10.8	8.4	30.8	0.0	31.9	28.6	0.0	29.7
Incr Delay (d2), s/veh	8.9	0.4	0.2	6.8	0.6	0.2	0.2	0.0	1.5	0.9	0.0	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	1.3	4.0	0.7	0.3	4.0	0.6	0.3	0.0	0.4	1.6	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	10.0	7.6	41.0	11.4	8.6	30.9	0.0	33.4	29.5	0.0	31.7
LnGrp LOS	D	B	A	D	B	A	C	A	C	C	A	C
Approach Vol, veh/h		1617			1440			40				181
Approach Delay, s/veh		11.2			11.6			32.4				30.5
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	45.3	6.1	12.5	8.3	43.1	9.5	9.1				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	21.0	4.5	18.0	4.5	21.0	4.5	18.0				
Max Q Clear Time (g_c+I1), s	2.6	14.3	2.6	5.1	4.6	13.9	5.7	2.9				
Green Ext Time (p_c), s	0.0	5.8	0.0	0.3	0.0	5.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				12.7								
HCM 6th LOS				B								

HCM Signalized Intersection Capacity Analysis

6: Volunteer Ave & Imperial Hwy

Existing AM
02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↘	↘
Traffic Volume (vph)	9	1177	137	44	1241	24	32	16	7	45	49	23
Future Volume (vph)	9	1177	137	44	1241	24	32	16	7	45	49	23
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1770	5006		1770	5071		1770	1778			1819	1583
Flt Permitted	0.16	1.00		0.14	1.00		0.95	1.00			0.98	1.00
Satd. Flow (perm)	301	5006		267	5071		1770	1778			1819	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	10	1308	152	48	1349	26	46	23	10	51	55	26
RTOR Reduction (vph)	0	13	0	0	2	0	0	9	0	0	0	25
Lane Group Flow (vph)	10	1447	0	48	1373	0	46	24	0	0	106	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	40.2	40.2		40.2	40.2		8.3	8.3			4.0	4.0
Effective Green, g (s)	40.2	40.2		40.2	40.2		8.3	8.3			4.0	4.0
Actuated g/C Ratio	0.57	0.57		0.57	0.57		0.12	0.12			0.06	0.06
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	172	2874		153	2912		209	210			103	90
v/s Ratio Prot		c0.29			0.27		c0.03	0.01			c0.06	
v/s Ratio Perm	0.03			0.18								0.00
v/c Ratio	0.06	0.50		0.31	0.47		0.22	0.12			1.03	0.02
Uniform Delay, d1	6.6	8.9		7.7	8.7		27.9	27.6			33.0	31.1
Progression Factor	0.85	0.68		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	0.2		5.3	0.6		0.5	0.2			96.8	0.1
Delay (s)	5.8	6.3		13.0	9.2		28.5	27.8			129.8	31.2
Level of Service	A	A		B	A		C	C			F	C
Approach Delay (s)		6.3			9.4			28.2			110.3	
Approach LOS		A			A			C			F	

Intersection Summary

HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

Existing AM
02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	856	48	310	1030	86	100	790	346	90	551	120
Future Volume (veh/h)	203	856	48	310	1030	86	100	790	346	90	551	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	214	901	51	348	1157	97	115	908	398	100	612	133
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	1468	456	289	1511	127	119	1125	502	230	920	199
Arrive On Green	0.14	0.29	0.29	0.16	0.31	0.31	0.07	0.32	0.32	0.07	0.32	0.32
Sat Flow, veh/h	1781	5106	1585	1781	4800	402	1781	3554	1585	3456	2904	630
Grp Volume(v), veh/h	214	901	51	348	820	434	115	908	398	100	374	371
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1798	1781	1777	1585	1728	1777	1757
Q Serve(g_s), s	14.2	18.3	2.8	19.5	26.1	26.1	7.7	28.1	27.5	3.3	21.9	22.0
Cycle Q Clear(g_c), s	14.2	18.3	2.8	19.5	26.1	26.1	7.7	28.1	27.5	3.3	21.9	22.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	241	1468	456	289	1072	566	119	1125	502	230	563	556
V/C Ratio(X)	0.89	0.61	0.11	1.20	0.77	0.77	0.97	0.81	0.79	0.43	0.66	0.67
Avail Cap(c_a), veh/h	278	1468	456	289	1072	566	119	1125	502	230	563	556
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)	0.88	0.88	0.88	1.00	1.00	1.00	0.71	0.71	0.71	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	37.0	31.5	50.3	37.1	37.1	55.9	37.6	37.4	53.8	35.5	35.5
Incr Delay (d2), s/veh	21.4	1.7	0.4	119.2	5.2	9.5	59.9	4.5	8.9	5.9	6.1	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	7.8	1.2	18.2	11.6	12.9	5.4	12.8	11.8	1.6	10.4	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	38.7	31.9	169.5	42.3	46.6	115.8	42.1	46.3	59.7	41.6	41.7
LnGrp LOS	E	D	C	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1166			1602			1421			845	
Approach Delay, s/veh		44.6			71.1			49.3			43.8	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	43.3	12.5	43.5	24.0	40.0	12.5	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	18.7	35.3	8.0	38.0	19.5	34.5	8.0	38.0				
Max Q Clear Time (g_c+I1), s	16.2	28.1	5.3	30.1	21.5	20.3	9.7	24.0				
Green Ext Time (p_c), s	0.1	5.5	0.0	3.4	0.0	7.8	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			54.2									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

Existing AM
02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Traffic Volume (veh/h)	73	680	119	185	882	79	124	693	101	100	1010	31
Future Volume (veh/h)	73	680	119	185	882	79	124	693	101	100	1010	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	739	129	191	909	81	135	753	110	112	1135	35
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	1402	242	169	1711	152	107	1027	150	89	1126	35
Arrive On Green	0.06	0.32	0.32	0.09	0.36	0.36	0.06	0.33	0.33	0.05	0.32	0.32
Sat Flow, veh/h	1781	4381	758	1781	4774	424	1781	3111	454	1781	3519	108
Grp Volume(v), veh/h	79	573	295	191	647	343	135	430	433	112	573	597
Grp Sat Flow(s),veh/h/ln	1781	1702	1734	1781	1702	1794	1781	1777	1789	1781	1777	1851
Q Serve(g_s), s	4.4	13.8	14.0	9.5	15.1	15.1	6.0	21.4	21.4	5.0	32.0	32.0
Cycle Q Clear(g_c), s	4.4	13.8	14.0	9.5	15.1	15.1	6.0	21.4	21.4	5.0	32.0	32.0
Prop In Lane	1.00		0.44	1.00		0.24	1.00		0.25	1.00		0.06
Lane Grp Cap(c), veh/h	101	1089	555	169	1220	643	107	586	590	89	569	592
V/C Ratio(X)	0.78	0.53	0.53	1.13	0.53	0.53	1.26	0.73	0.73	1.26	1.01	1.01
Avail Cap(c_a), veh/h	107	1089	555	169	1220	643	107	586	590	89	569	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	27.8	27.9	45.3	25.4	25.4	47.0	29.6	29.6	47.5	34.0	34.0
Incr Delay (d2), s/veh	26.3	1.8	3.6	108.0	1.7	3.1	173.6	7.9	7.9	179.6	39.7	39.0
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	2.7	5.8	6.3	9.2	6.3	6.9	7.8	10.2	10.3	6.6	19.6	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.9	29.6	31.5	153.2	27.1	28.6	220.6	37.5	37.5	227.1	73.7	73.0
LnGrp LOS	E	C	C	F	C	C	F	D	D	F	F	F
Approach Vol, veh/h		947			1181			998			1282	
Approach Delay, s/veh		33.8			47.9			62.3			86.7	
Approach LOS		C			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	41.8	9.0	39.0	14.0	38.0	10.0	38.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	35.5	5.0	33.0	9.5	32.0	6.0	32.0				
Max Q Clear Time (g_c+I1), s	6.4	17.1	7.0	23.4	11.5	16.0	8.0	34.0				
Green Ext Time (p_c), s	0.0	9.5	0.0	2.7	0.0	7.7	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay				59.4								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
9: Firestone Blvd & Pioneer Blvd

Existing AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	344	42	56	315	40	47	800	55	67	593	173
Future Volume (veh/h)	213	344	42	56	315	40	47	800	55	67	593	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	222	358	44	59	332	42	57	964	0	83	732	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	680	303	76	538	240	73	1719		105	1783	
Arrive On Green	0.08	0.19	0.19	0.04	0.15	0.15	0.04	0.48	0.00	0.06	0.50	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	222	358	44	59	332	42	57	964	0	83	732	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.0	7.7	2.0	2.8	7.4	2.0	2.7	16.3	0.0	3.9	11.0	0.0
Cycle Q Clear(g_c), s	7.0	7.7	2.0	2.8	7.4	2.0	2.7	16.3	0.0	3.9	11.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	680	303	76	538	240	73	1719		105	1783	
V/C Ratio(X)	1.51	0.53	0.14	0.78	0.62	0.17	0.78	0.56		0.79	0.41	
Avail Cap(c_a), veh/h	147	1212	541	147	1212	541	84	1719		105	1783	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	39.0	30.9	28.6	40.3	33.7	31.4	40.4	15.5	0.0	39.5	13.3	0.0
Incr Delay (d2), s/veh	262.8	1.1	0.4	6.4	2.0	0.6	28.4	1.3	0.0	28.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	3.3	0.8	1.3	3.3	0.8	1.7	6.5	0.0	2.5	4.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	301.8	32.0	28.9	46.7	35.7	32.0	68.8	16.9	0.0	67.5	13.9	0.0
LnGrp LOS	F	C	C	D	D	C	E	B		E	B	
Approach Vol, veh/h		624			433			1021			815	
Approach Delay, s/veh		127.8			36.9			19.8			19.4	
Approach LOS		F			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	46.6	7.6	21.8	7.5	48.1	11.0	18.4				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	5.0	25.0	7.0	29.0	4.0	26.0	7.0	29.0				
Max Q Clear Time (g_c+I1), s	5.9	18.3	4.8	9.7	4.7	13.0	9.0	9.4				
Green Ext Time (p_c), s	0.0	5.0	0.0	3.7	0.0	7.0	0.0	3.4				

Intersection Summary






















HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

Existing AM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	350	0	55	0	767	572	77	505	1	
Future Volume (vph)	0	0	0	350	0	55	0	767	572	77	505	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor				0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt				1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected				0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)				1681	1681	1583		5085	1583	1770	5084		
Flt Permitted				0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)				1681	1681	1583		5085	1583	1770	5084		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	0	0	0	443	0	70	0	1009	753	88	574	1	
RTOR Reduction (vph)	0	0	0	0	0	50	0	0	196	0	0	0	
Lane Group Flow (vph)	0	0	0	221	222	20	0	1009	557	88	575	0	
Turn Type				Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)				18.1	18.1	18.1		23.7	41.8	4.7	33.4		
Effective Green, g (s)				18.1	18.1	18.1		23.7	41.8	4.7	33.4		
Actuated g/C Ratio				0.29	0.29	0.29		0.38	0.67	0.08	0.53		
Clearance Time (s)				5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)				3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)				486	486	458		1928	1058	133	2716		
v/s Ratio Prot				0.13	0.13			0.20	c0.15	c0.05	0.11		
v/s Ratio Perm						0.01			0.20				
v/c Ratio				0.45	0.46	0.04		0.52	0.53	0.66	0.21		
Uniform Delay, d1				18.2	18.2	16.0		15.0	5.3	28.1	7.6		
Progression Factor				1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2				0.7	0.7	0.0		1.0	0.5	9.2	0.2		
Delay (s)				18.8	18.9	16.0		16.0	5.8	37.3	7.8		
Level of Service				B	B	B		B	A	D	A		
Approach Delay (s)		0.0			18.5			11.7			11.7		
Approach LOS		A			B			B			B		
Intersection Summary													
HCM 2000 Control Delay			12.9		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.60										
Actuated Cycle Length (s)			62.5		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			48.0%		ICU Level of Service					A			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	10	84	34	19	7	148	938	6	5	653	182
Future Volume (veh/h)	299	10	84	34	19	7	148	938	6	5	653	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	365	12	102	52	29	11	180	1144	7	5	673	188
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	486	578	490	474	399	151	163	1912	12	5	1720	767
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.05	0.53	0.53	0.00	0.48	0.48
Sat Flow, veh/h	1367	1870	1585	1279	1292	490	3456	3621	22	1781	3554	1585
Grp Volume(v), veh/h	365	12	102	52	0	40	180	561	590	5	673	188
Grp Sat Flow(s),veh/h/ln	1367	1870	1585	1279	0	1782	1728	1777	1866	1781	1777	1585
Q Serve(g_s), s	21.9	0.4	4.0	2.5	0.0	1.3	4.0	18.5	18.5	0.2	10.2	5.9
Cycle Q Clear(g_c), s	23.2	0.4	4.0	2.9	0.0	1.3	4.0	18.5	18.5	0.2	10.2	5.9
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	486	578	490	474	0	551	163	938	985	5	1720	767
V/C Ratio(X)	0.75	0.02	0.21	0.11	0.00	0.07	1.11	0.60	0.60	0.96	0.39	0.25
Avail Cap(c_a), veh/h	708	882	748	681	0	839	163	938	985	42	1720	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.57	0.57	0.57
Uniform Delay (d), s/veh	29.0	20.4	21.7	21.4	0.0	20.8	40.5	13.8	13.8	42.4	14.0	12.8
Incr Delay (d2), s/veh	2.1	0.0	0.2	0.1	0.0	0.0	102.1	2.8	2.7	73.2	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.2	1.5	0.7	0.0	0.6	4.0	7.5	7.9	0.2	4.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	20.4	21.8	21.5	0.0	20.8	142.6	16.7	16.5	115.6	14.3	13.3
LnGrp LOS	C	C	C	C	A	C	F	B	B	F	B	B
Approach Vol, veh/h		479			92			1331				866
Approach Delay, s/veh		28.8			21.2			33.6				14.7
Approach LOS		C			C			C				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	49.9		30.9	8.0	46.1		30.9				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+I1), s	2.2	20.5		4.9	6.0	12.2		25.2				
Green Ext Time (p_c), s	0.0	3.6		0.3	0.0	3.2		1.0				

Intersection Summary

HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘		↗		↕	↗	↘↗	↕↕			↕↕↗	
Traffic Volume (veh/h)	48	0	94	130	86	550	93	798	0	0	825	53
Future Volume (veh/h)	48	0	94	130	86	550	93	798	0	0	825	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	54	0	106	143	95	604	118	1010	0	0	994	64
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	323	740	469	294	3099	0	0	2350	151
Arrive On Green	0.00	0.00	0.00	0.30	0.30	0.30	0.08	0.61	0.00	0.00	0.48	0.48
Sat Flow, veh/h		0		1091	2502	1585	3456	5274	0	0	5071	315
Grp Volume(v), veh/h		0.0		238	0	604	118	1010	0	0	690	368
Grp Sat Flow(s),veh/h/ln				1816	1777	1585	1728	1702	0	0	1702	1814
Q Serve(g_s), s				12.2	0.0	34.0	3.7	11.1	0.0	0.0	15.2	15.3
Cycle Q Clear(g_c), s				12.2	0.0	34.0	3.7	11.1	0.0	0.0	15.2	15.3
Prop In Lane				0.60		1.00	1.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h				537	525	469	294	3099	0	0	1632	869
V/C Ratio(X)				0.44	0.00	1.29	0.40	0.33	0.00	0.00	0.42	0.42
Avail Cap(c_a), veh/h				537	525	469	300	3099	0	0	1632	869
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.97	0.97
Uniform Delay (d), s/veh				32.8	0.0	40.5	49.8	11.1	0.0	0.0	19.5	19.6
Incr Delay (d2), s/veh				0.6	0.0	145.3	0.8	0.3	0.0	0.0	0.8	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	32.0	1.6	4.1	0.0	0.0	6.1	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.4	0.0	185.8	50.7	11.3	0.0	0.0	20.3	21.0
LnGrp LOS				C	A	F	D	B	A	A	C	C
Approach Vol, veh/h					842			1128			1058	
Approach Delay, s/veh					142.7			15.4			20.6	
Approach LOS					F			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		75.6			14.7	60.9		39.4				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		52.4			10.0	37.5		34.0				
Max Q Clear Time (g_c+I1), s		13.1			5.7	17.3		36.0				
Green Ext Time (p_c), s		16.8			0.1	11.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay											52.6	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp

Existing AM
 02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	228	83	0	0	0	0	827	219	212	827	0
Future Volume (veh/h)	43	228	83	0	0	0	0	827	219	212	827	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	48	256	93				0	985	261	249	973	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	225	449	200				0	2408	637	363	3859	0
Arrive On Green	0.13	0.13	0.13				0.00	0.60	0.60	0.11	0.76	0.00
Sat Flow, veh/h	1781	3554	1585				0	4188	1063	3456	5274	0
Grp Volume(v), veh/h	48	256	93				0	834	412	249	973	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1679	1728	1702	0
Q Serve(g_s), s	2.3	6.4	5.2				0.0	12.4	12.4	6.6	5.5	0.0
Cycle Q Clear(g_c), s	2.3	6.4	5.2				0.0	12.4	12.4	6.6	5.5	0.0
Prop In Lane	1.00		1.00				0.00		0.63	1.00		0.00
Lane Grp Cap(c), veh/h	225	449	200				0	2039	1006	363	3859	0
V/C Ratio(X)	0.21	0.57	0.46				0.00	0.41	0.41	0.69	0.25	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	2039	1006	367	3859	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	1.00	1.00	0.75	0.75	0.00
Uniform Delay (d), s/veh	37.3	39.1	38.5				0.0	10.1	10.1	41.0	3.5	0.0
Incr Delay (d2), s/veh	0.5	1.1	1.7				0.0	0.6	1.2	3.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.9	2.1				0.0	4.4	4.5	3.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	40.2	40.2				0.0	10.7	11.4	44.9	3.6	0.0
LnGrp LOS	D	D	D				A	B	B	D	A	A
Approach Vol, veh/h		397						1246			1222	
Approach Delay, s/veh		39.9						10.9			12.0	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.9	62.7		17.4				77.6				
Change Period (Y+Rc), s	4.9	5.8		5.4				5.8				
Max Green Setting (Gmax), s	10.1	26.8		42.0				41.8				
Max Q Clear Time (g_c+I1), s	8.6	14.4		8.4				7.5				
Green Ext Time (p_c), s	0.1	9.3		2.2				15.1				
Intersection Summary												
HCM 6th Ctrl Delay			15.4									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	
Traffic Volume (veh/h)	213	344	42	56	315	40	47	800	55	67	593	173
Future Volume (veh/h)	213	344	42	56	315	40	47	800	55	67	593	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	374	46	62	346	44	55	930	64	80	706	206
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	1264	564	95	1191	531	121	1086	484	104	1165	335
Arrive On Green	0.07	0.36	0.36	0.05	0.34	0.34	0.07	0.31	0.31	0.06	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3937	1133
Grp Volume(v), veh/h	232	374	46	62	346	44	55	930	64	80	609	303
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1666
Q Serve(g_s), s	6.5	6.7	1.7	3.0	6.3	1.7	2.6	21.7	2.6	3.9	13.5	13.8
Cycle Q Clear(g_c), s	6.5	6.7	1.7	3.0	6.3	1.7	2.6	21.7	2.6	3.9	13.5	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	131	1264	564	95	1191	531	121	1086	484	104	1007	493
V/C Ratio(X)	1.76	0.30	0.08	0.65	0.29	0.08	0.45	0.86	0.13	0.77	0.60	0.61
Avail Cap(c_a), veh/h	131	1264	564	121	1191	531	121	1130	504	121	1082	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	20.4	18.8	40.9	21.6	20.0	39.4	28.8	22.1	40.9	26.6	26.7
Incr Delay (d2), s/veh	373.1	0.6	0.3	3.5	0.6	0.3	1.0	7.2	0.3	18.1	1.4	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	2.8	0.7	1.4	2.7	0.7	1.2	10.0	1.0	2.2	5.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	413.9	21.0	19.1	44.4	22.2	20.3	40.4	36.0	22.4	59.0	28.0	29.8
LnGrp LOS	F	C	B	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		652			452			1049			992	
Approach Delay, s/veh		160.7			25.1			35.4			31.0	
Approach LOS		F			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	36.8	9.7	32.4	11.0	35.0	10.5	31.6				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.0	30.0	6.0	28.0	6.5	29.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s	5.0	8.7	5.9	23.7	8.5	8.3	4.6	15.8				
Green Ext Time (p_c), s	0.0	4.6	0.0	3.2	0.0	4.2	0.0	7.3				

Intersection Summary												
HCM 6th Ctrl Delay											58.5	
HCM 6th LOS											E	

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	639	73	245	678	341	39	607	250	277	571	107
Future Volume (veh/h)	68	639	73	245	678	341	39	607	250	277	571	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	726	83	275	762	383	44	682	281	295	607	114
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	920	410	329	1017	798	98	1083	483	356	1253	559
Arrive On Green	0.07	0.26	0.26	0.10	0.29	0.29	0.06	0.30	0.30	0.10	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	77	726	83	275	762	383	44	682	281	295	607	114
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.4	20.0	4.3	8.2	20.5	11.9	2.5	17.3	15.7	8.8	14.0	5.3
Cycle Q Clear(g_c), s	4.4	20.0	4.3	8.2	20.5	11.9	2.5	17.3	15.7	8.8	14.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	920	410	329	1017	798	98	1083	483	356	1253	559
V/C Ratio(X)	0.63	0.79	0.20	0.84	0.75	0.48	0.45	0.63	0.58	0.83	0.48	0.20
Avail Cap(c_a), veh/h	136	920	410	329	1017	798	136	1083	483	362	1253	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	36.2	30.4	46.7	34.1	31.0	48.1	31.4	30.8	46.2	26.5	23.7
Incr Delay (d2), s/veh	6.8	6.8	1.1	15.5	4.7	1.9	2.4	2.8	5.0	14.3	1.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	9.4	1.8	4.2	9.4	4.2	1.2	7.7	6.6	4.5	6.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	43.1	31.5	62.2	38.8	32.9	50.4	34.2	35.9	60.5	27.9	24.5
LnGrp LOS	D	D	C	E	D	C	D	C	D	E	C	C
Approach Vol, veh/h		886			1420			1007			1016	
Approach Delay, s/veh		43.0			41.7			35.4			37.0	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	33.7	11.8	43.5	13.2	36.5	16.8	38.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	10.0	27.0	8.0	35.0	8.0	29.0	11.0	32.0				
Max Q Clear Time (g_c+I1), s	10.2	22.0	4.5	16.0	6.4	22.5	10.8	19.3				
Green Ext Time (p_c), s	0.0	3.2	0.0	7.6	0.0	4.9	0.0	7.4				
Intersection Summary												
HCM 6th Ctrl Delay			39.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	825	373	73	1069	0	0	0	0	387	1	203
Future Volume (veh/h)	0	825	373	73	1069	0	0	0	0	387	1	203
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	994	449	83	1215	0				473	0	248
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1760	785	187	3367	0				719	0	320
Arrive On Green	0.00	0.50	0.50	0.11	0.66	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	994	449	83	1215	0				473	0	248
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	15.7	16.0	3.5	8.5	0.0				9.8	0.0	11.8
Cycle Q Clear(g_c), s	0.0	15.7	16.0	3.5	8.5	0.0				9.8	0.0	11.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1760	785	187	3367	0				719	0	320
V/C Ratio(X)	0.00	0.56	0.57	0.44	0.36	0.00				0.66	0.00	0.77
Avail Cap(c_a), veh/h	0	1760	785	229	3367	0				917	0	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.61	0.61	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.1	14.2	33.6	6.1	0.0				29.4	0.0	30.2
Incr Delay (d2), s/veh	0.0	0.8	1.9	1.1	0.1	0.0				1.6	0.0	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	5.6	1.5	2.5	0.0				4.2	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.9	16.1	34.7	6.2	0.0				30.9	0.0	38.4
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1443			1298						721	
Approach Delay, s/veh		15.3			8.0						33.5	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.1	45.3		21.6		58.4						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	33.3		20.6		48.3						
Max Q Clear Time (g_c+I1), s	5.5	18.0		13.8		10.5						
Green Ext Time (p_c), s	0.0	9.0		2.3		13.7						

Intersection Summary

HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Notes

- User approved volume balancing among the lanes for turning movement.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

Existing AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗			↖↖↖	↖	↖	↖	↖			
Traffic Volume (veh/h)	212	1062	0	0	889	503	230	1	38	0	0	0
Future Volume (veh/h)	212	1062	0	0	889	503	230	1	38	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	230	1154	0	0	926	524	292	0	48			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2651	0	0	2975	923	466	0	207			
Arrive On Green	0.11	0.75	0.00	0.00	0.58	0.58	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	230	1154	0	0	926	524	292	0	48			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	11.0	0.0	0.0	8.3	18.6	7.0	0.0	2.4			
Cycle Q Clear(g_c), s	10.0	11.0	0.0	0.0	8.3	18.6	7.0	0.0	2.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2651	0	0	2975	923	466	0	207			
V/C Ratio(X)	1.16	0.44	0.00	0.00	0.31	0.57	0.63	0.00	0.23			
Avail Cap(c_a), veh/h	198	2651	0	0	2975	923	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	4.3	0.0	0.0	9.6	11.7	37.0	0.0	35.1			
Incr Delay (d2), s/veh	107.8	0.4	0.0	0.0	0.3	2.5	3.0	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.2	3.1	0.0	0.0	2.9	6.6	3.2	0.0	1.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.8	4.7	0.0	0.0	9.9	14.2	40.0	0.0	36.3			
LnGrp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		1384			1450			340				
Approach Delay, s/veh		28.5			11.4			39.5				
Approach LOS		C			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.8			14.7	58.1		17.2				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		13.0			12.0	20.6		9.0				
Green Ext Time (p_c), s		12.1			0.0	4.7		2.8				

Intersection Summary































HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
































HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave

Existing AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  			 			 	 
Traffic Volume (veh/h)	312	629	60	73	673	47	75	852	120	38	989	415
Future Volume (veh/h)	312	629	60	73	673	47	75	852	120	38	989	415
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	363	731	70	80	740	52	80	906	128	44	1137	477
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	1092	105	102	1596	112	102	1287	574	56	1194	633
Arrive On Green	0.06	0.33	0.33	0.06	0.33	0.33	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	3456	3277	314	1781	4872	341	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	363	396	405	80	516	276	80	906	128	44	1137	477
Grp Sat Flow(s),veh/h/ln	1728	1777	1814	1781	1702	1809	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.0	18.2	18.2	4.2	11.4	11.5	4.2	20.7	5.3	2.3	29.7	24.6
Cycle Q Clear(g_c), s	6.0	18.2	18.2	4.2	11.4	11.5	4.2	20.7	5.3	2.3	29.7	24.6
Prop In Lane	1.00		0.17	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	592	605	102	1115	593	102	1287	574	56	1194	633
V/C Ratio(X)	1.66	0.67	0.67	0.78	0.46	0.47	0.78	0.70	0.22	0.79	0.95	0.75
Avail Cap(c_a), veh/h	218	592	605	131	1115	593	103	1287	574	103	1197	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	27.2	27.2	44.2	25.3	25.3	44.2	25.9	21.0	45.7	30.8	24.5
Incr Delay (d2), s/veh	317.9	5.9	5.8	15.3	1.4	2.6	28.6	1.5	0.1	8.8	15.8	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	8.5	8.6	2.3	4.7	5.3	2.7	8.8	2.0	1.2	14.8	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	362.4	33.1	33.0	59.5	26.7	28.0	72.8	27.4	21.1	54.5	46.6	29.1
LnGrp LOS	F	C	C	E	C	C	E	C	C	D	D	C
Approach Vol, veh/h		1164			872			1114			1658	
Approach Delay, s/veh		135.7			30.1			30.0			41.8	
Approach LOS		F			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	37.7	9.5	37.4	11.0	37.1	7.0	39.9				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	7.0	30.0	5.5	32.0	6.0	31.0	5.5	32.0				
Max Q Clear Time (g_c+I1), s	6.2	20.2	6.2	31.7	8.0	13.5	4.3	22.7				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.2	0.0	3.3	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay			59.7									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

Existing PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		 	 	
Traffic Volume (veh/h)	92	1168	282	172	1072	118	39	422	230	140	435	498
Future Volume (veh/h)	92	1168	282	172	1072	118	39	422	230	140	435	498
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	1358	328	195	1218	134	42	459	250	169	524	600
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	2042	634	213	2042	634	308	1421	634	766	1421	634
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	403	5106	1585	292	5106	1585	501	3554	1585	1435	3554	1585
Grp Volume(v), veh/h	107	1358	328	195	1218	134	42	459	250	169	524	600
Grp Sat Flow(s),veh/h/ln	403	1702	1585	292	1702	1585	501	1777	1585	718	1777	1585
Q Serve(g_s), s	9.5	9.8	7.0	8.2	8.5	2.5	2.9	4.0	5.1	4.1	4.7	16.4
Cycle Q Clear(g_c), s	18.0	9.8	7.0	18.0	8.5	2.5	7.6	4.0	5.1	8.1	4.7	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	2042	634	213	2042	634	308	1421	634	766	1421	634
V/C Ratio(X)	0.44	0.66	0.52	0.91	0.60	0.21	0.14	0.32	0.39	0.22	0.37	0.95
Avail Cap(c_a), veh/h	246	2042	634	213	2042	634	308	1421	634	766	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	11.0	10.2	21.4	10.6	8.8	12.2	9.3	9.6	12.1	9.5	13.0
Incr Delay (d2), s/veh	1.2	0.8	0.7	38.7	0.5	0.2	0.2	0.1	0.4	0.1	0.2	23.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.0	2.0	4.2	2.5	0.7	0.3	1.2	1.4	0.6	1.4	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	11.9	11.0	60.1	11.1	9.0	12.4	9.4	10.0	12.2	9.7	36.4
LnGrp LOS	B	B	B	E	B	A	B	A	B	B	A	D
Approach Vol, veh/h		1793			1547			751			1293	
Approach Delay, s/veh		12.2			17.1			9.8			22.4	
Approach LOS		B			B			A			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		9.6		20.0		18.4		20.0				
Green Ext Time (p_c), s		2.9		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				15.7								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary

2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

Existing PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑↑	↑
Traffic Volume (veh/h)	0	1318	207	12	1222	0	0	0	0	270	138	143
Future Volume (veh/h)	0	1318	207	12	1222	0	0	0	0	270	138	143
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1498	235	14	1405	0				318	162	168
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2580	801	415	3527	0				570	299	254
Arrive On Green	0.00	0.51	0.51	0.12	0.69	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1498	235	14	1405	0				318	162	168
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	15.4	6.5	0.3	8.8	0.0				6.2	6.0	7.5
Cycle Q Clear(g_c), s	0.0	15.4	6.5	0.3	8.8	0.0				6.2	6.0	7.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2580	801	415	3527	0				570	299	254
V/C Ratio(X)	0.00	0.58	0.29	0.03	0.40	0.00				0.56	0.54	0.66
Avail Cap(c_a), veh/h	0	2580	801	419	3527	0				694	364	309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	0.78	0.78	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	13.0	10.8	29.2	5.0	0.0				29.1	29.0	29.6
Incr Delay (d2), s/veh	0.0	0.8	0.7	0.0	0.2	0.0				1.5	2.6	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.4	2.2	0.1	2.3	0.0				2.7	2.8	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.7	11.5	29.2	5.1	0.0				30.5	31.6	35.3
LnGrp LOS	A	B	B	C	A	A				C	C	D
Approach Vol, veh/h		1733			1419						648	
Approach Delay, s/veh		13.4			5.3						32.0	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.9	43.7		17.4		57.6						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.1	35.2		14.6		49.2						
Max Q Clear Time (g_c+I1), s	2.3	17.4		9.5		10.8						
Green Ext Time (p_c), s	0.0	15.0		2.0		24.3						

Intersection Summary

HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↓		↖	↑↑↑	↗		↖↑	↗			
Traffic Volume (veh/h)	126	1457	280	28	0	1081	126	137	11	0	0	0
Future Volume (veh/h)	126	1457	280	28	0	1081	126	137	11	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	145	1675	322	33	0	1272	140	152	12			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	230	3553	677	119	4213	1308	159	159	142			
Arrive On Green	0.13	1.00	1.00	0.07	0.00	0.83	0.09	0.09	0.09			
Sat Flow, veh/h	3456	4306	821	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	145	1321	676	33	0	1272	140	152	12			
Grp Sat Flow(s),veh/h/ln	1728	1702	1723	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	6.0	0.0	0.0	2.6	0.0	106.5	11.7	12.8	1.0			
Cycle Q Clear(g_c), s	6.0	0.0	0.0	2.6	0.0	106.5	11.7	12.8	1.0			
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	230	2808	1421	119	4213	1308	159	159	142			
V/C Ratio(X)	0.63	0.47	0.48	0.28	0.00	0.97	0.88	0.96	0.08			
Avail Cap(c_a), veh/h	237	2808	1421	120	4213	1308	159	159	142			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.88	0.45	0.00	0.45	1.00	1.00	1.00			
Uniform Delay (d), s/veh	63.3	0.0	0.0	66.6	0.0	11.6	67.5	68.0	62.7			
Incr Delay (d2), s/veh	4.5	0.5	1.0	0.6	0.0	11.1	39.4	58.8	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.7	0.2	0.4	1.2	0.0	32.5	7.1	8.4	0.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	0.5	1.0	67.1	0.0	22.7	106.9	126.8	63.0			
LnGrp LOS	E	A	A	E	A	C	F	F	E			
Approach Vol, veh/h		2142			1305			304				
Approach Delay, s/veh		5.2			23.8			115.1				
Approach LOS		A			C			F				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	14.9	129.6			14.9	129.6		18.8				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.1	110.4			10.3	* 1.1E2		13.4				
Max Q Clear Time (g_c+I1), s	4.6	2.0			8.0	108.5		14.8				
Green Ext Time (p_c), s	0.0	73.2			0.1	2.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

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

HCM Signalized Intersection Capacity Analysis

4: Norwalk Blvd & Imperial Hwy

Existing PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗
Traffic Volume (vph)	147	976	67	138	1329	0	144	515	109	114	765	216
Future Volume (vph)	147	976	67	138	1329	0	144	515	109	114	765	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5		6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	0.95	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00		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)	1770	5085	1583	1770	5085		1770	3539	1583	1770	5085	1583
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)	1770	5085	1583	1770	5085		1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	169	1122	77	159	1528	0	155	554	117	123	823	232
RTOR Reduction (vph)	0	0	56	0	0	0	0	0	68	0	0	156
Lane Group Flow (vph)	169	1122	21	159	1528	0	155	554	49	123	823	76
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8	6	7	4	
Permitted Phases			5			2			8			4
Actuated Green, G (s)	15.2	31.7	31.7	18.2	34.7		11.0	30.1	48.3	10.0	29.1	29.1
Effective Green, g (s)	15.2	31.7	31.7	18.2	34.7		11.0	30.1	48.3	10.0	29.1	29.1
Actuated g/C Ratio	0.13	0.28	0.28	0.16	0.30		0.10	0.26	0.42	0.09	0.25	0.25
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5		6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5		2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	233	1401	436	280	1534		169	926	664	153	1286	400
v/s Ratio Prot	0.10	c0.22		0.09	c0.30		c0.09	0.16	0.01	0.07	c0.16	
v/s Ratio Perm			0.01						0.02			0.05
v/c Ratio	0.73	0.80	0.05	0.57	1.00		0.92	0.60	0.07	0.80	0.64	0.19
Uniform Delay, d1	47.9	38.7	30.6	44.8	40.1		51.5	37.2	20.0	51.5	38.3	33.7
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	9.1	3.8	0.1	8.1	22.1		44.9	1.4	0.1	24.2	1.3	0.4
Delay (s)	57.0	42.5	30.7	52.9	62.2		96.4	38.6	20.0	75.8	39.6	34.1
Level of Service	E	D	C	D	E		F	D	C	E	D	C
Approach Delay (s)		43.6			61.3			46.8			42.3	
Approach LOS		D			E			D			D	

Intersection Summary

HCM 2000 Control Delay	49.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

Existing PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↑		↖	↗	
Traffic Volume (veh/h)	61	1259	18	4	1434	81	78	7	18	50	13	36
Future Volume (veh/h)	61	1259	18	4	1434	81	78	7	18	50	13	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	1431	20	4	1593	90	111	10	26	71	19	51
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	2928	909	8	2697	837	240	37	96	265	31	83
Arrive On Green	0.05	0.57	0.57	0.00	0.53	0.53	0.06	0.08	0.08	0.05	0.07	0.07
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	460	1195	1781	449	1205
Grp Volume(v), veh/h	69	1431	20	4	1593	90	111	0	36	71	0	70
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1655	1781	0	1654
Q Serve(g_s), s	2.9	12.5	0.4	0.2	16.0	2.1	4.3	0.0	1.5	2.7	0.0	3.1
Cycle Q Clear(g_c), s	2.9	12.5	0.4	0.2	16.0	2.1	4.3	0.0	1.5	2.7	0.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		0.73
Lane Grp Cap(c), veh/h	88	2928	909	8	2697	837	240	0	132	265	0	114
V/C Ratio(X)	0.78	0.49	0.02	0.53	0.59	0.11	0.46	0.00	0.27	0.27	0.00	0.61
Avail Cap(c_a), veh/h	107	2928	909	107	2697	837	240	0	397	285	0	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.58	0.58	0.58	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	9.5	6.9	37.3	12.1	8.8	30.4	0.0	32.4	30.4	0.0	33.9
Incr Delay (d2), s/veh	13.0	0.3	0.0	17.0	0.8	0.2	1.4	0.0	1.1	0.5	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.1	0.1	0.1	5.6	0.7	1.9	0.0	0.6	1.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	9.8	6.9	54.3	13.0	9.1	31.8	0.0	33.5	30.9	0.0	39.2
LnGrp LOS	D	A	A	D	B	A	C	A	C	C	A	D
Approach Vol, veh/h		1520			1687			147				141
Approach Delay, s/veh		11.5			12.9			32.2				35.1
Approach LOS		B			B			C				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	49.5	9.5	10.7	8.7	46.1	8.7	11.5				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	26.0	4.5	18.0	4.5	26.0	4.5	18.0				
Max Q Clear Time (g_c+I1), s	2.2	14.5	6.3	5.1	4.9	18.0	4.7	3.5				
Green Ext Time (p_c), s	0.0	9.2	0.0	0.2	0.0	7.0	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay				14.0								
HCM 6th LOS				B								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

Existing PM
02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↘	↘
Traffic Volume (vph)	14	1226	33	34	1343	56	115	48	39	37	14	20
Future Volume (vph)	14	1226	33	34	1343	56	115	48	39	37	14	20
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1770	5065		1770	5055		1770	1737			1798	1583
Flt Permitted	0.14	1.00		0.16	1.00		0.95	1.00			0.97	1.00
Satd. Flow (perm)	262	5065		305	5055		1770	1737			1798	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	16	1362	37	37	1460	61	167	70	57	42	16	22
RTOR Reduction (vph)	0	2	0	0	2	0	0	21	0	0	0	21
Lane Group Flow (vph)	16	1397	0	37	1519	0	167	106	0	0	58	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	108.4	108.4		108.4	108.4		20.1	20.1			4.0	4.0
Effective Green, g (s)	108.4	108.4		108.4	108.4		20.1	20.1			4.0	4.0
Actuated g/C Ratio	0.72	0.72		0.72	0.72		0.13	0.13			0.03	0.03
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	189	3660		220	3653		237	232			47	42
v/s Ratio Prot		0.28			c0.30		c0.09	0.06			c0.03	
v/s Ratio Perm	0.06			0.12								0.00
v/c Ratio	0.08	0.38		0.17	0.42		0.70	0.46			1.23	0.01
Uniform Delay, d1	6.1	8.0		6.6	8.2		62.1	59.9			73.0	71.1
Progression Factor	0.69	0.68		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.3	0.1		1.6	0.4		9.2	1.4			207.7	0.1
Delay (s)	4.5	5.5		8.2	8.6		71.3	61.4			280.7	71.2
Level of Service	A	A		A	A		E	E			F	E
Approach Delay (s)		5.5			8.6			67.0			223.1	
Approach LOS		A			A			E			F	

Intersection Summary

HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

Existing PM
02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1023	50	277	1043	52	135	566	404	147	778	200
Future Volume (veh/h)	183	1023	50	277	1043	52	135	566	404	147	778	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	193	1077	53	311	1172	58	155	651	464	163	864	222
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1489	462	260	1586	78	141	1125	502	274	886	228
Arrive On Green	0.12	0.29	0.29	0.15	0.32	0.32	0.08	0.32	0.32	0.08	0.32	0.32
Sat Flow, veh/h	1781	5106	1585	1781	4984	247	1781	3554	1585	3456	2799	719
Grp Volume(v), veh/h	193	1077	53	311	800	430	155	651	464	163	548	538
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1826	1781	1777	1585	1728	1777	1741
Q Serve(g_s), s	12.8	22.7	2.9	17.5	25.1	25.2	9.5	18.4	33.9	5.5	36.6	36.6
Cycle Q Clear(g_c), s	12.8	22.7	2.9	17.5	25.1	25.2	9.5	18.4	33.9	5.5	36.6	36.6
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	212	1489	462	260	1084	581	141	1125	502	274	563	551
V/C Ratio(X)	0.91	0.72	0.11	1.20	0.74	0.74	1.10	0.58	0.92	0.60	0.97	0.98
Avail Cap(c_a), veh/h	212	1489	462	260	1084	581	141	1125	502	274	563	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	38.2	31.1	51.3	36.5	36.5	55.3	34.3	39.6	53.4	40.5	40.5
Incr Delay (d2), s/veh	35.3	2.9	0.5	119.9	4.5	8.2	96.4	1.7	21.3	9.2	32.1	32.7
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	9.8	1.2	16.4	11.1	12.5	8.0	8.2	16.0	2.7	20.8	20.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.5	41.0	31.6	171.1	41.0	44.7	151.6	36.0	60.9	62.6	72.7	73.2
LnGrp LOS	F	D	C	F	D	D	F	D	E	E	E	E
Approach Vol, veh/h		1323			1541			1270			1249	
Approach Delay, s/veh		47.4			68.3			59.2			71.6	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	43.7	14.0	43.5	22.0	40.5	14.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	14.3	38.2	9.5	38.0	17.5	35.0	9.5	38.0				
Max Q Clear Time (g_c+I1), s	14.8	27.2	7.5	35.9	19.5	24.7	11.5	38.6				
Green Ext Time (p_c), s	0.0	7.8	0.0	1.0	0.0	7.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay					61.8							
HCM 6th LOS					E							

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

Existing PM
02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (veh/h)	122	791	106	154	652	91	133	1025	134	99	934	44
Future Volume (veh/h)	122	791	106	154	652	91	133	1025	134	99	934	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	860	115	159	672	94	145	1114	146	111	1049	49
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1404	187	173	1487	206	125	1043	136	107	1106	52
Arrive On Green	0.08	0.31	0.31	0.10	0.33	0.33	0.07	0.33	0.33	0.06	0.32	0.32
Sat Flow, veh/h	1781	4559	607	1781	4534	628	1781	3160	413	1781	3457	161
Grp Volume(v), veh/h	133	641	334	159	503	263	145	626	634	111	539	559
Grp Sat Flow(s),veh/h/ln	1781	1702	1761	1781	1702	1757	1781	1777	1796	1781	1777	1841
Q Serve(g_s), s	7.4	16.1	16.2	8.9	11.6	11.8	7.0	33.0	33.0	6.0	29.6	29.6
Cycle Q Clear(g_c), s	7.4	16.1	16.2	8.9	11.6	11.8	7.0	33.0	33.0	6.0	29.6	29.6
Prop In Lane	1.00		0.34	1.00		0.36	1.00		0.23	1.00		0.09
Lane Grp Cap(c), veh/h	137	1048	542	173	1117	576	125	586	593	107	569	589
V/C Ratio(X)	0.97	0.61	0.62	0.92	0.45	0.46	1.16	1.07	1.07	1.04	0.95	0.95
Avail Cap(c_a), veh/h	137	1048	542	173	1117	576	125	586	593	107	569	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	29.5	29.5	44.8	26.5	26.6	46.5	33.5	33.5	47.0	33.2	33.2
Incr Delay (d2), s/veh	67.0	2.7	5.2	45.3	1.3	2.6	131.0	56.3	57.3	97.8	26.9	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	6.8	7.5	6.0	4.9	5.3	7.6	22.9	23.3	5.5	16.6	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.1	32.2	34.7	90.1	27.8	29.2	177.5	89.8	90.8	144.8	60.1	59.5
LnGrp LOS	F	C	C	F	C	C	F	F	F	F	E	E
Approach Vol, veh/h		1108			925			1405			1209	
Approach Delay, s/veh		42.6			38.9			99.3			67.6	
Approach LOS		D			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	38.8	10.0	39.0	14.2	36.8	11.0	38.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	7.7	32.8	6.0	33.0	9.7	30.8	7.0	32.0				
Max Q Clear Time (g_c+I1), s	9.4	13.8	8.0	35.0	10.9	18.2	9.0	31.6				
Green Ext Time (p_c), s	0.0	7.5	0.0	0.0	0.0	7.3	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay				65.5								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 9: Firestone Blvd & Pioneer Blvd

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	359	53	36	362	65	74	706	41	62	863	191
Future Volume (veh/h)	216	359	53	36	362	65	74	706	41	62	863	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	225	374	55	38	381	68	89	851	0	77	1065	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	800	357	50	607	271	84	1693		84	1693	
Arrive On Green	0.08	0.23	0.23	0.03	0.17	0.17	0.05	0.48	0.00	0.05	0.48	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	225	374	55	38	381	68	89	851	0	77	1065	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.0	7.7	2.4	1.8	8.5	3.2	4.0	14.0	0.0	3.7	19.0	0.0
Cycle Q Clear(g_c), s	7.0	7.7	2.4	1.8	8.5	3.2	4.0	14.0	0.0	3.7	19.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	800	357	50	607	271	84	1693		84	1693	
V/C Ratio(X)	1.53	0.47	0.15	0.77	0.63	0.25	1.06	0.50		0.92	0.63	
Avail Cap(c_a), veh/h	147	1254	559	126	1212	541	84	1693		84	1693	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.82	0.82	0.00
Uniform Delay (d), s/veh	39.0	28.5	26.4	41.0	32.7	30.5	40.5	15.3	0.0	40.3	16.6	0.0
Incr Delay (d2), s/veh	271.4	0.7	0.3	8.7	1.8	0.8	116.1	1.1	0.0	62.4	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.1	3.3	0.9	0.9	3.7	1.2	4.4	5.6	0.0	3.0	7.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	310.4	29.2	26.8	49.8	34.6	31.4	156.6	16.4	0.0	102.8	18.1	0.0
LnGrp LOS	F	C	C	D	C	C	F	B		F	B	
Approach Vol, veh/h		654			487			940			1142	
Approach Delay, s/veh		125.8			35.3			29.7			23.8	
Approach LOS		F			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	46.0	6.4	24.6	8.0	46.0	11.0	20.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	4.0	26.0	6.0	30.0	4.0	26.0	7.0	29.0				
Max Q Clear Time (g_c+l1), s	5.7	16.0	3.8	9.7	6.0	21.0	9.0	10.5				
Green Ext Time (p_c), s	0.0	6.5	0.0	4.0	0.0	4.0	0.0	4.0				

