

Appendix I

Traffic Study

Palomar Street Grade Separation

Traffic Report

Prepared for
San Diego Association of Governments (SANDAG)
by
HNTB Corporation

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1. Introduction

This report presents the scope, methodology, inputs, assumptions and results of the traffic analysis of the preferred alternative concept for the Palomar Street Grade Separation Project (hereinafter referred to as the "Project"). The Project is located in the City of Chula Vista along the rail corridor east of Interstate 5 (I-5) Freeway and parallel to Industrial Boulevard (see **Figure 1**). The traffic analysis evaluated the impacts of the Project on traffic circulation, traffic operations, intersection levels of service, transit circulation, bicycle and pedestrian circulation, on-street parking and driveway access.

Figure 1 – Project Vicinity Map



1.1 Project Description

SANDAG, in conjunction with the City of Chula Vista, endeavors to grade separate the Palomar Street dual-track crossing of the Blue Line Light Rail Trolley (LRT). **Figure 2** (on the next page) shows the existing at-grade crossing. The LRT is operated by the San Diego Metropolitan Transit System (MTS). The dual tracks are also used by freight trains. The adjacent Palomar Trolley Station may be potentially impacted depending on preferred project alternative for the grade separation.

This proposed grade separation would:

- Provide significant safety enhancement
- Reduce vehicular delays and congestion
- Increase multi-modal mobility.

A Project Study Report for the Project has been previously prepared. The Project now moves into the next phase of the project development with the preparation of a Project Report and Environmental Document (PR/ED) to determine, and environmentally clear, a preferred alternative for the grade separation.

Figure 2 – Project Site Aerial Photo



1.2 Project Alternatives

The Project examined three alternatives as described below. The first two alternatives (P2 and P4) do not involve changes to the roadway network and were therefore not examined in this traffic study. Only the last alternative (P5) which would involve grade separating Palomar Street and Industrial Boulevard was examined in this traffic study. Other early alternatives (P1 and P3) were eliminated during initial study of the Project.

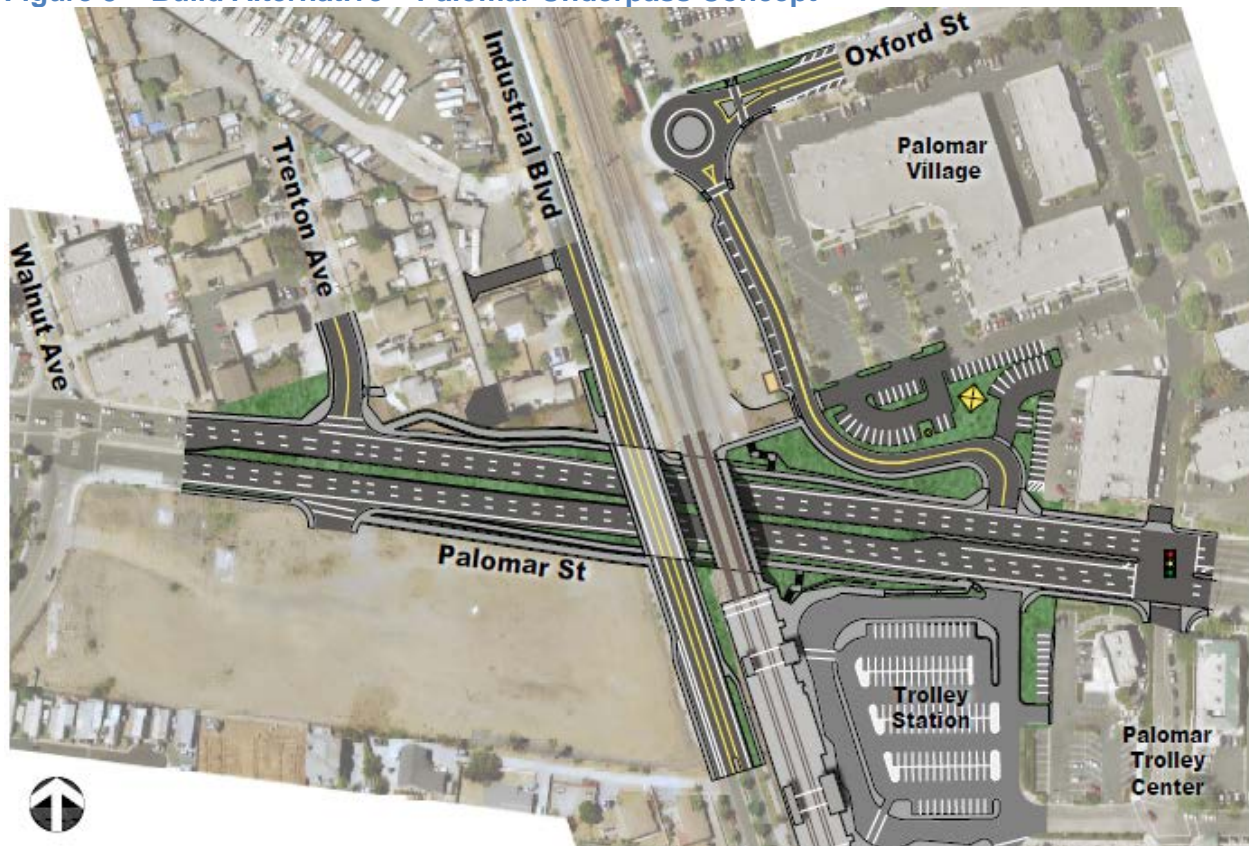
- **Alternative P2 – Raise Trolley Over Palomar Street**
 - Raises Trolley tracks and station approximately 22 feet to cross over Palomar Street
 - Partial grade separation as freight track will stay at grade, crossing Palomar Street
 - Realigns the Trolley tracks 6 feet to the west
 - Replaces the existing station and platform with new facilities on an aerial structure
 - Impacts to bus and parking at the Trolley Station
 - No changes to existing roadway network or driveways.
- **Alternative P4 – Lower Trolley Under Palomar Street**
 - Lowers Trolley tracks and station approximately 23 feet to cross under Palomar Street
 - Partial grade separation as freight track will stay at grade, crossing Palomar Street

- Trolley tracks are realigned 6 feet to the west
- Replaces existing station and platform with new facilities in the trench
- Impacts to bus and parking at the Trolley Station
- No changes to existing roadway network or driveways.
- **Alternative P5 – Lower Palomar Street Under Trolley**
 - Lowers Palomar Street approximately 23 feet to cross under the existing tracks and Industrial Boulevard
 - Fully grade separates both Trolley and freight tracks
 - Adds wider sidewalks for pedestrians, provides direct access to the Trolley Station via ramps, stairs, and pedestrian pathway across new bridge
 - Adds Class 2 bike lanes along Palomar
 - Right-of-way considerations
 - Changes the roadway network as follows: Grade separate Palomar Street from Industrial Boulevard.

1.3 Build Alternative – Palomar Underpass

Project Alternative P5 (Lower Palomar Street Under Trolley), the only alternative examined in this traffic study, is hereinafter referred to as the “Build Alternative.” The Build Alternative would lower Palomar Street under the railroad tracks, as shown in **Figure 3**. Under this alternative, the Palomar Street & Industrial Boulevard at-grade intersection would be eliminated and grade separated.

Figure 3 – Build Alternative – Palomar Underpass Concept



The Build Alternative would also reconfigure the Oxford Street Connector to eliminate its direct connection to Palomar Street and connect instead to the existing Palomar Village Driveway, thereby combining the Oxford Street Connector traffic with the Palomar Village Driveway traffic.

The Build Alternative would add wider sidewalks for pedestrians, provide direct access to the Trolley Station via ramps, stairs, and pedestrian pathway across new bridge, as shown in **Figures 4** and **5**. The following pedestrian facilities would mitigate any potential pedestrian circulation impacts due to grade separating Palomar Street and Industrial Boulevard:

- Pedestrian sidewalks on both sides of Industrial Boulevard bridge and Palomar Street underpass. The sidewalks along the underpass will be elevated from the underpass street level to provide lower grades for the sidewalks and separation from vehicular traffic.
- Pedestrian stairs connecting both sides of Palomar Street underpass to the east side of the Trolley & Freight Tracks bridge.
- Pedestrian sidewalks connecting both sides of Palomar Street in the vicinity of Trenton Avenue to the west side of Industrial Boulevard bridge.
- Pedestrian pathway on the east side of the Trolley & Freight Tracks bridge connecting the Trolley Station to the reconfigured Oxford Street Connector. A pedestrian ramp would connect the pathway from the bridge to the reconfigured connector.
- Pedestrian sidewalk on the west/south side of the reconfigured Oxford Street Connector.

The Build Alternative would also add Class 2 bike lanes along Palomar Street within the Project footprint, and maintain existing Class 2 bike lanes along Industrial Boulevard.

Figure 4 – Build Alternative – Pedestrian Facilities

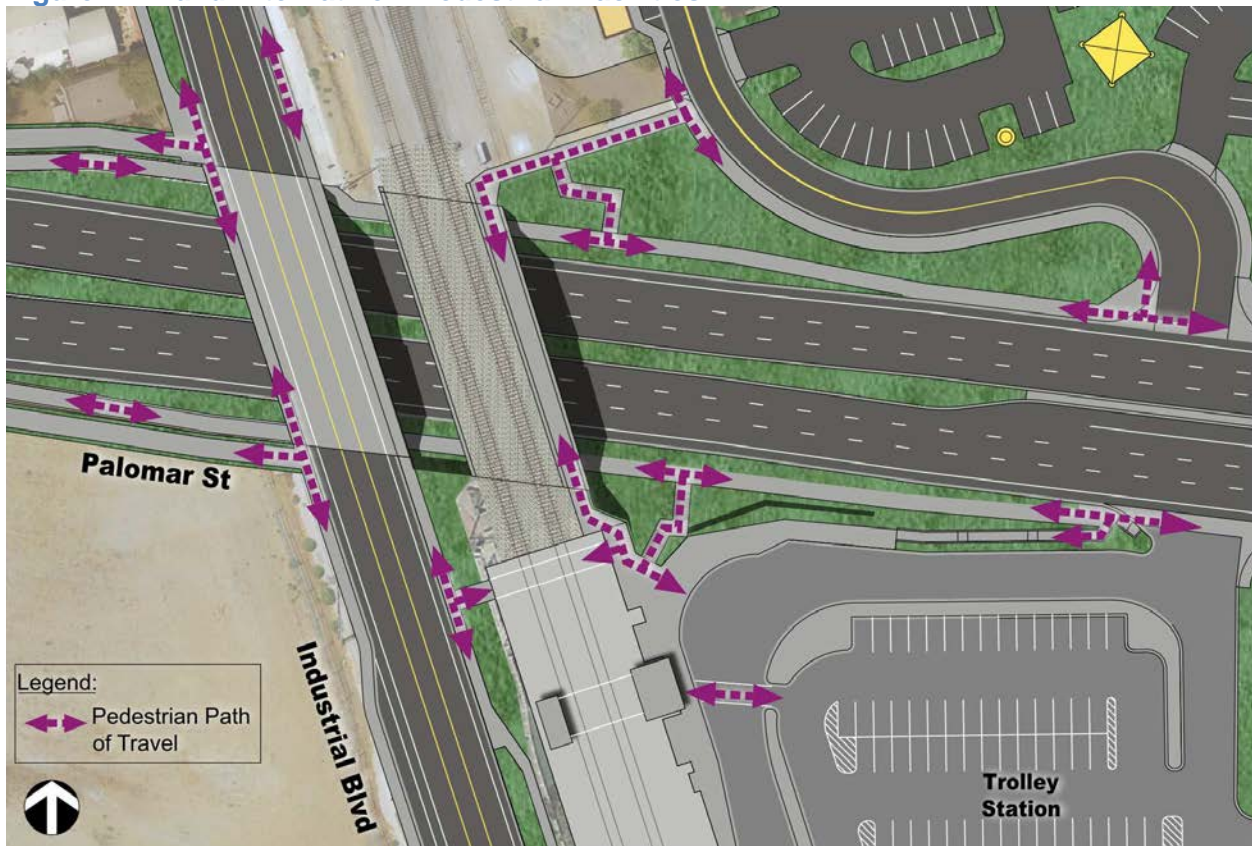


Figure 5 – Build Alternative – 3D View Looking West on Palomar Street



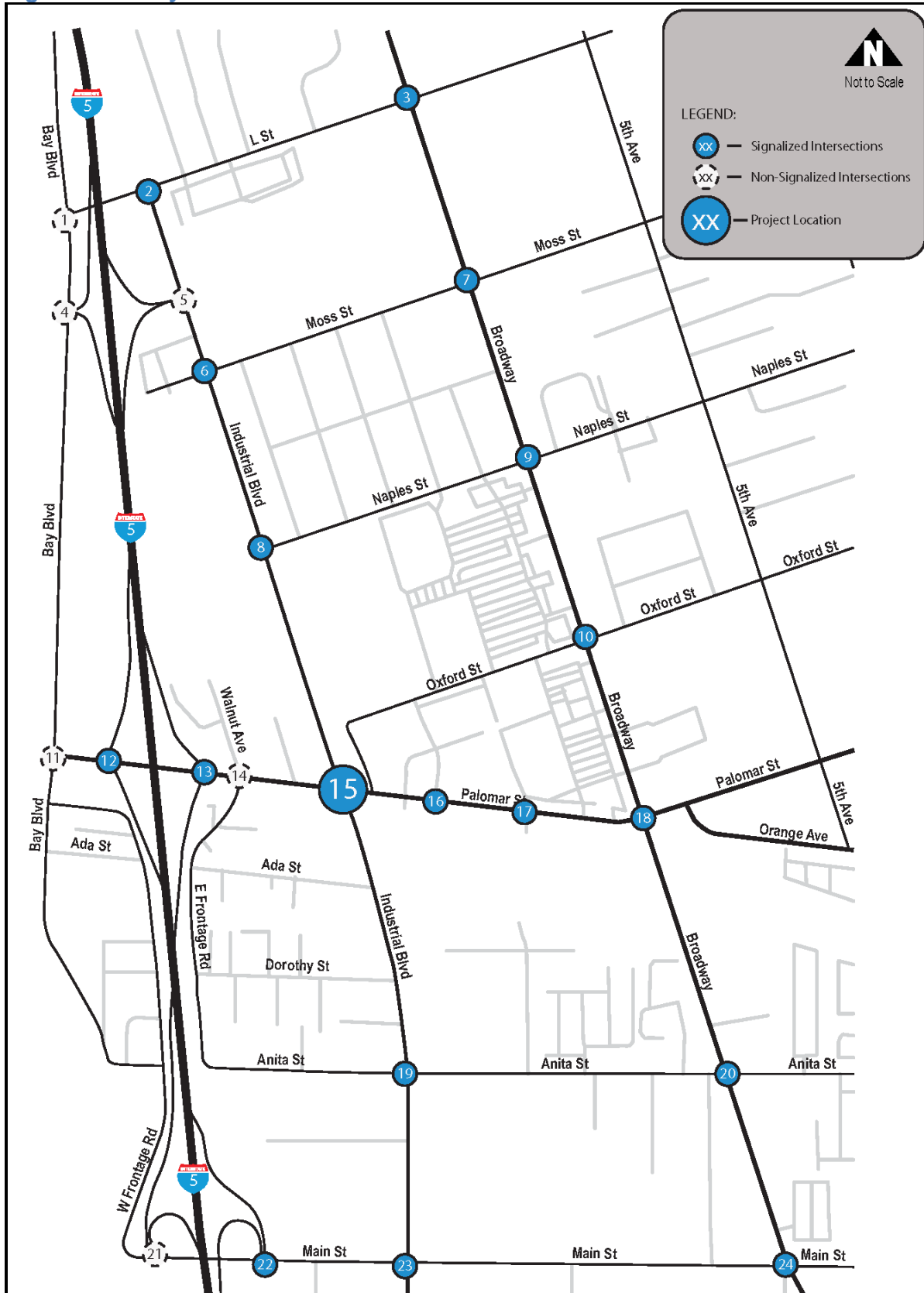
A City of Chula Vista project (CIP #TF390) would add Class 2 bike lanes (at-grade) along Palomar Street between Industrial Boulevard and Broadway, in addition to pedestrian signal upgrades to three traffic signals on Palomar Street: Transit Center Place (Murrell Drive), Plaza Entrance (Shopping Center Driveway) and Broadway. This project would be completed by the end of 2018. The grade separation Project would restore the Class 2 bike lanes on the below-grade segment of Palomar Street within the Project footprint.

1.4 Study Area and Intersections

The study area for traffic analysis was determined in consultation with SANDAG and the City of Chula Vista. The following intersections shown in **Figure 6** were included in the study area:

1. L Street & Bay Boulevard
2. L Street & Industrial Boulevard
3. L Street & Broadway
4. I-5 Southbound Ramps & Bay Boulevard
5. I-5 Northbound Ramps & Industrial Boulevard
6. Moss Street & Industrial Boulevard
7. Moss Street & Broadway
8. Naples Street & Industrial Boulevard
9. Naples Street & Broadway
10. Oxford Street & Broadway
11. Palomar Street & Bay Boulevard
12. Palomar Street & I-5 Southbound Ramps
13. Palomar Street & I-5 Northbound Ramps
14. Palomar Street & Walnut Avenue / East Frontage Road
15. Palomar Street & Industrial Boulevard (eliminated under the Build Alternative)

Figure 6 – Study Area and Intersections



16. Palomar Street & Transit Center Place
17. Palomar Street & Plaza Entrance
18. Palomar Street & Broadway
19. Anita Street & Industrial Boulevard
20. Anita Street & Broadway
21. Main Street & I-5 Southbound Ramps
22. Main Street & I-5 Northbound Ramps
23. Main Street & Industrial Boulevard
24. Main Street & Broadway

As part of the Build Alternative, the intersection of Palomar Street & Industrial Boulevard (#15) would be eliminated.

1.5 Study Scenarios

The traffic study examined existing (2017) traffic conditions and evaluated the No Build and Build Alternatives under 2025 Opening Year and 2045 Horizon Year traffic conditions. The following scenarios were analyzed:

- 2017 Existing Conditions
- 2025 Opening Year No Build Alternative
- 2025 Opening Year Build Alternative
- 2045 Horizon Year No Build Alternative
- 2045 Horizon Year Build Alternative

The Build Alternative was compared against the No Build Alternative under 2025 Opening Year and 2045 Horizon Year to determine traffic impacts.

2 Traffic Analysis Methodology

The ability of the transportation infrastructure to carry traffic was quantified using a Level of Service (LOS) designation, as set forth in the Highway Capacity Manual (HCM).¹ This designation is utilized in the transportation profession to quantify the performance of a facility. Levels of Service vary from LOS A (free flow, little delay) to LOS F (heavily congested, breakdown in vehicular flow) as described in **Table 1**.

Table 1 – Level of Service Definitions

Level of Service (LOS)	Description
A	Level of Service A occurs when progression is extremely favorable and vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average delay.
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent.
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs when oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Transportation Research Board, *Highway Capacity Manual Special Report 209*, National Research Council Washington D.C., 2000.

2.1 Intersection Analysis

The traffic operations analysis of study intersections is based on HCM methodologies. HCM uses control delay (expressed in terms of seconds of delay per vehicle, sec/veh) as the measure of effectiveness for both signalized and unsignalized intersections. Intersection level of service is defined based on the criteria shown in **Table 2**. The City of Chula Vista considers LOS D during the AM and PM peak hours to be the minimum standard for intersection level of service.

Intersection analysis was conducted using HCM methodologies as implemented in the Synchro 9 traffic analysis software.

¹ Transportation Research Board, *Highway Capacity Manual – 6th Edition*, 2016.

Table 2 – Level of Service Criteria for Signalized and Unsignalized Intersections

Level of Service (LOS)	Signalized Intersection Control Delay (sec/veh)	Unsignalized Intersection Control Delay (sec/veh)
A	0 – 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

Source: Transportation Research Board, *Highway Capacity Manual – 6th Edition*, 2016.

Note: The City of Chula Vista considers LOS D during the AM and PM peak hours to be the minimum acceptable standard for intersection level of service. LOS E and LOS F are highlighted in bold red to indicate that they exceed the minimum standard.

2.2 Intersection Delays Due to Train Crossing Activity

The HCM methodologies generally assume ideal lane capacities of 1,900 vehicles per hour (vph) per lane for all through and turn lanes. However, when trolleys pass through the railroad crossing, the flow of traffic is disrupted, resulting in a reduction in capacity of the affected movements. At intersections along Industrial Boulevard, trolley crossing activity would disrupt the following intersection turning movements:

- Eastbound through (EBT)²
- Westbound through (WBT), left (WBL) and right (WBR)
- Northbound right turn (NBR)
- Southbound left turn (SBL)

A previous study³ assumed that train crossing activity along Palomar Street effectively adds 24 seconds of average delay for the entire intersection at Palomar Street & Industrial Boulevard. This assumption was also used in this traffic study, and applied to all study intersections that cross the railroad tracks.

Field checks conducted by HNTB during the PM peak hour showed that train gates go down every 2-3 minutes, and would stay down for about one minute. If traffic gets delayed for one minute while the gate is down, while traffic in the next minute that the gate is up don't experience any gate delay, that would result in about 30s average delay for all traffic. However, not all traffic is affected when the gates are down (NBL, NBT, SBR and SBT movements are green during trolley crossing) so that lower than 30s delay is reasonable.

2.3 Traffic Impact Criteria

Significance criteria for traffic impacts were derived primarily from the SANTEC/ITE Guidelines for Traffic Impact Studies (TIS) in the San Diego Region.⁴ Based on these guidelines, a significant impact would occur under the conditions described below:

² Intersection turning movements are designated by 3-letter codes. The first two letters designate the direction of the approach: NB for northbound, SB for southbound, EB for eastbound, and WB for westbound. The 3rd letter designates the turn direction: L for left turn, T for thru movement, and R for right turn. For example, SBR designates the southbound right turn movement.

³ City of Chula Vista, *Palomar Gateway District Specific Plan Final Mobility Study*, April 27, 2012.

⁴ San Diego Traffic Engineers Council (SANTEC) and Institute of Transportation Engineers (ITE – California Border Section), *SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region – Final Draft*, March 2, 2000.

- If an intersection is at LOS D or better without the Project, and the Project causes the LOS to deteriorate to LOS E or LOS F (regardless of the change in delay), then a significant impact would occur.
- If an intersection is at LOS E or F without the Project, and the Project causes an increase in delay above the 2-second delay threshold, then a significant impact would occur. If the project causes the LOS to remain at E or F and any increase in delay is within the allowable 2-second threshold, then the impact is not significant.

2.4 Traffic Data Collection

HNTB conducted traffic counts in August 2017 and in previous years. The traffic counts included the following:

- AM and PM peak period intersection counts
 - intersection turning movement counts at all study intersections
 - pedestrian and bike crossing counts at selected study intersections
 - truck counts at selected study intersections
- 24-Hour machine counts at selected locations

The traffic count sheets are included in **Appendix A**.

2.5 Traffic Forecast Methodology and Assumptions

Opening Year 2025 and Design Year 2045 traffic volumes were estimated as follows:

1. SANDAG updated the regional Activity Based Model (ABM)⁵ to incorporate the land uses included in the Palomar Gateway District Specific Plan, assumed to be built out in 2045.
2. SANDAG provided 2014 Base, 2045 No Build and 2045 Build forecasts from the ABM model runs. The resulting 2045 Build forecasts reflect the traffic rerouting due to the Project.
3. HNTB post-processed the 2045 No Build and 2045 Build model forecasts to develop the 2045 peak hour turning volumes for the study intersections. Post-processing used the procedures described in NCHRP Report 255 for estimating peak hour intersection turning volumes from peak hour link volume forecasts generated by travel demand models like the SANDAG ABM model.⁶
4. Regional background traffic growth was estimated from the 2014 Base and 2045 No Build model runs. This resulted in an annual traffic growth rate of 0.8% per annum.
5. The annual traffic growth rate was applied to 2045 Build and No Build peak hour turning volumes to obtain Opening Year 2025 Build and No Build traffic volumes.
6. No cumulative projects were included in the analysis since the City did not provide a list of cumulative projects, and the Palomar Gateway District was assumed to absorb all the projected developments in the vicinity of the Project.

⁵ <http://www.sandag.org/index.asp?subclassid=120&fuseaction=home.subclasshome>

⁶ National Highway Cooperative Research Project (NCHRP) Report 255, Highway Traffic Data for Urbanized Area Project Planning and Design, 1982.

3 2017 Existing Conditions

This Section presents existing conditions observed in the study area and the results of traffic analysis based on collected data.

3.1 Existing Roadways

The following paragraphs briefly describe the freeways, arterials, and other roadways in the vicinity of the Project.

Interstate 5 Freeway (I-5, Golden State Freeway) is a north-south oriented freeway that extends from the U.S.-Mexico border to the U.S.-Canada border. In the vicinity of the project area, I-5 consists of four mixed-flow travel lanes in each direction. I-5 has an interchange at Palomar Street. It also has interchanges at L Street and Main Street to the north and south of Palomar Street, respectively. The I-5 NB ramps at L Street connect directly to Industrial Boulevard north of Palomar Street, while the SB ramps connect directly to Bay Boulevard. A high-occupancy vehicle (HOV) lane was recently added to the I-5 NB on-ramp at L Street/Industrial Boulevard.

Palomar Street is a six-lane, east-west roadway with median divider between the I-5 NB ramps and Broadway. The overcrossing between the NB and SB ramps provides four lanes. It is classified as a 6-Lane Major Arterial in the City of Chula Vista Circulation Plan. It currently accommodates approximately 37,700 vehicles per day (vpd) west of Industrial Boulevard, and 34,450 vph east of Industrial Boulevard. On-street parking is prohibited on both sides of Palomar Street between the I-5 SB ramps and Broadway. Sidewalks are provided on both sides. The posted speed limit is 35 mph. Between Industrial Boulevard and Broadway, commercial uses are located on both sides of Palomar Street. The north side of Palomar Street between I-5 and Industrial Boulevard has mixed residential and other uses, while the south side is currently vacant.

Industrial Boulevard is a two-lane north-south roadway running parallel to and on the west side of the railroad tracks. It is generally undivided except for the segment between Palomar Street and Ada Street that has a median divider. It is classified as Other Roads in the City of Chula Vista Circulation Plan. It currently accommodates approximately 4,800 and 4,400 vehicles per day (vpd) north and south of Palomar Street, respectively. On-street parking is not allowed on both sides north of Palomar Street and south of Ada Street. Between Palomar Street and Ada Street, on-street parking is allowed on the west side but not on the east side. Sidewalks are generally provided on the both sides. The posted speed limit is 40 mph. The west side of Industrial Boulevard between Palomar Street and Moss Street is generally fronted by motor homes. South of Palomar Street, the west side of Industrial Boulevard has low- to medium-density residential areas.

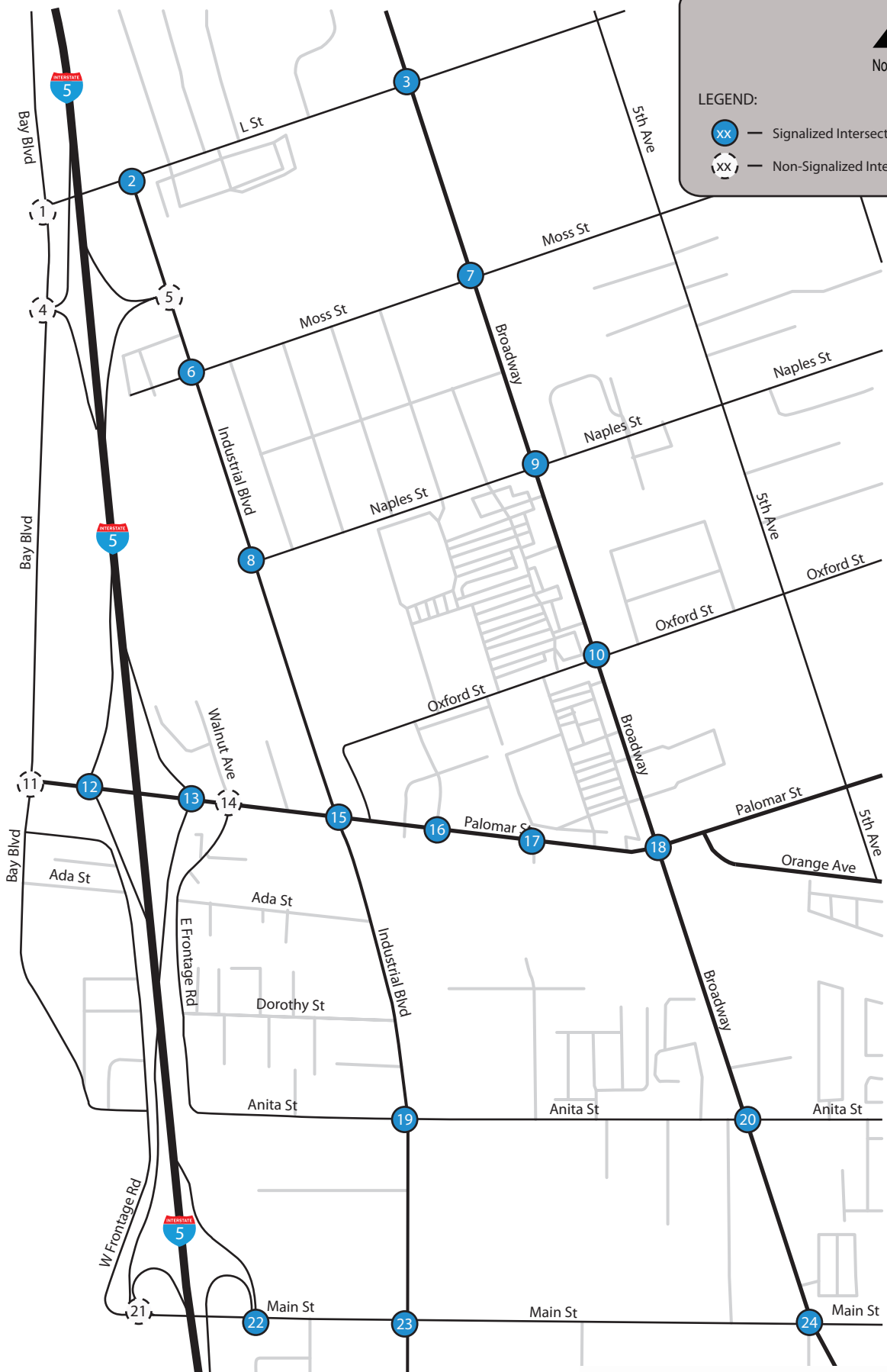
Other local streets in the study area are shown previously in **Figure 6**. Walnut Avenue and Trenton Avenue are generally two-lane two-way residential streets.

3.2 Existing Traffic Volumes and Intersection Operations

The existing intersection traffic volumes and lane configurations are shown in **Figures 7 and 8**, respectively. Using these inputs, the existing intersection levels of service were evaluated using the LOS analysis methods and criteria previously described in **Section 2.1**.

Table 3 summarizes the intersection levels of service under existing conditions. The detailed LOS worksheets are included in **Appendix B**. The following intersections currently operate at critical (LOS E or F) conditions during the AM and/or PM peak hours:

- #4 I-5 Southbound Ramps & Bay Boulevard – LOS C / F
- #6 Moss Street & Industrial Boulevard – LOS D / E



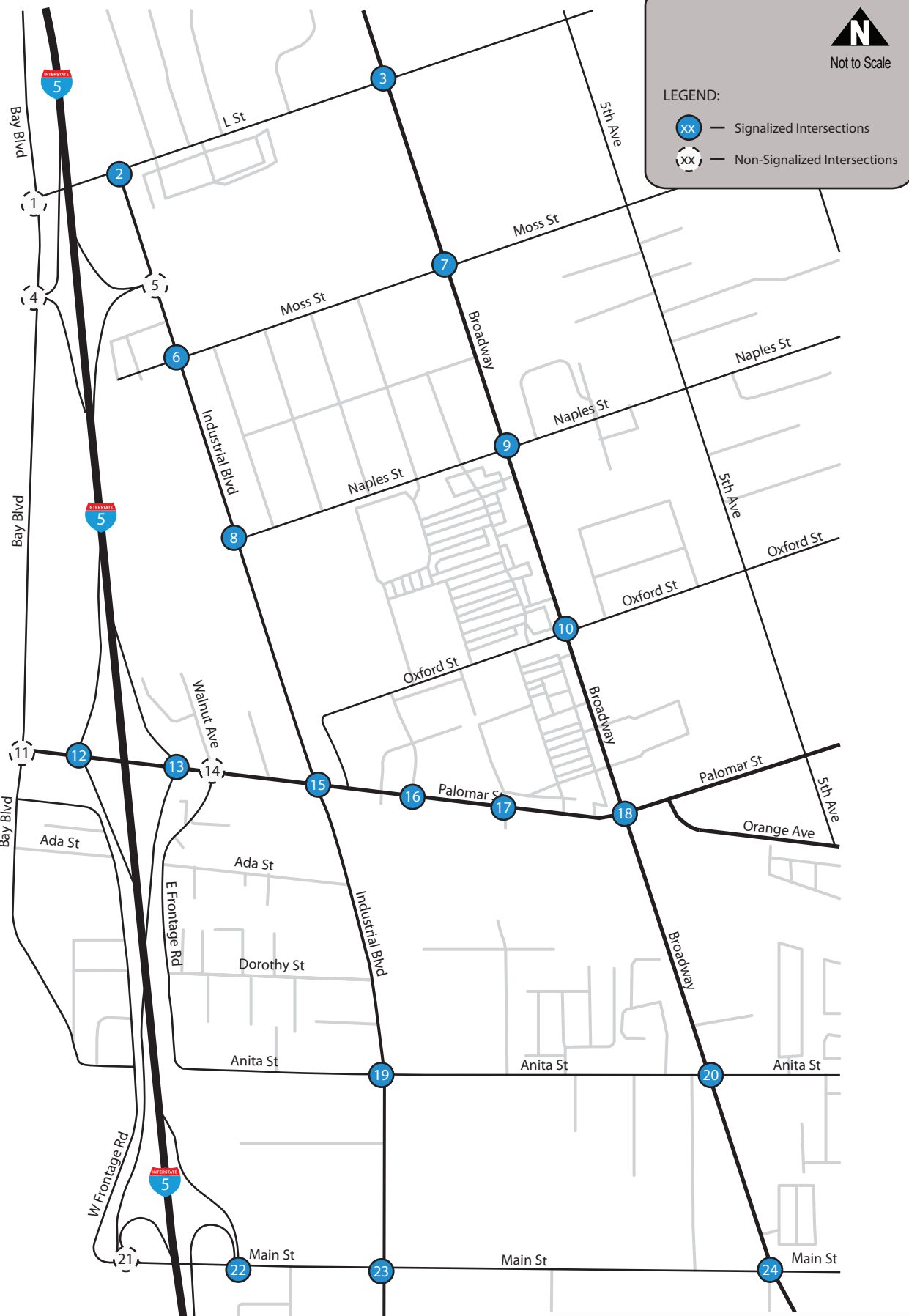
LEGEND:

- XX — Signalized Intersections
- XX — Non-Signalized Intersections

North Arrow
Not to Scale

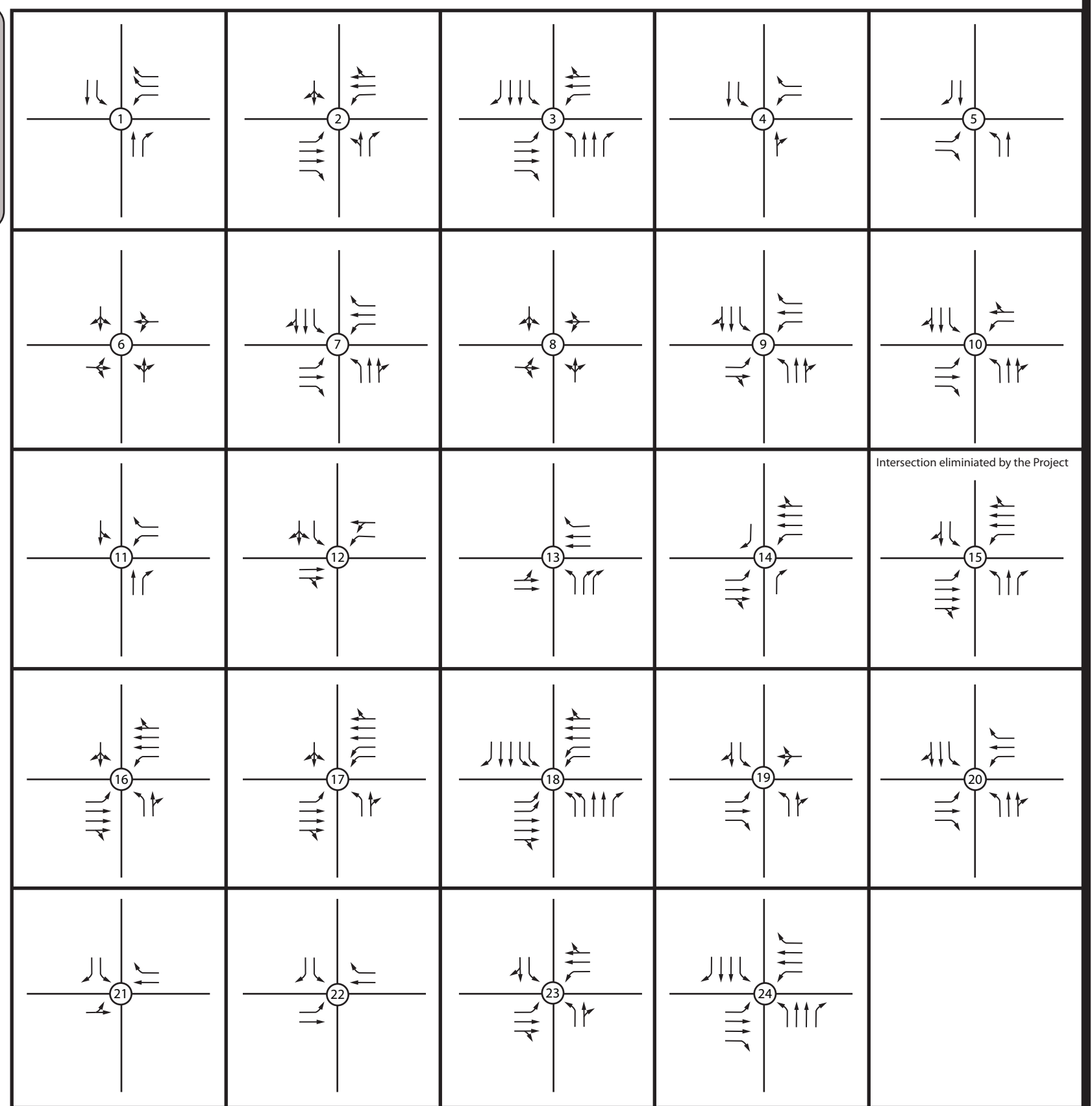
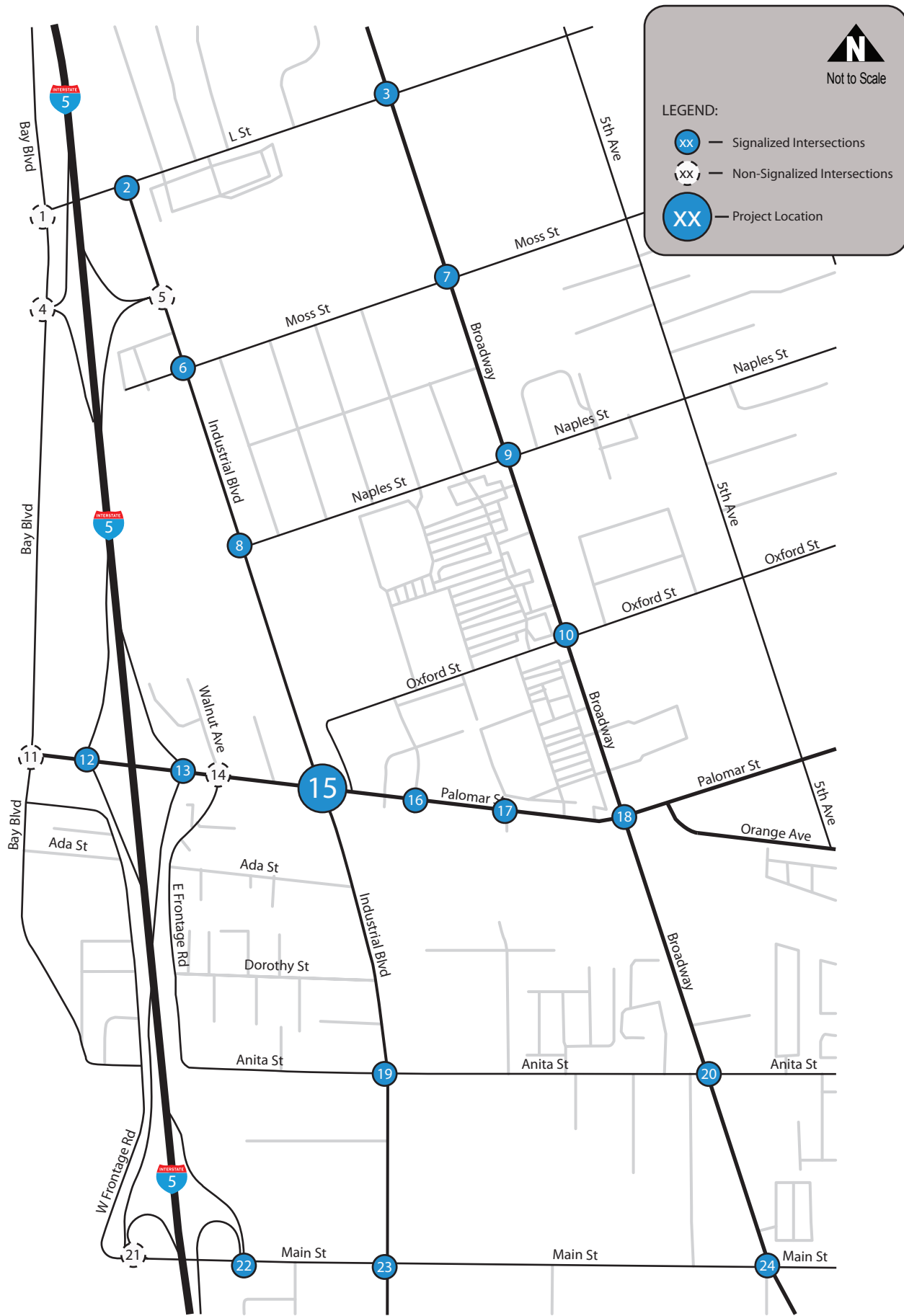
<p>1</p> <p>97 → 96 ←</p> <p>←171 ←333</p> <p>←567 ←46</p>	<p>2</p> <p>←3 ←396 ←269</p> <p>←313 ←98</p> <p>←478 ←221</p>	<p>3</p> <p>←95 ←541 ←116</p> <p>←79 ←425 ←114</p> <p>←93 ←420 ←155</p>	<p>4</p> <p>←330 ←81</p> <p>←573 ←87</p> <p>←4 ←61</p>	<p>5</p> <p>←220 ←290</p> <p>←328 ←87</p> <p>←401 ←87</p>
<p>6</p> <p>←161 ←122 ←0</p> <p>←279 ←16</p> <p>←17 ←197 ←2</p>	<p>7</p> <p>←57 ←517 ←48</p> <p>←33 ←113 ←44</p> <p>←50 ←480 ←92</p>	<p>8</p> <p>←99 ←33 ←0</p> <p>←138 ←7 ←80</p> <p>←18 ←24 ←34</p>	<p>9</p> <p>←38 ←456 ←62</p> <p>←96 ←193 ←8</p> <p>←37 ←394 ←58</p>	<p>10</p> <p>←65 ←358 ←133</p> <p>←58 ←195 ←75</p> <p>←61 ←418 ←179</p>
<p>11</p> <p>←61 ←25</p> <p>←151 ←18</p> <p>←14 ←42</p>	<p>12</p> <p>←422 ←76</p> <p>←173 ←333</p> <p>←82 ←35</p>	<p>13</p> <p>←630 ←436</p> <p>←27 ←476</p> <p>←62 ←509</p>	<p>14</p> <p>←43 ←1023 ←28</p> <p>←17 ←23</p> <p>←28 ←852 ←97</p>	<p>15</p> <p>←39 ←771 ←51</p> <p>←23 ←37 ←89</p> <p>←75 ←747 ←44</p>
<p>16</p> <p>←9 ←647 ←137</p> <p>←43 ←13 ←79</p> <p>←223 ←575 ←60</p>	<p>17</p> <p>←5 ←639 ←74</p> <p>←1 ←1 ←9</p> <p>←29 ←7 ←16</p>	<p>18</p> <p>←92 ←322 ←131</p> <p>←98 ←612 ←214</p> <p>←52 ←366 ←144</p>	<p>19</p> <p>←88 ←8 ←12</p> <p>←132 ←32 ←8</p> <p>←42 ←71 ←1</p>	<p>20</p> <p>←59 ←219 ←67</p> <p>←84 ←120 ←53</p> <p>←43 ←317 ←36</p>
<p>21</p> <p>←434 ←13</p> <p>←223 ←53</p> <p>←4 ←3</p>	<p>22</p> <p>←344 ←25</p> <p>←413 ←253</p> <p>←13 ←461</p>	<p>23</p> <p>←40 ←685 ←94</p> <p>←28 ←41 ←94</p> <p>←85 ←47 ←35</p>	<p>24</p> <p>←114 ←169 ←119</p> <p>←136 ←596 ←143</p> <p>←92 ←363 ←56</p>	<p>25</p> <p>←155 ←257 ←128</p>

Existing Intersection Volumes
AM Peak Hour
FIGURE 7A



<p>1</p> <p>71 → 105 →</p> <p>← 65 ← 411</p> <p>← 905 ← 50</p>	<p>2</p> <p>4 → 10 → 5 →</p> <p>← 8 ← 374 ← 285</p> <p>← 83 ← 281</p> <p>← 83 ← 405</p>	<p>3</p> <p>85 → 729 → 110 →</p> <p>← 80 ← 359 ← 140</p> <p>← 83 ← 554 ← 141</p> <p>← 579 ← 224</p>	<p>4</p> <p>404 → 101 →</p> <p>← 820 ← 25</p> <p>← 7 ← 152</p>	<p>5</p> <p>399 → 316 →</p> <p>← 118 ← 360</p> <p>← 255 ← 176</p>
<p>6</p> <p>240 → 308 → 2 →</p> <p>← 228 ← 26</p> <p>← 14 ← 187</p> <p>← 22 ← 6 ← 14</p>	<p>7</p> <p>92 → 907 → 50 →</p> <p>← 54 ← 143 ← 64</p> <p>← 49 ← 677 ← 83</p> <p>← 37 ← 140 ← 64</p>	<p>8</p> <p>199 → 57 → 0 →</p> <p>← 159 ← 24 ← 93</p> <p>← 16 ← 21 ← 21</p> <p>← 100 ← 18</p>	<p>9</p> <p>86 → 865 → 73 →</p> <p>← 63 ← 154 ← 108</p> <p>← 148 ← 230 ← 79</p> <p>← 114 ← 96</p>	<p>10</p> <p>154 → 873 → 211 →</p> <p>← 91 ← 135 ← 92</p> <p>← 186 ← 200 ← 211</p> <p>← 66 ← 667 ← 256</p>
<p>11</p> <p>152 → 47 →</p> <p>← 46 ← 22</p> <p>← 27 ← 32</p>	<p>12</p> <p>699 → 55 →</p> <p>← 94 ← 909</p> <p>← 177 ← 106</p>	<p>13</p> <p>627 → 963 →</p> <p>← 77 ← 827</p> <p>← 31 ← 678</p>	<p>14</p> <p>22 →</p> <p>← 48 ← 1509 ← 16</p> <p>← 27 ← 1394 ← 119</p> <p>← 11</p>	<p>15</p> <p>29 → 52 → 112 →</p> <p>← 38 ← 1304 ← 76</p> <p>← 88 ← 1241 ← 32</p> <p>← 82 ← 66 ← 142</p>
<p>16</p> <p>36 → 31 → 149 →</p> <p>← 33 ← 865 ← 53</p> <p>← 245 ← 1037 ← 103</p> <p>← 95 ← 22 ← 167</p>	<p>17</p> <p>2 → 18 → 57 →</p> <p>← 5 ← 680 ← 232</p> <p>← 124 ← 881 ← 90</p> <p>← 129 ← 28 ← 112</p>	<p>18</p> <p>376 → 610 → 87 →</p> <p>← 324 ← 591 ← 358</p> <p>← 222 ← 506 ← 115</p> <p>← 244 ← 500 ← 134</p>	<p>19</p> <p>33 → 93 → 9 →</p> <p>← 117 ← 20 ← 18</p> <p>← 16 ← 53 ← 35</p> <p>← 34 ← 94 ← 4</p>	<p>20</p> <p>102 → 656 → 78 →</p> <p>← 71 ← 53 ← 53</p> <p>← 92 ← 118 ← 40</p> <p>← 68 ← 538 ← 38</p>
<p>21</p> <p>624 → 12 →</p> <p>← 4 ← 202 ← 6</p> <p>← 20 ← 19</p>	<p>22</p> <p>380 → 25 →</p> <p>← 528 ← 449</p> <p>← 16 ← 674</p>	<p>23</p> <p>36 → 90 → 110 →</p> <p>← 57 ← 818 ← 184</p> <p>← 36 ← 893 ← 73</p> <p>← 133 ← 46 ← 43</p>	<p>24</p> <p>263 → 486 → 147 →</p> <p>← 233 ← 648 ← 258</p> <p>← 181 ← 663 ← 147</p> <p>← 215 ← 346 ← 153</p>	

**Existing Intersection Volumes
 PM Peak Hour
 FIGURE 7B**



Existing Intersection Lane Configurations

FIGURE 8

Table 3 – Existing Intersection LOS Summary

Int ID	Int Description	Control Type	Peak Hour	Delay* (seconds)	LOS
1	L St & Bay Blvd	Stop	AM	10.3	B
			PM	22.6	C
2	L St & Industrial Blvd **	Signal	AM	40.3	D
			PM	39.1	D
3	L St & Broadway	Signal	AM	28.9	C
			PM	31.0	C
4	I-5 SB Ramps & Bay Blvd	Stop	AM	16.3	C
			PM	56.2	F
5	I-5 NB Ramps & Industrial Blvd	Stop	AM	26.8	D
			PM	20.5	C
6	Moss St & Industrial Blvd **	Signal	AM	43.5	D
			PM	63.9	E
7	Moss St & Broadway	Signal	AM	19.6	B
			PM	23.9	C
8	Naples St & Industrial Blvd **	Signal	AM	47.5	D
			PM	46.4	D
9	Naples St & Broadway	Signal	AM	22.3	C
			PM	32.1	C
10	Oxford St & Broadway	Signal	AM	26.5	C
			PM	50.8	D
11	Palomar St & Bay Blvd	Stop	AM	8.7	A
			PM	9.6	A
12	Palomar St & I-5 SB Ramps	Signal	AM	21.8	C
			PM	37.1	D
13	Palomar St & I-5 NB Ramps	Signal	AM	14.6	B
			PM	19.1	B
14	Palomar St & E Frontage Rd	Stop	AM	11.1	B
			PM	11.2	B
15	Palomar St & Industrial Blvd **	Signal	AM	43.0	D
			PM	33.2	C
16	Palomar St & Transit Center Pl	Signal	AM	20.3	C
			PM	12.8	B
17	Palomar St & Plaza Entrance	Signal	AM	7.4	A
			PM	19.1	B
18	Palomar St & Broadway	Signal	AM	26.3	C
			PM	38.3	D
19	Anita St & Industrial Blvd **	Signal	AM	35.5	D
			PM	35.3	D
20	Anita St & Broadway	Signal	AM	11.5	B
			PM	12.7	B
21	Main St & I-5 SB Ramps	Stop	AM	13.5	B
			PM	28.3	D
22	Main St & I-5 NB Ramps	Signal	AM	16.3	B
			PM	18.0	B
23	Main St & Industrial Blvd	Signal	AM	20.5	C
			PM	28.1	C
24	Main St & Broadway	Signal	AM	31.0	C
			PM	45.3	D

Note:

* Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle.

** 24 seconds of delay added to account for trolley crossing.

3.3 Existing Truck Activity

Table 4 shows the truck composition at the intersection of Palomar Street and Industrial Boulevard. Traffic analysis assumed 2% trucks throughout the study area.⁷

Table 4 – Existing Truck Traffic Composition

FHWA Vehicle Classification	Palomar Street		Industrial Blvd.		Total	
	Veh.	%	Veh.	%	Veh.	%
# 1,2,3 Motorcycles, Cars, 2-Axle 4-Tire Single Units	35,628	98.10%	4,256	97.44%	39,884	98.03%
# 4 Buses	90	0.25%	29	0.66%	119	0.29%
# 5 2-Axle, 6-Tire Single Units	471	1.30%	77	1.76%	548	1.35%
# 6 3-Axle Single Units	8	0.02%	4	0.09%	12	0.03%
# 7 >=4-Axle Single Units	1	0.00%	0	0.00%	1	0.00%
# 8 <=4-Axle Single Trailers	11	0.03%	0	0.00%	11	0.03%
# 9 5- or more Axle Single Trailers	109	0.30%	2	0.05%	111	0.27%
Total	36,318	100.0%	4,368	100.0%	40,686	100.0%

Source: HNTB Vehicle Classification Counts, September 10, 2014.

3.4 Existing Transit Services

3.4.1 Existing Blue Line Trolley

The Metropolitan Transportation System (MTS) Blue Line Trolley operates between the America Plaza Station in Downtown San Diego and the San Ysidro Station near the U.S.-Mexico border crossing, serving the Palomar Street Trolley Station. The station provides approximately 305 free public parking spaces, and is located adjacent to commercial areas on both sides of Palomar Street with ample public parking spaces. The station also serves as the hub of bus routes serving the area.

The Blue Line Trolley operates every 7-8 minutes in each direction during peak periods, every 15 minutes during off-peak periods, and every 30 minutes at night. During weekdays, the trolley operates from approximately 5:00 AM until midnight.

The trolley schedule results in trolleys crossing Palomar Street in either direction every 3-4 minutes. The railroad crossing gates across Palomar Street were observed to close the street for approximately 1.5 minutes for each trolley crossing. When trolleys arrive in close succession, the gates were observed to close Palomar Street for as long as 3 minutes.

3.4.2 Existing Bus Routes

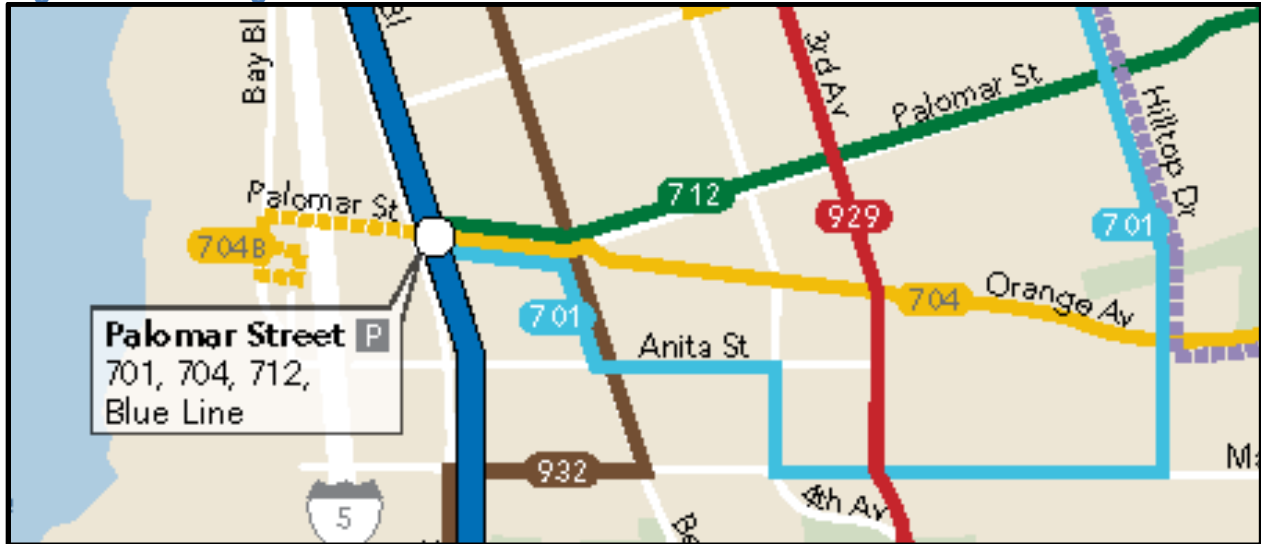
MTS provides transit services in the project area through fixed route scheduled buses, as shown in Figure 9.

- MTS 701 – H Street Trolley - Palomar Street Trolley
- MTS 704 – E Street Trolley - Palomar Street Trolley

⁷ HCM traffic analysis uses the parameter “heavy truck percentage” with “heavy trucks” defined as vehicles with more than four tires touching the ground. This corresponds to FHWA classification #4 and higher in Table 4.

- MTS 704B – Palomar Street Trolley - Bay Boulevard
- MTS 712 – Southwestern College - Palomar Street Trolley
- MTS 932 – 8th Street Trolley - Iris Avenue Trolley

Figure 9 – Existing Transit Routes

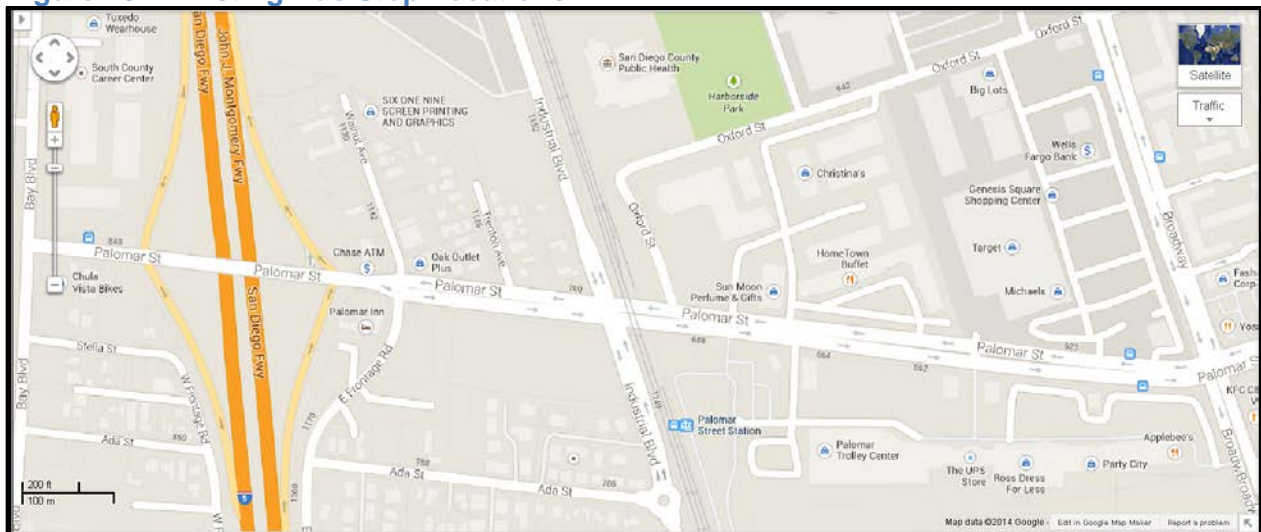


Source: MTS, Regional Transit Map.

3.4.3 Existing Bus Stops

Figure 10 and **Table 5** show the location and features, respectively, of bus stops located in the vicinity of the Project.

Figure 10 – Existing Bus Stop Locations



Source: Google Maps.

3.5 Existing Bicycle Facilities

Class 2 Bicycle Lanes are currently provided on both sides of Palomar Street between Industrial Boulevard and Walnut Avenue, on both sides of Industrial Boulevard north of Palomar Street up

to Moss Street, and south of Palomar Street up to Ada Street. The I-5 NB ramp intersection at Industrial Boulevard was recently restriped to provide Class 2 Bicycle Lane on the SB direction. Palomar Street east of Industrial Boulevard, and Industrial Boulevard south of Ada Street are designated as Class 3 Bicycle Routes in the City of Chula Vista General Plan.

Table 5 – Existing Bus Stop Characteristics

No.	Stop ID	Name	Location	Route/s Served
A	30156	Palomar / Bay	WB Palomar Street east of Bay Blvd.	MTS 704
B	91003 75008 91001 96004 75009 91004	Palomar Street Station	Palomar Trolley Center	Blue Line MTS 701, 704, 712
C	30224	Palomar St & Broadway	WB Palomar Street west of Broadway	MTS 701, 704, 712
D	30012	Palomar St & Broadway	EB Palomar Street west of Broadway	MTS 701, 704, 712

3.6 Existing Pedestrian Facilities

Pedestrian sidewalks are generally provided on both sides of Palomar Street and Industrial Boulevard. Pedestrian crossings are generally provided in all directions at signalized intersections along Palomar Street. However, pedestrians are prohibited from crossing Palomar Street between Industrial Boulevard and the next signal to the east (Transit Center Place) by a median barrier fence.

3.7 Existing Traffic Collisions

Table 6 shows the number of reported collisions in the vicinity of the Project for the three-year period 2007-2011. A total of 105 collisions were reported in the study area. Approximately 43% occurred in the vicinity of the Industrial Boulevard, 30% in the vicinity of Broadway, 20% in the vicinity of Walnut Avenue, and the remaining 7% in the vicinity of Trenton Avenue. 83% of all collisions involved vehicle-vehicle collisions, 12% involved pedestrians, and the remaining 5% involved fixed objects. No fatality was reported.

Approximately half of the collisions occurred in the vicinity of Palomar Street & Industrial Boulevard intersection, involving a total of 45 collisions, 33 of which involved vehicles only, while nine collisions involved pedestrians.

Table 6 – Existing Traffic Collisions

Int. No.	Intersection	Veh-Veh Collisions	Veh-Ped Collisions	Veh-Object Collisions	Total Collisions
1	Palomar St & I-5 SB Ramps	-	-	-	-
2	Palomar St & I-5 NB Ramps	-	-	-	-
3	Palomar St & Frontage/Walnut	21	-	-	21 (20%)
4	Palomar St & Trenton Ave	5	1	1	7 (7%)
5	Palomar St & Industrial Blvd	33	9	3	45 (43%)
6	Palomar St & Oxford St	-	-	-	-
7	Palomar St & Transit Driveway	-	-	-	-
8	Palomar St & Transit Center Pl	-	-	-	-
9	Palomar St & Plaza Entrance	-	-	-	-
10	Palomar St & Broadway	28	3	1	32 (30%)
	TOTAL	87 (83%)	13 (12%)	5 (5%)	105 (100%)

Source: City of Chula Vista, Traffic Collision History Report, 1/1/2007-12/31/2011

Notes:

- (1) Vehicle-Vehicle Collisions included sideswipes, broadsides, rear-ends and overruns.
- (2) No fatality reported.
- (3) Collisions occurring at or in the vicinity of the intersection.

4 2025 Opening Year Traffic Operations Analysis

4.1 2025 Opening Year No Build Alternative

4.1.1 Traffic Circulation

Under the No Build alternative, the roadway network and traffic patterns in the study area would generally remain the same as in existing conditions, except for intersection #16 Palomar Street & Transit Center Place (see discussion below). Background traffic growth would occur as described previously in **Section 2.5** (Traffic Forecast Methodology and Assumptions). The resulting traffic volumes and intersection lane configurations under this scenario are shown in **Table 7** and **Figure 11**, respectively.

During preliminary traffic analysis, intersection #16 Palomar Street & Transit Center Place was found to operate at LOS F during the PM peak hour. However, it was determined that this was the result of additional traffic from the shopping centers due to proposed Palomar Gateway District (PGD) developments. PGD proposed high density developments to the shopping centers north and south of Palomar Street. In addition, PGD proposed new shopping center access driveways across the railroad tracks at Ada Street and Oxford Street connecting to Industrial Boulevard, on the assumption that the railroad tracks would be constructed below grade at Palomar Street. However, these new access driveways were not included in the SANDAG model network because the railroad tracks would remain at grade with the Project. The lack of these additional access driveways resulted in new PGD traffic using the existing access driveways along Palomar Street, including intersection #16 Palomar Street & Transit Center Place. It was therefore assumed that the LOS F operations at that intersection would be mitigated by PGD to acceptable LOS D with the following improvements:

- Add exclusive SBR lane
- Restripe shared NBT/R into shared NBL/T/R lane
- Provide SBR overlap phase with EBL
- Split phase operation for NB and SB approaches.

These improvements were assumed to be in place in 2025 and 2045 No Build and Build scenarios.

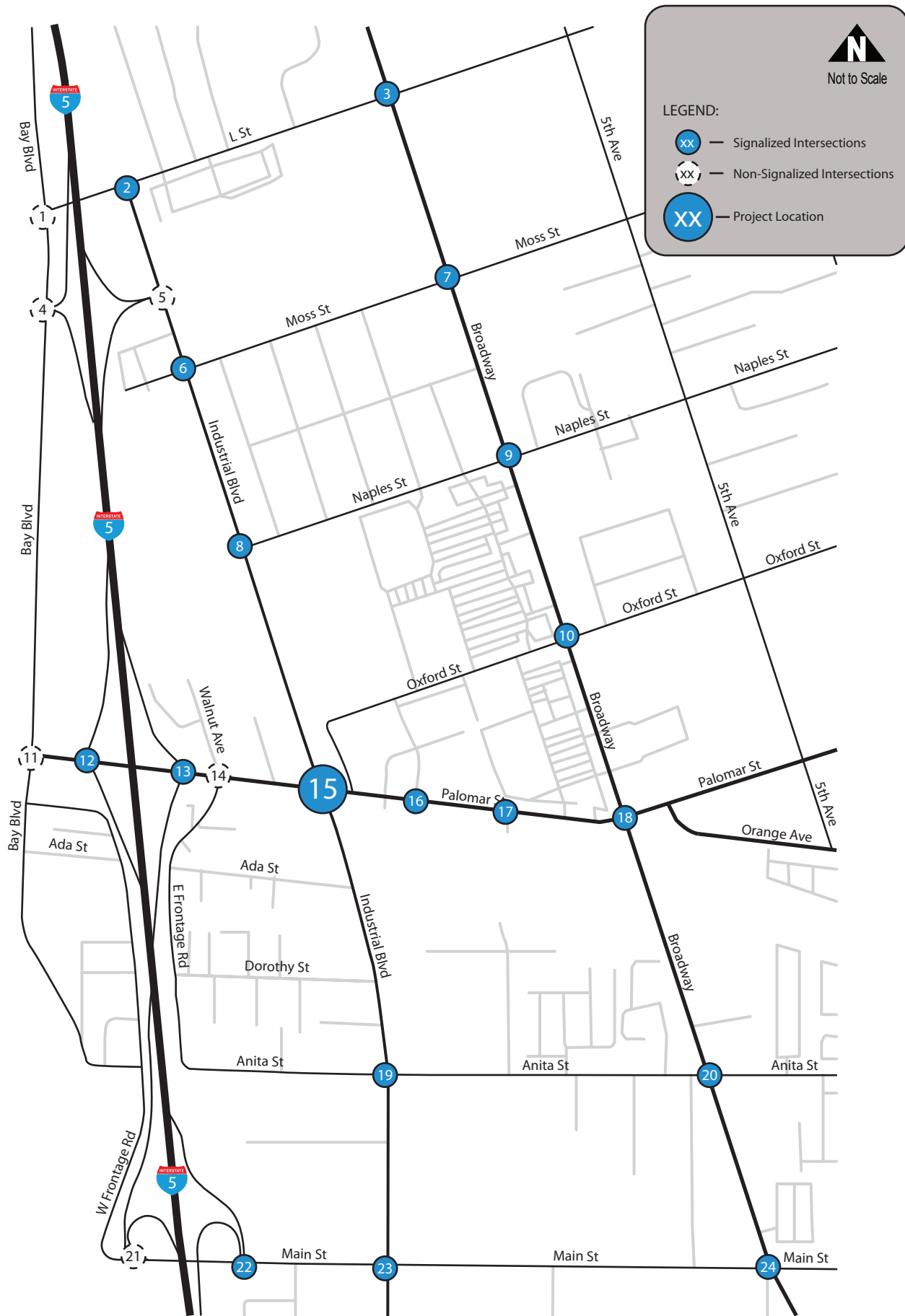
4.1.2 Traffic Operations

The No Build Alternative was used as the base condition against which the Build alternative was compared to determine significant traffic impacts. **Table 8** summarizes the intersection levels of service under 2025 No Build Alternative. The detailed LOS worksheets are included in **Appendix C**. Under the 2025 No Build Alternative, the following intersections would operate at critical (LOS E or F) conditions in the AM and/or PM peak hours:

- #1 L Street & Bay Boulevard – LOS B / F
- #4 I-5 SB Ramps & Bay Blvd – LOS C / F
- #5 I-5 NB Ramps & Industrial Boulevard – LOS F / F
- #6 Moss Street & Industrial Boulevard – LOS F / F
- #8 Naples Street & Industrial Boulevard – LOS F / F
- #15 Palomar Street & Industrial Boulevard – LOS D / E
- #21 Main Street & I-5 SB Ramps – LOS C / F
- #23 Main Street & Industrial Boulevard – LOS D / E

Table 7 – 2025 Intersection Volumes – No Build Alternative

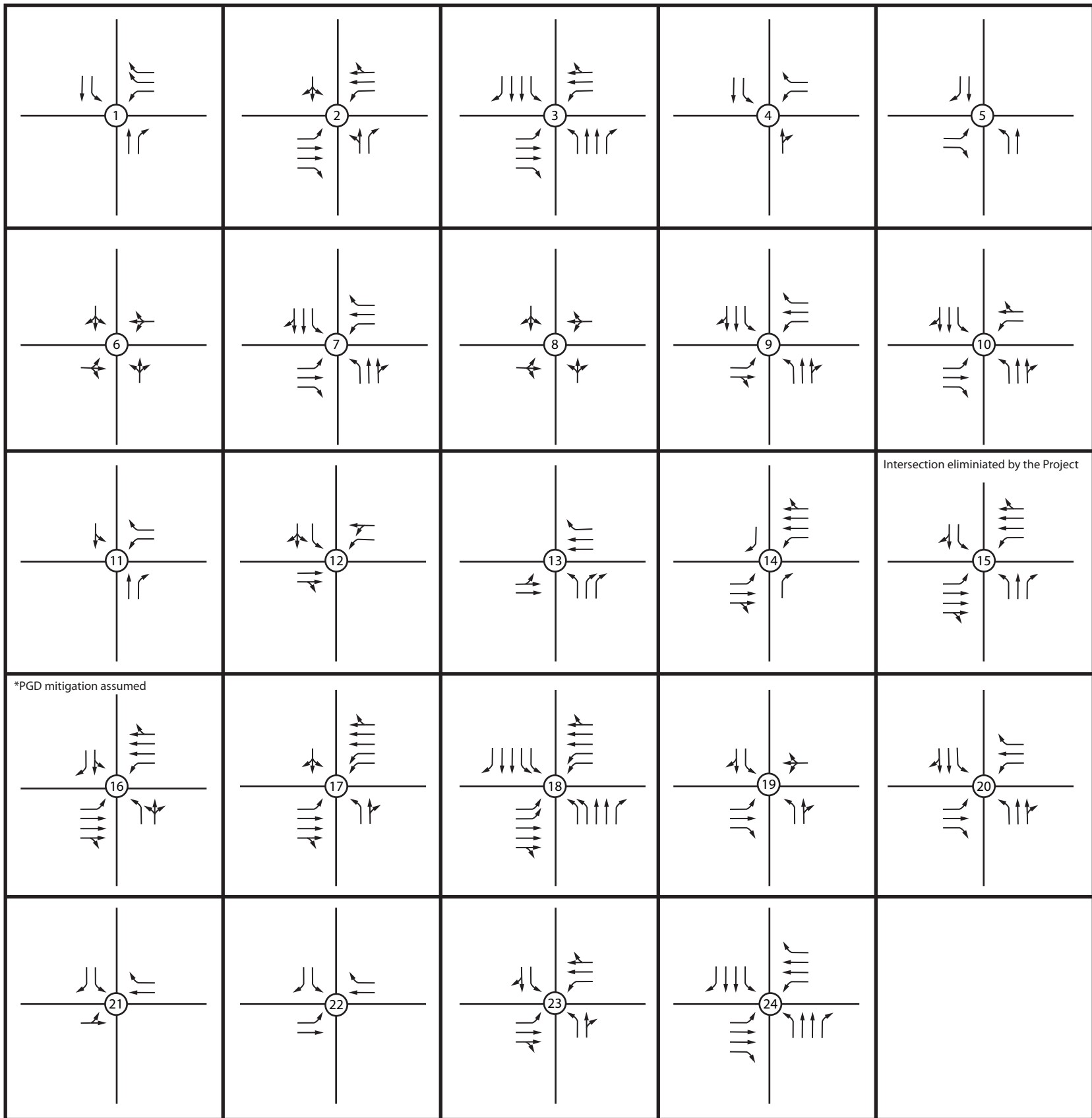
No.	Intersection (E/W & N/S)	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	L St & Bay Blvd	AM	0	125	644	212	102	0	0	0	0	355	0	182
		PM	0	60	1070	182	112	0	0	0	0	0	438	0
2	L St & Industrial Blvd	AM	176	3	123	1	4	0	2	403	453	107	350	3
		PM	145	7	109	3	9	4	5	577	674	101	370	7
3	L St & Broadway	AM	147	599	176	32	461	24	36	256	234	186	203	39
		PM	203	610	223	43	656	49	38	393	266	168	214	37
4	I-5 SB Ramps & Bay Blvd	AM	0	65	2	352	86	0	0	0	0	93	0	700
		PM	0	162	12	431	108	0	0	0	0	0	27	0
5	I-5 NB Ramps & Industrial Blvd	AM	777	108	0	0	391	169	190	0	266	0	0	0
		PM	885	150	0	0	581	203	104	0	313	0	0	0
6	Moss St & Industrial Blvd	AM	87	281	0	261	396	0	186	0	0	0	128	390
		PM	78	344	2	315	421	157	219	5	12	4	30	472
7	Moss St & Broadway	AM	120	651	64	141	465	122	44	143	20	18	275	155
		PM	107	831	49	227	699	158	71	220	32	26	240	86
8	Naples St & Industrial Blvd	AM	72	48	377	282	32	0	17	81	39	211	84	303
		PM	43	64	370	375	62	0	35	133	82	339	98	326
9	Naples St & Broadway	AM	126	520	90	34	427	49	81	181	98	146	296	90
		PM	103	714	172	58	530	35	138	260	81	186	207	98
10	Oxford St & Broadway	AM	14	661	32	37	527	12	11	4	9	155	25	140
		PM	10	711	68	142	784	8	65	67	69	119	7	124
11	Palomar St & Bay Blvd	AM	0	112	38	51	38	0	0	0	0	38	0	171
		PM	0	67	72	260	77	0	0	0	0	0	49	0
12	Palomar St & I-5 SB Ramps	AM	0	0	0	806	0	26	0	84	4	251	184	0
		PM	0	0	0	1077	0	16	0	312	20	646	119	0
13	Palomar St & I-5 NB Ramps	AM	14	0	439	0	0	0	19	873	0	0	424	906
		PM	3	0	365	0	0	0	45	1347	0	0	766	995
14	Palomar St & E Frontage Rd	AM	0	0	109	0	0	25	22	1180	120	2	1277	24
		PM	0	0	84	0	0	23	15	1401	310	8	1718	26
15	Palomar St & Industrial Blvd	AM	282	258	111	44	101	136	208	997	84	98	831	82
		PM	249	235	151	55	225	203	198	1215	72	177	1269	75
16	Palomar St & Transit Center Pl	AM	149	2	2	2	21	198	495	401	293	25	662	1
		PM	400	7	9	5	20	512	495	657	297	13	610	3
17	Palomar St & Plaza Entrance	AM	0	9	114	6	0	0	15	387	0	223	692	241
		PM	3	45	330	211	31	74	55	613	1	244	548	206
18	Palomar St & Broadway	AM	258	465	55	88	395	324	172	252	90	100	575	117
		PM	329	409	114	209	750	253	390	507	256	97	417	69
19	Anita St & Industrial Blvd	AM	6	389	58	194	138	16	6	5	1	32	10	263
		PM	2	344	86	217	306	9	34	79	26	70	5	288
20	Anita St & Broadway	AM	66	579	38	49	322	114	84	61	74	71	185	130
		PM	41	542	78	159	845	113	131	200	56	85	153	115
21	Main St & I-5 SB Ramps	AM	0	0	0	506	0	58	2	48	0	0	161	59
		PM	0	0	0	717	0	28	26	155	0	0	108	181
22	Main St & I-5 NB Ramps	AM	0	0	0	161	0	9	21	532	0	0	212	709
		PM	0	0	0	127	0	11	55	817	0	0	277	672
23	Main St & Industrial Blvd	AM	258	358	338	10	93	67	61	378	135	252	571	34
		PM	188	314	346	20	278	105	65	615	274	354	485	53
24	Main St & Broadway	AM	234	479	359	122	246	101	84	409	86	214	518	120
		PM	211	411	333	195	693	97	119	570	243	363	424	131



LEGEND:

- XX — Signalized Intersections
- XX — Non-Signalized Intersections
- XX — Project Location

Not to Scale



**2025 Intersection Lane Configurations
No Build and Build Alternatives**

FIGURE 11

Table 8 – 2025 Intersection LOS Summary – No Build Alternative

IntID	Int Description	Control Type	Peak Hour	Delay* (seconds)	LOS
1	L St & Bay Blvd	Stop	AM	12.6	B
			PM	50.8	F
2	L St & Industrial Blvd **	Signal	AM	43.9	D
			PM	36.6	D
3	L St & Broadway	Signal	AM	29.3	C
			PM	34.2	C
4	I-5 SB Ramps & Bay Blvd	Stop	AM	21.3	C
			PM	129.7	F
5	I-5 NB Ramps & Industrial Blvd	Stop	AM	219.8	F
			PM	266.0	F
6	Moss St & Industrial Blvd **	Signal	AM	173.3	F
			PM	265.3	F
7	Moss St & Broadway	Signal	AM	25.6	C
			PM	43.2	D
8	Naples St & Industrial Blvd **	Signal	AM	127.9	F
			PM	220.1	F
9	Naples St & Broadway	Signal	AM	28.1	C
			PM	37.1	D
10	Oxford St & Broadway	Signal	AM	21.2	C
			PM	27.4	C
11	Palomar St & Bay Blvd	Stop	AM	9.0	A
			PM	13.4	B
12	Palomar St & I-5 SB Ramps	Signal	AM	23.1	C
			PM	29.6	C
13	Palomar St & I-5 NB Ramps	Signal	AM	11.4	B
			PM	20.9	C
14	Palomar St & E Frontage Rd	Stop	AM	12.5	B
			PM	10.5	B
15	Palomar St & Industrial Blvd **	Signal	AM	52.2	D
			PM	67.2	E
16	Palomar St & Transit Center Pl ***	Signal	AM	31.1	C
			PM	35.4	D
17	Palomar St & Plaza Entrance	Signal	AM	10.7	B
			PM	31.3	C
18	Palomar St & Broadway	Signal	AM	30.4	C
			PM	43.4	D
19	Anita St & Industrial Blvd **	Signal	AM	37.8	D
			PM	43.3	D
20	Anita St & Broadway	Signal	AM	13.0	B
			PM	17.0	B
21	Main St & I-5 SB Ramps	Stop	AM	20.1	C
			PM	137.2	F
22	Main St & I-5 NB Ramps	Signal	AM	9.7	A
			PM	10.2	B
23	Main St & Industrial Blvd	Signal	AM	44.8	D
			PM	55.7	E
24	Main St & Broadway	Signal	AM	40.1	D
			PM	54.4	D

Note:

* Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle.

** 24 seconds of delay added to account for trolley crossing.

*** PGD Mitigation was assumed.

4.2 2025 Opening Year Build Alternative

4.2.1 Traffic Circulation and Diversion

The Build Alternative would change the traffic circulation patterns in the vicinity of the Project. Existing through traffic would continue along Palomar Street and Industrial Boulevard. Existing turning movements at the intersection of Palomar Street & Industrial Boulevard are expected to divert to other routes. The SANDAG 2045 Models were used to determine the volume and pattern of traffic diversion under the Build Alternative (see **Section 5.2.1** for discussion of traffic diversions observed from the SANDAG 2045 Models). It was assumed that the pattern (but not the magnitude) of traffic diversion resulting from the Project as observed in the 2045 model runs would generally be the same for 2025. The resulting 2025 traffic volumes with the traffic diversion under the Build Alternative are shown in **Table 9**.

4.2.2 Traffic Operations

Table 10 summarizes the 2025 intersection levels of service under the Build Alternative. The following intersections would operate at critical (LOS E or F) conditions in the AM and/or PM peak hours:

- #1 L Street & Bay Boulevard – LOS B / F
- #4 I-5 SB Ramps & Bay Blvd – LOS C / F
- #5 I-5 NB Ramps & Industrial Boulevard – LOS F / F
- #6 Moss Street & Industrial Boulevard – LOS F / F
- #8 Naples Street & Industrial Boulevard – LOS F / F
- #21 Main Street & I-5 SB Ramps – LOS C / F.

4.3 2025 Opening Year Traffic Impacts and Mitigations

Table 11 compares the Build Alternative to the No Build Alternative, and identifies significant traffic impacts. The detailed LOS worksheets are included in **Appendix D**. Compared to the No Build Alternative, the 2025 Build Alternative would significantly impact the following intersections during the indicated peak hour/s:

- #5 I-5 NB Ramps & Industrial Boulevard – AM & PM
- #6 Moss Street & Industrial Boulevard – AM & PM
- #8 Naples Street & Industrial Boulevard – AM & PM

Table 12 shows the resulting intersection operations with the recommended mitigations discussed below. The detailed LOS worksheets with mitigations are included in **Appendix E**.

- #5 I-5 NB Ramps & Industrial Boulevard – Traffic operations at this intersection would change from LOS D/C under existing conditions to LOS F/F under 2025 No Build conditions. Hence, projects other than the grade separation Project are driving the traffic impacts at this intersection. The intersection volumes warrant installation of a traffic signal at this location (see **Appendix E** for traffic signal warrant analysis). The heavy NBL volumes during the AM and PM would require dual NBL lanes, but existing width is not enough. Instead, it is recommended to restripe the existing NBT lane into a shared NBL/T and operate the signal as split phase. This would result in LOS D during the AM peak hour, and LOS F during the PM peak hour but with much lower intersection delay.
- #6 Moss Street & Industrial Boulevard – Traffic operations at this intersection would change from LOS D/E under existing conditions to LOS F/F under 2025 No Build conditions. Hence, projects other than the grade separation Project are driving the traffic

impacts at this intersection. The WB and SB approaches are critical, with heavy volumes on WBR and SBL. Providing an exclusive SBL lane coupled with an exclusive NBL would mitigate the impact by reducing the intersection delays to below significant levels, although intersection operations would remain at LOS F during both peak hours.

- #8 Naples Street & Industrial Boulevard – Traffic operations at this intersection would change from LOS D/D under existing conditions to LOS F/F under 2025 No Build conditions. Hence, projects other than the grade separation Project are driving the traffic impacts at this intersection. Providing exclusive WBL, NBL and SBL lanes would mitigate the impacts by reducing intersection delays to below significant levels, although intersection operations would remain critical at LOS E / F during the AM / PM peak hours, respectively.

Table 9 – 2025 Intersection Volumes – Build Alternative

No.	Intersection (E/W & N/S)	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	L St & Bay Blvd	AM	0	125	644	209	107	0	0	0	0	370	0	203
		PM	0	60	1070	175	119	0	0	0	0	446	0	84
2	L St & Industrial Blvd	AM	197	3	117	1	4	0	2	420	429	92	370	3
		PM	160	7	130	3	9	4	5	577	668	96	378	7
3	L St & Broadway	AM	159	615	194	32	466	23	34	258	242	194	202	37
		PM	214	612	239	43	651	47	35	399	272	171	208	34
4	I-5 SB Ramps & Bay Blvd	AM	0	65	4	375	86	0	0	0	0	93	0	700
		PM	0	162	12	446	108	0	0	0	0	27	0	974
5	I-5 NB Ramps & Industrial Blvd	AM	789	114	0	0	384	137	201	0	326	0	0	0
		PM	880	168	0	0	573	203	122	0	315	0	0	0
6	Moss St & Industrial Blvd	AM	94	300	0	246	464	0	204	0	0	0	125	381
		PM	114	335	4	306	474	107	249	11	32	11	43	464
7	Moss St & Broadway	AM	113	708	62	160	475	133	47	134	17	16	260	171
		PM	108	859	47	237	680	174	76	217	29	23	235	87
8	Naples St & Industrial Blvd	AM	69	55	411	341	33	0	15	71	29	183	77	324
		PM	51	80	371	435	82	0	32	100	68	318	96	340
9	Naples St & Broadway	AM	119	507	61	30	418	61	131	201	121	116	299	94
		PM	105	720	165	52	513	33	154	277	94	185	201	95
10	Oxford St & Broadway	AM	17	626	46	43	512	11	10	6	11	158	24	111
		PM	13	723	74	141	767	9	67	74	75	115	8	114
11	Palomar St & Bay Blvd	AM	0	66	38	59	25	0	0	0	0	49	0	222
		PM	0	57	67	291	68	0	0	0	0	53	0	106
12	Palomar St & I-5 SB Ramps	AM	0	0	0	848	0	31	0	94	3	217	240	0
		PM	0	0	0	1105	0	17	0	341	17	603	142	0
13	Palomar St & I-5 NB Ramps	AM	12	0	379	0	0	0	19	923	0	0	449	932
		PM	3	0	373	0	0	0	45	1405	0	0	747	1016
14	Palomar St & E Frontage Rd	AM	0	0	278	0	0	25	23	1113	177	2	1327	19
		PM	0	0	249	0	0	23	10	1444	337	26	1743	27
16	Palomar St & Transit Center Pl	AM	137	2	3	2	19	196	535	560	295	31	952	1
		PM	405	6	10	6	19	500	529	865	321	16	860	4
17	Palomar St & Plaza Entrance	AM	1	8	116	5	0	1	19	541	1	212	992	186
		PM	3	31	334	188	18	68	49	825	1	230	808	199
18	Palomar St & Broadway	AM	329	457	49	71	350	368	235	314	125	93	692	108
		PM	402	365	98	194	683	335	469	588	290	80	500	61
19	Anita St & Industrial Blvd	AM	51	367	94	97	138	43	39	61	13	54	45	131
		PM	30	342	102	96	329	65	43	119	96	112	56	159
20	Anita St & Broadway	AM	35	611	39	63	330	78	66	46	44	73	127	176
		PM	29	545	67	159	813	94	120	155	42	82	128	136
21	Main St & I-5 SB Ramps	AM	0	0	0	479	0	54	2	42	0	0	128	57
		PM	0	0	0	714	0	26	27	160	0	0	95	174
22	Main St & I-5 NB Ramps	AM	0	0	0	164	0	9	26	495	0	0	176	693
		PM	0	0	0	127	0	11	57	817	0	0	258	661
23	Main St & Industrial Blvd	AM	252	411	311	12	116	77	64	323	131	245	516	37
		PM	178	347	328	28	367	142	73	596	258	299	422	54
24	Main St & Broadway	AM	210	481	360	125	230	92	74	364	69	210	496	130
		PM	173	399	356	198	663	76	107	561	226	390	370	136

Table 10 – 2025 Intersection LOS Summary – Build Alternative

IntID	Int Description	Control Type	Peak Hour	Delay* (seconds)	LOS
1	L St & Bay Blvd	Stop	AM	13.0	B
			PM	50.8	F
2	L St & Industrial Blvd **	Signal	AM	43.2	D
			PM	39.8	D
3	L St & Broadway	Signal	AM	31.4	C
			PM	36.1	D
4	I-5 SB Ramps & Bay Blvd	Stop	AM	21.9	C
			PM	129.8	F
5	I-5 NB Ramps & Industrial Blvd	Stop	AM	231.5	F
			PM	268.9	F
6	Moss St & Industrial Blvd **	Signal	AM	197.8	F
			PM	290.9	F
7	Moss St & Broadway	Signal	AM	26.9	C
			PM	46.7	D
8	Naples St & Industrial Blvd **	Signal	AM	146.5	F
			PM	239.6	F
9	Naples St & Broadway	Signal	AM	34.0	C
			PM	37.7	D
10	Oxford St & Broadway	Signal	AM	21.5	C
			PM	27.7	C
11	Palomar St & Bay Blvd	Stop	AM	9.1	A
			PM	14.4	B
12	Palomar St & I-5 SB Ramps	Signal	AM	23.9	C
			PM	30.0	C
13	Palomar St & I-5 NB Ramps	Signal	AM	12.6	B
			PM	27.1	C
14	Palomar St & E Frontage Rd	Stop	AM	15.6	C
			PM	14.4	B
15	Palomar St & Industrial Blvd **	Signal	AM PM	Intersection Grade Separated	
16	Palomar St & Transit Center Pl ***	Signal	AM	36.5	D
			PM	42.3	D
17	Palomar St & Plaza Entrance	Signal	AM	16.9	B
			PM	30.8	C
18	Palomar St & Broadway	Signal	AM	36.8	D
			PM	47.9	D
19	Anita St & Industrial Blvd **	Signal	AM	36.5	D
			PM	40.9	D
20	Anita St & Broadway	Signal	AM	11.9	B
			PM	15.7	B
21	Main St & I-5 SB Ramps	Stop	AM	16.7	C
			PM	131.0	F
22	Main St & I-5 NB Ramps	Signal	AM	10.0	A
			PM	10.2	B
23	Main St & Industrial Blvd	Signal	AM	46.5	D
			PM	53.7	D
24	Main St & Broadway	Signal	AM	46.9	D
			PM	52.8	D

Note:

* Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle.