Intersection Summary

HCM 6th Ctrl Delay	47.9
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

Existing PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↗	↗		↑↑↑	↗	↖	↑↑↑	
Traffic Volume (vph)	0	0	1	482	0	99	0	654	322	116	879	0
Future Volume (vph)	0	0	1	482	0	99	0	654	322	116	879	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0	
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91	
Frt		0.86		1.00	1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1611		1681	1681	1583		5085	1583	1770	5085	
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1611		1681	1681	1583		5085	1583	1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88
Adj. Flow (vph)	0	0	1	610	0	125	0	861	424	132	999	0
RTOR Reduction (vph)	0	1	0	0	0	91	0	0	174	0	0	0
Lane Group Flow (vph)	0	0	0	305	305	34	0	861	250	132	999	0
Turn Type		NA		Split	NA	Perm		NA	pm+ov	Prot	NA	
Protected Phases		4		3	3			2	3	1	6	
Permitted Phases	4					3			2			
Actuated Green, G (s)		0.7		18.9	18.9	18.9		21.8	40.7	6.7	33.5	
Effective Green, g (s)		0.7		18.9	18.9	18.9		21.8	40.7	6.7	33.5	
Actuated g/C Ratio		0.01		0.27	0.27	0.27		0.32	0.59	0.10	0.48	
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0	
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0	
Lane Grp Cap (vph)		16		459	459	432		1604	932	171	2465	
v/s Ratio Prot		c0.00		c0.18	0.18			c0.17	0.07	c0.07	0.20	
v/s Ratio Perm						0.02			0.08			
v/c Ratio		0.00		0.66	0.66	0.08		0.54	0.27	0.77	0.41	
Uniform Delay, d1		33.9		22.3	22.3	18.6		19.5	6.9	30.5	11.4	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0		3.6	3.6	0.1		1.3	0.2	17.6	0.5	
Delay (s)		33.9		25.9	25.9	18.7		20.8	7.1	48.1	11.9	
Level of Service		C		C	C	B		C	A	D	B	
Approach Delay (s)		33.9			24.7			16.3			16.1	
Approach LOS		C			C			B			B	

Intersection Summary		
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.61	B
Actuated Cycle Length (s)	69.1	Sum of lost time (s)
Intersection Capacity Utilization	52.4%	21.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	15	123	8	9	5	78	801	13	11	891	204
Future Volume (veh/h)	285	15	123	8	9	5	78	801	13	11	891	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	348	18	150	12	14	8	95	977	16	11	919	210
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	471	537	455	426	321	183	156	1953	32	12	1804	804
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.05	0.55	0.55	0.01	0.51	0.51
Sat Flow, veh/h	1390	1870	1585	1217	1117	638	3456	3578	59	1781	3554	1585
Grp Volume(v), veh/h	348	18	150	12	0	22	95	485	508	11	919	210
Grp Sat Flow(s),veh/h/ln	1390	1870	1585	1217	0	1755	1728	1777	1860	1781	1777	1585
Q Serve(g_s), s	20.5	0.6	6.3	0.6	0.0	0.8	2.3	14.5	14.5	0.5	14.6	6.4
Cycle Q Clear(g_c), s	21.3	0.6	6.3	1.2	0.0	0.8	2.3	14.5	14.5	0.5	14.6	6.4
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	471	537	455	426	0	504	156	970	1015	12	1804	804
V/C Ratio(X)	0.74	0.03	0.33	0.03	0.00	0.04	0.61	0.50	0.50	0.91	0.51	0.26
Avail Cap(c_a), veh/h	728	882	748	649	0	826	163	970	1015	42	1804	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.41	0.41	0.41
Uniform Delay (d), s/veh	29.5	21.8	23.8	22.2	0.0	21.9	39.8	12.1	12.1	42.2	13.9	11.9
Incr Delay (d2), s/veh	1.7	0.0	0.3	0.0	0.0	0.0	4.1	1.8	1.8	28.7	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.3	0.0	0.2	0.0	0.3	1.0	5.7	6.0	0.3	5.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	21.8	24.2	22.2	0.0	21.9	44.0	13.9	13.8	70.8	14.3	12.2
LnGrp LOS	C	C	C	C	A	C	D	B	B	E	B	B
Approach Vol, veh/h		516			34			1088			1140	
Approach Delay, s/veh		28.9			22.0			16.5			14.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	51.4		29.0	7.8	48.1		29.0				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+l1), s	2.5	16.5		3.2	4.3	16.6		23.3				
Green Ext Time (p_c), s	0.0	3.7		0.1	0.0	3.8		1.2				

Intersection Summary

HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

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

HCM Signalized Intersection Capacity Analysis
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘		↗		↕	↗	↘	↕			↕	↗
Traffic Volume (vph)	18	0	61	133	104	294	108	752	0	0	1268	111
Future Volume (vph)	18	0	61	133	104	294	108	752	0	0	1268	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4		5.4	5.4	4.9	5.8			5.8	
Lane Util. Factor	1.00		1.00		0.95	1.00	0.97	0.91			0.91	
Frt	1.00		0.85		1.00	0.85	1.00	1.00			0.99	
Flt Protected	0.95		1.00		0.97	1.00	0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583		3443	1583	3433	5085			5024	
Flt Permitted	0.95		1.00		0.97	1.00	0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583		3443	1583	3433	5085			5024	
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Adj. Flow (vph)	20	0	69	146	114	323	137	952	0	0	1528	134
RTOR Reduction (vph)	0	0	62	0	0	238	0	0	0	0	10	0
Lane Group Flow (vph)	20	0	7	0	260	85	137	952	0	0	1652	0
Turn Type	Prot		Perm	Split	NA	Perm	Prot	NA			NA	
Protected Phases	7			8	8		5	2				6
Permitted Phases			7			8						6
Actuated Green, G (s)	9.6		9.6		12.0	12.0	10.0	54.3			39.4	
Effective Green, g (s)	9.6		9.6		12.0	12.0	10.0	54.3			39.4	
Actuated g/C Ratio	0.10		0.10		0.13	0.13	0.11	0.59			0.43	
Clearance Time (s)	5.4		5.4		5.4	5.4	4.9	5.8			5.8	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	5.0			5.0	
Lane Grp Cap (vph)	183		164		446	205	371	2985			2139	
v/s Ratio Prot	c0.01				c0.08		0.04	c0.19			c0.33	
v/s Ratio Perm			0.00			0.05						
v/c Ratio	0.11		0.04		0.58	0.41	0.37	0.32			0.77	
Uniform Delay, d1	37.6		37.3		37.9	37.0	38.3	9.7			22.7	
Progression Factor	1.00		1.00		1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	0.3		0.1		1.9	1.3	0.6	0.3			2.8	
Delay (s)	37.8		37.4		39.8	38.4	38.9	10.0			25.5	
Level of Service	D		D		D	D	D	A			C	
Approach Delay (s)		37.5			39.0			13.6			25.5	
Approach LOS		D			D			B			C	

Intersection Summary		
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.60	
Actuated Cycle Length (s)	92.5	Sum of lost time (s) 21.5
Intersection Capacity Utilization	62.8%	ICU Level of Service B
Analysis Period (min)	15	

c Critical Lane Group

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp

Existing PM
 02/27/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	215	108	0	0	0	0	780	153	377	1134	0
Future Volume (veh/h)	39	215	108	0	0	0	0	780	153	377	1134	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	44	242	121				0	929	182	444	1334	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	218	435	194				0	2441	476	497	3897	0
Arrive On Green	0.12	0.12	0.12				0.00	0.57	0.57	0.14	0.76	0.00
Sat Flow, veh/h	1781	3554	1585				0	4455	837	3456	5274	0
Grp Volume(v), veh/h	44	242	121				0	737	374	444	1334	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1720	1728	1702	0
Q Serve(g_s), s	2.2	6.3	7.1				0.0	11.7	11.7	12.4	8.2	0.0
Cycle Q Clear(g_c), s	2.2	6.3	7.1				0.0	11.7	11.7	12.4	8.2	0.0
Prop In Lane	1.00		1.00				0.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	218	435	194				0	1938	979	497	3897	0
V/C Ratio(X)	0.20	0.56	0.62				0.00	0.38	0.38	0.89	0.34	0.00
Avail Cap(c_a), veh/h	763	1523	679				0	1938	979	497	3897	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	1.00	1.00	0.61	0.61	0.00
Uniform Delay (d), s/veh	38.7	40.5	40.9				0.0	11.6	11.6	41.2	3.7	0.0
Incr Delay (d2), s/veh	0.5	1.1	3.3				0.0	0.6	1.1	12.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.8	2.9				0.0	4.3	4.5	6.0	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	41.6	44.1				0.0	12.2	12.7	53.4	3.9	0.0
LnGrp LOS	D	D	D				A	B	B	D	A	A
Approach Vol, veh/h		407						1111			1778	
Approach Delay, s/veh		42.1						12.4			16.2	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	19.0	61.6	17.4	80.6								
Change Period (Y+Rc), s	4.9	5.8	5.4	5.8								
Max Green Setting (Gmax), s	14.1	25.3	42.0	44.3								
Max Q Clear Time (g_c+l1), s	14.4	13.7	9.1	10.2								
Green Ext Time (p_c), s	0.0	8.1	2.2	21.3								
Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	
Traffic Volume (veh/h)	216	359	53	36	362	65	74	706	41	62	863	191
Future Volume (veh/h)	216	359	53	36	362	65	74	706	41	62	863	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	390	58	40	398	71	86	821	48	74	1027	227
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1287	574	75	1178	526	120	1116	498	101	1268	280
Arrive On Green	0.07	0.36	0.36	0.04	0.33	0.33	0.07	0.31	0.31	0.06	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	4185	924
Grp Volume(v), veh/h	235	390	58	40	398	71	86	821	48	74	835	419
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1704
Q Serve(g_s), s	6.5	7.0	2.2	2.0	7.5	2.8	4.2	18.3	1.9	3.6	20.2	20.2
Cycle Q Clear(g_c), s	6.5	7.0	2.2	2.0	7.5	2.8	4.2	18.3	1.9	3.6	20.2	20.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	130	1287	574	75	1178	526	120	1116	498	101	1032	517
V/C Ratio(X)	1.81	0.30	0.10	0.53	0.34	0.14	0.72	0.74	0.10	0.73	0.81	0.81
Avail Cap(c_a), veh/h	130	1287	574	120	1178	526	120	1118	499	120	1071	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	20.3	18.8	41.7	22.4	20.8	40.6	27.2	21.6	41.3	28.6	28.6
Incr Delay (d2), s/veh	391.3	0.6	0.4	2.1	0.8	0.5	16.0	3.1	0.2	13.0	5.3	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	2.9	0.8	0.9	3.2	1.1	2.4	8.0	0.7	1.9	8.7	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	432.5	20.9	19.1	43.9	23.2	21.3	56.7	30.4	21.8	54.3	33.9	38.8
LnGrp LOS	F	C	B	D	C	C	E	C	C	D	C	D
Approach Vol, veh/h		683			509			955			1328	
Approach Delay, s/veh		162.4			24.5			32.3			36.6	
Approach LOS		F			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	37.7	9.5	33.4	11.0	35.0	10.5	32.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.0	30.0	6.0	28.0	6.5	29.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s	4.0	9.0	5.6	20.3	8.5	9.5	6.2	22.2				
Green Ext Time (p_c), s	0.0	4.9	0.0	4.9	0.0	5.0	0.0	4.8				
Intersection Summary												
HCM 6th Ctrl Delay				58.4								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	555	50	197	699	246	59	636	320	306	548	97
Future Volume (veh/h)	75	555	50	197	699	246	59	636	320	306	548	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	631	57	221	785	276	66	715	360	326	583	103
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	1001	446	283	1044	819	116	1015	453	390	1185	528
Arrive On Green	0.07	0.28	0.28	0.08	0.29	0.29	0.07	0.29	0.29	0.11	0.33	0.33
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	85	631	57	221	785	276	66	715	360	326	583	103
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.9	16.3	2.8	6.6	21.0	8.1	3.8	18.9	22.0	9.7	13.7	4.9
Cycle Q Clear(g_c), s	4.9	16.3	2.8	6.6	21.0	8.1	3.8	18.9	22.0	9.7	13.7	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1001	446	283	1044	819	116	1015	453	390	1185	528
V/C Ratio(X)	0.68	0.63	0.13	0.78	0.75	0.34	0.57	0.70	0.79	0.84	0.49	0.19
Avail Cap(c_a), veh/h	136	1001	446	296	1044	819	136	1015	453	428	1185	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	32.9	28.1	47.3	33.6	29.1	47.7	33.5	34.7	45.6	27.9	25.0
Incr Delay (d2), s/veh	10.8	3.0	0.6	11.0	4.7	1.0	3.2	4.1	13.4	12.2	1.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	7.4	1.1	3.3	9.6	2.8	1.8	8.6	10.0	4.8	6.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	36.0	28.7	58.3	38.3	30.1	50.9	37.6	48.1	57.8	29.4	25.8
LnGrp LOS	E	D	C	E	D	C	D	D	D	E	C	C
Approach Vol, veh/h		773			1282			1141			1012	
Approach Delay, s/veh		37.9			40.0			41.7			38.2	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.1	12.8	41.5	13.3	37.3	17.8	36.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	9.0	28.0	8.0	35.0	8.0	29.0	13.0	30.0				
Max Q Clear Time (g_c+I1), s	8.6	18.3	5.8	15.7	6.9	23.0	11.7	24.0				
Green Ext Time (p_c), s	0.0	4.8	0.0	7.3	0.0	4.3	0.1	4.3				
Intersection Summary												
HCM 6th Ctrl Delay			39.6									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	882	345	64	931	0	0	0	0	345	0	201
Future Volume (veh/h)	0	882	345	64	931	0	0	0	0	345	0	201
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1063	416	73	1058	0				421	0	245
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1809	807	179	3411	0				688	0	306
Arrive On Green	0.00	0.51	0.51	0.10	0.67	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1063	416	73	1058	0				421	0	245
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	16.8	14.0	3.1	6.9	0.0				8.6	0.0	11.8
Cycle Q Clear(g_c), s	0.0	16.8	14.0	3.1	6.9	0.0				8.6	0.0	11.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1809	807	179	3411	0				688	0	306
V/C Ratio(X)	0.00	0.59	0.52	0.41	0.31	0.00				0.61	0.00	0.80
Avail Cap(c_a), veh/h	0	1809	807	229	3411	0				828	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.68	0.68	0.89	0.89	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.8	13.1	33.8	5.6	0.0				29.5	0.0	30.8
Incr Delay (d2), s/veh	0.0	1.0	1.6	1.0	0.1	0.0				1.3	0.0	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.3	4.9	1.4	2.0	0.0				3.7	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.7	14.7	34.7	5.6	0.0				30.8	0.0	42.0
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1479			1131						666	
Approach Delay, s/veh		14.7			7.5						35.0	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.7	46.4		20.9		59.1						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	35.3		18.6		50.3						
Max Q Clear Time (g_c+I1), s	5.1	18.8		13.8		8.9						
Green Ext Time (p_c), s	0.0	9.8		1.7		11.7						

Intersection Summary

HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

Existing PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗↗	↘	↘	↗	↘			
Traffic Volume (veh/h)	249	1005	0	0	794	612	191	1	48	0	0	0
Future Volume (veh/h)	249	1005	0	0	794	612	191	1	48	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	271	1092	0	0	827	638	243	0	61			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2709	0	0	3058	949	408	0	181			
Arrive On Green	0.11	0.76	0.00	0.00	0.60	0.60	0.11	0.00	0.11			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	271	1092	0	0	827	638	243	0	61			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	9.5	0.0	0.0	7.0	24.3	5.8	0.0	3.2			
Cycle Q Clear(g_c), s	10.0	9.5	0.0	0.0	7.0	24.3	5.8	0.0	3.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2709	0	0	3058	949	408	0	181			
V/C Ratio(X)	1.37	0.40	0.00	0.00	0.27	0.67	0.60	0.00	0.34			
Avail Cap(c_a), veh/h	198	2709	0	0	3058	949	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	3.7	0.0	0.0	8.6	12.1	37.9	0.0	36.7			
Incr Delay (d2), s/veh	189.2	0.3	0.0	0.0	0.2	3.8	3.0	0.0	2.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	14.7	2.6	0.0	0.0	2.4	8.6	2.7	0.0	1.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	229.2	4.0	0.0	0.0	8.9	15.9	40.8	0.0	39.0			
LnGrp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		1363			1465			304				
Approach Delay, s/veh		48.8			11.9			40.5				
Approach LOS		D			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		74.3			14.7	59.6		15.7				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		11.5			12.0	26.3		7.8				
Green Ext Time (p_c), s		11.5			0.0	0.7		2.5				

Intersection Summary

HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave

Existing PM
 01/03/2023


































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	337	617	51	90	618	47	107	975	135	49	1034	488
Future Volume (veh/h)	337	617	51	90	618	47	107	975	135	49	1034	488
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	392	717	59	99	679	52	114	1037	144	56	1189	561
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	405	1139	94	124	1429	109	122	1251	558	72	1151	699
Arrive On Green	0.12	0.34	0.34	0.07	0.30	0.30	0.07	0.35	0.35	0.04	0.32	0.32
Sat Flow, veh/h	3456	3325	273	1781	4840	368	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	392	383	393	99	476	255	114	1037	144	56	1189	561
Grp Sat Flow(s),veh/h/ln	1728	1777	1821	1781	1702	1804	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.9	19.0	19.0	5.7	12.0	12.2	6.7	28.0	6.8	3.3	34.0	32.2
Cycle Q Clear(g_c), s	11.9	19.0	19.0	5.7	12.0	12.2	6.7	28.0	6.8	3.3	34.0	32.2
Prop In Lane	1.00		0.15	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	405	609	624	124	1005	533	122	1251	558	72	1151	699
V/C Ratio(X)	0.97	0.63	0.63	0.80	0.47	0.48	0.93	0.83	0.26	0.78	1.03	0.80
Avail Cap(c_a), veh/h	405	609	624	192	1005	533	122	1251	558	98	1151	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	28.9	28.9	48.1	30.3	30.4	48.7	31.1	24.2	49.9	35.5	25.4
Incr Delay (d2), s/veh	36.2	4.9	4.8	5.8	1.6	3.1	60.2	4.5	0.1	15.7	35.5	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	8.8	9.0	2.7	5.1	5.7	5.0	12.5	2.5	1.8	20.0	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.3	33.8	33.7	53.9	31.9	33.4	108.9	35.6	24.3	65.6	71.0	31.6
LnGrp LOS	F	C	C	D	C	C	F	D	C	E	F	C
Approach Vol, veh/h		1168			830			1295			1806	
Approach Delay, s/veh		50.1			35.0			40.8			58.6	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	42.0	11.2	39.5	17.3	37.0	8.2	42.5				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	11.3	32.0	7.2	34.0	12.3	31.0	5.8	35.4				
Max Q Clear Time (g_c+I1), s	7.7	21.0	8.7	36.0	13.9	14.2	5.3	30.0				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	3.0	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay				48.3								
HCM 6th LOS				D								

**Appendix C:
Opening Year 2026
Without Project
Synchro Worksheets**

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

Near Term 2026 w/out Project AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		 	 	
Traffic Volume (veh/h)	294	1182	72	155	1052	109	23	419	187	145	310	542
Future Volume (veh/h)	294	1182	72	155	1052	109	23	419	187	145	310	542
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	1374	84	176	1195	124	25	455	203	175	373	653
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	3191	991	249	3191	991	183	1013	452	415	1013	452
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	416	5106	1585	364	5106	1585	550	3554	1585	1505	3554	1585
Grp Volume(v), veh/h	342	1374	84	176	1195	124	25	455	203	175	373	653
Grp Sat Flow(s),veh/h/ln	416	1702	1585	364	1702	1585	550	1777	1585	753	1777	1585
Q Serve(g_s), s	51.0	13.8	2.1	47.9	11.5	3.2	3.8	10.5	10.5	10.8	8.4	28.5
Cycle Q Clear(g_c), s	62.5	13.8	2.1	61.8	11.5	3.2	12.2	10.5	10.5	21.3	8.4	28.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	3191	991	249	3191	991	183	1013	452	415	1013	452
V/C Ratio(X)	1.20	0.43	0.08	0.71	0.37	0.13	0.14	0.45	0.45	0.42	0.37	1.45
Avail Cap(c_a), veh/h	284	3191	991	249	3191	991	183	1013	452	415	1013	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	9.6	7.4	25.5	9.2	7.6	33.4	29.3	29.3	38.0	28.6	35.8
Incr Delay (d2), s/veh	119.7	0.1	0.0	8.7	0.1	0.1	0.3	0.3	0.7	0.7	0.2	212.7
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	16.5	4.7	0.7	4.5	3.9	1.0	0.5	4.5	4.0	2.0	3.6	37.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	150.6	9.7	7.5	34.2	9.3	7.7	33.8	29.6	30.0	38.7	28.8	248.4
LnGrp LOS	F	A	A	C	A	A	C	C	C	D	C	F
Approach Vol, veh/h		1800			1495			683			1201	
Approach Delay, s/veh		36.4			12.1			29.9			149.7	
Approach LOS		D			B			C			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		67.0		33.0		67.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		28.5		62.5		28.5		62.5				
Max Q Clear Time (g_c+I1), s		14.2		64.5		30.5		63.8				
Green Ext Time (p_c), s		3.5		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				54.8								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

Near Term 2026 w/out Project AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↖↑	↗
Traffic Volume (veh/h)	0	1222	237	0	1126	0	0	0	0	457	95	168
Future Volume (veh/h)	0	1222	237	0	1126	0	0	0	0	457	95	168
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1389	269	0	1294	0				538	112	198
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3369	1046	5	3369	0				680	357	303
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1389	269	0	1294	0				538	112	198
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	9.5	5.2	0.0	8.7	0.0				10.8	3.9	8.7
Cycle Q Clear(g_c), s	0.0	9.5	5.2	0.0	8.7	0.0				10.8	3.9	8.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3369	1046	5	3369	0				680	357	303
V/C Ratio(X)	0.00	0.41	0.26	0.00	0.38	0.00				0.79	0.31	0.65
Avail Cap(c_a), veh/h	0	3369	1046	415	3369	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.90	0.00	0.96	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.0	5.2	0.0	5.8	0.0				28.9	26.1	28.1
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	0.1	0.0				6.2	0.9	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	1.5	0.0	2.5	0.0				5.0	1.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.3	5.8	0.0	6.0	0.0				35.1	27.0	33.5
LnGrp LOS	A	A	A	A	A	A				D	C	C
Approach Vol, veh/h		1658			1294						848	
Approach Delay, s/veh		6.2			6.0						33.6	
Approach LOS		A			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	0.0	55.3		19.7		55.3						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	0.0	11.5		12.8		10.7						
Green Ext Time (p_c), s	0.0	18.0		1.5		22.0						

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

Near Term 2026 w/out Project AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↓		↖	↑↑↑	↗		↖↑	↗			
Traffic Volume (veh/h)	58	1594	60	1	1022	413	78	112	8	0	0	0
Future Volume (veh/h)	58	1594	60	1	1022	413	78	112	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	67	1832	69	1	1202	486	87	124	9			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	347	2493	94	238	2689	835	282	281	251			
Arrive On Green	0.10	0.49	0.49	0.13	0.53	0.53	0.16	0.16	0.16			
Sat Flow, veh/h	3456	5050	190	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	67	1234	667	1	1202	486	87	124	9			
Grp Sat Flow(s),veh/h/ln	1728	1702	1836	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	1.3	21.6	21.7	0.0	10.9	15.7	3.2	4.7	0.4			
Cycle Q Clear(g_c), s	1.3	21.6	21.7	0.0	10.9	15.7	3.2	4.7	0.4			
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	347	1680	906	238	2689	835	282	281	251			
V/C Ratio(X)	0.19	0.73	0.74	0.00	0.45	0.58	0.31	0.44	0.04			
Avail Cap(c_a), veh/h	465	1680	906	240	2689	835	285	284	254			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.87	0.87	0.87	0.62	0.62	0.62	1.00	1.00	1.00			
Uniform Delay (d), s/veh	31.0	15.1	15.1	28.2	11.0	12.1	27.9	28.6	26.7			
Incr Delay (d2), s/veh	0.2	2.5	4.6	0.0	0.1	0.6	0.7	1.3	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	8.0	9.2	0.0	3.7	5.0	1.4	2.1	0.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	17.6	19.7	28.2	11.1	12.8	28.7	29.9	26.8			
LnGrp LOS	C	B	B	C	B	B	C	C	C			
Approach Vol, veh/h		1968			1689			220				
Approach Delay, s/veh		18.8			11.6			29.3				
Approach LOS		B			B			C				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	14.9	42.8			12.4	45.3		17.3				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.1	36.8			10.1	* 38		12.0				
Max Q Clear Time (g_c+I1), s	2.0	23.7			3.3	17.7		6.7				
Green Ext Time (p_c), s	0.0	12.1			0.1	11.0		0.6				

Intersection Summary
































HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

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

HCM Signalized Intersection Capacity Analysis
4: Norwalk Blvd & Imperial Hwy

Near Term 2026 w/out Project AM
01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Traffic Volume (vph)	157	1228	68	119	1155	38	115	597	126	116	421	123
Future Volume (vph)	157	1228	68	119	1155	38	115	597	126	116	421	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	180	1411	78	137	1328	44	124	642	135	125	453	132
RTOR Reduction (vph)	0	0	52	0	0	31	0	0	86	0	0	100
Lane Group Flow (vph)	180	1411	26	137	1328	13	124	642	49	125	453	32
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8		7		4
Permitted Phases			5			2			8			4
Actuated Green, G (s)	16.5	38.4	38.4	12.8	34.7	34.7	10.8	28.8	41.6	10.0	28.0	28.0
Effective Green, g (s)	16.5	38.4	38.4	12.8	34.7	34.7	10.8	28.8	41.6	10.0	28.0	28.0
Actuated g/C Ratio	0.14	0.33	0.33	0.11	0.30	0.30	0.09	0.25	0.36	0.09	0.24	0.24
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	253	1697	528	197	1534	477	166	886	572	153	1238	385
v/s Ratio Prot	0.10	c0.28		0.08	c0.26		0.07	c0.18	0.01	c0.07	0.09	
v/s Ratio Perm			0.02			0.01			0.02			0.02
v/c Ratio	0.71	0.83	0.05	0.70	0.87	0.03	0.75	0.72	0.09	0.82	0.37	0.08
Uniform Delay, d1	47.0	35.3	25.9	49.2	37.9	28.3	50.8	39.5	24.2	51.6	36.1	33.6
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	7.6	4.0	0.1	18.4	6.8	0.1	14.7	3.4	0.1	26.2	0.3	0.2
Delay (s)	54.6	39.3	26.0	67.6	44.7	28.4	65.5	42.8	24.3	77.8	36.4	33.8
Level of Service	D	D	C	E	D	C	E	D	C	E	D	C
Approach Delay (s)		40.3			46.3			43.2			43.2	
Approach LOS		D			D			D			D	
Intersection Summary												
HCM 2000 Control Delay			43.2				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			115.0				Sum of lost time (s)		25.0			
Intersection Capacity Utilization			77.7%				ICU Level of Service			D		
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

Near Term 2026 w/out Project AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1286	124	32	1215	76	59	12	24	71	23	35
Future Volume (veh/h)	59	1286	124	32	1215	76	59	12	24	71	23	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	1461	141	36	1350	84	84	17	34	101	33	50
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	2656	824	51	2558	794	247	40	81	276	53	80
Arrive On Green	0.05	0.52	0.52	0.03	0.50	0.50	0.06	0.07	0.07	0.06	0.08	0.08
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	557	1113	1781	671	1017
Grp Volume(v), veh/h	67	1461	141	36	1350	84	84	0	51	101	0	83
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1670	1781	0	1687
Q Serve(g_s), s	2.6	13.5	3.3	1.4	12.6	2.0	3.0	0.0	2.0	3.6	0.0	3.3
Cycle Q Clear(g_c), s	2.6	13.5	3.3	1.4	12.6	2.0	3.0	0.0	2.0	3.6	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.60
Lane Grp Cap(c), veh/h	85	2656	824	51	2558	794	247	0	121	276	0	134
V/C Ratio(X)	0.79	0.55	0.17	0.70	0.53	0.11	0.34	0.00	0.42	0.37	0.00	0.62
Avail Cap(c_a), veh/h	115	2656	824	115	2558	794	259	0	429	276	0	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.53	0.53	0.53	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	11.3	8.8	33.7	11.8	9.2	27.9	0.0	31.1	27.7	0.0	31.2
Incr Delay (d2), s/veh	8.9	0.4	0.2	5.9	0.7	0.2	0.8	0.0	2.3	0.8	0.0	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.5	1.0	0.7	4.3	0.7	1.3	0.0	0.9	1.5	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	11.7	9.1	39.5	12.6	9.4	28.7	0.0	33.4	28.5	0.0	35.9
LnGrp LOS	D	B	A	D	B	A	C	A	C	C	A	D
Approach Vol, veh/h		1669			1470			135				184
Approach Delay, s/veh		12.7			13.1			30.4				31.8
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	42.9	9.0	11.0	8.4	41.6	9.5	10.6				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	21.0	4.5	18.0	4.5	21.0	4.5	18.0				
Max Q Clear Time (g_c+I1), s	3.4	15.5	5.0	5.3	4.6	14.6	5.6	4.0				
Green Ext Time (p_c), s	0.0	4.9	0.0	0.3	0.0	5.4	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay				14.6								
HCM 6th LOS				B								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

Near Term 2026 w/out Project AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↙	↘
Traffic Volume (vph)	15	1200	137	53	1253	41	32	16	18	46	49	23
Future Volume (vph)	15	1200	137	53	1253	41	32	16	18	46	49	23
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1770	5007		1770	5061		1770	1714			1819	1583
Flt Permitted	0.15	1.00		0.14	1.00		0.95	1.00			0.98	1.00
Satd. Flow (perm)	283	5007		252	5061		1770	1714			1819	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	17	1333	152	58	1362	45	46	23	26	52	55	26
RTOR Reduction (vph)	0	13	0	0	3	0	0	22	0	0	0	25
Lane Group Flow (vph)	17	1472	0	58	1404	0	46	27	0	0	107	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	39.0	39.0		39.0	39.0		9.5	9.5			4.0	4.0
Effective Green, g (s)	39.0	39.0		39.0	39.0		9.5	9.5			4.0	4.0
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.14	0.14			0.06	0.06
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	157	2789		140	2819		240	232			103	90
v/s Ratio Prot		c0.29			0.28		c0.03	0.02			c0.06	
v/s Ratio Perm	0.06			0.23								0.00
v/c Ratio	0.11	0.53		0.41	0.50		0.19	0.11			1.04	0.02
Uniform Delay, d1	7.3	9.7		8.9	9.5		26.8	26.6			33.0	31.1
Progression Factor	0.79	0.61		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.5	0.3		8.8	0.6		0.4	0.2			99.5	0.1
Delay (s)	6.3	6.2		17.7	10.1		27.2	26.8			132.5	31.2
Level of Service	A	A		B	B		C	C			F	C
Approach Delay (s)		6.2			10.4			27.0			112.7	
Approach LOS		A			B			C			F	

Intersection Summary

HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

Near Term 2026 w/out Project AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	879	57	312	1050	86	110	792	348	90	553	126
Future Volume (veh/h)	209	879	57	312	1050	86	110	792	348	90	553	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	220	925	60	351	1180	97	126	910	400	100	614	140
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	1489	462	275	1507	124	126	1140	509	230	910	207
Arrive On Green	0.13	0.29	0.29	0.15	0.31	0.31	0.07	0.32	0.32	0.07	0.32	0.32
Sat Flow, veh/h	1781	5106	1585	1781	4808	395	1781	3554	1585	3456	2875	654
Grp Volume(v), veh/h	220	925	60	351	835	442	126	910	400	100	379	375
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1799	1781	1777	1585	1728	1777	1753
Q Serve(g_s), s	14.7	18.8	3.3	18.5	26.8	26.8	8.5	28.1	27.5	3.3	22.2	22.3
Cycle Q Clear(g_c), s	14.7	18.8	3.3	18.5	26.8	26.8	8.5	28.1	27.5	3.3	22.2	22.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	236	1489	462	275	1067	564	126	1140	509	230	563	555
V/C Ratio(X)	0.93	0.62	0.13	1.28	0.78	0.78	1.00	0.80	0.79	0.43	0.67	0.68
Avail Cap(c_a), veh/h	236	1489	462	275	1067	564	126	1140	509	230	563	555
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)	0.85	0.85	0.85	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	36.8	31.3	50.8	37.5	37.5	55.7	37.2	37.0	53.8	35.6	35.6
Incr Delay (d2), s/veh	35.8	1.7	0.5	150.3	5.8	10.4	66.1	4.1	8.3	5.9	6.3	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	8.0	1.4	19.7	11.9	13.3	6.1	12.7	11.7	1.6	10.6	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.4	38.4	31.8	201.0	43.2	47.9	121.9	41.3	45.3	59.7	41.9	42.1
LnGrp LOS	F	D	C	F	D	D	F	D	D	E	D	D
Approach Vol, veh/h		1205			1628			1436			854	
Approach Delay, s/veh		47.0			78.5			49.5			44.1	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	43.1	12.5	44.0	23.0	40.5	13.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	15.9	37.6	8.0	38.5	18.5	35.0	8.5	38.0				
Max Q Clear Time (g_c+I1), s	16.7	28.8	5.3	30.1	20.5	20.8	10.5	24.3				
Green Ext Time (p_c), s	0.0	6.6	0.0	3.6	0.0	8.0	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			57.2									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

Near Term 2026 w/out Project AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑		↖	↑↑		↖	↑↑	
Traffic Volume (veh/h)	73	703	119	185	902	79	124	693	101	100	1010	31
Future Volume (veh/h)	73	703	119	185	902	79	124	693	101	100	1010	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	764	129	191	930	81	135	753	110	112	1135	35
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	1453	243	151	1714	149	107	1027	150	89	1126	35
Arrive On Green	0.06	0.33	0.33	0.09	0.36	0.36	0.06	0.33	0.33	0.05	0.32	0.32
Sat Flow, veh/h	1781	4404	737	1781	4784	416	1781	3111	454	1781	3519	108
Grp Volume(v), veh/h	79	589	304	191	661	350	135	430	433	112	573	597
Grp Sat Flow(s),veh/h/ln	1781	1702	1738	1781	1702	1796	1781	1777	1789	1781	1777	1851
Q Serve(g_s), s	4.4	14.0	14.2	8.5	15.5	15.5	6.0	21.4	21.4	5.0	32.0	32.0
Cycle Q Clear(g_c), s	4.4	14.0	14.2	8.5	15.5	15.5	6.0	21.4	21.4	5.0	32.0	32.0
Prop In Lane	1.00		0.42	1.00		0.23	1.00		0.25	1.00		0.06
Lane Grp Cap(c), veh/h	101	1123	573	151	1220	643	107	586	590	89	569	592
V/C Ratio(X)	0.78	0.52	0.53	1.26	0.54	0.54	1.26	0.73	0.73	1.26	1.01	1.01
Avail Cap(c_a), veh/h	134	1123	573	151	1220	643	107	586	590	89	569	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	27.1	27.2	45.8	25.6	25.6	47.0	29.6	29.6	47.5	34.0	34.0
Incr Delay (d2), s/veh	13.9	1.8	3.5	159.9	1.7	3.3	173.6	7.9	7.9	179.6	39.7	39.0
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	2.3	5.9	6.3	10.5	6.4	7.1	7.8	10.2	10.3	6.6	19.6	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	28.9	30.7	205.6	27.3	28.9	220.6	37.5	37.5	227.1	73.7	73.0
LnGrp LOS	E	C	C	F	C	C	F	D	D	F	F	F
Approach Vol, veh/h		972			1202			998			1282	
Approach Delay, s/veh		32.0			56.1			62.3			86.7	
Approach LOS		C			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	41.8	9.0	39.0	13.0	39.0	10.0	38.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	7.5	34.0	5.0	33.0	8.5	33.0	6.0	32.0				
Max Q Clear Time (g_c+I1), s	6.4	17.5	7.0	23.4	10.5	16.2	8.0	34.0				
Green Ext Time (p_c), s	0.0	9.0	0.0	2.7	0.0	8.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			61.0									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
9: Firestone Blvd & Pioneer Blvd

Near Term 2026 w/out Project AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	345	44	56	317	40	49	836	55	67	628	173
Future Volume (veh/h)	213	345	44	56	317	40	49	836	55	67	628	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	222	359	46	59	334	42	59	1007	0	83	775	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	683	305	76	541	241	75	1758		84	1775	
Arrive On Green	0.08	0.19	0.19	0.04	0.15	0.15	0.04	0.49	0.00	0.05	0.50	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	222	359	46	59	334	42	59	1007	0	83	775	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.0	7.7	2.1	2.8	7.5	2.0	2.8	17.0	0.0	4.0	11.9	0.0
Cycle Q Clear(g_c), s	7.0	7.7	2.1	2.8	7.5	2.0	2.8	17.0	0.0	4.0	11.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	683	305	76	541	241	75	1758		84	1775	
V/C Ratio(X)	1.51	0.53	0.15	0.78	0.62	0.17	0.78	0.57		0.99	0.44	
Avail Cap(c_a), veh/h	147	1212	541	147	1212	541	84	1758		84	1775	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	39.0	30.8	28.6	40.3	33.7	31.4	40.3	15.1	0.0	40.5	13.6	0.0
Incr Delay (d2), s/veh	262.8	1.1	0.4	6.4	2.0	0.6	29.9	1.4	0.0	87.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	3.3	0.8	1.3	3.3	0.8	1.8	6.7	0.0	3.7	4.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	301.8	31.9	29.0	46.7	35.7	32.0	70.2	16.5	0.0	128.2	14.3	0.0
LnGrp LOS	F	C	C	D	D	C	E	B		F	B	
Approach Vol, veh/h		627			435			1066			858	
Approach Delay, s/veh		127.3			36.8			19.5			25.3	
Approach LOS		F			D			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	47.6	7.6	21.8	7.6	48.0	11.0	18.4				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	4.0	26.0	7.0	29.0	4.0	26.0	7.0	29.0				
Max Q Clear Time (g_c+I1), s	6.0	19.0	4.8	9.7	4.8	13.9	9.0	9.5				
Green Ext Time (p_c), s	0.0	5.4	0.0	3.7	0.0	7.0	0.0	3.5				

Intersection Summary






















HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

Near Term 2026 w/out Project AM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	3	0	0	405	0	69	0	818	626	92	525	1	
Future Volume (vph)	3	0	0	405	0	69	0	818	626	92	525	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected		0.95		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1770		1681	1681	1583		5085	1583	1770	5084		
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1863		1681	1681	1583		5085	1583	1770	5084		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	3	0	0	513	0	87	0	1076	824	105	597	1	
RTOR Reduction (vph)	0	0	0	0	0	62	0	0	216	0	0	0	
Lane Group Flow (vph)	0	3	0	256	257	25	0	1076	608	105	598	0	
Turn Type	Perm	NA		Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)		0.7		19.7	19.7	19.7		23.0	42.7	5.4	33.4		
Effective Green, g (s)		0.7		19.7	19.7	19.7		23.0	42.7	5.4	33.4		
Actuated g/C Ratio		0.01		0.28	0.28	0.28		0.33	0.61	0.08	0.48		
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)		18		474	474	446		1675	968	136	2432		
v/s Ratio Prot				0.15	0.15			c0.21	c0.18	c0.06	0.12		
v/s Ratio Perm		c0.00				0.02			0.21				
v/c Ratio		0.17		0.54	0.54	0.06		0.64	0.63	0.77	0.25		
Uniform Delay, d1		34.3		21.2	21.2	18.3		19.9	8.5	31.6	10.8		
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2		5.1		1.3	1.3	0.1		1.9	1.3	21.5	0.2		
Delay (s)		39.4		22.5	22.5	18.3		21.8	9.8	53.1	11.0		
Level of Service		D		C	C	B		C	A	D	B		
Approach Delay (s)		39.4			21.9			16.6			17.3		
Approach LOS		D			C			B			B		
Intersection Summary													
HCM 2000 Control Delay			17.8		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			69.8		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			59.7%		ICU Level of Service					B			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

Near Term 2026 w/out Project AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	10	91	34	19	7	157	954	6	5	666	189
Future Volume (veh/h)	305	10	91	34	19	7	157	954	6	5	666	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	372	12	111	52	29	11	191	1163	7	5	687	195
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	493	588	498	477	406	154	163	1894	11	5	1701	759
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.05	0.52	0.52	0.00	0.48	0.48
Sat Flow, veh/h	1367	1870	1585	1268	1292	490	3456	3621	22	1781	3554	1585
Grp Volume(v), veh/h	372	12	111	52	0	40	191	571	599	5	687	195
Grp Sat Flow(s),veh/h/ln	1367	1870	1585	1268	0	1782	1728	1777	1866	1781	1777	1585
Q Serve(g_s), s	22.3	0.4	4.4	2.5	0.0	1.3	4.0	19.2	19.2	0.2	10.6	6.2
Cycle Q Clear(g_c), s	23.6	0.4	4.4	2.9	0.0	1.3	4.0	19.2	19.2	0.2	10.6	6.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	493	588	498	477	0	560	163	929	976	5	1701	759
V/C Ratio(X)	0.76	0.02	0.22	0.11	0.00	0.07	1.17	0.61	0.61	0.96	0.40	0.26
Avail Cap(c_a), veh/h	708	882	748	676	0	839	163	929	976	42	1701	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.54	0.54	0.54
Uniform Delay (d), s/veh	28.7	20.1	21.5	21.1	0.0	20.5	40.5	14.2	14.2	42.4	14.3	13.2
Incr Delay (d2), s/veh	2.2	0.0	0.2	0.1	0.0	0.0	125.2	3.0	2.9	71.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.2	1.6	0.7	0.0	0.6	4.5	7.8	8.2	0.2	4.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	20.1	21.7	21.2	0.0	20.5	165.7	17.3	17.1	113.4	14.7	13.6
LnGrp LOS	C	C	C	C	A	C	F	B	B	F	B	B
Approach Vol, veh/h		495			92			1361				887
Approach Delay, s/veh		28.6			20.9			38.1				15.0
Approach LOS		C			C			D				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	49.4		31.3	8.0	45.7		31.3				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+I1), s	2.2	21.2		4.9	6.0	12.6		25.6				
Green Ext Time (p_c), s	0.0	3.5		0.3	0.0	3.2		1.1				

Intersection Summary

HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

Near Term 2026 w/out Project AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘		↗		↕	↗	↘↗	↕↕			↕↕↗	
Traffic Volume (veh/h)	82	0	101	130	86	567	97	857	0	3	900	56
Future Volume (veh/h)	82	0	101	130	86	567	97	857	0	3	900	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	92	0	113	143	95	623	123	1085	0	4	1084	67
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	0	0	0	309	709	449	295	3161	0	33	2339	144
Arrive On Green	0.00	0.00	0.00	0.28	0.28	0.28	0.09	0.62	0.00	0.49	0.49	0.49
Sat Flow, veh/h		0		1091	2502	1585	3456	5274	0	4	4762	293
Grp Volume(v), veh/h		0.0		238	0	623	123	1085	0	425	353	377
Grp Sat Flow(s),veh/h/ln				1816	1777	1585	1728	1702	0	1861	1549	1649
Q Serve(g_s), s				12.4	0.0	32.6	3.9	11.8	0.0	0.0	17.3	17.3
Cycle Q Clear(g_c), s				12.4	0.0	32.6	3.9	11.8	0.0	17.2	17.3	17.3
Prop In Lane				0.60		1.00	1.00		0.00	0.01		0.18
Lane Grp Cap(c), veh/h				515	504	449	295	3161	0	946	761	810
V/C Ratio(X)				0.46	0.00	1.39	0.42	0.34	0.00	0.45	0.46	0.47
Avail Cap(c_a), veh/h				515	504	449	300	3161	0	946	761	810
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.96	0.96	0.96
Uniform Delay (d), s/veh				34.0	0.0	41.2	49.9	10.6	0.0	19.3	19.3	19.3
Incr Delay (d2), s/veh				0.6	0.0	187.3	0.8	0.3	0.0	1.5	2.0	1.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.6	0.0	35.9	1.7	4.3	0.0	7.7	6.5	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.6	0.0	228.5	50.7	10.9	0.0	20.7	21.2	21.1
LnGrp LOS				C	A	F	D	B	A	C	C	C
Approach Vol, veh/h					861			1208			1155	
Approach Delay, s/veh					174.9			14.9			21.0	
Approach LOS					F			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.0			14.7	62.3		38.0				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		53.8			10.0	38.9		32.6				
Max Q Clear Time (g_c+I1), s		13.8			5.9	19.3		34.6				
Green Ext Time (p_c), s		18.5			0.1	12.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay											59.8	
HCM 6th LOS											E	

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp






























Near Term 2026 w/out Project AM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	228	90	0	0	0	0	877	223	243	873	0
Future Volume (veh/h)	51	228	90	0	0	0	0	877	223	243	873	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	57	256	101				0	1044	265	286	1027	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	225	449	200				0	2432	617	364	3859	0
Arrive On Green	0.13	0.13	0.13				0.00	0.60	0.60	0.11	0.76	0.00
Sat Flow, veh/h	1781	3554	1585				0	4228	1030	3456	5274	0
Grp Volume(v), veh/h	57	256	101				0	875	434	286	1027	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1685	1728	1702	0
Q Serve(g_s), s	2.7	6.4	5.6				0.0	13.2	13.2	7.7	5.8	0.0
Cycle Q Clear(g_c), s	2.7	6.4	5.6				0.0	13.2	13.2	7.7	5.8	0.0
Prop In Lane	1.00		1.00				0.00		0.61	1.00		0.00
Lane Grp Cap(c), veh/h	225	449	200				0	2039	1009	364	3859	0
V/C Ratio(X)	0.25	0.57	0.50				0.00	0.43	0.43	0.79	0.27	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	2039	1009	367	3859	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	1.00	1.00	0.75	0.75	0.00
Uniform Delay (d), s/veh	37.5	39.1	38.7				0.0	10.3	10.3	41.5	3.5	0.0
Incr Delay (d2), s/veh	0.6	1.1	2.0				0.0	0.7	1.3	8.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	2.3				0.0	4.7	4.9	3.6	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	40.2	40.7				0.0	10.9	11.6	49.7	3.7	0.0
LnGrp LOS	D	D	D				A	B	B	D	A	A
Approach Vol, veh/h		414						1309			1313	
Approach Delay, s/veh		40.0						11.2			13.7	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.9	62.7		17.4				77.6				
Change Period (Y+Rc), s	4.9	5.8		5.4				5.8				
Max Green Setting (Gmax), s	10.1	26.8		42.0				41.8				
Max Q Clear Time (g_c+I1), s	9.7	15.2		8.4				7.8				
Green Ext Time (p_c), s	0.0	9.1		2.2				16.0				
Intersection Summary												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

Near Term 2026 w/out Project AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			  	
Traffic Volume (veh/h)	213	344	43	57	315	46	49	847	57	73	632	173
Future Volume (veh/h)	213	344	43	57	315	46	49	847	57	73	632	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	374	47	63	346	51	57	985	66	87	752	206
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1247	556	95	1177	525	120	1098	490	111	1215	329
Arrive On Green	0.07	0.35	0.35	0.05	0.33	0.33	0.07	0.31	0.31	0.06	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3996	1083
Grp Volume(v), veh/h	232	374	47	63	346	51	57	985	66	87	639	319
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1675
Q Serve(g_s), s	6.5	6.8	1.8	3.1	6.4	2.0	2.7	23.6	2.7	4.3	14.3	14.6
Cycle Q Clear(g_c), s	6.5	6.8	1.8	3.1	6.4	2.0	2.7	23.6	2.7	4.3	14.3	14.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	130	1247	556	95	1177	525	120	1098	490	111	1035	509
V/C Ratio(X)	1.78	0.30	0.08	0.66	0.29	0.10	0.48	0.90	0.13	0.78	0.62	0.63
Avail Cap(c_a), veh/h	130	1247	556	120	1177	525	120	1117	498	120	1070	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	21.0	19.3	41.4	22.1	20.6	40.0	29.4	22.2	41.2	26.6	26.6
Incr Delay (d2), s/veh	382.3	0.6	0.3	4.6	0.6	0.4	1.1	10.2	0.3	23.3	1.6	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	2.9	0.7	1.5	2.7	0.8	1.2	11.2	1.0	2.6	5.9	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	423.5	21.6	19.6	46.0	22.7	21.0	41.1	39.7	22.5	64.4	28.2	30.0
LnGrp LOS	F	C	B	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		653			460			1108			1045	
Approach Delay, s/veh		164.3			25.7			38.7			31.7	
Approach LOS		F			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	36.8	10.1	33.0	11.0	35.0	10.5	32.6				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.0	30.0	6.0	28.0	6.5	29.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s	5.1	8.8	6.3	25.6	8.5	8.4	4.7	16.6				
Green Ext Time (p_c), s	0.0	4.6	0.0	1.9	0.0	4.3	0.0	7.2				
Intersection Summary												
HCM 6th Ctrl Delay				59.7								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
15: Bloomfield Ave & Rosecrans Ave













Near Term 2026 w/out Project AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	640	73	245	678	348	39	617	251	284	579	108
Future Volume (veh/h)	70	640	73	245	678	348	39	617	251	284	579	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	727	83	275	762	391	44	693	282	302	616	115
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	945	421	329	1039	815	98	1049	468	365	1229	548
Arrive On Green	0.07	0.27	0.27	0.10	0.29	0.29	0.06	0.30	0.30	0.11	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	80	727	83	275	762	391	44	693	282	302	616	115
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.6	19.8	4.3	8.2	20.3	12.1	2.5	17.9	16.0	9.0	14.4	5.4
Cycle Q Clear(g_c), s	4.6	19.8	4.3	8.2	20.3	12.1	2.5	17.9	16.0	9.0	14.4	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	945	421	329	1039	815	98	1049	468	365	1229	548
V/C Ratio(X)	0.65	0.77	0.20	0.84	0.73	0.48	0.45	0.66	0.60	0.83	0.50	0.21
Avail Cap(c_a), veh/h	136	945	421	329	1039	815	136	1049	468	395	1229	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	35.6	29.9	46.7	33.5	30.6	48.1	32.4	31.7	46.0	27.2	24.2
Incr Delay (d2), s/veh	8.1	6.0	1.0	15.5	4.3	1.9	2.4	3.3	5.7	12.4	1.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	9.3	1.7	4.2	9.2	4.2	1.2	8.1	6.8	4.5	6.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	41.6	30.9	62.2	37.8	32.5	50.4	35.7	37.4	58.4	28.6	25.1
LnGrp LOS	E	D	C	E	D	C	D	D	D	E	C	C
Approach Vol, veh/h		890			1428			1019			1033	
Approach Delay, s/veh		41.9			41.0			36.8			36.9	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	34.4	11.8	42.8	13.2	37.2	17.1	37.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	10.0	27.0	8.0	35.0	8.0	29.0	12.0	31.0				
Max Q Clear Time (g_c+I1), s	10.2	21.8	4.5	16.4	6.6	22.3	11.0	19.9				
Green Ext Time (p_c), s	0.0	3.3	0.0	7.7	0.0	5.0	0.1	6.7				
Intersection Summary												
HCM 6th Ctrl Delay				39.2								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

Near Term 2026 w/out Project AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	831	378	73	1078	0	0	0	0	387	1	203
Future Volume (veh/h)	0	831	378	73	1078	0	0	0	0	387	1	203
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1001	455	83	1225	0				473	0	248
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1768	789	187	3378	0				712	0	317
Arrive On Green	0.00	0.50	0.50	0.11	0.66	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1001	455	83	1225	0				473	0	248
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	15.8	16.2	3.5	8.5	0.0				9.8	0.0	11.9
Cycle Q Clear(g_c), s	0.0	15.8	16.2	3.5	8.5	0.0				9.8	0.0	11.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1768	789	187	3378	0				712	0	317
V/C Ratio(X)	0.00	0.57	0.58	0.44	0.36	0.00				0.66	0.00	0.78
Avail Cap(c_a), veh/h	0	1768	789	229	3378	0				882	0	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.62	0.62	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.1	14.2	33.6	6.0	0.0				29.5	0.0	30.4
Incr Delay (d2), s/veh	0.0	0.8	1.9	1.1	0.1	0.0				1.8	0.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.0	5.7	1.5	2.5	0.0				4.2	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.9	16.1	34.7	6.1	0.0				31.3	0.0	39.6
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1456			1308						721	
Approach Delay, s/veh		15.3			7.9						34.2	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.1	45.5		21.4		58.6						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	34.1		19.8		49.1						
Max Q Clear Time (g_c+I1), s	5.5	18.2		13.9		10.5						
Green Ext Time (p_c), s	0.0	9.3		2.1		14.0						
Intersection Summary												
HCM 6th Ctrl Delay				16.4								
HCM 6th LOS				B								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

Near Term 2026 w/out Project AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑			↑↑↑	↗	↗	↗	↗			
Traffic Volume (veh/h)	212	1068	0	0	893	503	235	1	38	0	0	0
Future Volume (veh/h)	212	1068	0	0	893	503	235	1	38	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	230	1161	0	0	930	524	298	0	48			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2643	0	0	2964	920	473	0	211			
Arrive On Green	0.11	0.74	0.00	0.00	0.58	0.58	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	230	1161	0	0	930	524	298	0	48			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	11.2	0.0	0.0	8.4	18.6	7.1	0.0	2.4			
Cycle Q Clear(g_c), s	10.0	11.2	0.0	0.0	8.4	18.6	7.1	0.0	2.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2643	0	0	2964	920	473	0	211			
V/C Ratio(X)	1.16	0.44	0.00	0.00	0.31	0.57	0.63	0.00	0.23			
Avail Cap(c_a), veh/h	198	2643	0	0	2964	920	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	4.4	0.0	0.0	9.7	11.8	36.9	0.0	34.9			
Incr Delay (d2), s/veh	107.5	0.4	0.0	0.0	0.3	2.6	2.9	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.2	3.2	0.0	0.0	3.0	6.6	3.2	0.0	1.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.5	4.8	0.0	0.0	10.0	14.4	39.9	0.0	36.1			
LnGrp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		1391			1454			346				
Approach Delay, s/veh		28.4			11.6			39.3				
Approach LOS		C			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.6			14.7	57.9		17.4				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		13.2			12.0	20.6		9.1				
Green Ext Time (p_c), s		12.1			0.0	4.6		2.8				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave
































Near Term 2026 w/out Project AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	630	65	78	675	47	77	855	122	38	995	415
Future Volume (veh/h)	312	630	65	78	675	47	77	855	122	38	995	415
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	363	733	76	86	742	52	82	910	130	44	1144	477
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	1066	110	110	1591	111	103	1291	576	56	1196	634
Arrive On Green	0.06	0.33	0.33	0.06	0.33	0.33	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	3456	3250	337	1781	4873	340	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	363	401	408	86	517	277	82	910	130	44	1144	477
Grp Sat Flow(s),veh/h/ln	1728	1777	1810	1781	1702	1809	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.0	18.6	18.6	4.5	11.5	11.6	4.3	20.8	5.4	2.3	29.9	24.5
Cycle Q Clear(g_c), s	6.0	18.6	18.6	4.5	11.5	11.6	4.3	20.8	5.4	2.3	29.9	24.5
Prop In Lane	1.00		0.19	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	583	594	110	1112	591	103	1291	576	56	1196	634
V/C Ratio(X)	1.66	0.69	0.69	0.78	0.47	0.47	0.80	0.71	0.23	0.79	0.96	0.75
Avail Cap(c_a), veh/h	218	583	594	137	1112	591	103	1291	576	103	1197	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	27.7	27.7	44.0	25.4	25.4	44.2	25.9	21.0	45.7	30.8	24.5
Incr Delay (d2), s/veh	317.9	6.5	6.4	16.1	1.4	2.7	31.5	1.5	0.1	8.8	16.5	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	8.7	8.9	2.5	4.8	5.3	2.8	8.8	2.0	1.2	15.1	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	362.4	34.2	34.1	60.1	26.8	28.1	75.7	27.4	21.1	54.5	47.3	29.0
LnGrp LOS	F	C	C	E	C	C	E	C	C	D	D	C
Approach Vol, veh/h		1172			880			1122			1665	
Approach Delay, s/veh		135.8			30.5			30.2			42.2	
Approach LOS		F			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	37.2	9.5	37.5	11.0	37.0	7.0	40.0				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	7.3	29.7	5.5	32.0	6.0	31.0	5.5	32.0				
Max Q Clear Time (g_c+I1), s	6.5	20.6	6.3	31.9	8.0	13.6	4.3	22.8				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.1	0.0	3.3	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay			60.0									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

Near Term 2026 w/out Project PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		 	 	
Traffic Volume (veh/h)	94	1244	290	196	1138	130	41	431	260	154	446	508
Future Volume (veh/h)	94	1244	290	196	1138	130	41	431	260	154	446	508
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	1447	337	223	1293	148	45	468	283	186	537	612
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	2042	634	203	2042	634	303	1421	634	747	1421	634
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	370	5106	1585	266	5106	1585	489	3554	1585	1380	3554	1585
Grp Volume(v), veh/h	109	1447	337	223	1293	148	45	468	283	186	537	612
Grp Sat Flow(s),veh/h/ln	370	1702	1585	266	1702	1585	489	1777	1585	690	1777	1585
Q Serve(g_s), s	8.8	10.7	7.3	7.3	9.2	2.8	3.2	4.1	5.9	4.8	4.8	17.0
Cycle Q Clear(g_c), s	18.0	10.7	7.3	18.0	9.2	2.8	8.0	4.1	5.9	8.9	4.8	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	2042	634	203	2042	634	303	1421	634	747	1421	634
V/C Ratio(X)	0.47	0.71	0.53	1.10	0.63	0.23	0.15	0.33	0.45	0.25	0.38	0.97
Avail Cap(c_a), veh/h	233	2042	634	203	2042	634	303	1421	634	747	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	11.3	10.3	21.7	10.8	8.9	12.4	9.3	9.9	12.4	9.5	13.2
Incr Delay (d2), s/veh	1.5	1.2	0.9	91.5	0.6	0.2	0.2	0.1	0.5	0.2	0.2	27.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.3	2.1	7.1	2.8	0.8	0.3	1.3	1.7	0.6	1.5	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	12.5	11.1	113.2	11.5	9.1	12.6	9.5	10.4	12.6	9.7	40.4
LnGrp LOS	C	B	B	F	B	A	B	A	B	B	A	D
Approach Vol, veh/h		1893			1664			796			1335	
Approach Delay, s/veh		12.7			24.9			10.0			24.2	
Approach LOS		B			C			A			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		10.0		20.0		19.0		20.0				
Green Ext Time (p_c), s		2.9		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				18.6								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↖↑	↗
Traffic Volume (veh/h)	0	1405	207	12	1296	0	0	0	0	300	150	143
Future Volume (veh/h)	0	1405	207	12	1296	0	0	0	0	300	150	143
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1597	235	14	1490	0				353	176	168
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2580	801	415	3527	0				570	299	254
Arrive On Green	0.00	0.51	0.51	0.12	0.69	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1597	235	14	1490	0				353	176	168
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	16.9	6.5	0.3	9.6	0.0				6.9	6.5	7.5
Cycle Q Clear(g_c), s	0.0	16.9	6.5	0.3	9.6	0.0				6.9	6.5	7.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2580	801	415	3527	0				570	299	254
V/C Ratio(X)	0.00	0.62	0.29	0.03	0.42	0.00				0.62	0.59	0.66
Avail Cap(c_a), veh/h	0	2580	801	415	3527	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.74	0.74	0.94	0.94	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	13.4	10.8	29.2	5.1	0.0				29.4	29.2	29.6
Incr Delay (d2), s/veh	0.0	0.8	0.7	0.0	0.2	0.0				1.9	3.1	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	2.2	0.1	2.5	0.0				3.0	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.2	11.5	29.2	5.2	0.0				31.3	32.3	34.8
LnGrp LOS	A	B	B	C	A	A				C	C	C
Approach Vol, veh/h		1832			1504							697
Approach Delay, s/veh		13.8			5.5							32.4
Approach LOS		B			A							C
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.9	43.7		17.4		57.6						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	2.3	18.9		9.5		11.6						
Green Ext Time (p_c), s	0.0	13.6		2.5		25.0						

Intersection Summary

HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑		↖	↑↑↑	↗		↖↑	↗			
Traffic Volume (veh/h)	126	1496	107	0	1155	671	126	137	11	0	0	0
Future Volume (veh/h)	126	1496	107	0	1155	671	126	137	11	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	145	1720	123	0	1359	789	140	152	12			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	438	3745	267	2	2950	916	285	284	253			
Arrive On Green	0.08	0.52	0.52	0.00	0.58	0.58	0.16	0.16	0.16			
Sat Flow, veh/h	3456	4865	347	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	145	1203	640	0	1359	789	140	152	12			
Grp Sat Flow(s),veh/h/ln	1728	1702	1808	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	3.0	16.8	16.9	0.0	11.5	31.4	5.4	5.9	0.5			
Cycle Q Clear(g_c), s	3.0	16.8	16.9	0.0	11.5	31.4	5.4	5.9	0.5			
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	438	2621	1392	2	2950	916	285	284	253			
V/C Ratio(X)	0.33	0.46	0.46	0.00	0.46	0.86	0.49	0.54	0.05			
Avail Cap(c_a), veh/h	465	2621	1392	238	2950	916	285	284	254			
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.85	0.85	0.85	0.00	0.23	0.23	1.00	1.00	1.00			
Uniform Delay (d), s/veh	31.3	8.2	8.3	0.0	9.1	13.3	28.7	29.0	26.7			
Incr Delay (d2), s/veh	0.4	0.5	0.9	0.0	0.0	2.1	1.6	2.3	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	6.6	7.2	0.0	3.7	9.8	2.3	2.6	0.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	8.7	9.2	0.0	9.1	15.4	30.3	31.2	26.8			
LnGrp LOS	C	A	A	A	A	B	C	C	C			
Approach Vol, veh/h		1988			2148			304				
Approach Delay, s/veh		10.6			11.5			30.6				
Approach LOS		B			B			C				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	0.0	63.5			14.4	49.1		17.4				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.0	36.9			10.1	* 38		12.0				
Max Q Clear Time (g_c+I1), s	0.0	18.9			5.0	33.4		7.9				
Green Ext Time (p_c), s	0.0	16.0			0.2	4.0		0.7				

Intersection Summary

HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

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

HCM Signalized Intersection Capacity Analysis
4: Norwalk Blvd & Imperial Hwy

Near Term 2026 w/out Project PM
01/03/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	1028	71	146	1416	69	208	564	134	138	802	216
Future Volume (vph)	147	1028	71	146	1416	69	208	564	134	138	802	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	169	1182	82	168	1628	79	224	606	144	148	862	232
RTOR Reduction (vph)	0	0	60	0	0	54	0	0	76	0	0	144
Lane Group Flow (vph)	169	1182	22	168	1628	25	224	606	68	148	862	88
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8	6	7	4	
Permitted Phases			5			2			8			4
Actuated Green, G (s)	14.0	34.1	34.1	19.9	40.0	40.0	15.0	35.0	54.9	11.0	31.0	31.0
Effective Green, g (s)	14.0	34.1	34.1	19.9	40.0	40.0	15.0	35.0	54.9	11.0	31.0	31.0
Actuated g/C Ratio	0.11	0.27	0.27	0.16	0.32	0.32	0.12	0.28	0.44	0.09	0.25	0.25
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	198	1387	431	281	1627	506	212	990	695	155	1261	392
v/s Ratio Prot	0.10	c0.23		0.09	c0.32		c0.13	c0.17	0.02	0.08	c0.17	
v/s Ratio Perm			0.01			0.02			0.03			0.06
v/c Ratio	0.85	0.85	0.05	0.60	1.00	0.05	1.06	0.61	0.10	0.95	0.68	0.22
Uniform Delay, d1	54.5	43.1	33.5	48.8	42.5	29.4	55.0	39.1	20.5	56.8	42.6	37.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.3	5.7	0.1	9.1	22.5	0.2	77.5	1.5	0.1	58.0	1.8	0.5
Delay (s)	81.8	48.7	33.6	57.9	65.0	29.6	132.5	40.6	20.6	114.7	44.4	37.9
Level of Service	F	D	C	E	E	C	F	D	C	F	D	D
Approach Delay (s)		51.8			62.8			58.8			51.6	
Approach LOS		D			E			E			D	
Intersection Summary												
HCM 2000 Control Delay			56.7				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			125.0				Sum of lost time (s)				25.0	
Intersection Capacity Utilization			83.5%				ICU Level of Service				E	
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

Near Term 2026 w/out Project PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	1289	82	44	1447	81	157	7	51	50	13	38
Future Volume (veh/h)	63	1289	82	44	1447	81	157	7	51	50	13	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	1465	93	49	1608	90	224	10	73	71	19	54
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	2751	854	62	2663	827	244	16	120	229	31	88
Arrive On Green	0.05	0.54	0.54	0.03	0.52	0.52	0.06	0.08	0.08	0.05	0.07	0.07
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	195	1420	1781	430	1221
Grp Volume(v), veh/h	72	1465	93	49	1608	90	224	0	83	71	0	73
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1615	1781	0	1651
Q Serve(g_s), s	3.0	13.9	2.2	2.0	16.5	2.2	4.6	0.0	3.7	2.7	0.0	3.2
Cycle Q Clear(g_c), s	3.0	13.9	2.2	2.0	16.5	2.2	4.6	0.0	3.7	2.7	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.74
Lane Grp Cap(c), veh/h	92	2751	854	62	2663	827	244	0	137	229	0	119
V/C Ratio(X)	0.78	0.53	0.11	0.80	0.60	0.11	0.92	0.00	0.61	0.31	0.00	0.61
Avail Cap(c_a), veh/h	107	2751	854	107	2663	827	244	0	388	251	0	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.50	0.50	0.50	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	11.2	8.5	35.9	12.5	9.1	33.6	0.0	33.1	30.2	0.0	33.8
Incr Delay (d2), s/veh	12.4	0.4	0.1	7.4	0.9	0.2	36.5	0.0	4.3	0.8	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.7	0.7	1.0	5.8	0.7	4.2	0.0	1.6	1.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	11.6	8.6	43.3	13.4	9.3	70.0	0.0	37.4	31.0	0.0	38.9
LnGrp LOS	D	B	A	D	B	A	E	A	D	C	A	D
Approach Vol, veh/h		1630			1747			307				144
Approach Delay, s/veh		13.0			14.0			61.2				35.0
Approach LOS		B			B			E				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	46.9	9.6	10.9	8.9	45.6	8.7	11.8				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	25.9	4.6	18.0	4.5	25.9	4.6	18.0				
Max Q Clear Time (g_c+I1), s	4.0	15.9	6.6	5.2	5.0	18.5	4.7	5.7				
Green Ext Time (p_c), s	0.0	8.3	0.0	0.2	0.0	6.6	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				18.2								
HCM 6th LOS				B								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

Near Term 2026 w/out Project PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↘	↘
Traffic Volume (vph)	27	1262	33	47	1372	94	115	48	57	38	14	20
Future Volume (vph)	27	1262	33	47	1372	94	115	48	57	38	14	20
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	5066		1770	5036		1770	1711			1797	1583
Flt Permitted	0.12	1.00		0.13	1.00		0.95	1.00			0.96	1.00
Satd. Flow (perm)	216	5066		246	5036		1770	1711			1797	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	30	1402	37	51	1491	102	167	70	83	43	16	22
RTOR Reduction (vph)	0	3	0	0	8	0	0	67	0	0	0	21
Lane Group Flow (vph)	30	1436	0	51	1585	0	167	86	0	0	59	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	34.5	34.5		34.5	34.5		13.8	13.8			4.2	4.2
Effective Green, g (s)	34.5	34.5		34.5	34.5		13.8	13.8			4.2	4.2
Actuated g/C Ratio	0.49	0.49		0.49	0.49		0.20	0.20			0.06	0.06
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	106	2496		121	2482		348	337			107	94
v/s Ratio Prot		0.28			c0.31		c0.09	0.05			c0.03	
v/s Ratio Perm	0.14			0.21								0.00
v/c Ratio	0.28	0.58		0.42	0.64		0.48	0.26			0.55	0.01
Uniform Delay, d1	10.5	12.6		11.4	13.1		24.9	23.8			32.0	31.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.5	0.5		10.4	1.3		1.0	0.4			6.0	0.1
Delay (s)	13.0	13.0		21.8	14.4		26.0	24.2			38.0	31.0
Level of Service	B	B		C	B		C	C			D	C
Approach Delay (s)		13.0			14.6			25.1			36.1	
Approach LOS		B			B			C			D	

Intersection Summary

HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

Near Term 2026 w/out Project PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	1061	66	279	1089	52	153	569	406	147	781	212
Future Volume (veh/h)	193	1061	66	279	1089	52	153	569	406	147	781	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1117	69	313	1224	58	176	654	467	163	868	236
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1489	462	245	1528	72	156	1155	515	274	875	238
Arrive On Green	0.12	0.29	0.29	0.14	0.31	0.31	0.09	0.32	0.32	0.08	0.32	0.32
Sat Flow, veh/h	1781	5106	1585	1781	4995	237	1781	3554	1585	3456	2762	750
Grp Volume(v), veh/h	203	1117	69	313	834	448	176	654	467	163	558	546
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1828	1781	1777	1585	1728	1777	1735
Q Serve(g_s), s	13.5	23.8	3.9	16.5	27.0	27.0	10.5	18.3	33.8	5.5	37.6	37.6
Cycle Q Clear(g_c), s	13.5	23.8	3.9	16.5	27.0	27.0	10.5	18.3	33.8	5.5	37.6	37.6
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	220	1489	462	245	1041	559	156	1155	515	274	563	550
V/C Ratio(X)	0.92	0.75	0.15	1.28	0.80	0.80	1.13	0.57	0.91	0.60	0.99	0.99
Avail Cap(c_a), veh/h	220	1489	462	245	1041	559	156	1155	515	274	563	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.82	0.82	0.82	1.00	1.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	38.5	31.5	51.7	38.3	38.3	54.8	33.5	38.8	53.4	40.8	40.9
Incr Delay (d2), s/veh	34.8	2.9	0.6	152.7	6.5	11.5	102.3	1.6	18.2	9.2	36.0	36.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	10.3	1.6	17.7	12.1	13.8	9.1	8.1	15.6	2.7	21.8	21.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.9	41.4	32.0	204.5	44.8	49.8	157.1	35.1	57.0	62.6	76.9	77.7
LnGrp LOS	F	D	C	F	D	D	F	D	E	E	E	E
Approach Vol, veh/h		1389			1595			1297			1267	
Approach Delay, s/veh		47.6			77.5			59.5			75.4	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.3	42.2	14.0	44.5	21.0	40.5	15.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	14.8	36.7	9.5	39.0	16.5	35.0	10.5	38.0				
Max Q Clear Time (g_c+I1), s	15.5	29.0	7.5	35.8	18.5	25.8	12.5	39.6				
Green Ext Time (p_c), s	0.0	5.9	0.0	1.4	0.0	6.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay											65.3	
HCM 6th LOS											E	

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

Near Term 2026 w/out Project PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (veh/h)	122	829	106	154	698	91	133	1025	134	99	934	44
Future Volume (veh/h)	122	829	106	154	698	91	133	1025	134	99	934	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	901	115	159	720	94	145	1114	146	111	1049	49
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	1422	181	169	1510	195	125	1043	136	107	1106	52
Arrive On Green	0.08	0.31	0.31	0.09	0.33	0.33	0.07	0.33	0.33	0.06	0.32	0.32
Sat Flow, veh/h	1781	4586	583	1781	4575	592	1781	3160	413	1781	3457	161
Grp Volume(v), veh/h	133	668	348	159	534	280	145	626	634	111	539	559
Grp Sat Flow(s),veh/h/ln	1781	1702	1765	1781	1702	1764	1781	1777	1796	1781	1777	1841
Q Serve(g_s), s	7.5	16.8	17.0	8.9	12.5	12.6	7.0	33.0	33.0	6.0	29.6	29.6
Cycle Q Clear(g_c), s	7.5	16.8	17.0	8.9	12.5	12.6	7.0	33.0	33.0	6.0	29.6	29.6
Prop In Lane	1.00		0.33	1.00		0.34	1.00		0.23	1.00		0.09
Lane Grp Cap(c), veh/h	134	1055	547	169	1123	582	125	586	593	107	569	589
V/C Ratio(X)	1.00	0.63	0.64	0.94	0.48	0.48	1.16	1.07	1.07	1.04	0.95	0.95
Avail Cap(c_a), veh/h	134	1055	547	169	1123	582	125	586	593	107	569	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	29.6	29.7	45.0	26.6	26.7	46.5	33.5	33.5	47.0	33.2	33.2
Incr Delay (d2), s/veh	76.4	2.9	5.6	51.1	1.4	2.8	131.0	56.3	57.3	97.8	26.9	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	7.2	7.9	6.3	5.2	5.7	7.6	22.9	23.3	5.5	16.6	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.6	32.5	35.2	96.0	28.1	29.5	177.5	89.8	90.8	144.8	60.1	59.5
LnGrp LOS	F	C	D	F	C	C	F	F	F	F	E	E
Approach Vol, veh/h		1149			973			1405			1209	
Approach Delay, s/veh		43.8			39.6			99.3			67.6	
Approach LOS		D			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	39.0	10.0	39.0	14.0	37.0	11.0	38.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	7.5	33.0	6.0	33.0	9.5	31.0	7.0	32.0				
Max Q Clear Time (g_c+I1), s	9.5	14.6	8.0	35.0	10.9	19.0	9.0	31.6				
Green Ext Time (p_c), s	0.0	7.8	0.0	0.0	0.0	7.3	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			65.5									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
9: Firestone Blvd & Pioneer Blvd

Near Term 2026 w/out Project PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	361	55	36	364	65	76	750	41	62	909	191
Future Volume (veh/h)	216	361	55	36	364	65	76	750	41	62	909	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	225	376	57	38	383	68	92	904	0	77	1122	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	935	417	48	582	259	94	1616		99	1625	
Arrive On Green	0.13	0.26	0.26	0.03	0.16	0.16	0.05	0.45	0.00	0.06	0.46	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	225	376	57	38	383	68	92	904	0	77	1122	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	8.3	2.6	2.0	9.6	3.6	4.9	17.7	0.0	4.1	23.8	0.0
Cycle Q Clear(g_c), s	12.0	8.3	2.6	2.0	9.6	3.6	4.9	17.7	0.0	4.1	23.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	935	417	48	582	259	94	1616		99	1625	
V/C Ratio(X)	1.00	0.40	0.14	0.80	0.66	0.26	0.98	0.56		0.78	0.69	
Avail Cap(c_a), veh/h	225	1309	584	113	1085	484	94	1616		113	1625	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.77	0.77	0.00
Uniform Delay (d), s/veh	41.5	28.8	26.7	46.0	37.2	34.7	45.0	18.9	0.0	44.3	20.4	0.0
Incr Delay (d2), s/veh	60.0	0.5	0.3	10.6	2.2	0.9	86.4	1.4	0.0	17.8	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	3.5	1.0	1.0	4.3	1.4	4.4	7.3	0.0	2.3	9.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.5	29.3	27.0	56.6	39.4	35.6	131.3	20.4	0.0	62.1	22.3	0.0
LnGrp LOS	F	C	C	E	D	D	F	C		E	C	
Approach Vol, veh/h		658			489			996			1199	
Approach Delay, s/veh		53.8			40.2			30.6			24.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	48.7	6.5	30.5	9.0	49.0	16.0	21.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	6.0	29.0	6.0	35.0	5.0	30.0	12.0	29.0				
Max Q Clear Time (g_c+I1), s	6.1	19.7	4.0	10.3	6.9	25.8	14.0	11.6				
Green Ext Time (p_c), s	0.0	6.4	0.0	4.4	0.0	3.5	0.0	3.9				

Intersection Summary






















HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

Near Term 2026 w/out Project PM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	2	0	1	550	0	128	0	745	427	143	902	0	
Future Volume (vph)	2	0	1	550	0	128	0	745	427	143	902	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt		0.95		1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected		0.97		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1722		1681	1681	1583		5085	1583	1770	5085		
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1779		1681	1681	1583		5085	1583	1770	5085		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	2	0	1	696	0	162	0	980	562	162	1025	0	
RTOR Reduction (vph)	0	3	0	0	0	114	0	0	202	0	0	0	
Lane Group Flow (vph)	0	0	0	348	348	48	0	980	360	163	1025	0	
Turn Type	Perm	NA		Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)		0.7		20.4	20.4	20.4		18.7	39.1	8.6	32.3		
Effective Green, g (s)		0.7		20.4	20.4	20.4		18.7	39.1	8.6	32.3		
Actuated g/C Ratio		0.01		0.29	0.29	0.29		0.27	0.56	0.12	0.47		
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)		17		494	494	465		1370	891	219	2366		
v/s Ratio Prot				c0.21	0.21			c0.19	0.12	c0.09	0.20		
v/s Ratio Perm		c0.00				0.03			0.11				
v/c Ratio		0.00		0.70	0.70	0.10		0.72	0.40	0.74	0.43		
Uniform Delay, d1		34.0		21.8	21.8	17.8		22.9	8.6	29.3	12.4		
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.0		4.5	4.5	0.1		3.2	0.3	11.3	0.6		
Delay (s)		34.1		26.4	26.4	17.9		26.2	8.9	40.7	13.0		
Level of Service		C		C	C	B		C	A	D	B		
Approach Delay (s)		34.1			24.8			19.9			16.8		
Approach LOS		C			C			B			B		
Intersection Summary													
HCM 2000 Control Delay			20.0		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.71										
Actuated Cycle Length (s)			69.4		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			56.4%		ICU Level of Service					B			
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	15	137	8	9	5	93	825	13	11	915	211
Future Volume (veh/h)	292	15	137	8	9	5	93	825	13	11	915	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	356	18	167	12	14	8	113	1006	16	11	943	218
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	480	549	465	428	328	187	163	1933	31	12	1776	792
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.05	0.54	0.54	0.01	0.50	0.50
Sat Flow, veh/h	1390	1870	1585	1199	1117	638	3456	3580	57	1781	3554	1585
Grp Volume(v), veh/h	356	18	167	12	0	22	113	499	523	11	943	218
Grp Sat Flow(s),veh/h/ln	1390	1870	1585	1199	0	1755	1728	1777	1860	1781	1777	1585
Q Serve(g_s), s	21.0	0.6	7.1	0.6	0.0	0.8	2.7	15.3	15.3	0.5	15.4	6.8
Cycle Q Clear(g_c), s	21.7	0.6	7.1	1.2	0.0	0.8	2.7	15.3	15.3	0.5	15.4	6.8
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	480	549	465	428	0	515	163	959	1004	12	1776	792
V/C Ratio(X)	0.74	0.03	0.36	0.03	0.00	0.04	0.69	0.52	0.52	0.91	0.53	0.28
Avail Cap(c_a), veh/h	728	882	748	641	0	826	163	959	1004	42	1776	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.38	0.38	0.38
Uniform Delay (d), s/veh	29.3	21.4	23.7	21.9	0.0	21.5	39.9	12.5	12.5	42.2	14.5	12.3
Incr Delay (d2), s/veh	1.7	0.0	0.3	0.0	0.0	0.0	10.3	2.0	1.9	27.2	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.3	2.6	0.2	0.0	0.3	1.4	6.1	6.3	0.3	5.8	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	21.5	24.1	21.9	0.0	21.5	50.2	14.5	14.4	69.3	14.9	12.7
LnGrp LOS	C	C	C	C	A	C	D	B	B	E	B	B
Approach Vol, veh/h		541			34			1135			1172	
Approach Delay, s/veh		28.5			21.6			18.0			15.0	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	50.9		29.5	8.0	47.5		29.5				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+I1), s	2.5	17.3		3.2	4.7	17.4		23.7				
Green Ext Time (p_c), s	0.0	3.7		0.1	0.0	3.8		1.2				

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖		↗		↕	↗	↖↗	↕↕			↕↕↗	
Traffic Volume (veh/h)	97	0	70	133	104	330	111	834	0	5	1358	113
Future Volume (veh/h)	97	0	70	133	104	330	111	834	0	5	1358	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	109	0	79	146	114	363	141	1056	0	6	1636	136
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	0	0	0	264	264	235	355	3746	0	41	2695	223
Arrive On Green	0.00	0.00	0.00	0.15	0.15	0.15	0.10	0.73	0.00	0.58	0.58	0.58
Sat Flow, veh/h		0		1781	1777	1585	3456	5274	0	4	4652	385
Grp Volume(v), veh/h		0.0		146	114	363	141	1056	0	656	546	576
Grp Sat Flow(s),veh/h/ln				1781	1777	1585	1728	1702	0	1860	1549	1633
Q Serve(g_s), s				7.2	5.5	14.1	3.6	6.6	0.0	0.0	21.7	21.8
Cycle Q Clear(g_c), s				7.2	5.5	14.1	3.6	6.6	0.0	21.6	21.7	21.8
Prop In Lane				1.00		1.00	1.00		0.00	0.01		0.24
Lane Grp Cap(c), veh/h				264	264	235	355	3746	0	1116	897	946
V/C Ratio(X)				0.55	0.43	1.54	0.40	0.28	0.00	0.59	0.61	0.61
Avail Cap(c_a), veh/h				264	264	235	364	3746	0	1116	897	946
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	1.00	1.00	0.90	0.90	0.00	0.88	0.88	0.88
Uniform Delay (d), s/veh				37.5	36.8	40.4	39.9	4.2	0.0	12.9	13.0	13.0
Incr Delay (d2), s/veh				2.5	1.1	264.4	0.6	0.2	0.0	2.0	2.7	2.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.3	2.5	22.7	1.6	1.9	0.0	8.9	7.6	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.0	37.9	304.9	40.5	4.4	0.0	14.9	15.7	15.6
LnGrp LOS				D	D	F	D	A	A	B	B	B
Approach Vol, veh/h					623			1197			1778	
Approach Delay, s/veh					194.0			8.7			15.4	
Approach LOS					F			A			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		75.5			14.7	60.8		19.5				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		52.3			10.0	37.4		14.1				
Max Q Clear Time (g_c+I1), s		8.6			5.6	23.8		16.1				
Green Ext Time (p_c), s		18.6			0.1	12.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay											44.1	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp

Near Term 2026 w/out Project PM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	215	124	0	0	0	0	845	156	410	1196	0
Future Volume (veh/h)	46	215	124	0	0	0	0	845	156	410	1196	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	52	242	139				0	1006	186	482	1407	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	229	457	204				0	2534	468	404	3848	0
Arrive On Green	0.13	0.13	0.13				0.00	0.59	0.59	0.12	0.75	0.00
Sat Flow, veh/h	1781	3554	1585				0	4500	799	3456	5274	0
Grp Volume(v), veh/h	52	242	139				0	790	402	482	1407	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1727	1728	1702	0
Q Serve(g_s), s	2.5	6.0	8.0				0.0	11.9	12.0	11.1	8.9	0.0
Cycle Q Clear(g_c), s	2.5	6.0	8.0				0.0	11.9	12.0	11.1	8.9	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	229	457	204				0	1992	1010	404	3848	0
V/C Ratio(X)	0.23	0.53	0.68				0.00	0.40	0.40	1.19	0.37	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	1992	1010	404	3848	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	1.00	1.00	0.45	0.45	0.00
Uniform Delay (d), s/veh	37.2	38.7	39.5				0.0	10.6	10.7	42.0	4.0	0.0
Incr Delay (d2), s/veh	0.5	1.0	4.0				0.0	0.6	1.2	98.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.7	3.3				0.0	4.3	4.6	10.2	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	39.7	43.5				0.0	11.2	11.8	140.1	4.1	0.0
LnGrp LOS	D	D	D				A	B	B	F	A	A
Approach Vol, veh/h		433						1192			1889	
Approach Delay, s/veh		40.7						11.4			38.8	
Approach LOS		D						B			D	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	16.0	61.4	17.6	77.4								
Change Period (Y+Rc), s	4.9	5.8	5.4	5.8								
Max Green Setting (Gmax), s	11.1	25.8	42.0	41.8								
Max Q Clear Time (g_c+l1), s	13.1	14.0	10.0	10.9								
Green Ext Time (p_c), s	0.0	8.7	2.3	21.0								
Intersection Summary												
HCM 6th Ctrl Delay			29.8									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗↗	
Traffic Volume (veh/h)	216	359	55	38	362	78	76	757	43	73	916	191
Future Volume (veh/h)	216	359	55	38	362	78	76	757	43	73	916	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	390	60	42	398	86	88	880	50	87	1090	227
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1277	570	77	1173	523	120	1105	493	111	1296	270
Arrive On Green	0.07	0.36	0.36	0.04	0.33	0.33	0.07	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	4234	881
Grp Volume(v), veh/h	235	390	60	42	398	86	88	880	50	87	876	441
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1712
Q Serve(g_s), s	6.5	7.1	2.3	2.1	7.5	3.4	4.3	20.3	2.0	4.3	21.5	21.5
Cycle Q Clear(g_c), s	6.5	7.1	2.3	2.1	7.5	3.4	4.3	20.3	2.0	4.3	21.5	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	130	1277	570	77	1173	523	120	1105	493	111	1042	524
V/C Ratio(X)	1.81	0.31	0.11	0.54	0.34	0.16	0.74	0.80	0.10	0.78	0.84	0.84
Avail Cap(c_a), veh/h	130	1277	570	120	1173	523	120	1114	497	120	1067	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	20.6	19.1	41.9	22.6	21.2	40.9	28.2	21.9	41.3	29.0	29.0
Incr Delay (d2), s/veh	394.7	0.6	0.4	2.2	0.8	0.7	18.6	4.7	0.2	23.5	6.7	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	3.0	0.9	0.9	3.2	1.3	2.5	9.0	0.8	2.6	9.4	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	436.2	21.2	19.4	44.0	23.4	21.9	59.5	32.9	22.1	64.7	35.7	41.5
LnGrp LOS	F	C	B	D	C	C	E	C	C	E	D	D
Approach Vol, veh/h		685			526			1018			1404	
Approach Delay, s/veh		163.4			24.8			34.7			39.3	
Approach LOS		F			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	37.6	10.1	33.3	11.0	35.0	10.5	32.8				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.0	30.0	6.0	28.0	6.5	29.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s	4.1	9.1	6.3	22.3	8.5	9.5	6.3	23.5				
Green Ext Time (p_c), s	0.0	4.9	0.0	4.0	0.0	5.1	0.0	3.8				
Intersection Summary												
HCM 6th Ctrl Delay			59.3									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	556	50	199	701	262	59	654	321	320	565	99
Future Volume (veh/h)	77	556	50	199	701	262	59	654	321	320	565	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	632	57	224	788	294	66	735	361	340	601	105
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	985	439	286	1029	807	116	1015	453	402	1198	534
Arrive On Green	0.07	0.28	0.28	0.08	0.29	0.29	0.07	0.29	0.29	0.12	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	88	632	57	224	788	294	66	735	361	340	601	105
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.1	16.4	2.8	6.7	21.3	8.8	3.8	19.6	22.1	10.1	14.2	4.9
Cycle Q Clear(g_c), s	5.1	16.4	2.8	6.7	21.3	8.8	3.8	19.6	22.1	10.1	14.2	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	985	439	286	1029	807	116	1015	453	402	1198	534
V/C Ratio(X)	0.70	0.64	0.13	0.78	0.77	0.36	0.57	0.72	0.80	0.85	0.50	0.20
Avail Cap(c_a), veh/h	136	985	439	296	1029	807	136	1015	453	428	1198	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	33.4	28.5	47.2	34.1	29.6	47.7	33.8	34.7	45.5	27.8	24.7
Incr Delay (d2), s/veh	12.7	3.2	0.6	11.3	5.1	1.2	3.2	4.5	13.6	13.4	1.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	7.4	1.1	3.3	9.8	3.1	1.8	8.9	10.1	5.1	6.2	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	36.6	29.1	58.6	39.2	30.8	50.9	38.3	48.3	58.9	29.3	25.5
LnGrp LOS	E	D	C	E	D	C	D	D	D	E	C	C
Approach Vol, veh/h		777			1306			1162			1046	
Approach Delay, s/veh		38.7			40.6			42.1			38.5	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	35.6	12.8	41.9	13.4	36.9	18.2	36.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	9.0	28.0	8.0	35.0	8.0	29.0	13.0	30.0				
Max Q Clear Time (g_c+I1), s	8.7	18.4	5.8	16.2	7.1	23.3	12.1	24.1				
Green Ext Time (p_c), s	0.0	4.8	0.0	7.5	0.0	4.2	0.1	4.3				
Intersection Summary												
HCM 6th Ctrl Delay			40.2									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	887	356	64	951	0	0	0	0	345	0	201
Future Volume (veh/h)	0	887	356	64	951	0	0	0	0	345	0	201
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1069	429	73	1081	0				421	0	245
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1809	807	179	3411	0				688	0	306
Arrive On Green	0.00	0.51	0.51	0.10	0.67	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1069	429	73	1081	0				421	0	245
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	16.9	14.6	3.1	7.1	0.0				8.6	0.0	11.8
Cycle Q Clear(g_c), s	0.0	16.9	14.6	3.1	7.1	0.0				8.6	0.0	11.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1809	807	179	3411	0				688	0	306
V/C Ratio(X)	0.00	0.59	0.53	0.41	0.32	0.00				0.61	0.00	0.80
Avail Cap(c_a), veh/h	0	1809	807	229	3411	0				828	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.67	0.67	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.8	13.2	33.8	5.6	0.0				29.5	0.0	30.8
Incr Delay (d2), s/veh	0.0	1.0	1.7	1.1	0.1	0.0				1.3	0.0	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.4	5.1	1.4	2.1	0.0				3.7	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.7	14.9	34.8	5.7	0.0				30.8	0.0	42.0
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1498			1154						666	
Approach Delay, s/veh		14.8			7.5						35.0	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.7	46.4		20.9		59.1						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	35.3		18.6		50.3						
Max Q Clear Time (g_c+I1), s	5.1	18.9		13.8		9.1						
Green Ext Time (p_c), s	0.0	9.8		1.7		12.0						

Intersection Summary

HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	249	1010	0	0	802	612	203	1	48	0	0	0
Future Volume (veh/h)	249	1010	0	0	802	612	203	1	48	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	271	1098	0	0	835	638	258	0	61			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2690	0	0	3031	941	427	0	190			
Arrive On Green	0.11	0.76	0.00	0.00	0.59	0.59	0.12	0.00	0.12			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	271	1098	0	0	835	638	258	0	61			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	9.8	0.0	0.0	7.2	24.6	6.2	0.0	3.2			
Cycle Q Clear(g_c), s	10.0	9.8	0.0	0.0	7.2	24.6	6.2	0.0	3.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2690	0	0	3031	941	427	0	190			
V/C Ratio(X)	1.37	0.41	0.00	0.00	0.28	0.68	0.60	0.00	0.32			
Avail Cap(c_a), veh/h	198	2690	0	0	3031	941	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	3.8	0.0	0.0	8.9	12.4	37.6	0.0	36.3			
Incr Delay (d2), s/veh	189.0	0.4	0.0	0.0	0.2	3.9	2.9	0.0	2.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	14.7	2.7	0.0	0.0	2.5	8.8	2.8	0.0	1.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	229.0	4.2	0.0	0.0	9.1	16.4	40.5	0.0	38.3			
LnGrp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		1369			1473			319				
Approach Delay, s/veh		48.7			12.3			40.1				
Approach LOS		D			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.8			14.7	59.1		16.2				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		11.8			12.0	26.6		8.2				
Green Ext Time (p_c), s		11.5			0.0	0.5		2.6				

Intersection Summary

HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave

Near Term 2026 w/out Project PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	337	619	54	93	620	47	113	982	141	49	1038	488
Future Volume (veh/h)	337	619	54	93	620	47	113	982	141	49	1038	488
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	392	720	63	102	681	52	120	1045	150	56	1193	561
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	1136	99	128	1457	111	126	1241	553	72	1134	687
Arrive On Green	0.11	0.34	0.34	0.07	0.30	0.30	0.07	0.35	0.35	0.04	0.32	0.32
Sat Flow, veh/h	3456	3306	289	1781	4841	367	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	392	387	396	102	478	255	120	1045	150	56	1193	561
Grp Sat Flow(s),veh/h/ln	1728	1777	1818	1781	1702	1804	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.9	19.2	19.2	5.9	12.0	12.1	7.0	28.5	7.1	3.3	33.5	32.6
Cycle Q Clear(g_c), s	11.9	19.2	19.2	5.9	12.0	12.1	7.0	28.5	7.1	3.3	33.5	32.6
Prop In Lane	1.00		0.16	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	610	625	128	1024	543	126	1241	553	72	1134	687
V/C Ratio(X)	0.99	0.63	0.63	0.80	0.47	0.47	0.96	0.84	0.27	0.78	1.05	0.82
Avail Cap(c_a), veh/h	395	610	625	159	1024	543	126	1241	553	95	1134	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	28.9	28.9	48.0	29.8	29.9	48.6	31.5	24.6	49.9	35.8	26.1
Incr Delay (d2), s/veh	43.2	4.9	4.9	16.0	1.5	2.9	66.0	5.1	0.1	18.2	41.6	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	8.9	9.1	3.2	5.1	5.6	5.4	12.8	2.7	1.8	20.7	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.6	33.9	33.8	64.0	31.4	32.8	114.6	36.6	24.7	68.1	77.3	33.2
LnGrp LOS	F	C	C	E	C	C	F	D	C	E	F	C
Approach Vol, veh/h		1175			835			1315			1810	
Approach Delay, s/veh		52.4			35.8			42.4			63.4	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	42.1	11.4	39.0	17.0	37.6	8.2	42.2				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	9.4	34.2	7.4	33.5	12.0	31.6	5.6	35.3				
Max Q Clear Time (g_c+I1), s	7.9	21.2	9.0	35.5	13.9	14.1	5.3	30.5				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	0.0	3.1	0.0	2.5				

Intersection Summary												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									