** 24 seconds of delay added to account for trolley crossing.

*** PGD Mitigation was assumed.

Table 11 – 2025 Traffic Impacts – Opening Year

IntID	Int Description	Peak Hour	2025 No Build		2025 Build		2025 Build vs. No Build	
			Delay* (seconds)	LOS	Delay* (seconds)	LOS	Change in Delay* (seconds)	Significant Impact? ****
1	L St & Bay Blvd	AM	12.6	B	13.0	B	0.4	No
		PM	50.8	F	50.8	F	0.0	No
2	L St & Industrial Blvd **	AM	43.9	D	43.2	D	-0.7	No
		PM	36.6	D	39.8	D	3.2	No
3	L St & Broadway	AM	29.3	C	31.4	C	2.1	No
		PM	34.2	C	36.1	D	1.9	No
4	I-5 SB Ramps & Bay Blvd	AM	21.3	C	21.9	C	0.6	No
		PM	129.7	F	129.8	F	0.1	No
5	I-5 NB Ramps & Industrial Blvd	AM	219.8	F	231.5	F	11.7	Yes
		PM	266.0	F	268.9	F	2.9	Yes
6	Moss St & Industrial Blvd **	AM	173.3	F	197.8	F	24.5	Yes
		PM	265.3	F	290.9	F	25.6	Yes
7	Moss St & Broadway	AM	25.6	C	26.9	C	1.3	No
		PM	43.2	D	46.7	D	3.5	No
8	Naples St & Industrial Blvd **	AM	127.9	F	146.5	F	18.6	Yes
		PM	220.1	F	239.6	F	19.5	Yes
9	Naples St & Broadway	AM	28.1	C	34.0	C	5.9	No
		PM	37.1	D	37.7	D	0.6	No
10	Oxford St & Broadway	AM	21.2	C	21.5	C	0.3	No
		PM	27.4	C	27.7	C	0.3	No
11	Palomar St & Bay Blvd	AM	9.0	A	9.1	A	0.1	No
		PM	13.4	B	14.4	B	1.0	No
12	Palomar St & I-5 SB Ramps	AM	23.1	C	23.9	C	0.8	No
		PM	29.6	C	30.0	C	0.4	No
13	Palomar St & I-5 NB Ramps	AM	11.4	B	12.6	B	1.2	No
		PM	20.9	C	27.1	C	6.2	No
14	Palomar St & E Frontage Rd	AM	12.5	B	15.6	C	3.1	No
		PM	10.5	B	14.4	B	3.9	No
15	Palomar St & Industrial Blvd **	AM	52.2	D	Intersection Grade Separated		Intersection Grade Separated	
		PM	67.2	E	Intersection Grade Separated		Intersection Grade Separated	
16	Palomar St & Transit Center PI ***	AM	31.1	C	36.5	D	5.4	No
		PM	35.4	D	42.3	D	6.9	No
17	Palomar St & Plaza Entrance	AM	10.7	B	16.9	B	6.2	No
		PM	31.3	C	30.8	C	-0.5	No
18	Palomar St & Broadway	AM	30.4	C	36.8	D	6.4	No
		PM	43.4	D	47.9	D	4.5	No
19	Anita St & Industrial Blvd **	AM	37.8	D	36.5	D	-1.3	No
		PM	43.3	D	40.9	D	-2.4	No
20	Anita St & Broadway	AM	13.0	B	11.9	B	-1.1	No
		PM	17.0	B	15.7	B	-1.3	No
21	Main St & I-5 SB Ramps	AM	20.1	C	16.7	C	-3.4	No
		PM	137.2	F	131.0	F	-6.2	No
22	Main St & I-5 NB Ramps	AM	9.7	A	10.0	A	0.3	No
		PM	10.2	B	10.2	B	0.0	No
23	Main St & Industrial Blvd	AM	44.8	D	46.5	D	1.7	No
		PM	55.7	E	53.7	D	-2.0	No
24	Main St & Broadway	AM	40.1	D	46.9	D	6.8	No
		PM	54.4	D	52.8	D	-1.6	No

Notes:

- * Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle.
- ** 24 seconds of delay was added to account for trolley crossing.
- *** PGD Mitigation was assumed.
- **** Significant impact is defined if an intersection is at LOS D or better without the project, and the project causes the LOS to deteriorate to LOS E or LOS F (regardless of the change in delay). Or if an intersection is at LOS E or F without the project and the project causes an increase in delay above the 2-second delay threshold.

Table 12 – 2025 Traffic Mitigations – Opening Year

Int ID	Int Description	Peak Hour	2025 Build without Mitigation		Proposed Mitigation	2025 Build with Mitigation	
			Delay* (sec)	LOS		Delay* (sec)	LOS
5	I-5 NB Ramps & Industrial Blvd	AM	231.5	F	Signalize. Restripe NBT to shared NBL/T. Split phase	32.4	D
		PM	268.9	F		51.4	F
6	Moss St & Industrial Blvd **	AM	197.8	F	Provide exclusive NBL and SBL lanes.	90.2	F
		PM	290.9	F		111.7	F
8	Naples St & Industrial Blvd **	AM	146.5	F	Provide exclusive WBL, NBL and SBL lanes.	78.0	E
		PM	239.6	F		126.3	F

Notes:

* Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle.

** 24 seconds of delay was added to account for trolley crossing.

5 2045 Horizon Year Traffic Operations Analysis

5.1 2045 Horizon Year No Build Alternative

Under the No Build alternative, background traffic growth would occur as described previously in **Section 2.5** (Traffic Forecast Methodology and Assumptions). Most of the roadway network and intersections in the study area would remain in their existing configurations, except as discussed below. The resulting traffic volumes and intersection lane configurations under this scenario are shown in **Table 13** and **Figure 12**, respectively.

5.1.1 Roadway Network Improvements and Traffic Circulation

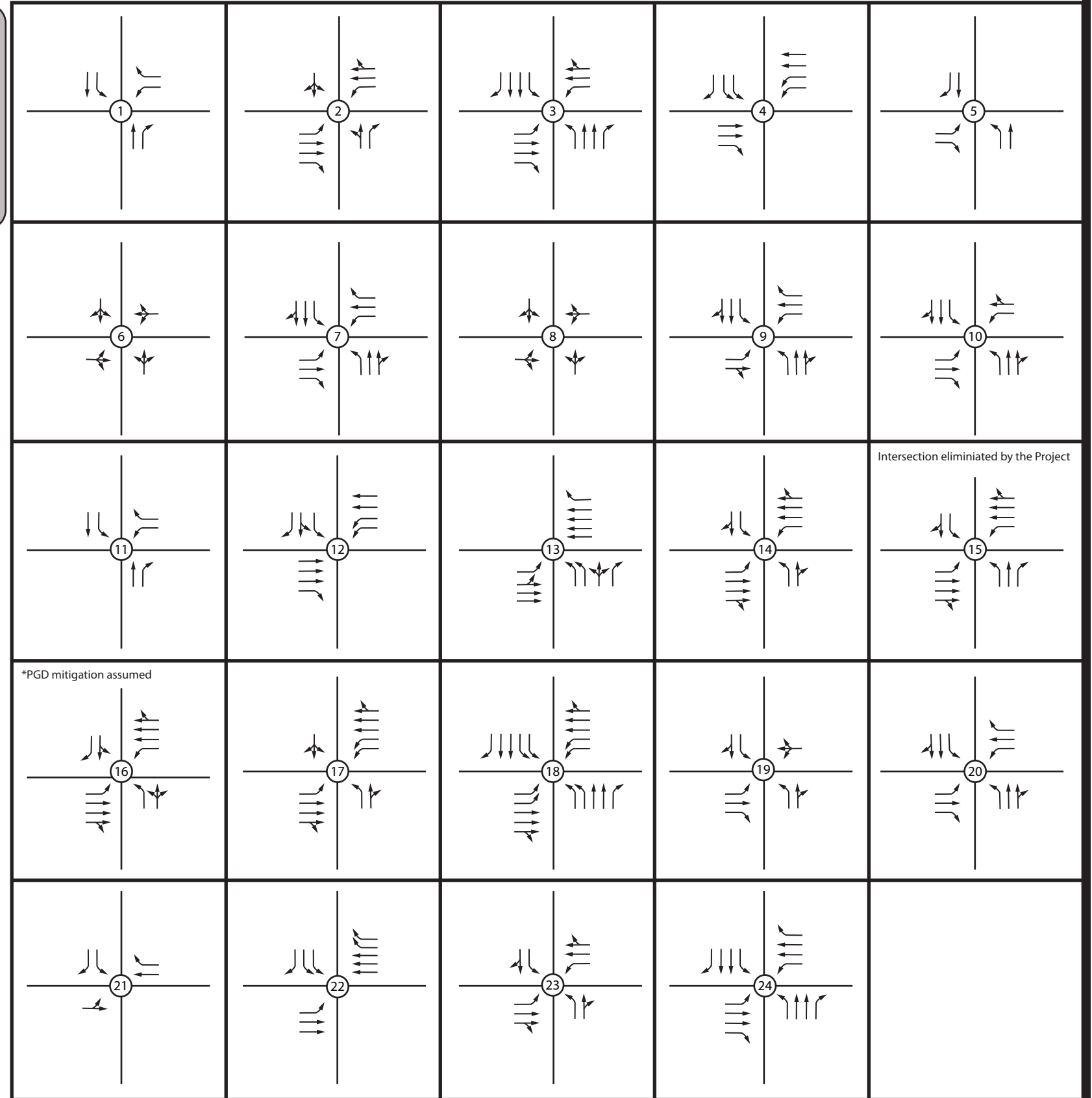
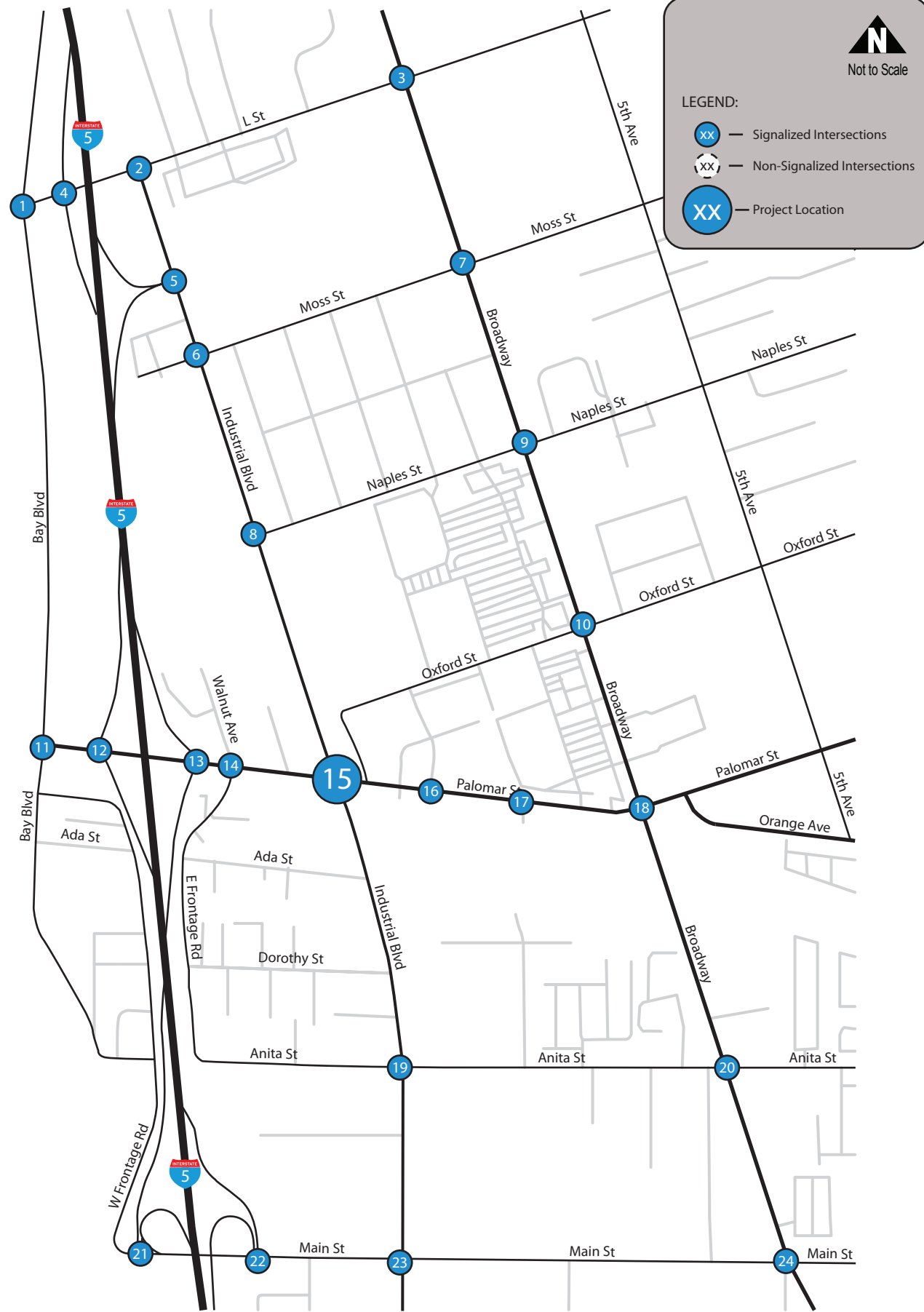
The following roadway network improvements were assumed for the 2045 No Build network, based on assumptions included in the 2045 SANDAG No Build model and inputs provided by the City of Chula Vista on intersection geometric improvements:

- The I-5 SB Ramps would be reconstructed and realigned to connect directly to L Street, instead of connecting to Bay Boulevard under existing conditions. SANDAG assumes that this improvement would be operational by 2035. This improvement also includes signalization of adjacent intersections as described below.⁸ The traffic patterns at intersection #1 L Street & Bay Boulevard is expected to change significantly as a result of this improvement.
- A new trolley line extension would operate along Palomar Street from the existing railroad tracks towards the east.
- #1 L Street & Bay Boulevard – intersection will be signalized.
- #4 L Street & I-5 SB Ramps (relocated) – intersection will be signalized.
- #5 Industrial Boulevard & I-5 NB Ramps – intersection will be signalized.
- #11 Palomar Street & Bay Boulevard – intersection will be signalized.
- #12 Palomar Street & I-5 SB Ramps – The following geometric improvements will be provided:
 - Exclusive SBR lane. Restripe existing shared SB/T/L/R lane to shared SBT/L lane.
 - Additional (2nd) WBT lane
 - Additional (2nd) WBL lane
 - Restripe existing shared WBT/L lane into exclusive WBT lane.
 - Restripe existing shared EBT/R lane into exclusive (2nd) EBT lane.
 - Additional (3rd) EBT lane
 - Exclusive EBR lane
- #13 Palomar Street & I-5 NB Ramps – The following geometric improvements will be provided:
 - Two additional (3rd and 4th) WBT lane
 - 2nd exclusive NBL lane
 - Restripe exclusive NBR to shared NBT/L/R
 - Exclusive EBL lane
 - Additional (3rd) EBT lane
- #14 Palomar Street & Walnut Avenue – intersection will be signalized. The following geometric improvements will be provided:
 - Exclusive SBL lane

⁸ SANDAG, *Interstate 5 South Multimodal Corridor Study*, 2010. Alternative 2 lane configurations for intersection in the vicinity of L Street were used in this analysis.

Table 13 – 2045 Intersection Volumes – No Build Alternative

No.	Intersection (E/W & N/S)	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	L St & Bay Blvd	AM	0	460	18	75	150	0	0	0	0	423	0	299
		PM	0	614	102	349	412	0	0	0	0	0	292	0
2	L St & Industrial Blvd	AM	206	3	144	1	5	0	2	473	531	126	352	3
		PM	170	8	128	4	10	5	6	725	801	119	442	8
3	L St & Broadway	AM	172	702	206	38	541	28	42	300	274	218	238	46
		PM	238	715	261	51	769	58	44	461	312	197	251	43
4	I-5 SB Ramps & Bay Blvd	AM	0	0	0	952	0	368	0	49	44	203	354	0
		PM	0	0	0	1328	0	192	0	198	253	359	253	0
5	I-5 NB Ramps & Industrial Blvd	AM	882	127	0	0	458	198	223	0	312	0	0	0
		PM	1038	176	0	0	681	238	122	0	367	0	0	0
6	Moss St & Industrial Blvd	AM	102	329	0	306	464	0	218	0	0	0	150	457
		PM	92	403	2	370	494	184	257	6	14	5	35	553
7	Moss St & Broadway	AM	141	763	75	165	545	143	52	168	24	21	323	182
		PM	126	975	58	266	820	185	83	258	37	31	281	101
8	Naples St & Industrial Blvd	AM	84	56	442	331	38	0	20	95	46	247	99	355
		PM	51	75	434	440	73	0	41	156	96	398	115	382
9	Naples St & Broadway	AM	148	610	106	40	501	58	95	212	115	171	347	105
		PM	121	837	202	68	621	41	162	305	95	218	243	115
10	Oxford St & Broadway	AM	17	775	37	43	618	14	13	5	11	182	29	164
		PM	12	834	80	166	920	9	76	79	81	139	8	146
11	Palomar St & Bay Blvd	AM	0	131	44	60	45	0	0	0	0	45	0	201
		PM	0	79	84	305	90	0	0	0	0	0	57	0
12	Palomar St & I-5 SB Ramps	AM	0	0	0	945	0	30	0	99	5	294	216	0
		PM	0	0	0	1263	0	19	0	366	23	758	139	0
13	Palomar St & I-5 NB Ramps	AM	16	0	515	0	0	0	22	1024	0	0	497	1062
		PM	4	0	428	0	0	0	53	1580	0	0	898	1167
14	Palomar St & E Frontage Rd	AM	62	0	66	2	0	27	26	1381	141	2	1436	28
		PM	36	0	62	4	0	24	18	1639	363	9	1979	30
15	Palomar St & Industrial Blvd	AM	331	303	130	52	119	160	182	1169	98	115	975	96
		PM	292	276	177	65	264	238	196	1425	84	207	1488	88
16	Palomar St & Transit Center Pl	AM	175	2	2	2	25	232	580	470	344	29	776	1
		PM	469	8	10	6	24	600	581	771	348	15	715	4
17	Palomar St & Plaza Entrance	AM	0	10	134	7	0	0	18	454	0	261	811	283
		PM	4	53	387	247	36	87	64	719	1	286	643	242
18	Palomar St & Broadway	AM	302	545	64	103	463	380	202	295	106	117	674	137
		PM	386	480	134	245	880	297	457	595	300	114	489	81
19	Anita St & Industrial Blvd	AM	7	456	68	227	162	19	7	6	1	37	12	308
		PM	2	403	101	254	359	11	40	93	31	82	6	338
20	Anita St & Broadway	AM	77	679	45	58	378	134	98	71	87	83	217	153
		PM	48	636	92	186	991	133	154	235	66	100	180	135
21	Main St & I-5 SB Ramps	AM	0	0	0	593	0	68	2	56	0	0	189	69
		PM	0	0	0	841	0	33	31	182	0	0	127	212
22	Main St & I-5 NB Ramps	AM	0	0	0	189	0	10	25	624	0	0	249	831
		PM	0	0	0	149	0	13	64	958	0	0	325	788
23	Main St & Industrial Blvd	AM	303	420	396	12	109	78	71	443	158	296	670	40
		PM	220	368	406	24	326	123	76	721	321	415	569	62
24	Main St & Broadway	AM	274	562	421	143	288	118	98	480	101	251	607	141
		PM	248	482	390	229	813	114	140	669	285	426	497	154



**2045 Intersection Lane Configurations
No Build and Build Alternatives**

FIGURE 12

- Restripe exclusive SBR lane to shared SBT/R lane
- Additional (3rd) EBT lane
- Exclusive NBL lane
- Restripe exclusive NBR lane to shared NBT/R lane.
- #16 Palomar Street & Transit Center Place – PGD mitigation assumed for LOS D operations:
 - Add exclusive SBR lane
 - Restripe shared NBT/R into shared NBL/T/R lane
 - Provide SBR overlap phase with EBL
 - Split phase operation for NB and SB approaches.
- #21 Main Street & I-5 SB Ramps – intersection will be signalized.
- #22 Main Street & I-5 NB Ramps – The following geometric improvements will be provided:
 - Add 2nd SBL lane
 - Add 2nd WBR lane
 - Add two WBT lanes
 - Add 2nd EBT lane.

5.1.2 Traffic Operations

The No Build Alternative was used as the base condition against which the Build Alternative was compared to determine significant traffic impacts. **Table 14** summarizes the intersection levels of service. The detailed LOS worksheets are included in **Appendix F**. Under the 2045 No Build Alternative, the following intersections would operate at critical (LOS E or F) conditions during the AM and/or PM peak hours:

- #5 I-5 NB Ramps & Industrial Boulevard – LOS F / F
- #6 Moss Street & Industrial Boulevard – LOS F / F
- #8 Naples Street & Industrial Boulevard – LOS F / F
- #15 Palomar Street & Industrial Boulevard – LOS D / E
- #19 Anita Street & Industrial Boulevard – LOS D / E
- #23 Main Street & Industrial Boulevard – LOS E / F
- #24 Main Street & Broadway – LOS D / E.

5.2 2045 Horizon Year Build Alternative

5.2.1 Traffic Circulation and Diversion

The Build Alternative would change the traffic circulation patterns in the vicinity of the Project. Existing through traffic would continue along Palomar Street and Industrial Boulevard. Existing turning movements at the intersection of Palomar Street & Industrial Boulevard are expected to divert to other routes. The SANDAG 2045 Models were used to determine the volume and pattern of traffic diversion under the Build Alternative. The following changes to traffic circulation patterns were noted:

- More traffic would use Palomar Street between Bay Boulevard and Broadway, as well as the I-5 NB On-Ramp and SB Off-Ramp. This is expected as a result of the Project which eliminates the congestion and delays at the intersection of Palomar Street and Industrial Boulevard, attracting more traffic to use Palomar Street.
- Traffic on Industrial Boulevard coming from or going to south of Palomar Street would divert to Anita Street and East Frontage Road.
- Traffic on Industrial Boulevard coming from or going to north of Palomar Street would divert to L Street and Bay Boulevard to reach Palomar Street.

Table 14 – 2045 Intersection LOS Summary – No Build Alternative

Int ID	Int Description	Control Type	Peak Hour	Delay* (seconds)	LOS
1	L St & Bay Blvd	Signal	AM	19.4	B
			PM	30.6	C
2	L St & Industrial Blvd **	Signal	AM	51.9	D
			PM	46.7	D
3	L St & Broadway	Signal	AM	38.7	D
			PM	47.0	D
4	L St & I-5 SB Ramps	Signal	AM	23.1	C
			PM	35.3	D
5	I-5 NB Ramps & Industrial Blvd	Signal	AM	83.3	F
			PM	165.3	F
6	Moss St & Industrial Blvd **	Signal	AM	285.0	F
			PM	382.5	F
7	Moss St & Broadway	Signal	AM	31.8	C
			PM	46.0	D
8	Naples St & Industrial Blvd **	Signal	AM	224.5	F
			PM	341.8	F
9	Naples St & Broadway	Signal	AM	35.3	D
			PM	47.4	D
10	Oxford St & Broadway	Signal	AM	23.6	C
			PM	29.9	C
11	Palomar St & Bay Blvd	Signal	AM	10.7	B
			PM	9.9	A
12	Palomar St & I-5 SB Ramps	Signal	AM	21.6	C
			PM	34.0	C
13	Palomar St & I-5 NB Ramps	Signal	AM	11.8	B
			PM	16.5	B
14	Palomar St & E Frontage Rd	Signal	AM	4.1	A
			PM	1.8	A
15	Palomar St & Industrial Blvd **	Signal	AM	47.6	D
			PM	71.2	E
16	Palomar St & Transit Center Pl ***	Signal	AM	37.1	D
			PM	46.2	D
17	Palomar St & Plaza Entrance	Signal	AM	18.4	B
			PM	43.3	D
18	Palomar St & Broadway	Signal	AM	32.9	C
			PM	49.0	D
19	Anita St & Industrial Blvd **	Signal	AM	54.5	D
			PM	69.2	E
20	Anita St & Broadway	Signal	AM	20.1	C
			PM	29.2	C
21	Main St & I-5 SB Ramps	Signal	AM	14.5	B
			PM	54.4	D
22	Main St & I-5 NB Ramps	Signal	AM	7.5	A
			PM	8.5	A
23	Main St & Industrial Blvd	Signal	AM	76.1	E
			PM	123.6	F
24	Main St & Broadway	Signal	AM	52.7	D
			PM	74.4	E

Notes:

* Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle.

** 24 seconds of delay added to account for trolley crossing.

*** PGD Mitigation was assumed.

- The following streets segments parallel to or perpendicular to Palomar Street, would experience increased traffic volumes due to traffic attracted to Palomar Street:
 - Oxford Street west of Broadway
 - Broadway between north of Oxford Street and Anita Street.

The resulting 2045 Build Alternative traffic volumes are shown in **Table 15**. The roadway network and intersection lane configurations would remain the same as in 2045 No Build Alternative, previously shown in **Figure 12**, except for the grade separation Project at the intersection of Palomar Street and Industrial Boulevard.

5.2.2 Traffic Operations

Table 16 summarizes the intersection levels of service under the 2045 Build Alternative. The detailed LOS worksheets are included in **Appendix G**. The following intersections would operate at critical (LOS E or F) conditions in the AM and/or PM peak hours:

- #5 I-5 NB Ramps & Industrial Boulevard – LOS F / F
- #6 Moss Street & Industrial Boulevard – LOS F / F
- #8 Naples Street & Industrial Boulevard – LOS F / F
- #19 Anita Street & Industrial Boulevard – LOS D / E
- #23 Main Street & Industrial Boulevard – LOS E / F
- #24 Main Street & Broadway – LOS D / E.

5.3 2045 Horizon Year Traffic Impacts and Mitigations

Table 17 compares the Build Alternative to the No Build Alternative, and identifies significant traffic impacts. Compared to the No Build Alternative, the Build Alternative would significantly impact the following intersections during the indicated peak hour/s:

- #5 I-5 NB Ramps & Industrial Boulevard – AM only
- #6 Moss Street & Industrial Boulevard – AM & PM
- #8 Naples Street & Industrial Boulevard – AM & PM.

Table 18 shows the resulting intersection operations with the recommended mitigations discussed below. The detailed LOS worksheets with mitigations are included in **Appendix H**.

- #5 I-5 NB Ramps & Industrial Boulevard – Traffic operations at this intersection would change from LOS D/C under existing conditions to LOS F/F under 2045 No Build conditions. Hence, projects other than the grade separation Project are driving the traffic impacts at this intersection. The heavy NBL volumes during the AM and PM would require dual NBL lanes, but existing width is not enough. Instead, it is recommended to restripe the existing NBT lane into a shared NBL/T and operate the signal as split phase. This would result in LOS D during the AM peak hour, and LOS E during the PM peak hour but with below significant intersection delay.
- #6 Moss Street & Industrial Boulevard – Traffic operations at this intersection would change from LOS D/E under existing conditions to LOS F/F under 2045 No Build conditions. Hence, projects other than the grade separation Project are driving the traffic impacts at this intersection. The WB and SB approaches are critical, with heavy volumes on WBR and SBL. Providing an exclusive SBL lane coupled with an exclusive NBL would mitigate the impact by reducing the intersection delays to below significant levels, although intersection operations remain at LOS F during both peak hours.
- #8 Naples Street & Industrial Boulevard – Traffic operations at this intersection would change from LOS D/D under existing conditions to LOS F/F under 2045 No Build

conditions. Hence, projects other than the grade separation Project are driving the traffic impacts at this intersection. Providing exclusive WBL, NBL and SBL lanes would mitigate the impacts by reducing intersection delays to below significant levels, although intersection operations remain critical at LOS F / F during the AM / PM peak hours, respectively.

Table 15 – 2045 Intersection Volumes – Build Alternative

No.	Intersection (E/W & N/S)	Peak Hour	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	L St & Bay Blvd	AM	0	468	17	72	140	0	0	0	0	431	0	276
		PM	0	610	118	329	457	0	0	0	0	267	0	145
2	L St & Industrial Blvd	AM	231	3	139	1	5	0	2	490	503	108	383	3
		PM	188	8	152	4	10	5	6	706	790	126	433	8
3	L St & Broadway	AM	186	721	227	37	547	27	40	303	284	228	237	43
		PM	251	718	280	50	764	55	41	458	319	200	244	40
4	I-5 SB Ramps & Bay Blvd	AM	0	0	0	951	0	358	0	41	48	265	349	0
		PM	0	0	0	1315	0	182	0	180	267	391	230	0
5	I-5 NB Ramps & Industrial Blvd	AM	913	134	0	0	450	161	236	0	382	0	0	0
		PM	1032	197	0	0	671	245	143	0	370	0	0	0
6	Moss St & Industrial Blvd	AM	110	352	0	288	544	0	239	0	0	0	147	447
		PM	134	393	5	359	556	126	292	13	38	13	51	544
7	Moss St & Broadway	AM	132	830	73	188	557	156	55	157	20	19	305	200
		PM	127	1007	55	278	797	204	89	255	34	27	276	102
8	Naples St & Industrial Blvd	AM	81	64	482	400	39	0	18	83	34	215	90	380
		PM	60	94	435	510	96	0	38	117	80	373	112	399
9	Naples St & Broadway	AM	139	595	71	35	490	72	154	236	142	136	351	110
		PM	123	844	194	61	602	39	181	325	110	217	236	111
10	Oxford St & Broadway	AM	20	734	54	50	600	13	12	7	13	185	28	130
		PM	15	848	87	165	899	10	78	87	88	135	9	134
11	Palomar St & Bay Blvd	AM	0	77	45	69	29	0	0	0	0	57	0	260
		PM	0	67	79	341	80	0	0	0	0	62	0	124
12	Palomar St & I-5 SB Ramps	AM	0	0	0	994	0	36	0	110	4	255	281	0
		PM	0	0	0	1296	0	20	0	400	20	707	167	0
13	Palomar St & I-5 NB Ramps	AM	14	0	445	0	0	0	22	1083	0	0	526	1093
		PM	3	0	438	0	0	0	53	1648	0	0	876	1192
14	Palomar St & E Frontage Rd	AM	73	0	253	2	0	27	27	1303	208	2	1484	22
		PM	37	0	254	4	0	24	12	1690	395	30	2007	32
16	Palomar St & Transit Center Pl	AM	161	2	3	2	22	230	555	657	346	36	1117	1
		PM	475	7	12	7	22	586	583	1015	376	19	1008	5
17	Palomar St & Plaza Entrance	AM	1	9	136	6	0	1	22	635	1	249	1163	218
		PM	4	36	392	220	21	80	58	968	1	270	948	233
18	Palomar St & Broadway	AM	386	536	58	83	410	432	276	368	147	109	812	127
		PM	472	428	115	227	801	393	550	690	340	94	586	71
19	Anita St & Industrial Blvd	AM	60	430	110	114	162	51	46	71	15	63	53	154
		PM	35	401	120	113	386	76	51	139	112	131	66	187
20	Anita St & Broadway	AM	41	716	46	74	387	91	77	54	52	86	149	206
		PM	34	639	79	187	954	110	141	182	49	96	150	160
21	Main St & I-5 SB Ramps	AM	0	0	0	562	0	63	2	49	0	0	150	67
		PM	0	0	0	837	0	31	32	188	0	0	111	204
22	Main St & I-5 NB Ramps	AM	0	0	0	192	0	11	30	580	0	0	206	813
		PM	0	0	0	149	0	13	67	958	0	0	302	775
23	Main St & Industrial Blvd	AM	296	482	365	14	136	90	75	379	154	287	605	43
		PM	209	407	385	33	430	167	86	699	302	351	495	63
24	Main St & Broadway	AM	246	564	422	147	270	108	87	427	81	246	582	152
		PM	203	468	417	232	777	89	125	658	265	457	434	159

Table 16 – 2045 Intersection LOS Summary – Build Alternative

Int ID	Int Description	Control Type	Peak Hour	Delay* (seconds)	LOS
1	L St & Bay Blvd	Signal	AM	14.0	B
			PM	15.2	B
2	L St & Industrial Blvd **	Signal	AM	48.4	D
			PM	53.6	D
3	L St & Broadway	Signal	AM	42.9	D
			PM	50.3	D
4	L St & I-5 SB Ramps	Signal	AM	12.2	B
			PM	27.8	C
5	I-5 NB Ramps & Industrial Blvd	Signal	AM	102.7	F
			PM	159.7	F
6	Moss St & Industrial Blvd **	Signal	AM	315.7	F
			PM	410.4	F
7	Moss St & Broadway	Signal	AM	35.2	D
			PM	45.4	D
8	Naples St & Industrial Blvd **	Signal	AM	251.3	F
			PM	374.1	F
9	Naples St & Broadway	Signal	AM	34.8	C
			PM	49.0	D
10	Oxford St & Broadway	Signal	AM	23.8	C
			PM	33.3	C
11	Palomar St & Bay Blvd	Signal	AM	11.3	B
			PM	10.2	B
12	Palomar St & I-5 SB Ramps	Signal	AM	21.7	C
			PM	35.6	D
13	Palomar St & I-5 NB Ramps	Signal	AM	11.8	B
			PM	18.5	B
14	Palomar St & E Frontage Rd	Signal	AM	19.7	B
			PM	14.7	B
15	Palomar St & Industrial Blvd **	Signal	AM PM	Intersection Grade Separated	
16	Palomar St & Transit Center Pl ***	Signal	AM	42.9	D
			PM	54.2	D
17	Palomar St & Plaza Entrance	Signal	AM	14.8	B
			PM	37.9	D
18	Palomar St & Broadway	Signal	AM	37.6	D
			PM	53.3	D
19	Anita St & Industrial Blvd **	Signal	AM	48.2	D
			PM	59.5	E
20	Anita St & Broadway	Signal	AM	18.0	B
			PM	29.5	C
21	Main St & I-5 SB Ramps	Signal	AM	32.4	C
			PM	36.8	D
22	Main St & I-5 NB Ramps	Signal	AM	8.5	A
			PM	7.0	A
23	Main St & Industrial Blvd	Signal	AM	73.8	E
			PM	123.7	F
24	Main St & Broadway	Signal	AM	45.6	D
			PM	72.1	E

Notes:

* Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle.

** 24 seconds of delay added to account for trolley crossing.

*** PGD Mitigation was assumed.

Table 17 – 2045 Traffic Impacts – Horizon Year

Int ID	Int Description	Peak Hour	2045 No Build		2045 Build		2045 Build vs. No Build	
			Delay* (seconds)	LOS	Delay* (seconds)	LOS	Change in Delay* (seconds)	Significant Impact? ***
1	L St & Bay Blvd	AM	19.4	B	14.0	B	-5.4	No
		PM	30.6	C	15.2	B	-15.4	No
2	L St & Industrial Blvd **	AM	51.9	D	48.4	D	-3.5	No
		PM	46.7	D	53.6	D	6.9	No
3	L St & Broadway	AM	38.7	D	42.9	D	4.2	No
		PM	47.0	D	50.3	D	3.3	No
4	L St & I-5 SB Ramps	AM	23.1	C	12.2	B	-10.9	No
		PM	35.3	D	27.8	C	-7.5	No
5	I-5 NB Ramps & Industrial Blvd	AM	83.3	F	102.7	F	19.4	Yes
		PM	165.3	F	159.7	F	-5.6	No
6	Moss St & Industrial Blvd **	AM	285.0	F	315.7	F	30.7	Yes
		PM	382.5	F	410.4	F	27.9	Yes
7	Moss St & Broadway	AM	31.8	C	35.2	D	3.4	No
		PM	46.0	D	45.4	D	-0.6	No
8	Naples St & Industrial Blvd **	AM	224.5	F	251.3	F	26.8	Yes
		PM	341.8	F	374.1	F	32.3	Yes
9	Naples St & Broadway	AM	35.3	D	34.8	C	-0.5	No
		PM	47.4	D	49.0	D	1.6	No
10	Oxford St & Broadway	AM	23.6	C	23.8	C	0.2	No
		PM	29.9	C	33.3	C	3.4	No
11	Palomar St & Bay Blvd	AM	10.7	B	11.3	B	0.6	No
		PM	9.9	A	10.2	B	0.3	No
12	Palomar St & I-5 SB Ramps	AM	21.6	C	21.7	C	0.1	No
		PM	34.0	C	35.6	D	1.6	No
13	Palomar St & I-5 NB Ramps	AM	11.8	B	11.8	B	0.0	No
		PM	16.5	B	18.5	B	2.0	No
14	Palomar St & E Frontage Rd	AM	4.1	A	19.7	B	15.6	No
		PM	1.8	A	14.7	B	12.9	No
15	Palomar St & Industrial Blvd **	AM	47.6	D	Intersection Grade Separated		Intersection Grade Separated	
		PM	71.2	E	Intersection Grade Separated		Intersection Grade Separated	
16	Palomar St & Transit Center PI ***	AM	37.1	D	42.9	D	5.8	No
		PM	46.2	D	54.2	D	8.0	No
17	Palomar St & Plaza Entrance	AM	18.4	B	14.8	B	-3.6	No
		PM	43.3	D	37.9	D	-5.4	No
18	Palomar St & Broadway	AM	32.9	C	37.6	D	4.7	No
		PM	49.0	D	53.3	D	4.3	No
19	Anita St & Industrial Blvd **	AM	54.5	D	48.2	D	-6.3	No
		PM	69.2	E	59.5	E	-9.7	No
20	Anita St & Broadway	AM	20.1	C	18.0	B	-2.1	No
		PM	29.2	C	29.5	C	0.3	No
21	Main St & I-5 SB Ramps	AM	14.5	B	32.4	C	17.9	No
		PM	54.4	D	36.8	D	-17.6	No
22	Main St & I-5 NB Ramps	AM	7.5	A	8.5	A	1.0	No
		PM	8.5	A	7.0	A	-1.5	No
23	Main St & Industrial Blvd	AM	76.1	E	73.8	E	-2.3	No
		PM	123.6	F	123.7	F	0.1	No
24	Main St & Broadway	AM	52.7	D	45.6	D	-7.1	No
		PM	74.4	E	72.1	E	-2.3	No

Notes:

- * Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per
- ** 24 seconds of delay was added to account for trolley crossing.
- *** PGD Mitigation was assumed.
- **** Significant impact is defined if an intersection is at LOS D or better without the project, and the project causes the LOS to deteriorate to LOS E or LOS F (regardless of the change in delay). Or if an intersection is at LOS E or F without the project and the project causes an increase in delay above the 2-second delay threshold.

Table 18 – 2045 Traffic Mitigations – Horizon Year

Int ID	Int Description	Peak Hour	2045 Build without Mitigation		Proposed Mitigation	2045 Build with Mitigation	
			Delay* (sec)	LOS		Delay* (sec)	LOS
5	I-5 NB Ramps & Industrial Blvd	AM	102.7	F	Restripe NBT to shared NBL/T. Split phase operation.	44.6	D
		PM	159.7	F		72.2	E
6	Moss St & Industrial Blvd **	AM	315.7	F	Provide exclusive NBL and SBL lanes.	114.9	F
		PM	410.4	F		151.0	F
8	Naples St & Industrial Blvd **	AM	251.3	F	Provide exclusive WBL, NBL and SBL lanes.	116.9	F
		PM	374.1	F		145.7	F

Notes:

* Average delay for signalized intersections. Maximum approach delay for unsignalized intersection. Seconds per vehicle

** 24 seconds of delay was added to account for trolley crossing.

6 Other Traffic-Related Factors

This section describes the effects of the Build Alternative on other traffic-related factors in addition to traffic circulation and traffic operations presented in the previous section. These factors include pedestrian circulation, bicycle circulation, safety, parking and driveway access.

6.1 Pedestrian Circulation

The Build Alternative would change the pedestrian circulation patterns in the vicinity of the Project as a result of the grade separation. The Build Alternative would introduce grade differentials (via stairs and ramps) that are not present in the No Build Alternative. However, the Build Alternative would provide additional pedestrian facilities including ramps, stairs and pathways across the bridge, as previously shown in **Figures 4 and 5**. These pedestrian facilities would mitigate any potential pedestrian circulation impacts due to grade separating Palomar Street and Industrial Boulevard. Therefore, no significant pedestrian impacts are expected.

6.2 Bicycle Circulation

The Build Alternative would change bicycle circulation patterns in the vicinity of the Project. Through bicycle traffic along Palomar Street and Industrial Boulevard will be able to traverse the area unimpeded by a signal (as in existing conditions). Cyclists currently turning at the Palomar Street & Industrial Boulevard intersection would have to use the ramps or stairs to cross from one street to the other, or use alternative routes that avoid the grade separation altogether.

6.3 Safety

Due to the grade separation, the Build Alternative would eliminate traffic collisions at the intersection of Palomar Street & Industrial Boulevard.

6.4 Parking

The Build Alternative would not impact on-street parking. However, the reconfiguration of the Oxford Street Connector would eliminate some off-street parking spaces in the Palomar Village parking lot. To offset this loss in parking spaces, new on-street parking spaces would be provided on the west side of the reconfigured Oxford Street Connector.

6.5 Driveway Access

The Oxford Street Connector that currently connects directly to Palomar Street would be reconfigured to connect to the existing Palomar Village driveway. The parking impacts of this reconfiguration was discussed previously.

The Build Alternative would close an existing driveway on the north side of Palomar Street between Trenton Avenue and Industrial Boulevard. This driveway currently serves as the only access for three residential units on the northwest corner of Palomar Street & Industrial Boulevard intersection. To mitigate this impact, the Build Alternative would provide a new driveway just north of the intersection and connecting to the west side of Industrial Boulevard. The driveway would allow right-in right-out movements only, as in the existing driveway.

Appendix A – Existing Traffic Counts

Location: Chula Vista
 N/S: Bay Boulevard
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

	Bay Boulevard Southbound			L Street Westbound			Bay Boulevard Northbound			L Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	3	7	0	63	0	8	0	6	96	0	0	0	183
7:15 AM	2	13	0	83	0	27	0	8	125	0	0	0	258
7:30 AM	16	18	0	106	0	48	0	8	158	0	0	0	354
7:45 AM	50	48	0	72	0	84	0	15	164	0	0	0	433
8:00 AM	26	25	0	97	0	25	0	13	146	0	0	0	332
8:15 AM	5	5	0	58	0	14	0	10	99	0	0	0	191
8:30 AM	6	6	0	67	0	12	0	5	135	0	0	0	231
8:45 AM	11	5	0	54	0	12	0	8	125	0	0	0	215
TOTAL VOLUMES:	119	127	0	600	0	230	0	73	1048	0	0	0	2197

AM Peak Hr Begins at: 715 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	94	104	0	358	0	184	0	44	593	0	0	0	1377

PEAK HR FACTOR:	0.505	0.869	0.890	0.000	0.795
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	Bay Boulevard Southbound			L Street Westbound			Bay Boulevard Northbound			L Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	33	40	0	109	0	27	0	12	219	0	0	0	440
4:15 PM	19	35	0	92	0	16	0	12	205	0	0	0	379
4:30 PM	25	21	0	99	0	11	0	16	229	0	0	0	401
4:45 PM	16	35	0	103	0	12	0	10	207	0	0	0	383
5:00 PM	23	32	0	104	0	20	0	17	239	0	0	0	435
5:15 PM	7	17	0	105	0	22	0	7	230	0	0	0	388
5:30 PM	19	30	0	69	0	17	0	12	211	0	0	0	358
5:45 PM	15	22	0	84	0	13	0	7	193	0	0	0	334
TOTAL VOLUMES:	157	232	0	765	0	138	0	93	1733	0	0	0	3118

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	71	105	0	411	0	65	0	50	905	0	0	0	1607

PEAK HR FACTOR:	0.800	0.937	0.933	0.000	0.924
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Location: Chula Vista
 N/S: Bay Boulevard
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Bay Boulevard	East Leg L Street	South Leg Bay Boulevard	West Leg L Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	2	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	2	2
8:45 AM	0	0	0	2	2
TOTAL VOLUMES:	0	0	0	6	6

	North Leg Bay Boulevard	East Leg L Street	South Leg Bay Boulevard	West Leg L Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	2	2

Location: Chula Vista
 N/S: Bay Boulevard
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Bay Boulevard	East Leg L Street	South Leg Bay Boulevard	West Leg L Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	2	2
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	1	2
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	2	2
TOTAL VOLUMES:	1	0	0	5	6

	North Leg Bay Boulevard	East Leg L Street	South Leg Bay Boulevard	West Leg L Street	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	3	3
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	2	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	2	2
5:30 PM	0	0	0	12	12
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	19	20

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

	Industrial Boulevard Southbound			L Street Westbound			Industrial Boulevard Northbound			L Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	2	0	0	50	53	0	13	1	88	0	62	36	305
7:15 AM	0	0	0	83	104	0	12	1	122	0	88	29	439
7:30 AM	1	0	0	63	122	0	27	2	75	0	130	61	481
7:45 AM	0	2	0	55	116	0	46	0	96	0	162	62	539
8:00 AM	0	1	0	76	101	0	18	0	72	0	129	51	448
8:15 AM	0	2	0	75	57	3	7	1	70	0	57	47	319
8:30 AM	1	1	0	74	61	0	14	0	61	2	81	56	351
8:45 AM	0	2	0	63	51	0	9	2	48	1	78	64	318
TOTAL VOLUMES:	4	8	0	539	665	3	146	7	632	3	787	406	3200

AM Peak Hr Begins at: 715 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	1	3	0	277	443	0	103	3	365	0	509	203	1907

PEAK HR FACTOR:	0.500	0.963	0.829	0.795	0.885
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	Industrial Boulevard Southbound			L Street Westbound			Industrial Boulevard Northbound			L Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	0	3	1	58	105	1	29	0	55	1	137	114	504
4:15 PM	0	2	1	66	75	3	26	0	65	0	114	110	462
4:30 PM	1	1	0	67	99	2	12	2	69	1	159	101	514
4:45 PM	0	3	1	80	88	2	26	4	77	1	145	83	510
5:00 PM	1	4	1	68	98	4	17	1	64	2	138	118	516
5:15 PM	2	2	3	70	89	0	28	1	71	2	141	103	512
5:30 PM	2	1	2	65	74	1	20	1	63	0	139	86	454
5:45 PM	1	1	0	55	71	0	20	1	67	0	128	72	416
TOTAL VOLUMES:	7	17	9	529	699	13	178	10	531	7	1101	787	3888

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	4	10	5	285	374	8	83	8	281	6	583	405	2052

PEAK HR FACTOR:	0.679	0.981	0.869	0.952	0.994
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Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Industrial Boulevard	East Leg L Street	South Leg Industrial Boulevard	West Leg L Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	2	0	0	0	2
7:45 AM	7	3	0	0	10
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	12	3	0	0	15

	North Leg Industrial Boulevard	East Leg L Street	South Leg Industrial Boulevard	West Leg L Street	TOTAL
4:00 PM	9	3	0	0	12
4:15 PM	2	2	0	0	4
4:30 PM	2	0	1	0	3
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	2	1	0	0	3
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	16	6	1	0	23

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Industrial Boulevard	East Leg L Street	South Leg Industrial Boulevard	West Leg L Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	2	1	0	0	3
7:45 AM	1	0	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	1	1	0	0	2
TOTAL VOLUMES:	4	2	0	0	6

	North Leg Industrial Boulevard	East Leg L Street	South Leg Industrial Boulevard	West Leg L Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	3	0	0	0	3
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	2	1	0	0	3
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	6	2	0	0	8

Location: Chula Vista
 N/S: Broadway
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

	Broadway Southbound			L Street Westbound			Broadway Northbound			L Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	12	54	11	13	85	22	20	99	18	24	102	22	482
7:15 AM	10	61	19	19	137	39	15	103	22	36	117	30	608
7:30 AM	11	94	24	27	157	37	30	112	23	25	137	44	721
7:45 AM	21	89	21	29	150	20	31	143	17	28	124	42	715
8:00 AM	16	123	25	32	119	21	31	91	16	23	99	38	634
8:15 AM	20	91	18	28	115	17	22	79	23	17	60	31	521
8:30 AM	11	89	16	28	85	13	27	99	19	24	71	44	526
8:45 AM	6	76	12	24	106	22	33	86	22	15	72	34	508
TOTAL VOLUMES:	107	677	146	200	954	191	209	812	160	192	782	285	4715

AM Peak Hr Begins at: 715 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	58	367	89	107	563	117	107	449	78	112	477	154	2678

PEAK HR FACTOR:	0.784	0.890	0.830	0.902	0.929
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	Broadway Southbound			L Street Westbound			Broadway Northbound			L Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	14	207	31	20	103	19	40	145	27	17	139	49	811
4:15 PM	16	186	29	39	71	19	29	127	36	24	126	49	751
4:30 PM	21	175	29	32	83	22	37	148	36	20	133	60	796
4:45 PM	25	169	36	34	92	14	34	137	28	20	153	58	800
5:00 PM	17	201	27	40	113	25	27	116	30	21	151	52	820
5:15 PM	22	184	18	34	71	19	43	153	41	22	142	54	803
5:30 PM	29	202	15	33	80	24	38	138	29	20	130	48	786
5:45 PM	20	221	26	19	65	10	31	132	32	12	139	52	759
TOTAL VOLUMES:	164	1545	211	251	678	152	279	1096	259	156	1113	422	6326

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	85	729	110	140	359	80	141	554	135	83	579	224	3219

PEAK HR FACTOR:	0.943	0.813	0.876	0.959	0.981
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Location: Chula Vista
 N/S: Broadway
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Broadway	East Leg L Street	South Leg Broadway	West Leg L Street	TOTAL
7:00 AM	0	3	1	0	4
7:15 AM	5	5	0	3	13
7:30 AM	1	4	2	0	7
7:45 AM	3	8	3	3	17
8:00 AM	3	4	1	2	10
8:15 AM	2	1	2	4	9
8:30 AM	4	4	4	5	17
8:45 AM	11	3	4	10	28
TOTAL VOLUMES:	29	32	17	27	105

	North Leg Broadway	East Leg L Street	South Leg Broadway	West Leg L Street	TOTAL
4:00 PM	2	7	1	3	13
4:15 PM	2	0	2	3	7
4:30 PM	2	7	1	1	11
4:45 PM	2	4	0	3	9
5:00 PM	3	0	3	3	9
5:15 PM	0	2	2	0	4
5:30 PM	6	2	0	2	10
5:45 PM	3	4	1	6	14
TOTAL VOLUMES:	20	26	10	21	77

Location: Chula Vista
 N/S: Broadway
 E/W: L Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Broadway	East Leg L Street	South Leg Broadway	West Leg L Street	TOTAL
7:00 AM	1	0	0	2	3
7:15 AM	0	1	0	0	1
7:30 AM	0	1	0	0	1
7:45 AM	1	0	0	0	1
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	2	5	0	2	9

	North Leg Broadway	East Leg L Street	South Leg Broadway	West Leg L Street	TOTAL
4:00 PM	3	1	0	3	7
4:15 PM	3	3	1	1	8
4:30 PM	0	3	0	1	4
4:45 PM	1	1	0	0	2
5:00 PM	1	1	0	2	4
5:15 PM	0	1	1	2	4
5:30 PM	3	1	0	1	5
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	11	11	2	11	35

Location: Chula Vista
 N/S: Bay Boulevard
 E/W: I-5 Southbound Ramps



Date: 8/15/2017
 Day: Tuesday

	Bay Boulevard Southbound			I-5 Southbound Ramps Westbound			Bay Boulevard Northbound			Dead End Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	56	10	0	12	0	98	0	6	0	0	0	0	182
7:15 AM	79	15	0	8	0	119	0	15	0	0	0	0	236
7:30 AM	98	19	0	21	0	165	0	9	0	0	0	0	312
7:45 AM	96	23	0	18	0	173	0	17	1	0	0	0	328
8:00 AM	88	29	0	31	0	142	0	18	2	0	0	0	310
8:15 AM	48	10	0	17	0	93	0	17	1	0	0	0	186
8:30 AM	56	14	0	7	0	125	0	18	0	0	0	0	220
8:45 AM	45	14	0	15	0	126	0	19	1	0	0	0	220
TOTAL VOLUMES:	566	134	0	129	0	1041	0	119	5	0	0	0	1994

AM Peak Hr Begins at: 715 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	361	86	0	78	0	599	0	59	3	0	0	0	1186

PEAK HR FACTOR:	0.939	0.886	0.775	0.000	0.904
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	Bay Boulevard Southbound			I-5 Southbound Ramps Westbound			Bay Boulevard Northbound			Dead End Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	109	39	0	5	0	187	0	43	5	0	0	0	388
4:15 PM	89	37	0	10	0	184	0	34	3	0	0	0	357
4:30 PM	95	23	0	11	0	208	0	42	1	0	0	0	380
4:45 PM	103	30	0	8	0	184	0	28	0	0	0	0	353
5:00 PM	105	30	0	3	0	213	0	54	4	0	0	0	409
5:15 PM	101	18	0	3	0	215	0	28	2	0	0	0	367
5:30 PM	81	19	0	2	0	197	0	24	3	0	0	0	326
5:45 PM	88	20	0	4	0	192	0	17	1	0	0	0	322
TOTAL VOLUMES:	771	216	0	46	0	1580	0	270	19	0	0	0	2902

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	404	101	0	25	0	820	0	152	7	0	0	0	1509

PEAK HR FACTOR:	0.935	0.965	0.685	0.000	0.922
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Location: Chula Vista
 N/S: Bay Boulevard
 E/W: I-5 Southbound Ramps



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Bay Boulevard	East Leg I-5 Southbound Ramps	South Leg Bay Boulevard	West Leg Dead End	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Bay Boulevard	East Leg I-5 Southbound Ramps	South Leg Bay Boulevard	West Leg Dead End	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

Location: Chula Vista
 N/S: Bay Boulevard
 E/W: I-5 Southbound Ramps



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Bay Boulevard	East Leg I-5 Southbound Ramps	South Leg Bay Boulevard	West Leg Dead End	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	2	2
TOTAL VOLUMES:	0	0	0	4	4

	North Leg Bay Boulevard	East Leg I-5 Southbound Ramps	South Leg Bay Boulevard	West Leg Dead End	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	4	4
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	2	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	2	2
5:30 PM	0	0	0	12	12
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	20	21

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: I-5 Northbound Ramps



Date: 8/15/2017
 Day: Tuesday

	Industrial Boulevard Southbound			Dead End Westbound			Industrial Boulevard Northbound			I-5 Northbound Ramps Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	0	32	55	0	0	0	86	19	0	84	0	16	292
7:15 AM	0	36	69	0	0	0	109	24	0	118	0	26	382
7:30 AM	0	62	76	0	0	0	76	17	0	87	0	20	338
7:45 AM	0	51	65	0	0	0	95	28	0	116	0	17	372
8:00 AM	0	62	70	0	0	0	114	23	0	63	0	27	359
8:15 AM	0	45	79	0	0	0	116	19	0	62	0	23	344
8:30 AM	0	50	82	0	0	0	115	21	0	55	0	18	341
8:45 AM	0	63	76	0	0	0	86	14	0	44	0	18	301
TOTAL VOLUMES:	0	401	572	0	0	0	797	165	0	629	0	165	2729

AM Peak Hr Begins at: 715 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	0	211	280	0	0	0	394	92	0	384	0	90	1451

PEAK HR FACTOR:	0.889	0.000	0.887	0.823	0.950
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	Industrial Boulevard Southbound			Dead End Westbound			Industrial Boulevard Northbound			I-5 Northbound Ramps Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	0	91	78	0	0	0	100	29	0	55	0	45	398
4:15 PM	0	104	81	0	0	0	100	32	0	58	0	37	412
4:30 PM	0	87	76	0	0	0	109	22	0	69	0	58	421
4:45 PM	0	95	77	0	0	0	81	35	0	65	0	47	400
5:00 PM	0	103	85	0	0	0	84	26	0	62	0	32	392
5:15 PM	0	114	78	0	0	0	86	35	0	59	0	39	411
5:30 PM	0	89	68	0	0	0	94	29	0	57	0	35	372
5:45 PM	0	77	51	0	0	0	92	27	0	57	0	54	358
TOTAL VOLUMES:	0	760	594	0	0	0	746	235	0	482	0	347	3164

PM Peak Hr Begins at: 400 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	0	377	312	0	0	0	390	118	0	247	0	187	1631

PEAK HR FACTOR:	0.931	0.000	0.962	0.854	0.969
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Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: I-5 Northbound Ramps



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Industrial Boulevard	East Leg Dead End	South Leg Industrial Boulevard	West Leg I-5 Northbound Ramps	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	0	0	0	1	1

	North Leg Industrial Boulevard	East Leg Dead End	South Leg Industrial Boulevard	West Leg I-5 Northbound Ramps	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	4	4

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: I-5 Northbound Ramps



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Industrial Boulevard	East Leg Dead End	South Leg Industrial Boulevard	West Leg I-5 Northbound Ramps	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	1	0	1
7:30 AM	0	0	1	0	1
7:45 AM	0	0	1	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	3	0	3

	North Leg Industrial Boulevard	East Leg Dead End	South Leg Industrial Boulevard	West Leg I-5 Northbound Ramps	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Moss Street



Date: 8/15/2017
 Day: Tuesday

	Industrial Boulevard Southbound			Moss Street Westbound			Industrial Boulevard Northbound			Moss Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	29	20	0	2	1	65	0	33	1	0	0	1	152
7:15 AM	39	21	0	7	1	82	0	40	7	2	1	0	200
7:30 AM	45	30	0	3	0	50	0	48	4	0	0	0	180
7:45 AM	38	31	0	5	2	73	1	50	2	0	0	0	202
8:00 AM	49	32	0	5	0	74	1	52	3	0	0	0	216
8:15 AM	29	29	0	3	1	82	0	47	8	0	0	0	199
8:30 AM	34	37	0	3	0	67	1	55	2	0	0	3	202
8:45 AM	47	32	0	3	0	62	0	41	0	0	0	1	186
TOTAL VOLUMES:	310	232	0	31	5	555	3	366	27	2	1	5	1537

AM Peak Hr Begins at: 745 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	150	129	0	16	3	296	3	204	15	0	0	3	819

PEAK HR FACTOR:	0.861	0.916	0.957	0.250	0.948
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	Industrial Boulevard Southbound			Moss Street Westbound			Industrial Boulevard Northbound			Moss Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	46	80	0	3	0	59	3	57	2	0	1	5	256
4:15 PM	53	76	1	4	3	51	1	63	4	4	5	0	265
4:30 PM	67	77	0	7	1	78	2	47	3	4	0	3	289
4:45 PM	54	80	0	4	1	50	2	43	3	10	3	4	254
5:00 PM	59	73	1	10	1	49	4	47	4	3	1	4	256
5:15 PM	60	78	1	5	0	51	1	50	4	5	2	3	260
5:30 PM	45	65	1	8	0	54	1	56	3	1	0	5	239
5:45 PM	56	61	0	2	0	47	5	58	4	4	1	8	246
TOTAL VOLUMES:	440	590	4	43	6	439	19	421	27	31	13	32	2065

PM Peak Hr Begins at: 415 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	233	306	2	25	6	228	9	200	14	21	9	11	1064

PEAK HR FACTOR:	0.939	0.753	0.820	0.603	0.920
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Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Moss Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Industrial Boulevard	East Leg Moss Street	South Leg Industrial Boulevard	West Leg Moss Street	TOTAL
7:00 AM	1	0	0	0	1
7:15 AM	1	0	0	0	1
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	2	0	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	3	2	0	0	5

	North Leg Industrial Boulevard	East Leg Moss Street	South Leg Industrial Boulevard	West Leg Moss Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	1	2
4:30 PM	1	1	0	0	2
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	1	3	1	1	6

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Moss Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Industrial Boulevard	East Leg Moss Street	South Leg Industrial Boulevard	West Leg Moss Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	1	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Industrial Boulevard	East Leg Moss Street	South Leg Industrial Boulevard	West Leg Moss Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

Location: Chula Vista
 N/S: Broadway
 E/W: Moss Street



Date: 8/15/2017
 Day: Tuesday

	Broadway Southbound			Moss Street Westbound			Broadway Northbound			Moss Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	14	58	13	9	41	20	21	112	11	12	20	3	334
7:15 AM	25	78	10	11	35	19	14	84	17	16	31	17	357
7:30 AM	12	123	14	7	45	26	21	137	26	8	37	10	466
7:45 AM	16	134	10	11	39	27	15	143	11	8	20	9	443
8:00 AM	18	138	11	10	43	24	26	93	6	6	34	18	427
8:15 AM	11	122	13	6	55	22	30	107	7	11	22	7	413
8:30 AM	15	118	8	5	28	13	10	110	12	13	19	14	365
8:45 AM	9	106	6	8	42	27	20	99	10	3	22	15	367
TOTAL VOLUMES:	120	877	85	67	328	178	157	885	100	77	205	93	3172

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	57	517	48	34	182	99	92	480	50	33	113	44	1749

PEAK HR FACTOR:	0.931	0.949	0.845	0.819	0.938
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	Broadway Southbound			Moss Street Westbound			Broadway Northbound			Moss Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	25	228	13	16	43	13	24	178	11	10	34	11	606
4:15 PM	23	209	13	11	31	24	19	171	15	8	32	23	579
4:30 PM	27	222	10	19	48	19	24	165	17	5	25	15	596
4:45 PM	14	222	11	15	32	17	12	156	14	9	29	13	544
5:00 PM	23	233	21	20	20	11	22	179	7	14	37	18	605
5:15 PM	28	230	8	10	43	7	25	177	11	9	49	18	615
5:30 PM	28	226	15	14	28	23	16	138	11	4	34	10	547
5:45 PM	19	233	15	16	25	15	26	158	9	6	33	13	568
TOTAL VOLUMES:	187	1803	106	121	270	129	168	1322	95	65	273	121	4660

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	92	907	50	64	143	54	83	677	49	37	140	64	2360

PEAK HR FACTOR:	0.947	0.759	0.950	0.793	0.959
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Location: Chula Vista
 N/S: Broadway
 E/W: Moss Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Broadway	East Leg Moss Street	South Leg Broadway	West Leg Moss Street	TOTAL
7:00 AM	3	6	3	2	14
7:15 AM	1	7	6	1	15
7:30 AM	3	3	0	1	7
7:45 AM	1	10	5	3	19
8:00 AM	5	7	0	5	17
8:15 AM	3	3	3	3	12
8:30 AM	2	4	2	4	12
8:45 AM	0	11	4	1	16
TOTAL VOLUMES:	18	51	23	20	112

	North Leg Broadway	East Leg Moss Street	South Leg Broadway	West Leg Moss Street	TOTAL
4:00 PM	3	5	10	5	23
4:15 PM	1	3	7	3	14
4:30 PM	0	7	4	2	13
4:45 PM	1	3	1	4	9
5:00 PM	15	7	1	2	25
5:15 PM	2	1	1	5	9
5:30 PM	0	8	3	2	13
5:45 PM	2	8	2	5	17
TOTAL VOLUMES:	24	42	29	28	123

Location: Chula Vista
 N/S: Broadway
 E/W: Moss Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Broadway	East Leg Moss Street	South Leg Broadway	West Leg Moss Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	1	1	0	2
7:45 AM	0	1	0	0	1
8:00 AM	0	1	1	0	2
8:15 AM	0	1	1	0	2
8:30 AM	0	1	0	0	1
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	7	3	0	10

	North Leg Broadway	East Leg Moss Street	South Leg Broadway	West Leg Moss Street	TOTAL
4:00 PM	1	0	0	3	4
4:15 PM	0	3	0	0	3
4:30 PM	0	1	0	0	1
4:45 PM	0	1	0	0	1
5:00 PM	1	1	0	0	2
5:15 PM	0	1	0	1	2
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	2	7	0	5	14

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Naples Street



Date: 8/15/2017
 Day: Tuesday

	Industrial Boulevard Southbound			Naples Street Westbound			Industrial Boulevard Northbound			Naples Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	14	7	0	13	0	23	0	7	6	5	3	8	86
7:15 AM	12	10	0	19	1	29	3	11	17	8	6	14	130
7:30 AM	24	5	0	12	1	31	4	15	16	4	7	14	133
7:45 AM	24	10	0	20	1	29	7	16	25	6	4	12	154
8:00 AM	26	6	0	19	5	42	2	11	28	4	5	3	151
8:15 AM	25	12	0	29	0	36	2	13	55	4	8	5	189
8:30 AM	26	10	0	29	4	37	4	5	14	6	5	10	150
8:45 AM	28	10	0	16	5	24	0	8	19	5	3	3	121
TOTAL VOLUMES:	179	70	0	157	17	251	22	86	180	42	41	69	1114

AM Peak Hr Begins at: 745 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	101	38	0	97	10	144	15	45	122	20	22	30	644

PEAK HR FACTOR:	0.939	0.896	0.650	0.818	0.852
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	Industrial Boulevard Southbound			Naples Street Westbound			Industrial Boulevard Northbound			Naples Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	62	17	0	25	6	50	3	12	21	3	1	10	210
4:15 PM	51	9	0	27	4	42	4	15	21	5	7	11	196
4:30 PM	46	15	0	19	5	32	4	14	12	3	5	2	157
4:45 PM	48	10	0	30	6	40	3	7	31	5	7	5	192
5:00 PM	47	17	0	18	6	39	3	15	31	7	3	8	194
5:15 PM	58	15	0	26	7	48	8	17	26	1	5	6	217
5:30 PM	48	15	0	19	11	51	3	14	29	4	1	5	200
5:45 PM	47	15	0	21	4	32	4	13	33	6	3	3	181
TOTAL VOLUMES:	407	113	0	185	49	334	32	107	204	34	32	50	1547

PM Peak Hr Begins at: 445 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	201	57	0	93	30	178	17	53	117	17	16	24	803

PEAK HR FACTOR:	0.884	0.929	0.917	0.792	0.925
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Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Naples Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Industrial Boulevard	East Leg Naples Street	South Leg Industrial Boulevard	West Leg Naples Street	TOTAL
7:00 AM	0	0	5	3	8
7:15 AM	0	0	0	1	1
7:30 AM	2	1	4	1	8
7:45 AM	2	0	8	2	12
8:00 AM	2	0	22	8	32
8:15 AM	0	0	42	3	45
8:30 AM	3	0	27	0	30
8:45 AM	1	0	6	2	9
TOTAL VOLUMES:	10	1	114	20	145

	North Leg Industrial Boulevard	East Leg Naples Street	South Leg Industrial Boulevard	West Leg Naples Street	TOTAL
4:00 PM	2	1	1	1	5
4:15 PM	1	2	0	0	3
4:30 PM	1	0	1	0	2
4:45 PM	3	0	8	0	11
5:00 PM	3	3	1	0	7
5:15 PM	0	0	1	1	2
5:30 PM	1	1	5	3	10
5:45 PM	3	3	17	9	32
TOTAL VOLUMES:	14	10	34	14	72

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Naples Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Industrial Boulevard	East Leg Naples Street	South Leg Industrial Boulevard	West Leg Naples Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Industrial Boulevard	East Leg Naples Street	South Leg Industrial Boulevard	West Leg Naples Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	1	1	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	2	1	3
TOTAL VOLUMES:	1	1	3	2	7

Location: Chula Vista
 N/S: Broadway
 E/W: Naples Street



Date: 8/15/2017
 Day: Tuesday

	Broadway Southbound			Naples Street Westbound			Broadway Northbound			Naples Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	5	60	4	14	23	11	7	90	7	17	19	4	261
7:15 AM	11	77	5	14	35	24	11	81	7	9	31	6	311
7:30 AM	8	118	15	17	40	25	9	118	9	20	19	13	411
7:45 AM	8	97	21	18	59	26	18	108	7	20	33	10	425
8:00 AM	11	137	11	23	50	19	17	80	12	21	26	11	418
8:15 AM	11	104	15	23	44	26	14	88	9	30	32	23	419
8:30 AM	11	104	13	14	35	20	11	77	13	35	39	24	396
8:45 AM	12	116	6	27	31	14	9	90	13	28	23	18	387
TOTAL VOLUMES:	77	813	90	150	317	165	96	732	77	180	222	109	3028

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	38	456	62	81	193	96	58	394	37	91	110	57	1673

PEAK HR FACTOR:	0.874	0.898	0.899	0.759	0.984
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	Broadway Southbound			Naples Street Westbound			Broadway Northbound			Naples Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	14	235	24	23	32	23	25	158	20	37	45	31	667
4:15 PM	15	221	20	24	29	20	19	142	23	34	46	22	615
4:30 PM	22	206	18	27	40	11	19	147	33	43	62	16	644
4:45 PM	20	219	19	26	38	16	20	135	27	33	52	17	622
5:00 PM	19	214	14	25	40	21	31	137	31	41	50	21	644
5:15 PM	25	226	22	30	36	15	26	154	23	31	66	25	679
5:30 PM	25	195	20	25	42	17	19	132	33	37	30	14	589
5:45 PM	23	227	18	22	43	22	29	126	22	33	60	25	650
TOTAL VOLUMES:	163	1743	155	202	300	145	188	1131	212	289	411	171	5110

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	86	865	73	108	154	63	96	573	114	148	230	79	2589

PEAK HR FACTOR:	0.938	0.945	0.964	0.936	0.953
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Location: Chula Vista
 N/S: Broadway
 E/W: Naples Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Broadway	East Leg Naples Street	South Leg Broadway	West Leg Naples Street	TOTAL
7:00 AM	2	5	4	2	13
7:15 AM	3	3	5	2	13
7:30 AM	3	6	7	2	18
7:45 AM	7	6	6	5	24
8:00 AM	16	5	7	13	41
8:15 AM	1	9	13	4	27
8:30 AM	4	2	8	4	18
8:45 AM	1	4	0	2	7
TOTAL VOLUMES:	37	40	50	34	161

	North Leg Broadway	East Leg Naples Street	South Leg Broadway	West Leg Naples Street	TOTAL
4:00 PM	14	13	13	7	47
4:15 PM	6	11	20	8	45
4:30 PM	6	9	17	11	43
4:45 PM	4	3	7	9	23
5:00 PM	8	6	6	7	27
5:15 PM	3	4	6	9	22
5:30 PM	5	9	13	17	44
5:45 PM	8	7	15	5	35
TOTAL VOLUMES:	54	62	97	73	286

Location: Chula Vista
 N/S: Broadway
 E/W: Naples Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Broadway	East Leg Naples Street	South Leg Broadway	West Leg Naples Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	2	1	0	0	3
7:30 AM	0	2	0	0	2
7:45 AM	1	1	1	0	3
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	1	1	1	3
8:45 AM	1	1	0	1	3
TOTAL VOLUMES:	4	6	2	2	14

	North Leg Broadway	East Leg Naples Street	South Leg Broadway	West Leg Naples Street	TOTAL
4:00 PM	0	0	1	2	3
4:15 PM	0	3	1	0	4
4:30 PM	0	1	0	0	1
4:45 PM	1	0	0	0	1
5:00 PM	0	1	0	0	1
5:15 PM	1	1	3	2	7
5:30 PM	1	0	2	1	4
5:45 PM	0	0	0	2	2
TOTAL VOLUMES:	3	6	7	7	23

Location: Chula Vista
 N/S: Broadway
 E/W: Oxford Street



Date: 8/15/2017
 Day: Tuesday

	Broadway Southbound			Oxford Street Westbound			Broadway Northbound			Oxford Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	6	74	17	10	19	17	28	82	3	10	16	8	290
7:15 AM	13	75	22	10	26	9	32	84	9	10	6	15	311
7:30 AM	15	76	29	18	35	15	42	105	16	21	12	18	402
7:45 AM	16	71	40	11	43	14	38	112	20	17	20	15	417
8:00 AM	16	103	34	21	71	13	48	105	10	15	24	17	477
8:15 AM	18	108	30	25	46	16	51	96	15	16	24	21	466
8:30 AM	17	104	34	9	40	13	37	84	10	22	20	26	416
8:45 AM	14	121	33	15	29	20	29	90	12	25	24	21	433
TOTAL VOLUMES:	115	732	239	119	309	117	305	758	95	136	146	141	3212

AM Peak Hr Begins at: 800 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	65	436	131	70	186	62	165	375	47	78	92	85	1792

PEAK HR FACTOR:	0.940	0.757	0.900	0.911	0.939
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	Broadway Southbound			Oxford Street Westbound			Broadway Northbound			Oxford Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	42	228	56	19	30	29	47	165	13	46	41	63	779
4:15 PM	46	244	48	23	22	29	61	155	28	46	41	45	788
4:30 PM	39	211	51	29	34	27	57	163	15	44	42	42	754
4:45 PM	37	232	60	25	42	27	59	157	18	43	50	57	807
5:00 PM	38	208	42	20	27	20	78	169	17	48	67	68	802
5:15 PM	40	224	58	18	32	17	62	178	16	51	41	44	781
5:30 PM	44	200	50	24	24	22	59	178	22	28	38	58	747
5:45 PM	42	229	52	17	27	18	66	153	15	41	40	56	756
TOTAL VOLUMES:	328	1776	417	175	238	189	489	1318	144	347	360	433	6214

PM Peak Hr Begins at: 415 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	160	895	201	97	125	103	255	644	78	181	200	212	3151

PEAK HR FACTOR:	0.929	0.864	0.925	0.810	0.976
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Location: Chula Vista
 N/S: Broadway
 E/W: Oxford Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Broadway	East Leg Oxford Street	South Leg Broadway	West Leg Oxford Street	TOTAL
7:00 AM	2	2	1	5	10
7:15 AM	1	7	5	3	16
7:30 AM	1	5	5	2	13
7:45 AM	2	7	9	9	27
8:00 AM	4	3	12	15	34
8:15 AM	5	1	9	5	20
8:30 AM	9	7	4	8	28
8:45 AM	4	4	3	5	16
TOTAL VOLUMES:	28	36	48	52	164

	North Leg Broadway	East Leg Oxford Street	South Leg Broadway	West Leg Oxford Street	TOTAL
4:00 PM	5	4	7	12	28
4:15 PM	10	4	15	11	40
4:30 PM	9	8	5	10	32
4:45 PM	15	4	8	13	40
5:00 PM	12	3	12	6	33
5:15 PM	8	9	16	8	41
5:30 PM	21	5	9	8	43
5:45 PM	8	7	5	8	28
TOTAL VOLUMES:	88	44	77	76	285

Location: Chula Vista
 N/S: Broadway
 E/W: Oxford Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Broadway	East Leg Oxford Street	South Leg Broadway	West Leg Oxford Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	1	1	0	0	2
7:30 AM	0	1	0	0	1
7:45 AM	0	1	1	0	2
8:00 AM	0	0	0	0	0
8:15 AM	1	0	1	0	2
8:30 AM	0	2	0	0	2
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	5	2	0	9

	North Leg Broadway	East Leg Oxford Street	South Leg Broadway	West Leg Oxford Street	TOTAL
4:00 PM	1	3	1	0	5
4:15 PM	2	2	0	1	5
4:30 PM	0	1	0	0	1
4:45 PM	0	0	1	0	1
5:00 PM	0	1	1	1	3
5:15 PM	2	1	0	2	5
5:30 PM	2	0	0	3	5
5:45 PM	1	0	1	2	4
TOTAL VOLUMES:	8	8	4	9	29

Location: Chula Vista
 N/S: Bay Boulevard
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	Bay Boulevard Southbound			Palomar Street Westbound			Bay Boulevard Northbound			Dead End Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	4	4	0	0	0	13	0	8	5	0	0	0	34
7:15 AM	9	3	0	4	0	23	0	6	2	0	0	0	47
7:30 AM	10	5	0	4	0	27	0	7	2	0	0	0	55
7:45 AM	16	9	0	7	0	51	0	17	3	0	0	0	103
8:00 AM	20	7	0	5	0	39	0	7	2	0	0	0	80
8:15 AM	15	4	0	2	0	34	0	11	7	0	0	0	73
8:30 AM	17	6	0	4	0	23	0	7	1	0	0	0	58
8:45 AM	19	1	0	8	0	21	0	5	3	0	0	0	57
TOTAL VOLUMES:	110	39	0	34	0	231	0	68	25	0	0	0	507

AM Peak Hr Begins at: 745 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	68	26	0	18	0	147	0	42	13	0	0	0	314

PEAK HR FACTOR:	0.870	0.711	0.688	0.000	0.762
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	Bay Boulevard Southbound			Palomar Street Westbound			Bay Boulevard Northbound			Dead End Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	57	14	0	9	0	8	0	7	10	0	0	0	105
4:15 PM	38	14	0	7	0	12	0	4	5	0	0	0	80
4:30 PM	47	11	0	3	0	18	0	9	9	0	0	0	97
4:45 PM	34	17	0	6	0	6	0	5	3	0	0	0	71
5:00 PM	49	12	0	7	0	11	0	13	9	0	0	0	101
5:15 PM	22	7	0	6	0	11	0	5	6	0	0	0	57
5:30 PM	21	10	0	3	0	10	0	4	5	0	0	0	53
5:45 PM	14	10	0	6	0	7	0	2	3	0	0	0	42
TOTAL VOLUMES:	282	95	0	47	0	83	0	49	50	0	0	0	606

PM Peak Hr Begins at: 400 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	176	56	0	25	0	44	0	25	27	0	0	0	353

PEAK HR FACTOR:	0.817	0.821	0.722	0.000	0.840
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Location: Chula Vista
 N/S: Bay Boulevard
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Bay Boulevard	East Leg Palomar Street	South Leg Bay Boulevard	West Leg Dead End	TOTAL
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	1	1
7:30 AM	0	0	0	0	0
7:45 AM	0	2	1	0	3
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	2	2	1	5

	North Leg Bay Boulevard	East Leg Palomar Street	South Leg Bay Boulevard	West Leg Dead End	TOTAL
4:00 PM	0	2	0	0	2
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	1	0	0	1
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	5	0	0	5

Location: Chula Vista
 N/S: Bay Boulevard
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Bay Boulevard	East Leg Palomar Street	South Leg Bay Boulevard	West Leg Dead End	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	12	12
7:30 AM	0	0	0	8	8
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	9	9
8:15 AM	0	0	0	5	5
8:30 AM	0	1	0	5	6
8:45 AM	0	2	0	11	13
TOTAL VOLUMES:	0	3	0	51	54

	North Leg Bay Boulevard	East Leg Palomar Street	South Leg Bay Boulevard	West Leg Dead End	TOTAL
4:00 PM	0	2	1	4	7
4:15 PM	0	0	1	11	12
4:30 PM	0	0	0	7	7
4:45 PM	0	0	1	8	9
5:00 PM	0	1	0	3	4
5:15 PM	0	0	2	15	17
5:30 PM	0	0	0	26	26
5:45 PM	0	0	0	20	20
TOTAL VOLUMES:	0	3	5	94	102

Location: Chula Vista
 N/S: I-5 Southbound Ramps
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	I-5 Southbound Ramps Southbound			Palomar Street Westbound			I-5 Southbound Ramps Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	70	0	13	63	12	0	0	0	0	0	17	4	179
7:15 AM	95	0	7	76	25	0	0	0	0	0	14	4	221
7:30 AM	110	0	14	93	29	0	0	0	0	0	14	7	267
7:45 AM	114	1	23	85	58	0	0	0	0	0	22	5	308
8:00 AM	106	0	21	66	49	0	0	0	0	0	23	10	275
8:15 AM	92	0	18	89	37	0	0	0	0	0	23	13	272
8:30 AM	102	0	20	90	32	0	0	0	0	0	16	9	269
8:45 AM	115	2	21	76	31	0	0	0	0	0	26	8	279
TOTAL VOLUMES:	804	3	137	638	273	0	0	0	0	0	155	60	2070

AM Peak Hr Begins at: 745 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	414	1	82	330	176	0	0	0	0	0	84	37	1124

PEAK HR FACTOR:	0.900	0.885	0.000	0.840	0.912
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	I-5 Southbound Ramps Southbound			Palomar Street Westbound			I-5 Southbound Ramps Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	168	0	13	229	23	0	0	0	0	0	48	44	525
4:15 PM	168	1	23	219	28	0	0	0	0	0	41	22	502
4:30 PM	151	1	12	241	24	0	0	0	0	0	50	29	508
4:45 PM	209	0	10	222	19	0	0	0	0	0	27	28	515
5:00 PM	159	0	16	209	23	0	0	0	0	0	72	23	502
5:15 PM	180	4	17	237	28	0	0	0	0	0	28	26	520
5:30 PM	203	0	12	217	19	0	0	0	0	0	29	16	496
5:45 PM	164	0	15	217	20	0	0	0	0	0	29	12	457
TOTAL VOLUMES:	1402	6	118	1791	184	0	0	0	0	0	324	200	4025

PM Peak Hr Begins at: 400 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	696	2	58	911	94	0	0	0	0	0	166	123	2050

PEAK HR FACTOR:	0.863	0.948	0.000	0.785	0.976
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Location: Chula Vista
 N/S: I-5 Southbound Ramps
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg I-5 Southbound Ramps	East Leg Palomar Street	South Leg I-5 Southbound Ramps	West Leg Palomar Street	TOTAL
7:00 AM	0	0	2	0	2
7:15 AM	0	0	5	3	8
7:30 AM	0	0	3	2	5
7:45 AM	0	0	8	5	13
8:00 AM	1	0	2	3	6
8:15 AM	1	0	6	7	14
8:30 AM	0	0	2	2	4
8:45 AM	1	0	2	0	3
TOTAL VOLUMES:	3	0	30	22	55

	North Leg I-5 Southbound Ramps	East Leg Palomar Street	South Leg I-5 Southbound Ramps	West Leg Palomar Street	TOTAL
4:00 PM	0	0	13	4	17
4:15 PM	0	0	7	5	12
4:30 PM	0	0	7	6	13
4:45 PM	1	0	1	0	2
5:00 PM	0	0	5	0	5
5:15 PM	0	0	2	0	2
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	0	35	15	52

Location: Chula Vista
 N/S: I-5 Southbound Ramps
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg I-5 Southbound Ramps	East Leg Palomar Street	South Leg I-5 Southbound Ramps	West Leg Palomar Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	1	1	2
8:15 AM	0	0	1	0	1
8:30 AM	0	0	2	0	2
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	0	5	1	6

	North Leg I-5 Southbound Ramps	East Leg Palomar Street	South Leg I-5 Southbound Ramps	West Leg Palomar Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: Chula Vista
 N/S: I-5 Northbound Ramps
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	I-5 Northbound Ramps Southbound			Palomar Street Westbound			I-5 Northbound Ramps Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	0	0	0	0	77	143	4	0	71	9	76	0	380
7:15 AM	0	0	0	0	89	139	5	0	94	3	111	0	441
7:30 AM	0	0	0	0	116	174	11	0	103	3	120	0	527
7:45 AM	0	0	0	0	121	143	17	1	133	7	129	0	551
8:00 AM	0	0	0	0	95	165	20	0	139	7	126	0	552
8:15 AM	0	0	0	0	104	148	14	0	134	10	101	0	511
8:30 AM	0	0	0	0	103	148	15	0	137	10	108	0	521
8:45 AM	0	0	0	0	103	149	7	0	128	16	128	0	531
TOTAL VOLUMES:	0	0	0	0	808	1209	93	1	939	65	899	0	4014

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	0	0	0	0	436	630	62	1	509	27	476	0	2141

PEAK HR FACTOR:	0.000	0.919	0.899	0.925	0.970
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	I-5 Northbound Ramps Southbound			Palomar Street Westbound			I-5 Northbound Ramps Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	0	0	0	0	243	164	4	1	144	21	200	0	777
4:15 PM	0	0	0	0	240	164	8	0	158	21	184	0	775
4:30 PM	0	0	0	0	247	164	9	0	150	15	194	0	779
4:45 PM	0	0	0	0	236	139	5	0	179	13	228	0	800
5:00 PM	0	0	0	0	219	162	8	0	184	26	215	0	814
5:15 PM	0	0	0	0	261	162	9	0	165	23	190	0	810
5:30 PM	0	0	0	0	230	136	4	0	169	16	214	0	769
5:45 PM	0	0	0	0	233	146	7	0	178	15	180	0	759
TOTAL VOLUMES:	0	0	0	0	1909	1237	54	1	1327	150	1605	0	6283

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	0	0	0	0	963	627	31	0	678	77	827	0	3203