**Appendix D:
Opening Year 2026
Plus Project
Synchro Worksheets**

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	1210	72	173	1089	109	23	419	201	145	310	542
Future Volume (veh/h)	294	1210	72	173	1089	109	23	419	201	145	310	542
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	342	1407	84	197	1238	124	25	455	218	175	373	653
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	2042	634	221	2042	634	341	1421	634	783	1421	634
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	399	5106	1585	353	5106	1585	550	3554	1585	1484	3554	1585
Grp Volume(v), veh/h	342	1407	84	197	1238	124	25	455	218	175	373	653
Grp Sat Flow(s),veh/h/ln	399	1702	1585	353	1702	1585	550	1777	1585	742	1777	1585
Q Serve(g_s), s	9.4	10.3	1.5	7.7	8.6	2.3	1.4	4.0	4.3	4.1	3.2	18.0
Cycle Q Clear(g_c), s	18.0	10.3	1.5	18.0	8.6	2.3	4.6	4.0	4.3	8.1	3.2	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	2042	634	221	2042	634	341	1421	634	783	1421	634
V/C Ratio(X)	1.41	0.69	0.13	0.89	0.61	0.20	0.07	0.32	0.34	0.22	0.26	1.03
Avail Cap(c_a), veh/h	243	2042	634	221	2042	634	341	1421	634	783	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	11.2	8.6	21.3	10.7	8.8	10.6	9.3	9.4	12.1	9.0	13.5
Incr Delay (d2), s/veh	205.9	1.0	0.1	33.4	0.5	0.1	0.1	0.1	0.3	0.1	0.1	43.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.2	3.2	0.4	3.9	2.6	0.6	0.2	1.2	1.2	0.6	1.0	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	226.8	12.2	8.6	54.7	11.2	8.9	10.7	9.4	9.7	12.2	9.1	57.1
LnGrp LOS	F	B	A	D	B	A	B	A	A	B	A	F
Approach Vol, veh/h		1833			1559			698			1201	
Approach Delay, s/veh		52.1			16.5			9.6			35.7	
Approach LOS		D			B			A			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.6		20.0		20.0		20.0				
Green Ext Time (p_c), s		3.1		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				32.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↖↑	↗
Traffic Volume (veh/h)	0	1264	237	0	1181	0	0	0	0	499	109	168
Future Volume (veh/h)	0	1264	237	0	1181	0	0	0	0	499	109	168
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1436	269	0	1357	0				587	128	198
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3329	1033	5	3329	0				708	372	315
Arrive On Green	0.00	0.65	0.65	0.00	0.65	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1436	269	0	1357	0				587	128	198
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	10.2	5.3	0.0	9.4	0.0				11.9	4.4	8.6
Cycle Q Clear(g_c), s	0.0	10.2	5.3	0.0	9.4	0.0				11.9	4.4	8.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3329	1033	5	3329	0				708	372	315
V/C Ratio(X)	0.00	0.43	0.26	0.00	0.41	0.00				0.83	0.34	0.63
Avail Cap(c_a), veh/h	0	3329	1033	415	3329	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.76	0.76	0.00	0.95	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	5.5	0.0	6.2	0.0				28.8	25.8	27.5
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	0.2	0.0				8.2	0.9	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	1.6	0.0	2.8	0.0				5.7	2.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.6	5.9	0.0	6.3	0.0				37.1	26.8	32.2
LnGrp LOS	A	A	A	A	A	A				D	C	C
Approach Vol, veh/h		1705			1357						913	
Approach Delay, s/veh		6.5			6.3						34.6	
Approach LOS		A			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	0.0	54.7		20.3		54.7						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	0.0	12.2		13.9		11.4						
Green Ext Time (p_c), s	0.0	17.9		1.0		22.8						

Intersection Summary

HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↓		↖	↑↑↑	↗		↖↑	↗			
Traffic Volume (veh/h)	58	1649	115	1	1106	413	78	130	8	0	0	0
Future Volume (veh/h)	58	1649	115	1	1106	413	78	130	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	67	1895	132	1	1301	486	87	144	9			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	347	2404	167	238	2686	834	283	282	252			
Arrive On Green	0.10	0.49	0.49	0.13	0.53	0.53	0.16	0.16	0.16			
Sat Flow, veh/h	3456	4875	338	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	67	1321	706	1	1301	486	87	144	9			
Grp Sat Flow(s),veh/h/ln	1728	1702	1809	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	1.3	24.1	24.3	0.0	12.2	15.7	3.2	5.6	0.4			
Cycle Q Clear(g_c), s	1.3	24.1	24.3	0.0	12.2	15.7	3.2	5.6	0.4			
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	347	1678	892	238	2686	834	283	282	252			
V/C Ratio(X)	0.19	0.79	0.79	0.00	0.48	0.58	0.31	0.51	0.04			
Avail Cap(c_a), veh/h	465	1678	892	238	2686	834	285	284	254			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.85	0.85	0.85	0.51	0.51	0.51	1.00	1.00	1.00			
Uniform Delay (d), s/veh	31.0	15.7	15.8	28.2	11.3	12.1	27.9	28.9	26.7			
Incr Delay (d2), s/veh	0.2	3.3	6.1	0.0	0.1	0.5	0.7	1.8	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	9.1	10.4	0.0	4.1	5.0	1.4	2.4	0.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	19.0	21.9	28.2	11.4	12.7	28.6	30.6	26.7			
LnGrp LOS	C	B	C	C	B	B	C	C	C			
Approach Vol, veh/h		2094			1788			240				
Approach Delay, s/veh		20.4			11.7			29.8				
Approach LOS		C			B			C				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	14.9	42.8			12.4	45.3		17.3				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.0	36.9			10.1	* 38		12.0				
Max Q Clear Time (g_c+l1), s	2.0	26.3			3.3	17.7		7.6				
Green Ext Time (p_c), s	0.0	10.0			0.1	11.7		0.6				

Intersection Summary


































HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

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

HCM Signalized Intersection Capacity Analysis
4: Norwalk Blvd & Imperial Hwy

Near Term_2026_with_Project_AM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			  			 		  	  		
Traffic Volume (vph)	157	1312	68	119	1265	56	115	597	126	130	421	123	
Future Volume (vph)	157	1312	68	119	1265	56	115	597	126	130	421	123	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583	
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	180	1508	78	137	1454	64	124	642	135	140	453	132	
RTOR Reduction (vph)	0	0	50	0	0	45	0	0	89	0	0	100	
Lane Group Flow (vph)	180	1508	28	137	1454	19	124	642	46	140	453	32	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	
Protected Phases	1	5		6	2		3	8	6	7	4		
Permitted Phases			5			2			8			4	
Actuated Green, G (s)	16.5	40.7	40.7	10.5	34.7	34.7	10.8	28.8	39.3	10.0	28.0	28.0	
Effective Green, g (s)	16.5	40.7	40.7	10.5	34.7	34.7	10.8	28.8	39.3	10.0	28.0	28.0	
Actuated g/C Ratio	0.14	0.35	0.35	0.09	0.30	0.30	0.09	0.25	0.34	0.09	0.24	0.24	
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5	
Lane Grp Cap (vph)	253	1799	560	161	1534	477	166	886	540	153	1238	385	
v/s Ratio Prot	0.10	c0.30		0.08	c0.29		0.07	c0.18	0.01	c0.08	0.09		
v/s Ratio Perm			0.02			0.01			0.02			0.02	
v/c Ratio	0.71	0.84	0.05	0.85	0.95	0.04	0.75	0.72	0.09	0.92	0.37	0.08	
Uniform Delay, d1	47.0	34.1	24.4	51.5	39.3	28.4	50.8	39.5	25.7	52.1	36.1	33.6	
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	7.6	3.9	0.1	40.0	13.5	0.2	14.7	3.4	0.1	47.4	0.3	0.2	
Delay (s)	54.6	38.0	24.5	91.5	52.8	28.5	65.5	42.8	25.8	99.5	36.4	33.8	
Level of Service	D	D	C	F	D	C	E	D	C	F	D	C	
Approach Delay (s)		39.1			55.1			43.4			48.1		
Approach LOS		D			E			D			D		
Intersection Summary													
HCM 2000 Control Delay			46.4									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.88										
Actuated Cycle Length (s)			115.0									Sum of lost time (s)	25.0
Intersection Capacity Utilization			79.4%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

Near Term_2026_with_Project_AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1415	124	32	1313	76	59	12	24	71	23	35
Future Volume (veh/h)	59	1415	124	32	1313	76	59	12	24	71	23	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	1608	141	36	1459	84	84	17	34	101	33	50
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	2776	862	50	2674	830	237	42	83	265	52	79
Arrive On Green	0.05	0.54	0.54	0.03	0.52	0.52	0.06	0.07	0.07	0.06	0.08	0.08
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	557	1113	1781	671	1017
Grp Volume(v), veh/h	67	1608	141	36	1459	84	84	0	51	101	0	83
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1670	1781	0	1687
Q Serve(g_s), s	2.8	15.7	3.3	1.5	14.3	2.0	3.2	0.0	2.2	3.9	0.0	3.6
Cycle Q Clear(g_c), s	2.8	15.7	3.3	1.5	14.3	2.0	3.2	0.0	2.2	3.9	0.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.60
Lane Grp Cap(c), veh/h	86	2776	862	50	2674	830	237	0	125	265	0	130
V/C Ratio(X)	0.78	0.58	0.16	0.72	0.55	0.10	0.35	0.00	0.41	0.38	0.00	0.64
Avail Cap(c_a), veh/h	109	2776	862	107	2674	830	242	0	401	265	0	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.50	0.50	0.50	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	11.4	8.6	36.1	11.9	9.0	29.7	0.0	33.1	29.8	0.0	33.6
Incr Delay (d2), s/veh	9.9	0.4	0.2	6.3	0.7	0.2	0.9	0.0	2.1	0.9	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	5.3	1.1	0.7	5.0	0.7	1.4	0.0	0.9	1.7	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	11.8	8.8	42.5	12.6	9.2	30.6	0.0	35.2	30.7	0.0	38.6
LnGrp LOS	D	B	A	D	B	A	C	A	D	C	A	D
Approach Vol, veh/h		1816			1579			135				184
Approach Delay, s/veh		12.8			13.1			32.4				34.3
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	47.3	9.3	11.3	8.6	45.8	9.5	11.1				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	26.0	4.5	18.0	4.6	25.9	4.5	18.0				
Max Q Clear Time (g_c+I1), s	3.5	17.7	5.2	5.6	4.8	16.3	5.9	4.2				
Green Ext Time (p_c), s	0.0	7.3	0.0	0.3	0.0	8.0	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay				14.7								
HCM 6th LOS				B								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

Near Term_2026_with_Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↙	↘
Traffic Volume (vph)	15	1329	137	53	1351	41	32	16	18	46	49	23
Future Volume (vph)	15	1329	137	53	1351	41	32	16	18	46	49	23
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1770	5014		1770	5063		1770	1714			1819	1583
Flt Permitted	0.13	1.00		0.11	1.00		0.95	1.00			0.98	1.00
Satd. Flow (perm)	242	5014		203	5063		1770	1714			1819	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	17	1477	152	58	1468	45	46	23	26	52	55	26
RTOR Reduction (vph)	0	12	0	0	3	0	0	22	0	0	0	25
Lane Group Flow (vph)	17	1617	0	58	1510	0	46	27	0	0	107	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	39.0	39.0		39.0	39.0		9.5	9.5			4.0	4.0
Effective Green, g (s)	39.0	39.0		39.0	39.0		9.5	9.5			4.0	4.0
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.14	0.14			0.06	0.06
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	134	2793		113	2820		240	232			103	90
v/s Ratio Prot		c0.32			0.30		c0.03	0.02			c0.06	
v/s Ratio Perm	0.07			0.29								0.00
v/c Ratio	0.13	0.58		0.51	0.54		0.19	0.11			1.04	0.02
Uniform Delay, d1	7.4	10.1		9.6	9.8		26.8	26.6			33.0	31.1
Progression Factor	1.00	1.00		2.67	2.58		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.7	0.4		9.1	0.4		0.4	0.2			99.5	0.1
Delay (s)	8.1	10.5		34.7	25.7		27.2	26.8			132.5	31.2
Level of Service	A	B		C	C		C	C			F	C
Approach Delay (s)		10.5			26.0			27.0			112.7	
Approach LOS		B			C			C			F	

Intersection Summary

HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

Near Term_2026_with_Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	879	155	340	1050	86	239	810	385	90	567	126
Future Volume (veh/h)	209	879	155	340	1050	86	239	810	385	90	567	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	220	925	163	382	1180	97	275	931	443	100	630	140
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	1277	396	350	1504	124	248	1170	522	281	785	174
Arrive On Green	0.13	0.25	0.25	0.20	0.31	0.31	0.14	0.33	0.33	0.08	0.27	0.27
Sat Flow, veh/h	1781	5106	1585	1781	4808	395	1781	3554	1585	3456	2891	641
Grp Volume(v), veh/h	220	925	163	382	835	442	275	931	443	100	387	383
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1799	1781	1777	1585	1728	1777	1755
Q Serve(g_s), s	17.1	23.2	12.0	27.5	31.3	31.3	19.5	33.3	36.4	3.8	28.4	28.5
Cycle Q Clear(g_c), s	17.1	23.2	12.0	27.5	31.3	31.3	19.5	33.3	36.4	3.8	28.4	28.5
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	238	1277	396	350	1065	563	248	1170	522	281	482	476
V/C Ratio(X)	0.92	0.72	0.41	1.09	0.78	0.78	1.11	0.80	0.85	0.36	0.80	0.80
Avail Cap(c_a), veh/h	238	1277	396	350	1065	563	248	1170	522	281	482	476
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)	0.80	0.80	0.80	1.00	1.00	1.00	0.57	0.57	0.57	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	48.1	43.9	56.2	43.8	43.8	60.3	42.7	43.7	60.8	47.5	47.5
Incr Delay (d2), s/veh	32.6	2.9	2.5	75.0	5.8	10.5	75.9	3.3	9.7	3.5	13.2	13.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	10.2	5.0	19.6	14.0	15.6	14.0	15.2	15.7	1.8	14.3	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.6	51.0	46.4	131.2	49.6	54.3	136.2	46.0	53.4	64.3	60.7	61.0
LnGrp LOS	F	D	D	F	D	D	F	D	D	E	E	E
Approach Vol, veh/h		1308			1659			1649			870	
Approach Delay, s/veh		57.4			69.7			63.0			61.2	
Approach LOS		E			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.2	49.3	15.9	51.6	32.0	40.5	24.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	18.7	43.8	11.4	46.1	27.5	35.0	19.5	38.0				
Max Q Clear Time (g_c+I1), s	19.1	33.3	5.8	38.4	29.5	25.2	21.5	30.5				
Green Ext Time (p_c), s	0.0	7.7	0.0	3.5	0.0	6.4	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				63.4								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

Near Term_2026_with_Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↶↶		↶	↶↶↶		↶	↶↶		↶	↶↶	
Traffic Volume (veh/h)	73	703	119	185	902	79	124	693	101	100	1010	31
Future Volume (veh/h)	73	703	119	185	902	79	124	693	101	100	1010	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	764	129	191	930	81	135	753	110	112	1135	35
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	1453	243	151	1722	150	107	1027	150	89	1126	35
Arrive On Green	0.05	0.33	0.33	0.09	0.36	0.36	0.06	0.33	0.33	0.05	0.32	0.32
Sat Flow, veh/h	1781	4404	737	1781	4784	416	1781	3111	454	1781	3519	108
Grp Volume(v), veh/h	79	589	304	191	661	350	135	430	433	112	573	597
Grp Sat Flow(s),veh/h/ln	1781	1702	1738	1781	1702	1796	1781	1777	1789	1781	1777	1851
Q Serve(g_s), s	4.4	14.0	14.2	8.5	15.4	15.5	6.0	21.4	21.4	5.0	32.0	32.0
Cycle Q Clear(g_c), s	4.4	14.0	14.2	8.5	15.4	15.5	6.0	21.4	21.4	5.0	32.0	32.0
Prop In Lane	1.00		0.42	1.00		0.23	1.00		0.25	1.00		0.06
Lane Grp Cap(c), veh/h	98	1123	573	151	1225	646	107	586	590	89	569	592
V/C Ratio(X)	0.81	0.52	0.53	1.26	0.54	0.54	1.26	0.73	0.73	1.26	1.01	1.01
Avail Cap(c_a), veh/h	98	1123	573	151	1225	646	107	586	590	89	569	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	27.1	27.2	45.8	25.4	25.4	47.0	29.6	29.6	47.5	34.0	34.0
Incr Delay (d2), s/veh	35.1	1.8	3.5	159.9	1.7	3.2	173.6	7.9	7.9	179.6	39.7	39.0
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	2.9	5.9	6.3	10.5	6.4	7.0	7.8	10.2	10.3	6.6	19.6	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.8	28.9	30.7	205.6	27.1	28.7	220.6	37.5	37.5	227.1	73.7	73.0
LnGrp LOS	F	C	C	F	C	C	F	D	D	F	F	F
Approach Vol, veh/h		972			1202			998			1282	
Approach Delay, s/veh		33.8			55.9			62.3			86.7	
Approach LOS		C			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	42.0	9.0	39.0	13.0	39.0	10.0	38.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	5.5	36.0	5.0	33.0	8.5	33.0	6.0	32.0				
Max Q Clear Time (g_c+I1), s	6.4	17.5	7.0	23.4	10.5	16.2	8.0	34.0				
Green Ext Time (p_c), s	0.0	9.8	0.0	2.7	0.0	8.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			61.4									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
 9: Firestone Blvd & Pioneer Blvd

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	345	44	56	317	40	49	850	55	67	646	173
Future Volume (veh/h)	213	345	44	56	317	40	49	850	55	67	646	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	222	359	46	59	334	42	59	1024	0	83	798	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	683	305	76	541	241	75	1758		84	1775	
Arrive On Green	0.08	0.19	0.19	0.04	0.15	0.15	0.04	0.49	0.00	0.05	0.50	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	222	359	46	59	334	42	59	1024	0	83	798	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.0	7.7	2.1	2.8	7.5	2.0	2.8	17.4	0.0	4.0	12.3	0.0
Cycle Q Clear(g_c), s	7.0	7.7	2.1	2.8	7.5	2.0	2.8	17.4	0.0	4.0	12.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	683	305	76	541	241	75	1758		84	1775	
V/C Ratio(X)	1.51	0.53	0.15	0.78	0.62	0.17	0.78	0.58		0.99	0.45	
Avail Cap(c_a), veh/h	147	1212	541	147	1212	541	84	1758		84	1775	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.84	0.84	0.00
Uniform Delay (d), s/veh	39.0	30.8	28.6	40.3	33.7	31.4	40.3	15.2	0.0	40.5	13.7	0.0
Incr Delay (d2), s/veh	262.8	1.1	0.4	6.4	2.0	0.6	29.9	1.4	0.0	86.6	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	3.3	0.8	1.3	3.3	0.8	1.8	6.8	0.0	3.7	4.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	301.8	31.9	29.0	46.7	35.7	32.0	70.2	16.7	0.0	127.1	14.4	0.0
LnGrp LOS	F	C	C	D	D	C	E	B		F	B	
Approach Vol, veh/h		627			435			1083			881	
Approach Delay, s/veh		127.3			36.8			19.6			25.0	
Approach LOS		F			D			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	47.6	7.6	21.8	7.6	48.0	11.0	18.4				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	4.0	26.0	7.0	29.0	4.0	26.0	7.0	29.0				
Max Q Clear Time (g_c+I1), s	6.0	19.4	4.8	9.7	4.8	14.3	9.0	9.5				
Green Ext Time (p_c), s	0.0	5.1	0.0	3.7	0.0	7.0	0.0	3.5				

Intersection Summary






















HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
 10: Norwalk Blvd & Civic Center Dr

Near Term_2026_with_Project_AM
 01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	3	0	0	442	0	69	0	818	654	92	525	1	
Future Volume (vph)	3	0	0	442	0	69	0	818	654	92	525	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected		0.95		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1770		1681	1681	1583		5085	1583	1770	5084		
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1863		1681	1681	1583		5085	1583	1770	5084		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	3	0	0	559	0	87	0	1076	861	105	597	1	
RTOR Reduction (vph)	0	0	0	0	0	62	0	0	215	0	0	0	
Lane Group Flow (vph)	0	3	0	279	280	25	0	1076	646	105	598	0	
Turn Type	Perm	NA		Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)		0.7		20.1	20.1	20.1		23.0	43.1	5.4	33.4		
Effective Green, g (s)		0.7		20.1	20.1	20.1		23.0	43.1	5.4	33.4		
Actuated g/C Ratio		0.01		0.29	0.29	0.29		0.33	0.61	0.08	0.48		
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)		18		481	481	453		1666	971	136	2418		
v/s Ratio Prot				0.17	0.17			0.21	c0.19	c0.06	0.12		
v/s Ratio Perm		c0.00				0.02			0.22				
v/c Ratio		0.17		0.58	0.58	0.05		0.65	0.67	0.77	0.25		
Uniform Delay, d1		34.5		21.4	21.5	18.2		20.1	8.8	31.8	10.9		
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2		5.1		1.8	1.8	0.1		1.9	1.7	21.5	0.2		
Delay (s)		39.6		23.2	23.3	18.2		22.1	10.6	53.3	11.2		
Level of Service		D		C	C	B		C	B	D	B		
Approach Delay (s)		39.6			22.6			17.0			17.5		
Approach LOS		D			C			B			B		
Intersection Summary													
HCM 2000 Control Delay			18.2		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.67										
Actuated Cycle Length (s)			70.2		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			61.4%		ICU Level of Service					B			
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	305	10	119	34	19	7	194	1138	6	5	806	189
Future Volume (veh/h)	305	10	119	34	19	7	194	1138	6	5	806	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	372	12	145	52	29	11	237	1388	7	5	831	195
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	494	589	499	466	407	154	163	1893	10	5	1699	758
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.05	0.52	0.52	0.00	0.48	0.48
Sat Flow, veh/h	1367	1870	1585	1230	1292	490	3456	3626	18	1781	3554	1585
Grp Volume(v), veh/h	372	12	145	52	0	40	237	680	715	5	831	195
Grp Sat Flow(s),veh/h/ln	1367	1870	1585	1230	0	1782	1728	1777	1867	1781	1777	1585
Q Serve(g_s), s	22.3	0.4	5.9	2.6	0.0	1.3	4.0	25.2	25.2	0.2	13.5	6.2
Cycle Q Clear(g_c), s	23.6	0.4	5.9	3.0	0.0	1.3	4.0	25.2	25.2	0.2	13.5	6.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	494	589	499	466	0	561	163	928	975	5	1699	758
V/C Ratio(X)	0.75	0.02	0.29	0.11	0.00	0.07	1.46	0.73	0.73	0.96	0.49	0.26
Avail Cap(c_a), veh/h	708	882	748	658	0	839	163	928	975	42	1699	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.57	0.57	0.57
Uniform Delay (d), s/veh	28.7	20.1	22.0	21.1	0.0	20.4	40.5	15.7	15.7	42.4	15.1	13.2
Incr Delay (d2), s/veh	2.2	0.0	0.2	0.1	0.0	0.0	236.5	5.1	4.9	73.2	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.2	2.2	0.7	0.0	0.6	7.0	10.6	11.1	0.2	5.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	20.1	22.2	21.2	0.0	20.4	277.0	20.8	20.6	115.6	15.7	13.7
LnGrp LOS	C	C	C	C	A	C	F	C	C	F	B	B
Approach Vol, veh/h		529			92			1632			1031	
Approach Delay, s/veh		28.3			20.9			57.9			15.8	
Approach LOS		C			C			E			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	49.4		31.4	8.0	45.6		31.4				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+l1), s	2.2	27.2		5.0	6.0	15.5		25.6				
Green Ext Time (p_c), s	0.0	1.4		0.3	0.0	3.6		1.2				

Intersection Summary

HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘		↗		↕	↗	↘↗	↕↕↕			↕↕↗	
Traffic Volume (veh/h)	100	0	101	130	86	567	97	885	0	3	918	56
Future Volume (veh/h)	100	0	101	130	86	567	97	885	0	3	918	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	112	0	113	143	95	623	123	1120	0	4	1106	67
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	0	0	0	309	709	449	295	3161	0	33	2342	141
Arrive On Green	0.00	0.00	0.00	0.28	0.28	0.28	0.09	0.62	0.00	0.49	0.49	0.49
Sat Flow, veh/h		0		1091	2502	1585	3456	5274	0	4	4768	288
Grp Volume(v), veh/h		0.0		238	0	623	123	1120	0	433	360	384
Grp Sat Flow(s),veh/h/ln				1816	1777	1585	1728	1702	0	1860	1549	1650
Q Serve(g_s), s				12.4	0.0	32.6	3.9	12.3	0.0	0.0	17.7	17.7
Cycle Q Clear(g_c), s				12.4	0.0	32.6	3.9	12.3	0.0	17.6	17.7	17.7
Prop In Lane				0.60		1.00	1.00		0.00	0.01		0.17
Lane Grp Cap(c), veh/h				515	504	449	295	3161	0	946	761	811
V/C Ratio(X)				0.46	0.00	1.39	0.42	0.35	0.00	0.46	0.47	0.47
Avail Cap(c_a), veh/h				515	504	449	300	3161	0	946	761	811
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.95	0.95	0.95
Uniform Delay (d), s/veh				34.0	0.0	41.2	49.9	10.7	0.0	19.4	19.4	19.4
Incr Delay (d2), s/veh				0.6	0.0	187.3	0.8	0.3	0.0	1.5	2.0	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
%ile BackOfQ(50%),veh/ln				5.6	0.0	35.9	1.7	4.5	0.0	7.9	6.7	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.6	0.0	228.5	50.7	11.0	0.0	20.9	21.4	21.3
LnGrp LOS				C	A	F	D	B	A	C	C	C
Approach Vol, veh/h					861			1243			1177	
Approach Delay, s/veh					174.9			14.9			21.2	
Approach LOS					F			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.0			14.7	62.3		38.0				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		53.8			10.0	38.9		32.6				
Max Q Clear Time (g_c+I1), s		14.3			5.9	19.7		34.6				
Green Ext Time (p_c), s		19.1			0.1	12.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				59.1								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp






























Near Term_2026_with_Project_AM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	228	90	0	0	0	0	891	223	243	891	0
Future Volume (veh/h)	65	228	90	0	0	0	0	891	223	243	891	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	73	256	101				0	1061	265	286	1048	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	225	449	200				0	2441	609	364	3859	0
Arrive On Green	0.13	0.13	0.13				0.00	0.60	0.60	0.11	0.76	0.00
Sat Flow, veh/h	1781	3554	1585				0	4243	1017	3456	5274	0
Grp Volume(v), veh/h	73	256	101				0	886	440	286	1048	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1687	1728	1702	0
Q Serve(g_s), s	3.5	6.4	5.6				0.0	13.4	13.4	7.7	6.0	0.0
Cycle Q Clear(g_c), s	3.5	6.4	5.6				0.0	13.4	13.4	7.7	6.0	0.0
Prop In Lane	1.00		1.00				0.00		0.60	1.00		0.00
Lane Grp Cap(c), veh/h	225	449	200				0	2039	1011	364	3859	0
V/C Ratio(X)	0.32	0.57	0.50				0.00	0.43	0.44	0.79	0.27	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	2039	1011	367	3859	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	1.00	1.00	0.65	0.65	0.00
Uniform Delay (d), s/veh	37.8	39.1	38.7				0.0	10.3	10.3	41.5	3.6	0.0
Incr Delay (d2), s/veh	0.8	1.1	2.0				0.0	0.7	1.4	7.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.9	2.3				0.0	4.8	5.0	3.6	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	40.2	40.7				0.0	11.0	11.7	48.7	3.7	0.0
LnGrp LOS	D	D	D				A	B	B	D	A	A
Approach Vol, veh/h		430						1326			1334	
Approach Delay, s/veh		40.1						11.2			13.3	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.9	62.7		17.4				77.6				
Change Period (Y+Rc), s	4.9	5.8		5.4				5.8				
Max Green Setting (Gmax), s	10.1	26.8		42.0				41.8				
Max Q Clear Time (g_c+I1), s	9.7	15.4		8.4				8.0				
Green Ext Time (p_c), s	0.0	9.0		2.3				16.3				
Intersection Summary												
HCM 6th Ctrl Delay			16.1									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

Near Term_2026_with_Project_AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			  	
Traffic Volume (veh/h)	213	344	43	57	315	46	49	861	57	73	650	173
Future Volume (veh/h)	213	344	43	57	315	46	49	861	57	73	650	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	374	47	63	346	51	57	1001	66	87	774	206
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	1245	555	95	1175	524	120	1101	491	111	1227	324
Arrive On Green	0.07	0.35	0.35	0.05	0.33	0.33	0.07	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	4023	1061
Grp Volume(v), veh/h	232	374	47	63	346	51	57	1001	66	87	654	326
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1679
Q Serve(g_s), s	6.5	6.8	1.8	3.1	6.4	2.0	2.8	24.1	2.7	4.3	14.7	14.9
Cycle Q Clear(g_c), s	6.5	6.8	1.8	3.1	6.4	2.0	2.8	24.1	2.7	4.3	14.7	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.63
Lane Grp Cap(c), veh/h	130	1245	555	95	1175	524	120	1101	491	111	1038	512
V/C Ratio(X)	1.79	0.30	0.08	0.67	0.29	0.10	0.48	0.91	0.13	0.78	0.63	0.64
Avail Cap(c_a), veh/h	130	1245	555	120	1175	524	120	1115	497	120	1068	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	21.0	19.4	41.5	22.1	20.6	40.1	29.6	22.2	41.2	26.7	26.7
Incr Delay (d2), s/veh	383.5	0.6	0.3	4.7	0.6	0.4	1.1	11.4	0.3	23.4	1.7	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	2.9	0.7	1.5	2.7	0.8	1.2	11.6	1.0	2.6	6.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	424.9	21.7	19.7	46.1	22.8	21.0	41.2	40.9	22.4	64.6	28.4	30.3
LnGrp LOS	F	C	B	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		653			460			1124			1067	
Approach Delay, s/veh		164.8			25.8			39.9			31.9	
Approach LOS		F			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	36.8	10.1	33.2	11.0	35.0	10.5	32.7				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.0	30.0	6.0	28.0	6.5	29.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s	5.1	8.8	6.3	26.1	8.5	8.4	4.8	16.9				
Green Ext Time (p_c), s	0.0	4.6	0.0	1.5	0.0	4.3	0.0	7.2				
Intersection Summary												
HCM 6th Ctrl Delay				60.0								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	640	73	245	678	418	39	631	251	376	597	134
Future Volume (veh/h)	90	640	73	245	678	418	39	631	251	376	597	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	727	83	275	762	470	44	709	282	400	635	143
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	946	422	329	1027	806	98	948	423	463	1228	548
Arrive On Green	0.07	0.27	0.27	0.10	0.29	0.29	0.06	0.27	0.27	0.13	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	102	727	83	275	762	470	44	709	282	400	635	143
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.9	19.8	4.3	8.2	20.4	15.1	2.5	19.2	16.7	11.9	15.0	6.8
Cycle Q Clear(g_c), s	5.9	19.8	4.3	8.2	20.4	15.1	2.5	19.2	16.7	11.9	15.0	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	946	422	329	1027	806	98	948	423	463	1228	548
V/C Ratio(X)	0.79	0.77	0.20	0.84	0.74	0.58	0.45	0.75	0.67	0.86	0.52	0.26
Avail Cap(c_a), veh/h	153	946	422	329	1027	806	136	948	423	494	1228	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	35.5	29.8	46.7	33.8	31.9	48.1	35.3	34.3	44.5	27.4	24.7
Incr Delay (d2), s/veh	19.5	6.0	1.0	15.3	4.5	2.8	2.4	5.4	8.1	13.8	1.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	9.2	1.7	4.2	9.3	5.4	1.2	8.9	7.3	5.9	6.5	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.4	41.5	30.9	62.0	38.2	34.7	50.4	40.7	42.4	58.3	28.9	25.9
LnGrp LOS	E	D	C	E	D	C	D	D	D	E	C	C
Approach Vol, veh/h		912			1507			1035			1178	
Approach Delay, s/veh		43.5			41.5			41.6			38.6	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	34.4	11.8	42.8	13.6	36.9	20.1	34.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	10.0	27.0	8.0	35.0	9.0	28.0	15.0	28.0				
Max Q Clear Time (g_c+I1), s	10.2	21.8	4.5	17.0	7.9	22.4	13.9	21.2				
Green Ext Time (p_c), s	0.0	3.3	0.0	7.9	0.0	4.4	0.2	4.6				
Intersection Summary												
HCM 6th Ctrl Delay			41.1									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	849	451	73	1148	0	0	0	0	387	1	203
Future Volume (veh/h)	0	849	451	73	1148	0	0	0	0	387	1	203
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1023	543	83	1305	0				473	0	248
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1768	789	187	3378	0				712	0	317
Arrive On Green	0.00	0.50	0.50	0.11	0.66	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1023	543	83	1305	0				473	0	248
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	16.2	20.9	3.5	9.3	0.0				9.8	0.0	11.9
Cycle Q Clear(g_c), s	0.0	16.2	20.9	3.5	9.3	0.0				9.8	0.0	11.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1768	789	187	3378	0				712	0	317
V/C Ratio(X)	0.00	0.58	0.69	0.44	0.39	0.00				0.66	0.00	0.78
Avail Cap(c_a), veh/h	0	1768	789	229	3378	0				882	0	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.59	0.59	0.92	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.2	15.4	33.6	6.2	0.0				29.5	0.0	30.4
Incr Delay (d2), s/veh	0.0	0.8	2.9	1.1	0.1	0.0				1.8	0.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.1	7.5	1.5	2.7	0.0				4.2	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.0	18.3	34.7	6.2	0.0				31.3	0.0	39.6
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1566			1388						721	
Approach Delay, s/veh		16.1			7.9						34.2	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.1	45.5		21.4		58.6						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	34.1		19.8		49.1						
Max Q Clear Time (g_c+I1), s	5.5	22.9		13.9		11.3						
Green Ext Time (p_c), s	0.0	7.6		2.1		15.1						

Intersection Summary

HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	212	1086	0	0	907	503	291	1	38	0	0	0
Future Volume (veh/h)	212	1086	0	0	907	503	291	1	38	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	230	1180	0	0	945	524	369	0	48			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2554	0	0	2836	880	562	0	250			
Arrive On Green	0.11	0.72	0.00	0.00	0.56	0.56	0.16	0.00	0.16			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	230	1180	0	0	945	524	369	0	48			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	12.6	0.0	0.0	9.1	19.8	8.8	0.0	2.4			
Cycle Q Clear(g_c), s	10.0	12.6	0.0	0.0	9.1	19.8	8.8	0.0	2.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2554	0	0	2836	880	562	0	250			
V/C Ratio(X)	1.16	0.46	0.00	0.00	0.33	0.60	0.66	0.00	0.19			
Avail Cap(c_a), veh/h	198	2554	0	0	2836	880	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.77	0.77	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	5.3	0.0	0.0	10.9	13.3	35.6	0.0	32.9			
Incr Delay (d2), s/veh	107.1	0.5	0.0	0.0	0.3	3.0	2.8	0.0	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.2	3.8	0.0	0.0	3.3	7.2	4.0	0.0	1.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.1	5.8	0.0	0.0	11.2	16.2	38.4	0.0	33.7			
LnGrp LOS	F	A	A	A	B	B	D	A	C			
Approach Vol, veh/h		1410			1469			417				
Approach Delay, s/veh		28.8			13.0			37.8				
Approach LOS		C			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.4			14.7	55.7		19.6				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		14.6			12.0	21.8		10.8				
Green Ext Time (p_c), s		12.1			0.0	4.0		3.5				

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave

Near Term_2026_with_Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	648	65	78	689	47	77	855	122	38	995	415
Future Volume (veh/h)	312	648	65	78	689	47	77	855	122	38	995	415
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	363	753	76	86	757	52	82	910	130	44	1144	477
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	1069	108	110	1594	109	103	1291	576	56	1196	634
Arrive On Green	0.06	0.33	0.33	0.06	0.33	0.33	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	3456	3259	329	1781	4881	334	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	363	410	419	86	527	282	82	910	130	44	1144	477
Grp Sat Flow(s),veh/h/ln	1728	1777	1811	1781	1702	1810	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.0	19.2	19.2	4.5	11.7	11.8	4.3	20.8	5.4	2.3	29.9	24.5
Cycle Q Clear(g_c), s	6.0	19.2	19.2	4.5	11.7	11.8	4.3	20.8	5.4	2.3	29.9	24.5
Prop In Lane	1.00		0.18	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	583	594	110	1112	591	103	1291	576	56	1196	634
V/C Ratio(X)	1.66	0.70	0.70	0.78	0.47	0.48	0.80	0.71	0.23	0.79	0.96	0.75
Avail Cap(c_a), veh/h	218	583	594	137	1112	591	103	1291	576	103	1197	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	27.9	27.9	44.0	25.5	25.5	44.2	25.9	21.0	45.7	30.8	24.5
Incr Delay (d2), s/veh	317.9	7.0	6.9	16.1	1.5	2.7	31.5	1.5	0.1	8.8	16.5	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	9.1	9.2	2.5	4.9	5.4	2.8	8.8	2.0	1.2	15.1	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	362.4	34.9	34.8	60.1	26.9	28.3	75.7	27.4	21.1	54.5	47.3	29.0
LnGrp LOS	F	C	C	E	C	C	E	C	C	D	D	C
Approach Vol, veh/h		1192			895			1122			1665	
Approach Delay, s/veh		134.6			30.5			30.2			42.2	
Approach LOS		F			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	37.2	9.5	37.5	11.0	37.0	7.0	40.0				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	7.3	29.7	5.5	32.0	6.0	31.0	5.5	32.0				
Max Q Clear Time (g_c+I1), s	6.5	21.2	6.3	31.9	8.0	13.8	4.3	22.8				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.1	0.0	3.4	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay			59.9									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
 19: Bloomfield Ave & New Project Driveway

Near Term_2026_with_Project_AM
 01/03/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	147	74	1164	57	57	932
Future Volume (veh/h)	147	74	1164	57	57	932
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	160	80	1265	62	62	1013
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	218	194	2189	107	89	2662
Arrive On Green	0.12	0.12	0.63	0.63	0.05	0.75
Sat Flow, veh/h	1781	1585	3542	169	1781	3647
Grp Volume(v), veh/h	160	80	651	676	62	1013
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1840	1781	1777
Q Serve(g_s), s	6.1	3.3	14.8	14.8	2.4	7.0
Cycle Q Clear(g_c), s	6.1	3.3	14.8	14.8	2.4	7.0
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	218	194	1128	1168	89	2662
V/C Ratio(X)	0.73	0.41	0.58	0.58	0.70	0.38
Avail Cap(c_a), veh/h	562	500	1128	1168	130	2662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.80	0.80
Uniform Delay (d), s/veh	29.6	28.4	7.4	7.4	32.7	3.1
Incr Delay (d2), s/veh	4.7	1.4	2.2	2.1	7.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.3	5.0	5.2	1.2	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.4	29.8	9.5	9.5	40.3	3.4
LnGrp LOS	C	C	A	A	D	A
Approach Vol, veh/h			1327			1075
Approach Delay, s/veh	32.8		9.5			5.5
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.0	48.9			56.9	13.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.1	29.3			38.9	22.1
Max Q Clear Time (g_c+I1), s	4.4	16.8			9.0	8.1
Green Ext Time (p_c), s	0.0	7.1			8.6	0.6
Intersection Summary						
HCM 6th Ctrl Delay			10.0			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	147	1182	56	112	814
Future Vol, veh/h	0	147	1182	56	112	814
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	160	1285	61	122	885

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	673	0	0	1346
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22
Pot Cap-1 Maneuver	0	398	-	-	508
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	398	-	-	508
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20	0	1.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	398	508
HCM Lane V/C Ratio	-	-	0.401	0.24
HCM Control Delay (s)	-	-	20	14.3
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	1.9	0.9

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	1287	290	212	1171	130	41	431	281	154	446	508
Future Volume (veh/h)	94	1287	290	212	1171	130	41	431	281	154	446	508
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	1497	337	241	1331	148	45	468	305	186	537	612
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	2042	634	198	2042	634	303	1421	634	738	1421	634
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	357	5106	1585	253	5106	1585	489	3554	1585	1352	3554	1585
Grp Volume(v), veh/h	109	1497	337	241	1331	148	45	468	305	186	537	612
Grp Sat Flow(s),veh/h/ln	357	1702	1585	253	1702	1585	489	1777	1585	676	1777	1585
Q Serve(g_s), s	8.5	11.2	7.3	6.8	9.5	2.8	3.2	4.1	6.4	5.0	4.8	17.0
Cycle Q Clear(g_c), s	18.0	11.2	7.3	18.0	9.5	2.8	8.0	4.1	6.4	9.1	4.8	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	2042	634	198	2042	634	303	1421	634	738	1421	634
V/C Ratio(X)	0.48	0.73	0.53	1.22	0.65	0.23	0.15	0.33	0.48	0.25	0.38	0.97
Avail Cap(c_a), veh/h	227	2042	634	198	2042	634	303	1421	634	738	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	11.5	10.3	21.8	11.0	8.9	12.4	9.3	10.0	12.5	9.5	13.2
Incr Delay (d2), s/veh	1.6	1.4	0.9	134.0	0.7	0.2	0.2	0.1	0.6	0.2	0.2	27.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.5	2.1	9.3	2.9	0.8	0.3	1.3	1.8	0.6	1.5	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	12.8	11.1	155.9	11.7	9.1	12.6	9.5	10.6	12.6	9.7	40.4
LnGrp LOS	C	B	B	F	B	A	B	A	B	B	A	D
Approach Vol, veh/h		1943			1720			818			1335	
Approach Delay, s/veh		13.0			31.7			10.1			24.2	
Approach LOS		B			C			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		10.0		20.0		19.0		20.0				
Green Ext Time (p_c), s		3.0		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				20.7								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↖↑	↗
Traffic Volume (veh/h)	0	1469	207	12	1345	0	0	0	0	364	171	143
Future Volume (veh/h)	0	1469	207	12	1345	0	0	0	0	364	171	143
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1669	235	14	1546	0				428	201	168
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2516	781	415	3462	0				615	323	274
Arrive On Green	0.00	0.49	0.49	0.12	0.68	0.00				0.17	0.17	0.17
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1669	235	14	1546	0				428	201	168
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	18.5	6.6	0.3	10.5	0.0				8.5	7.5	7.4
Cycle Q Clear(g_c), s	0.0	18.5	6.6	0.3	10.5	0.0				8.5	7.5	7.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2516	781	415	3462	0				615	323	274
V/C Ratio(X)	0.00	0.66	0.30	0.03	0.45	0.00				0.70	0.62	0.61
Avail Cap(c_a), veh/h	0	2516	781	415	3462	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.71	0.91	0.91	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.3	11.3	29.2	5.6	0.0				29.2	28.8	28.7
Incr Delay (d2), s/veh	0.0	1.0	0.7	0.0	0.2	0.0				3.1	3.5	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.6	2.3	0.1	2.9	0.0				3.8	3.5	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.3	12.0	29.2	5.8	0.0				32.3	32.3	32.6
LnGrp LOS	A	B	B	C	A	A				C	C	C
Approach Vol, veh/h		1904			1560						797	
Approach Delay, s/veh		14.9			6.0						32.3	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.9	42.8		18.3		56.7						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	2.3	20.5		10.5		12.5						
Green Ext Time (p_c), s	0.0	12.5		2.5		25.5						

Intersection Summary

HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔	↑↑↑	↔		↔↔	↔			
Traffic Volume (veh/h)	126	1545	156	0	1283	671	126	153	11	0	0	0
Future Volume (veh/h)	126	1545	156	0	1283	671	126	153	11	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	145	1776	179	0	1509	789	140	170	12			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	438	3676	369	2	2999	931	285	284	253			
Arrive On Green	0.13	0.78	0.78	0.00	0.59	0.59	0.16	0.16	0.16			
Sat Flow, veh/h	3456	4716	473	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	145	1280	675	0	1509	789	140	170	12			
Grp Sat Flow(s),veh/h/ln	1728	1702	1785	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	2.9	10.0	10.0	0.0	13.0	30.7	5.4	6.7	0.5			
Cycle Q Clear(g_c), s	2.9	10.0	10.0	0.0	13.0	30.7	5.4	6.7	0.5			
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	438	2654	1392	2	2999	931	285	284	253			
V/C Ratio(X)	0.33	0.48	0.48	0.00	0.50	0.85	0.49	0.60	0.05			
Avail Cap(c_a), veh/h	465	2654	1392	238	2999	931	285	284	254			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.82	0.82	0.82	0.00	0.10	0.10	1.00	1.00	1.00			
Uniform Delay (d), s/veh	29.8	2.9	2.9	0.0	9.1	12.7	28.7	29.3	26.7			
Incr Delay (d2), s/veh	0.4	0.5	1.0	0.0	0.0	0.8	1.6	3.8	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	2.0	2.2	0.0	4.1	9.2	2.3	3.0	0.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	3.4	3.9	0.0	9.1	13.5	30.3	33.0	26.8			
LnGrp LOS	C	A	A	A	A	B	C	C	C			
Approach Vol, veh/h		2100			2298			322				
Approach Delay, s/veh		5.4			10.6			31.6				
Approach LOS		A			B			C				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	0.0	64.3			14.4	49.9		17.4				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.0	36.9			10.1	* 38		12.0				
Max Q Clear Time (g_c+I1), s	0.0	12.0			4.9	32.7		8.7				
Green Ext Time (p_c), s	0.0	22.0			0.2	4.7		0.6				

Intersection Summary
































HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

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

HCM Signalized Intersection Capacity Analysis
4: Norwalk Blvd & Imperial Hwy

Near Term_2026_with_Project_PM
01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Traffic Volume (vph)	147	1156	71	146	1514	85	208	564	134	159	802	216
Future Volume (vph)	147	1156	71	146	1514	85	208	564	134	159	802	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	169	1329	82	168	1740	98	224	606	144	171	862	232
RTOR Reduction (vph)	0	0	58	0	0	64	0	0	73	0	0	136
Lane Group Flow (vph)	169	1329	24	168	1740	34	224	606	71	171	862	96
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8	6	7	4	
Permitted Phases			5			2			8			4
Actuated Green, G (s)	14.5	40.2	40.2	20.9	46.6	46.6	17.0	34.9	55.8	14.0	31.9	31.9
Effective Green, g (s)	14.5	40.2	40.2	20.9	46.6	46.6	17.0	34.9	55.8	14.0	31.9	31.9
Actuated g/C Ratio	0.11	0.30	0.30	0.15	0.35	0.35	0.13	0.26	0.41	0.10	0.24	0.24
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	190	1514	471	274	1755	546	222	914	654	183	1201	374
v/s Ratio Prot	0.10	c0.26		0.09	c0.34		c0.13	c0.17	0.02	0.10	c0.17	
v/s Ratio Perm			0.02			0.02			0.03			0.06
v/c Ratio	0.89	0.88	0.05	0.61	0.99	0.06	1.01	0.66	0.11	0.93	0.72	0.26
Uniform Delay, d1	59.5	45.1	33.8	53.3	44.0	29.6	59.0	44.8	24.3	60.0	47.4	41.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	35.1	6.5	0.1	9.9	19.6	0.2	62.7	2.2	0.1	47.2	2.4	0.6
Delay (s)	94.5	51.5	33.9	63.1	63.6	29.8	121.7	47.0	24.4	107.2	49.8	42.5
Level of Service	F	D	C	E	E	C	F	D	C	F	D	D
Approach Delay (s)		55.2			61.9			60.8			56.2	
Approach LOS		E			E			E			E	
Intersection Summary												
HCM 2000 Control Delay			58.7				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)			25.0		
Intersection Capacity Utilization			85.4%				ICU Level of Service			E		
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

Near Term_2026_with_Project_PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	1403	82	44	1597	81	157	7	51	50	13	38
Future Volume (veh/h)	63	1403	82	44	1597	81	157	7	51	50	13	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	1594	93	49	1774	90	224	10	73	71	19	54
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	2872	891	62	2784	864	229	15	112	215	30	86
Arrive On Green	0.05	0.56	0.56	0.03	0.55	0.55	0.06	0.08	0.08	0.05	0.07	0.07
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	195	1420	1781	430	1221
Grp Volume(v), veh/h	72	1594	93	49	1774	90	224	0	83	71	0	73
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1615	1781	0	1651
Q Serve(g_s), s	3.2	15.9	2.2	2.2	19.4	2.2	4.6	0.0	4.0	2.9	0.0	3.4
Cycle Q Clear(g_c), s	3.2	15.9	2.2	2.2	19.4	2.2	4.6	0.0	4.0	2.9	0.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.74
Lane Grp Cap(c), veh/h	92	2872	891	62	2784	864	229	0	128	215	0	116
V/C Ratio(X)	0.78	0.56	0.10	0.79	0.64	0.10	0.98	0.00	0.65	0.33	0.00	0.63
Avail Cap(c_a), veh/h	100	2872	891	100	2784	864	229	0	365	231	0	373
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)	0.46	0.46	0.46	0.84	0.84	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.5	11.1	8.1	38.3	12.7	8.8	36.2	0.0	35.8	32.4	0.0	36.2
Incr Delay (d2), s/veh	13.5	0.4	0.1	7.0	0.9	0.2	53.5	0.0	5.5	0.9	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	5.4	0.7	1.1	6.8	0.7	5.5	0.0	1.7	1.3	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	11.5	8.2	45.3	13.6	9.0	89.7	0.0	41.3	33.3	0.0	41.7
LnGrp LOS	D	B	A	D	B	A	F	A	D	C	A	D
Approach Vol, veh/h		1759			1913			307				144
Approach Delay, s/veh		12.9			14.2			76.6				37.5
Approach LOS		B			B			E				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	51.5	9.6	11.1	9.1	50.1	8.9	11.8				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	30.8	4.6	18.1	4.5	30.8	4.6	18.1				
Max Q Clear Time (g_c+I1), s	4.2	17.9	6.6	5.4	5.2	21.4	4.9	6.0				
Green Ext Time (p_c), s	0.0	10.9	0.0	0.2	0.0	8.5	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				19.1								
HCM 6th LOS				B								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