PEAK HR FACTOR:	0.000	0.940	0.923	0.938	0.984
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Location: Chula Vista
 N/S: I-5 Northbound Ramps
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg I-5 Northbound Ramps	East Leg Palomar Street	South Leg I-5 Northbound Ramps	West Leg Palomar Street	TOTAL
7:00 AM	0	0	2	0	2
7:15 AM	0	0	5	0	5
7:30 AM	0	0	3	0	3
7:45 AM	1	0	6	2	9
8:00 AM	0	0	2	0	2
8:15 AM	2	0	5	1	8
8:30 AM	1	0	1	1	3
8:45 AM	0	0	2	0	2
TOTAL VOLUMES:	4	0	26	4	34

	North Leg I-5 Northbound Ramps	East Leg Palomar Street	South Leg I-5 Northbound Ramps	West Leg Palomar Street	TOTAL
4:00 PM	0	0	9	1	10
4:15 PM	0	0	9	0	9
4:30 PM	0	1	6	0	7
4:45 PM	0	0	2	0	2
5:00 PM	0	0	4	1	5
5:15 PM	0	0	2	0	2
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
TOTAL VOLUMES:	0	1	33	2	36

Location: Chula Vista
 N/S: I-5 Northbound Ramps
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg I-5 Northbound Ramps	East Leg Palomar Street	South Leg I-5 Northbound Ramps	West Leg Palomar Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	1	1	2
8:30 AM	0	0	2	0	2
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	0	4	1	5

	North Leg I-5 Northbound Ramps	East Leg Palomar Street	South Leg I-5 Northbound Ramps	West Leg Palomar Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

aa Chula Vista
 N/S: Walnut Avenue/E Frontage Road
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	Walnut Avenue Southbound			Palomar Street Westbound			East Frontage Road Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	1	0	2	4	213	8	0	0	4	3	121	30	386
7:15 AM	1	1	3	2	221	4	2	0	5	3	169	30	441
7:30 AM	1	0	4	2	283	11	2	0	9	3	190	21	526
7:45 AM	0	0	4	11	253	10	0	0	5	7	226	27	543
8:00 AM	1	1	3	9	250	7	4	0	6	8	230	28	547
8:15 AM	2	0	6	6	237	15	1	0	3	10	206	21	507
8:30 AM	0	0	9	4	233	12	0	0	2	8	205	24	497
8:45 AM	0	0	4	3	239	11	1	0	2	10	227	25	522
TOTAL VOLUMES:	6	2	35	41	1929	78	10	0	36	52	1574	206	3969

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	4	1	17	28	1023	43	7	0	23	28	852	97	2123

PEAK HR FACTOR:	0.688	0.924	0.682	0.918	0.970
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	Walnut Avenue Southbound			Palomar Street Westbound			East Frontage Road Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	0	0	10	7	381	15	1	0	5	10	326	31	786
4:15 PM	1	0	12	5	380	12	0	0	3	5	295	32	745
4:30 PM	1	0	7	3	414	8	1	0	1	9	310	26	780
4:45 PM	1	0	2	3	353	10	0	0	1	9	354	42	775
5:00 PM	0	0	8	6	357	10	0	0	5	5	363	24	778
5:15 PM	1	0	5	4	385	20	0	0	4	4	367	27	817
5:30 PM	0	0	6	2	321	8	2	0	3	6	348	22	718
5:45 PM	2	1	4	5	349	13	0	0	7	8	339	23	751
TOTAL VOLUMES:	6	1	54	35	2940	96	4	0	29	56	2702	227	6150

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	3	0	22	16	1509	48	1	0	11	27	1394	119	3150

PEAK HR FACTOR:	0.781	0.925	0.600	0.951	0.964
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aa Chula Vista
 N/S: Walnut Avenue/E Frontage Road
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Walnut Avenue	East Leg Palomar Street	South Leg East Frontage Road	West Leg Palomar Street	TOTAL
7:00 AM	0	0	1	2	3
7:15 AM	3	3	7	3	16
7:30 AM	1	0	3	0	4
7:45 AM	2	0	4	0	6
8:00 AM	0	0	3	0	3
8:15 AM	1	0	3	0	4
8:30 AM	0	0	2	0	2
8:45 AM	2	1	2	0	5
TOTAL VOLUMES:	9	4	25	5	43

	North Leg Walnut Avenue	East Leg Palomar Street	South Leg East Frontage Road	West Leg Palomar Street	TOTAL
4:00 PM	0	0	4	2	6
4:15 PM	0	0	6	0	6
4:30 PM	0	0	2	1	3
4:45 PM	0	0	0	0	0
5:00 PM	1	0	4	1	6
5:15 PM	0	0	0	2	2
5:30 PM	1	1	3	0	5
5:45 PM	1	0	1	1	3
TOTAL VOLUMES:	3	1	20	7	31

aa Chula Vista
 N/S: Walnut Avenue/E Frontage Road
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Walnut Avenue	East Leg Palomar Street	South Leg East Frontage Road	West Leg Palomar Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	1	0	1	0	2
8:30 AM	0	0	2	0	2
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	1	0	4	0	5

	North Leg Walnut Avenue	East Leg Palomar Street	South Leg East Frontage Road	West Leg Palomar Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	Industrial Boulevard Southbound			Palomar Street Westbound			Industrial Boulevard Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	10	5	14	9	148	1	42	9	16	6	105	8	373
7:15 AM	6	14	23	7	152	4	45	10	15	15	126	11	428
7:30 AM	7	6	18	16	212	13	54	11	18	14	186	11	566
7:45 AM	9	7	24	11	178	4	46	17	18	21	188	8	531
8:00 AM	0	11	18	14	202	15	46	19	10	21	210	18	584
8:15 AM	7	13	29	10	179	7	43	42	13	19	163	7	532
8:30 AM	9	17	27	12	171	2	42	13	13	14	188	7	515
8:45 AM	6	12	28	15	186	4	30	11	15	12	188	15	522
TOTAL VOLUMES:	54	85	181	94	1428	50	348	132	118	122	1354	85	4051

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	23	37	89	51	771	39	189	89	59	75	747	44	2213

PEAK HR FACTOR:	0.760	0.893	0.860	0.869	0.947
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	Industrial Boulevard Southbound			Palomar Street Westbound			Industrial Boulevard Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	12	14	35	16	323	4	47	18	18	18	266	12	783
4:15 PM	9	8	29	19	341	9	36	14	24	19	302	5	815
4:30 PM	7	14	23	16	366	11	38	11	19	15	295	5	820
4:45 PM	3	12	28	17	300	9	30	17	15	18	302	11	762
5:00 PM	8	14	30	18	288	8	38	17	28	26	310	7	792
5:15 PM	11	12	31	25	350	10	36	21	20	29	334	9	888
5:30 PM	9	7	28	13	267	5	36	13	31	17	301	11	738
5:45 PM	12	5	17	21	319	7	22	25	20	32	286	13	779
TOTAL VOLUMES:	71	86	221	145	2554	63	283	136	175	174	2396	73	6377

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	29	52	112	76	1304	38	142	66	82	88	1241	32	3262

PEAK HR FACTOR:	0.894	0.902	0.873	0.915	0.918
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Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Industrial Boulevard	East Leg Palomar Street	South Leg Industrial Boulevard	West Leg Palomar Street	TOTAL
7:00 AM	1	10	8	6	25
7:15 AM	2	5	6	2	15
7:30 AM	6	6	1	1	14
7:45 AM	3	10	7	2	22
8:00 AM	2	6	4	0	12
8:15 AM	3	8	5	1	17
8:30 AM	3	17	2	2	24
8:45 AM	0	6	4	1	11
TOTAL VOLUMES:	20	68	37	15	140

	North Leg Industrial Boulevard	East Leg Palomar Street	South Leg Industrial Boulevard	West Leg Palomar Street	TOTAL
4:00 PM	5	2	8	6	21
4:15 PM	2	6	11	1	20
4:30 PM	2	11	7	1	21
4:45 PM	3	6	3	2	14
5:00 PM	2	6	4	4	16
5:15 PM	2	5	2	1	10
5:30 PM	7	15	4	6	32
5:45 PM	2	12	1	0	15
TOTAL VOLUMES:	25	63	40	21	149

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Industrial Boulevard	East Leg Palomar Street	South Leg Industrial Boulevard	West Leg Palomar Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	2	0	0	1	3
8:00 AM	1	0	0	0	1
8:15 AM	1	0	0	0	1
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	4	0	1	1	6

	North Leg Industrial Boulevard	East Leg Palomar Street	South Leg Industrial Boulevard	West Leg Palomar Street	TOTAL
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	1	1	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	3	3	0	6

Location: Chula Vista
 N/S: Shopping Center DW
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	Shopping Center DW Southbound			Palomar Street Westbound			Shopping Center DW Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	3	2	11	32	116	7	29	3	9	32	82	13	339
7:15 AM	1	5	4	30	136	0	25	4	8	27	117	8	365
7:30 AM	5	6	9	28	174	4	21	2	4	41	159	12	465
7:45 AM	1	7	14	30	165	1	15	3	11	54	142	9	452
8:00 AM	2	5	5	48	129	2	23	5	17	69	137	24	466
8:15 AM	1	2	4	31	179	2	20	3	11	59	137	15	464
8:30 AM	2	5	17	25	116	0	22	2	10	45	150	16	410
8:45 AM	1	4	4	25	141	3	28	2	23	45	152	13	441
TOTAL VOLUMES:	16	36	68	249	1156	19	183	24	93	372	1076	110	3402

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	9	20	32	137	647	9	79	13	43	223	575	60	1847

PEAK HR FACTOR:	0.693	0.935	0.750	0.933	0.991
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	Shopping Center DW Southbound			Palomar Street Westbound			Shopping Center DW Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	6	6	44	16	201	7	42	4	28	66	226	25	671
4:15 PM	12	13	38	32	219	11	35	2	12	63	234	37	708
4:30 PM	9	10	33	25	243	10	42	7	23	48	251	31	732
4:45 PM	7	8	39	23	210	5	41	5	26	74	227	33	698
5:00 PM	11	7	40	20	185	7	41	6	14	60	251	23	665
5:15 PM	9	6	37	25	227	11	43	4	22	63	308	16	771
5:30 PM	7	10	34	28	199	10	35	7	27	48	236	23	664
5:45 PM	15	8	37	30	235	11	35	7	16	68	270	28	760
TOTAL VOLUMES:	76	68	302	199	1719	72	314	42	168	490	2003	216	5669

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	36	31	149	93	865	33	167	22	85	245	1037	103	2866

PEAK HR FACTOR:	0.931	0.891	0.951	0.895	0.929
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Location: Chula Vista
 N/S: Shopping Center DW
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Shopping Center DW	East Leg Palomar Street	South Leg Shopping Center DW	West Leg Palomar Street	TOTAL
7:00 AM	4	2	9	12	27
7:15 AM	6	3	8	22	39
7:30 AM	7	4	7	6	24
7:45 AM	4	4	5	22	35
8:00 AM	3	11	10	16	40
8:15 AM	5	4	6	15	30
8:30 AM	2	2	6	17	27
8:45 AM	2	2	9	15	28
TOTAL VOLUMES:	33	32	60	125	250

	North Leg Shopping Center DW	East Leg Palomar Street	South Leg Shopping Center DW	West Leg Palomar Street	TOTAL
4:00 PM	14	6	13	33	66
4:15 PM	4	5	20	22	51
4:30 PM	8	17	20	26	71
4:45 PM	6	8	18	22	54
5:00 PM	10	9	14	32	65
5:15 PM	5	14	12	49	80
5:30 PM	5	7	13	27	52
5:45 PM	17	5	9	23	54
TOTAL VOLUMES:	69	71	119	234	493

Location: Chula Vista
 N/S: Shopping Center DW
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Shopping Center DW	East Leg Palomar Street	South Leg Shopping Center DW	West Leg Palomar Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	1	1	0	2
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	1	0	0	0	1
8:15 AM	0	0	0	2	2
8:30 AM	1	0	1	0	2
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	2	1	2	3	8

	North Leg Shopping Center DW	East Leg Palomar Street	South Leg Shopping Center DW	West Leg Palomar Street	TOTAL
4:00 PM	1	0	2	0	3
4:15 PM	0	1	1	0	2
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	1	1	3
5:15 PM	0	0	1	0	1
5:30 PM	1	1	1	1	4
5:45 PM	2	1	1	0	4
TOTAL VOLUMES:	4	5	7	2	18

Location: Chula Vista
 N/S: Driveway
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	Driveway Southbound			Palomar Street Westbound			Driveway Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	0	0	0	11	153	2	0	0	6	5	90	1	268
7:15 AM	0	0	2	10	160	0	1	0	2	11	108	1	295
7:30 AM	0	0	1	12	169	0	6	1	6	16	148	0	359
7:45 AM	0	0	1	14	165	1	0	1	8	15	110	5	320
8:00 AM	1	0	2	19	147	2	4	1	9	18	113	6	322
8:15 AM	0	1	5	29	158	2	6	4	6	13	98	8	330
8:30 AM	0	1	6	21	126	1	4	4	13	21	144	8	349
8:45 AM	0	0	4	20	159	2	5	0	12	15	134	13	364
TOTAL VOLUMES:	1	2	21	136	1237	10	26	11	62	114	945	42	2607

AM Peak Hr Begins at: 800 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	1	2	17	89	590	7	19	9	40	67	489	35	1365

PEAK HR FACTOR:	0.714	0.907	0.810	0.854	0.938
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	Driveway Southbound			Palomar Street Westbound			Driveway Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	1	1	3	57	169	0	30	1	37	29	181	13	522
4:15 PM	1	4	17	45	209	2	27	9	31	28	222	17	612
4:30 PM	0	3	19	89	196	1	22	9	32	32	225	24	652
4:45 PM	0	6	12	45	170	0	36	9	31	21	239	21	590
5:00 PM	0	2	7	44	145	1	22	3	29	31	192	15	491
5:15 PM	2	7	19	54	169	3	32	7	37	40	225	30	625
5:30 PM	1	1	12	74	178	1	23	11	42	38	207	25	613
5:45 PM	1	1	11	48	198	1	23	5	35	30	226	15	594
TOTAL VOLUMES:	6	25	100	456	1434	9	215	54	274	249	1717	160	4699

PM Peak Hr Begins at: 400 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	2	14	51	236	744	3	115	28	131	110	867	75	2376

PEAK HR FACTOR:	0.761	0.859	0.901	0.936	0.911
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Location: Chula Vista
 N/S: Driveway
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Driveway	East Leg Palomar Street	South Leg Driveway	West Leg Palomar Street	TOTAL
7:00 AM	4	2	7	0	13
7:15 AM	2	6	9	0	17
7:30 AM	4	4	5	0	13
7:45 AM	1	4	4	0	9
8:00 AM	0	1	1	0	2
8:15 AM	6	6	1	0	13
8:30 AM	2	4	8	0	14
8:45 AM	4	2	3	0	9
TOTAL VOLUMES:	23	29	38	0	90

	North Leg Driveway	East Leg Palomar Street	South Leg Driveway	West Leg Palomar Street	TOTAL
4:00 PM	9	20	11	2	42
4:15 PM	9	20	12	0	41
4:30 PM	10	11	9	0	30
4:45 PM	7	16	6	3	32
5:00 PM	8	21	9	0	38
5:15 PM	12	26	12	0	50
5:30 PM	9	14	6	0	29
5:45 PM	1	14	8	0	23
TOTAL VOLUMES:	65	142	73	5	285

Location: Chula Vista
 N/S: Driveway
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Driveway	East Leg Palomar Street	South Leg Driveway	West Leg Palomar Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	1	2	0	0	3
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	3	3	0	0	6

	North Leg Driveway	East Leg Palomar Street	South Leg Driveway	West Leg Palomar Street	TOTAL
4:00 PM	1	0	2	0	3
4:15 PM	0	0	1	0	1
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	1	0	0	0	1
5:30 PM	0	2	3	1	6
5:45 PM	1	1	0	0	2
TOTAL VOLUMES:	3	5	6	1	15

Location: Chula Vista
 N/S: Broadway
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

	Broadway Southbound			Palomar Street Westbound			Broadway Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	10	125	24	25	66	11	17	65	14	25	45	20	447
7:15 AM	11	127	30	28	63	25	31	81	8	43	55	22	524
7:30 AM	21	147	41	34	100	29	31	108	14	34	53	29	641
7:45 AM	23	170	55	26	75	27	34	96	14	30	58	23	631
8:00 AM	21	173	73	34	74	22	28	93	13	43	65	26	665
8:15 AM	33	122	45	37	73	14	51	69	11	37	76	48	616
8:30 AM	15	108	37	37	63	15	52	89	17	55	82	17	587
8:45 AM	25	114	33	32	82	18	30	100	13	41	89	38	615
TOTAL VOLUMES:	159	1086	338	253	596	161	274	701	104	308	523	223	4726

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	98	612	214	131	322	92	144	366	52	144	252	126	2553

PEAK HR FACTOR:	0.865	0.836	0.918	0.811	0.960
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	Broadway Southbound			Palomar Street Westbound			Broadway Northbound			Palomar Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	90	128	32	99	146	96	29	122	66	46	124	27	1005
4:15 PM	87	148	32	82	156	96	36	138	53	58	136	35	1057
4:30 PM	85	162	26	81	161	88	40	145	56	56	118	31	1049
4:45 PM	87	133	22	88	169	83	22	117	59	53	130	32	995
5:00 PM	104	147	19	94	162	67	32	128	64	58	123	24	1022
5:15 PM	100	168	20	95	159	86	40	110	65	55	135	28	1061
5:30 PM	106	161	27	93	153	79	18	129	58	54	114	25	1017
5:45 PM	103	164	31	97	175	97	32	131	53	55	124	27	1089
TOTAL VOLUMES:	762	1211	209	729	1281	692	249	1020	474	435	1004	229	8295

PM Peak Hr Begins at: 500 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	413	640	97	379	649	329	122	498	240	222	496	104	4189

PEAK HR FACTOR:	0.965	0.919	0.960	0.943	0.962
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Location: Chula Vista
 N/S: Broadway
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Broadway	East Leg Palomar Street	South Leg Broadway	West Leg Palomar Street	TOTAL
7:00 AM	0	4	7	13	24
7:15 AM	5	4	6	8	23
7:30 AM	5	5	16	13	39
7:45 AM	5	4	12	5	26
8:00 AM	5	8	9	6	28
8:15 AM	4	2	10	11	27
8:30 AM	7	7	11	9	34
8:45 AM	6	12	10	6	34
TOTAL VOLUMES:	37	46	81	71	235

	North Leg Broadway	East Leg Palomar Street	South Leg Broadway	West Leg Palomar Street	TOTAL
4:00 PM	5	10	8	17	40
4:15 PM	10	11	9	19	49
4:30 PM	9	14	14	12	49
4:45 PM	31	19	5	9	64
5:00 PM	12	8	9	12	41
5:15 PM	15	12	4	12	43
5:30 PM	3	17	7	9	36
5:45 PM	13	18	9	16	56
TOTAL VOLUMES:	98	109	65	106	378

Location: Chula Vista
 N/S: Broadway
 E/W: Palomar Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Broadway	East Leg Palomar Street	South Leg Broadway	West Leg Palomar Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	2	0	0	0	2
7:30 AM	1	0	0	0	1
7:45 AM	0	1	0	1	2
8:00 AM	0	0	0	1	1
8:15 AM	2	0	1	0	3
8:30 AM	0	0	0	1	1
8:45 AM	0	0	2	0	2
TOTAL VOLUMES:	5	1	3	3	12

	North Leg Broadway	East Leg Palomar Street	South Leg Broadway	West Leg Palomar Street	TOTAL
4:00 PM	2	2	0	0	4
4:15 PM	2	1	0	0	3
4:30 PM	1	0	2	0	3
4:45 PM	0	0	1	0	1
5:00 PM	1	0	0	0	1
5:15 PM	2	1	1	0	4
5:30 PM	1	0	0	1	2
5:45 PM	0	1	2	1	4
TOTAL VOLUMES:	9	5	6	2	22

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Anita Street



Date: 8/15/2017
 Day: Tuesday

	Industrial Boulevard Southbound			Anita Street Westbound			Industrial Boulevard Northbound			Anita Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	13	9	2	5	3	28	7	10	5	5	19	3	109
7:15 AM	26	2	2	1	3	23	5	13	8	3	28	0	114
7:30 AM	26	3	4	3	3	27	1	11	10	3	23	0	114
7:45 AM	18	2	4	0	12	31	3	17	9	6	19	0	121
8:00 AM	27	2	1	3	10	43	2	23	19	4	20	0	154
8:15 AM	17	1	3	2	7	31	1	20	4	8	12	1	107
8:30 AM	16	1	5	2	5	26	5	20	10	2	16	0	108
8:45 AM	22	0	5	0	2	21	2	13	10	5	14	0	94
TOTAL VOLUMES:	165	20	26	16	45	230	26	127	75	36	151	4	921

AM Peak Hr Begins at: 715 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	97	9	11	7	28	124	11	64	46	16	90	0	503

PEAK HR FACTOR:	0.886	0.710	0.688	0.855	0.817
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	Industrial Boulevard Southbound			Anita Street Westbound			Industrial Boulevard Northbound			Anita Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	10	23	4	12	6	31	8	26	14	2	16	6	158
4:15 PM	5	15	3	10	4	30	5	33	18	2	14	4	143
4:30 PM	3	21	3	22	6	38	1	19	7	2	15	11	148
4:45 PM	12	23	1	16	7	26	1	28	13	6	18	6	157
5:00 PM	11	22	3	29	4	26	1	23	9	8	9	10	155
5:15 PM	7	27	2	14	3	27	1	24	5	0	11	8	129
5:30 PM	10	26	3	7	3	31	2	32	13	2	13	6	148
5:45 PM	9	22	0	11	2	27	3	24	10	4	6	7	125
TOTAL VOLUMES:	67	179	19	121	35	236	22	209	89	26	102	58	1163

PM Peak Hr Begins at: 400 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	30	82	11	60	23	125	15	106	52	12	63	27	606

PEAK HR FACTOR:	0.831	0.788	0.772	0.850	0.959
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Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Anita Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Industrial Boulevard	East Leg Anita Street	South Leg Industrial Boulevard	West Leg Anita Street	TOTAL
7:00 AM	1	1	1	6	9
7:15 AM	1	0	0	2	3
7:30 AM	0	0	1	4	5
7:45 AM	0	0	1	3	4
8:00 AM	0	1	1	2	4
8:15 AM	1	1	0	3	5
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	2	2
TOTAL VOLUMES:	3	3	4	22	32

	North Leg Industrial Boulevard	East Leg Anita Street	South Leg Industrial Boulevard	West Leg Anita Street	TOTAL
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	6	6
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	3	3
5:00 PM	0	0	0	0	0
5:15 PM	1	0	0	2	3
5:30 PM	0	0	0	2	2
5:45 PM	0	1	0	5	6
TOTAL VOLUMES:	1	1	0	19	21

Location: Chula Vista
 N/S: Industrial Boulevard
 E/W: Anita Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Industrial Boulevard	East Leg Anita Street	South Leg Industrial Boulevard	West Leg Anita Street	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	0	1	0	0	1
7:30 AM	0	0	1	0	1
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	0	1	0	2	3
TOTAL VOLUMES:	0	3	1	4	8

	North Leg Industrial Boulevard	East Leg Anita Street	South Leg Industrial Boulevard	West Leg Anita Street	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	1	2
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	1	0	0	2	3
TOTAL VOLUMES:	1	2	0	4	7

Location: Chula Vista
 N/S: Broadway
 E/W: Anita Street



Date: 8/15/2017
 Day: Tuesday

	Broadway Southbound			Anita Street Westbound			Broadway Northbound			Anita Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	9	42	21	4	25	13	8	59	6	9	6	6	208
7:15 AM	7	52	16	7	25	14	10	70	6	11	16	18	252
7:30 AM	19	45	14	11	22	23	12	92	8	21	27	19	313
7:45 AM	17	54	14	12	21	14	12	75	19	12	20	18	288
8:00 AM	10	45	13	19	51	29	8	68	13	14	23	8	301
8:15 AM	13	75	26	11	26	18	4	82	3	13	19	17	307
8:30 AM	9	75	22	10	14	10	3	75	12	10	14	10	264
8:45 AM	12	93	15	10	29	18	11	81	11	20	9	11	320
TOTAL VOLUMES:	96	481	141	84	213	139	68	602	78	110	134	107	2253

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	59	219	67	53	120	84	36	317	43	60	89	62	1209

PEAK HR FACTOR:	0.757	0.649	0.884	0.787	0.966
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	Broadway Southbound			Anita Street Westbound			Broadway Northbound			Anita Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	26	147	23	17	20	24	14	114	17	20	32	11	465
4:15 PM	23	134	27	9	25	22	9	147	24	22	25	4	471
4:30 PM	22	174	17	10	18	21	4	155	19	19	26	12	497
4:45 PM	22	157	20	15	14	14	12	149	15	16	31	8	473
5:00 PM	33	172	28	13	32	27	13	120	19	31	25	10	523
5:15 PM	25	153	13	15	21	9	9	134	15	26	36	10	466
5:30 PM	21	164	27	12	22	17	5	135	16	23	29	14	485
5:45 PM	18	183	19	14	18	14	11	134	14	16	28	15	484
TOTAL VOLUMES:	190	1284	174	105	170	148	77	1088	139	173	232	84	3864

PM Peak Hr Begins at: 415 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	100	637	92	47	89	84	38	571	77	88	107	34	1964

PEAK HR FACTOR:	0.889	0.764	0.953	0.867	0.939
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Location: Chula Vista
 N/S: Broadway
 E/W: Anita Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Broadway	East Leg Anita Street	South Leg Broadway	West Leg Anita Street	TOTAL
7:00 AM	4	3	0	2	9
7:15 AM	2	7	2	1	12
7:30 AM	2	1	1	2	6
7:45 AM	1	2	2	5	10
8:00 AM	0	2	0	2	4
8:15 AM	0	3	0	1	4
8:30 AM	8	4	1	4	17
8:45 AM	1	6	2	1	10
TOTAL VOLUMES:	18	28	8	18	72

	North Leg Broadway	East Leg Anita Street	South Leg Broadway	West Leg Anita Street	TOTAL
4:00 PM	3	2	1	0	6
4:15 PM	1	3	3	6	13
4:30 PM	0	0	0	5	5
4:45 PM	5	3	0	4	12
5:00 PM	2	5	3	8	18
5:15 PM	9	3	1	4	17
5:30 PM	3	2	0	1	6
5:45 PM	1	1	0	3	5
TOTAL VOLUMES:	24	19	8	31	82

Location: Chula Vista
 N/S: Broadway
 E/W: Anita Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Broadway	East Leg Anita Street	South Leg Broadway	West Leg Anita Street	TOTAL
7:00 AM	1	0	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	1	1	0	2
7:45 AM	0	0	0	1	1
8:00 AM	1	0	0	0	1
8:15 AM	0	1	1	0	2
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	2	3	1	8

	North Leg Broadway	East Leg Anita Street	South Leg Broadway	West Leg Anita Street	TOTAL
4:00 PM	2	0	0	0	2
4:15 PM	0	2	0	0	2
4:30 PM	0	0	0	1	1
4:45 PM	1	0	2	0	3
5:00 PM	0	1	3	0	4
5:15 PM	0	0	0	0	0
5:30 PM	1	2	0	1	4
5:45 PM	1	0	0	1	2
TOTAL VOLUMES:	5	5	5	3	18

Location: Chula Vista
 N/S: I-5 Southbound Ramps
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

	I-5 Southbound Ramps Southbound			Main Street Westbound			Dead End Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	65	0	4	0	11	47	0	0	0	1	3	0	131
7:15 AM	90	0	1	0	15	39	0	0	0	1	6	0	152
7:30 AM	109	0	2	0	9	51	0	0	0	3	15	0	189
7:45 AM	119	0	2	0	15	55	0	0	0	0	11	0	202
8:00 AM	113	0	6	0	14	57	0	0	0	1	8	0	199
8:15 AM	93	0	3	0	15	60	0	0	0	0	9	0	180
8:30 AM	81	0	1	0	6	46	0	0	0	3	9	0	146
8:45 AM	96	0	4	0	14	62	0	0	0	2	7	0	185
TOTAL VOLUMES:	766	0	23	0	99	417	0	0	0	11	68	0	1384

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	434	0	13	0	53	223	0	0	0	4	43	0	770

PEAK HR FACTOR:	0.924	0.920	0.000	0.653	0.953
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	I-5 Southbound Ramps Southbound			Main Street Westbound			Dead End Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	151	0	4	0	19	109	0	0	0	5	26	0	314
4:15 PM	165	0	4	0	10	101	0	0	0	6	15	0	301
4:30 PM	155	0	3	0	6	92	0	0	0	4	11	0	271
4:45 PM	159	0	2	0	15	85	0	0	0	5	11	0	277
5:00 PM	155	0	3	0	21	104	0	0	0	6	13	0	302
5:15 PM	155	0	4	0	19	121	0	0	0	5	26	0	330
5:30 PM	162	0	5	0	6	108	0	0	0	4	13	0	298
5:45 PM	116	0	0	0	7	110	0	0	0	4	18	0	255
TOTAL VOLUMES:	1218	0	25	0	103	830	0	0	0	39	133	0	2348

PM Peak Hr Begins at: 445 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	631	0	14	0	61	418	0	0	0	20	63	0	1207

PEAK HR FACTOR:	0.966	0.855	0.000	0.669	0.914
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Location: Chula Vista
 N/S: I-5 Southbound Ramps
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg I-5 Southbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	2	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	0	3	0	3

	North Leg I-5 Southbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Chula Vista
 N/S: I-5 Southbound Ramps
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg I-5 Southbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
7:00 AM	2	0	0	0	2
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	1	0	0	0	1
8:00 AM	1	0	2	0	3
8:15 AM	1	0	2	0	3
8:30 AM	0	0	0	0	0
8:45 AM	0	0	3	0	3
TOTAL VOLUMES:	6	0	7	0	13

	North Leg I-5 Southbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	2	0	2
5:15 PM	1	0	2	0	3
5:30 PM	1	0	1	0	2
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	3	0	6	0	9

Location: Chula Vista
 N/S: I-5 Northbound Ramps
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

	I-5 Northbound Ramps Southbound			Main Street Westbound			Dead End Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	70	0	4	0	56	108	0	0	0	0	68	0	306
7:15 AM	74	0	8	0	45	87	0	0	0	2	87	0	303
7:30 AM	73	0	4	0	55	96	0	0	0	5	118	0	351
7:45 AM	88	0	7	0	64	111	0	0	0	4	119	0	393
8:00 AM	96	0	8	0	64	97	0	0	0	1	128	0	394
8:15 AM	87	0	6	0	70	109	0	0	0	3	96	0	371
8:30 AM	75	0	7	0	54	122	0	0	0	2	94	0	354
8:45 AM	76	0	3	0	76	87	0	0	0	3	97	0	342
TOTAL VOLUMES:	639	0	47	0	484	817	0	0	0	20	807	0	2814

AM Peak Hr Begins at: 745 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	346	0	28	0	252	439	0	0	0	10	437	0	1512

PEAK HR FACTOR:	0.899	0.965	0.000	0.866	0.959
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	I-5 Northbound Ramps Southbound			Main Street Westbound			Dead End Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	90	0	5	0	126	96	0	0	0	11	163	0	491
4:15 PM	95	0	5	0	114	109	0	0	0	9	165	0	497
4:30 PM	80	0	2	0	90	130	0	0	0	3	163	0	468
4:45 PM	122	0	4	0	96	139	0	0	0	4	169	0	534
5:00 PM	83	0	9	0	125	139	0	0	0	6	171	0	533
5:15 PM	95	0	10	0	138	120	0	0	0	3	171	0	537
5:30 PM	90	0	12	0	107	121	0	0	0	7	166	0	503
5:45 PM	84	0	4	0	114	90	0	0	0	5	135	0	432
TOTAL VOLUMES:	739	0	51	0	910	944	0	0	0	48	1303	0	3995

PM Peak Hr Begins at: 445 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	390	0	35	0	466	519	0	0	0	20	677	0	2107

PEAK HR FACTOR:	0.843	0.933	0.000	0.984	0.981
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Location: Chula Vista
 N/S: I-5 Northbound Ramps
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg I-5 Northbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	0	2

	North Leg I-5 Northbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: Chula Vista
 N/S: I-5 Northbound Ramps
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg I-5 Northbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	2	0	0	0	2
7:30 AM	1	0	1	0	2
7:45 AM	0	0	2	0	2
8:00 AM	2	0	1	0	3
8:15 AM	0	0	2	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	5	0	7	0	12

	North Leg I-5 Northbound Ramps	East Leg Main Street	South Leg Dead End	West Leg Main Street	TOTAL
4:00 PM	0	0	2	0	2
4:15 PM	0	0	5	0	5
4:30 PM	0	0	3	0	3
4:45 PM	0	0	3	0	3
5:00 PM	0	0	3	0	3
5:15 PM	1	0	3	0	4
5:30 PM	1	0	1	0	2
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	3	0	20	0	23

Location: Chula Vista
 N/S: Industrial Blvd/Hollister Street
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

	Industrial Boulevard Southbound			Main Street Westbound			Hollister Street Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	13	8	13	11	139	7	11	9	16	11	101	6	345
7:15 AM	7	11	12	17	143	9	3	8	19	13	114	6	362
7:30 AM	5	8	18	19	158	5	3	5	20	10	143	8	402
7:45 AM	4	9	26	28	196	10	10	12	26	8	163	9	501
8:00 AM	8	12	22	20	158	16	13	15	16	16	158	9	463
8:15 AM	11	12	28	27	173	9	9	15	23	16	137	10	470
8:30 AM	9	16	30	29	144	16	6	10	14	13	118	9	414
8:45 AM	7	11	20	37	164	10	9	9	28	14	135	10	454
TOTAL VOLUMES:	64	87	169	188	1275	82	64	83	162	101	1069	67	3411

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	28	41	94	94	685	40	35	47	85	50	601	36	1674

PEAK HR FACTOR:	0.799	0.875	0.870	0.939	0.906
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	Industrial Boulevard Southbound			Main Street Westbound			Hollister Street Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	9	18	29	21	184	14	13	17	42	13	208	29	597
4:15 PM	12	12	17	8	179	9	10	18	22	15	218	18	538
4:30 PM	10	19	32	47	194	11	12	8	33	13	205	20	604
4:45 PM	8	24	25	41	187	20	9	10	34	10	238	20	626
5:00 PM	11	24	31	53	225	15	14	11	36	9	217	18	664
5:15 PM	7	23	22	43	212	11	8	17	30	4	233	15	625
5:30 PM	11	12	18	36	190	5	11	25	29	11	217	10	575
5:45 PM	7	18	17	39	173	12	11	15	31	6	177	14	520
TOTAL VOLUMES:	75	150	191	288	1544	97	88	121	257	81	1713	144	4749

PM Peak Hr Begins at: 430 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	36	90	110	184	818	57	43	46	133	36	893	73	2519

PEAK HR FACTOR:	0.894	0.904	0.910	0.935	0.948
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Location: Chula Vista
 N/S: Industrial Blvd/Hollister Street
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Industrial Boulevard	East Leg Main Street	South Leg Hollister Street	West Leg Main Street	TOTAL
7:00 AM	2	0	1	2	5
7:15 AM	2	1	0	0	3
7:30 AM	0	1	2	1	4
7:45 AM	1	2	0	1	4
8:00 AM	0	2	2	0	4
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	2	1	0	3
TOTAL VOLUMES:	5	8	6	4	23

	North Leg Industrial Boulevard	East Leg Main Street	South Leg Hollister Street	West Leg Main Street	TOTAL
4:00 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	2	2
5:00 PM	0	0	2	1	3
5:15 PM	0	0	1	2	3
5:30 PM	1	2	1	0	4
5:45 PM	0	0	0	3	3
TOTAL VOLUMES:	1	3	4	9	17

Location: Chula Vista
 N/S: Industrial Blvd/Hollister Street
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Industrial Boulevard	East Leg Main Street	South Leg Hollister Street	West Leg Main Street	TOTAL
7:00 AM	1	0	0	0	1
7:15 AM	0	0	1	0	1
7:30 AM	1	0	3	0	4
7:45 AM	1	0	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	1	1	0	2
8:30 AM	0	2	0	0	2
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	3	4	5	0	12

	North Leg Industrial Boulevard	East Leg Main Street	South Leg Hollister Street	West Leg Main Street	TOTAL
4:00 PM	1	0	0	0	1
4:15 PM	0	0	2	0	2
4:30 PM	0	0	0	0	0
4:45 PM	0	1	3	0	4
5:00 PM	0	2	2	1	5
5:15 PM	1	0	1	1	3
5:30 PM	1	0	1	0	2
5:45 PM	0	0	1	1	2
TOTAL VOLUMES:	3	3	10	3	19

Location: Chula Vista
 N/S: Broadway
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

	Broadway Southbound			Main Street Westbound			Broadway Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
7:00 AM	19	30	16	13	96	23	28	42	21	10	71	8	377
7:15 AM	28	48	19	22	116	24	26	49	16	17	73	13	451
7:30 AM	29	36	22	41	121	43	27	67	47	21	91	10	555
7:45 AM	29	47	34	37	165	37	35	67	44	19	112	15	641
8:00 AM	17	44	36	38	150	31	30	61	33	26	88	11	565
8:15 AM	39	42	27	27	160	25	36	62	31	26	72	20	567
8:30 AM	39	45	25	37	124	28	31	64	21	27	58	9	508
8:45 AM	35	46	38	24	144	36	34	53	32	46	60	11	559
TOTAL VOLUMES:	235	338	217	239	1076	247	247	465	245	192	625	97	4223

AM Peak Hr Begins at: 730 AM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	114	169	119	143	596	136	128	257	155	92	363	56	2328

PEAK HR FACTOR:	0.914	0.915	0.925	0.875	0.908
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	Broadway Southbound			Main Street Westbound			Broadway Northbound			Main Street Eastbound			TOTAL
	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	
4:00 PM	61	119	37	57	165	50	38	83	40	44	156	39	889
4:15 PM	45	123	28	66	148	54	36	100	49	52	156	30	887
4:30 PM	70	105	43	62	143	53	33	95	50	44	157	39	894
4:45 PM	77	131	34	67	162	57	41	80	47	50	168	27	941
5:00 PM	69	117	40	58	185	62	40	85	60	40	183	40	979
5:15 PM	47	133	30	71	158	61	39	86	58	47	155	41	926
5:30 PM	73	118	30	53	155	47	32	97	50	34	169	49	907
5:45 PM	76	137	42	50	174	39	34	84	48	43	137	25	889
TOTAL VOLUMES:	518	983	284	484	1290	423	293	710	402	354	1281	290	7312

PM Peak Hr Begins at: 445 PM

	SL	ST	SR	WL	WT	WR	NL	NT	NR	EL	ET	ER	TOTAL
PEAK VOLUMES:	266	499	134	249	660	227	152	348	215	171	675	157	3753

PEAK HR FACTOR:	0.929	0.931	0.966	0.953	0.958
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Location: Chula Vista
 N/S: Broadway
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Broadway	East Leg Main Street	South Leg Broadway	West Leg Main Street	TOTAL
7:00 AM	1	1	0	1	3
7:15 AM	4	3	1	0	8
7:30 AM	1	2	0	1	4
7:45 AM	1	0	0	1	2
8:00 AM	1	4	6	1	12
8:15 AM	1	5	3	0	9
8:30 AM	5	2	0	3	10
8:45 AM	0	1	3	0	4
TOTAL VOLUMES:	14	18	13	7	52

	North Leg Broadway	East Leg Main Street	South Leg Broadway	West Leg Main Street	TOTAL
4:00 PM	2	1	0	2	5
4:15 PM	0	1	1	0	2
4:30 PM	1	1	1	3	6
4:45 PM	0	3	0	0	3
5:00 PM	1	5	4	0	10
5:15 PM	0	1	0	1	2
5:30 PM	1	5	3	5	14
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	5	18	9	11	43

Location: Chula Vista
 N/S: Broadway
 E/W: Main Street



Date: 8/15/2017
 Day: Tuesday

BICYCLES

	North Leg Broadway	East Leg Main Street	South Leg Broadway	West Leg Main Street	TOTAL
7:00 AM	1	0	1	0	2
7:15 AM	0	0	0	0	0
7:30 AM	1	0	2	0	3
7:45 AM	1	0	2	1	4
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	3	1	5	1	10

	North Leg Broadway	East Leg Main Street	South Leg Broadway	West Leg Main Street	TOTAL
4:00 PM	1	1	0	0	2
4:15 PM	2	2	1	0	5
4:30 PM	0	1	0	1	2
4:45 PM	2	0	0	0	2
5:00 PM	1	0	0	0	1
5:15 PM	0	1	3	0	4
5:30 PM	2	1	1	1	5
5:45 PM	1	1	0	1	3
TOTAL VOLUMES:	9	7	5	3	24

Martin A. Parish

2117 Willow Drive

El Centro, CA

619-988-1949

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File Name : 2014-00405

Site Code : 00405

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Groups Printed- U Turn - Bicycles - Class 1,2,3 - Class 4 - Class 5 - Class 6 - Class 7 - Class 8 - Class 9

Start Time	Industrial Blvd Southbound				Palomar Street Westbound				Industrial Blvd Northbound				Palomar Street Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
00:00	0	0	2	1	1	42	0	0	2	0	0	0	3	21	2	0	1	73	74
00:15	0	0	0	1	4	23	0	0	3	0	0	0	1	20	1	0	1	52	53
00:30	0	1	1	0	0	21	0	0	1	0	3	0	1	21	3	0	0	52	52
00:45	0	0	6	0	3	20	0	0	0	0	0	0	1	21	1	0	0	52	52
Total	0	1	9	2	8	106	0	0	6	0	3	0	6	83	7	0	2	229	231
01:00	0	0	1	0	0	19	0	0	1	0	0	0	0	21	0	0	0	42	42
01:15	1	1	1	0	0	15	0	0	1	0	0	0	3	15	0	0	0	37	37
01:30	0	1	2	0	1	24	0	0	0	0	0	0	0	15	1	0	0	44	44
01:45	0	1	5	0	1	34	1	0	1	0	0	0	3	28	0	0	0	74	74
Total	1	3	9	0	2	92	1	0	3	0	0	0	6	79	1	0	0	197	197
02:00	0	1	0	0	1	36	0	0	0	0	0	0	3	13	0	0	0	54	54
02:15	0	0	2	0	0	35	1	0	1	0	0	0	3	16	1	0	0	59	59
02:30	0	0	2	0	0	27	0	0	1	0	0	0	0	23	1	0	0	54	54
02:45	0	0	2	0	1	25	1	0	3	0	1	0	1	35	1	0	0	70	70
Total	0	1	6	0	2	123	2	0	5	0	1	0	7	87	3	0	0	237	237
03:00	0	1	5	0	1	24	1	0	0	0	0	0	1	22	0	0	0	55	55
03:15	0	1	0	0	1	45	0	0	1	0	0	0	1	20	0	0	0	69	69
03:30	1	0	6	0	3	61	0	0	4	0	0	0	3	30	1	0	0	109	109
03:45	2	2	2	0	3	60	0	1	5	1	1	0	6	35	4	0	1	121	122
Total	3	4	13	0	8	190	1	1	10	1	1	0	11	107	5	0	1	354	355
04:00	1	1	3	1	2	85	2	0	6	0	0	1	5	45	1	1	3	151	154
04:15	2	2	11	1	7	124	0	1	8	1	2	0	8	50	2	0	2	217	219
04:30	0	1	9	0	4	149	1	3	8	0	1	0	6	58	4	0	3	241	244
04:45	1	2	12	1	11	138	2	4	14	0	1	0	2	78	11	4	9	272	281
Total	4	6	35	3	24	496	5	8	36	1	4	1	21	231	18	5	17	881	898
05:00	2	3	10	2	7	167	0	2	12	3	3	1	15	59	12	1	6	293	299
05:15	3	2	7	1	14	204	2	4	8	5	4	1	7	77	8	1	7	341	348
05:30	0	7	11	4	12	207	5	5	14	2	5	5	7	76	13	5	19	359	378
05:45	0	7	16	1	10	153	0	5	15	8	7	1	12	112	9	2	9	349	358
Total	5	19	44	8	43	731	7	16	49	18	19	8	41	324	42	9	41	1342	1383
06:00	5	7	13	0	10	169	4	8	12	10	6	3	8	137	7	0	11	388	399
06:15	2	9	21	1	10	169	5	7	2	6	7	4	19	165	7	4	16	422	438
06:30	3	7	23	3	12	136	4	12	13	7	18	4	13	185	4	4	23	425	448
06:45	8	14	28	0	19	220	7	6	9	8	18	2	23	205	9	4	12	568	580
Total	18	37	85	4	51	694	20	33	36	31	49	13	63	692	27	12	62	1803	1865
07:00	5	20	17	2	20	202	10	19	12	14	7	2	19	214	13	1	24	553	577
07:15	3	12	19	0	18	200	14	2	15	18	8	1	23	180	14	4	7	524	531
07:30	8	22	34	4	20	195	4	4	19	5	3	3	12	195	11	5	16	528	544
07:45	6	8	20	1	18	204	4	8	19	0	8	3	16	202	6	2	14	511	525
Total	22	62	90	7	76	801	32	33	65	37	26	9	70	791	44	12	61	2116	2177
08:00	5	9	16	1	7	189	4	9	4	3	7	1	10	196	8	0	11	458	469
08:15	6	6	6	2	13	178	4	5	7	2	7	1	13	203	15	1	9	460	469
08:30	4	13	20	1	13	216	4	10	4	4	5	2	20	254	15	1	14	572	586
08:45	4	6	15	2	14	204	5	4	8	3	10	1	13	215	6	5	12	503	515
Total	19	34	57	6	47	787	17	28	23	12	29	5	56	868	44	7	46	1993	2039
09:00	3	9	7	1	15	195	6	4	9	3	4	1	23	221	14	1	7	509	516