Near Term_2026_with_Project_PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↘	↘
Traffic Volume (vph)	27	1376	33	47	1522	94	115	48	57	38	14	20
Future Volume (vph)	27	1376	33	47	1522	94	115	48	57	38	14	20
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	5067		1770	5041		1770	1711			1797	1583
Flt Permitted	0.11	1.00		0.11	1.00		0.95	1.00			0.96	1.00
Satd. Flow (perm)	210	5067		210	5041		1770	1711			1797	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	30	1529	37	51	1654	102	167	70	83	43	16	22
RTOR Reduction (vph)	0	2	0	0	7	0	0	51	0	0	0	21
Lane Group Flow (vph)	30	1564	0	51	1749	0	167	102	0	0	59	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	35.5	35.5		35.5	35.5		13.8	13.8			3.2	3.2
Effective Green, g (s)	35.5	35.5		35.5	35.5		13.8	13.8			3.2	3.2
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.20	0.20			0.05	0.05
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	106	2569		106	2556		348	337			82	72
v/s Ratio Prot		0.31			c0.35		c0.09	0.06			c0.03	
v/s Ratio Perm	0.14			0.24								0.00
v/c Ratio	0.28	0.61		0.48	0.68		0.48	0.30			0.72	0.01
Uniform Delay, d1	9.9	12.3		11.2	13.0		24.9	24.0			33.0	31.9
Progression Factor	1.00	1.00		2.26	2.52		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.5	0.5		8.7	0.9		1.0	0.5			25.9	0.1
Delay (s)	12.5	12.8		34.1	33.6		26.0	24.5			58.8	32.0
Level of Service	B	B		C	C		C	C			E	C
Approach Delay (s)		12.8			33.7			25.3			51.5	
Approach LOS		B			C			C			D	

Intersection Summary

HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

Near Term_2026_with_Project_PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	1061	216	322	1089	52	267	585	439	147	802	212
Future Volume (veh/h)	193	1061	216	322	1089	52	267	585	439	147	802	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1117	227	362	1224	58	307	672	505	163	891	236
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1277	396	324	1541	73	274	1084	483	415	754	200
Arrive On Green	0.12	0.25	0.25	0.18	0.31	0.31	0.15	0.31	0.31	0.12	0.27	0.27
Sat Flow, veh/h	1781	5106	1585	1781	4995	237	1781	3554	1585	3456	2779	735
Grp Volume(v), veh/h	203	1117	227	362	834	448	307	672	505	163	569	558
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1828	1781	1777	1585	1728	1777	1738
Q Serve(g_s), s	15.8	29.4	17.6	25.5	31.4	31.4	21.5	22.7	42.7	6.1	38.0	38.0
Cycle Q Clear(g_c), s	15.8	29.4	17.6	25.5	31.4	31.4	21.5	22.7	42.7	6.1	38.0	38.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	220	1277	396	324	1050	564	274	1084	483	415	482	472
V/C Ratio(X)	0.92	0.88	0.57	1.12	0.79	0.79	1.12	0.62	1.04	0.39	1.18	1.18
Avail Cap(c_a), veh/h	220	1277	396	324	1050	564	274	1084	483	415	482	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	50.4	46.0	57.2	44.3	44.3	59.3	41.7	48.6	56.9	51.0	51.0
Incr Delay (d2), s/veh	33.2	6.9	4.6	84.9	6.2	11.0	82.7	1.8	46.2	2.8	100.8	102.0
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	9.2	13.3	7.5	19.1	14.2	16.0	16.0	10.3	23.0	2.8	30.3	29.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	57.3	50.6	142.1	50.5	55.3	142.0	43.5	94.9	59.7	151.8	153.0
LnGrp LOS	F	E	D	F	D	E	F	D	F	E	F	F
Approach Vol, veh/h		1547			1644			1484			1290	
Approach Delay, s/veh		61.1			72.0			81.4			140.7	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.8	48.7	21.3	48.2	30.0	40.5	26.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	17.3	43.2	16.8	42.7	25.5	35.0	21.5	38.0				
Max Q Clear Time (g_c+I1), s	17.8	33.4	8.1	44.7	27.5	31.4	23.5	40.0				
Green Ext Time (p_c), s	0.0	7.3	0.0	0.0	0.0	3.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			86.4									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

Near Term_2026_with_Project_PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (veh/h)	122	829	106	154	698	91	133	1025	134	99	934	44
Future Volume (veh/h)	122	829	106	154	698	91	133	1025	134	99	934	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	901	115	159	720	94	145	1114	146	111	1049	49
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1468	187	151	1464	190	125	1043	136	107	1106	52
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.07	0.33	0.33	0.06	0.32	0.32
Sat Flow, veh/h	1781	4586	583	1781	4575	592	1781	3160	413	1781	3457	161
Grp Volume(v), veh/h	133	668	348	159	534	280	145	626	634	111	539	559
Grp Sat Flow(s),veh/h/ln	1781	1702	1765	1781	1702	1764	1781	1777	1796	1781	1777	1841
Q Serve(g_s), s	7.4	16.6	16.7	8.5	12.7	12.8	7.0	33.0	33.0	6.0	29.6	29.6
Cycle Q Clear(g_c), s	7.4	16.6	16.7	8.5	12.7	12.8	7.0	33.0	33.0	6.0	29.6	29.6
Prop In Lane	1.00		0.33	1.00		0.34	1.00		0.23	1.00		0.09
Lane Grp Cap(c), veh/h	151	1089	565	151	1089	564	125	586	593	107	569	589
V/C Ratio(X)	0.88	0.61	0.62	1.05	0.49	0.50	1.16	1.07	1.07	1.04	0.95	0.95
Avail Cap(c_a), veh/h	151	1089	565	151	1089	564	125	586	593	107	569	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	28.8	28.8	45.8	27.4	27.5	46.5	33.5	33.5	47.0	33.2	33.2
Incr Delay (d2), s/veh	38.9	2.6	5.0	87.1	1.6	3.1	131.0	56.3	57.3	97.8	26.9	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	7.0	7.7	7.4	5.3	5.8	7.6	22.9	23.3	5.5	16.6	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.2	31.3	33.8	132.8	29.0	30.6	177.5	89.8	90.8	144.8	60.1	59.5
LnGrp LOS	F	C	C	F	C	C	F	F	F	F	E	E
Approach Vol, veh/h		1149			973			1405			1209	
Approach Delay, s/veh		38.2			46.4			99.3			67.6	
Approach LOS		D			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	38.0	10.0	39.0	13.0	38.0	11.0	38.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	8.5	32.0	6.0	33.0	8.5	32.0	7.0	32.0				
Max Q Clear Time (g_c+I1), s	9.4	14.8	8.0	35.0	10.5	18.7	9.0	31.6				
Green Ext Time (p_c), s	0.0	7.5	0.0	0.0	0.0	7.8	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			65.5									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
9: Firestone Blvd & Pioneer Blvd

Near Term_2026_with_Project_PM
01/03/2023
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	361	55	36	364	65	76	771	41	62	925	191
Future Volume (veh/h)	216	361	55	36	364	65	76	771	41	62	925	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	225	376	57	38	383	68	92	929	0	77	1142	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	898	400	48	582	259	94	1663		94	1663	
Arrive On Green	0.12	0.25	0.25	0.03	0.16	0.16	0.05	0.47	0.00	0.05	0.47	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	225	376	57	38	383	68	92	929	0	77	1142	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.0	8.4	2.6	2.0	9.6	3.6	4.9	17.9	0.0	4.1	23.9	0.0
Cycle Q Clear(g_c), s	11.0	8.4	2.6	2.0	9.6	3.6	4.9	17.9	0.0	4.1	23.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	898	400	48	582	259	94	1663		94	1663	
V/C Ratio(X)	1.09	0.42	0.14	0.80	0.66	0.26	0.98	0.56		0.82	0.69	
Avail Cap(c_a), veh/h	206	1272	567	113	1085	484	94	1663		94	1663	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	42.0	29.7	27.5	46.0	37.2	34.7	45.0	18.2	0.0	44.6	19.8	0.0
Incr Delay (d2), s/veh	89.0	0.5	0.3	10.6	2.2	0.9	86.4	1.4	0.0	31.2	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	3.6	1.0	1.0	4.3	1.4	4.4	7.3	0.0	2.6	9.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	131.0	30.2	27.8	56.6	39.4	35.6	131.3	19.6	0.0	75.7	21.5	0.0
LnGrp LOS	F	C	C	E	D	D	F	B		E	C	
Approach Vol, veh/h		658			489			1021			1219	
Approach Delay, s/veh		64.5			40.2			29.6			25.0	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	50.0	6.5	29.5	9.0	50.0	15.0	21.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	5.0	31.0	6.0	34.0	5.0	31.0	11.0	29.0				
Max Q Clear Time (g_c+I1), s	6.1	19.9	4.0	10.4	6.9	25.9	13.0	11.6				
Green Ext Time (p_c), s	0.0	7.5	0.0	4.3	0.0	4.2	0.0	3.9				

Intersection Summary												
HCM 6th Ctrl Delay											36.2	
HCM 6th LOS											D	

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

Near Term_2026_with_Project_PM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	2	0	1	583	0	128	0	745	470	143	902	0	
Future Volume (vph)	2	0	1	583	0	128	0	745	470	143	902	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt		0.95		1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected		0.97		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1722		1681	1681	1583		5085	1583	1770	5085		
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1779		1681	1681	1583		5085	1583	1770	5085		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	2	0	1	738	0	162	0	980	618	162	1025	0	
RTOR Reduction (vph)	0	3	0	0	0	113	0	0	200	0	0	0	
Lane Group Flow (vph)	0	0	0	369	369	49	0	980	418	163	1025	0	
Turn Type	Perm	NA		Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)		0.7		21.2	21.2	21.2		18.6	39.8	8.6	32.2		
Effective Green, g (s)		0.7		21.2	21.2	21.2		18.6	39.8	8.6	32.2		
Actuated g/C Ratio		0.01		0.30	0.30	0.30		0.27	0.57	0.12	0.46		
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)		17		508	508	478		1349	898	217	2335		
v/s Ratio Prot				c0.22	0.22			c0.19	0.14	c0.09	0.20		
v/s Ratio Perm		c0.00				0.03			0.12				
v/c Ratio		0.00		0.73	0.73	0.10		0.73	0.47	0.75	0.44		
Uniform Delay, d1		34.4		21.9	21.9	17.6		23.4	8.9	29.7	12.8		
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.0		5.1	5.1	0.1		3.4	0.4	12.2	0.6		
Delay (s)		34.4		27.0	27.0	17.7		26.9	9.3	41.9	13.4		
Level of Service		C		C	C	B		C	A	D	B		
Approach Delay (s)		34.4			25.3			20.1			17.3		
Approach LOS		C			C			C			B		
Intersection Summary													
HCM 2000 Control Delay			20.5		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.72										
Actuated Cycle Length (s)			70.1		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			57.7%		ICU Level of Service					B			
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	15	180	8	9	5	126	988	13	11	1129	211
Future Volume (veh/h)	292	15	180	8	9	5	126	988	13	11	1129	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	356	18	220	12	14	8	154	1205	16	11	1164	218
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	482	551	467	413	329	188	163	1934	26	12	1771	790
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.05	0.54	0.54	0.01	0.50	0.50
Sat Flow, veh/h	1390	1870	1585	1142	1117	638	3456	3591	48	1781	3554	1585
Grp Volume(v), veh/h	356	18	220	12	0	22	154	596	625	11	1164	218
Grp Sat Flow(s),veh/h/ln	1390	1870	1585	1142	0	1755	1728	1777	1862	1781	1777	1585
Q Serve(g_s), s	20.9	0.6	9.7	0.6	0.0	0.8	3.8	19.8	19.8	0.5	20.8	6.8
Cycle Q Clear(g_c), s	21.7	0.6	9.7	1.2	0.0	0.8	3.8	19.8	19.8	0.5	20.8	6.8
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	482	551	467	413	0	517	163	957	1003	12	1771	790
V/C Ratio(X)	0.74	0.03	0.47	0.03	0.00	0.04	0.95	0.62	0.62	0.91	0.66	0.28
Avail Cap(c_a), veh/h	728	882	748	614	0	826	163	957	1003	42	1771	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.31	0.31	0.31
Uniform Delay (d), s/veh	29.2	21.4	24.6	21.8	0.0	21.4	40.4	13.6	13.6	42.2	15.9	12.4
Incr Delay (d2), s/veh	1.7	0.0	0.5	0.0	0.0	0.0	54.4	3.1	2.9	23.4	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.3	3.6	0.2	0.0	0.3	2.8	8.0	8.3	0.3	7.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	21.4	25.1	21.8	0.0	21.4	94.8	16.7	16.5	65.6	16.5	12.7
LnGrp LOS	C	C	C	C	A	C	F	B	B	E	B	B
Approach Vol, veh/h		594			34			1375			1393	
Approach Delay, s/veh		28.4			21.6			25.4			16.3	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	50.8		29.6	8.0	47.4		29.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+l1), s	2.5	21.8		3.2	5.8	22.8		23.7				
Green Ext Time (p_c), s	0.0	3.4		0.1	0.0	2.7		1.4				

Intersection Summary

HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	0	70	133	104	330	111	877	0	5	1374	113
Future Volume (veh/h)	113	0	70	133	104	330	111	877	0	5	1374	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	127	0	79	146	114	363	141	1110	0	6	1655	136
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	0	0	0	264	264	235	355	3746	0	41	2698	221
Arrive On Green	0.00	0.00	0.00	0.15	0.15	0.15	0.10	0.73	0.00	0.58	0.58	0.58
Sat Flow, veh/h		0		1781	1777	1585	3456	5274	0	4	4657	381
Grp Volume(v), veh/h		0.0		146	114	363	141	1110	0	663	552	583
Grp Sat Flow(s),veh/h/ln				1781	1777	1585	1728	1702	0	1859	1549	1633
Q Serve(g_s), s				7.2	5.5	14.1	3.6	7.0	0.0	0.0	22.1	22.2
Cycle Q Clear(g_c), s				7.2	5.5	14.1	3.6	7.0	0.0	21.9	22.1	22.2
Prop In Lane				1.00		1.00	1.00		0.00	0.01		0.23
Lane Grp Cap(c), veh/h				264	264	235	355	3746	0	1116	897	946
V/C Ratio(X)				0.55	0.43	1.54	0.40	0.30	0.00	0.59	0.61	0.62
Avail Cap(c_a), veh/h				264	264	235	364	3746	0	1116	897	946
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.89	0.89	0.00	0.87	0.87	0.87
Uniform Delay (d), s/veh				37.5	36.8	40.4	39.9	4.3	0.0	13.0	13.1	13.1
Incr Delay (d2), s/veh				2.5	1.1	264.4	0.6	0.2	0.0	2.0	2.7	2.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.3	2.5	22.7	1.6	2.0	0.0	9.1	7.7	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.0	37.9	304.9	40.5	4.5	0.0	15.0	15.8	15.7
LnGrp LOS				D	D	F	D	A	A	B	B	B
Approach Vol, veh/h					623			1251			1797	
Approach Delay, s/veh					194.0			8.5			15.5	
Approach LOS					F			A			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		75.5			14.7	60.8		19.5				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		52.3			10.0	37.4		14.1				
Max Q Clear Time (g_c+I1), s		9.0			5.6	24.2		16.1				
Green Ext Time (p_c), s		19.7			0.1	11.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay											43.4	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp

Near Term_2026_with_Project_PM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	215	124	0	0	0	0	866	156	410	1212	0
Future Volume (veh/h)	67	215	124	0	0	0	0	866	156	410	1212	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	75	242	139				0	1031	186	482	1426	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	230	459	205				0	2542	458	404	3844	0
Arrive On Green	0.13	0.13	0.13				0.00	0.58	0.58	0.12	0.75	0.00
Sat Flow, veh/h	1781	3554	1585				0	4518	783	3456	5274	0
Grp Volume(v), veh/h	75	242	139				0	806	411	482	1426	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1729	1728	1702	0
Q Serve(g_s), s	3.6	6.0	8.0				0.0	12.3	12.3	11.1	9.1	0.0
Cycle Q Clear(g_c), s	3.6	6.0	8.0				0.0	12.3	12.3	11.1	9.1	0.0
Prop In Lane	1.00		1.00				0.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	230	459	205				0	1989	1011	404	3844	0
V/C Ratio(X)	0.33	0.53	0.68				0.00	0.41	0.41	1.19	0.37	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	1989	1011	404	3844	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.42	0.42	0.00
Uniform Delay (d), s/veh	37.6	38.6	39.5				0.0	10.7	10.8	42.0	4.0	0.0
Incr Delay (d2), s/veh	0.8	0.9	3.9				0.0	0.6	1.2	97.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.7	3.3				0.0	4.4	4.7	10.1	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	39.6	43.4				0.0	11.4	12.0	139.4	4.1	0.0
LnGrp LOS	D	D	D				A	B	B	F	A	A
Approach Vol, veh/h		456						1217			1908	
Approach Delay, s/veh		40.5						11.6			38.3	
Approach LOS		D						B			D	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	16.0	61.3		17.7				77.3				
Change Period (Y+Rc), s	4.9	5.8		5.4				5.8				
Max Green Setting (Gmax), s	11.1	25.8		42.0				41.8				
Max Q Clear Time (g_c+I1), s	13.1	14.3		10.0				11.1				
Green Ext Time (p_c), s	0.0	8.6		2.3				21.2				
Intersection Summary												
HCM 6th Ctrl Delay			29.5									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	
Traffic Volume (veh/h)	216	359	55	38	362	78	76	778	43	73	932	191
Future Volume (veh/h)	216	359	55	38	362	78	76	778	43	73	932	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	390	60	42	398	86	88	905	50	87	1110	227
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	1276	569	77	1172	523	119	1107	494	111	1304	267
Arrive On Green	0.07	0.36	0.36	0.04	0.33	0.33	0.07	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	4249	869
Grp Volume(v), veh/h	235	390	60	42	398	86	88	905	50	87	889	448
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1714
Q Serve(g_s), s	6.5	7.1	2.3	2.1	7.6	3.4	4.3	21.0	2.0	4.3	21.9	21.9
Cycle Q Clear(g_c), s	6.5	7.1	2.3	2.1	7.6	3.4	4.3	21.0	2.0	4.3	21.9	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	129	1276	569	77	1172	523	119	1107	494	111	1045	526
V/C Ratio(X)	1.82	0.31	0.11	0.54	0.34	0.16	0.74	0.82	0.10	0.78	0.85	0.85
Avail Cap(c_a), veh/h	129	1276	569	119	1172	523	119	1112	496	119	1066	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	20.6	19.1	41.9	22.6	21.2	40.9	28.4	21.9	41.3	29.1	29.1
Incr Delay (d2), s/veh	395.7	0.6	0.4	2.2	0.8	0.7	18.7	5.5	0.2	23.5	7.3	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	3.0	0.9	0.9	3.2	1.4	2.5	9.5	0.8	2.6	9.7	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	437.1	21.3	19.5	44.1	23.4	21.9	59.7	33.9	22.1	64.9	36.4	42.5
LnGrp LOS	F	C	B	D	C	C	E	C	C	E	D	D
Approach Vol, veh/h		685			526			1043			1424	
Approach Delay, s/veh		163.8			24.8			35.5			40.1	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	37.6	10.1	33.4	11.0	35.0	10.5	32.9				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.0	30.0	6.0	28.0	6.5	29.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s	4.1	9.1	6.3	23.0	8.5	9.6	6.3	23.9				
Green Ext Time (p_c), s	0.0	4.9	0.0	3.6	0.0	5.1	0.0	3.5				
Intersection Summary												
HCM 6th Ctrl Delay			59.6									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	556	50	199	701	369	59	675	321	402	581	122
Future Volume (veh/h)	107	556	50	199	701	369	59	675	321	402	581	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	632	57	224	788	415	66	758	361	428	618	130
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	1018	454	263	990	777	116	914	408	491	1188	530
Arrive On Green	0.08	0.29	0.29	0.08	0.28	0.28	0.07	0.26	0.26	0.14	0.33	0.33
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	122	632	57	224	788	415	66	758	361	428	618	130
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.1	16.2	2.8	6.7	21.6	13.2	3.8	21.1	23.0	12.7	14.7	6.2
Cycle Q Clear(g_c), s	7.1	16.2	2.8	6.7	21.6	13.2	3.8	21.1	23.0	12.7	14.7	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	1018	454	263	990	777	116	914	408	491	1188	530
V/C Ratio(X)	0.82	0.62	0.13	0.85	0.80	0.53	0.57	0.83	0.89	0.87	0.52	0.25
Avail Cap(c_a), veh/h	153	1018	454	263	990	777	136	914	408	527	1188	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	32.5	27.7	47.9	35.1	32.1	47.7	36.8	37.5	44.1	28.2	25.4
Incr Delay (d2), s/veh	26.7	2.8	0.6	20.8	6.2	2.4	3.2	8.6	23.5	13.7	1.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	7.3	1.1	3.6	10.0	4.7	1.8	10.1	11.4	6.3	6.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	35.4	28.3	68.7	41.3	34.5	50.9	45.4	61.0	57.8	29.8	26.5
LnGrp LOS	E	D	C	E	D	C	D	D	E	E	C	C
Approach Vol, veh/h		811			1427			1185			1176	
Approach Delay, s/veh		40.7			43.6			50.5			39.6	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	36.6	12.8	41.6	14.8	35.8	20.9	33.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	8.0	29.0	8.0	35.0	9.0	28.0	16.0	27.0				
Max Q Clear Time (g_c+I1), s	8.7	18.2	5.8	16.7	9.1	23.6	14.7	25.0				
Green Ext Time (p_c), s	0.0	5.2	0.0	7.7	0.0	3.5	0.2	1.6				

Intersection Summary												
HCM 6th Ctrl Delay											43.8	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	903	421	64	1058	0	0	0	0	345	0	201
Future Volume (veh/h)	0	903	421	64	1058	0	0	0	0	345	0	201
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1088	507	73	1202	0				421	0	245
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1809	807	179	3411	0				688	0	306
Arrive On Green	0.00	0.51	0.51	0.10	0.67	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1088	507	73	1202	0				421	0	245
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	17.3	18.5	3.1	8.2	0.0				8.6	0.0	11.8
Cycle Q Clear(g_c), s	0.0	17.3	18.5	3.1	8.2	0.0				8.6	0.0	11.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1809	807	179	3411	0				688	0	306
V/C Ratio(X)	0.00	0.60	0.63	0.41	0.35	0.00				0.61	0.00	0.80
Avail Cap(c_a), veh/h	0	1809	807	225	3411	0				828	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.65	0.65	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.9	14.2	33.8	5.8	0.0				29.5	0.0	30.8
Incr Delay (d2), s/veh	0.0	1.0	2.4	1.0	0.1	0.0				1.3	0.0	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.5	6.5	1.4	2.4	0.0				3.7	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.9	16.6	34.8	5.8	0.0				30.8	0.0	42.0
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1595			1275						666	
Approach Delay, s/veh		15.4			7.5						35.0	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.7	46.4		20.9		59.1						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	35.5		18.6		50.3						
Max Q Clear Time (g_c+I1), s	5.1	20.5		13.8		10.2						
Green Ext Time (p_c), s	0.0	9.7		1.7		13.8						

Intersection Summary

HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	249	1026	0	0	823	612	289	1	48	0	0	0
Future Volume (veh/h)	249	1026	0	0	823	612	289	1	48	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	271	1115	0	0	857	638	367	0	61			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2553	0	0	2834	880	564	0	251			
Arrive On Green	0.11	0.72	0.00	0.00	0.56	0.56	0.16	0.00	0.16			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	271	1115	0	0	857	638	367	0	61			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	11.6	0.0	0.0	8.1	27.0	8.7	0.0	3.0			
Cycle Q Clear(g_c), s	10.0	11.6	0.0	0.0	8.1	27.0	8.7	0.0	3.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2553	0	0	2834	880	564	0	251			
V/C Ratio(X)	1.37	0.44	0.00	0.00	0.30	0.73	0.65	0.00	0.24			
Avail Cap(c_a), veh/h	198	2553	0	0	2834	880	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.76	0.76	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	5.2	0.0	0.0	10.7	14.9	35.5	0.0	33.2			
Incr Delay (d2), s/veh	188.7	0.4	0.0	0.0	0.3	5.2	2.7	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	14.7	3.5	0.0	0.0	2.9	10.1	3.9	0.0	1.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	228.7	5.6	0.0	0.0	11.0	20.1	38.2	0.0	34.2			
LnGrp LOS	F	A	A	A	B	C	D	A	C			
Approach Vol, veh/h		1386			1495			428				
Approach Delay, s/veh		49.2			14.9			37.7				
Approach LOS		D			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.4			14.7	55.7		19.6				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		13.6			12.0	29.0		10.7				
Green Ext Time (p_c), s		11.4			0.0	0.0		3.5				

Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave

Near Term_2026_with_Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	337	635	54	93	641	47	113	982	141	49	1038	488
Future Volume (veh/h)	337	635	54	93	641	47	113	982	141	49	1038	488
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	392	738	63	102	704	52	120	1045	150	56	1193	561
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	1138	97	128	1461	107	126	1241	553	72	1134	687
Arrive On Green	0.11	0.34	0.34	0.07	0.30	0.30	0.07	0.35	0.35	0.04	0.32	0.32
Sat Flow, veh/h	3456	3314	283	1781	4854	357	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	392	396	405	102	493	263	120	1045	150	56	1193	561
Grp Sat Flow(s),veh/h/ln	1728	1777	1819	1781	1702	1806	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.9	19.7	19.8	5.9	12.4	12.5	7.0	28.5	7.1	3.3	33.5	32.6
Cycle Q Clear(g_c), s	11.9	19.7	19.8	5.9	12.4	12.5	7.0	28.5	7.1	3.3	33.5	32.6
Prop In Lane	1.00		0.16	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	610	625	128	1024	544	126	1241	553	72	1134	687
V/C Ratio(X)	0.99	0.65	0.65	0.80	0.48	0.48	0.96	0.84	0.27	0.78	1.05	0.82
Avail Cap(c_a), veh/h	395	610	625	159	1024	544	126	1241	553	95	1134	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	29.1	29.1	48.0	30.0	30.0	48.6	31.5	24.6	49.9	35.8	26.1
Incr Delay (d2), s/veh	43.2	5.3	5.1	16.0	1.6	3.1	66.0	5.1	0.1	18.2	41.6	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	9.2	9.4	3.2	5.3	5.9	5.4	12.8	2.7	1.8	20.7	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.6	34.4	34.3	64.0	31.6	33.1	114.6	36.6	24.7	68.1	77.3	33.2
LnGrp LOS	F	C	C	E	C	C	F	D	C	E	F	C
Approach Vol, veh/h		1193			858			1315			1810	
Approach Delay, s/veh		52.5			35.9			42.4			63.4	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	42.1	11.4	39.0	17.0	37.6	8.2	42.2				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	9.4	34.2	7.4	33.5	12.0	31.6	5.6	35.3				
Max Q Clear Time (g_c+I1), s	7.9	21.8	9.0	35.5	13.9	14.5	5.3	30.5				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	0.0	3.1	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 19: Bloomfield Ave & New Project Driveway

Near Term_2026_with_Project_PM
 01/03/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	131	74	1000	97	97	1180
Future Volume (veh/h)	131	74	1000	97	97	1180
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	80	1087	105	105	1283
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	199	177	2030	196	134	2700
Arrive On Green	0.11	0.11	0.62	0.62	0.08	0.76
Sat Flow, veh/h	1781	1585	3368	316	1781	3647
Grp Volume(v), veh/h	142	80	589	603	105	1283
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1813	1781	1777
Q Serve(g_s), s	5.4	3.3	13.2	13.2	4.1	9.5
Cycle Q Clear(g_c), s	5.4	3.3	13.2	13.2	4.1	9.5
Prop In Lane	1.00	1.00		0.17	1.00	
Lane Grp Cap(c), veh/h	199	177	1102	1124	134	2700
V/C Ratio(X)	0.71	0.45	0.54	0.54	0.78	0.48
Avail Cap(c_a), veh/h	562	500	1102	1124	165	2700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.63	0.63
Uniform Delay (d), s/veh	30.0	29.1	7.6	7.6	31.8	3.2
Incr Delay (d2), s/veh	4.7	1.8	1.9	1.8	11.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.3	4.5	4.6	2.1	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.7	30.9	9.4	9.4	43.4	3.5
LnGrp LOS	C	C	A	A	D	A
Approach Vol, veh/h			1192			1388
Approach Delay, s/veh	33.3		9.4			6.6
Approach LOS	C		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.8	47.9			57.7	12.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	6.5	27.9			38.9	22.1
Max Q Clear Time (g_c+I1), s	6.1	15.2			11.5	7.4
Green Ext Time (p_c), s	0.0	6.4			11.5	0.5
Intersection Summary						
HCM 6th Ctrl Delay			9.9			
HCM 6th LOS			A			

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	131	990	86	171	1138
Future Vol, veh/h	0	131	990	86	171	1138
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	142	1076	93	186	1237

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	585	0	0	1169
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22
Pot Cap-1 Maneuver	0	454	-	-	593
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	454	-	-	593
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	1.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	454	593
HCM Lane V/C Ratio	-	-	0.314	0.313
HCM Control Delay (s)	-	-	16.5	13.8
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	1.3	1.3

**Appendix E:
Future Year 2045
Without Project
Synchro Worksheets**

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	1299	79	170	1157	120	25	461	206	159	341	596
Future Volume (veh/h)	323	1299	79	170	1157	120	25	461	206	159	341	596
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	376	1510	92	193	1315	136	27	501	224	192	411	718
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	2042	634	207	2042	634	320	1421	634	746	1421	634
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	367	5106	1585	317	5106	1585	499	3554	1585	1414	3554	1585
Grp Volume(v), veh/h	376	1510	92	193	1315	136	27	501	224	192	411	718
Grp Sat Flow(s),veh/h/ln	367	1702	1585	317	1702	1585	499	1777	1585	707	1777	1585
Q Serve(g_s), s	8.6	11.3	1.7	6.7	9.4	2.5	1.7	4.4	4.4	4.9	3.5	18.0
Cycle Q Clear(g_c), s	18.0	11.3	1.7	18.0	9.4	2.5	5.3	4.4	4.4	9.4	3.5	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	2042	634	207	2042	634	320	1421	634	746	1421	634
V/C Ratio(X)	1.63	0.74	0.15	0.93	0.64	0.21	0.08	0.35	0.35	0.26	0.29	1.13
Avail Cap(c_a), veh/h	230	2042	634	207	2042	634	320	1421	634	746	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	11.5	8.6	21.7	10.9	8.9	11.0	9.4	9.4	12.7	9.2	13.5
Incr Delay (d2), s/veh	303.4	1.5	0.1	43.9	0.7	0.2	0.1	0.1	0.3	0.2	0.1	78.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	3.6	0.5	4.4	2.8	0.7	0.2	1.4	1.3	0.7	1.1	18.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	324.5	13.0	8.7	65.6	11.6	9.0	11.1	9.6	9.8	12.9	9.3	91.6
LnGrp LOS	F	B	A	E	B	A	B	A	A	B	A	F
Approach Vol, veh/h		1978			1644			752			1321	
Approach Delay, s/veh		72.0			17.7			9.7			54.6	
Approach LOS		E			B			A			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		7.3		20.0		20.0		20.0				
Green Ext Time (p_c), s		3.3		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				44.1								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	1343	261	0	1238	0	0	0	0	502	104	185
Future Volume (veh/h)	0	1343	261	0	1238	0	0	0	0	502	104	185
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1526	297	0	1423	0				591	122	218
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3326	1032	5	3326	0				710	373	316
Arrive On Green	0.00	0.65	0.65	0.00	0.65	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1526	297	0	1423	0				591	122	218
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	11.1	6.0	0.0	10.1	0.0				11.9	4.2	9.6
Cycle Q Clear(g_c), s	0.0	11.1	6.0	0.0	10.1	0.0				11.9	4.2	9.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3326	1032	5	3326	0				710	373	316
V/C Ratio(X)	0.00	0.46	0.29	0.00	0.43	0.00				0.83	0.33	0.69
Avail Cap(c_a), veh/h	0	3326	1032	415	3326	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.71	0.00	0.95	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.5	5.6	0.0	6.3	0.0				28.8	25.7	27.9
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	0.2	0.0				8.4	0.9	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	1.7	0.0	2.9	0.0				5.7	1.9	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.8	6.1	0.0	6.5	0.0				37.2	26.6	34.8
LnGrp LOS	A	A	A	A	A	A				D	C	C
Approach Vol, veh/h		1823			1423						931	
Approach Delay, s/veh		6.7			6.5						35.3	
Approach LOS		A			A						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	0.0	54.6		20.4		54.6						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	0.0	13.1		13.9		12.1						
Green Ext Time (p_c), s	0.0	17.9		1.0		23.7						

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↓		↖	↑↑↑	↗		↖↑	↗			
Traffic Volume (veh/h)	64	1752	66	1	1124	454	86	123	9	0	0	0
Future Volume (veh/h)	64	1752	66	1	1124	454	86	123	9	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	74	2014	76	1	1322	534	96	137	10			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	362	2490	94	238	2663	827	283	282	252			
Arrive On Green	0.10	0.49	0.49	0.13	0.52	0.52	0.16	0.16	0.16			
Sat Flow, veh/h	3456	5050	190	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	74	1356	734	1	1322	534	96	137	10			
Grp Sat Flow(s),veh/h/ln	1728	1702	1836	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	1.5	25.2	25.3	0.0	12.5	18.2	3.6	5.3	0.4			
Cycle Q Clear(g_c), s	1.5	25.2	25.3	0.0	12.5	18.2	3.6	5.3	0.4			
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	362	1678	905	238	2663	827	283	282	252			
V/C Ratio(X)	0.20	0.81	0.81	0.00	0.50	0.65	0.34	0.48	0.04			
Avail Cap(c_a), veh/h	465	1678	905	238	2663	827	285	284	254			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.83	0.41	0.41	0.41	1.00	1.00	1.00			
Uniform Delay (d), s/veh	30.7	16.0	16.1	28.2	11.6	12.9	28.0	28.7	26.7			
Incr Delay (d2), s/veh	0.2	3.6	6.6	0.0	0.1	0.7	0.8	1.6	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	9.5	11.0	0.0	4.2	5.9	1.6	2.3	0.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	19.6	22.6	28.2	11.6	13.7	28.9	30.3	26.8			
LnGrp LOS	C	B	C	C	B	B	C	C	C			
Approach Vol, veh/h		2164			1857			243				
Approach Delay, s/veh		21.0			12.2			29.6				
Approach LOS		C			B			C				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	14.9	42.8			12.8	44.9		17.3				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.0	36.9			10.1	* 38		12.0				
Max Q Clear Time (g_c+I1), s	2.0	27.3			3.5	20.2		7.3				
Green Ext Time (p_c), s	0.0	9.1			0.1	11.1		0.6				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B
































Notes

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

HCM Signalized Intersection Capacity Analysis

4: Norwalk Blvd & Imperial Hwy

FY_w/out Project_AM
01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Traffic Volume (vph)	173	1350	75	131	1270	42	126	656	139	128	463	135
Future Volume (vph)	173	1350	75	131	1270	42	126	656	139	128	463	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	199	1552	86	151	1460	48	135	705	149	138	498	145
RTOR Reduction (vph)	0	0	57	0	0	34	0	0	95	0	0	108
Lane Group Flow (vph)	199	1552	29	151	1460	14	135	705	54	138	498	37
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8		6	7	4
Permitted Phases			5			2			8			4
Actuated Green, G (s)	16.4	39.2	39.2	10.2	33.0	33.0	11.5	30.6	40.8	10.0	29.1	29.1
Effective Green, g (s)	16.4	39.2	39.2	10.2	33.0	33.0	11.5	30.6	40.8	10.0	29.1	29.1
Actuated g/C Ratio	0.14	0.34	0.34	0.09	0.29	0.29	0.10	0.27	0.35	0.09	0.25	0.25
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	252	1733	539	156	1459	454	177	941	561	153	1286	400
v/s Ratio Prot	0.11	c0.31		0.09	c0.29		0.08	c0.20	0.01	c0.08	0.10	
v/s Ratio Perm			0.02			0.01			0.03			0.02
v/c Ratio	0.79	0.90	0.05	0.97	1.00	0.03	0.76	0.75	0.10	0.90	0.39	0.09
Uniform Delay, d1	47.6	36.0	25.5	52.2	41.0	29.5	50.4	38.7	24.8	52.0	35.6	32.8
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	14.0	6.8	0.1	64.0	23.7	0.1	15.9	3.7	0.1	44.3	0.3	0.2
Delay (s)	61.6	42.7	25.5	116.3	64.7	29.6	66.3	42.4	24.9	96.3	35.9	33.0
Level of Service	E	D	C	F	E	C	E	D	C	F	D	C
Approach Delay (s)		44.0			68.4			43.1			46.0	
Approach LOS		D			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			51.8			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			115.0			Sum of lost time (s)			25.0			
Intersection Capacity Utilization			81.7%			ICU Level of Service			D			
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

FY_w/out Project_AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1414	136	35	1336	84	65	13	26	78	25	38
Future Volume (veh/h)	65	1414	136	35	1336	84	65	13	26	78	25	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	1607	155	39	1484	93	93	19	37	111	36	54
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	2733	848	53	2612	811	242	46	90	270	55	83
Arrive On Green	0.05	0.54	0.54	0.03	0.51	0.51	0.06	0.08	0.08	0.06	0.08	0.08
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	567	1104	1781	675	1013
Grp Volume(v), veh/h	74	1607	155	39	1484	93	93	0	56	111	0	90
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1672	1781	0	1688
Q Serve(g_s), s	3.1	16.0	3.8	1.6	15.0	2.3	3.5	0.0	2.4	4.3	0.0	3.9
Cycle Q Clear(g_c), s	3.1	16.0	3.8	1.6	15.0	2.3	3.5	0.0	2.4	4.3	0.0	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.66	1.00		0.60
Lane Grp Cap(c), veh/h	95	2733	848	53	2612	811	242	0	137	270	0	138
V/C Ratio(X)	0.78	0.59	0.18	0.74	0.57	0.11	0.38	0.00	0.41	0.41	0.00	0.65
Avail Cap(c_a), veh/h	119	2733	848	107	2612	811	242	0	401	270	0	405
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)	0.43	0.43	0.43	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	11.8	9.0	36.1	12.6	9.5	29.2	0.0	32.7	29.5	0.0	33.4
Incr Delay (d2), s/veh	8.2	0.4	0.2	6.5	0.8	0.3	1.0	0.0	2.0	1.0	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.4	1.2	0.8	5.3	0.8	1.5	0.0	1.0	1.8	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	12.2	9.2	42.6	13.4	9.8	30.2	0.0	34.7	30.5	0.0	38.5
LnGrp LOS	D	B	A	D	B	A	C	A	C	C	A	D
Approach Vol, veh/h		1836			1616			149			201	
Approach Delay, s/veh		13.2			13.9			31.9			34.1	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	46.6	9.5	11.6	9.0	44.9	9.5	11.6				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	26.0	4.5	18.0	5.0	25.5	4.5	18.0				
Max Q Clear Time (g_c+I1), s	3.6	18.0	5.5	5.9	5.1	17.0	6.3	4.4				
Green Ext Time (p_c), s	0.0	7.1	0.0	0.3	0.0	7.2	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			15.4									
HCM 6th LOS			B									

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

FY_w/out Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↘	↘
Traffic Volume (vph)	16	1319	151	58	1378	45	35	18	20	51	54	25
Future Volume (vph)	16	1319	151	58	1378	45	35	18	20	51	54	25
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1770	5007		1770	5061		1770	1715			1819	1583
Flt Permitted	0.13	1.00		0.12	1.00		0.95	1.00			0.98	1.00
Satd. Flow (perm)	248	5007		221	5061		1770	1715			1819	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	18	1466	168	63	1498	49	51	26	29	57	61	28
RTOR Reduction (vph)	0	11	0	0	2	0	0	26	0	0	0	27
Lane Group Flow (vph)	18	1624	0	63	1545	0	51	29	0	0	118	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	58.5	58.5		58.5	58.5		10.0	10.0			4.0	4.0
Effective Green, g (s)	58.5	58.5		58.5	58.5		10.0	10.0			4.0	4.0
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.11	0.11			0.04	0.04
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	161	3254		143	3289		196	190			80	70
v/s Ratio Prot		c0.32			0.31		c0.03	0.02			c0.06	
v/s Ratio Perm	0.07			0.29								0.00
v/c Ratio	0.11	0.50		0.44	0.47		0.26	0.15			1.48	0.02
Uniform Delay, d1	5.9	8.2		7.7	7.9		36.6	36.2			43.0	41.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.5	0.2		9.6	0.5		0.7	0.4			269.2	0.1
Delay (s)	6.5	8.4		17.3	8.4		37.3	36.6			312.2	41.2
Level of Service	A	A		B	A		D	D			F	D
Approach Delay (s)		8.3			8.8			36.9			260.2	
Approach LOS		A			A			D			F	

Intersection Summary

HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

FY_w/out Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	966	63	343	1154	95	121	871	383	99	608	139
Future Volume (veh/h)	230	966	63	343	1154	95	121	871	383	99	608	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	242	1017	66	385	1297	107	139	1001	440	110	676	154
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	1375	427	363	1568	129	144	1077	480	242	840	191
Arrive On Green	0.15	0.27	0.27	0.20	0.33	0.33	0.08	0.30	0.30	0.07	0.29	0.29
Sat Flow, veh/h	1781	5106	1585	1781	4807	397	1781	3554	1585	3456	2875	654
Grp Volume(v), veh/h	242	1017	66	385	919	485	139	1001	440	110	418	412
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1799	1781	1777	1585	1728	1777	1753
Q Serve(g_s), s	17.4	23.6	4.1	26.5	32.4	32.4	10.1	35.5	34.8	4.0	28.3	28.3
Cycle Q Clear(g_c), s	17.4	23.6	4.1	26.5	32.4	32.4	10.1	35.5	34.8	4.0	28.3	28.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	262	1375	427	363	1110	587	144	1077	480	242	519	512
V/C Ratio(X)	0.92	0.74	0.15	1.06	0.83	0.83	0.97	0.93	0.92	0.45	0.80	0.81
Avail Cap(c_a), veh/h	262	1375	427	363	1110	587	144	1077	480	242	519	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.87	0.87	0.87	1.00	1.00	1.00	0.59	0.59	0.59	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	43.3	36.2	51.7	40.4	40.4	59.6	44.0	43.7	58.1	42.6	42.6
Incr Delay (d2), s/veh	32.4	3.2	0.7	64.1	7.1	12.6	47.9	9.9	16.7	6.1	12.5	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	10.3	1.7	18.3	14.6	16.3	6.5	17.0	15.8	1.9	14.2	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.1	46.5	36.9	115.8	47.5	53.1	107.5	53.8	60.4	64.1	55.0	55.3
LnGrp LOS	F	D	D	F	D	D	F	D	E	E	E	E
Approach Vol, veh/h		1325			1789			1580			940	
Approach Delay, s/veh		53.4			63.7			60.4			56.2	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.6	47.9	13.6	44.9	31.0	40.5	15.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	19.1	42.4	9.1	39.4	26.5	35.0	10.5	38.0				
Max Q Clear Time (g_c+I1), s	19.4	34.4	6.0	37.5	28.5	25.6	12.1	30.3				
Green Ext Time (p_c), s	0.0	6.5	0.0	1.2	0.0	6.3	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			59.1									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

FY_w/out Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (veh/h)	80	773	131	203	992	87	136	762	111	110	1110	34
Future Volume (veh/h)	80	773	131	203	992	87	136	762	111	110	1110	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	840	142	209	1023	90	148	828	121	124	1247	38
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	1296	218	212	1681	148	113	1018	149	130	1184	36
Arrive On Green	0.06	0.29	0.29	0.12	0.35	0.35	0.06	0.33	0.33	0.07	0.34	0.34
Sat Flow, veh/h	1781	4402	740	1781	4779	420	1781	3111	455	1781	3521	107
Grp Volume(v), veh/h	87	649	333	209	728	385	148	473	476	124	629	656
Grp Sat Flow(s),veh/h/ln	1781	1702	1737	1781	1702	1795	1781	1777	1789	1781	1777	1851
Q Serve(g_s), s	5.3	18.3	18.4	12.9	19.4	19.5	7.0	26.8	26.8	7.6	37.0	37.0
Cycle Q Clear(g_c), s	5.3	18.3	18.4	12.9	19.4	19.5	7.0	26.8	26.8	7.6	37.0	37.0
Prop In Lane	1.00		0.43	1.00		0.23	1.00		0.25	1.00		0.06
Lane Grp Cap(c), veh/h	110	1003	512	212	1197	631	113	582	585	130	598	623
V/C Ratio(X)	0.79	0.65	0.65	0.99	0.61	0.61	1.31	0.81	0.81	0.96	1.05	1.05
Avail Cap(c_a), veh/h	186	1003	512	212	1197	631	113	582	585	130	598	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	33.8	33.9	48.4	29.4	29.4	51.5	33.9	33.9	50.8	36.5	36.5
Incr Delay (d2), s/veh	4.7	3.2	6.3	57.3	2.3	4.3	187.3	11.8	11.8	65.5	51.4	51.0
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	2.5	7.9	8.6	9.1	8.2	9.1	9.0	13.3	13.4	5.7	24.2	25.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	37.0	40.2	105.6	31.7	33.8	238.8	45.7	45.7	116.3	87.9	87.5
LnGrp LOS	E	D	D	F	C	C	F	D	D	F	F	F
Approach Vol, veh/h		1069			1322			1097			1409	
Approach Delay, s/veh		39.5			44.0			71.8			90.2	
Approach LOS		D			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	44.7	12.0	42.0	17.6	38.4	11.0	43.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	11.5	34.0	8.0	36.0	13.1	32.4	7.0	37.0				
Max Q Clear Time (g_c+l1), s	7.3	21.5	9.6	28.8	14.9	20.4	9.0	39.0				
Green Ext Time (p_c), s	0.0	8.1	0.0	2.5	0.0	7.1	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay				62.5								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 9: Firestone Blvd & Pioneer Blvd