Martin A. Parish

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Groups Printed- U Turn - Bicycles - Class 1,2,3 - Class 4 - Class 5 - Class 6 - Class 7 - Class 8 - Class 9

Start Time	Industrial Blvd Southbound				Palomar Street Westbound				Industrial Blvd Northbound				Palomar Street Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
09:15	4	13	16	5	19	218	9	4	8	4	6	4	26	234	16	2	15	573	588
09:30	4	9	22	2	21	218	5	2	7	4	8	4	22	241	9	1	9	570	579
09:45	8	14	23	2	10	235	7	10	8	5	9	7	24	234	16	4	23	593	616
Total	19	45	68	10	65	866	27	20	32	16	27	16	95	930	55	8	54	2245	2299
10:00	3	10	19	0	21	273	7	5	7	1	9	6	20	249	15	5	16	634	650
10:15	7	4	19	4	15	227	10	5	7	4	4	1	16	237	9	0	10	559	569
10:30	5	14	26	0	17	234	6	5	7	3	4	3	22	247	10	2	10	595	605
10:45	11	10	17	1	20	304	10	4	10	4	12	3	24	323	9	0	8	754	762
Total	26	38	81	5	73	1038	33	19	31	12	29	13	82	1056	43	7	44	2542	2586
11:00	8	13	28	1	15	280	13	9	7	3	3	0	25	263	9	4	14	667	681
11:15	5	17	25	5	13	263	6	7	8	4	9	6	19	282	12	5	23	663	686
11:30	3	11	25	2	17	304	11	3	8	3	1	2	13	285	15	0	7	696	703
11:45	5	10	22	3	16	324	11	11	9	3	11	3	16	263	9	2	19	699	718
Total	21	51	100	11	61	1171	41	30	32	13	24	11	73	1093	45	11	63	2725	2788
12:00	3	15	35	1	25	268	11	3	6	4	7	2	21	266	9	0	6	670	676
12:15	6	15	30	2	24	331	11	9	6	3	5	0	21	265	7	4	15	724	739
12:30	6	11	30	2	20	284	5	13	11	5	4	1	16	251	17	4	20	660	680
12:45	1	11	23	5	15	336	8	9	9	3	8	3	24	287	11	2	19	736	755
Total	16	52	118	10	84	1219	35	34	32	15	24	6	82	1069	44	10	60	2790	2850
13:00	4	10	24	1	10	289	11	6	10	6	3	9	20	281	17	2	18	685	703
13:15	12	10	29	2	19	289	11	4	8	5	12	5	21	272	6	0	11	694	705
13:30	5	14	27	0	11	285	11	3	8	14	5	4	11	300	11	5	12	702	714
13:45	4	7	21	2	18	335	8	9	4	7	8	2	39	313	7	6	19	771	790
Total	25	41	101	5	58	1198	41	22	30	32	28	20	91	1166	41	13	60	2852	2912
14:00	8	23	32	3	10	246	11	6	11	9	9	0	21	190	4	8	17	574	591
14:15	12	19	34	0	39	368	14	10	11	34	9	4	18	248	12	11	25	818	843
14:30	8	15	30	6	20	285	10	10	15	5	7	5	23	242	8	4	25	668	693
14:45	7	14	29	0	17	292	11	7	9	6	7	1	21	226	11	5	13	650	663
Total	35	71	125	9	86	1191	46	33	46	54	32	10	83	906	35	28	80	2710	2790
15:00	6	10	29	0	19	310	12	12	18	4	9	4	22	314	9	1	17	762	779
15:15	11	16	28	2	21	280	6	2	12	3	14	6	13	297	23	3	13	724	737
15:30	7	17	33	1	12	233	8	9	20	14	7	1	19	235	12	1	12	617	629
15:45	4	11	32	4	18	313	9	6	15	11	11	3	23	364	9	5	18	820	838
Total	28	54	122	7	70	1136	35	29	65	32	41	14	77	1210	53	10	60	2923	2983
16:00	4	19	29	6	14	222	6	4	22	14	10	10	18	241	10	4	24	609	633
16:15	6	16	22	6	21	356	9	6	25	5	9	2	39	352	11	4	18	871	889
16:30	2	24	39	4	25	258	12	3	20	4	7	4	19	294	11	7	18	715	733
16:45	3	10	30	7	17	300	5	6	17	5	12	8	22	317	10	8	29	748	777
Total	15	69	120	23	77	1136	32	19	84	28	38	24	98	1204	42	23	89	2943	3032
17:00	11	14	33	5	25	281	7	5	13	7	10	2	22	293	15	4	16	731	747
17:15	6	10	27	3	21	306	5	5	14	5	9	6	21	266	16	4	18	706	724
17:30	3	13	33	6	16	247	9	3	12	10	7	2	14	262	12	4	15	638	653
17:45	2	13	25	10	18	308	7	5	14	9	10	1	21	246	12	1	17	685	702
Total	22	50	118	24	80	1142	28	18	53	31	36	11	78	1067	55	13	66	2760	2826
18:00	3	17	36	1	20	230	4	2	11	7	17	2	15	212	15	1	6	587	593
18:15	3	12	27	7	15	302	3	3	6	2	9	1	21	243	3	8	19	646	665

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Groups Printed- U Turn - Bicycles - Class 1,2,3 - Class 4 - Class 5 - Class 6 - Class 7 - Class 8 - Class 9

Start Time	Industrial Blvd Southbound				Palomar Street Westbound				Industrial Blvd Northbound				Palomar Street Eastbound				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
18:30	6	13	27	7	15	273	12	1	12	1	8	0	13	184	8	2	10	572	582
18:45	6	5	22	2	14	214	7	2	8	3	11	5	10	165	7	4	13	472	485
Total	18	47	112	17	64	1019	26	8	37	13	45	8	59	804	33	15	48	2277	2325
19:00	8	15	16	1	22	297	3	3	9	4	14	0	27	161	3	2	6	579	585
19:15	6	6	32	4	6	233	6	10	15	7	4	2	12	160	3	3	19	490	509
19:30	5	7	15	4	9	195	10	5	4	4	7	6	4	136	4	2	17	400	417
19:45	1	4	15	4	17	183	4	2	8	2	7	4	5	116	3	1	11	365	376
Total	20	32	78	13	54	908	23	20	36	17	32	12	48	573	13	8	53	1834	1887
20:00	4	2	11	2	17	187	2	3	13	0	10	3	15	137	3	1	9	401	410
20:15	1	4	17	3	15	143	7	0	9	2	8	2	10	118	6	4	9	340	349
20:30	3	8	12	1	6	117	2	2	20	9	4	0	9	100	5	1	4	295	299
20:45	2	3	10	3	11	141	6	3	13	1	4	0	16	82	3	2	8	292	300
Total	10	17	50	9	49	588	17	8	55	12	26	5	50	437	17	8	30	1328	1358
21:00	6	4	6	1	7	117	2	1	6	4	5	0	11	89	2	2	4	259	263
21:15	3	3	8	2	7	96	4	3	4	2	3	0	6	93	4	0	5	233	238
21:30	1	1	2	2	5	108	3	2	4	2	0	0	4	70	3	0	4	203	207
21:45	2	2	8	2	6	88	4	3	1	2	2	0	8	81	4	1	6	208	214
Total	12	10	24	7	25	409	13	9	15	10	10	0	29	333	13	3	19	903	922
22:00	2	1	4	1	2	77	0	0	2	1	1	0	1	65	2	1	2	158	160
22:15	1	1	9	0	2	64	4	0	3	2	0	1	2	79	1	1	2	168	170
22:30	3	0	6	0	2	46	1	1	2	0	0	0	2	58	3	0	1	123	124
22:45	2	0	3	2	1	41	6	2	2	0	1	0	6	60	0	0	4	122	126
Total	8	2	22	3	7	228	11	3	9	3	2	1	11	262	6	2	9	571	580
23:00	0	0	3	1	4	41	1	1	4	0	1	0	5	37	2	0	2	98	100
23:15	2	2	1	1	2	39	0	0	1	2	2	0	6	52	1	0	1	110	111
23:30	1	0	0	1	1	44	0	1	5	3	1	0	2	31	0	0	2	88	90
23:45	2	0	1	1	2	39	2	0	2	0	0	0	1	31	1	0	1	81	82
Total	5	2	5	4	9	163	3	2	12	5	4	0	14	151	4	0	6	377	383
Grand Total	352	748	1592	187	1123	17432	496	393	802	393	530	187	1251	15523	690	204	971	40932	41903
Apprch %	13.1	27.8	59.1		5.9	91.5	2.6		46.5	22.8	30.7		7.2	88.9	4				
Total %	0.9	1.8	3.9		2.7	42.6	1.2		2	1	1.3		3.1	37.9	1.7		2.3	97.7	
U Turn	3	0	0		4	0	0		0	0	0		135	0	0		0	0	142
% U Turn	0.9	0	0	0	0.4	0	0	0	0	0	0	0	10.8	0	0	0	0	0	0.3
Bicycles	6	12	1		5	29	3		4	14	9		0	17	4		0	0	161
% Bicycles	1.7	1.6	0.1	5.9	0.4	0.2	0.6	4.3	0.5	3.6	1.7	10.2	0	0.1	0.6	4.9	0	0	0.4
Class 1,2,3	340	708	1567		1078	17096	481		761	368	512		1092	15256	625		0	0	40798
% Class 1,2,3	96.6	94.7	98.4	94.1	96	98.1	97	95.7	94.9	93.6	96.6	89.8	87.3	98.3	90.6	95.1	0	0	97.4
Class 4	0	2	11		4	42	1		16	0	0		11	16	16		0	0	119
% Class 4	0	0.3	0.7	0	0.4	0.2	0.2	0	2	0	0	0	0.9	0.1	2.3	0	0	0	0.3
Class 5	3	24	13		27	210	10		19	9	9		10	180	34		0	0	548
% Class 5	0.9	3.2	0.8	0	2.4	1.2	2	0	2.4	2.3	1.7	0	0.8	1.2	4.9	0	0	0	1.3
Class 6	0	1	0		2	2	0		1	2	0		0	3	1		0	0	12
% Class 6	0	0.1	0	0	0.2	0	0	0	0.1	0.5	0	0	0	0	0.1	0	0	0	0
Class 7	0	0	0		0	1	0		0	0	0		0	0	0		0	0	1
% Class 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Class 8	0	0	0		0	4	0		0	0	0		1	4	2		0	0	11
% Class 8	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.3	0	0	0	0
Class 9	0	1	0		3	48	1		1	0	0		2	47	8		0	0	111
% Class 9	0	0.1	0	0	0.3	0.3	0.2	0	0.1	0	0	0	0.2	0.3	1.2	0	0	0	0.3

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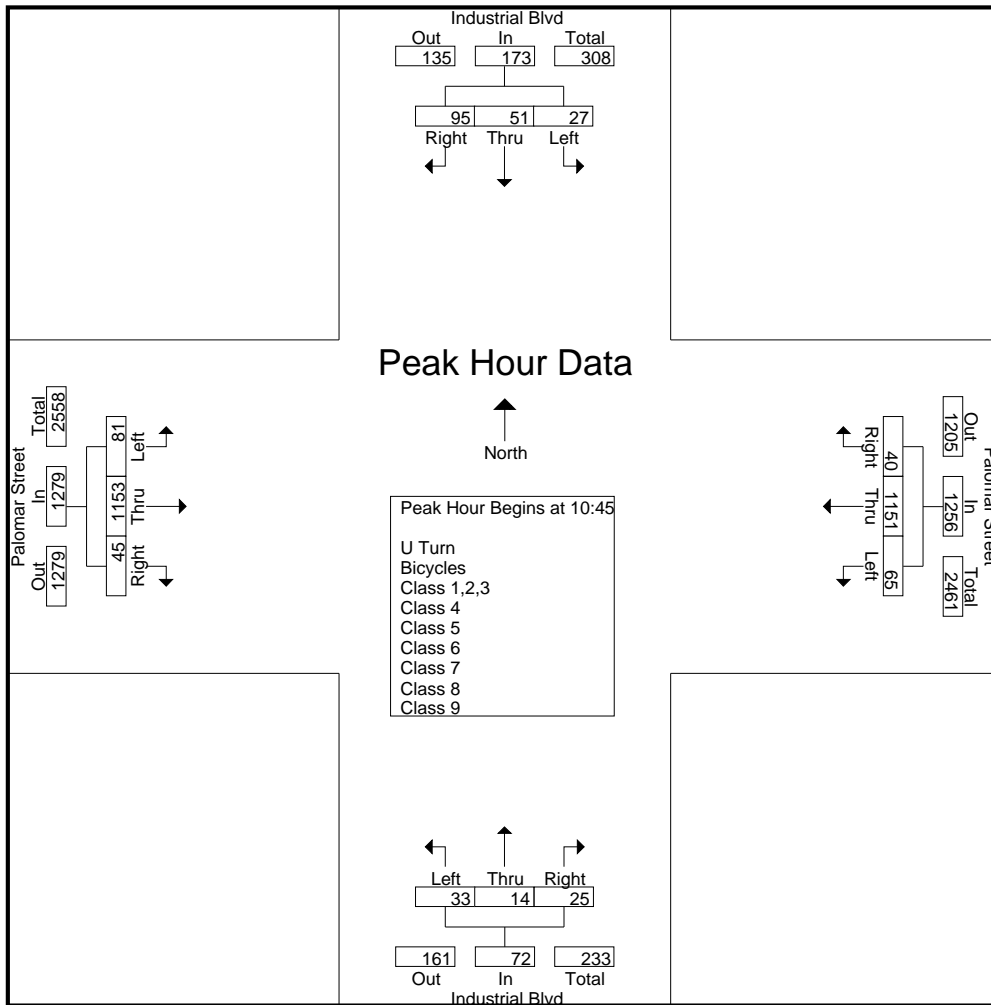
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Start Time	Industrial Blvd Southbound				Palomar Street Westbound				Industrial Blvd Northbound				Palomar Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 00:00 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:45																	
10:45	11	10	17	38	20	304	10	334	10	4	12	26	24	323	9	356	754
11:00	8	13	28	49	15	280	13	308	7	3	3	13	25	263	9	297	667
11:15	5	17	25	47	13	263	6	282	8	4	9	21	19	282	12	313	663
11:30	3	11	25	39	17	304	11	332	8	3	1	12	13	285	15	313	696
Total Volume	27	51	95	173	65	1151	40	1256	33	14	25	72	81	1153	45	1279	2780
% App. Total	15.6	29.5	54.9		5.2	91.6	3.2		45.8	19.4	34.7		6.3	90.1	3.5		
PHF	.614	.750	.848	.883	.813	.947	.769	.940	.825	.875	.521	.692	.810	.892	.750	.898	.922



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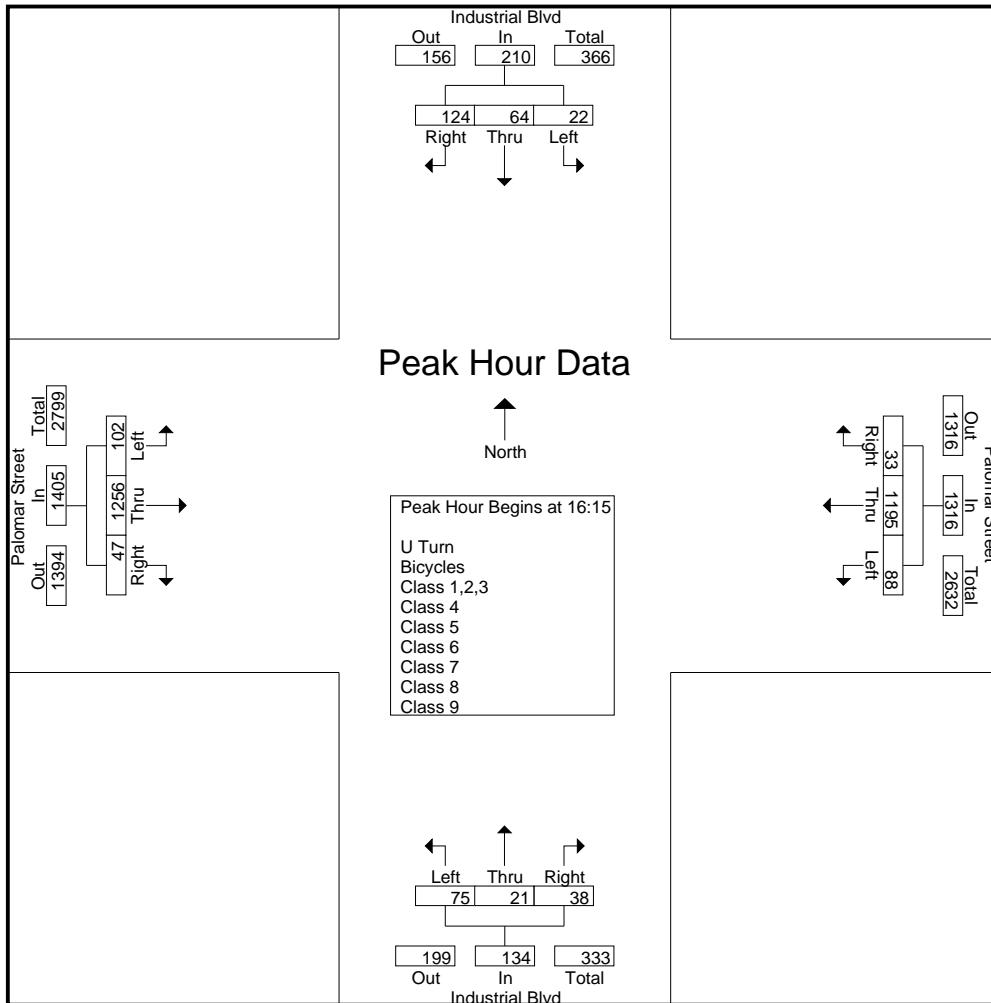
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Start Time	Industrial Blvd Southbound				Palomar Street Westbound				Industrial Blvd Northbound				Palomar Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 to 23:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:15																	
16:15	6	16	22	44	21	356	9	386	25	5	9	39	39	352	11	402	871
16:30	2	24	39	65	25	258	12	295	20	4	7	31	19	294	11	324	715
16:45	3	10	30	43	17	300	5	322	17	5	12	34	22	317	10	349	748
17:00	11	14	33	58	25	281	7	313	13	7	10	30	22	293	15	330	731
Total Volume	22	64	124	210	88	1195	33	1316	75	21	38	134	102	1256	47	1405	3065
% App. Total	10.5	30.5	59		6.7	90.8	2.5		56	15.7	28.4		7.3	89.4	3.3		
PHF	.500	.667	.795	.808	.880	.839	.688	.852	.750	.750	.792	.859	.654	.892	.783	.874	.880















Appendix B – Existing Intersection LOS Worksheets

HCM Unsignalized Intersection Capacity Analysis

1: Bay Blvd & L St

Existing - AM

							
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Sign Control	Stop		Stop			Stop	
Traffic Volume (vph)	333	171	46	567	97	96	
Future Volume (vph)	333	171	46	567	97	96	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	362	186	50	616	105	104	
Direction, Lane #	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	362	93	93	50	616	105	104
Volume Left (vph)	362	0	0	0	0	105	0
Volume Right (vph)	0	93	93	0	616	0	0
Hadj (s)	0.23	-0.57	-0.57	0.03	-0.57	0.53	0.03
Departure Headway (s)	4.8	3.2	3.2	5.3	3.2	6.1	5.6
Degree Utilization, x	0.49	0.08	0.08	0.07	0.55	0.18	0.16
Capacity (veh/h)	718	1121	1121	625	1117	564	612
Control Delay (s)	12.3	6.5	6.5	8.7	10.0	9.2	8.4
Approach Delay (s)	10.3			9.9		8.8	
Approach LOS	B			A		A	
Intersection Summary							
Delay			9.9				
Level of Service			A				
Intersection Capacity Utilization			47.1%		ICU Level of Service		A
Analysis Period (min)			15				

HCM 2010 Signalized Intersection Summary

2: Industrial Blvd/Driveway & L St
























Existing - AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	478	221	269	396	3	98	3	313	1	5	0
Future Volume (veh/h)	0	478	221	269	396	3	98	3	313	1	5	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	0	520	58	292	430	2	107	3	82	1	5	-2
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1524	659	330	2475	12	302	5	185	177	704	0
Arrive On Green	0.00	0.43	0.43	0.19	0.69	0.69	0.12	0.12	0.12	0.12	0.12	0.00
Sat Flow, veh/h	1774	3539	1531	1774	3612	17	1369	38	1550	170	2614	-928
Grp Volume(v), veh/h	0	520	58	292	211	221	110	0	82	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1531	1774	1770	1859	1407	0	1550	0	0	0
Q Serve(g_s), s	0.0	5.0	1.1	8.2	2.2	2.2	3.8	0.0	2.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.0	1.1	8.2	2.2	2.2	3.8	0.0	2.5	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.97		1.00	0.25		-0.50
Lane Grp Cap(c), veh/h	3	1524	659	330	1212	1274	307	0	185	0	0	0
V/C Ratio(X)	0.00	0.34	0.09	0.89	0.17	0.17	0.36	0.00	0.44	0.00	0.00	0.00
Avail Cap(c_a), veh/h	156	1524	659	330	1212	1274	690	0	607	0	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.7	8.6	20.3	2.9	2.9	21.5	0.0	20.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.3	23.6	0.3	0.3	0.7	0.0	1.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	0.5	6.1	1.2	1.2	1.5	0.0	1.2	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	10.3	8.9	43.9	3.2	3.2	22.2	0.0	22.6	0.0	0.0	0.0
LnGrp LOS		B	A	D	A	A	C		C			
Approach Vol, veh/h		578			724			192			0	
Approach Delay, s/veh		10.2			19.6			22.4			0.0	
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	27.0		11.1	0.0	40.0		11.1				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	9.5	22.0		20.0	4.5	27.0		20.0				
Max Q Clear Time (g_c+I1), s	10.2	7.0		0.0	0.0	4.2		5.8				
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	6.4		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				16.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

3: Broadway & L St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	420	155	116	541	95	114	425	79	68	397	88
Future Volume (veh/h)	93	420	155	116	541	95	114	425	79	68	397	88
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	101	457	168	126	588	103	124	462	86	74	432	96
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	959	419	158	862	151	155	1342	725	95	1223	646
Arrive On Green	0.07	0.27	0.27	0.09	0.29	0.29	0.09	0.38	0.38	0.05	0.35	0.35
Sat Flow, veh/h	1774	3539	1548	1774	3002	524	1774	3539	1542	1774	3539	1539
Grp Volume(v), veh/h	101	457	168	126	346	345	124	462	86	74	432	96
Grp Sat Flow(s),veh/h/ln	1774	1770	1548	1774	1770	1756	1774	1770	1542	1774	1770	1539
Q Serve(g_s), s	4.9	9.4	7.7	6.0	15.0	15.1	6.0	8.1	2.7	3.6	7.9	3.4
Cycle Q Clear(g_c), s	4.9	9.4	7.7	6.0	15.0	15.1	6.0	8.1	2.7	3.6	7.9	3.4
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	959	419	158	508	505	155	1342	725	95	1223	646
V/C Ratio(X)	0.79	0.48	0.40	0.80	0.68	0.68	0.80	0.34	0.12	0.78	0.35	0.15
Avail Cap(c_a), veh/h	163	1304	570	204	693	688	204	1342	725	184	1223	646
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	39.6	26.5	25.9	38.8	27.4	27.4	38.9	19.2	13.0	40.6	21.2	15.7
Incr Delay (d2), s/veh	17.6	0.4	0.6	15.5	1.6	1.7	15.1	0.7	0.3	12.5	0.8	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	3.0	4.6	3.4	3.7	7.5	7.5	3.6	4.0	1.2	2.1	4.0	1.5
LnGrp Delay(d),s/veh	57.2	26.9	26.5	54.3	29.0	29.1	53.9	19.9	13.3	53.1	22.0	16.2
LnGrp LOS	E	C	C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		726			817			672			602	
Approach Delay, s/veh		31.0			33.0			25.4			24.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	28.5	11.6	35.0	10.3	30.0	8.7	37.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	10.0	32.0	10.0	30.0	8.0	34.0	9.0	31.0				
Max Q Clear Time (g_c+I1), s	8.0	11.4	8.0	9.9	6.9	17.1	5.6	10.1				
Green Ext Time (p_c), s	0.1	8.1	0.1	6.5	0.0	7.3	0.0	6.6				
Intersection Summary												
HCM 2010 Ctrl Delay			28.9									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis

4: Bay Blvd & I-5 SB Ramps

Existing - AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	87	573	61	4	330	81
Future Volume (Veh/h)	87	573	61	4	330	81
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	95	623	66	4	359	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	874	68			66	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	874	68			66	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	61	37			77	
cM capacity (veh/h)	245	995			1536	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	718	70	359	88		
Volume Left	95	0	359	0		
Volume Right	623	4	0	0		
cSH	1147	1700	1536	1700		
Volume to Capacity	0.63	0.04	0.23	0.05		
Queue Length 95th (ft)	116	0	23	0		
Control Delay (s)	16.3	0.0	8.1	0.0		
Lane LOS	C		A			
Approach Delay (s)	16.3	0.0	6.5			
Approach LOS	C					
Intersection Summary						
Average Delay			11.8			
Intersection Capacity Utilization			45.6%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

Existing - AM



















Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	328	87	401	87	220	290
Future Volume (vph)	328	87	401	87	220	290
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	357	95	436	95	239	315
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	357	95	436	95	239	315
Volume Left (vph)	357	0	436	0	0	0
Volume Right (vph)	0	95	0	0	0	315
Hadj (s)	0.23	-0.57	0.53	0.03	0.03	-0.57
Departure Headway (s)	6.3	3.2	6.7	6.2	6.2	3.2
Degree Utilization, x	0.62	0.08	0.81	0.16	0.41	0.28
Capacity (veh/h)	546	1121	530	569	551	1112
Control Delay (s)	19.0	6.5	30.6	9.1	13.4	7.4
Approach Delay (s)	16.4		26.8		10.0	
Approach LOS	C		D		B	

Intersection Summary						
Delay			17.7			
Level of Service			C			
Intersection Capacity Utilization			62.0%	ICU Level of Service		B
Analysis Period (min)			15			

























HCM 2010 Signalized Intersection Summary
 6: Industrial Blvd & Moss St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	16	3	279	2	197	17	161	122	0
Future Volume (veh/h)	0	0	0	16	3	279	2	197	17	161	122	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	0	0	17	3	303	2	214	18	175	133	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	4	0	21	4	382	3	322	27	236	179	0
Arrive On Green	0.00	0.00	0.00	0.26	0.26	0.26	0.19	0.19	0.19	0.23	0.23	0.00
Sat Flow, veh/h	0	1863	0	84	15	1493	16	1676	141	1029	782	0
Grp Volume(v), veh/h	0	0	0	323	0	0	234	0	0	308	0	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1591	0	0	1832	0	0	1811	0	0
Q Serve(g_s), s	0.0	0.0	0.0	8.8	0.0	0.0	5.5	0.0	0.0	7.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.8	0.0	0.0	5.5	0.0	0.0	7.3	0.0	0.0
Prop In Lane	0.00		0.00	0.05		0.94	0.01		0.08	0.57		0.00
Lane Grp Cap(c), veh/h	0	4	0	407	0	0	352	0	0	415	0	0
V/C Ratio(X)	0.00	0.00	0.00	0.79	0.00	0.00	0.66	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	0	722	0	651	0	0	1105	0	0	780	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	16.1	0.0	0.0	17.4	0.0	0.0	16.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.6	0.0	0.0	2.1	0.0	0.0	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.3	0.0	0.0	2.9	0.0	0.0	3.9	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	19.7	0.0	0.0	19.5	0.0	0.0	19.3	0.0	0.0
LnGrp LOS				B			B			B		
Approach Vol, veh/h		0			323			234			308	
Approach Delay, s/veh		0.0			19.7			19.5			19.3	
Approach LOS					B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		0.0		15.6		16.9		13.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		18.0		20.0		19.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.3		10.8		7.5				
Green Ext Time (p_c), s		0.0		1.2		1.2		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				19.5								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 7: Broadway & Moss St

















Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	113	44	34	182	99	92	480	50	57	517	48
Future Volume (veh/h)	33	113	44	34	182	99	92	480	50	57	517	48
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	36	123	48	37	198	108	100	522	54	62	562	52
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	404	333	44	406	334	129	1385	143	78	1308	121
Arrive On Green	0.02	0.22	0.22	0.02	0.22	0.22	0.07	0.43	0.43	0.04	0.40	0.40
Sat Flow, veh/h	1774	1863	1534	1774	1863	1534	1774	3221	332	1774	3259	301
Grp Volume(v), veh/h	36	123	48	37	198	108	100	286	290	62	304	310
Grp Sat Flow(s),veh/h/ln	1774	1863	1534	1774	1863	1534	1774	1770	1784	1774	1770	1790
Q Serve(g_s), s	1.2	3.3	1.5	1.2	5.6	3.5	3.3	6.6	6.6	2.1	7.4	7.5
Cycle Q Clear(g_c), s	1.2	3.3	1.5	1.2	5.6	3.5	3.3	6.6	6.6	2.1	7.4	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.17
Lane Grp Cap(c), veh/h	43	404	333	44	406	334	129	761	767	78	710	718
V/C Ratio(X)	0.84	0.30	0.14	0.84	0.49	0.32	0.78	0.38	0.38	0.79	0.43	0.43
Avail Cap(c_a), veh/h	133	997	821	133	997	821	222	761	767	193	710	718
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	29.1	19.6	18.9	29.0	20.5	19.7	27.3	11.6	11.6	28.3	12.9	13.0
Incr Delay (d2), s/veh	32.6	0.4	0.2	31.5	0.9	0.6	9.6	1.4	1.4	16.4	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.8	0.7	1.0	3.0	1.5	2.0	3.5	3.5	1.4	4.0	4.1
LnGrp Delay(d),s/veh	61.7	20.0	19.1	60.6	21.4	20.2	36.9	13.0	13.0	44.7	14.8	14.8
LnGrp LOS	E	C	B	E	C	C	D	B	B	D	B	B
Approach Vol, veh/h		207			343			676			676	
Approach Delay, s/veh		27.1			25.2			16.6			17.6	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	18.0	7.8	29.0	4.9	18.0	6.1	30.7				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	7.5	24.0	4.5	32.0	6.5	25.0				
Max Q Clear Time (g_c+I1), s	3.2	5.3	5.3	9.5	3.2	7.6	4.1	8.6				
Green Ext Time (p_c), s	0.0	2.3	0.0	6.2	0.0	2.3	0.0	6.6				
Intersection Summary												
HCM 2010 Ctrl Delay			19.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

8: Industrial Blvd & Naples St
























Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	24	34	80	7	138	15	55	124	99	33	0
Future Volume (veh/h)	18	24	34	80	7	138	15	55	124	99	33	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.72	1.00		0.81	1.00		0.96	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	20	26	25	87	8	124	16	60	93	108	36	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	78	75	124	11	177	26	96	148	192	64	0
Arrive On Green	0.14	0.14	0.14	0.21	0.21	0.21	0.16	0.16	0.16	0.14	0.14	0.00
Sat Flow, veh/h	441	574	552	605	56	863	162	608	942	1400	467	0
Grp Volume(v), veh/h	71	0	0	219	0	0	169	0	0	144	0	0
Grp Sat Flow(s),veh/h/ln	1566	0	0	1524	0	0	1711	0	0	1867	0	0
Q Serve(g_s), s	2.3	0.0	0.0	7.3	0.0	0.0	5.1	0.0	0.0	4.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	0.0	7.3	0.0	0.0	5.1	0.0	0.0	4.0	0.0	0.0
Prop In Lane	0.28		0.35	0.40		0.57	0.09		0.55	0.75		0.00
Lane Grp Cap(c), veh/h	213	0	0	313	0	0	269	0	0	255	0	0
V/C Ratio(X)	0.33	0.00	0.00	0.70	0.00	0.00	0.63	0.00	0.00	0.56	0.00	0.00
Avail Cap(c_a), veh/h	628	0	0	528	0	0	686	0	0	749	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.5	0.0	0.0	20.2	0.0	0.0	21.6	0.0	0.0	22.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	2.8	0.0	0.0	2.4	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	3.3	0.0	0.0	2.6	0.0	0.0	2.2	0.0	0.0
LnGrp Delay(d),s/veh	22.4	0.0	0.0	23.1	0.0	0.0	24.0	0.0	0.0	24.1	0.0	0.0
LnGrp LOS	C			C			C			C		
Approach Vol, veh/h		71			219			169			144	
Approach Delay, s/veh		22.4			23.1			24.0			24.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		12.5		12.5		16.3		13.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		22.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		4.3		6.0		9.3		7.1				
Green Ext Time (p_c), s		0.3		0.6		0.9		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				23.5								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

9: Broadway & Naples St






















Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	110	57	81	193	96	58	394	37	38	456	62
Future Volume (veh/h)	91	110	57	81	193	96	58	394	37	38	456	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.94	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	99	120	30	88	210	47	63	428	25	41	496	56
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	382	95	114	484	391	80	1289	75	50	1158	130
Arrive On Green	0.07	0.27	0.27	0.06	0.26	0.26	0.05	0.38	0.38	0.03	0.36	0.36
Sat Flow, veh/h	1774	1423	356	1774	1863	1504	1774	3387	197	1774	3185	358
Grp Volume(v), veh/h	99	0	150	88	210	47	63	223	230	41	274	278
Grp Sat Flow(s),veh/h/ln	1774	0	1778	1774	1863	1504	1774	1770	1814	1774	1770	1774
Q Serve(g_s), s	3.6	0.0	4.4	3.2	6.2	1.6	2.3	5.9	5.9	1.5	7.7	7.8
Cycle Q Clear(g_c), s	3.6	0.0	4.4	3.2	6.2	1.6	2.3	5.9	5.9	1.5	7.7	7.8
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.11	1.00		0.20
Lane Grp Cap(c), veh/h	128	0	477	114	484	391	80	674	691	50	644	645
V/C Ratio(X)	0.77	0.00	0.31	0.77	0.43	0.12	0.79	0.33	0.33	0.82	0.43	0.43
Avail Cap(c_a), veh/h	284	0	894	257	908	733	230	674	691	149	644	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	29.9	0.0	19.2	30.3	20.3	18.6	31.0	14.4	14.4	31.7	15.7	15.8
Incr Delay (d2), s/veh	9.4	0.0	0.4	10.6	0.6	0.1	15.4	1.3	1.3	26.5	2.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	2.2	1.9	3.2	0.7	1.5	3.1	3.2	1.1	4.1	4.2
LnGrp Delay(d),s/veh	39.3	0.0	19.6	40.9	20.9	18.7	46.4	15.7	15.7	58.3	17.8	17.9
LnGrp LOS	D		B	D	C	B	D	B	B	E	B	B
Approach Vol, veh/h		249			345			516			593	
Approach Delay, s/veh		27.4			25.7			19.5			20.6	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	22.6	6.5	28.9	8.2	22.1	5.4	30.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	9.5	33.0	8.5	22.0	10.5	32.0	5.5	25.0				
Max Q Clear Time (g_c+I1), s	5.2	6.4	4.3	9.8	5.6	8.2	3.5	7.9				
Green Ext Time (p_c), s	0.1	2.2	0.0	4.7	0.1	2.2	0.0	5.6				
Intersection Summary												
HCM 2010 Ctrl Delay			22.3									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

10: Broadway & Oxford St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	80	71	75	195	58	179	418	61	65	358	133
Future Volume (veh/h)	69	80	71	75	195	58	179	418	61	65	358	133
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.94	1.00		0.94	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	75	87	-3	82	212	48	195	454	56	71	389	122
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	436	370	106	347	79	239	1389	170	92	936	289
Arrive On Green	0.05	0.23	0.00	0.06	0.24	0.24	0.13	0.44	0.44	0.05	0.36	0.36
Sat Flow, veh/h	1774	1863	1583	1774	1453	329	1774	3151	386	1774	2618	807
Grp Volume(v), veh/h	75	87	-3	82	0	260	195	254	256	71	261	250
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1781	1774	1770	1768	1774	1770	1655
Q Serve(g_s), s	3.3	3.0	0.0	3.6	0.0	10.3	8.5	7.4	7.5	3.1	8.8	9.1
Cycle Q Clear(g_c), s	3.3	3.0	0.0	3.6	0.0	10.3	8.5	7.4	7.5	3.1	8.8	9.1
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.22	1.00		0.49
Lane Grp Cap(c), veh/h	97	436	370	106	0	426	239	780	779	92	633	592
V/C Ratio(X)	0.77	0.20	-0.01	0.77	0.00	0.61	0.82	0.33	0.33	0.78	0.41	0.42
Avail Cap(c_a), veh/h	212	680	578	212	0	650	458	780	779	212	633	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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	24.4	0.0	36.8	0.0	26.9	33.4	14.5	14.5	37.2	19.2	19.3
Incr Delay (d2), s/veh	12.3	0.2	0.0	11.3	0.0	1.4	6.7	1.1	1.1	13.0	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.5	0.0	2.1	0.0	5.2	4.6	3.8	3.9	1.9	4.6	4.5
LnGrp Delay(d),s/veh	49.4	24.7	0.0	48.2	0.0	28.3	40.1	15.6	15.7	50.2	21.2	21.5
LnGrp LOS	D	C		D		C	D	B	B	D	C	C
Approach Vol, veh/h		159			342			705			582	
Approach Delay, s/veh		36.8			33.1			22.4			24.9	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	23.6	14.2	33.4	7.8	24.0	7.6	40.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	9.5	29.0	20.5	24.0	9.5	29.0	9.5	35.0				
Max Q Clear Time (g_c+I1), s	5.6	5.0	10.5	11.1	5.3	12.3	5.1	9.5				
Green Ext Time (p_c), s	0.0	2.1	0.4	5.0	0.0	1.8	0.0	6.7				
Intersection Summary												
HCM 2010 Ctrl Delay			26.5									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis

11: Bay Blvd & Palomar St

Existing - AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	18	151	42	14	61	25
Future Volume (vph)	18	151	42	14	61	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	164	46	15	66	27


















Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	20	164	46	15	93
Volume Left (vph)	20	0	0	0	66
Volume Right (vph)	0	164	0	15	0
Hadj (s)	0.53	-0.67	0.03	-0.67	0.18
Departure Headway (s)	5.4	4.2	5.0	4.3	5.0
Degree Utilization, x	0.03	0.19	0.06	0.02	0.13
Capacity (veh/h)	647	821	682	786	690
Control Delay (s)	7.4	7.0	7.2	6.2	8.7
Approach Delay (s)	7.1		6.9		8.7
Approach LOS	A		A		A

Intersection Summary					
Delay			7.5		
Level of Service			A		
Intersection Capacity Utilization			30.1%	ICU Level of Service	A
Analysis Period (min)			15		

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St





















Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	82	35	333	173	0	0	0	0	422	0	76
Future Volume (vph)	0	82	35	333	173	0	0	0	0	422	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		3.5	3.5					5.0	5.0	
Lane Util. Factor		0.95		0.95	0.95					0.95	0.95	
Frbp, ped/bikes		0.99		1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.96		1.00	1.00					1.00	0.95	
Flt Protected		1.00		0.95	0.98					0.95	0.97	
Satd. Flow (prot)		3342		1681	1741					1681	1613	
Flt Permitted		1.00		0.95	0.98					0.95	0.97	
Satd. Flow (perm)		3342		1681	1741					1681	1613	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	89	38	362	188	0	0	0	0	459	0	83
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	58	0
Lane Group Flow (vph)	0	103	0	271	279	0	0	0	0	275	209	0
Confl. Peds. (#/hr)	2		19	19		2	17					17
Confl. Bikes (#/hr)			2	2			1					1
Turn Type		NA		Split	NA					Split	NA	
Protected Phases		2		6	6					4	4	
Permitted Phases												
Actuated Green, G (s)		29.8		18.2	18.2					18.5	18.5	
Effective Green, g (s)		29.8		18.2	18.2					18.5	18.5	
Actuated g/C Ratio		0.37		0.23	0.23					0.23	0.23	
Clearance Time (s)		5.0		3.5	3.5					5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		1244		382	396					388	373	
v/s Ratio Prot		c0.03		c0.16	0.16					c0.16	0.13	
v/s Ratio Perm												
v/c Ratio		0.08		0.71	0.70					0.71	0.56	
Uniform Delay, d1		16.3		28.5	28.4					28.3	27.2	
Progression Factor		1.00		0.28	0.28					1.00	1.00	
Incremental Delay, d2		0.1		5.5	5.2					5.8	1.9	
Delay (s)		16.4		13.5	13.2					34.1	29.1	
Level of Service		B		B	B					C	C	
Approach Delay (s)		16.4			13.3			0.0			31.6	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM 2000 Control Delay			21.8			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			42.5%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 				 			
Traffic Volume (vph)	27	476	0	0	436	630	62	0	509	0	0	0
Future Volume (vph)	27	476	0	0	436	630	62	0	509	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			3.5	4.0	3.5		3.5			
Lane Util. Factor		0.95			0.95	1.00	1.00		0.88			
Frbp, ped/bikes		1.00			1.00	0.99	1.00		1.00			
Flpb, ped/bikes		1.00			1.00	1.00	1.00		1.00			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3530			3539	1563	1770		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3530			3539	1563	1770		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	517	0	0	474	685	67	0	553	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	491	0	0	0
Lane Group Flow (vph)	0	546	0	0	474	685	67	0	62	0	0	0
Confl. Peds. (#/hr)	3		16	16		3	3					3
Confl. Bikes (#/hr)			1	1			1					1
Turn Type	Split	NA			NA	Free	Prot		Prot			
Protected Phases	2	2			6		3		3			
Permitted Phases						Free						
Actuated Green, G (s)		42.8			16.2	80.0	9.0		9.0			
Effective Green, g (s)		42.8			16.2	80.0	9.0		9.0			
Actuated g/C Ratio		0.53			0.20	1.00	0.11		0.11			
Clearance Time (s)		5.0			3.5		3.5		3.5			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		1888			716	1563	199		313			
v/s Ratio Prot		0.15			c0.13		0.04		0.02			
v/s Ratio Perm						c0.44						
v/c Ratio		0.29			0.66	0.44	0.34		0.20			
Uniform Delay, d1		10.2			29.4	0.0	32.7		32.2			
Progression Factor		0.36			0.71	1.00	1.00		1.00			
Incremental Delay, d2		0.4			2.2	0.8	1.0		0.3			
Delay (s)		4.1			23.1	0.8	33.8		32.5			
Level of Service		A			C	A	C		C			
Approach Delay (s)		4.1			10.0			32.7			0.0	
Approach LOS		A			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			14.6				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			80.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			41.3%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