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	379	48	62	349	44	54	919	60	74	690	190
Future Volume (veh/h)	234	379	48	62	349	44	54	919	60	74	690	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	244	395	50	65	367	46	65	1107	0	91	852	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	840	375	84	558	249	84	1649		94	1670	
Arrive On Green	0.13	0.24	0.24	0.05	0.16	0.16	0.05	0.46	0.00	0.05	0.47	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	244	395	50	65	367	46	65	1107	0	91	852	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	9.1	2.4	3.4	9.2	2.4	3.4	23.0	0.0	4.8	15.9	0.0
Cycle Q Clear(g_c), s	12.0	9.1	2.4	3.4	9.2	2.4	3.4	23.0	0.0	4.8	15.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	840	375	84	558	249	84	1649		94	1670	
V/C Ratio(X)	1.08	0.47	0.13	0.78	0.66	0.18	0.78	0.67		0.97	0.51	
Avail Cap(c_a), veh/h	225	1197	534	169	1085	484	113	1649		94	1670	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	41.5	31.2	28.6	44.8	37.6	34.8	44.8	19.8	0.0	44.9	17.6	0.0
Incr Delay (d2), s/veh	84.3	0.7	0.3	5.7	2.3	0.6	14.7	2.2	0.0	75.8	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	3.9	0.9	1.6	4.1	1.0	1.8	9.6	0.0	4.1	6.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.8	31.9	28.9	50.5	39.9	35.4	59.5	22.0	0.0	120.7	18.5	0.0
LnGrp LOS	F	C	C	D	D	D	E	C		F	B	
Approach Vol, veh/h		689			478			1172			943	
Approach Delay, s/veh		64.9			40.9			24.1			28.4	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	49.6	8.5	27.9	8.5	50.1	16.0	20.4				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	5.0	30.0	9.0	32.0	6.0	29.0	12.0	29.0				
Max Q Clear Time (g_c+I1), s	6.8	25.0	5.4	11.1	5.4	17.9	14.0	11.2				
Green Ext Time (p_c), s	0.0	4.1	0.0	4.3	0.0	7.1	0.0	3.7				






















Intersection Summary												
HCM 6th Ctrl Delay											36.3	
HCM 6th LOS											D	

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

FY_w/out Project_AM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	3	0	0	445	0	76	0	899	688	101	577	1	
Future Volume (vph)	3	0	0	445	0	76	0	899	688	101	577	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt		1.00		1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected		0.95		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1770		1681	1681	1583		5085	1583	1770	5084		
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1863		1681	1681	1583		5085	1583	1770	5084		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	3	0	0	563	0	96	0	1183	905	115	656	1	
RTOR Reduction (vph)	0	0	0	0	0	68	0	0	214	0	0	0	
Lane Group Flow (vph)	0	3	0	281	282	28	0	1183	691	115	657	0	
Turn Type	Perm	NA		Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)		0.7		20.4	20.4	20.4		21.2	41.6	6.1	32.3		
Effective Green, g (s)		0.7		20.4	20.4	20.4		21.2	41.6	6.1	32.3		
Actuated g/C Ratio		0.01		0.29	0.29	0.29		0.31	0.60	0.09	0.47		
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)		18		494	494	465		1553	948	155	2366		
v/s Ratio Prot				0.17	0.17			c0.23	c0.21	c0.06	0.13		
v/s Ratio Perm		c0.00				0.02			0.22				
v/c Ratio		0.17		0.57	0.57	0.06		0.76	0.73	0.74	0.28		
Uniform Delay, d1		34.1		20.8	20.8	17.6		21.8	9.9	30.9	11.4		
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2		5.1		1.5	1.6	0.1		3.6	2.8	15.3	0.3		
Delay (s)		39.2		22.3	22.4	17.7		25.4	12.7	46.2	11.7		
Level of Service		D		C	C	B		C	B	D	B		
Approach Delay (s)		39.2			21.7			19.9			16.8		
Approach LOS		D			C			B			B		
Intersection Summary													
HCM 2000 Control Delay			19.6		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.74										
Actuated Cycle Length (s)			69.4		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			64.0%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	11	100	37	21	8	173	1049	7	5	732	208
Future Volume (veh/h)	335	11	100	37	21	8	173	1049	7	5	732	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	409	13	122	57	32	12	211	1279	9	5	755	214
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	641	543	509	444	167	163	1788	13	5	1600	714
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.05	0.49	0.49	0.00	0.45	0.45
Sat Flow, veh/h	1362	1870	1585	1254	1297	486	3456	3617	25	1781	3554	1585
Grp Volume(v), veh/h	409	13	122	57	0	44	211	628	660	5	755	214
Grp Sat Flow(s),veh/h/ln	1362	1870	1585	1254	0	1783	1728	1777	1866	1781	1777	1585
Q Serve(g_s), s	24.6	0.4	4.7	2.7	0.0	1.4	4.0	23.5	23.5	0.2	12.6	7.3
Cycle Q Clear(g_c), s	26.0	0.4	4.7	3.1	0.0	1.4	4.0	23.5	23.5	0.2	12.6	7.3
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	529	641	543	509	0	611	163	878	922	5	1600	714
V/C Ratio(X)	0.77	0.02	0.22	0.11	0.00	0.07	1.30	0.72	0.72	0.96	0.47	0.30
Avail Cap(c_a), veh/h	705	882	748	669	0	839	163	878	922	42	1600	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.56	0.56	0.56
Uniform Delay (d), s/veh	27.6	18.5	19.9	19.5	0.0	18.8	40.5	16.8	16.8	42.4	16.3	14.9
Incr Delay (d2), s/veh	3.3	0.0	0.2	0.1	0.0	0.0	171.5	5.0	4.7	72.5	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.2	1.7	0.8	0.0	0.6	5.5	10.0	10.4	0.2	5.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	18.5	20.0	19.6	0.0	18.9	212.0	21.8	21.5	114.8	16.9	15.5
LnGrp LOS	C	B	C	B	A	B	F	C	C	F	B	B
Approach Vol, veh/h		544			101			1499				974
Approach Delay, s/veh		28.2			19.3			48.5				17.1
Approach LOS		C			B			D				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	47.0		33.7	8.0	43.3		33.7				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+I1), s	2.2	25.5		5.1	6.0	14.6		28.0				
Green Ext Time (p_c), s	0.0	2.2		0.3	0.0	3.4		1.1				

Intersection Summary

HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖		↗		↕	↗	↖↗	↕↕↕			↕↕↕	
Traffic Volume (veh/h)	90	0	111	143	95	623	107	942	0	3	989	62
Future Volume (veh/h)	90	0	111	143	95	623	107	942	0	3	989	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	101	0	125	157	104	685	135	1192	0	4	1192	75
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	0	0	0	367	840	533	274	2933	0	31	2168	136
Arrive On Green	0.00	0.00	0.00	0.34	0.34	0.34	0.08	0.57	0.00	0.46	0.46	0.46
Sat Flow, veh/h		0		1092	2500	1585	3456	5274	0	4	4755	298
Grp Volume(v), veh/h		0.0		261	0	685	135	1192	0	467	389	414
Grp Sat Flow(s),veh/h/ln				1816	1777	1585	1728	1702	0	1860	1549	1648
Q Serve(g_s), s				13.9	0.0	42.0	4.7	16.2	0.0	0.0	22.8	22.8
Cycle Q Clear(g_c), s				13.9	0.0	42.0	4.7	16.2	0.0	22.7	22.8	22.8
Prop In Lane				0.60		1.00	1.00		0.00	0.01		0.18
Lane Grp Cap(c), veh/h				610	597	533	274	2933	0	877	706	752
V/C Ratio(X)				0.43	0.00	1.29	0.49	0.41	0.00	0.53	0.55	0.55
Avail Cap(c_a), veh/h				610	597	533	276	2933	0	877	706	752
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.86	0.86	0.00	0.95	0.95	0.95
Uniform Delay (d), s/veh				32.2	0.0	41.5	55.1	14.8	0.0	24.7	24.7	24.7
Incr Delay (d2), s/veh				0.5	0.0	142.5	1.2	0.4	0.0	2.2	2.9	2.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	37.3	2.1	6.3	0.0	10.5	8.9	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.7	0.0	184.0	56.3	15.1	0.0	26.9	27.6	27.5
LnGrp LOS				C	A	F	E	B	A	C	C	C
Approach Vol, veh/h					946			1327			1271	
Approach Delay, s/veh					142.3			19.3			27.3	
Approach LOS					F			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			14.8	62.8		47.4				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		54.4			10.0	39.5		42.0				
Max Q Clear Time (g_c+I1), s		18.2			6.7	24.8		44.0				
Green Ext Time (p_c), s		19.6			0.1	10.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				55.0								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp

FY_w/out Project_AM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	251	99	0	0	0	0	964	245	267	960	0
Future Volume (veh/h)	56	251	99	0	0	0	0	964	245	267	960	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	63	282	111				0	1148	292	314	1129	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	225	449	200				0	2426	617	367	3859	0
Arrive On Green	0.13	0.13	0.13				0.00	0.60	0.60	0.11	0.76	0.00
Sat Flow, veh/h	1781	3554	1585				0	4225	1032	3456	5274	0
Grp Volume(v), veh/h	63	282	111				0	963	477	314	1129	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1685	1728	1702	0
Q Serve(g_s), s	3.0	7.2	6.3				0.0	15.1	15.1	8.5	6.6	0.0
Cycle Q Clear(g_c), s	3.0	7.2	6.3				0.0	15.1	15.1	8.5	6.6	0.0
Prop In Lane	1.00		1.00				0.00		0.61	1.00		0.00
Lane Grp Cap(c), veh/h	225	449	200				0	2035	1007	367	3859	0
V/C Ratio(X)	0.28	0.63	0.55				0.00	0.47	0.47	0.85	0.29	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	2035	1007	367	3859	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	1.00	1.00	0.54	0.54	0.00
Uniform Delay (d), s/veh	37.6	39.4	39.0				0.0	10.7	10.7	41.7	3.6	0.0
Incr Delay (d2), s/veh	0.7	1.5	2.4				0.0	0.8	1.6	10.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.2	2.5				0.0	5.4	5.6	4.1	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	40.8	41.4				0.0	11.5	12.3	52.1	3.7	0.0
LnGrp LOS	D	D	D				A	B	B	D	A	A
Approach Vol, veh/h		456						1440			1443	
Approach Delay, s/veh		40.6						11.8			14.3	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	15.0	62.6		17.4				77.6				
Change Period (Y+Rc), s	4.9	5.8		5.4				5.8				
Max Green Setting (Gmax), s	10.1	26.8		42.0				41.8				
Max Q Clear Time (g_c+I1), s	10.5	17.1		9.2				8.6				
Green Ext Time (p_c), s	0.0	8.2		2.5				17.6				
Intersection Summary												
HCM 6th Ctrl Delay			16.8									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

























FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	378	47	63	346	51	54	931	63	80	695	190
Future Volume (veh/h)	234	378	47	63	346	51	54	931	63	80	695	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	254	411	51	69	380	56	63	1083	73	95	827	226
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	1375	613	91	1038	463	107	1070	477	109	1207	327
Arrive On Green	0.15	0.39	0.39	0.05	0.29	0.29	0.06	0.30	0.30	0.06	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3995	1084
Grp Volume(v), veh/h	254	411	51	69	380	56	63	1083	73	95	704	349
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1675
Q Serve(g_s), s	14.2	8.0	2.0	3.8	8.5	2.6	3.4	30.1	3.4	5.3	18.2	18.4
Cycle Q Clear(g_c), s	14.2	8.0	2.0	3.8	8.5	2.6	3.4	30.1	3.4	5.3	18.2	18.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	260	1375	613	91	1038	463	107	1070	477	109	1028	506
V/C Ratio(X)	0.98	0.30	0.08	0.76	0.37	0.12	0.59	1.01	0.15	0.87	0.68	0.69
Avail Cap(c_a), veh/h	260	1375	613	169	1038	463	112	1070	477	109	1028	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	21.3	19.4	46.8	28.1	26.0	45.8	35.0	25.6	46.6	30.7	30.8
Incr Delay (d2), s/veh	49.0	0.6	0.3	4.7	1.0	0.5	4.6	30.6	0.3	47.9	2.5	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	3.4	0.8	1.8	3.7	1.0	1.7	17.2	1.3	3.8	7.7	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.5	21.8	19.7	51.5	29.1	26.5	50.4	65.6	25.9	94.5	33.2	35.9
LnGrp LOS	F	C	B	D	C	C	D	F	C	F	C	D
Approach Vol, veh/h		716			505			1219			1148	
Approach Delay, s/veh		46.4			31.9			62.4			39.1	
Approach LOS		D			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	44.2	10.6	35.6	19.1	34.7	10.5	35.7				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	9.5	34.3	6.1	30.1	14.6	29.2	6.3	29.9				
Max Q Clear Time (g_c+I1), s	5.8	10.0	7.3	32.1	16.2	10.5	5.4	20.4				
Green Ext Time (p_c), s	0.0	5.4	0.0	0.0	0.0	4.5	0.0	6.7				
Intersection Summary												
HCM 6th Ctrl Delay				47.4								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

FY_w/out Project_AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	704	80	269	745	383	43	678	276	312	637	119
Future Volume (veh/h)	77	704	80	269	745	383	43	678	276	312	637	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	800	91	302	837	430	48	762	310	332	678	127
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	948	423	329	1036	813	102	1015	453	395	1218	543
Arrive On Green	0.07	0.27	0.27	0.10	0.29	0.29	0.06	0.29	0.29	0.11	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	88	800	91	302	837	430	48	762	310	332	678	127
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.1	22.4	4.7	9.1	22.9	13.6	2.7	20.5	18.2	9.9	16.3	6.0
Cycle Q Clear(g_c), s	5.1	22.4	4.7	9.1	22.9	13.6	2.7	20.5	18.2	9.9	16.3	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	948	423	329	1036	813	102	1015	453	395	1218	543
V/C Ratio(X)	0.70	0.84	0.22	0.92	0.81	0.53	0.47	0.75	0.68	0.84	0.56	0.23
Avail Cap(c_a), veh/h	136	948	423	329	1036	813	136	1015	453	428	1218	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	36.4	30.0	47.1	34.5	31.2	47.9	34.1	33.3	45.6	28.0	24.7
Incr Delay (d2), s/veh	12.7	9.1	1.2	27.2	6.1	2.2	2.5	5.1	8.2	12.7	1.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	10.8	1.9	5.1	10.6	4.8	1.3	9.4	7.9	4.9	7.1	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	45.6	31.1	74.3	40.6	33.4	50.4	39.2	41.5	58.3	29.9	25.7
LnGrp LOS	E	D	C	E	D	C	D	D	D	E	C	C
Approach Vol, veh/h		979			1569			1120			1137	
Approach Delay, s/veh		45.5			45.1			40.3			37.7	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	34.5	12.0	42.5	13.4	37.1	18.0	36.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	10.0	27.0	8.0	35.0	8.0	29.0	13.0	30.0				
Max Q Clear Time (g_c+I1), s	11.1	24.4	4.7	18.3	7.1	24.9	11.9	22.5				
Green Ext Time (p_c), s	0.0	1.9	0.0	7.9	0.0	3.3	0.1	5.3				
Intersection Summary												
HCM 6th Ctrl Delay			42.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	914	416	80	1185	0	0	0	0	425	1	223
Future Volume (veh/h)	0	914	416	80	1185	0	0	0	0	425	1	223
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1101	501	91	1347	0				519	0	272
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1701	759	193	3299	0				767	0	341
Arrive On Green	0.00	0.48	0.48	0.11	0.65	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1101	501	91	1347	0				519	0	272
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	18.7	19.3	3.8	10.1	0.0				10.7	0.0	13.0
Cycle Q Clear(g_c), s	0.0	18.7	19.3	3.8	10.1	0.0				10.7	0.0	13.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1701	759	193	3299	0				767	0	341
V/C Ratio(X)	0.00	0.65	0.66	0.47	0.41	0.00				0.68	0.00	0.80
Avail Cap(c_a), veh/h	0	1701	759	223	3299	0				917	0	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.53	0.53	0.92	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.7	15.9	33.5	6.8	0.0				28.8	0.0	29.7
Incr Delay (d2), s/veh	0.0	1.0	2.4	1.2	0.1	0.0				1.9	0.0	10.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.2	6.9	1.7	3.1	0.0				4.6	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.8	18.3	34.7	6.9	0.0				30.8	0.0	39.8
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1602			1438						791	
Approach Delay, s/veh		17.2			8.7						33.9	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.4	44.0		22.6		57.4						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	33.6		20.6		48.3						
Max Q Clear Time (g_c+I1), s	5.8	21.3		15.0		12.1						
Green Ext Time (p_c), s	0.0	8.4		2.2		15.5						

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗↗	↘	↘	↗	↘			
Traffic Volume (veh/h)	233	1174	0	0	982	553	258	1	42	0	0	0
Future Volume (veh/h)	233	1174	0	0	982	553	258	1	42	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	253	1276	0	0	1023	576	328	0	53			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2604	0	0	2907	903	513	0	228			
Arrive On Green	0.11	0.73	0.00	0.00	0.57	0.57	0.14	0.00	0.14			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	253	1276	0	0	1023	576	328	0	53			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	13.5	0.0	0.0	9.7	22.1	7.8	0.0	2.7			
Cycle Q Clear(g_c), s	10.0	13.5	0.0	0.0	9.7	22.1	7.8	0.0	2.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2604	0	0	2907	903	513	0	228			
V/C Ratio(X)	1.28	0.49	0.00	0.00	0.35	0.64	0.64	0.00	0.23			
Avail Cap(c_a), veh/h	198	2604	0	0	2907	903	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	5.0	0.0	0.0	10.4	13.1	36.3	0.0	34.1			
Incr Delay (d2), s/veh	150.3	0.5	0.0	0.0	0.3	3.4	2.8	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.6	3.9	0.0	0.0	3.5	8.0	3.5	0.0	1.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	190.3	5.5	0.0	0.0	10.8	16.6	39.2	0.0	35.2			
LnGrp LOS	F	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		1529			1599			381				
Approach Delay, s/veh		36.1			12.9			38.6				
Approach LOS		D			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		71.6			14.7	56.9		18.4				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		15.5			12.0	24.1		9.8				
Green Ext Time (p_c), s		13.1			0.0	2.5		3.1				

Intersection Summary

HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave
































FY_w/out Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	343	693	71	86	742	52	85	940	134	42	1094	456
Future Volume (veh/h)	343	693	71	86	742	52	85	940	134	42	1094	456
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	399	806	83	95	815	57	90	1000	143	48	1257	524
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	1144	118	120	1481	103	98	1248	557	61	1174	706
Arrive On Green	0.12	0.35	0.35	0.07	0.30	0.30	0.06	0.35	0.35	0.03	0.33	0.33
Sat Flow, veh/h	3456	3252	335	1781	4874	340	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	399	440	449	95	568	304	90	1000	143	48	1257	524
Grp Sat Flow(s),veh/h/ln	1728	1777	1810	1781	1702	1809	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.1	22.4	22.4	5.5	14.7	14.7	5.3	26.7	6.8	2.8	34.7	28.7
Cycle Q Clear(g_c), s	12.1	22.4	22.4	5.5	14.7	14.7	5.3	26.7	6.8	2.8	34.7	28.7
Prop In Lane	1.00		0.18	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	398	625	637	120	1034	550	98	1248	557	61	1174	706
V/C Ratio(X)	1.00	0.70	0.70	0.79	0.55	0.55	0.91	0.80	0.26	0.78	1.07	0.74
Avail Cap(c_a), veh/h	398	625	637	153	1034	550	98	1248	557	93	1174	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	29.3	29.3	48.3	30.5	30.6	49.4	30.8	24.3	50.3	35.1	24.1
Incr Delay (d2), s/veh	45.6	6.5	6.4	15.2	2.1	4.0	62.8	3.5	0.1	10.1	47.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	10.5	10.7	2.9	6.2	7.0	4.1	11.8	2.5	1.4	22.3	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.0	35.9	35.8	63.4	32.6	34.5	112.1	34.3	24.4	60.4	82.4	27.8
LnGrp LOS	F	D	D	E	C	C	F	C	C	E	F	C
Approach Vol, veh/h		1288			967			1233			1829	
Approach Delay, s/veh		53.2			36.3			38.8			66.2	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	42.9	9.8	40.2	17.1	37.9	7.6	42.4				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	9.0	35.0	5.8	34.7	12.1	31.9	5.5	35.0				
Max Q Clear Time (g_c+I1), s	7.5	24.4	7.3	36.7	14.1	16.7	4.8	28.7				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.0	0.0	3.5	0.0	2.9				
Intersection Summary												
HCM 6th Ctrl Delay			51.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

FY_w/out Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		 	 	
Traffic Volume (veh/h)	103	1368	319	215	1251	143	45	474	286	169	490	558
Future Volume (veh/h)	103	1368	319	215	1251	143	45	474	286	169	490	558
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	1591	371	244	1422	162	49	515	311	204	590	672
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	2042	634	189	2042	634	283	1421	634	704	1421	634
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	323	5106	1585	223	5106	1585	439	3554	1585	1287	3554	1585
Grp Volume(v), veh/h	120	1591	371	244	1422	162	49	515	311	204	590	672
Grp Sat Flow(s),veh/h/ln	323	1702	1585	223	1702	1585	439	1777	1585	643	1777	1585
Q Serve(g_s), s	7.6	12.2	8.3	5.8	10.4	3.1	4.1	4.6	6.6	5.9	5.4	18.0
Cycle Q Clear(g_c), s	18.0	12.2	8.3	18.0	10.4	3.1	9.4	4.6	6.6	10.5	5.4	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	2042	634	189	2042	634	283	1421	634	704	1421	634
V/C Ratio(X)	0.56	0.78	0.59	1.29	0.70	0.26	0.17	0.36	0.49	0.29	0.42	1.06
Avail Cap(c_a), veh/h	214	2042	634	189	2042	634	283	1421	634	704	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	11.8	10.6	22.1	11.2	9.0	13.1	9.5	10.1	13.2	9.7	13.5
Incr Delay (d2), s/veh	3.3	2.0	1.4	165.4	1.0	0.2	0.3	0.2	0.6	0.2	0.2	52.7
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	1.3	3.9	2.5	10.5	3.2	0.9	0.4	1.4	1.9	0.7	1.7	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	13.8	12.0	187.5	12.3	9.2	13.4	9.6	10.7	13.4	9.9	66.2
LnGrp LOS	C	B	B	F	B	A	B	A	B	B	A	F
Approach Vol, veh/h		2082			1828			875			1466	
Approach Delay, s/veh		14.0			35.4			10.2			36.2	
Approach LOS		B			D			B			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		11.4		20.0		20.0		20.0				
Green Ext Time (p_c), s		2.8		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				24.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

FY_w/out Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖↗	↑↑↑					↘	↖↗	↗
Traffic Volume (veh/h)	0	1545	228	13	1425	0	0	0	0	330	165	157
Future Volume (veh/h)	0	1545	228	13	1425	0	0	0	0	330	165	157
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1756	259	15	1638	0				388	194	185
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2532	786	415	3479	0				604	317	269
Arrive On Green	0.00	0.50	0.50	0.12	0.68	0.00				0.17	0.17	0.17
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1756	259	15	1638	0				388	194	185
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	19.8	7.4	0.3	11.3	0.0				7.6	7.2	8.2
Cycle Q Clear(g_c), s	0.0	19.8	7.4	0.3	11.3	0.0				7.6	7.2	8.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2532	786	415	3479	0				604	317	269
V/C Ratio(X)	0.00	0.69	0.33	0.04	0.47	0.00				0.64	0.61	0.69
Avail Cap(c_a), veh/h	0	2532	786	415	3479	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.66	0.66	0.91	0.91	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.5	11.4	29.2	5.6	0.0				29.0	28.9	29.3
Incr Delay (d2), s/veh	0.0	1.1	0.7	0.0	0.2	0.0				2.1	3.3	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.1	2.5	0.1	3.1	0.0				3.3	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.6	12.1	29.2	5.8	0.0				31.2	32.1	35.6
LnGrp LOS	A	B	B	C	A	A				C	C	D
Approach Vol, veh/h		2015			1653						767	
Approach Delay, s/veh		15.1			6.0						32.5	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.9	43.0		18.1		56.9						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	2.3	21.8		10.2		13.3						
Green Ext Time (p_c), s	0.0	11.6		2.5		26.3						

Intersection Summary

HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

FY_w/out Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔	↑↑↑	↔		↔↔	↔			
Traffic Volume (veh/h)	139	1645	118	0	1270	738	139	151	12	0	0	0
Future Volume (veh/h)	139	1645	118	0	1270	738	139	151	12	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	160	1891	136	0	1494	868	154	168	13			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	420	3986	286	2	3252	1010	267	266	238			
Arrive On Green	0.12	0.82	0.82	0.00	0.64	0.64	0.15	0.15	0.15			
Sat Flow, veh/h	3456	4863	349	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	160	1322	705	0	1494	868	154	168	13			
Grp Sat Flow(s),veh/h/ln	1728	1702	1808	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	3.4	9.2	9.2	0.0	12.0	35.2	6.4	7.1	0.6			
Cycle Q Clear(g_c), s	3.4	9.2	9.2	0.0	12.0	35.2	6.4	7.1	0.6			
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	420	2790	1482	2	3252	1010	267	266	238			
V/C Ratio(X)	0.38	0.47	0.48	0.00	0.46	0.86	0.58	0.63	0.05			
Avail Cap(c_a), veh/h	436	2790	1482	225	3252	1010	272	271	242			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.80	0.80	0.80	0.00	0.09	0.09	1.00	1.00	1.00			
Uniform Delay (d), s/veh	32.4	2.1	2.1	0.0	7.5	11.7	31.6	31.9	29.1			
Incr Delay (d2), s/veh	0.5	0.5	0.9	0.0	0.0	0.8	3.2	4.9	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.4	1.4	1.7	0.0	3.7	10.2	2.9	3.3	0.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	2.6	3.0	0.0	7.5	12.4	34.9	36.8	29.3			
LnGrp LOS	C	A	A	A	A	B	C	D	C			
Approach Vol, veh/h		2187			2362			335				
Approach Delay, s/veh		4.9			9.3			35.6				
Approach LOS		A			A			D				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	0.0	71.4			14.6	56.8		17.4				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.1	41.6			10.1	* 43		12.2				
Max Q Clear Time (g_c+I1), s	0.0	11.2			5.4	37.2		9.1				
Green Ext Time (p_c), s	0.0	26.8			0.2	5.0		0.6				

Intersection Summary
































HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

Notes

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

HCM Signalized Intersection Capacity Analysis
4: Norwalk Blvd & Imperial Hwy

FY_w/out Project_PM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  			  			 			  		
Traffic Volume (vph)	162	1130	78	161	1557	76	229	620	147	152	882	237	
Future Volume (vph)	162	1130	78	161	1557	76	229	620	147	152	882	237	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583	
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	186	1299	90	185	1790	87	246	667	158	163	948	255	
RTOR Reduction (vph)	0	0	64	0	0	56	0	0	66	0	0	128	
Lane Group Flow (vph)	186	1299	26	185	1790	31	246	667	92	163	948	127	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	
Protected Phases	1	5		6	2		3	8		7		4	
Permitted Phases			5			2			8			4	
Actuated Green, G (s)	15.6	41.2	41.2	25.4	51.0	51.0	20.0	37.7	63.1	15.7	33.4	33.4	
Effective Green, g (s)	15.6	41.2	41.2	25.4	51.0	51.0	20.0	37.7	63.1	15.7	33.4	33.4	
Actuated g/C Ratio	0.11	0.28	0.28	0.18	0.35	0.35	0.14	0.26	0.44	0.11	0.23	0.23	
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5	
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5	
Lane Grp Cap (vph)	190	1444	449	310	1788	556	244	920	688	191	1171	364	
v/s Ratio Prot	0.11	c0.26		0.10	c0.35		c0.14	c0.19	0.02	0.09	c0.19		
v/s Ratio Perm			0.02			0.02			0.03			0.08	
v/c Ratio	0.98	0.90	0.06	0.60	1.00	0.06	1.01	0.72	0.13	0.85	0.81	0.35	
Uniform Delay, d1	64.5	49.9	37.8	55.1	47.0	31.1	62.5	48.9	24.6	63.5	52.8	46.7	
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	58.3	8.2	0.1	8.2	21.5	0.2	59.7	3.3	0.2	28.1	4.7	1.0	
Delay (s)	122.8	58.1	37.9	63.3	68.5	31.3	122.2	52.2	24.7	91.6	57.5	47.7	
Level of Service	F	E	D	E	E	C	F	D	C	F	E	D	
Approach Delay (s)		64.6			66.5			64.2			59.7		
Approach LOS		E			E			E			E		
Intersection Summary													
HCM 2000 Control Delay			64.1									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.97										
Actuated Cycle Length (s)			145.0									Sum of lost time (s)	25.0
Intersection Capacity Utilization			89.6%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy





















FY_w/out Project_PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1417	90	48	1591	89	173	8	56	55	14	42
Future Volume (veh/h)	69	1417	90	48	1591	89	173	8	56	55	14	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	1610	102	53	1768	99	247	11	80	79	20	60
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	2808	872	67	2714	842	236	16	118	224	33	99
Arrive On Green	0.06	0.55	0.55	0.04	0.53	0.53	0.06	0.08	0.08	0.05	0.08	0.08
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	195	1420	1781	412	1236
Grp Volume(v), veh/h	78	1610	102	53	1768	99	247	0	91	79	0	80
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1615	1781	0	1648
Q Serve(g_s), s	3.5	16.6	2.5	2.4	19.9	2.5	4.6	0.0	4.4	3.2	0.0	3.8
Cycle Q Clear(g_c), s	3.5	16.6	2.5	2.4	19.9	2.5	4.6	0.0	4.4	3.2	0.0	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.75
Lane Grp Cap(c), veh/h	100	2808	872	67	2714	842	236	0	135	224	0	132
V/C Ratio(X)	0.78	0.57	0.12	0.79	0.65	0.12	1.05	0.00	0.68	0.35	0.00	0.61
Avail Cap(c_a), veh/h	100	2808	872	102	2714	842	236	0	365	230	0	373
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)	0.45	0.45	0.45	0.83	0.83	0.83	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.3	11.8	8.7	38.2	13.4	9.4	36.0	0.0	35.6	31.5	0.0	35.6
Incr Delay (d2), s/veh	14.8	0.4	0.1	8.5	1.0	0.2	71.6	0.0	5.8	0.9	0.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	5.7	0.8	1.2	7.0	0.8	7.0	0.0	1.9	1.4	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	12.2	8.8	46.7	14.5	9.6	107.6	0.0	41.4	32.5	0.0	40.1
LnGrp LOS	D	B	A	D	B	A	F	A	D	C	A	D
Approach Vol, veh/h		1790			1920			338				159
Approach Delay, s/veh		13.8			15.1			89.7				36.3
Approach LOS		B			B			F				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	50.5	9.6	11.9	9.5	49.0	9.3	12.2				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.6	30.7	4.6	18.1	4.5	30.8	4.6	18.1				
Max Q Clear Time (g_c+I1), s	4.4	18.6	6.6	5.8	5.5	21.9	5.2	6.4				
Green Ext Time (p_c), s	0.0	10.3	0.0	0.3	0.0	8.1	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

FY_w/out Project_PM
03/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1387	36	52	1508	103	126	53	63	42	15	22
Future Volume (vph)	30	1387	36	52	1508	103	126	53	63	42	15	22
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	5066		1770	5037		1770	1711			1797	1583
Flt Permitted	0.10	1.00		0.12	1.00		0.95	1.00			0.96	1.00
Satd. Flow (perm)	184	5066		232	5037		1770	1711			1797	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	33	1541	40	57	1639	112	183	77	91	47	17	25
RTOR Reduction (vph)	0	2	0	0	5	0	0	35	0	0	0	24
Lane Group Flow (vph)	33	1579	0	57	1746	0	183	133	0	0	64	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	86.6	86.6		86.6	86.6		18.8	18.8			7.1	7.1
Effective Green, g (s)	86.6	86.6		86.6	86.6		18.8	18.8			7.1	7.1
Actuated g/C Ratio	0.67	0.67		0.67	0.67		0.14	0.14			0.05	0.05
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	122	3374		154	3355		255	247			98	86
v/s Ratio Prot		0.31			c0.35		c0.10	0.08			c0.04	
v/s Ratio Perm	0.18			0.25								0.00
v/c Ratio	0.27	0.47		0.37	0.52		0.72	0.54			0.65	0.02
Uniform Delay, d1	8.8	10.5		9.6	11.1		53.1	51.6			60.2	58.1
Progression Factor	1.00	1.00		0.50	0.44		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.1	0.2		3.5	0.3		9.3	2.3			14.5	0.1
Delay (s)	10.9	10.7		8.3	5.2		62.3	53.8			74.8	58.2
Level of Service	B	B		A	A		E	D			E	E
Approach Delay (s)		10.7			5.3			58.3			70.1	
Approach LOS		B			A			E			E	
Intersection Summary												
HCM 2000 Control Delay			13.9				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)				17.5	
Intersection Capacity Utilization			67.3%				ICU Level of Service				C	
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

FY_w/out Project_PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	1166	73	307	1197	57	168	626	446	162	859	233
Future Volume (veh/h)	212	1166	73	307	1197	57	168	626	446	162	859	233
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	1227	77	345	1345	64	193	720	513	180	954	259
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	1351	419	326	1556	74	189	1044	466	362	808	219
Arrive On Green	0.14	0.26	0.26	0.18	0.31	0.31	0.11	0.29	0.29	0.10	0.29	0.29
Sat Flow, veh/h	1781	5106	1585	1781	4994	238	1781	3554	1585	3456	2764	748
Grp Volume(v), veh/h	223	1227	77	345	917	492	193	720	513	180	612	601
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1828	1781	1777	1585	1728	1777	1736
Q Serve(g_s), s	16.1	30.2	4.9	23.8	33.0	33.0	13.8	23.3	38.2	6.4	38.0	38.0
Cycle Q Clear(g_c), s	16.1	30.2	4.9	23.8	33.0	33.0	13.8	23.3	38.2	6.4	38.0	38.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	243	1351	419	326	1060	569	189	1044	466	362	519	507
V/C Ratio(X)	0.92	0.91	0.18	1.06	0.86	0.86	1.02	0.69	1.10	0.50	1.18	1.18
Avail Cap(c_a), veh/h	243	1351	419	326	1060	569	189	1044	466	362	519	507
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)	0.88	0.88	0.88	1.00	1.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	46.3	36.9	53.1	42.2	42.2	58.1	40.6	45.9	55.0	46.0	46.0
Incr Delay (d2), s/veh	33.2	9.4	0.8	65.9	9.4	16.0	60.2	2.6	66.0	4.8	99.0	101.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	13.9	2.0	16.6	15.2	17.3	9.4	10.6	23.4	3.0	30.9	30.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.6	55.7	37.8	119.0	51.5	58.1	118.3	43.3	111.9	59.8	145.0	147.5
LnGrp LOS	F	E	D	F	D	E	F	D	F	E	F	F
Approach Vol, veh/h		1527			1754			1426			1393	
Approach Delay, s/veh		59.6			66.7			78.1			135.1	
Approach LOS		E			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.2	46.0	18.1	43.7	28.3	39.9	18.3	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	17.7	40.5	13.6	38.2	23.8	34.4	13.8	38.0				
Max Q Clear Time (g_c+I1), s	18.1	35.0	8.4	40.2	25.8	32.2	15.8	40.0				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.0	0.0	1.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay											83.2	
HCM 6th LOS											F	

HCM 6th Signalized Intersection Summary
 8: Carmenita Rd & Imperial Hwy

























FY_w/out Project_PM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (veh/h)	134	911	117	169	767	100	146	1127	147	109	1027	48
Future Volume (veh/h)	134	911	117	169	767	100	146	1127	147	109	1027	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	146	990	127	174	791	103	159	1225	160	122	1154	54
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	1296	166	185	1356	175	162	1150	150	113	1163	54
Arrive On Green	0.09	0.28	0.28	0.10	0.30	0.30	0.09	0.36	0.36	0.06	0.34	0.34
Sat Flow, veh/h	1781	4582	586	1781	4576	592	1781	3162	411	1781	3456	162
Grp Volume(v), veh/h	146	735	382	174	587	307	159	686	699	122	593	615
Grp Sat Flow(s),veh/h/ln	1781	1702	1765	1781	1702	1764	1781	1777	1796	1781	1777	1841
Q Serve(g_s), s	8.9	21.7	21.8	10.7	16.1	16.3	9.8	40.0	40.0	7.0	36.6	36.6
Cycle Q Clear(g_c), s	8.9	21.7	21.8	10.7	16.1	16.3	9.8	40.0	40.0	7.0	36.6	36.6
Prop In Lane	1.00		0.33	1.00		0.34	1.00		0.23	1.00		0.09
Lane Grp Cap(c), veh/h	160	962	499	185	1009	523	162	646	653	113	598	619
V/C Ratio(X)	0.91	0.76	0.77	0.94	0.58	0.59	0.98	1.06	1.07	1.08	0.99	0.99
Avail Cap(c_a), veh/h	160	962	499	185	1009	523	162	646	653	113	598	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	36.1	36.1	49.0	32.9	33.0	49.9	35.0	35.0	51.5	36.4	36.4
Incr Delay (d2), s/veh	45.1	5.7	10.7	49.2	2.5	4.8	65.0	53.1	55.3	106.5	34.9	34.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	9.7	10.8	7.2	6.9	7.6	7.3	26.3	27.0	6.5	21.3	22.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.7	41.8	46.8	98.2	35.4	37.7	115.0	88.1	90.3	158.0	71.3	70.9
LnGrp LOS	F	D	D	F	D	D	F	F	F	F	E	E
Approach Vol, veh/h		1263			1068			1544			1330	
Approach Delay, s/veh		49.4			46.3			91.9			79.1	
Approach LOS		D			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	38.6	11.0	46.0	15.9	37.1	14.0	43.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	9.9	32.6	7.0	40.0	11.4	31.1	10.0	37.0				
Max Q Clear Time (g_c+I1), s	10.9	18.3	9.0	42.0	12.7	23.8	11.8	38.6				
Green Ext Time (p_c), s	0.0	7.4	0.0	0.0	0.0	5.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				68.9								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 9: Firestone Blvd & Pioneer Blvd

FY_w/out Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	397	60	40	400	71	84	825	45	68	999	210
Future Volume (veh/h)	237	397	60	40	400	71	84	825	45	68	999	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	247	414	62	42	421	75	101	994	0	84	1233	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	970	433	53	603	269	102	1621		107	1631	
Arrive On Green	0.13	0.27	0.27	0.03	0.17	0.17	0.06	0.46	0.00	0.06	0.46	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	247	414	62	42	421	75	101	994	0	84	1233	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	14.0	10.1	3.1	2.5	11.7	4.3	6.0	22.2	0.0	4.9	30.2	0.0
Cycle Q Clear(g_c), s	14.0	10.1	3.1	2.5	11.7	4.3	6.0	22.2	0.0	4.9	30.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	970	433	53	603	269	102	1621		107	1631	
V/C Ratio(X)	1.04	0.43	0.14	0.79	0.70	0.28	0.99	0.61		0.79	0.76	
Avail Cap(c_a), veh/h	238	1252	559	102	981	438	102	1621		119	1631	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.70	0.70	0.00
Uniform Delay (d), s/veh	45.5	31.4	28.9	50.6	41.1	38.0	49.5	21.6	0.0	48.7	23.5	0.0
Incr Delay (d2), s/veh	69.2	0.5	0.3	9.0	2.5	1.0	86.5	1.7	0.0	17.1	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	4.4	1.2	1.2	5.3	1.7	5.1	9.4	0.0	2.7	12.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.7	31.9	29.1	59.6	43.6	39.0	136.0	23.3	0.0	65.8	25.9	0.0
LnGrp LOS	F	C	C	E	D	D	F	C		E	C	
Approach Vol, veh/h		723			538			1095			1317	
Approach Delay, s/veh		60.0			44.2			33.7			28.4	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	53.4	7.2	34.2	10.0	53.7	18.0	23.3				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	7.0	36.0	6.0	37.0	6.0	37.0	14.0	29.0				
Max Q Clear Time (g_c+I1), s	6.9	24.2	4.5	12.1	8.0	32.2	16.0	13.7				
Green Ext Time (p_c), s	0.0	8.3	0.0	4.9	0.0	4.2	0.0	4.1				






















Intersection Summary												
HCM 6th Ctrl Delay											38.5	
HCM 6th LOS											D	

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

FY_w/out Project_PM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	2	0	1	605	0	141	0	819	469	157	992	0	
Future Volume (vph)	2	0	1	605	0	141	0	819	469	157	992	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt		0.95		1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected		0.97		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1722		1681	1681	1583		5085	1583	1770	5085		
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1779		1681	1681	1583		5085	1583	1770	5085		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	2	0	1	766	0	178	0	1078	617	178	1127	0	
RTOR Reduction (vph)	0	3	0	0	0	124	0	0	192	0	0	0	
Lane Group Flow (vph)	0	0	0	383	383	54	0	1078	425	178	1127	0	
Turn Type	Perm	NA		Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)		0.7		21.4	21.4	21.4		18.4	39.8	8.8	32.2		
Effective Green, g (s)		0.7		21.4	21.4	21.4		18.4	39.8	8.8	32.2		
Actuated g/C Ratio		0.01		0.30	0.30	0.30		0.26	0.57	0.13	0.46		
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)		17		511	511	481		1330	896	221	2329		
v/s Ratio Prot				c0.23	0.23			c0.21	0.14	c0.10	0.22		
v/s Ratio Perm		c0.00				0.03			0.12				
v/c Ratio		0.00		0.75	0.75	0.11		0.81	0.47	0.81	0.48		
Uniform Delay, d1		34.5		22.0	22.0	17.6		24.3	9.0	29.9	13.3		
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.0		6.0	6.0	0.1		5.4	0.4	17.9	0.7		
Delay (s)		34.5		28.0	28.0	17.7		29.8	9.4	47.8	14.0		
Level of Service		C		C	C	B		C	A	D	B		
Approach Delay (s)		34.5			26.1			22.4			18.6		
Approach LOS		C			C			C			B		
Intersection Summary													
HCM 2000 Control Delay			22.0		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.77										
Actuated Cycle Length (s)			70.3		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			60.7%		ICU Level of Service					B			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

FY_w/out Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	16	151	9	10	5	102	907	14	12	1006	232
Future Volume (veh/h)	321	16	151	9	10	5	102	907	14	12	1006	232
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	391	20	184	14	15	8	124	1106	17	12	1037	239
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	515	596	505	451	366	195	163	1841	28	13	1685	752
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.05	0.51	0.51	0.01	0.47	0.47
Sat Flow, veh/h	1388	1870	1585	1178	1148	612	3456	3582	55	1781	3554	1585
Grp Volume(v), veh/h	391	20	184	14	0	23	124	549	574	12	1037	239
Grp Sat Flow(s),veh/h/ln	1388	1870	1585	1178	0	1760	1728	1777	1860	1781	1777	1585
Q Serve(g_s), s	23.0	0.6	7.6	0.7	0.0	0.8	3.0	18.5	18.5	0.6	18.4	7.9
Cycle Q Clear(g_c), s	23.8	0.6	7.6	1.3	0.0	0.8	3.0	18.5	18.5	0.6	18.4	7.9
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	515	596	505	451	0	561	163	913	956	13	1685	752
V/C Ratio(X)	0.76	0.03	0.36	0.03	0.00	0.04	0.76	0.60	0.60	0.90	0.62	0.32
Avail Cap(c_a), veh/h	727	882	748	630	0	828	163	913	956	42	1685	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.28	0.28	0.28
Uniform Delay (d), s/veh	28.2	19.9	22.3	20.4	0.0	20.0	40.0	14.5	14.5	42.2	16.6	13.8
Incr Delay (d2), s/veh	2.4	0.0	0.3	0.0	0.0	0.0	17.2	2.9	2.8	19.4	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.3	2.8	0.2	0.0	0.3	1.6	7.6	7.9	0.3	7.1	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	20.0	22.6	20.4	0.0	20.0	57.3	17.4	17.3	61.6	17.1	14.1
LnGrp LOS	C	B	C	C	A	C	E	B	B	E	B	B
Approach Vol, veh/h		595			37			1247			1288	
Approach Delay, s/veh		27.8			20.2			21.3			16.9	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	48.7		31.7	8.0	45.3		31.7				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+I1), s	2.6	20.5		3.3	5.0	20.4		25.8				
Green Ext Time (p_c), s	0.0	3.5		0.1	0.0	3.3		1.3				

Intersection Summary

HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

FY_w/out Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	0	77	146	114	363	122	917	0	5	1493	124
Future Volume (veh/h)	107	0	77	146	114	363	122	917	0	5	1493	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	120	0	87	160	125	399	154	1161	0	6	1799	149
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	0	0	0	299	298	266	325	3706	0	37	2722	224
Arrive On Green	0.00	0.00	0.00	0.17	0.17	0.17	0.09	0.73	0.00	0.58	0.58	0.58
Sat Flow, veh/h		0		1781	1777	1585	3456	5274	0	4	4654	383
Grp Volume(v), veh/h		0.0		160	125	399	154	1161	0	720	599	635
Grp Sat Flow(s),veh/h/ln				1781	1777	1585	1728	1702	0	1859	1549	1633
Q Serve(g_s), s				8.6	6.6	17.6	4.4	8.5	0.0	0.0	27.5	27.7
Cycle Q Clear(g_c), s				8.6	6.6	17.6	4.4	8.5	0.0	27.3	27.5	27.7
Prop In Lane				1.00		1.00	1.00		0.00	0.01		0.23
Lane Grp Cap(c), veh/h				299	298	266	325	3706	0	1122	906	955
V/C Ratio(X)				0.54	0.42	1.50	0.47	0.31	0.00	0.64	0.66	0.66
Avail Cap(c_a), veh/h				299	298	266	329	3706	0	1122	906	955
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.85	0.85	0.00	0.84	0.84	0.84
Uniform Delay (d), s/veh				40.0	39.1	43.7	45.1	5.1	0.0	14.7	14.8	14.8
Incr Delay (d2), s/veh				1.9	0.9	244.5	0.9	0.2	0.0	2.4	3.2	3.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	3.0	24.9	1.9	2.6	0.0	11.5	9.8	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.8	40.1	288.2	46.0	5.3	0.0	17.1	18.0	17.9
LnGrp LOS				D	D	F	D	A	A	B	B	B
Approach Vol, veh/h					684			1315			1954	
Approach Delay, s/veh					185.2			10.1			17.6	
Approach LOS					F			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.0			14.8	67.2		23.0				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		58.8			10.0	43.9		17.6				
Max Q Clear Time (g_c+I1), s		10.5			6.4	29.7		19.6				
Green Ext Time (p_c), s		22.0			0.1	13.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay											44.1	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp

FY_w/out Project_PM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	236	136	0	0	0	0	929	172	451	1315	0
Future Volume (veh/h)	51	236	136	0	0	0	0	929	172	451	1315	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	57	265	153				0	1106	205	531	1547	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	248	495	221				0	2486	461	404	3793	0
Arrive On Green	0.14	0.14	0.14				0.00	0.57	0.57	0.12	0.74	0.00
Sat Flow, veh/h	1781	3554	1585				0	4497	802	3456	5274	0
Grp Volume(v), veh/h	57	265	153				0	870	441	531	1547	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1726	1728	1702	0
Q Serve(g_s), s	2.7	6.6	8.7				0.0	13.9	13.9	11.1	10.6	0.0
Cycle Q Clear(g_c), s	2.7	6.6	8.7				0.0	13.9	13.9	11.1	10.6	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	248	495	221				0	1955	992	404	3793	0
V/C Ratio(X)	0.23	0.54	0.69				0.00	0.44	0.45	1.32	0.41	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	1955	992	404	3793	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	1.00	1.00	0.18	0.18	0.00
Uniform Delay (d), s/veh	36.4	38.0	39.0				0.0	11.6	11.6	42.0	4.5	0.0
Incr Delay (d2), s/veh	0.5	0.9	3.9				0.0	0.7	1.4	145.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	3.6				0.0	5.1	5.4	12.8	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	38.9	42.8				0.0	12.3	13.0	187.0	4.6	0.0
LnGrp LOS	D	D	D				A	B	B	F	A	A
Approach Vol, veh/h		475						1311			2078	
Approach Delay, s/veh		39.9						12.5			51.2	
Approach LOS		D						B			D	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	16.0	60.4		18.6				76.4				
Change Period (Y+Rc), s	4.9	5.8		5.4				5.8				
Max Green Setting (Gmax), s	11.1	25.8		42.0				41.8				
Max Q Clear Time (g_c+I1), s	13.1	15.9		10.7				12.6				
Green Ext Time (p_c), s	0.0	7.9		2.5				21.9				
Intersection Summary												
HCM 6th Ctrl Delay			36.7									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