14: E Frontage Rd/Walnut Ave & Palomar St























Existing - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	852	97	28	1023	43	0	0	23	0	0	17
Future Volume (Veh/h)	28	852	97	28	1023	43	0	0	23	0	0	17
Sign Control		Free			Free			Stop		Stop		
Grade		0%			0%			0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	926	105	30	1112	47	0	0	25	0	0	18
Pedestrians								13				4
Lane Width (ft)								12.0				12.0
Walking Speed (ft/s)								4.0				4.0
Percent Blockage								1				0
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		267			722							
pX, platoon unblocked	0.90			0.92			0.94	0.94	0.92	0.94	0.94	0.90
vC, conflicting volume	1163			1044			1500	2274	528	1748	2304	398
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	781			883			866	1694	325	1130	1725	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			96			100	100	96	100	100	98
cM capacity (veh/h)	744			696			208	78	613	131	74	970
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1			
Volume Total	30	617	414	30	445	445	269	25	18			
Volume Left	30	0	0	30	0	0	0	0	0			
Volume Right	0	0	105	0	0	0	47	25	18			
cSH	744	1700	1700	696	1700	1700	1700	613	970			
Volume to Capacity	0.04	0.36	0.24	0.04	0.26	0.26	0.16	0.04	0.02			
Queue Length 95th (ft)	3	0	0	3	0	0	0	3	1			
Control Delay (s)	10.0	0.0	0.0	10.4	0.0	0.0	0.0	11.1	8.8			
Lane LOS	B			B				B	A			
Approach Delay (s)	0.3			0.3				11.1	8.8			
Approach LOS								B	A			
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utilization			36.8%		ICU Level of Service					A		
Analysis Period (min)			15									




















HCM 2010 Signalized Intersection Summary
 15: Industrial Blvd & Palomar St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	747	44	51	771	39	189	89	59	23	37	89
Future Volume (veh/h)	75	747	44	51	771	39	189	89	59	23	37	89
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.97		0.96	0.97		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	82	812	41	55	838	42	205	97	47	25	40	56
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	2169	109	393	2179	109	455	540	439	385	152	213
Arrive On Green	0.06	0.58	0.58	0.01	0.15	0.15	0.08	0.29	0.29	0.02	0.22	0.22
Sat Flow, veh/h	1774	4947	249	1774	4949	247	1774	1863	1515	1774	680	952
Grp Volume(v), veh/h	82	556	297	55	573	307	205	97	47	25	0	96
Grp Sat Flow(s),veh/h/ln	1774	1695	1806	1774	1695	1806	1774	1863	1515	1774	0	1633
Q Serve(g_s), s	2.0	7.0	7.0	1.3	12.2	12.3	6.5	3.1	1.8	0.9	0.0	3.9
Cycle Q Clear(g_c), s	2.0	7.0	7.0	1.3	12.2	12.3	6.5	3.1	1.8	0.9	0.0	3.9
Prop In Lane	1.00		0.14	1.00		0.14	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	344	1486	792	393	1493	795	455	540	439	385	0	365
V/C Ratio(X)	0.24	0.37	0.38	0.14	0.38	0.39	0.45	0.18	0.11	0.06	0.00	0.26
Avail Cap(c_a), veh/h	391	1486	792	459	1493	795	455	675	549	480	0	571
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	0.98	0.98	0.98	0.91	0.00	0.91
Uniform Delay (d), s/veh	12.2	10.8	10.8	11.8	24.4	24.4	20.9	21.3	20.8	23.5	0.0	25.6
Incr Delay (d2), s/veh	0.1	0.7	1.4	0.1	0.7	1.4	0.3	0.2	0.1	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.3	3.7	0.6	5.9	6.5	0.6	1.6	0.8	0.4	0.0	1.8
LnGrp Delay(d),s/veh	12.3	11.5	12.2	11.8	25.1	25.8	21.2	21.4	20.9	23.5	0.0	26.0
LnGrp LOS	B	B	B	B	C	C	C	C	C	C		C
Approach Vol, veh/h		935			935			349			121	
Approach Delay, s/veh		11.8			24.5			21.2			25.4	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	40.1	10.0	22.9	6.9	40.2	4.7	28.2				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	6.5	22.0	6.5	28.0	5.5	23.0	5.5	29.0				
Max Q Clear Time (g_c+I1), s	3.3	9.0	8.5	5.9	4.0	14.3	2.9	5.1				
Green Ext Time (p_c), s	0.0	9.3	0.0	1.2	0.0	6.7	0.0	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			19.0									
HCM 2010 LOS			B									




















HCM 2010 Signalized Intersection Summary
 16: Transit Center Place & Palomar St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	575	60	137	647	9	79	13	43	9	20	32
Future Volume (veh/h)	223	575	60	137	647	9	79	13	43	9	20	32
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.94		1.00	0.93		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	242	625	39	149	703	7	86	14	-17	10	22	14
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	2264	140	181	2098	21	429	0	515	115	232	128
Arrive On Green	0.05	0.15	0.15	0.20	0.81	0.81	0.26	0.26	0.00	0.26	0.26	0.26
Sat Flow, veh/h	1774	4879	302	1774	5189	52	1281	1863	0	234	898	495
Grp Volume(v), veh/h	242	433	231	149	459	251	86	-3	-3	46	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1791	1774	1695	1850	1281	1863	1583	1627	0	0
Q Serve(g_s), s	10.8	9.0	9.1	6.4	2.8	2.8	2.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.8	9.0	9.1	6.4	2.8	2.8	3.7	0.0	0.0	1.6	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.03	1.00		0.00	0.22		0.30
Lane Grp Cap(c), veh/h	287	1573	831	181	1371	748	429	0	0	476	0	0
V/C Ratio(X)	0.84	0.28	0.28	0.82	0.33	0.34	0.20	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	421	1573	831	266	1371	748	514	0	0	581	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.99	0.99	0.99	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.9	22.0	22.0	31.1	4.8	4.8	23.3	0.0	0.0	22.6	0.0	0.0
Incr Delay (d2), s/veh	6.3	0.4	0.8	7.9	0.7	1.2	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	4.3	4.7	3.5	1.4	1.6	1.5	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	43.2	22.4	22.8	39.0	5.5	6.0	23.5	0.0	0.0	22.7	0.0	0.0
LnGrp LOS	D	C	C	D	A	A	C			C		
Approach Vol, veh/h		906			859			80			46	
Approach Delay, s/veh		28.0			11.5			25.3			22.7	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	42.1		25.7	16.9	37.3		25.7				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	12.0	28.0		26.0	19.0	21.0		26.0				
Max Q Clear Time (g_c+I1), s	8.4	11.1		3.6	12.8	4.8		5.7				
Green Ext Time (p_c), s	0.1	9.2		0.5	0.2	9.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								

































HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	469	19	74	639	5	16	7	29	1	1	9
Future Volume (veh/h)	62	469	19	74	639	5	16	7	29	1	1	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.99	0.96		1.00	0.96		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	67	510	8	80	695	4	17	8	-1	1	1	-2
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	3541	55	138	3540	20	268	195	0	90	0	3564
Arrive On Green	0.10	1.00	1.00	0.04	0.68	0.68	0.10	0.10	0.00	0.10	0.10	0.00
Sat Flow, veh/h	1774	5158	81	3442	5217	30	1698	1863	0	17736	10497	-28232
Grp Volume(v), veh/h	67	335	183	80	451	248	17	7	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1848	1721	1695	1857	1698	1863	0	0	0	0
Q Serve(g_s), s	3.0	0.0	0.0	1.8	4.0	4.0	0.7	0.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	1.8	4.0	4.0	0.7	0.3	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.0010000	0.00		-20000.00
Lane Grp Cap(c), veh/h	85	2327	1269	138	2300	1260	268	195	0	0	0	0
V/C Ratio(X)	0.79	0.14	0.14	0.58	0.20	0.20	0.06	0.04	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	233	2327	1269	366	2300	1260	663	629	0	0	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.94	0.94	0.94	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	35.7	0.0	0.0	37.7	4.8	4.8	32.4	32.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.1	0.2	1.4	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.9	1.9	2.1	0.3	0.1	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	41.4	0.1	0.2	39.1	5.0	5.1	32.5	32.3	0.0	0.0	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	C	C				
Approach Vol, veh/h		585			779			24				0
Approach Delay, s/veh		4.9			8.5			32.4				0.0
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	59.9		13.4	7.3	59.3		13.4				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	8.5	31.0		27.0	10.5	29.0		27.0				
Max Q Clear Time (g_c+I1), s	3.8	2.0		0.0	5.0	6.0		2.7				
Green Ext Time (p_c), s	0.0	10.6		0.0	0.0	9.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.4								
HCM 2010 LOS				A								





















HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	144	252	126	131	322	92	144	366	52	98	612	214
Future Volume (veh/h)	144	252	126	131	322	92	144	366	52	98	612	214
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	157	274	99	142	350	67	157	398	23	107	665	174
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	1319	438	216	1496	275	233	1086	463	175	1026	437
Arrive On Green	0.07	0.35	0.35	0.06	0.35	0.35	0.07	0.31	0.31	0.05	0.29	0.29
Sat Flow, veh/h	3442	3719	1235	3442	4277	785	3442	3539	1509	3442	3539	1506
Grp Volume(v), veh/h	157	248	125	142	274	143	157	398	23	107	665	174
Grp Sat Flow(s),veh/h/ln	1721	1695	1564	1721	1695	1672	1721	1770	1509	1721	1770	1506
Q Serve(g_s), s	3.6	4.1	4.5	3.2	4.6	4.9	3.6	7.0	0.9	2.4	13.1	7.4
Cycle Q Clear(g_c), s	3.6	4.1	4.5	3.2	4.6	4.9	3.6	7.0	0.9	2.4	13.1	7.4
Prop In Lane	1.00		0.79	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	1202	555	216	1186	585	233	1086	463	175	1026	437
V/C Ratio(X)	0.67	0.21	0.23	0.66	0.23	0.24	0.67	0.37	0.05	0.61	0.65	0.40
Avail Cap(c_a), veh/h	258	1202	555	258	1186	585	258	1194	509	258	1194	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	18.0	18.1	36.7	18.4	18.5	36.4	21.7	19.5	37.2	24.8	22.8
Incr Delay (d2), s/veh	5.9	0.4	0.9	3.8	0.5	1.0	5.9	0.2	0.0	3.5	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.0	2.1	1.7	2.2	2.4	1.9	3.5	0.4	1.2	6.5	3.2
LnGrp Delay(d),s/veh	42.4	18.4	19.1	40.5	18.9	19.5	42.4	21.9	19.6	40.7	25.9	23.5
LnGrp LOS	D	B	B	D	B	B	D	C	B	D	C	C
Approach Vol, veh/h		530			559			578			946	
Approach Delay, s/veh		25.6			24.5			27.4			27.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	33.4	9.4	28.2	9.4	33.0	8.1	29.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	6.0	28.0	6.0	27.0	6.0	28.0	6.0	27.0				
Max Q Clear Time (g_c+I1), s	5.2	6.5	5.6	15.1	5.6	6.9	4.4	9.0				
Green Ext Time (p_c), s	0.0	6.0	0.0	6.2	0.0	5.9	0.0	8.0				
Intersection Summary												
HCM 2010 Ctrl Delay				26.3								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St

























Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	74	1	8	32	132	7	71	42	88	8	12
Future Volume (veh/h)	21	74	1	8	32	132	7	71	42	88	8	12
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.96	0.97		0.95	0.98		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	23	80	0	9	35	44	8	77	46	96	9	-4
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	150	128	13	52	65	611	253	151	510	440	0
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.24	0.24	0.24	0.24	0.24	0.00
Sat Flow, veh/h	1774	1863	1583	171	665	835	1370	1072	641	1239	1863	0
Grp Volume(v), veh/h	23	80	0	88	0	0	8	0	123	96	5	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1671	0	0	1370	0	1713	1239	1863	0
Q Serve(g_s), s	0.3	1.0	0.0	1.3	0.0	0.0	0.1	0.0	1.5	1.7	0.1	0.0
Cycle Q Clear(g_c), s	0.3	1.0	0.0	1.3	0.0	0.0	0.2	0.0	1.5	3.2	0.1	0.0
Prop In Lane	1.00		1.00	0.10		0.50	1.00		0.37	1.00		0.00
Lane Grp Cap(c), veh/h	143	150	128	130	0	0	611	0	404	510	440	0
V/C Ratio(X)	0.16	0.53	0.00	0.68	0.00	0.00	0.01	0.00	0.30	0.19	0.01	0.00
Avail Cap(c_a), veh/h	1862	1955	1661	1753	0	0	1283	0	1244	1118	1353	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.6	10.9	0.0	11.1	0.0	0.0	7.3	0.0	7.8	9.1	7.2	0.0
Incr Delay (d2), s/veh	0.5	2.9	0.0	6.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.0	0.8	0.0	0.0	0.0	0.0	0.7	0.6	0.0	0.0
LnGrp Delay(d),s/veh	11.1	13.9	0.0	17.1	0.0	0.0	7.3	0.0	8.2	9.3	7.3	0.0
LnGrp LOS	B	B		B			A		A	A	A	
Approach Vol, veh/h		103			88			131			101	
Approach Delay, s/veh		13.2			17.1			8.2			9.2	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		7.0		10.9		6.9		10.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		18.0		26.0		18.0				
Max Q Clear Time (g_c+I1), s		3.0		5.2		3.3		3.5				
Green Ext Time (p_c), s		0.4		0.8		0.4		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				11.5								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

20: Broadway & Anita St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	89	62	53	120	84	36	317	43	59	219	67
Future Volume (veh/h)	60	89	62	53	120	84	36	317	43	59	219	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	65	97	51	58	130	19	39	345	31	64	238	44
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	370	309	324	370	309	704	1696	151	653	1569	285
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.02	0.52	0.52	0.03	0.53	0.53
Sat Flow, veh/h	1230	1863	1554	1231	1863	1554	1774	3277	292	1774	2977	540
Grp Volume(v), veh/h	65	97	51	58	130	19	39	185	191	64	140	142
Grp Sat Flow(s),veh/h/ln	1230	1863	1554	1231	1863	1554	1774	1770	1800	1774	1770	1747
Q Serve(g_s), s	2.6	2.4	1.5	2.3	3.3	0.5	0.6	3.1	3.1	0.9	2.2	2.3
Cycle Q Clear(g_c), s	5.9	2.4	1.5	4.6	3.3	0.5	0.6	3.1	3.1	0.9	2.2	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.31
Lane Grp Cap(c), veh/h	304	370	309	324	370	309	704	916	932	653	933	921
V/C Ratio(X)	0.21	0.26	0.17	0.18	0.35	0.06	0.06	0.20	0.20	0.10	0.15	0.15
Avail Cap(c_a), veh/h	945	1343	1120	966	1343	1120	808	916	932	740	933	921
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	18.3	18.0	20.3	18.7	17.6	5.8	7.0	7.0	5.7	6.6	6.6
Incr Delay (d2), s/veh	0.3	0.4	0.2	0.3	0.6	0.1	0.0	0.5	0.5	0.1	0.3	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	0.9	1.3	0.6	0.8	1.7	0.2	0.3	1.6	1.7	0.4	1.1	1.2
LnGrp Delay(d),s/veh	21.5	18.7	18.2	20.5	19.2	17.7	5.9	7.5	7.5	5.8	6.9	6.9
LnGrp LOS	C	B	B	C	B	B	A	A	A	A	A	A
Approach Vol, veh/h		213			207			415			346	
Approach Delay, s/veh		19.4			19.5			7.4			6.7	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.8	4.8	33.5		15.8	5.4	33.0				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		39.0	4.5	28.0		39.0	4.5	28.0				
Max Q Clear Time (g_c+I1), s		7.9	2.6	4.3		6.6	2.9	5.1				
Green Ext Time (p_c), s		2.0	0.0	3.9		2.0	0.0	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay			11.5									
HCM 2010 LOS			B									

HCM Unsignalized Intersection Capacity Analysis

21: Main St & I-5 SB Ramps

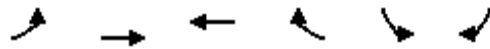
Existing - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↶	↶	↶	↶
Traffic Volume (veh/h)	4	43	53	223	434	13
Future Volume (Veh/h)	4	43	53	223	434	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	47	58	242	472	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						14
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			809			
pX, platoon unblocked						
vC, conflicting volume	58				113	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	58				113	58
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				46	99
cM capacity (veh/h)	1546				881	1008
Direction, Lane #	EB 1	WB 1	WB 2	SB 1		
Volume Total	51	58	242	486		
Volume Left	4	0	0	472		
Volume Right	0	0	242	14		
cSH	1546	1700	1700	907		
Volume to Capacity	0.00	0.03	0.14	0.54		
Queue Length 95th (ft)	0	0	0	81		
Control Delay (s)	0.6	0.0	0.0	13.5		
Lane LOS	A			B		
Approach Delay (s)	0.6	0.0		13.5		
Approach LOS				B		
Intersection Summary						
Average Delay			7.9			
Intersection Capacity Utilization			36.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM 2010 Signalized Intersection Summary
 22: Main St & I-5 NB Ramps





















Existing - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	13	461	253	413	344	25		
Future Volume (veh/h)	13	461	253	413	344	25		
Number	5	2	6	16	7	14		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	14	501	275	-5	374	1		
Adj No. of Lanes	1	1	1	1	1	1		
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	18	1094	966	821	436	389		
Arrive On Green	0.01	0.59	0.52	0.00	0.25	0.25		
Sat Flow, veh/h	1774	1863	1863	1583	1774	1583		
Grp Volume(v), veh/h	14	501	275	-5	374	1		
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1583	1774	1583		
Q Serve(g_s), s	0.5	9.1	5.0	0.0	12.1	0.0		
Cycle Q Clear(g_c), s	0.5	9.1	5.0	0.0	12.1	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	18	1094	966	821	436	389		
V/C Ratio(X)	0.76	0.46	0.28	-0.01	0.86	0.00		
Avail Cap(c_a), veh/h	133	1094	966	821	621	554		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	29.6	7.0	8.2	0.0	21.6	17.1		
Incr Delay (d2), s/veh	46.4	1.4	0.7	0.0	8.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	5.0	2.7	0.0	6.9	0.0		
LnGrp Delay(d),s/veh	76.0	8.4	8.9	0.0	29.9	17.1		
LnGrp LOS	E	A	A		C	B		
Approach Vol, veh/h		515	270		375			
Approach Delay, s/veh		10.2	9.1		29.9			
Approach LOS		B	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.3		19.7	4.1	36.1		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		29.0		21.0	4.5	21.0		
Max Q Clear Time (g_c+I1), s		11.1		14.1	2.5	7.0		
Green Ext Time (p_c), s		4.5		0.7	0.0	4.1		
Intersection Summary								
HCM 2010 Ctrl Delay			16.3					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

Existing - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	601	36	94	685	40	35	47	85	28	41	94
Future Volume (veh/h)	50	601	36	94	685	40	35	47	85	28	41	94
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	653	16	102	745	40	38	51	31	30	45	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	497	1368	34	497	1323	71	222	148	90	227	121	113
Arrive On Green	0.28	0.39	0.39	0.28	0.39	0.39	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	3528	86	1774	3411	183	1294	1075	653	1300	876	818
Grp Volume(v), veh/h	54	327	342	102	386	399	38	0	82	30	0	87
Grp Sat Flow(s),veh/h/ln	1774	1770	1844	1774	1770	1824	1294	0	1728	1300	0	1694
Q Serve(g_s), s	1.6	9.7	9.7	3.1	11.9	11.9	1.9	0.0	3.0	1.5	0.0	3.2
Cycle Q Clear(g_c), s	1.6	9.7	9.7	3.1	11.9	11.9	5.2	0.0	3.0	4.5	0.0	3.2
Prop In Lane	1.00		0.05	1.00		0.10	1.00		0.38	1.00		0.48
Lane Grp Cap(c), veh/h	497	686	715	497	686	707	222	0	239	227	0	234
V/C Ratio(X)	0.11	0.48	0.48	0.21	0.56	0.56	0.17	0.00	0.34	0.13	0.00	0.37
Avail Cap(c_a), veh/h	497	686	715	497	686	707	508	0	621	515	0	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	16.0	16.0	19.1	16.7	16.7	29.6	0.0	27.1	29.2	0.0	27.3
Incr Delay (d2), s/veh	0.4	2.4	2.3	0.9	3.3	3.2	0.4	0.0	0.8	0.3	0.0	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	0.8	5.2	5.4	1.6	6.4	6.6	0.7	0.0	1.5	0.5	0.0	1.6
LnGrp Delay(d),s/veh	19.0	18.4	18.3	20.1	20.0	19.9	30.0	0.0	28.0	29.4	0.0	28.2
LnGrp LOS	B	B	B	C	C	B	C		C	C		C
Approach Vol, veh/h		723			887			120			117	
Approach Delay, s/veh		18.4			20.0			28.6			28.5	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	32.0		14.6	23.0	32.0		14.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	19.5	27.0		25.0	19.5	27.0		25.0				
Max Q Clear Time (g_c+I1), s	5.1	11.7		6.5	3.6	13.9		7.2				
Green Ext Time (p_c), s	0.2	7.8		1.1	0.1	7.1		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				20.5								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

24: Broadway & Main St













Existing - AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	363	56	143	596	136	128	257	155	114	169	119
Future Volume (veh/h)	92	363	56	143	596	136	128	257	155	114	169	119
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	100	395	61	155	648	148	139	279	168	124	184	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	902	393	190	1027	448	172	1226	536	157	1197	535
Arrive On Green	0.07	0.25	0.25	0.11	0.29	0.29	0.10	0.35	0.35	0.09	0.34	0.00
Sat Flow, veh/h	1774	3539	1542	1774	3539	1545	1774	3539	1549	1774	3539	1583
Grp Volume(v), veh/h	100	395	61	155	648	148	139	279	168	124	184	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1542	1774	1770	1545	1774	1770	1549	1774	1770	1583
Q Serve(g_s), s	4.9	8.3	2.7	7.6	14.1	6.7	6.8	5.0	7.1	6.1	3.2	0.0
Cycle Q Clear(g_c), s	4.9	8.3	2.7	7.6	14.1	6.7	6.8	5.0	7.1	6.1	3.2	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	128	902	393	190	1027	448	172	1226	536	157	1197	535
V/C Ratio(X)	0.78	0.44	0.16	0.81	0.63	0.33	0.81	0.23	0.31	0.79	0.15	0.00
Avail Cap(c_a), veh/h	220	1476	643	280	1596	697	220	1226	536	340	1197	535
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	0.00
Uniform Delay (d), s/veh	40.5	27.7	25.6	38.7	27.4	24.7	39.3	20.6	21.3	39.6	20.5	0.0
Incr Delay (d2), s/veh	9.9	0.3	0.2	11.0	0.6	0.4	15.9	0.4	1.5	8.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.1	1.2	4.3	6.9	2.9	4.1	2.5	3.2	3.3	1.6	0.0
LnGrp Delay(d),s/veh	50.4	28.1	25.8	49.8	28.0	25.2	55.1	21.0	22.8	48.1	20.8	0.0
LnGrp LOS	D	C	C	D	C	C	E	C	C	D	C	
Approach Vol, veh/h		556			951			586			308	
Approach Delay, s/veh		31.8			31.1			29.6			31.8	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	27.6	12.6	35.0	10.4	30.7	11.9	35.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	14.0	37.0	11.0	30.0	11.0	40.0	17.0	24.0				
Max Q Clear Time (g_c+I1), s	9.6	10.3	8.8	5.2	6.9	16.1	8.1	9.1				
Green Ext Time (p_c), s	0.1	8.6	0.1	3.6	0.1	8.3	0.2	3.1				
Intersection Summary												
HCM 2010 Ctrl Delay			31.0									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis

1: Bay Blvd & L St





















Existing - PM

							
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Sign Control	Stop		Stop			Stop	
Traffic Volume (vph)	411	65	50	905	71	105	
Future Volume (vph)	411	65	50	905	71	105	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	447	71	54	984	77	114	
Direction, Lane #	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	447	36	36	54	984	77	114
Volume Left (vph)	447	0	0	0	0	77	0
Volume Right (vph)	0	36	36	0	984	0	0
Hadj (s)	0.23	-0.57	-0.57	0.03	-0.57	0.53	0.03
Departure Headway (s)	4.8	3.2	3.2	5.5	3.2	6.3	5.8
Degree Utilization, x	0.60	0.03	0.03	0.08	0.87	0.13	0.18
Capacity (veh/h)	725	1121	1121	592	1116	538	583
Control Delay (s)	14.7	6.3	6.3	9.0	23.3	9.1	8.9
Approach Delay (s)	13.6			22.6		9.0	
Approach LOS	B			C		A	
Intersection Summary							
Delay			18.4				
Level of Service			C				
Intersection Capacity Utilization			66.6%		ICU Level of Service		C
Analysis Period (min)			15				

HCM 2010 Signalized Intersection Summary

2: Industrial Blvd/Driveway & L St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	583	405	285	374	8	83	8	281	4	10	5
Future Volume (veh/h)	6	583	405	285	374	8	83	8	281	4	10	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	7	634	258	310	407	8	90	9	47	4	11	3
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	1536	684	364	2249	44	275	14	147	102	106	24
Arrive On Green	0.01	0.43	0.43	0.21	0.63	0.63	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1774	3539	1576	1774	3550	70	1476	148	1556	161	1122	257
Grp Volume(v), veh/h	7	634	258	310	203	212	99	0	47	18	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1576	1774	1770	1850	1624	0	1556	1539	0	0
Q Serve(g_s), s	0.2	6.3	5.6	8.5	2.4	2.4	0.0	0.0	1.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.3	5.6	8.5	2.4	2.4	2.7	0.0	1.4	2.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.04	0.91		1.00	0.22		0.17
Lane Grp Cap(c), veh/h	10	1536	684	364	1121	1172	289	0	147	232	0	0
V/C Ratio(X)	0.71	0.41	0.38	0.85	0.18	0.18	0.34	0.00	0.32	0.08	0.00	0.00
Avail Cap(c_a), veh/h	157	1536	684	367	1121	1172	716	0	614	731	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.2	9.9	9.7	19.4	3.8	3.8	22.0	0.0	21.4	21.0	0.0	0.0
Incr Delay (d2), s/veh	64.7	0.8	1.6	17.1	0.4	0.3	0.7	0.0	1.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.2	2.7	5.9	1.2	1.3	1.4	0.0	0.7	0.2	0.0	0.0
LnGrp Delay(d),s/veh	89.8	10.7	11.3	36.5	4.2	4.2	22.7	0.0	22.7	21.1	0.0	0.0
LnGrp LOS	F	B	B	D	A	A	C		C	C		
Approach Vol, veh/h		899			725			146			18	
Approach Delay, s/veh		11.5			18.0			22.7			21.1	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	27.0		9.8	3.8	37.1		9.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	10.5	22.0		20.0	4.5	28.0		20.0				
Max Q Clear Time (g_c+I1), s	10.5	8.3		4.7	2.2	4.4		4.7				
Green Ext Time (p_c), s	0.0	6.3		0.6	0.0	8.2		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			15.1									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

3: Broadway & L St












Existing - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	579	224	140	359	80	141	554	135	85	729	110
Future Volume (veh/h)	83	579	224	140	359	80	141	554	135	85	729	110
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	90	629	243	152	390	87	153	602	147	92	792	120
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	942	412	185	877	194	186	1296	730	118	1160	608
Arrive On Green	0.07	0.27	0.27	0.10	0.31	0.31	0.11	0.37	0.37	0.07	0.33	0.33
Sat Flow, veh/h	1774	3539	1549	1774	2872	634	1774	3539	1542	1774	3539	1540
Grp Volume(v), veh/h	90	629	243	152	239	238	153	602	147	92	792	120
Grp Sat Flow(s),veh/h/ln	1774	1770	1549	1774	1770	1736	1774	1770	1542	1774	1770	1540
Q Serve(g_s), s	4.6	14.5	12.5	7.7	9.9	10.1	7.7	11.9	5.1	4.7	17.7	4.7
Cycle Q Clear(g_c), s	4.6	14.5	12.5	7.7	9.9	10.1	7.7	11.9	5.1	4.7	17.7	4.7
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	942	412	185	541	530	186	1296	730	118	1160	608
V/C Ratio(X)	0.78	0.67	0.59	0.82	0.44	0.45	0.82	0.46	0.20	0.78	0.68	0.20
Avail Cap(c_a), veh/h	213	1276	559	233	657	645	233	1296	730	233	1160	608
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	42.1	30.0	29.2	40.1	25.5	25.6	40.1	22.2	14.2	42.1	26.6	18.3
Incr Delay (d2), s/veh	10.7	0.8	1.3	16.8	0.6	0.6	17.0	1.2	0.6	10.5	3.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	7.2	5.5	4.6	4.9	4.9	4.7	6.0	2.3	2.6	9.2	2.1
LnGrp Delay(d),s/veh	52.8	30.8	30.6	57.0	26.1	26.2	57.1	23.4	14.8	52.5	29.9	19.0
LnGrp LOS	D	C	C	E	C	C	E	C	B	D	C	B
Approach Vol, veh/h		962			629			902			1004	
Approach Delay, s/veh		32.8			33.6			27.7			30.7	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.6	29.4	13.6	35.0	10.0	33.0	10.1	38.5				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	33.0	12.0	30.0	11.0	34.0	12.0	30.0				
Max Q Clear Time (g_c+I1), s	9.7	16.5	9.7	19.7	6.6	12.1	6.7	13.9				
Green Ext Time (p_c), s	0.1	7.3	0.1	6.7	0.1	8.4	0.1	9.2				
Intersection Summary												
HCM 2010 Ctrl Delay			31.0									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis

4: Bay Blvd & I-5 SB Ramps

Existing - PM

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	820	152	7	404	101
Future Volume (Veh/h)	25	820	152	7	404	101
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	891	165	8	439	110
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1157	169			165	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1157	169			165	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	82	0			69	
cM capacity (veh/h)	150	875			1413	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	918	173	439	110		
Volume Left	27	0	439	0		
Volume Right	891	8	0	0		
cSH	901	1700	1413	1700		
Volume to Capacity	1.02	0.10	0.31	0.06		
Queue Length 95th (ft)	490	0	33	0		
Control Delay (s)	56.2	0.0	8.7	0.0		
Lane LOS	F		A			
Approach Delay (s)	56.2	0.0	6.9			
Approach LOS	F					
Intersection Summary						
Average Delay			33.8			
Intersection Capacity Utilization			65.9%		ICU Level of Service	C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

Existing - PM



















Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	255	176	360	118	399	316
Future Volume (vph)	255	176	360	118	399	316
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	277	191	391	128	434	343
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	277	191	391	128	434	343
Volume Left (vph)	277	0	391	0	0	0
Volume Right (vph)	0	191	0	0	0	343
Hadj (s)	0.23	-0.57	0.53	0.03	0.03	-0.57
Departure Headway (s)	6.6	3.2	6.7	6.2	5.8	3.2
Degree Utilization, x	0.51	0.17	0.72	0.22	0.71	0.30
Capacity (veh/h)	507	1121	526	568	593	1113
Control Delay (s)	16.2	6.9	24.1	9.7	21.6	7.6
Approach Delay (s)	12.4		20.5		15.4	
Approach LOS	B		C		C	
Intersection Summary						
Delay			16.1			
Level of Service			C			
Intersection Capacity Utilization			65.1%	ICU Level of Service		C
Analysis Period (min)			15			

HCM 2010 Signalized Intersection Summary

6: Industrial Blvd & Moss St

























Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	6	14	26	3	228	9	187	14	240	308	2
Future Volume (veh/h)	22	6	14	26	3	228	9	187	14	240	308	2
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	24	7	15	28	3	248	10	203	15	261	335	2
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	9	19	32	3	282	13	257	19	293	377	2
Arrive On Green	0.03	0.03	0.03	0.20	0.20	0.20	0.16	0.16	0.16	0.37	0.37	0.37
Sat Flow, veh/h	892	260	558	161	17	1422	81	1636	121	795	1021	6
Grp Volume(v), veh/h	46	0	0	279	0	0	228	0	0	598	0	0
Grp Sat Flow(s),veh/h/ln	1711	0	0	1600	0	0	1837	0	0	1822	0	0
Q Serve(g_s), s	2.2	0.0	0.0	14.0	0.0	0.0	9.9	0.0	0.0	25.5	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	14.0	0.0	0.0	9.9	0.0	0.0	25.5	0.0	0.0
Prop In Lane	0.52		0.33	0.10		0.89	0.04		0.07	0.44		0.00
Lane Grp Cap(c), veh/h	58	0	0	318	0	0	288	0	0	672	0	0
V/C Ratio(X)	0.79	0.00	0.00	0.88	0.00	0.00	0.79	0.00	0.00	0.89	0.00	0.00
Avail Cap(c_a), veh/h	372	0	0	367	0	0	621	0	0	880	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.7	0.0	0.0	32.2	0.0	0.0	33.6	0.0	0.0	24.6	0.0	0.0
Incr Delay (d2), s/veh	20.5	0.0	0.0	18.9	0.0	0.0	4.8	0.0	0.0	9.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	7.9	0.0	0.0	5.4	0.0	0.0	14.5	0.0	0.0
LnGrp Delay(d),s/veh	60.2	0.0	0.0	51.2	0.0	0.0	38.5	0.0	0.0	33.7	0.0	0.0
LnGrp LOS	E			D			D			C		
Approach Vol, veh/h		46			279			228			598	
Approach Delay, s/veh		60.2			51.2			38.5			33.7	
Approach LOS		E			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		7.8		35.6		21.5		18.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		18.0		40.0		19.0		28.0				
Max Q Clear Time (g_c+I1), s		4.2		27.5		16.0		11.9				
Green Ext Time (p_c), s		0.1		3.0		0.5		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				39.9								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary

7: Broadway & Moss St

















Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	140	64	64	143	54	83	677	49	92	907	50
Future Volume (veh/h)	37	140	64	64	143	54	83	677	49	92	907	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	40	152	70	70	155	59	90	736	53	100	986	54
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	400	327	89	442	362	115	1328	96	128	1380	76
Arrive On Green	0.03	0.21	0.21	0.05	0.24	0.24	0.06	0.40	0.40	0.07	0.41	0.41
Sat Flow, veh/h	1774	1863	1524	1774	1863	1528	1774	3336	240	1774	3403	186
Grp Volume(v), veh/h	40	152	70	70	155	59	90	390	399	100	513	527
Grp Sat Flow(s),veh/h/ln	1774	1863	1524	1774	1863	1528	1774	1770	1807	1774	1770	1819
Q Serve(g_s), s	1.4	4.5	2.4	2.5	4.4	2.0	3.2	10.9	10.9	3.6	15.6	15.6
Cycle Q Clear(g_c), s	1.4	4.5	2.4	2.5	4.4	2.0	3.2	10.9	10.9	3.6	15.6	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.10
Lane Grp Cap(c), veh/h	49	400	327	89	442	362	115	704	719	128	718	738
V/C Ratio(X)	0.82	0.38	0.21	0.79	0.35	0.16	0.78	0.55	0.55	0.78	0.71	0.71
Avail Cap(c_a), veh/h	125	959	784	125	959	786	125	704	719	180	718	738
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	21.5	20.7	30.1	20.3	19.4	29.5	14.9	14.9	29.2	16.0	16.0
Incr Delay (d2), s/veh	27.8	0.6	0.3	19.7	0.5	0.2	25.3	3.1	3.1	13.3	6.0	5.8
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	1.1	2.3	1.0	1.7	2.3	0.8	2.4	5.9	6.0	2.2	8.7	9.0
LnGrp Delay(d),s/veh	58.8	22.1	21.1	49.8	20.8	19.6	54.8	18.0	18.0	42.6	22.0	21.8
LnGrp LOS	E	C	C	D	C	B	D	B	B	D	C	C
Approach Vol, veh/h		262			284			879			1140	
Approach Delay, s/veh		27.4			27.7			21.8			23.7	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	18.8	7.7	31.0	5.3	20.2	8.1	30.5				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	33.0	4.5	26.0	4.5	33.0	6.5	24.0				
Max Q Clear Time (g_c+I1), s	4.5	6.5	5.2	17.6	3.4	6.4	5.6	12.9				
Green Ext Time (p_c), s	0.0	2.2	0.0	6.2	0.0	2.2	0.0	7.7				
Intersection Summary												
HCM 2010 Ctrl Delay			23.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary






















8: Industrial Blvd & Naples St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	20	21	93	24	159	18	53	100	199	57	0
Future Volume (veh/h)	16	20	21	93	24	159	18	53	100	199	57	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		0.95	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	17	22	11	101	26	147	20	58	67	216	62	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	41	20	134	35	195	32	94	108	297	85	0
Arrive On Green	0.05	0.05	0.05	0.21	0.21	0.21	0.13	0.13	0.13	0.20	0.20	0.00
Sat Flow, veh/h	604	782	391	624	161	908	241	700	808	1449	416	0
Grp Volume(v), veh/h	50	0	0	274	0	0	145	0	0	278	0	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1693	0	0	1749	0	0	1865	0	0
Q Serve(g_s), s	1.4	0.0	0.0	7.7	0.0	0.0	4.0	0.0	0.0	7.1	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	7.7	0.0	0.0	4.0	0.0	0.0	7.1	0.0	0.0
Prop In Lane	0.34		0.22	0.37		0.54	0.14		0.46	0.78		0.00
Lane Grp Cap(c), veh/h	93	0	0	364	0	0	234	0	0	382	0	0
V/C Ratio(X)	0.54	0.00	0.00	0.75	0.00	0.00	0.62	0.00	0.00	0.73	0.00	0.00
Avail Cap(c_a), veh/h	701	0	0	702	0	0	759	0	0	810	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.4	0.0	0.0	18.6	0.0	0.0	20.7	0.0	0.0	18.8	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.0	0.0	3.2	0.0	0.0	2.7	0.0	0.0	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	3.9	0.0	0.0	2.1	0.0	0.0	3.9	0.0	0.0
LnGrp Delay(d),s/veh	28.2	0.0	0.0	21.8	0.0	0.0	23.4	0.0	0.0	21.5	0.0	0.0
LnGrp LOS	C			C			C			C		
Approach Vol, veh/h		50			274			145			278	
Approach Delay, s/veh		28.2			21.8			23.4			21.5	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		7.6		15.4		15.9		11.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		22.0		21.0		22.0				
Max Q Clear Time (g_c+I1), s		3.4		9.1		9.7		6.0				
Green Ext Time (p_c), s		0.2		1.2		1.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				22.4								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 9: Broadway & Naples St























Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	230	79	108	154	63	96	573	114	86	865	73
Future Volume (veh/h)	148	230	79	108	154	63	96	573	114	86	865	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.94	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	161	250	54	117	167	11	104	623	109	93	940	68
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	394	85	148	448	358	133	1083	189	120	1187	86
Arrive On Green	0.11	0.27	0.27	0.08	0.24	0.24	0.07	0.36	0.36	0.07	0.36	0.36
Sat Flow, veh/h	1774	1468	317	1774	1863	1491	1774	2975	519	1774	3327	241
Grp Volume(v), veh/h	161	0	304	117	167	11	104	370	362	93	500	508
Grp Sat Flow(s),veh/h/ln	1774	0	1786	1774	1863	1491	1774	1770	1724	1774	1770	1798
Q Serve(g_s), s	7.0	0.0	11.8	5.1	5.9	0.4	4.5	13.2	13.3	4.0	19.9	19.9
Cycle Q Clear(g_c), s	7.0	0.0	11.8	5.1	5.9	0.4	4.5	13.2	13.3	4.0	19.9	19.9
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.30	1.00		0.13
Lane Grp Cap(c), veh/h	198	0	479	148	448	358	133	644	628	120	631	642
V/C Ratio(X)	0.81	0.00	0.63	0.79	0.37	0.03	0.78	0.57	0.58	0.78	0.79	0.79
Avail Cap(c_a), veh/h	237	0	660	192	641	513	170	644	628	192	631	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	34.1	0.0	25.3	35.3	24.9	22.8	35.7	20.1	20.1	36.0	22.6	22.6
Incr Delay (d2), s/veh	16.5	0.0	1.4	15.2	0.5	0.0	16.6	3.7	3.8	10.3	9.8	9.7
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	4.3	0.0	6.0	3.1	3.1	0.2	2.8	7.0	6.9	2.3	11.3	11.5
LnGrp Delay(d),s/veh	50.5	0.0	26.7	50.4	25.4	22.8	52.3	23.7	23.9	46.4	32.4	32.3
LnGrp LOS	D		C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		465			295			836			1101	
Approach Delay, s/veh		35.0			35.2			27.4			33.5	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	26.1	9.4	33.0	12.2	23.9	8.8	33.6				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	8.5	29.0	7.5	28.0	10.5	27.0	8.5	27.0				
Max Q Clear Time (g_c+I1), s	7.1	13.8	6.5	21.9	9.0	7.9	6.0	15.3				
Green Ext Time (p_c), s	0.0	2.4	0.0	4.6	0.1	2.6	0.0	7.8				
Intersection Summary												
HCM 2010 Ctrl Delay			32.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary












10: Broadway & Oxford St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	200	211	92	135	91	256	667	66	154	875	211
Future Volume (veh/h)	186	200	211	92	135	91	256	667	66	154	875	211
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.92	1.00		0.93	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	202	217	149	100	147	84	278	725	62	167	951	206
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	466	370	127	205	117	306	1335	114	199	988	214
Arrive On Green	0.13	0.25	0.25	0.07	0.19	0.19	0.17	0.41	0.41	0.11	0.35	0.35
Sat Flow, veh/h	1774	1863	1480	1774	1075	614	1774	3279	280	1774	2849	616
Grp Volume(v), veh/h	202	217	149	100	0	231	278	391	396	167	590	567
Grp Sat Flow(s),veh/h/ln	1774	1863	1480	1774	0	1690	1774	1770	1790	1774	1770	1695
Q Serve(g_s), s	11.9	10.6	9.0	5.9	0.0	13.7	16.4	17.9	18.0	9.8	34.9	35.0
Cycle Q Clear(g_c), s	11.9	10.6	9.0	5.9	0.0	13.7	16.4	17.9	18.0	9.8	34.9	35.0
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.16	1.00		0.36
Lane Grp Cap(c), veh/h	232	466	370	127	0	322	306	720	728	199	614	588
V/C Ratio(X)	0.87	0.47	0.40	0.79	0.00	0.72	0.91	0.54	0.54	0.84	0.96	0.96
Avail Cap(c_a), veh/h	258	466	370	258	0	380	308	720	728	308	614	588
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	34.0	33.4	48.8	0.0	40.5	43.3	24.1	24.1	46.4	34.2	34.2
Incr Delay (d2), s/veh	24.2	0.7	0.7	10.4	0.0	5.3	29.0	2.9	2.9	11.5	28.0	29.4
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	7.4	5.5	3.7	3.3	0.0	6.8	10.5	9.3	9.5	5.5	21.8	21.2
LnGrp Delay(d),s/veh	69.7	34.7	34.1	59.1	0.0	45.8	72.3	27.0	27.0	57.9	62.2	63.6
LnGrp LOS	E	C	C	E		D	E	C	C	E	E	E
Approach Vol, veh/h		568			331			1065			1324	
Approach Delay, s/veh		47.0			49.8			38.8			62.2	
Approach LOS		D			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	31.7	21.9	42.0	17.5	25.3	15.5	48.4				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	15.5	24.0	18.5	37.0	15.5	24.0	18.5	37.0				
Max Q Clear Time (g_c+I1), s	7.9	12.6	18.4	37.0	13.9	15.7	11.8	20.0				
Green Ext Time (p_c), s	0.1	2.6	0.0	0.0	0.1	0.8	0.2	11.4				
Intersection Summary												
HCM 2010 Ctrl Delay			50.8									
HCM 2010 LOS			D									