FY_w/out Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	395	60	42	398	86	84	832	47	80	1007	210
Future Volume (veh/h)	237	395	60	42	398	86	84	832	47	80	1007	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	429	65	46	437	95	98	967	55	95	1199	250
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	1452	648	77	1077	480	112	1006	449	116	1206	252
Arrive On Green	0.15	0.41	0.41	0.04	0.30	0.30	0.06	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	4233	883
Grp Volume(v), veh/h	258	429	65	46	437	95	98	967	55	95	964	485
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1711
Q Serve(g_s), s	14.4	8.1	2.5	2.5	9.8	4.4	5.5	26.8	2.6	5.3	28.3	28.3
Cycle Q Clear(g_c), s	14.4	8.1	2.5	2.5	9.8	4.4	5.5	26.8	2.6	5.3	28.3	28.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	265	1452	648	77	1077	480	112	1006	449	116	970	488
V/C Ratio(X)	0.97	0.30	0.10	0.60	0.41	0.20	0.87	0.96	0.12	0.82	0.99	0.99
Avail Cap(c_a), veh/h	265	1452	648	123	1077	480	112	1006	449	116	970	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	19.9	18.2	47.0	27.7	25.8	46.5	35.3	26.6	46.2	35.7	35.7
Incr Delay (d2), s/veh	47.1	0.5	0.3	2.7	1.1	0.9	46.6	19.9	0.3	33.6	27.4	39.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	3.4	1.0	1.2	4.3	1.8	3.9	14.1	1.0	3.4	15.1	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.5	20.4	18.5	49.7	28.8	26.8	93.1	55.2	26.9	79.8	63.0	74.8
LnGrp LOS	F	C	B	D	C	C	F	E	C	E	E	E
Approach Vol, veh/h		752			578			1120			1544	
Approach Delay, s/veh		43.9			30.2			57.2			67.8	
Approach LOS		D			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	46.4	11.0	33.8	19.4	35.8	10.8	34.0				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.9	38.3	6.5	28.3	14.9	30.3	6.3	28.5				
Max Q Clear Time (g_c+I1), s	4.5	10.1	7.3	28.8	16.4	11.8	7.5	30.3				
Green Ext Time (p_c), s	0.0	6.1	0.0	0.0	0.0	5.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				54.9								
HCM 6th LOS				D								













HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

FY_w/out Project_PM
 01/03/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	611	55	219	771	288	65	719	353	352	621	109
Future Volume (veh/h)	85	611	55	219	771	288	65	719	353	352	621	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	694	62	246	866	324	73	808	397	374	661	116
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	973	434	296	1023	803	120	981	438	436	1191	531
Arrive On Green	0.07	0.27	0.27	0.09	0.29	0.29	0.07	0.28	0.28	0.13	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	97	694	62	246	866	324	73	808	397	374	661	116
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.6	18.5	3.1	7.4	24.1	9.8	4.2	22.4	25.4	11.1	16.0	5.5
Cycle Q Clear(g_c), s	5.6	18.5	3.1	7.4	24.1	9.8	4.2	22.4	25.4	11.1	16.0	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	973	434	296	1023	803	120	981	438	436	1191	531
V/C Ratio(X)	0.76	0.71	0.14	0.83	0.85	0.40	0.61	0.82	0.91	0.86	0.55	0.22
Avail Cap(c_a), veh/h	136	973	434	296	1023	803	136	981	438	461	1191	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	34.4	28.8	47.2	35.2	30.1	47.6	35.6	36.7	45.0	28.5	25.0
Incr Delay (d2), s/veh	19.6	4.4	0.7	16.2	8.0	1.4	5.1	7.8	25.1	14.0	1.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	8.5	1.3	3.8	11.4	3.4	2.0	10.6	12.7	5.6	7.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	38.8	29.5	63.4	43.2	31.5	52.8	43.4	61.8	58.9	30.4	26.0
LnGrp LOS	E	D	C	E	D	C	D	D	E	E	C	C
Approach Vol, veh/h		853			1436			1278			1151	
Approach Delay, s/veh		41.4			44.0			49.6			39.2	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	35.3	13.0	41.7	13.5	36.7	19.2	35.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	9.0	28.0	8.0	35.0	8.0	29.0	14.0	29.0				
Max Q Clear Time (g_c+I1), s	9.4	20.5	6.2	18.0	7.6	26.1	13.1	27.4				
Green Ext Time (p_c), s	0.0	4.3	0.0	7.8	0.0	2.4	0.1	1.3				
Intersection Summary												
HCM 6th Ctrl Delay				43.9								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

FY_w/out Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	975	391	70	1046	0	0	0	0	379	0	221
Future Volume (veh/h)	0	975	391	70	1046	0	0	0	0	379	0	221
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1175	471	80	1189	0				462	0	270
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1751	781	185	3346	0				734	0	326
Arrive On Green	0.00	0.49	0.49	0.10	0.66	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1175	471	80	1189	0				462	0	270
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	20.0	17.2	3.4	8.4	0.0				9.5	0.0	13.0
Cycle Q Clear(g_c), s	0.0	20.0	17.2	3.4	8.4	0.0				9.5	0.0	13.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1751	781	185	3346	0				734	0	326
V/C Ratio(X)	0.00	0.67	0.60	0.43	0.36	0.00				0.63	0.00	0.83
Avail Cap(c_a), veh/h	0	1751	781	223	3346	0				828	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.59	0.59	0.93	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.4	14.6	33.6	6.2	0.0				29.0	0.0	30.4
Incr Delay (d2), s/veh	0.0	1.2	2.0	1.1	0.1	0.0				1.6	0.0	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.7	6.1	1.5	2.5	0.0				4.1	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.6	16.7	34.7	6.3	0.0				30.6	0.0	44.5
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1646			1269						732	
Approach Delay, s/veh		16.6			8.1						35.7	
Approach LOS		B			A						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	45.1		21.9		58.1						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	35.6		18.6		50.3						
Max Q Clear Time (g_c+I1), s	5.4	22.0		15.0		10.4						
Green Ext Time (p_c), s	0.0	9.3		1.4		13.6						

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

FY_w/out Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	274	1110	0	0	882	673	223	1	53	0	0	0
Future Volume (veh/h)	274	1110	0	0	882	673	223	1	53	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	298	1207	0	0	919	701	283	0	67			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2656	0	0	2982	926	460	0	205			
Arrive On Green	0.11	0.75	0.00	0.00	0.58	0.58	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	298	1207	0	0	919	701	283	0	67			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	11.7	0.0	0.0	8.2	29.7	6.8	0.0	3.5			
Cycle Q Clear(g_c), s	10.0	11.7	0.0	0.0	8.2	29.7	6.8	0.0	3.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2656	0	0	2982	926	460	0	205			
V/C Ratio(X)	1.51	0.45	0.00	0.00	0.31	0.76	0.61	0.00	0.33			
Avail Cap(c_a), veh/h	198	2656	0	0	2982	926	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	0.71	0.71	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	4.3	0.0	0.0	9.5	14.0	37.1	0.0	35.6			
Incr Delay (d2), s/veh	245.4	0.4	0.0	0.0	0.3	5.8	2.8	0.0	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			
%ile BackOfQ(50%),veh/ln	17.8	3.3	0.0	0.0	2.9	10.9	3.1	0.0	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	285.4	4.7	0.0	0.0	9.8	19.7	39.9	0.0	37.6			
LnGrp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		1505			1620			350				
Approach Delay, s/veh		60.3			14.1			39.5				
Approach LOS		E			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.0			14.7	58.3		17.0				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		13.7			12.0	31.7		8.8				
Green Ext Time (p_c), s		12.6			0.0	0.0		2.9				

Intersection Summary























HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave
































FY_w/out Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	681	59	102	682	52	124	1080	155	54	1141	537
Future Volume (veh/h)	370	681	59	102	682	52	124	1080	155	54	1141	537
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	430	792	69	112	749	57	132	1149	165	62	1311	617
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	427	1079	94	138	1356	103	133	1328	592	80	1221	740
Arrive On Green	0.12	0.33	0.33	0.08	0.28	0.28	0.07	0.37	0.37	0.04	0.34	0.34
Sat Flow, veh/h	3456	3307	288	1781	4842	367	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	430	425	436	112	525	281	132	1149	165	62	1311	617
Grp Sat Flow(s),veh/h/ln	1728	1777	1819	1781	1702	1804	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	14.2	24.4	24.4	7.1	15.1	15.2	8.5	34.4	8.4	4.0	39.5	39.1
Cycle Q Clear(g_c), s	14.2	24.4	24.4	7.1	15.1	15.2	8.5	34.4	8.4	4.0	39.5	39.1
Prop In Lane	1.00		0.16	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	427	580	593	138	953	505	133	1328	592	80	1221	740
V/C Ratio(X)	1.01	0.73	0.73	0.81	0.55	0.56	0.99	0.87	0.28	0.78	1.07	0.83
Avail Cap(c_a), veh/h	427	580	593	170	953	505	133	1328	592	87	1221	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	34.3	34.3	52.2	35.2	35.3	53.2	33.3	25.2	54.4	37.8	26.8
Incr Delay (d2), s/veh	45.5	8.0	7.9	17.5	2.3	4.4	75.0	6.0	0.1	29.2	48.1	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	11.7	12.0	3.8	6.6	7.3	6.6	15.6	3.2	2.4	25.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.9	42.3	42.2	69.8	37.5	39.6	128.1	39.3	25.3	83.6	85.9	34.4
LnGrp LOS	F	D	D	E	D	D	F	D	C	F	F	C
Approach Vol, veh/h		1291			918			1446			1990	
Approach Delay, s/veh		60.1			42.1			45.8			69.9	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	43.5	12.6	45.0	19.2	38.2	9.1	48.5				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	11.0	35.4	8.6	39.5	14.2	32.2	5.6	42.5				
Max Q Clear Time (g_c+I1), s	9.1	26.4	10.5	41.5	16.2	17.2	6.0	36.4				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	3.2	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay				57.0								
HCM 6th LOS				E								

**Appendix F:
Future Year 2045
Plus Project
Synchro Worksheets**

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

FY with Project_AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		 	 	
Traffic Volume (veh/h)	288	1135	70	135	1009	103	21	409	172	137	303	531
Future Volume (veh/h)	288	1135	70	135	1009	103	21	409	172	137	303	531
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	335	1320	81	153	1147	117	23	445	187	165	365	640
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	3140	975	257	3140	975	192	1048	468	443	1048	468
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	439	5106	1585	385	5106	1585	561	3554	1585	1542	3554	1585
Grp Volume(v), veh/h	335	1320	81	153	1147	117	23	445	187	165	365	640
Grp Sat Flow(s),veh/h/ln	439	1702	1585	385	1702	1585	561	1777	1585	771	1777	1585
Q Serve(g_s), s	50.3	13.4	2.1	34.3	11.2	3.1	3.4	10.1	9.4	9.7	8.1	29.5
Cycle Q Clear(g_c), s	61.5	13.4	2.1	47.7	11.2	3.1	11.4	10.1	9.4	19.7	8.1	29.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	3140	975	257	3140	975	192	1048	468	443	1048	468
V/C Ratio(X)	1.14	0.42	0.08	0.60	0.37	0.12	0.12	0.42	0.40	0.37	0.35	1.37
Avail Cap(c_a), veh/h	293	3140	975	257	3140	975	192	1048	468	443	1048	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	10.0	7.8	22.4	9.6	8.0	32.2	28.4	28.2	36.4	27.7	35.2
Incr Delay (d2), s/veh	97.3	0.1	0.0	3.7	0.1	0.1	0.3	0.3	0.6	0.5	0.2	179.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	4.6	0.7	3.2	3.9	1.0	0.5	4.3	3.6	1.8	3.4	34.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.3	10.1	7.8	26.1	9.6	8.1	32.5	28.7	28.7	36.9	27.9	214.4
LnGrp LOS	F	B	A	C	A	A	C	C	C	D	C	F
Approach Vol, veh/h		1736			1417			655			1170	
Approach Delay, s/veh		32.8			11.3			28.8			131.2	
Approach LOS		C			B			C			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		66.0		34.0		66.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.5		61.5		29.5		61.5				
Max Q Clear Time (g_c+I1), s		13.4		63.5		31.5		49.7				
Green Ext Time (p_c), s		3.5		0.0		0.0		7.8				
Intersection Summary												
HCM 6th Ctrl Delay				49.3								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

FY with Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↖↑	↗
Traffic Volume (veh/h)	0	1183	237	0	1083	0	0	0	0	445	90	168
Future Volume (veh/h)	0	1183	237	0	1083	0	0	0	0	445	90	168
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1344	269	0	1245	0				524	106	198
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3382	1050	5	3382	0				671	352	299
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1344	269	0	1245	0				524	106	198
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	9.0	5.2	0.0	8.2	0.0				10.5	3.7	8.7
Cycle Q Clear(g_c), s	0.0	9.0	5.2	0.0	8.2	0.0				10.5	3.7	8.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3382	1050	5	3382	0				671	352	299
V/C Ratio(X)	0.00	0.40	0.26	0.00	0.37	0.00				0.78	0.30	0.66
Avail Cap(c_a), veh/h	0	3382	1050	415	3382	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	0.00	0.96	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	5.8	5.1	0.0	5.7	0.0				29.0	26.2	28.2
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	0.1	0.0				5.7	0.8	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.6	1.5	0.0	2.3	0.0				4.8	1.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.1	5.7	0.0	5.8	0.0				34.7	27.0	33.9
LnGrp LOS	A	A	A	A	A	A				C	C	C
Approach Vol, veh/h		1613			1245						828	
Approach Delay, s/veh		6.0			5.8						33.5	
Approach LOS		A			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	0.0	55.5		19.5		55.5						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	0.0	11.0		12.5		10.2						
Green Ext Time (p_c), s	0.0	17.9		1.6		21.2						

Intersection Summary

HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

FY with Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↓		↖	↑↑↑	↗		↖↑	↗			
Traffic Volume (veh/h)	58	1576	26	1	979	382	78	112	8	0	0	0
Future Volume (veh/h)	58	1576	26	1	979	382	78	112	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	67	1811	30	1	1152	449	87	124	9			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	347	2554	42	238	2689	835	282	281	251			
Arrive On Green	0.10	0.49	0.49	0.13	0.53	0.53	0.16	0.16	0.16			
Sat Flow, veh/h	3456	5173	86	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	67	1191	650	1	1152	449	87	124	9			
Grp Sat Flow(s),veh/h/ln	1728	1702	1855	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	1.3	20.4	20.5	0.0	10.3	14.0	3.2	4.7	0.4			
Cycle Q Clear(g_c), s	1.3	20.4	20.5	0.0	10.3	14.0	3.2	4.7	0.4			
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	347	1680	916	238	2689	835	282	281	251			
V/C Ratio(X)	0.19	0.71	0.71	0.00	0.43	0.54	0.31	0.44	0.04			
Avail Cap(c_a), veh/h	465	1680	916	240	2689	835	285	284	254			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.88	0.70	0.70	0.70	1.00	1.00	1.00			
Uniform Delay (d), s/veh	31.0	14.8	14.8	28.2	10.9	11.7	27.9	28.6	26.7			
Incr Delay (d2), s/veh	0.2	2.3	4.1	0.0	0.1	0.5	0.7	1.3	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	7.5	8.7	0.0	3.5	4.5	1.4	2.1	0.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	17.1	18.9	28.2	10.9	12.2	28.7	29.9	26.8			
LnGrp LOS	C	B	B	C	B	B	C	C	C			
Approach Vol, veh/h		1908			1602			220				
Approach Delay, s/veh		18.2			11.3			29.3				
Approach LOS		B			B			C				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	14.9	42.8			12.4	45.3		17.3				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.1	36.8			10.1	* 38		12.0				
Max Q Clear Time (g_c+I1), s	2.0	22.5			3.3	16.0		6.7				
Green Ext Time (p_c), s	0.0	12.9			0.1	10.8		0.6				

Intersection Summary
































HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

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

HCM Signalized Intersection Capacity Analysis
4: Norwalk Blvd & Imperial Hwy

FY with Project_AM
01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Traffic Volume (vph)	157	1204	64	114	1104	36	72	569	110	104	399	123
Future Volume (vph)	157	1204	64	114	1104	36	72	569	110	104	399	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	180	1384	74	131	1269	41	77	612	118	112	429	132
RTOR Reduction (vph)	0	0	49	0	0	29	0	0	76	0	0	96
Lane Group Flow (vph)	180	1384	25	131	1269	12	77	612	42	112	429	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8		7		4
Permitted Phases			5			2			8			4
Actuated Green, G (s)	16.9	38.6	38.6	12.3	34.0	34.0	8.0	29.1	41.4	10.0	31.1	31.1
Effective Green, g (s)	16.9	38.6	38.6	12.3	34.0	34.0	8.0	29.1	41.4	10.0	31.1	31.1
Actuated g/C Ratio	0.15	0.34	0.34	0.11	0.30	0.30	0.07	0.25	0.36	0.09	0.27	0.27
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	260	1706	531	189	1503	468	123	895	569	153	1375	428
v/s Ratio Prot	0.10	c0.27		0.07	c0.25		0.04	c0.17	0.01	c0.06	0.08	
v/s Ratio Perm			0.02			0.01			0.02			0.02
v/c Ratio	0.69	0.81	0.05	0.69	0.84	0.03	0.63	0.68	0.07	0.73	0.31	0.08
Uniform Delay, d1	46.6	34.9	25.8	49.5	38.0	28.7	52.0	38.8	24.2	51.2	33.4	31.3
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	6.3	3.4	0.1	18.9	6.0	0.1	7.0	2.5	0.1	14.4	0.2	0.1
Delay (s)	52.9	38.2	25.8	68.4	44.0	28.8	59.0	41.3	24.3	65.6	33.7	31.5
Level of Service	D	D	C	E	D	C	E	D	C	E	C	C
Approach Delay (s)		39.3			45.8			40.5			38.5	
Approach LOS		D			D			D			D	
Intersection Summary												
HCM 2000 Control Delay			41.5		HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			115.0		Sum of lost time (s)			25.0				
Intersection Capacity Utilization			76.3%		ICU Level of Service			D				
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

FY with Project_AM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	1269	96	14	1206	76	11	12	5	71	23	33
Future Volume (veh/h)	58	1269	96	14	1206	76	11	12	5	71	23	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	1442	109	16	1340	84	16	17	7	101	33	47
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	2832	879	27	2669	828	198	65	27	271	70	100
Arrive On Green	0.05	0.55	0.55	0.02	0.52	0.52	0.02	0.05	0.05	0.06	0.10	0.10
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	1259	518	1781	698	994
Grp Volume(v), veh/h	66	1442	109	16	1340	84	16	0	24	101	0	80
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1777	1781	0	1691
Q Serve(g_s), s	2.6	12.3	2.3	0.6	11.9	1.9	0.6	0.0	0.9	3.7	0.0	3.1
Cycle Q Clear(g_c), s	2.6	12.3	2.3	0.6	11.9	1.9	0.6	0.0	0.9	3.7	0.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		0.59
Lane Grp Cap(c), veh/h	84	2832	879	27	2669	828	198	0	92	271	0	170
V/C Ratio(X)	0.79	0.51	0.12	0.59	0.50	0.10	0.08	0.00	0.26	0.37	0.00	0.47
Avail Cap(c_a), veh/h	115	2832	879	115	2669	828	285	0	457	271	0	435
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)	0.56	0.56	0.56	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	9.7	7.5	34.2	10.8	8.4	30.8	0.0	31.9	28.6	0.0	29.7
Incr Delay (d2), s/veh	8.9	0.4	0.2	6.8	0.6	0.2	0.2	0.0	1.5	0.9	0.0	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	1.3	4.0	0.7	0.3	4.0	0.6	0.3	0.0	0.4	1.6	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	10.0	7.6	41.0	11.4	8.6	30.9	0.0	33.4	29.5	0.0	31.7
LnGrp LOS	D	B	A	D	B	A	C	A	C	C	A	C
Approach Vol, veh/h		1617			1440			40				181
Approach Delay, s/veh		11.2			11.6			32.4				30.5
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	45.3	6.1	12.5	8.3	43.1	9.5	9.1				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.5	21.0	4.5	18.0	4.5	21.0	4.5	18.0				
Max Q Clear Time (g_c+I1), s	2.6	14.3	2.6	5.1	4.6	13.9	5.7	2.9				
Green Ext Time (p_c), s	0.0	5.8	0.0	0.3	0.0	5.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				12.7								
HCM 6th LOS				B								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

FY with Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑		↘	↑↑↑		↘	↑			↘	↘
Traffic Volume (vph)	16	1448	151	58	1476	45	35	18	20	51	54	25
Future Volume (vph)	16	1448	151	58	1476	45	35	18	20	51	54	25
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		6.0	6.0			5.0	5.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1770	5013		1770	5063		1770	1715			1819	1583
Flt Permitted	0.12	1.00		0.10	1.00		0.95	1.00			0.98	1.00
Satd. Flow (perm)	215	5013		181	5063		1770	1715			1819	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	18	1609	168	63	1604	49	51	26	29	57	61	28
RTOR Reduction (vph)	0	9	0	0	2	0	0	23	0	0	0	27
Lane Group Flow (vph)	18	1768	0	63	1651	0	51	32	0	0	118	1
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	Perm
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								3
Actuated Green, G (s)	58.5	58.5		58.5	58.5		10.0	10.0			4.0	4.0
Effective Green, g (s)	58.5	58.5		58.5	58.5		10.0	10.0			4.0	4.0
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.11	0.11			0.04	0.04
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	5.0
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	139	3258		117	3290		196	190			80	70
v/s Ratio Prot		c0.35			0.33		c0.03	0.02			c0.06	
v/s Ratio Perm	0.08			0.35								0.00
v/c Ratio	0.13	0.54		0.54	0.50		0.26	0.17			1.48	0.02
Uniform Delay, d1	6.0	8.5		8.5	8.2		36.6	36.2			43.0	41.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.7	0.3		16.6	0.5		0.7	0.4			269.2	0.1
Delay (s)	6.7	8.8		25.1	8.7		37.3	36.7			312.2	41.2
Level of Service	A	A		C	A		D	D			F	D
Approach Delay (s)		8.8			9.3			37.0			260.2	
Approach LOS		A			A			D			F	

Intersection Summary

HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

FY with Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	966	161	371	1154	95	250	889	420	99	622	139
Future Volume (veh/h)	230	966	161	371	1154	95	250	889	420	99	622	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	242	1017	169	417	1297	107	287	1022	483	110	691	154
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	1191	370	398	1487	123	279	1149	512	299	732	163
Arrive On Green	0.15	0.23	0.23	0.22	0.31	0.31	0.16	0.32	0.32	0.09	0.25	0.25
Sat Flow, veh/h	1781	5106	1585	1781	4807	397	1781	3554	1585	3456	2888	643
Grp Volume(v), veh/h	242	1017	169	417	919	485	287	1022	483	110	425	420
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1799	1781	1777	1585	1728	1777	1755
Q Serve(g_s), s	20.1	28.6	13.7	33.5	38.3	38.3	23.5	41.0	44.5	4.5	35.2	35.3
Cycle Q Clear(g_c), s	20.1	28.6	13.7	33.5	38.3	38.3	23.5	41.0	44.5	4.5	35.2	35.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	262	1191	370	398	1053	556	279	1149	512	299	450	444
V/C Ratio(X)	0.92	0.85	0.46	1.05	0.87	0.87	1.03	0.89	0.94	0.37	0.94	0.95
Avail Cap(c_a), veh/h	262	1191	370	398	1053	556	279	1149	512	299	450	444
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)	0.83	0.83	0.83	1.00	1.00	1.00	0.43	0.43	0.43	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	55.0	49.3	58.3	49.0	49.0	63.3	48.2	49.4	64.6	55.0	55.0
Incr Delay (d2), s/veh	30.8	6.6	3.4	58.3	10.0	17.0	42.8	4.9	15.5	3.4	30.5	30.9
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	11.4	13.0	5.8	21.5	17.7	19.8	14.0	18.9	19.8	2.1	19.6	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	61.7	52.7	116.6	59.0	66.0	106.0	53.1	64.9	68.1	85.5	85.9
LnGrp LOS	F	E	D	F	E	E	F	D	E	E	F	F
Approach Vol, veh/h		1428			1821			1792			955	
Approach Delay, s/veh		66.1			74.0			64.8			83.7	
Approach LOS		E			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.6	51.9	17.5	54.0	38.0	40.5	28.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	22.1	46.4	13.0	48.5	33.5	35.0	23.5	38.0				
Max Q Clear Time (g_c+I1), s	22.1	40.3	6.5	46.5	35.5	30.6	25.5	37.3				
Green Ext Time (p_c), s	0.0	5.1	0.0	1.3	0.0	3.4	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay				70.9								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

FY with Project_AM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (veh/h)	80	773	131	203	992	87	136	762	111	110	1110	34
Future Volume (veh/h)	80	773	131	203	992	87	136	762	111	110	1110	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	840	142	209	1023	90	148	828	121	124	1247	38
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	1360	229	154	1594	140	146	1037	152	151	1184	36
Arrive On Green	0.06	0.31	0.31	0.09	0.33	0.33	0.08	0.33	0.33	0.08	0.34	0.34
Sat Flow, veh/h	1781	4402	740	1781	4779	420	1781	3111	455	1781	3521	107
Grp Volume(v), veh/h	87	649	333	209	728	385	148	473	476	124	629	656
Grp Sat Flow(s),veh/h/ln	1781	1702	1737	1781	1702	1795	1781	1777	1789	1781	1777	1851
Q Serve(g_s), s	5.3	17.9	18.1	9.5	19.9	20.0	9.0	26.6	26.6	7.5	37.0	37.0
Cycle Q Clear(g_c), s	5.3	17.9	18.1	9.5	19.9	20.0	9.0	26.6	26.6	7.5	37.0	37.0
Prop In Lane	1.00		0.43	1.00		0.23	1.00		0.25	1.00		0.06
Lane Grp Cap(c), veh/h	110	1052	537	154	1136	599	146	592	596	151	598	623
V/C Ratio(X)	0.79	0.62	0.62	1.36	0.64	0.64	1.02	0.80	0.80	0.82	1.05	1.05
Avail Cap(c_a), veh/h	170	1052	537	154	1136	599	146	592	596	162	598	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	32.4	32.5	50.3	31.1	31.1	50.5	33.3	33.3	49.5	36.5	36.5
Incr Delay (d2), s/veh	5.9	2.7	5.3	197.6	2.8	5.2	78.7	10.8	10.7	25.2	51.4	51.0
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	2.5	7.7	8.3	12.7	8.5	9.4	7.2	13.0	13.1	4.4	24.2	25.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.8	35.1	37.8	247.8	33.9	36.3	129.2	44.1	44.0	74.8	87.9	87.5
LnGrp LOS	E	D	D	F	C	D	F	D	D	E	F	F
Approach Vol, veh/h		1069			1322			1097			1409	
Approach Delay, s/veh		37.7			68.4			55.5			86.5	
Approach LOS		D			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	42.7	13.3	42.7	14.0	40.0	13.0	43.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	10.5	33.0	10.0	36.0	9.5	34.0	9.0	37.0				
Max Q Clear Time (g_c+I1), s	7.3	22.0	9.5	28.6	11.5	20.1	11.0	39.0				
Green Ext Time (p_c), s	0.0	7.3	0.0	2.6	0.0	7.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			64.0									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
 9: Firestone Blvd & Pioneer Blvd

FY with Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘
Traffic Volume (veh/h)	234	379	48	62	349	44	55	933	60	74	708	190
Future Volume (veh/h)	234	379	48	62	349	44	55	933	60	74	708	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	244	395	50	65	367	46	66	1124	0	91	874	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	840	375	84	558	249	85	1649		94	1667	
Arrive On Green	0.13	0.24	0.24	0.05	0.16	0.16	0.05	0.46	0.00	0.05	0.47	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	244	395	50	65	367	46	66	1124	0	91	874	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.0	9.1	2.4	3.4	9.2	2.4	3.5	23.6	0.0	4.8	16.4	0.0
Cycle Q Clear(g_c), s	12.0	9.1	2.4	3.4	9.2	2.4	3.5	23.6	0.0	4.8	16.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	840	375	84	558	249	85	1649		94	1667	
V/C Ratio(X)	1.08	0.47	0.13	0.78	0.66	0.18	0.78	0.68		0.97	0.52	
Avail Cap(c_a), veh/h	225	1197	534	169	1085	484	113	1649		94	1667	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	41.5	31.2	28.6	44.8	37.6	34.8	44.7	20.0	0.0	44.9	17.8	0.0
Incr Delay (d2), s/veh	84.3	0.7	0.3	5.7	2.3	0.6	15.5	2.3	0.0	78.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	3.9	0.9	1.6	4.1	1.0	1.9	9.8	0.0	4.2	6.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.8	31.9	28.9	50.5	39.9	35.4	60.2	22.2	0.0	123.1	18.8	0.0
LnGrp LOS	F	C	C	D	D	D	E	C		F	B	
Approach Vol, veh/h		689			478			1190			965	
Approach Delay, s/veh		64.9			40.9			24.4			28.6	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	49.6	8.5	27.9	8.5	50.1	16.0	20.4				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	5.0	30.0	9.0	32.0	6.0	29.0	12.0	29.0				
Max Q Clear Time (g_c+I1), s	6.8	25.6	5.4	11.1	5.5	18.4	14.0	11.2				
Green Ext Time (p_c), s	0.0	3.7	0.0	4.3	0.0	6.9	0.0	3.7				






















Intersection Summary												
HCM 6th Ctrl Delay											36.4	
HCM 6th LOS											D	

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

FY with Project_AM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	350	0	55	0	767	572	77	505	1	
Future Volume (vph)	0	0	0	350	0	55	0	767	572	77	505	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor				0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt				1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected				0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)				1681	1681	1583		5085	1583	1770	5084		
Flt Permitted				0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)				1681	1681	1583		5085	1583	1770	5084		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	0	0	0	443	0	70	0	1009	753	88	574	1	
RTOR Reduction (vph)	0	0	0	0	0	50	0	0	196	0	0	0	
Lane Group Flow (vph)	0	0	0	221	222	20	0	1009	557	88	575	0	
Turn Type				Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)				18.1	18.1	18.1		23.7	41.8	4.7	33.4		
Effective Green, g (s)				18.1	18.1	18.1		23.7	41.8	4.7	33.4		
Actuated g/C Ratio				0.29	0.29	0.29		0.38	0.67	0.08	0.53		
Clearance Time (s)				5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)				3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)				486	486	458		1928	1058	133	2716		
v/s Ratio Prot				0.13	0.13			0.20	c0.15	c0.05	0.11		
v/s Ratio Perm						0.01			0.20				
v/c Ratio				0.45	0.46	0.04		0.52	0.53	0.66	0.21		
Uniform Delay, d1				18.2	18.2	16.0		15.0	5.3	28.1	7.6		
Progression Factor				1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2				0.7	0.7	0.0		1.0	0.5	9.2	0.2		
Delay (s)				18.8	18.9	16.0		16.0	5.8	37.3	7.8		
Level of Service				B	B	B		B	A	D	A		
Approach Delay (s)		0.0			18.5			11.7			11.7		
Approach LOS		A			B			B			B		
Intersection Summary													
HCM 2000 Control Delay			12.9		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.60										
Actuated Cycle Length (s)			62.5		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			48.0%		ICU Level of Service					A			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

FY with Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	10	84	34	19	7	148	938	6	5	653	182
Future Volume (veh/h)	299	10	84	34	19	7	148	938	6	5	653	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	365	12	102	52	29	11	180	1144	7	5	673	188
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	486	578	490	474	399	151	163	1912	12	5	1720	767
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.05	0.53	0.53	0.00	0.48	0.48
Sat Flow, veh/h	1367	1870	1585	1279	1292	490	3456	3621	22	1781	3554	1585
Grp Volume(v), veh/h	365	12	102	52	0	40	180	561	590	5	673	188
Grp Sat Flow(s),veh/h/ln	1367	1870	1585	1279	0	1782	1728	1777	1866	1781	1777	1585
Q Serve(g_s), s	21.9	0.4	4.0	2.5	0.0	1.3	4.0	18.5	18.5	0.2	10.2	5.9
Cycle Q Clear(g_c), s	23.2	0.4	4.0	2.9	0.0	1.3	4.0	18.5	18.5	0.2	10.2	5.9
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	486	578	490	474	0	551	163	938	985	5	1720	767
V/C Ratio(X)	0.75	0.02	0.21	0.11	0.00	0.07	1.11	0.60	0.60	0.96	0.39	0.25
Avail Cap(c_a), veh/h	708	882	748	681	0	839	163	938	985	42	1720	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.57	0.57	0.57
Uniform Delay (d), s/veh	29.0	20.4	21.7	21.4	0.0	20.8	40.5	13.8	13.8	42.4	14.0	12.8
Incr Delay (d2), s/veh	2.1	0.0	0.2	0.1	0.0	0.0	102.1	2.8	2.7	73.2	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.2	1.5	0.7	0.0	0.6	4.0	7.5	7.9	0.2	4.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	20.4	21.8	21.5	0.0	20.8	142.6	16.7	16.5	115.6	14.3	13.3
LnGrp LOS	C	C	C	C	A	C	F	B	B	F	B	B
Approach Vol, veh/h		479			92			1331			866	
Approach Delay, s/veh		28.8			21.2			33.6			14.7	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	49.9		30.9	8.0	46.1		30.9				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	4.0	27.4		* 40				
Max Q Clear Time (g_c+I1), s	2.2	20.5		4.9	6.0	12.2		25.2				
Green Ext Time (p_c), s	0.0	3.6		0.3	0.0	3.2		1.0				

Intersection Summary

HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

FY with Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	0	94	130	86	550	93	798	0	0	825	53
Future Volume (veh/h)	48	0	94	130	86	550	93	798	0	0	825	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	54	0	106	143	95	604	118	1010	0	0	994	64
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	0	0	323	740	469	294	3099	0	0	2350	151
Arrive On Green	0.00	0.00	0.00	0.30	0.30	0.30	0.08	0.61	0.00	0.00	0.48	0.48
Sat Flow, veh/h		0		1091	2502	1585	3456	5274	0	0	5071	315
Grp Volume(v), veh/h		0.0		238	0	604	118	1010	0	0	690	368
Grp Sat Flow(s),veh/h/ln				1816	1777	1585	1728	1702	0	0	1702	1814
Q Serve(g_s), s				12.2	0.0	34.0	3.7	11.1	0.0	0.0	15.2	15.3
Cycle Q Clear(g_c), s				12.2	0.0	34.0	3.7	11.1	0.0	0.0	15.2	15.3
Prop In Lane				0.60		1.00	1.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h				537	525	469	294	3099	0	0	1632	869
V/C Ratio(X)				0.44	0.00	1.29	0.40	0.33	0.00	0.00	0.42	0.42
Avail Cap(c_a), veh/h				537	525	469	300	3099	0	0	1632	869
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.97	0.97
Uniform Delay (d), s/veh				32.8	0.0	40.5	49.8	11.1	0.0	0.0	19.5	19.6
Incr Delay (d2), s/veh				0.6	0.0	145.3	0.8	0.3	0.0	0.0	0.8	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	32.0	1.6	4.1	0.0	0.0	6.1	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.4	0.0	185.8	50.7	11.3	0.0	0.0	20.3	21.0
LnGrp LOS				C	A	F	D	B	A	A	C	C
Approach Vol, veh/h					842			1128			1058	
Approach Delay, s/veh					142.7			15.4			20.6	
Approach LOS					F			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		75.6			14.7	60.9		39.4				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		52.4			10.0	37.5		34.0				
Max Q Clear Time (g_c+I1), s		13.1			5.7	17.3		36.0				
Green Ext Time (p_c), s		16.8			0.1	11.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay											52.6	
HCM 6th LOS											D	

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp






























FY with Project_AM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	251	99	0	0	0	0	978	245	267	978	0
Future Volume (veh/h)	70	251	99	0	0	0	0	978	245	267	978	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	79	282	111				0	1164	292	314	1151	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	225	449	200				0	2433	610	367	3859	0
Arrive On Green	0.13	0.13	0.13				0.00	0.60	0.60	0.11	0.76	0.00
Sat Flow, veh/h	1781	3554	1585				0	4238	1021	3456	5274	0
Grp Volume(v), veh/h	79	282	111				0	974	482	314	1151	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1687	1728	1702	0
Q Serve(g_s), s	3.9	7.2	6.3				0.0	15.3	15.3	8.5	6.8	0.0
Cycle Q Clear(g_c), s	3.9	7.2	6.3				0.0	15.3	15.3	8.5	6.8	0.0
Prop In Lane	1.00		1.00				0.00		0.61	1.00		0.00
Lane Grp Cap(c), veh/h	225	449	200				0	2035	1008	367	3859	0
V/C Ratio(X)	0.35	0.63	0.55				0.00	0.48	0.48	0.85	0.30	0.00
Avail Cap(c_a), veh/h	788	1571	701				0	2035	1008	367	3859	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.48	0.48	0.00
Uniform Delay (d), s/veh	37.9	39.4	39.0				0.0	10.8	10.8	41.7	3.7	0.0
Incr Delay (d2), s/veh	0.9	1.5	2.4				0.0	0.8	1.6	9.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.2	2.5				0.0	5.5	5.7	4.0	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	40.8	41.4				0.0	11.6	12.4	51.1	3.8	0.0
LnGrp LOS	D	D	D				A	B	B	D	A	A
Approach Vol, veh/h		472						1456			1465	
Approach Delay, s/veh		40.6						11.8			13.9	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	15.0	62.6	17.4	77.6								
Change Period (Y+Rc), s	4.9	5.8	5.4	5.8								
Max Green Setting (Gmax), s	10.1	26.8	42.0	41.8								
Max Q Clear Time (g_c+I1), s	10.5	17.3	9.2	8.8								
Green Ext Time (p_c), s	0.0	8.0	2.5	17.9								
Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

FY with Project_AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			  	
Traffic Volume (veh/h)	213	344	42	56	315	40	47	800	55	67	593	173
Future Volume (veh/h)	213	344	42	56	315	40	47	800	55	67	593	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	374	46	62	346	44	55	930	64	80	706	206
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	1264	564	95	1191	531	121	1086	484	104	1165	335
Arrive On Green	0.07	0.36	0.36	0.05	0.34	0.34	0.07	0.31	0.31	0.06	0.30	0.30
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3937	1133
Grp Volume(v), veh/h	232	374	46	62	346	44	55	930	64	80	609	303
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1666
Q Serve(g_s), s	6.5	6.7	1.7	3.0	6.3	1.7	2.6	21.7	2.6	3.9	13.5	13.8
Cycle Q Clear(g_c), s	6.5	6.7	1.7	3.0	6.3	1.7	2.6	21.7	2.6	3.9	13.5	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	131	1264	564	95	1191	531	121	1086	484	104	1007	493
V/C Ratio(X)	1.76	0.30	0.08	0.65	0.29	0.08	0.45	0.86	0.13	0.77	0.60	0.61
Avail Cap(c_a), veh/h	131	1264	564	121	1191	531	121	1130	504	121	1082	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	20.4	18.8	40.9	21.6	20.0	39.4	28.8	22.1	40.9	26.6	26.7
Incr Delay (d2), s/veh	373.1	0.6	0.3	3.5	0.6	0.3	1.0	7.2	0.3	18.1	1.4	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	2.8	0.7	1.4	2.7	0.7	1.2	10.0	1.0	2.2	5.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	413.9	21.0	19.1	44.4	22.2	20.3	40.4	36.0	22.4	59.0	28.0	29.8
LnGrp LOS	F	C	B	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		652			452			1049			992	
Approach Delay, s/veh		160.7			25.1			35.4			31.0	
Approach LOS		F			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	36.8	9.7	32.4	11.0	35.0	10.5	31.6				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.0	30.0	6.0	28.0	6.5	29.5	6.0	28.0				
Max Q Clear Time (g_c+I1), s	5.0	8.7	5.9	23.7	8.5	8.3	4.6	15.8				
Green Ext Time (p_c), s	0.0	4.6	0.0	3.2	0.0	4.2	0.0	7.3				
Intersection Summary												
HCM 6th Ctrl Delay				58.5								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave

FY with Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	639	73	245	678	341	39	607	250	277	571	107
Future Volume (veh/h)	68	639	73	245	678	341	39	607	250	277	571	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	726	83	275	762	383	44	682	281	295	607	114
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	920	410	329	1017	798	98	1083	483	356	1253	559
Arrive On Green	0.07	0.26	0.26	0.10	0.29	0.29	0.06	0.30	0.30	0.10	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	77	726	83	275	762	383	44	682	281	295	607	114
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.4	20.0	4.3	8.2	20.5	11.9	2.5	17.3	15.7	8.8	14.0	5.3
Cycle Q Clear(g_c), s	4.4	20.0	4.3	8.2	20.5	11.9	2.5	17.3	15.7	8.8	14.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	920	410	329	1017	798	98	1083	483	356	1253	559
V/C Ratio(X)	0.63	0.79	0.20	0.84	0.75	0.48	0.45	0.63	0.58	0.83	0.48	0.20
Avail Cap(c_a), veh/h	136	920	410	329	1017	798	136	1083	483	362	1253	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	36.2	30.4	46.7	34.1	31.0	48.1	31.4	30.8	46.2	26.5	23.7
Incr Delay (d2), s/veh	6.8	6.8	1.1	15.5	4.7	1.9	2.4	2.8	5.0	14.3	1.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	9.4	1.8	4.2	9.4	4.2	1.2	7.7	6.6	4.5	6.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	43.1	31.5	62.2	38.8	32.9	50.4	34.2	35.9	60.5	27.9	24.5
LnGrp LOS	D	D	C	E	D	C	D	C	D	E	C	C
Approach Vol, veh/h		886			1420			1007			1016	
Approach Delay, s/veh		43.0			41.7			35.4			37.0	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	33.7	11.8	43.5	13.2	36.5	16.8	38.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	10.0	27.0	8.0	35.0	8.0	29.0	11.0	32.0				
Max Q Clear Time (g_c+I1), s	10.2	22.0	4.5	16.0	6.4	22.5	10.8	19.3				
Green Ext Time (p_c), s	0.0	3.2	0.0	7.6	0.0	4.9	0.0	7.4				
Intersection Summary												
HCM 6th Ctrl Delay			39.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

FY with Project_AM
 01/03/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	825	373	73	1069	0	0	0	0	387	1	203
Future Volume (veh/h)	0	825	373	73	1069	0	0	0	0	387	1	203
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	994	449	83	1215	0				473	0	248
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1760	785	187	3367	0				719	0	320
Arrive On Green	0.00	0.50	0.50	0.11	0.66	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	994	449	83	1215	0				473	0	248
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	15.7	16.0	3.5	8.5	0.0				9.8	0.0	11.8
Cycle Q Clear(g_c), s	0.0	15.7	16.0	3.5	8.5	0.0				9.8	0.0	11.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1760	785	187	3367	0				719	0	320
V/C Ratio(X)	0.00	0.56	0.57	0.44	0.36	0.00				0.66	0.00	0.77
Avail Cap(c_a), veh/h	0	1760	785	229	3367	0				917	0	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.61	0.61	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.1	14.2	33.6	6.1	0.0				29.4	0.0	30.2
Incr Delay (d2), s/veh	0.0	0.8	1.9	1.1	0.1	0.0				1.6	0.0	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	5.6	1.5	2.5	0.0				4.2	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.9	16.1	34.7	6.2	0.0				30.9	0.0	38.4
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1443			1298						721	
Approach Delay, s/veh		15.3			8.0						33.5	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.1	45.3		21.6		58.4						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	33.3		20.6		48.3						
Max Q Clear Time (g_c+I1), s	5.5	18.0		13.8		10.5						
Green Ext Time (p_c), s	0.0	9.0		2.3		13.7						
Intersection Summary												
HCM 6th Ctrl Delay				16.3								
HCM 6th LOS				B								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

FY with Project_AM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗↗	↘	↘	↗	↘			
Traffic Volume (veh/h)	212	1062	0	0	889	503	230	1	38	0	0	0
Future Volume (veh/h)	212	1062	0	0	889	503	230	1	38	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	230	1154	0	0	926	524	292	0	48			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2651	0	0	2975	923	466	0	207			
Arrive On Green	0.11	0.75	0.00	0.00	0.58	0.58	0.13	0.00	0.13			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	230	1154	0	0	926	524	292	0	48			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	11.0	0.0	0.0	8.3	18.6	7.0	0.0	2.4			
Cycle Q Clear(g_c), s	10.0	11.0	0.0	0.0	8.3	18.6	7.0	0.0	2.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2651	0	0	2975	923	466	0	207			
V/C Ratio(X)	1.16	0.44	0.00	0.00	0.31	0.57	0.63	0.00	0.23			
Avail Cap(c_a), veh/h	198	2651	0	0	2975	923	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	4.3	0.0	0.0	9.6	11.7	37.0	0.0	35.1			
Incr Delay (d2), s/veh	107.8	0.4	0.0	0.0	0.3	2.5	3.0	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.2	3.1	0.0	0.0	2.9	6.6	3.2	0.0	1.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.8	4.7	0.0	0.0	9.9	14.2	40.0	0.0	36.3			
LnGrp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		1384			1450			340				
Approach Delay, s/veh		28.5			11.4			39.5				
Approach LOS		C			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.8			14.7	58.1		17.2				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		13.0			12.0	20.6		9.0				
Green Ext Time (p_c), s		12.1			0.0	4.7		2.8				

Intersection Summary

































HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.












HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave

FY with Project_AM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 	 	 	 	 
Traffic Volume (veh/h)	312	629	60	73	673	47	75	852	120	38	989	415
Future Volume (veh/h)	312	629	60	73	673	47	75	852	120	38	989	415
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	363	731	70	80	740	52	80	906	128	44	1137	477
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	1092	105	102	1596	112	102	1287	574	56	1194	633
Arrive On Green	0.06	0.33	0.33	0.06	0.33	0.33	0.06	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	3456	3277	314	1781	4872	341	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	363	396	405	80	516	276	80	906	128	44	1137	477
Grp Sat Flow(s),veh/h/ln	1728	1777	1814	1781	1702	1809	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.0	18.2	18.2	4.2	11.4	11.5	4.2	20.7	5.3	2.3	29.7	24.6
Cycle Q Clear(g_c), s	6.0	18.2	18.2	4.2	11.4	11.5	4.2	20.7	5.3	2.3	29.7	24.6
Prop In Lane	1.00		0.17	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	592	605	102	1115	593	102	1287	574	56	1194	633
V/C Ratio(X)	1.66	0.67	0.67	0.78	0.46	0.47	0.78	0.70	0.22	0.79	0.95	0.75
Avail Cap(c_a), veh/h	218	592	605	131	1115	593	103	1287	574	103	1197	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	27.2	27.2	44.2	25.3	25.3	44.2	25.9	21.0	45.7	30.8	24.5
Incr Delay (d2), s/veh	317.9	5.9	5.8	15.3	1.4	2.6	28.6	1.5	0.1	8.8	15.8	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	8.5	8.6	2.3	4.7	5.3	2.7	8.8	2.0	1.2	14.8	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	362.4	33.1	33.0	59.5	26.7	28.0	72.8	27.4	21.1	54.5	46.6	29.1
LnGrp LOS	F	C	C	E	C	C	E	C	C	D	D	C
Approach Vol, veh/h		1164			872			1114			1658	
Approach Delay, s/veh		135.7			30.1			30.0			41.8	
Approach LOS		F			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	37.7	9.5	37.4	11.0	37.1	7.0	39.9				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	7.0	30.0	5.5	32.0	6.0	31.0	5.5	32.0				
Max Q Clear Time (g_c+I1), s	6.2	20.2	6.2	31.7	8.0	13.5	4.3	22.7				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.2	0.0	3.3	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay				59.7								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 19: Bloomfield Ave & New Project Driveway

FY with Project_AM
 01/03/2023

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	147	74	1274	57	57	1010
Future Volume (veh/h)	147	74	1274	57	57	1010
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	160	80	1385	62	62	1098
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	214	191	2257	101	86	2700
Arrive On Green	0.12	0.12	0.65	0.65	0.05	0.76
Sat Flow, veh/h	1781	1585	3558	155	1781	3647
Grp Volume(v), veh/h	160	80	709	738	62	1098
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1842	1781	1777
Q Serve(g_s), s	6.5	3.5	17.4	17.5	2.6	8.1
Cycle Q Clear(g_c), s	6.5	3.5	17.4	17.5	2.6	8.1
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	214	191	1157	1200	86	2700
V/C Ratio(X)	0.75	0.42	0.61	0.61	0.72	0.41
Avail Cap(c_a), veh/h	525	467	1157	1200	126	2700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.91	0.91
Uniform Delay (d), s/veh	31.9	30.6	7.6	7.6	35.2	3.1
Incr Delay (d2), s/veh	5.1	1.5	2.4	2.4	9.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	1.4	5.9	6.2	1.3	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.0	32.0	10.0	10.0	45.0	3.5
LnGrp LOS	D	C	B	A	D	A
Approach Vol, veh/h	240		1447			1160
Approach Delay, s/veh	35.3		10.0			5.8
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.1	53.3			61.5	13.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.3	34.1			43.9	22.1
Max Q Clear Time (g_c+I1), s	4.6	19.5			10.1	8.5
Green Ext Time (p_c), s	0.0	8.7			10.0	0.6
Intersection Summary						
HCM 6th Ctrl Delay			10.4			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	147	1292	56	112	919
Future Vol, veh/h	0	147	1292	56	112	919
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	160	1404	61	122	999
































Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	733	0	0	1465
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22
Pot Cap-1 Maneuver	0	363	-	-	457
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	363	-	-	457
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.5	0	1.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	363	457
HCM Lane V/C Ratio	-	-	0.44	0.266
HCM Control Delay (s)	-	-	22.5	15.7
HCM Lane LOS	-	-	C	C
HCM 95th %tile Q(veh)	-	-	2.2	1.1

HCM 6th Signalized Intersection Summary
 1: Imperial Hwy & Pioneer Blvd

FY with Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		 	 	
Traffic Volume (veh/h)	103	1411	319	231	1284	143	45	474	307	169	490	558
Future Volume (veh/h)	103	1411	319	231	1284	143	45	474	307	169	490	558
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	1641	371	262	1459	162	49	515	334	204	590	672
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.92	0.92	0.92	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	2042	634	185	2042	634	283	1421	634	696	1421	634
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	311	5106	1585	213	5106	1585	439	3554	1585	1259	3554	1585
Grp Volume(v), veh/h	120	1641	371	262	1459	162	49	515	334	204	590	672
Grp Sat Flow(s),veh/h/ln	311	1702	1585	213	1702	1585	439	1777	1585	630	1777	1585
Q Serve(g_s), s	7.2	12.8	8.3	5.2	10.8	3.1	4.1	4.6	7.2	6.1	5.4	18.0
Cycle Q Clear(g_c), s	18.0	12.8	8.3	18.0	10.8	3.1	9.4	4.6	7.2	10.7	5.4	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	2042	634	185	2042	634	283	1421	634	696	1421	634
V/C Ratio(X)	0.57	0.80	0.59	1.42	0.71	0.26	0.17	0.36	0.53	0.29	0.42	1.06
Avail Cap(c_a), veh/h	210	2042	634	185	2042	634	283	1421	634	696	1421	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	11.9	10.6	22.2	11.3	9.0	13.1	9.5	10.3	13.2	9.7	13.5
Incr Delay (d2), s/veh	3.7	2.4	1.4	217.2	1.2	0.2	0.3	0.2	0.8	0.2	0.2	52.7
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	1.4	4.2	2.5	12.9	3.4	0.9	0.4	1.4	2.1	0.7	1.7	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	14.4	12.0	239.3	12.5	9.2	13.4	9.6	11.1	13.5	9.9	66.2
LnGrp LOS	C	B	B	F	B	A	B	A	B	B	A	F
Approach Vol, veh/h		2132			1883			898			1466	
Approach Delay, s/veh		14.5			43.8			10.4			36.2	
Approach LOS		B			D			B			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		11.4		20.0		20.0		20.0				
Green Ext Time (p_c), s		2.9		0.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				27.6								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 2: Frontage Rd/I-5 SB Off Ramp & Imperial Blvd

FY with Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↘	↑↑↑					↘	↖↖	↗
Traffic Volume (veh/h)	0	1609	228	13	1474	0	0	0	0	394	186	157
Future Volume (veh/h)	0	1609	228	13	1474	0	0	0	0	394	186	157
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1828	259	15	1694	0				464	219	185
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87				0.85	0.85	0.85
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2475	768	415	3421	0				644	338	286
Arrive On Green	0.00	0.48	0.48	0.12	0.67	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	1870	1585
Grp Volume(v), veh/h	0	1828	259	15	1694	0				464	219	185
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	1870	1585
Q Serve(g_s), s	0.0	21.6	7.5	0.3	12.3	0.0				9.2	8.1	8.1
Cycle Q Clear(g_c), s	0.0	21.6	7.5	0.3	12.3	0.0				9.2	8.1	8.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2475	768	415	3421	0				644	338	286
V/C Ratio(X)	0.00	0.74	0.34	0.04	0.50	0.00				0.72	0.65	0.65
Avail Cap(c_a), veh/h	0	2475	768	415	3421	0				741	389	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.63	0.63	0.89	0.89	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.5	11.9	29.2	6.1	0.0				28.9	28.5	28.5
Incr Delay (d2), s/veh	0.0	1.3	0.7	0.0	0.2	0.0				3.7	4.3	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.7	2.6	0.1	3.4	0.0				4.1	3.9	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.8	12.7	29.2	6.3	0.0				32.7	32.8	33.5
LnGrp LOS	A	B	B	C	A	A				C	C	C
Approach Vol, veh/h		2087			1709						868	
Approach Delay, s/veh		16.3			6.5						32.9	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.9	42.2		18.9		56.1						
Change Period (Y+Rc), s	4.9	5.8		5.4		5.8						
Max Green Setting (Gmax), s	9.0	34.3		15.6		48.2						
Max Q Clear Time (g_c+I1), s	2.3	23.6		11.2		14.3						
Green Ext Time (p_c), s	0.0	10.1		2.3		26.5						

Intersection Summary

HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 3: Andree St/I-5 NB On Ramp & Imperial Blvd

FY with Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑		↔	↑↑↑	↔		↔↔	↔			
Traffic Volume (veh/h)	139	1694	167	0	1398	738	139	167	12	0	0	0
Future Volume (veh/h)	139	1694	167	0	1398	738	139	167	12	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	160	1947	192	0	1645	868	154	186	13			
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2			
Cap, veh/h	420	3916	383	2	3296	1023	267	266	238			
Arrive On Green	0.12	0.83	0.83	0.00	0.65	0.65	0.15	0.15	0.15			
Sat Flow, veh/h	3456	4728	463	1781	5106	1585	1781	1777	1585			
Grp Volume(v), veh/h	160	1398	741	0	1645	868	154	186	13			
Grp Sat Flow(s),veh/h/ln	1728	1702	1787	1781	1702	1585	1781	1777	1585			
Q Serve(g_s), s	3.4	9.6	9.7	0.0	13.5	34.3	6.4	8.0	0.6			
Cycle Q Clear(g_c), s	3.4	9.6	9.7	0.0	13.5	34.3	6.4	8.0	0.6			
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	420	2819	1480	2	3296	1023	267	266	238			
V/C Ratio(X)	0.38	0.50	0.50	0.00	0.50	0.85	0.58	0.70	0.05			
Avail Cap(c_a), veh/h	436	2819	1480	223	3296	1023	272	271	242			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.77	0.00	0.09	0.09	1.00	1.00	1.00			
Uniform Delay (d), s/veh	32.4	2.0	2.0	0.0	7.4	11.1	31.6	32.3	29.1			
Incr Delay (d2), s/veh	0.4	0.5	0.9	0.0	0.0	0.7	3.2	7.9	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.4	1.3	1.6	0.0	4.0	9.8	2.9	3.9	0.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	2.5	3.0	0.0	7.4	11.8	34.9	40.2	29.3			
LnGrp LOS	C	A	A	A	A	B	C	D	C			
Approach Vol, veh/h		2299			2513			353				
Approach Delay, s/veh		4.7			8.9			37.5				
Approach LOS		A			A			D				
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	0.0	72.1			14.6	57.4		17.4				
Change Period (Y+Rc), s	4.9	5.8			4.9	* 5.8		5.4				
Max Green Setting (Gmax), s	10.0	41.7			10.1	* 43		12.2				
Max Q Clear Time (g_c+I1), s	0.0	11.7			5.4	36.3		10.0				
Green Ext Time (p_c), s	0.0	27.2			0.2	5.9		0.5				

Intersection Summary

HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A
































Notes

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

HCM Signalized Intersection Capacity Analysis

4: Norwalk Blvd & Imperial Hwy

FY with Project_PM
01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			  	
Traffic Volume (vph)	162	1258	78	161	1655	92	229	620	147	173	882	237
Future Volume (vph)	162	1258	78	161	1655	92	229	620	147	173	882	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.91	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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
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	5085	1583	1770	5085	1583	1770	3539	1583	1770	5085	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	186	1446	90	185	1902	106	246	667	158	186	948	255
RTOR Reduction (vph)	0	0	62	0	0	67	0	0	70	0	0	128
Lane Group Flow (vph)	186	1446	28	185	1902	39	246	667	88	186	948	127
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	5		6	2		3	8		7		4
Permitted Phases			5			2			8			4
Actuated Green, G (s)	14.6	45.6	45.6	22.0	53.0	53.0	19.0	36.4	58.4	16.0	33.4	33.4
Effective Green, g (s)	14.6	45.6	45.6	22.0	53.0	53.0	19.0	36.4	58.4	16.0	33.4	33.4
Actuated g/C Ratio	0.10	0.31	0.31	0.15	0.37	0.37	0.13	0.25	0.40	0.11	0.23	0.23
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0	6.0	6.5	6.5
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5	4.5	2.0	4.5	2.0	2.0	4.5	4.5
Lane Grp Cap (vph)	178	1599	497	268	1858	578	231	888	637	195	1171	364
v/s Ratio Prot	0.11	c0.28		0.10	c0.37		c0.14	c0.19	0.02	0.11	c0.19	
v/s Ratio Perm			0.02			0.02			0.03			0.08
v/c Ratio	1.04	0.90	0.06	0.69	1.02	0.07	1.06	0.75	0.14	0.95	0.81	0.35
Uniform Delay, d1	65.2	47.6	34.7	58.3	46.0	29.9	63.0	50.1	27.4	64.1	52.8	46.7
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	79.8	7.9	0.1	13.6	27.1	0.2	77.4	4.1	0.2	50.6	4.7	1.0
Delay (s)	145.0	55.5	34.8	71.9	73.1	30.1	140.4	54.2	27.6	114.7	57.5	47.7
Level of Service	F	E	C	E	E	C	F	D	C	F	E	D
Approach Delay (s)		64.1			70.9			70.1			63.4	
Approach LOS		E			E			E			E	
Intersection Summary												
HCM 2000 Control Delay			67.3				HCM 2000 Level of Service		E			
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			145.0				Sum of lost time (s)		25.0			
Intersection Capacity Utilization			91.5%				ICU Level of Service		F			
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
5: Avenida Manuel Salinas & Imperial Hqy

FY with Project_PM
01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↗		↘	↗	
Traffic Volume (veh/h)	69	1531	90	48	1741	89	173	8	56	55	14	42
Future Volume (veh/h)	69	1531	90	48	1741	89	173	8	56	55	14	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	1740	102	53	1934	99	247	11	80	79	20	60
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	2955	917	68	2866	890	231	17	120	216	30	89
Arrive On Green	0.06	0.58	0.58	0.04	0.56	0.56	0.07	0.08	0.08	0.05	0.07	0.07
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	195	1420	1781	412	1236
Grp Volume(v), veh/h	78	1740	102	53	1934	99	247	0	91	79	0	80
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	0	1615	1781	0	1648
Q Serve(g_s), s	3.9	19.6	2.6	2.7	24.1	2.6	6.0	0.0	4.9	3.6	0.0	4.3
Cycle Q Clear(g_c), s	3.9	19.6	2.6	2.7	24.1	2.6	6.0	0.0	4.9	3.6	0.0	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.75
Lane Grp Cap(c), veh/h	99	2955	917	68	2866	890	231	0	137	216	0	119
V/C Ratio(X)	0.79	0.59	0.11	0.78	0.67	0.11	1.07	0.00	0.67	0.37	0.00	0.67
Avail Cap(c_a), veh/h	99	2955	917	97	2866	890	231	0	337	222	0	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.41	0.41	0.41	0.79	0.79	0.79	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.0	12.1	8.5	42.9	13.9	9.2	40.0	0.0	39.9	36.0	0.0	40.7
Incr Delay (d2), s/veh	14.7	0.4	0.1	11.3	1.0	0.2	78.1	0.0	5.4	1.0	0.0	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.8	0.9	1.4	8.7	0.9	7.2	0.0	2.1	1.6	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	12.5	8.6	54.2	15.0	9.4	118.1	0.0	45.4	37.1	0.0	47.2
LnGrp LOS	E	B	A	D	B	A	F	A	D	D	A	D
Approach Vol, veh/h		1920			2086			338				159
Approach Delay, s/veh		14.1			15.7			98.5				42.2
Approach LOS		B			B			F				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	58.6	11.0	12.0	10.0	57.0	9.9	13.1				
Change Period (Y+Rc), s	5.0	6.5	5.0	5.5	5.0	6.5	5.0	5.5				
Max Green Setting (Gmax), s	4.9	39.1	6.0	18.0	5.0	39.0	5.2	18.8				
Max Q Clear Time (g_c+I1), s	4.7	21.6	8.0	6.3	5.9	26.1	5.6	6.9				
Green Ext Time (p_c), s	0.0	14.9	0.0	0.2	0.0	11.8	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				22.2								
HCM 6th LOS				C								

HCM Signalized Intersection Capacity Analysis
6: Volunteer Ave & Imperial Hwy

FY with Project_PM
03/03/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1501	36	52	1658	103	126	53	63	42	15	22
Future Volume (vph)	30	1501	36	52	1658	103	126	53	63	42	15	22
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		6.0	6.0			5.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	5067		1770	5041		1770	1711			1797	1583
Flt Permitted	0.08	1.00		0.11	1.00		0.95	1.00			0.96	1.00
Satd. Flow (perm)	148	5067		197	5041		1770	1711			1797	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	33	1668	40	57	1802	112	183	77	91	47	17	25
RTOR Reduction (vph)	0	2	0	0	4	0	0	35	0	0	0	25
Lane Group Flow (vph)	33	1706	0	57	1910	0	183	133	0	0	64	0
Turn Type	Perm	NA		Perm	NA		Split	NA		Split	NA	NA
Protected Phases		6			2		4	4		3	3	
Permitted Phases	6			2								
Actuated Green, G (s)	87.3	87.3		87.3	87.3		18.8	18.8			6.4	0.0
Effective Green, g (s)	87.3	87.3		87.3	87.3		18.8	18.8			6.4	0.0
Actuated g/C Ratio	0.67	0.67		0.67	0.67		0.14	0.14			0.05	0.00
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0			5.0	
Vehicle Extension (s)	4.5	4.5		4.5	4.5		3.0	3.0			3.0	
Lane Grp Cap (vph)	99	3402		132	3385		255	247			88	0
v/s Ratio Prot		0.34			c0.38		c0.10	0.08			c0.04	
v/s Ratio Perm	0.22			0.29								
v/c Ratio	0.33	0.50		0.43	0.56		0.72	0.54			0.73	0.00
Uniform Delay, d1	9.0	10.6		9.9	11.3		53.1	51.6			60.9	65.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	3.4	0.2		10.0	0.7		9.3	2.3			25.6	0.0
Delay (s)	12.5	10.8		19.9	12.0		62.3	53.8			86.6	65.0
Level of Service	B	B		B	B		E	D			F	E
Approach Delay (s)		10.8			12.2			58.3			80.5	
Approach LOS		B			B			E			F	
Intersection Summary												
HCM 2000 Control Delay			17.0			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		17.5				
Intersection Capacity Utilization			67.3%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
7: Bloomfield Ave & Imperial Hwy

FY with Project_PM
03/03/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	1166	223	350	1197	57	282	642	479	162	880	233
Future Volume (veh/h)	212	1166	223	350	1197	57	282	642	479	162	880	233
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	1227	235	393	1345	64	324	738	551	180	978	259
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	1277	396	324	1491	71	274	1015	453	481	755	199
Arrive On Green	0.13	0.25	0.25	0.18	0.30	0.30	0.15	0.29	0.29	0.14	0.27	0.27
Sat Flow, veh/h	1781	5106	1585	1781	4994	238	1781	3554	1585	3456	2781	734
Grp Volume(v), veh/h	223	1227	235	393	917	492	324	738	551	180	624	613
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1828	1781	1777	1585	1728	1777	1738
Q Serve(g_s), s	17.4	33.2	18.3	25.5	36.2	36.2	21.5	26.2	40.0	6.6	38.0	38.0
Cycle Q Clear(g_c), s	17.4	33.2	18.3	25.5	36.2	36.2	21.5	26.2	40.0	6.6	38.0	38.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	238	1277	396	324	1016	546	274	1015	453	481	482	472
V/C Ratio(X)	0.94	0.96	0.59	1.21	0.90	0.90	1.18	0.73	1.22	0.37	1.29	1.30
Avail Cap(c_a), veh/h	238	1277	396	324	1016	546	274	1015	453	481	482	472
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)	0.86	0.86	0.86	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	51.8	46.2	57.2	47.1	47.1	59.3	45.1	50.0	54.7	51.0	51.0
Incr Delay (d2), s/veh	37.1	15.8	5.5	120.2	12.7	20.7	103.3	2.8	109.4	2.2	146.7	149.9
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	10.3	16.0	7.9	22.3	17.1	19.6	17.6	12.0	29.5	3.1	36.5	36.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.2	67.6	51.8	177.5	59.8	67.8	162.6	47.8	159.4	56.9	197.7	200.9
LnGrp LOS	F	E	D	F	E	E	F	D	F	E	F	F
Approach Vol, veh/h		1685			1802			1613			1417	
Approach Delay, s/veh		69.3			87.7			109.0			181.2	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.2	47.3	24.0	45.5	30.0	40.5	26.0	43.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	18.7	41.8	19.5	40.0	25.5	35.0	21.5	38.0				
Max Q Clear Time (g_c+I1), s	19.4	38.2	8.6	42.0	27.5	35.2	23.5	40.0				
Green Ext Time (p_c), s	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				108.5								
HCM 6th LOS				F								

HCM 6th Signalized Intersection Summary
8: Carmenita Rd & Imperial Hwy

FY with Project_PM
03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↗	↑↑↑		↗	↑↑		↗	↑↑	
Traffic Volume (veh/h)	134	911	117	169	767	100	146	1127	147	109	1027	48
Future Volume (veh/h)	134	911	117	169	767	100	146	1127	147	109	1027	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	146	990	127	174	791	103	159	1225	160	122	1154	54
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	1296	166	185	1356	175	162	1150	150	113	1163	54
Arrive On Green	0.09	0.28	0.28	0.10	0.30	0.30	0.09	0.36	0.36	0.06	0.34	0.34
Sat Flow, veh/h	1781	4582	586	1781	4576	592	1781	3162	411	1781	3456	162
Grp Volume(v), veh/h	146	735	382	174	587	307	159	686	699	122	593	615
Grp Sat Flow(s),veh/h/ln	1781	1702	1765	1781	1702	1764	1781	1777	1796	1781	1777	1841
Q Serve(g_s), s	8.9	21.7	21.8	10.7	16.1	16.3	9.8	40.0	40.0	7.0	36.6	36.6
Cycle Q Clear(g_c), s	8.9	21.7	21.8	10.7	16.1	16.3	9.8	40.0	40.0	7.0	36.6	36.6
Prop In Lane	1.00		0.33	1.00		0.34	1.00		0.23	1.00		0.09
Lane Grp Cap(c), veh/h	160	962	499	185	1009	523	162	646	653	113	598	619
V/C Ratio(X)	0.91	0.76	0.77	0.94	0.58	0.59	0.98	1.06	1.07	1.08	0.99	0.99
Avail Cap(c_a), veh/h	160	962	499	185	1009	523	162	646	653	113	598	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	36.1	36.1	49.0	32.9	33.0	49.9	35.0	35.0	51.5	36.4	36.4
Incr Delay (d2), s/veh	45.1	5.7	10.7	49.2	2.5	4.8	65.0	53.1	55.3	106.5	34.9	34.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	9.7	10.8	7.2	6.9	7.6	7.3	26.3	27.0	6.5	21.3	22.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.7	41.8	46.8	98.2	35.4	37.7	115.0	88.1	90.3	158.0	71.3	70.9
LnGrp LOS	F	D	D	F	D	D	F	F	F	F	E	E
Approach Vol, veh/h		1263			1068			1544			1330	
Approach Delay, s/veh		49.4			46.3			91.9			79.1	
Approach LOS		D			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	38.6	11.0	46.0	15.9	37.1	14.0	43.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	6.0	4.5	6.0	4.0	6.0				
Max Green Setting (Gmax), s	9.9	32.6	7.0	40.0	11.4	31.1	10.0	37.0				
Max Q Clear Time (g_c+I1), s	10.9	18.3	9.0	42.0	12.7	23.8	11.8	38.6				
Green Ext Time (p_c), s	0.0	7.4	0.0	0.0	0.0	5.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				68.9								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 9: Firestone Blvd & Pioneer Blvd

FY with Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	397	60	40	400	71	84	846	45	68	1015	210
Future Volume (veh/h)	237	397	60	40	400	71	84	846	45	68	1015	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	247	414	62	42	421	75	101	1019	0	84	1253	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.83	0.83	0.83	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	970	433	53	603	269	102	1621		107	1631	
Arrive On Green	0.13	0.27	0.27	0.03	0.17	0.17	0.06	0.46	0.00	0.06	0.46	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	247	414	62	42	421	75	101	1019	0	84	1253	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	14.0	10.1	3.1	2.5	11.7	4.3	6.0	23.0	0.0	4.9	30.9	0.0
Cycle Q Clear(g_c), s	14.0	10.1	3.1	2.5	11.7	4.3	6.0	23.0	0.0	4.9	30.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	970	433	53	603	269	102	1621		107	1631	
V/C Ratio(X)	1.04	0.43	0.14	0.79	0.70	0.28	0.99	0.63		0.79	0.77	
Avail Cap(c_a), veh/h	238	1252	559	102	981	438	102	1621		119	1631	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.65	0.65	0.00
Uniform Delay (d), s/veh	45.5	31.4	28.9	50.6	41.1	38.0	49.5	21.8	0.0	48.7	23.7	0.0
Incr Delay (d2), s/veh	69.2	0.5	0.3	9.0	2.5	1.0	86.5	1.9	0.0	16.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	4.4	1.2	1.2	5.3	1.7	5.1	9.7	0.0	2.6	13.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.7	31.9	29.1	59.6	43.6	39.0	136.0	23.6	0.0	64.7	26.1	0.0
LnGrp LOS	F	C	C	E	D	D	F	C		E	C	
Approach Vol, veh/h		723			538			1120			1337	
Approach Delay, s/veh		60.0			44.2			33.8			28.5	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	53.4	7.2	34.2	10.0	53.7	18.0	23.3				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	7.0	36.0	6.0	37.0	6.0	37.0	14.0	29.0				
Max Q Clear Time (g_c+I1), s	6.9	25.0	4.5	12.1	8.0	32.9	16.0	13.7				
Green Ext Time (p_c), s	0.0	8.0	0.0	4.9	0.0	3.6	0.0	4.1				

Intersection Summary






















HCM 6th Ctrl Delay	38.5
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
10: Norwalk Blvd & Civic Center Dr

FY with Project_PM
01/03/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	2	0	1	638	0	141	0	819	512	157	992	0	
Future Volume (vph)	2	0	1	638	0	141	0	819	512	157	992	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Lane Util. Factor		1.00		0.95	0.95	1.00		0.91	1.00	1.00	0.91		
Frt		0.95		1.00	1.00	0.85		1.00	0.85	1.00	1.00		
Flt Protected		0.97		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1722		1681	1681	1583		5085	1583	1770	5085		
Flt Permitted		1.00		0.95	0.95	1.00		1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1779		1681	1681	1583		5085	1583	1770	5085		
Peak-hour factor, PHF	0.92	0.92	0.92	0.79	0.79	0.79	0.76	0.76	0.76	0.88	0.88	0.88	
Adj. Flow (vph)	2	0	1	808	0	178	0	1078	674	178	1127	0	
RTOR Reduction (vph)	0	3	0	0	0	123	0	0	191	0	0	0	
Lane Group Flow (vph)	0	0	0	404	404	55	0	1078	483	178	1127	0	
Turn Type	Perm	NA		Split	NA	Perm		NA	pm+ov	Prot	NA		
Protected Phases		4		3	3			2	3	1	6		
Permitted Phases	4					3			2				
Actuated Green, G (s)		0.7		21.9	21.9	21.9		18.4	40.3	8.8	32.2		
Effective Green, g (s)		0.7		21.9	21.9	21.9		18.4	40.3	8.8	32.2		
Actuated g/C Ratio		0.01		0.31	0.31	0.31		0.26	0.57	0.12	0.45		
Clearance Time (s)		5.0		5.0	5.0	5.0		6.0	5.0	5.0	6.0		
Vehicle Extension (s)		3.5		3.0	3.0	3.0		4.0	3.0	2.0	4.0		
Lane Grp Cap (vph)		17		519	519	489		1321	901	220	2312		
v/s Ratio Prot				c0.24	0.24			c0.21	0.17	c0.10	0.22		
v/s Ratio Perm		c0.00				0.03			0.14				
v/c Ratio		0.00		0.78	0.78	0.11		0.82	0.54	0.81	0.49		
Uniform Delay, d1		34.7		22.2	22.2	17.5		24.6	9.5	30.2	13.5		
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.0		7.2	7.2	0.1		5.7	0.6	18.3	0.7		
Delay (s)		34.8		29.5	29.5	17.6		30.3	10.1	48.5	14.3		
Level of Service		C		C	C	B		C	B	D	B		
Approach Delay (s)		34.8			27.3			22.5			18.9		
Approach LOS		C			C			C			B		
Intersection Summary													
HCM 2000 Control Delay			22.5		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.79										
Actuated Cycle Length (s)			70.8		Sum of lost time (s)					21.0			
Intersection Capacity Utilization			62.0%		ICU Level of Service					B			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary
 11: Bloomfield Ave & Civic Center Dr

FY with Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	16	194	9	10	5	135	1070	14	12	1220	232
Future Volume (veh/h)	321	16	194	9	10	5	135	1070	14	12	1220	232
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	391	20	237	14	15	8	165	1305	17	12	1258	239
Peak Hour Factor	0.82	0.82	0.82	0.65	0.65	0.65	0.82	0.82	0.82	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	516	598	507	435	367	196	122	1842	24	13	1723	769
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.04	0.51	0.51	0.01	0.48	0.48
Sat Flow, veh/h	1388	1870	1585	1123	1148	612	3456	3592	47	1781	3554	1585
Grp Volume(v), veh/h	391	20	237	14	0	23	165	645	677	12	1258	239
Grp Sat Flow(s),veh/h/ln	1388	1870	1585	1123	0	1760	1728	1777	1862	1781	1777	1585
Q Serve(g_s), s	23.0	0.6	10.2	0.7	0.0	0.8	3.0	23.6	23.6	0.6	24.0	7.8
Cycle Q Clear(g_c), s	23.7	0.6	10.2	1.4	0.0	0.8	3.0	23.6	23.6	0.6	24.0	7.8
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	516	598	507	435	0	563	122	911	955	13	1723	769
V/C Ratio(X)	0.76	0.03	0.47	0.03	0.00	0.04	1.35	0.71	0.71	0.90	0.73	0.31
Avail Cap(c_a), veh/h	727	882	748	605	0	828	122	911	955	42	1723	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.12	0.12	0.12
Uniform Delay (d), s/veh	28.1	19.9	23.1	20.3	0.0	19.9	41.0	15.8	15.9	42.2	17.5	13.3
Incr Delay (d2), s/veh	2.4	0.0	0.5	0.0	0.0	0.0	203.0	4.6	4.4	9.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.3	3.7	0.2	0.0	0.3	4.7	9.9	10.3	0.3	9.1	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	19.9	23.6	20.4	0.0	19.9	244.0	20.5	20.3	52.0	17.8	13.4
LnGrp LOS	C	B	C	C	A	B	F	C	C	D	B	B
Approach Vol, veh/h		648			37			1487			1509	
Approach Delay, s/veh		27.6			20.1			45.2			17.4	
Approach LOS		C			C			D			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	48.6		31.8	7.0	46.2		31.8				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		* 4.6				
Max Green Setting (Gmax), s	2.0	29.4		40.0	3.0	28.4		* 40				
Max Q Clear Time (g_c+I1), s	2.6	25.6		3.4	5.0	26.0		25.7				
Green Ext Time (p_c), s	0.0	2.2		0.1	0.0	1.6		1.5				

Intersection Summary

HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
 12: Norwalk Blvd & Andree St/I-5 NB Off Ramp

FY with Project_PM
 01/03/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	0	77	146	114	363	122	960	0	5	1509	124
Future Volume (veh/h)	123	0	77	146	114	363	122	960	0	5	1509	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h	138	0	87	160	125	399	154	1215	0	6	1818	149
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.79	0.79	0.79	0.83	0.83	0.83
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	0	0	0	297	296	264	325	3710	0	37	2729	222
Arrive On Green	0.00	0.00	0.00	0.17	0.17	0.17	0.09	0.73	0.00	0.59	0.59	0.59
Sat Flow, veh/h		0		1781	1777	1585	3456	5274	0	4	4658	380
Grp Volume(v), veh/h		0.0		160	125	399	154	1215	0	727	605	641
Grp Sat Flow(s),veh/h/ln				1781	1777	1585	1728	1702	0	1859	1549	1634
Q Serve(g_s), s				8.6	6.6	17.5	4.4	9.0	0.0	0.0	27.9	28.1
Cycle Q Clear(g_c), s				8.6	6.6	17.5	4.4	9.0	0.0	27.6	27.9	28.1
Prop In Lane				1.00		1.00	1.00		0.00	0.01		0.23
Lane Grp Cap(c), veh/h				297	296	264	325	3710	0	1123	907	957
V/C Ratio(X)				0.54	0.42	1.51	0.47	0.33	0.00	0.65	0.67	0.67
Avail Cap(c_a), veh/h				297	296	264	329	3710	0	1123	907	957
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.84	0.84	0.00	0.83	0.83	0.83
Uniform Delay (d), s/veh				40.1	39.2	43.8	45.1	5.1	0.0	14.7	14.8	14.8
Incr Delay (d2), s/veh				1.9	1.0	248.3	0.9	0.2	0.0	2.4	3.2	3.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	3.0	25.0	1.9	2.8	0.0	11.7	9.9	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.0	40.2	292.1	46.0	5.3	0.0	17.1	18.0	17.9
LnGrp LOS				D	D	F	D	A	A	B	B	B
Approach Vol, veh/h					684			1369			1973	
Approach Delay, s/veh					187.5			9.9			17.7	
Approach LOS					F			A			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.1			14.8	67.3		22.9				
Change Period (Y+Rc), s		5.8			4.9	5.8		5.4				
Max Green Setting (Gmax), s		58.9			10.0	44.0		17.5				
Max Q Clear Time (g_c+I1), s		11.0			6.4	30.1		19.5				
Green Ext Time (p_c), s		23.2			0.1	12.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay					43.9							
HCM 6th LOS					D							

HCM 6th Signalized Intersection Summary
 13: San Antonio Dr & Frontage Rd/I-5 SB On Ramp






























FY with Project_PM
 03/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	236	136	0	0	0	0	950	172	451	1331	0
Future Volume (veh/h)	72	236	136	0	0	0	0	950	172	451	1331	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	81	265	153				0	1131	205	531	1566	0
Peak Hour Factor	0.89	0.89	0.89				0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	249	497	222				0	2516	456	386	3789	0
Arrive On Green	0.14	0.14	0.14				0.00	0.58	0.58	0.11	0.74	0.00
Sat Flow, veh/h	1781	3554	1585				0	4514	787	3456	5274	0
Grp Volume(v), veh/h	81	265	153				0	886	450	531	1566	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				0	1702	1729	1728	1702	0
Q Serve(g_s), s	3.9	6.6	8.7				0.0	14.1	14.1	10.6	10.8	0.0
Cycle Q Clear(g_c), s	3.9	6.6	8.7				0.0	14.1	14.1	10.6	10.8	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	249	497	222				0	1971	1001	386	3789	0
V/C Ratio(X)	0.32	0.53	0.69				0.00	0.45	0.45	1.38	0.41	0.00
Avail Cap(c_a), veh/h	799	1594	711				0	1971	1001	386	3789	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.18	0.18	0.00
Uniform Delay (d), s/veh	36.8	38.0	38.9				0.0	11.4	11.4	42.2	4.6	0.0
Incr Delay (d2), s/veh	0.7	0.9	3.8				0.0	0.7	1.5	172.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.9	3.6				0.0	5.1	5.4	13.7	3.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	38.9	42.7				0.0	12.1	12.8	214.9	4.6	0.0
LnGrp LOS	D	D	D				A	B	B	F	A	A
Approach Vol, veh/h		499						1336			2097	
Approach Delay, s/veh		39.8						12.4			57.9	
Approach LOS		D						B			E	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	15.5	60.8		18.7				76.3				
Change Period (Y+Rc), s	4.9	5.8		5.4				5.8				
Max Green Setting (Gmax), s	10.6	25.7		42.6				41.2				
Max Q Clear Time (g_c+I1), s	12.6	16.1		10.7				12.8				
Green Ext Time (p_c), s	0.0	7.8		2.6				21.6				
Intersection Summary												
HCM 6th Ctrl Delay			40.1									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 14: San Antonio Dr & Firestone Blvd

FY with Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			  	
Traffic Volume (veh/h)	237	395	60	42	398	86	84	853	47	80	1023	210
Future Volume (veh/h)	237	395	60	42	398	86	84	853	47	80	1023	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	429	65	46	437	95	98	992	55	95	1218	250
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	1452	648	77	1077	480	112	1020	455	109	1210	248
Arrive On Green	0.15	0.41	0.41	0.04	0.30	0.30	0.06	0.29	0.29	0.06	0.28	0.28
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	3554	1585	1781	4246	872
Grp Volume(v), veh/h	258	429	65	46	437	95	98	992	55	95	976	492
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1777	1585	1781	1702	1713
Q Serve(g_s), s	14.4	8.1	2.5	2.5	9.8	4.4	5.5	27.6	2.6	5.3	28.5	28.5
Cycle Q Clear(g_c), s	14.4	8.1	2.5	2.5	9.8	4.4	5.5	27.6	2.6	5.3	28.5	28.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	265	1452	648	77	1077	480	112	1020	455	109	970	488
V/C Ratio(X)	0.97	0.30	0.10	0.60	0.41	0.20	0.87	0.97	0.12	0.87	1.01	1.01
Avail Cap(c_a), veh/h	265	1452	648	123	1077	480	112	1020	455	109	970	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	19.9	18.2	47.0	27.7	25.8	46.5	35.3	26.3	46.6	35.8	35.8
Incr Delay (d2), s/veh	47.1	0.5	0.3	2.7	1.1	0.9	46.6	21.9	0.3	47.9	30.5	42.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	3.4	1.0	1.2	4.3	1.8	3.9	14.7	1.0	3.8	15.6	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.5	20.4	18.5	49.7	28.8	26.8	93.1	57.2	26.6	94.5	66.2	78.1
LnGrp LOS	F	C	B	D	C	C	F	E	C	F	F	F
Approach Vol, veh/h		752			578			1145			1563	
Approach Delay, s/veh		43.9			30.2			58.8			71.7	
Approach LOS		D			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	46.4	10.6	34.2	19.4	35.8	10.8	34.0				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	6.9	38.3	6.1	28.7	14.9	30.3	6.3	28.5				
Max Q Clear Time (g_c+I1), s	4.5	10.1	7.3	29.6	16.4	11.8	7.5	30.5				
Green Ext Time (p_c), s	0.0	6.1	0.0	0.0	0.0	5.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				56.9								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 15: Bloomfield Ave & Rosecrans Ave













FY with Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	611	55	219	771	395	65	740	353	434	637	132
Future Volume (veh/h)	115	611	55	219	771	395	65	740	353	434	637	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	694	62	246	866	444	73	831	397	462	678	140
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	981	438	263	981	770	120	948	423	494	1217	543
Arrive On Green	0.08	0.28	0.28	0.08	0.28	0.28	0.07	0.27	0.27	0.14	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	3456	3554	2790	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	131	694	62	246	866	444	73	831	397	462	678	140
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1395	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.7	18.4	3.1	7.4	24.5	14.4	4.2	23.5	25.7	13.9	16.3	6.7
Cycle Q Clear(g_c), s	7.7	18.4	3.1	7.4	24.5	14.4	4.2	23.5	25.7	13.9	16.3	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	136	981	438	263	981	770	120	948	423	494	1217	543
V/C Ratio(X)	0.97	0.71	0.14	0.93	0.88	0.58	0.61	0.88	0.94	0.94	0.56	0.26
Avail Cap(c_a), veh/h	136	981	438	263	981	770	136	948	423	494	1217	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	34.2	28.6	48.2	36.4	32.7	47.6	36.9	37.7	44.5	28.1	24.9
Incr Delay (d2), s/veh	66.2	4.3	0.7	35.7	10.5	2.8	5.1	11.2	30.9	25.3	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	8.4	1.3	4.5	11.9	5.1	2.0	11.5	13.4	7.6	7.1	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.6	38.5	29.3	83.9	46.8	35.6	52.8	48.1	68.6	69.8	29.9	26.1
LnGrp LOS	F	D	C	F	D	D	D	D	E	E	C	C
Approach Vol, veh/h		887			1556			1301			1280	
Approach Delay, s/veh		49.1			49.5			54.6			43.9	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	35.5	13.0	42.5	14.0	35.5	21.0	34.5				
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.0	6.5	6.0	6.5				
Max Green Setting (Gmax), s	8.0	29.0	8.0	35.0	8.0	29.0	15.0	28.0				
Max Q Clear Time (g_c+I1), s	9.4	20.4	6.2	18.3	9.7	26.5	15.9	27.7				
Green Ext Time (p_c), s	0.0	4.7	0.0	8.0	0.0	2.1	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			49.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 16: Rosecrans Ave & I-5 SB Ramps

FY with Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	991	456	70	1153	0	0	0	0	379	0	221
Future Volume (veh/h)	0	991	456	70	1153	0	0	0	0	379	0	221
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1194	549	80	1310	0				462	0	270
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1751	781	185	3346	0				734	0	326
Arrive On Green	0.00	0.49	0.49	0.10	0.66	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	3647	1585	1781	5274	0				3563	0	1585
Grp Volume(v), veh/h	0	1194	549	80	1310	0				462	0	270
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	20.5	21.5	3.4	9.5	0.0				9.5	0.0	13.0
Cycle Q Clear(g_c), s	0.0	20.5	21.5	3.4	9.5	0.0				9.5	0.0	13.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1751	781	185	3346	0				734	0	326
V/C Ratio(X)	0.00	0.68	0.70	0.43	0.39	0.00				0.63	0.00	0.83
Avail Cap(c_a), veh/h	0	1751	781	223	3346	0				828	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.55	0.55	0.91	0.91	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.5	15.7	33.6	6.4	0.0				29.0	0.0	30.4
Incr Delay (d2), s/veh	0.0	1.2	2.9	1.1	0.1	0.0				1.6	0.0	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.8	7.7	1.5	2.8	0.0				4.1	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.7	18.7	34.7	6.5	0.0				30.6	0.0	44.5
LnGrp LOS	A	B	B	C	A	A				C	A	D
Approach Vol, veh/h		1743			1390						732	
Approach Delay, s/veh		17.3			8.1						35.7	
Approach LOS		B			A						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	45.1		21.9		58.1						
Change Period (Y+Rc), s	* 4.7	5.7		5.4		5.7						
Max Green Setting (Gmax), s	* 10	35.6		18.6		50.3						
Max Q Clear Time (g_c+I1), s	5.4	23.5		15.0		11.5						
Green Ext Time (p_c), s	0.0	8.9		1.4		15.4						

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 17: I-5 NB Ramps & Rosecrans Ave

FY with Project_PM
 01/03/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	274	1126	0	0	903	673	309	1	53	0	0	0
Future Volume (veh/h)	274	1126	0	0	903	673	309	1	53	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	298	1224	0	0	941	701	392	0	67			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.79	0.79	0.79			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	198	2520	0	0	2787	865	597	0	266			
Arrive On Green	0.11	0.71	0.00	0.00	0.55	0.55	0.17	0.00	0.17			
Sat Flow, veh/h	1781	3647	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	298	1224	0	0	941	701	392	0	67			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.0	13.8	0.0	0.0	9.2	32.4	9.3	0.0	3.3			
Cycle Q Clear(g_c), s	10.0	13.8	0.0	0.0	9.2	32.4	9.3	0.0	3.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	198	2520	0	0	2787	865	597	0	266			
V/C Ratio(X)	1.51	0.49	0.00	0.00	0.34	0.81	0.66	0.00	0.25			
Avail Cap(c_a), veh/h	198	2520	0	0	2787	865	1465	0	652			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.69	0.69	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	5.8	0.0	0.0	11.4	16.6	35.0	0.0	32.6			
Incr Delay (d2), s/veh	244.9	0.5	0.0	0.0	0.3	8.1	2.6	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	17.8	4.3	0.0	0.0	3.3	12.6	4.2	0.0	1.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	284.9	6.3	0.0	0.0	11.7	24.8	37.7	0.0	33.6			
LnGrp LOS	F	A	A	A	B	C	D	A	C			
Approach Vol, veh/h		1522			1642			459				
Approach Delay, s/veh		60.8			17.3			37.1				
Approach LOS		E			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		69.5			14.7	54.8		20.5				
Change Period (Y+Rc), s		* 5.7			* 4.7	5.7		5.4				
Max Green Setting (Gmax), s		* 42			* 10	27.2		37.0				
Max Q Clear Time (g_c+I1), s		15.8			12.0	34.4		11.3				
Green Ext Time (p_c), s		12.4			0.0	0.0		3.8				

Intersection Summary


































HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.












HCM 6th Signalized Intersection Summary
 18: Carmenita Rd & Rosecrans Ave

FY with Project_PM
 01/03/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 	 	 	 	 
Traffic Volume (veh/h)	370	697	59	102	703	52	124	1080	155	54	1141	537
Future Volume (veh/h)	370	697	59	102	703	52	124	1080	155	54	1141	537
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	430	810	69	112	773	57	132	1149	165	62	1311	617
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	427	1081	92	138	1359	100	133	1328	592	80	1221	740
Arrive On Green	0.12	0.33	0.33	0.08	0.28	0.28	0.07	0.37	0.37	0.04	0.34	0.34
Sat Flow, veh/h	3456	3314	282	1781	4854	356	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	430	434	445	112	541	289	132	1149	165	62	1311	617
Grp Sat Flow(s),veh/h/ln	1728	1777	1820	1781	1702	1806	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	14.2	25.1	25.1	7.1	15.6	15.8	8.5	34.4	8.4	4.0	39.5	39.1
Cycle Q Clear(g_c), s	14.2	25.1	25.1	7.1	15.6	15.8	8.5	34.4	8.4	4.0	39.5	39.1
Prop In Lane	1.00		0.16	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	427	580	594	138	953	506	133	1328	592	80	1221	740
V/C Ratio(X)	1.01	0.75	0.75	0.81	0.57	0.57	0.99	0.87	0.28	0.78	1.07	0.83
Avail Cap(c_a), veh/h	427	580	594	170	953	506	133	1328	592	87	1221	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	34.5	34.5	52.2	35.4	35.5	53.2	33.3	25.2	54.4	37.8	26.8
Incr Delay (d2), s/veh	45.5	8.6	8.4	17.5	2.4	4.6	75.0	6.0	0.1	29.2	48.1	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	12.1	12.4	3.8	6.8	7.6	6.6	15.6	3.2	2.4	25.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.9	43.2	43.0	69.8	37.9	40.1	128.1	39.3	25.3	83.6	85.9	34.4
LnGrp LOS	F	D	D	E	D	D	F	D	C	F	F	C
Approach Vol, veh/h		1309			942			1446			1990	
Approach Delay, s/veh		60.4			42.4			45.8			69.9	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	43.5	12.6	45.0	19.2	38.2	9.1	48.5				
Change Period (Y+Rc), s	5.0	6.0	4.0	5.5	5.0	6.0	4.0	5.5				
Max Green Setting (Gmax), s	11.0	35.4	8.6	39.5	14.2	32.2	5.6	42.5				
Max Q Clear Time (g_c+I1), s	9.1	27.1	10.5	41.5	16.2	17.8	6.0	36.4				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	3.3	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay				57.0								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
 19: Bloomfield Ave & New Project Driveway

FY with Project_PM
 01/03/2023

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	131	74	1092	97	97	1285
Future Volume (veh/h)	131	74	1092	97	97	1285
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	80	1187	105	105	1397
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	560	498	1368	121	140	1980
Arrive On Green	0.31	0.31	0.41	0.41	0.08	0.56
Sat Flow, veh/h	1781	1585	3397	292	1781	3647
Grp Volume(v), veh/h	142	80	638	654	105	1397
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1818	1781	1777
Q Serve(g_s), s	4.2	2.6	22.9	23.1	4.0	20.1
Cycle Q Clear(g_c), s	4.2	2.6	22.9	23.1	4.0	20.1
Prop In Lane	1.00	1.00		0.16	1.00	
Lane Grp Cap(c), veh/h	560	498	736	753	140	1980
V/C Ratio(X)	0.25	0.16	0.87	0.87	0.75	0.71
Avail Cap(c_a), veh/h	560	498	736	753	140	1980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	17.3	18.7	18.8	31.6	11.3
Incr Delay (d2), s/veh	1.1	0.7	13.0	13.0	30.4	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.0	11.1	11.4	2.9	7.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.0	18.0	31.7	31.7	62.0	13.5
LnGrp LOS	B	B	C	C	E	B
Approach Vol, veh/h			1292			1502
Approach Delay, s/veh			31.7			16.8
Approach LOS			C			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.0	33.5			43.5	26.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	29.0			39.0	22.0
Max Q Clear Time (g_c+I1), s	6.0	25.1			22.1	6.2
Green Ext Time (p_c), s	0.0	2.8			9.7	0.6
Intersection Summary						
HCM 6th Ctrl Delay			23.4			
HCM 6th LOS			C			

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕		↖	↕
Traffic Vol, veh/h	0	131	1082	86	171	1243
Future Vol, veh/h	0	131	1082	86	171	1243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	170	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	142	1176	93	186	1351

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	635	0	0	1269
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22
Pot Cap-1 Maneuver	0	421	-	-	543
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	421	-	-	543
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.9	0	1.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	421	543
HCM Lane V/C Ratio	-	-	0.338	0.342
HCM Control Delay (s)	-	-	17.9	15
HCM Lane LOS	-	-	C	C
HCM 95th %tile Q(veh)	-	-	1.5	1.5