HCM Unsignalized Intersection Capacity Analysis
 11: Bay Blvd & Palomar St

Existing - PM

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	22	46	32	27	152	47
Future Volume (vph)	22	46	32	27	152	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	50	35	29	165	51
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	
Volume Total (vph)	24	50	35	29	216	
Volume Left (vph)	24	0	0	0	165	
Volume Right (vph)	0	50	0	29	0	
Hadj (s)	0.53	-0.67	0.03	-0.67	0.19	
Departure Headway (s)	5.7	4.5	4.9	4.2	4.7	
Degree Utilization, x	0.04	0.06	0.05	0.03	0.28	
Capacity (veh/h)	595	750	712	828	738	
Control Delay (s)	7.7	6.6	6.9	6.1	9.6	
Approach Delay (s)	7.0		6.6		9.6	
Approach LOS	A		A		A	
Intersection Summary						
Delay			8.5			
Level of Service			A			
Intersection Capacity Utilization			27.6%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

Existing - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↗					↖	↗	
Traffic Volume (vph)	0	177	106	909	94	0	0	0	0	699	0	55
Future Volume (vph)	0	177	106	909	94	0	0	0	0	699	0	55
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		3.5	3.5					5.0	5.0	
Lane Util. Factor		0.95		0.95	0.95					0.95	0.95	
Frbp, ped/bikes		0.99		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.94		1.00	1.00					1.00	0.98	
Flt Protected		1.00		0.95	0.96					0.95	0.96	
Satd. Flow (prot)		3294		1681	1700					1681	1655	
Flt Permitted		1.00		0.95	0.96					0.95	0.96	
Satd. Flow (perm)		3294		1681	1700					1681	1655	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	192	115	988	102	0	0	0	0	760	0	60
RTOR Reduction (vph)	0	84	0	0	0	0	0	0	0	0	43	0
Lane Group Flow (vph)	0	223	0	543	547	0	0	0	0	410	367	0
Confl. Peds. (#/hr)	1		15	15		1	6					6
Confl. Bikes (#/hr)			1	1								
Turn Type		NA		Split	NA					Split	NA	
Protected Phases		2		6	6					4	4	
Permitted Phases												
Actuated Green, G (s)		22.6		36.3	36.3					27.6	27.6	
Effective Green, g (s)		22.6		36.3	36.3					27.6	27.6	
Actuated g/C Ratio		0.23		0.36	0.36					0.28	0.28	
Clearance Time (s)		5.0		3.5	3.5					5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		744		610	617					463	456	
v/s Ratio Prot		c0.07		c0.32	0.32					c0.24	0.22	
v/s Ratio Perm												
v/c Ratio		0.30		0.89	0.89					0.89	0.80	
Uniform Delay, d1		32.1		30.0	29.9					34.7	33.7	
Progression Factor		1.00		0.70	0.69					1.00	1.00	
Incremental Delay, d2		1.0		9.4	8.9					18.0	9.9	
Delay (s)		33.2		30.3	29.6					52.7	43.6	
Level of Service		C		C	C					D	D	
Approach Delay (s)		33.2			30.0			0.0			48.1	
Approach LOS		C			C			A			D	
Intersection Summary												
HCM 2000 Control Delay			37.1			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			13.5			
Intersection Capacity Utilization			75.4%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St

Existing - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖		↗↗			
Traffic Volume (vph)	77	827	0	0	963	627	31	0	678	0	0	0
Future Volume (vph)	77	827	0	0	963	627	31	0	678	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			3.5	4.0	3.5		3.5			
Lane Util. Factor		0.95			0.95	1.00	1.00		0.88			
Frbp, ped/bikes		1.00			1.00	1.00	1.00		1.00			
Flpb, ped/bikes		1.00			1.00	1.00	1.00		1.00			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3524			3539	1583	1770		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3524			3539	1583	1770		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	84	899	0	0	1047	682	34	0	737	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	667	0	0	0
Lane Group Flow (vph)	0	983	0	0	1047	682	34	0	70	0	0	0
Confl. Peds. (#/hr)			14	14			1		1	1		1
Confl. Bikes (#/hr)			1	1								
Turn Type	Split	NA			NA	Free	Prot		Prot			
Protected Phases	2	2			6		3		3			
Permitted Phases						Free						
Actuated Green, G (s)		44.4			34.1	100.0	9.5		9.5			
Effective Green, g (s)		44.4			34.1	100.0	9.5		9.5			
Actuated g/C Ratio		0.44			0.34	1.00	0.10		0.10			
Clearance Time (s)		5.0			3.5		3.5		3.5			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		1564			1206	1583	168		264			
v/s Ratio Prot		c0.28			c0.30		0.02		0.03			
v/s Ratio Perm						c0.43						
v/c Ratio		0.63			0.87	0.43	0.20		0.27			
Uniform Delay, d1		21.4			30.8	0.0	41.8		42.0			
Progression Factor		0.25			0.63	1.00	1.00		1.00			
Incremental Delay, d2		1.3			6.1	0.8	0.6		0.5			
Delay (s)		6.6			25.6	0.8	42.4		42.6			
Level of Service		A			C	A	D		D			
Approach Delay (s)		6.6			15.8			42.5			0.0	
Approach LOS		A			B			D			A	
Intersection Summary												
HCM 2000 Control Delay			19.1				HCM 2000 Level of Service		B			
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			65.9%				ICU Level of Service		C			
Analysis Period (min)			15									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

14: E Frontage Rd/Walnut Ave & Palomar St























Existing - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1394	119	16	1509	48	0	0	11	0	0	22
Future Volume (Veh/h)	27	1394	119	16	1509	48	0	0	11	0	0	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1515	129	17	1640	52	0	0	12	0	0	24
Pedestrians		4						6			1	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		267			722							
pX, platoon unblocked	0.81			0.79			0.89	0.89	0.79	0.89	0.89	0.81
vC, conflicting volume	1693			1650			2252	3370	828	2528	3409	578
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1019			1291			847	2108	251	1159	2151	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			96			100	100	98	100	100	97
cM capacity (veh/h)	545			419			202	41	589	121	38	871
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1			
Volume Total	29	1010	634	17	656	656	380	12	24			
Volume Left	29	0	0	17	0	0	0	0	0			
Volume Right	0	0	129	0	0	0	52	12	24			
cSH	545	1700	1700	419	1700	1700	1700	589	871			
Volume to Capacity	0.05	0.59	0.37	0.04	0.39	0.39	0.22	0.02	0.03			
Queue Length 95th (ft)	4	0	0	3	0	0	0	2	2			
Control Delay (s)	12.0	0.0	0.0	14.0	0.0	0.0	0.0	11.2	9.3			
Lane LOS	B			B				B	A			
Approach Delay (s)	0.2			0.1				11.2	9.3			
Approach LOS								B	A			
Intersection Summary												
Average Delay			0.3									
Intersection Capacity Utilization			52.4%		ICU Level of Service				A			
Analysis Period (min)			15									




















HCM 2010 Signalized Intersection Summary
 15: Industrial Blvd & Palomar St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1241	32	76	1304	38	142	66	82	29	52	112
Future Volume (veh/h)	88	1241	32	76	1304	38	142	66	82	29	52	112
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.97		0.95	0.96		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	96	1349	28	83	1417	41	154	72	72	32	57	81
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	2737	57	315	2729	79	321	429	347	330	125	177
Arrive On Green	0.06	0.71	0.71	0.09	1.00	1.00	0.06	0.23	0.23	0.02	0.19	0.19
Sat Flow, veh/h	1774	5123	106	1774	5074	147	1774	1863	1505	1774	671	954
Grp Volume(v), veh/h	96	893	484	83	947	511	154	72	72	32	0	138
Grp Sat Flow(s),veh/h/ln	1774	1695	1839	1774	1695	1830	1774	1863	1505	1774	0	1625
Q Serve(g_s), s	2.4	11.7	11.7	2.1	0.0	0.0	6.5	3.1	3.9	1.5	0.0	7.6
Cycle Q Clear(g_c), s	2.4	11.7	11.7	2.1	0.0	0.0	6.5	3.1	3.9	1.5	0.0	7.6
Prop In Lane	1.00		0.06	1.00		0.08	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	339	1811	983	315	1823	984	321	429	347	330	0	302
V/C Ratio(X)	0.28	0.49	0.49	0.26	0.52	0.52	0.48	0.17	0.21	0.10	0.00	0.46
Avail Cap(c_a), veh/h	399	1811	983	351	1823	984	321	540	436	391	0	455
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	0.98	0.98	0.98	0.77	0.00	0.77
Uniform Delay (d), s/veh	9.4	8.4	8.4	9.7	0.0	0.0	30.1	30.8	31.1	32.1	0.0	36.2
Incr Delay (d2), s/veh	0.2	1.0	1.8	0.1	0.9	1.6	0.4	0.2	0.3	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.5	6.2	1.0	0.2	0.4	0.7	1.6	1.6	0.7	0.0	3.4
LnGrp Delay(d),s/veh	9.5	9.4	10.2	9.8	0.9	1.6	30.6	31.0	31.4	32.1	0.0	37.1
LnGrp LOS	A	A	B	A	A	A	C	C	C	C		D
Approach Vol, veh/h		1473			1541			298			170	
Approach Delay, s/veh		9.7			1.6			30.9			36.1	
Approach LOS		A			A			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	58.4	10.0	23.6	7.6	58.8	5.5	28.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	6.5	42.0	6.5	28.0	7.5	41.0	5.5	29.0				
Max Q Clear Time (g_c+I1), s	4.1	13.7	8.5	9.6	4.4	2.0	3.5	5.9				
Green Ext Time (p_c), s	0.0	24.5	0.0	1.3	0.0	32.3	0.0	1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.2									
HCM 2010 LOS			A									




















HCM 2010 Signalized Intersection Summary
 16: Transit Center Place & Palomar St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	1037	103	93	865	33	167	22	85	36	31	149
Future Volume (veh/h)	245	1037	103	93	865	33	167	22	85	36	31	149
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.91	0.91		0.84	0.87		0.84
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	266	1127	86	101	940	33	182	24	28	39	34	141
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	2532	193	126	2183	76	293	184	215	86	80	239
Arrive On Green	0.33	1.00	1.00	0.14	0.87	0.87	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	4786	365	1774	5024	176	1099	708	826	168	308	920
Grp Volume(v), veh/h	266	798	415	101	634	339	182	0	52	214	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1761	1774	1695	1810	1099	0	1533	1396	0	0
Q Serve(g_s), s	14.3	0.0	0.0	5.5	3.9	3.9	8.8	0.0	2.6	4.7	0.0	0.0
Cycle Q Clear(g_c), s	14.3	0.0	0.0	5.5	3.9	3.9	21.8	0.0	2.6	13.0	0.0	0.0
Prop In Lane	1.00		0.21	1.00		0.10	1.00		0.54	0.18		0.66
Lane Grp Cap(c), veh/h	294	1794	932	126	1473	787	293	0	398	405	0	0
V/C Ratio(X)	0.91	0.44	0.45	0.80	0.43	0.43	0.62	0.00	0.13	0.53	0.00	0.00
Avail Cap(c_a), veh/h	426	1794	932	213	1473	787	381	0	521	514	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.7	0.0	0.0	42.2	4.0	4.0	37.0	0.0	28.3	32.1	0.0	0.0
Incr Delay (d2), s/veh	12.2	0.7	1.3	4.3	0.9	1.7	2.2	0.0	0.1	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.2	0.3	2.8	1.8	2.1	5.0	0.0	1.1	5.2	0.0	0.0
LnGrp Delay(d),s/veh	44.9	0.7	1.3	46.5	4.8	5.6	39.2	0.0	28.5	33.2	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	D		C	C		
Approach Vol, veh/h		1479			1074			234			214	
Approach Delay, s/veh		8.8			9.0			36.8			33.2	
Approach LOS		A			A			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	57.9		31.0	20.6	48.5		31.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	12.0	40.0		34.0	24.0	28.0		34.0				
Max Q Clear Time (g_c+I1), s	7.5	2.0		15.0	16.3	5.9		23.8				
Green Ext Time (p_c), s	0.0	24.9		2.5	0.2	16.8		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								























HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	881	90	232	680	5	112	28	129	2	18	57
Future Volume (veh/h)	124	881	90	232	680	5	112	28	129	2	18	57
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	0.92		0.91	0.94		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	135	958	85	252	739	4	122	30	107	2	20	50
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	2510	222	325	2773	15	383	80	286	39	112	259
Arrive On Green	0.18	1.00	1.00	0.03	0.18	0.18	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	4748	420	3442	5219	28	1223	331	1182	9	462	1070
Grp Volume(v), veh/h	135	683	360	252	480	263	122	0	137	72	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1778	1721	1695	1857	1223	0	1514	1541	0	0
Q Serve(g_s), s	7.3	0.0	0.0	7.3	12.2	12.3	3.3	0.0	7.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.3	0.0	0.0	7.3	12.2	12.3	7.0	0.0	7.5	3.7	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.02	1.00		0.78	0.03		0.69
Lane Grp Cap(c), veh/h	163	1792	940	325	1801	987	383	0	366	410	0	0
V/C Ratio(X)	0.83	0.38	0.38	0.77	0.27	0.27	0.32	0.00	0.37	0.18	0.00	0.00
Avail Cap(c_a), veh/h	328	1792	940	568	1801	987	467	0	469	514	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.77	0.77	0.77	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	40.1	0.0	0.0	47.4	24.4	24.4	31.2	0.0	31.6	30.1	0.0	0.0
Incr Delay (d2), s/veh	3.6	0.5	1.0	1.2	0.3	0.5	0.5	0.0	0.6	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.1	0.3	3.5	5.8	6.5	2.8	0.0	3.2	1.6	0.0	0.0
LnGrp Delay(d),s/veh	43.7	0.5	1.0	48.5	24.7	24.9	31.7	0.0	32.2	30.3	0.0	0.0
LnGrp LOS	D	A	A	D	C	C	C		C	C		
Approach Vol, veh/h		1178			995			259			72	
Approach Delay, s/veh		5.6			30.8			32.0			30.3	
Approach LOS		A			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.9	57.9		29.2	12.7	58.1		29.2				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	16.5	39.0		31.0	18.5	37.0		31.0				
Max Q Clear Time (g_c+I1), s	9.3	2.0		5.7	9.3	14.3		9.5				
Green Ext Time (p_c), s	0.2	19.2		1.8	0.1	14.4		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			19.1									
HCM 2010 LOS			B									





















HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	506	115	358	651	324	134	500	244	376	610	87
Future Volume (veh/h)	222	506	115	358	651	324	134	500	244	376	610	87
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.94	1.00		0.94	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	241	550	87	389	708	319	146	543	231	409	663	36
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	316	1335	206	447	1159	510	211	882	370	472	1151	490
Arrive On Green	0.03	0.10	0.10	0.13	0.34	0.34	0.06	0.25	0.25	0.14	0.33	0.33
Sat Flow, veh/h	3442	4397	679	3442	3390	1490	3442	3539	1482	3442	3539	1506
Grp Volume(v), veh/h	241	421	216	389	708	319	146	543	231	409	663	36
Grp Sat Flow(s),veh/h/ln	1721	1695	1686	1721	1695	1490	1721	1770	1482	1721	1770	1506
Q Serve(g_s), s	7.0	11.7	12.0	11.1	17.4	17.9	4.2	13.6	13.9	11.6	15.6	1.7
Cycle Q Clear(g_c), s	7.0	11.7	12.0	11.1	17.4	17.9	4.2	13.6	13.9	11.6	15.6	1.7
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	316	1029	512	447	1159	510	211	882	370	472	1151	490
V/C Ratio(X)	0.76	0.41	0.42	0.87	0.61	0.63	0.69	0.62	0.63	0.87	0.58	0.07
Avail Cap(c_a), veh/h	413	1029	512	447	1159	510	275	956	400	482	1168	497
HCM Platoon Ratio	0.33	0.33	0.33	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	0.94	0.94	0.94	0.35	0.35	0.35
Uniform Delay (d), s/veh	47.4	36.6	36.7	42.7	27.4	27.6	46.0	33.3	33.4	42.3	28.0	23.3
Incr Delay (d2), s/veh	5.7	1.1	2.4	16.4	2.4	5.7	4.6	1.0	2.6	6.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	5.6	6.0	6.3	8.5	8.2	2.1	6.8	5.9	5.9	7.6	0.7
LnGrp Delay(d),s/veh	53.1	37.7	39.1	59.0	29.8	33.3	50.6	34.3	36.0	48.3	28.3	23.4
LnGrp LOS	D	D	D	E	C	C	D	C	D	D	C	C
Approach Vol, veh/h		878			1416			920			1108	
Approach Delay, s/veh		42.3			38.6			37.3			35.5	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	35.4	10.1	37.5	13.2	39.2	17.7	29.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0	28.0	8.0	33.0	12.0	29.0	14.0	27.0				
Max Q Clear Time (g_c+I1), s	13.1	14.0	6.2	17.6	9.0	19.9	13.6	15.9				
Green Ext Time (p_c), s	0.0	9.8	0.1	8.4	0.2	6.9	0.1	6.8				
Intersection Summary												
HCM 2010 Ctrl Delay				38.3								
HCM 2010 LOS				D								

























HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	53	35	81	20	117	4	94	34	33	93	9
Future Volume (veh/h)	16	53	35	81	20	117	4	94	34	33	93	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
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	0.99		0.97	0.99		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	17	58	0	88	22	28	4	102	37	36	101	-7
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	98	84	130	32	41	512	268	97	472	387	0
Arrive On Green	0.05	0.05	0.00	0.12	0.12	0.12	0.21	0.21	0.21	0.21	0.21	0.00
Sat Flow, veh/h	1774	1863	1583	1112	278	354	1284	1292	469	1234	1863	0
Grp Volume(v), veh/h	17	58	0	138	0	0	4	0	139	36	94	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1743	0	0	1284	0	1761	1234	1863	0
Q Serve(g_s), s	0.2	0.7	0.0	1.8	0.0	0.0	0.1	0.0	1.6	0.6	1.0	0.0
Cycle Q Clear(g_c), s	0.2	0.7	0.0	1.8	0.0	0.0	1.1	0.0	1.6	2.3	1.0	0.0
Prop In Lane	1.00		1.00	0.64		0.20	1.00		0.27	1.00		0.00
Lane Grp Cap(c), veh/h	94	98	84	204	0	0	512	0	366	472	387	0
V/C Ratio(X)	0.18	0.59	0.00	0.68	0.00	0.00	0.01	0.00	0.38	0.08	0.24	0.00
Avail Cap(c_a), veh/h	1915	2010	1709	1881	0	0	1204	0	1316	1137	1392	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.9	11.2	0.0	10.2	0.0	0.0	8.4	0.0	8.2	9.2	8.0	0.0
Incr Delay (d2), s/veh	0.9	5.5	0.0	3.9	0.0	0.0	0.0	0.0	0.6	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.0	1.1	0.0	0.0	0.0	0.0	0.8	0.2	0.6	0.0
LnGrp Delay(d),s/veh	11.8	16.7	0.0	14.1	0.0	0.0	8.4	0.0	8.9	9.2	8.3	0.0
LnGrp LOS	B	B		B			A		A	A	A	
Approach Vol, veh/h		75			138			143			130	
Approach Delay, s/veh		15.6			14.1			8.8			8.6	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		6.3		10.0		7.8		10.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		18.0		26.0		18.0				
Max Q Clear Time (g_c+I1), s		2.7		4.3		3.8		3.6				
Green Ext Time (p_c), s		0.3		1.2		0.7		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				11.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 20: Broadway & Anita St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	118	40	53	85	71	38	558	68	102	656	78
Future Volume (veh/h)	92	118	40	53	85	71	38	558	68	102	656	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	100	128	27	58	92	5	41	607	58	111	713	56
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	469	385	360	469	385	412	1504	143	480	1635	128
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.02	0.46	0.46	0.06	0.49	0.49
Sat Flow, veh/h	1273	1863	1528	1210	1863	1528	1774	3251	310	1774	3313	260
Grp Volume(v), veh/h	100	128	27	58	92	5	41	330	335	111	381	388
Grp Sat Flow(s),veh/h/ln	1273	1863	1528	1210	1863	1528	1774	1770	1792	1774	1770	1804
Q Serve(g_s), s	3.9	3.2	0.8	2.4	2.3	0.1	0.7	7.2	7.3	1.9	8.2	8.2
Cycle Q Clear(g_c), s	6.2	3.2	0.8	5.6	2.3	0.1	0.7	7.2	7.3	1.9	8.2	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.14
Lane Grp Cap(c), veh/h	394	469	385	360	469	385	412	819	829	480	873	890
V/C Ratio(X)	0.25	0.27	0.07	0.16	0.20	0.01	0.10	0.40	0.40	0.23	0.44	0.44
Avail Cap(c_a), veh/h	896	1205	988	838	1205	988	504	819	829	577	873	890
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	19.8	17.7	16.7	19.9	17.3	16.5	8.3	10.4	10.4	7.7	9.6	9.6
Incr Delay (d2), s/veh	0.3	0.3	0.1	0.2	0.2	0.0	0.1	1.5	1.5	0.2	1.6	1.6
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	1.4	1.7	0.3	0.8	1.2	0.1	0.3	3.8	3.9	0.9	4.3	4.4
LnGrp Delay(d),s/veh	20.1	18.0	16.8	20.1	17.5	16.5	8.4	11.9	11.9	7.9	11.2	11.2
LnGrp LOS	C	B	B	C	B	B	A	B	B	A	B	B
Approach Vol, veh/h		255			155			706			880	
Approach Delay, s/veh		18.7			18.5			11.7			10.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.8	5.0	34.0		19.8	6.8	32.2				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		38.0	4.5	29.0		38.0	6.5	27.0				
Max Q Clear Time (g_c+I1), s		8.2	2.7	10.2		7.6	3.9	9.3				
Green Ext Time (p_c), s		1.9	0.0	8.7		1.9	0.1	8.4				
Intersection Summary												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			B									

HCM Unsignalized Intersection Capacity Analysis

21: Main St & I-5 SB Ramps

Existing - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Volume (veh/h)	20	61	61	402	624	12
Future Volume (Veh/h)	20	61	61	402	624	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	66	66	437	678	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						14
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			809			
pX, platoon unblocked						
vC, conflicting volume	66				176	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	66				176	66
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				15	99
cM capacity (veh/h)	1536				802	998

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	88	66	437	691
Volume Left	22	0	0	678
Volume Right	0	0	437	13
cSH	1536	1700	1700	818
Volume to Capacity	0.01	0.04	0.26	0.85
Queue Length 95th (ft)	1	0	0	251
Control Delay (s)	1.9	0.0	0.0	28.3
Lane LOS	A			D
Approach Delay (s)	1.9	0.0		28.3
Approach LOS				D

Intersection Summary			
Average Delay		15.4	
Intersection Capacity Utilization		52.2%	ICU Level of Service
Analysis Period (min)		15	A

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps

Existing - PM























Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	16	674	449	528	380	25		
Future Volume (veh/h)	16	674	449	528	380	25		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	17	733	488	120	413	1		
Adj No. of Lanes	1	1	1	1	1	1		
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	22	1060	928	772	469	419		
Arrive On Green	0.01	0.57	0.50	0.50	0.26	0.26		
Sat Flow, veh/h	1774	1863	1863	1550	1774	1583		
Grp Volume(v), veh/h	17	733	488	120	413	1		
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1550	1774	1583		
Q Serve(g_s), s	0.6	16.8	10.7	2.5	13.4	0.0		
Cycle Q Clear(g_c), s	0.6	16.8	10.7	2.5	13.4	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	22	1060	928	772	469	419		
V/C Ratio(X)	0.78	0.69	0.53	0.16	0.88	0.00		
Avail Cap(c_a), veh/h	133	1060	928	772	562	501		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	29.5	9.2	10.2	8.2	21.2	16.2		
Incr Delay (d2), s/veh	43.2	3.7	2.1	0.4	13.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	9.6	6.0	1.2	8.3	0.0		
LnGrp Delay(d),s/veh	72.8	12.9	12.4	8.6	34.4	16.2		
LnGrp LOS	E	B	B	A	C	B		
Approach Vol, veh/h		750	608		414			
Approach Delay, s/veh		14.3	11.6		34.3			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		39.1		20.9	4.2	34.9		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		31.0		19.0	4.5	23.0		
Max Q Clear Time (g_c+I1), s		18.8		15.4	2.6	12.7		
Green Ext Time (p_c), s		6.6		0.5	0.0	5.8		
Intersection Summary								
HCM 2010 Ctrl Delay			18.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary

























23: Industrial Blvd & Main St

Existing - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	893	73	184	818	57	43	46	133	36	90	110
Future Volume (veh/h)	36	893	73	184	818	57	43	46	133	36	90	110
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	39	971	56	200	889	59	47	50	84	39	98	60
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	469	1242	72	469	1230	82	225	115	193	241	200	123
Arrive On Green	0.26	0.37	0.37	0.26	0.37	0.37	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3395	196	1774	3362	223	1216	615	1034	1242	1071	656
Grp Volume(v), veh/h	39	506	521	200	468	480	47	0	134	39	0	158
Grp Sat Flow(s),veh/h/ln	1774	1770	1821	1774	1770	1815	1216	0	1649	1242	0	1727
Q Serve(g_s), s	1.2	18.7	18.7	6.9	16.8	16.8	2.7	0.0	5.3	2.1	0.0	6.0
Cycle Q Clear(g_c), s	1.2	18.7	18.7	6.9	16.8	16.8	8.7	0.0	5.3	7.4	0.0	6.0
Prop In Lane	1.00		0.11	1.00		0.12	1.00		0.63	1.00		0.38
Lane Grp Cap(c), veh/h	469	647	666	469	647	664	225	0	308	241	0	323
V/C Ratio(X)	0.08	0.78	0.78	0.43	0.72	0.72	0.21	0.00	0.43	0.16	0.00	0.49
Avail Cap(c_a), veh/h	469	647	666	469	647	664	410	0	559	429	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.4	20.8	20.8	22.5	20.2	20.2	30.7	0.0	26.5	29.8	0.0	26.8
Incr Delay (d2), s/veh	0.3	9.1	8.9	2.8	6.9	6.7	0.5	0.0	1.0	0.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	10.8	11.0	3.8	9.4	9.6	0.9	0.0	2.5	0.7	0.0	3.0
LnGrp Delay(d),s/veh	20.8	29.9	29.7	25.3	27.0	26.9	31.2	0.0	27.5	30.1	0.0	28.0
LnGrp LOS	C	C	C	C	C	C	C		C	C		C
Approach Vol, veh/h		1066			1148			181			197	
Approach Delay, s/veh		29.4			26.7			28.5			28.4	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	32.0		18.8	23.0	32.0		18.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	19.5	27.0		25.0	19.5	27.0		25.0				
Max Q Clear Time (g_c+I1), s	8.9	20.7		9.4	3.2	18.8		10.7				
Green Ext Time (p_c), s	0.4	5.0		1.8	0.0	6.4		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				28.1								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 24: Broadway & Main St

Existing - PM













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	663	147	258	648	233	153	346	215	263	486	147
Future Volume (veh/h)	181	663	147	258	648	233	153	346	215	263	486	147
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	197	721	160	280	704	253	166	376	234	286	528	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	1015	445	309	1179	518	194	705	306	317	950	425
Arrive On Green	0.13	0.29	0.29	0.17	0.33	0.33	0.11	0.20	0.20	0.18	0.27	0.00
Sat Flow, veh/h	1774	3539	1553	1774	3539	1554	1774	3539	1538	1774	3539	1583
Grp Volume(v), veh/h	197	721	160	280	704	253	166	376	234	286	528	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1553	1774	1770	1554	1774	1770	1538	1774	1770	1583
Q Serve(g_s), s	12.2	20.4	9.2	17.3	18.5	14.5	10.3	10.6	16.1	17.6	14.3	0.0
Cycle Q Clear(g_c), s	12.2	20.4	9.2	17.3	18.5	14.5	10.3	10.6	16.1	17.6	14.3	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	227	1015	445	309	1179	518	194	705	306	317	950	425
V/C Ratio(X)	0.87	0.71	0.36	0.91	0.60	0.49	0.85	0.53	0.76	0.90	0.56	0.00
Avail Cap(c_a), veh/h	270	1204	528	333	1331	584	206	705	306	381	950	425
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	0.00
Uniform Delay (d), s/veh	47.8	35.7	31.7	45.2	31.0	29.7	48.9	40.1	42.2	44.9	35.1	0.0
Incr Delay (d2), s/veh	22.0	1.6	0.5	26.2	0.6	0.7	26.8	2.9	16.5	21.3	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	7.4	10.1	4.0	10.7	9.1	6.3	6.5	5.5	8.2	10.5	7.3	0.0
LnGrp Delay(d),s/veh	69.8	37.3	32.2	71.4	31.6	30.4	75.7	43.0	58.7	66.3	37.5	0.0
LnGrp LOS	E	D	C	E	C	C	E	D	E	E	D	
Approach Vol, veh/h		1078			1237			776			814	
Approach Delay, s/veh		42.5			40.4			54.7			47.6	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.4	37.0	16.2	35.0	18.3	42.2	24.0	27.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	21.0	38.0	13.0	30.0	17.0	42.0	24.0	19.0				
Max Q Clear Time (g_c+I1), s	19.3	22.4	12.3	16.3	14.2	20.5	19.6	18.1				
Green Ext Time (p_c), s	0.2	9.7	0.0	5.7	0.1	11.8	0.3	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			45.3									
HCM 2010 LOS			D									

**Appendix C – 2025 Intersection LOS Worksheets – No Build
Alternative**

HCM Unsignalized Intersection Capacity Analysis

1: Bay Blvd & L St





















2025 No Build - AM

							
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Sign Control	Stop		Stop			Stop	
Traffic Volume (vph)	355	182	125	644	212	102	
Future Volume (vph)	355	182	125	644	212	102	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	386	198	136	700	230	111	
Direction, Lane #	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	386	99	99	136	700	230	111
Volume Left (vph)	386	0	0	0	0	230	0
Volume Right (vph)	0	99	99	0	700	0	0
Hadj (s)	0.23	-0.57	-0.57	0.03	-0.57	0.53	0.03
Departure Headway (s)	5.4	3.2	3.2	5.7	3.2	6.4	5.9
Degree Utilization, x	0.58	0.09	0.09	0.22	0.62	0.41	0.18
Capacity (veh/h)	638	1121	1121	582	1118	541	583
Control Delay (s)	15.8	6.5	6.5	10.3	11.3	12.5	9.0
Approach Delay (s)	12.6			11.2		11.4	
Approach LOS	B			B		B	
Intersection Summary							
Delay			11.7				
Level of Service			B				
Intersection Capacity Utilization			58.3%		ICU Level of Service		B
Analysis Period (min)			15				

HCM 2010 Signalized Intersection Summary

2: Industrial Blvd/Driveway & L St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	403	453	107	350	3	176	3	123	1	4	0
Future Volume (veh/h)	2	403	453	107	350	3	176	3	123	1	4	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	438	315	116	380	2	191	3	86	1	4	0
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1302	562	133	1593	8	325	4	517	79	251	0
Arrive On Green	0.00	0.37	0.37	0.08	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.00
Sat Flow, veh/h	1774	3539	1528	1774	3609	19	622	13	1559	22	757	0
Grp Volume(v), veh/h	2	438	315	116	186	196	194	0	86	5	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1528	1774	1770	1859	634	0	1559	779	0	0
Q Serve(g_s), s	0.1	5.3	9.8	3.9	3.9	3.9	0.9	0.0	2.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	5.3	9.8	3.9	3.9	3.9	19.0	0.0	2.3	18.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.98		1.00	0.20		0.00
Lane Grp Cap(c), veh/h	3	1302	562	133	781	820	330	0	517	330	0	0
V/C Ratio(X)	0.67	0.34	0.56	0.87	0.24	0.24	0.59	0.00	0.17	0.02	0.00	0.00
Avail Cap(c_a), veh/h	133	1302	562	133	781	820	334	0	521	336	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.8	13.6	15.1	27.4	10.4	10.4	20.3	0.0	14.2	14.5	0.0	0.0
Incr Delay (d2), s/veh	139.3	0.7	4.0	41.7	0.7	0.7	2.6	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.7	4.7	3.4	2.1	2.2	3.4	0.0	1.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	169.1	14.3	19.1	69.1	11.2	11.1	23.0	0.0	14.3	14.5	0.0	0.0
LnGrp LOS	F	B	B	E	B	B	C		B	B		
Approach Vol, veh/h		755			498			280				5
Approach Delay, s/veh		16.7			24.6			20.3				14.5
Approach LOS		B			C			C				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	27.0		24.9	3.6	31.4		24.9				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	22.0		20.0	4.5	22.0		20.0				
Max Q Clear Time (g_c+I1), s	5.9	11.8		20.6	2.1	5.9		21.0				
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0	5.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				19.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

3: Broadway & L St

2025 No Build - AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	256	234	186	203	39	147	599	176	32	461	24
Future Volume (veh/h)	36	256	234	186	203	39	147	599	176	32	461	24
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	39	278	163	202	221	27	160	651	123	35	501	16
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	685	298	231	941	114	189	1551	883	43	1259	591
Arrive On Green	0.03	0.19	0.19	0.13	0.30	0.30	0.11	0.44	0.44	0.02	0.36	0.36
Sat Flow, veh/h	1774	3539	1541	1774	3172	383	1774	3539	1545	1774	3539	1540
Grp Volume(v), veh/h	39	278	163	202	122	126	160	651	123	35	501	16
Grp Sat Flow(s),veh/h/ln	1774	1770	1541	1774	1770	1785	1774	1770	1545	1774	1770	1540
Q Serve(g_s), s	1.8	5.8	8.0	9.4	4.4	4.5	7.5	10.7	3.1	1.7	9.0	0.5
Cycle Q Clear(g_c), s	1.8	5.8	8.0	9.4	4.4	4.5	7.5	10.7	3.1	1.7	9.0	0.5
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	685	298	231	525	530	189	1551	883	43	1259	591
V/C Ratio(X)	0.80	0.41	0.55	0.87	0.23	0.24	0.85	0.42	0.14	0.81	0.40	0.03
Avail Cap(c_a), veh/h	126	1343	585	231	776	783	189	1551	883	126	1259	591
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	29.8	30.7	36.0	22.4	22.4	37.0	16.3	8.5	40.9	20.4	16.2
Incr Delay (d2), s/veh	25.5	0.4	1.6	28.5	0.2	0.2	28.0	0.8	0.3	29.0	0.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	3.5	6.4	2.2	2.2	5.1	5.3	1.4	1.2	4.5	0.2
LnGrp Delay(d),s/veh	66.2	30.1	32.2	64.5	22.6	22.7	65.0	17.1	8.9	69.9	21.3	16.3
LnGrp LOS	E	C	C	E	C	C	E	B	A	E	C	B
Approach Vol, veh/h		480			450			934			552	
Approach Delay, s/veh		33.8			41.4			24.3			24.3	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	21.3	13.0	35.0	6.3	30.0	6.0	42.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	11.0	32.0	9.0	30.0	6.0	37.0	6.0	33.0				
Max Q Clear Time (g_c+I1), s	11.4	10.0	9.5	11.0	3.8	6.5	3.7	12.7				
Green Ext Time (p_c), s	0.0	3.7	0.0	8.0	0.0	4.0	0.0	8.3				
Intersection Summary												
HCM 2010 Ctrl Delay			29.3									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis

4: Bay Blvd & I-5 SB Ramps

2025 No Build - AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	700	65	2	352	86
Future Volume (Veh/h)	93	700	65	2	352	86
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	101	761	71	2	383	93
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	931	72			71	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	931	72			71	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	55	23			75	
cM capacity (veh/h)	222	990			1529	













Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	862	73	383	93
Volume Left	101	0	383	0
Volume Right	761	2	0	0
cSH	1122	1700	1529	1700
Volume to Capacity	0.77	0.04	0.25	0.05
Queue Length 95th (ft)	200	0	25	0
Control Delay (s)	21.3	0.0	8.1	0.0
Lane LOS	C		A	
Approach Delay (s)	21.3	0.0	6.5	
Approach LOS	C			

Intersection Summary			
Average Delay		15.2	
Intersection Capacity Utilization		53.6%	ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

















2025 No Build - AM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	190	266	777	108	391	169
Future Volume (vph)	190	266	777	108	391	169
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	207	289	845	117	425	184
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	207	289	845	117	425	184
Volume Left (vph)	207	0	845	0	0	0
Volume Right (vph)	0	289	0	0	0	184
Hadj (s)	0.23	-0.57	0.53	0.03	0.03	-0.57
Departure Headway (s)	6.8	3.2	6.4	5.9	5.7	3.2
Degree Utilization, x	0.39	0.26	1.50	0.19	0.68	0.16
Capacity (veh/h)	510	1112	568	606	612	1121
Control Delay (s)	14.1	7.3	248.9	9.0	19.8	6.8
Approach Delay (s)	10.2		219.8		15.9	
Approach LOS	B		F		C	
Intersection Summary						
Delay			109.4			
Level of Service			F			
Intersection Capacity Utilization			84.2%		ICU Level of Service	E
Analysis Period (min)			15			

HCM 2010 Signalized Intersection Summary

6: Industrial Blvd & Moss St

























2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	0	0	0	128	390	87	281	0	261	396	0
Future Volume (veh/h)	186	0	0	0	128	390	87	281	0	261	396	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	202	0	0	0	139	285	95	305	0	284	430	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	0	0	0	122	250	85	274	0	228	346	0
Arrive On Green	0.13	0.00	0.00	0.00	0.22	0.22	0.20	0.20	0.00	0.31	0.31	0.00
Sat Flow, veh/h	1774	0	0	0	545	1118	437	1404	0	726	1100	0
Grp Volume(v), veh/h	202	0	0	0	0	424	400	0	0	714	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	0	0	0	1663	1841	0	0	1826	0	0
Q Serve(g_s), s	16.1	0.0	0.0	0.0	0.0	32.0	28.0	0.0	0.0	45.0	0.0	0.0
Cycle Q Clear(g_c), s	16.1	0.0	0.0	0.0	0.0	32.0	28.0	0.0	0.0	45.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.67	0.24		0.00	0.40		0.00
Lane Grp Cap(c), veh/h	226	0	0	0	0	371	360	0	0	574	0	0
V/C Ratio(X)	0.89	0.00	0.00	0.00	0.00	1.14	1.11	0.00	0.00	1.24	0.00	0.00
Avail Cap(c_a), veh/h	248	0	0	0	0	371	360	0	0	574	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.5	0.0	0.0	0.0	0.0	55.6	57.6	0.0	0.0	49.1	0.0	0.0
Incr Delay (d2), s/veh	29.5	0.0	0.0	0.0	0.0	91.1	81.1	0.0	0.0	124.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	0.0	0.0	0.0	24.0	22.3	0.0	0.0	42.4	0.0	0.0
LnGrp Delay(d),s/veh	91.1	0.0	0.0	0.0	0.0	146.7	138.7	0.0	0.0	173.2	0.0	0.0
LnGrp LOS	F					F	F			F		
Approach Vol, veh/h		202			424			400			714	
Approach Delay, s/veh		91.1			146.7			138.7			173.2	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.2		50.0		37.0		33.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		45.0		32.0		28.0				
Max Q Clear Time (g_c+I1), s		18.1		47.0		34.0		30.0				
Green Ext Time (p_c), s		0.2		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				149.3								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary

















7: Broadway & Moss St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	143	20	18	275	155	120	651	64	141	465	122
Future Volume (veh/h)	44	143	20	18	275	155	120	651	64	141	465	122
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.94	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	48	155	14	20	299	107	130	708	57	153	505	91
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	508	420	25	472	390	165	1171	94	191	1097	196
Arrive On Green	0.03	0.27	0.27	0.01	0.25	0.25	0.09	0.35	0.35	0.11	0.37	0.37
Sat Flow, veh/h	1774	1863	1540	1774	1863	1538	1774	3301	266	1774	2971	532
Grp Volume(v), veh/h	48	155	14	20	299	107	130	379	386	153	300	296
Grp Sat Flow(s),veh/h/ln	1774	1863	1540	1774	1863	1538	1774	1770	1797	1774	1770	1733
Q Serve(g_s), s	1.8	4.5	0.5	0.8	9.7	3.8	4.9	11.9	11.9	5.7	8.7	8.8
Cycle Q Clear(g_c), s	1.8	4.5	0.5	0.8	9.7	3.8	4.9	11.9	11.9	5.7	8.7	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.31
Lane Grp Cap(c), veh/h	60	508	420	25	472	390	165	628	637	191	653	640
V/C Ratio(X)	0.81	0.30	0.03	0.81	0.63	0.27	0.79	0.60	0.61	0.80	0.46	0.46
Avail Cap(c_a), veh/h	118	881	728	118	881	727	197	628	637	197	653	640
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	32.5	19.5	18.1	33.3	22.5	20.3	30.1	17.9	17.9	29.5	16.2	16.2
Incr Delay (d2), s/veh	21.7	0.3	0.0	44.6	1.4	0.4	16.4	4.3	4.2	20.4	2.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.3	0.2	0.7	5.2	1.6	3.1	6.5	6.6	3.9	4.7	4.6
LnGrp Delay(d),s/veh	54.2	19.8	18.1	77.8	23.9	20.7	46.5	22.2	22.2	49.9	18.5	18.6
LnGrp LOS	D	B	B	E	C	C	D	C	C	D	B	B
Approach Vol, veh/h		217			426			895			749	
Approach Delay, s/veh		27.3			25.6			25.7			25.0	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.4	23.5	9.8	30.0	5.8	22.1	10.8	29.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	7.5	24.0	4.5	32.0	7.5	24.0				
Max Q Clear Time (g_c+I1), s	2.8	6.5	6.9	10.8	3.8	11.7	7.7	13.9				
Green Ext Time (p_c), s	0.0	3.1	0.0	6.7	0.0	2.9	0.0	5.6				
Intersection Summary												
HCM 2010 Ctrl Delay			25.6									
HCM 2010 LOS			C									























HCM 2010 Signalized Intersection Summary
 8: Industrial Blvd & Naples St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	81	39	211	84	303	72	48	377	282	32	0
Future Volume (veh/h)	17	81	39	211	84	303	72	48	377	282	32	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.62	1.00		0.88	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	18	88	27	229	91	282	78	52	262	307	35	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	108	33	204	81	252	81	54	270	297	34	0
Arrive On Green	0.10	0.10	0.10	0.33	0.33	0.33	0.24	0.24	0.24	0.18	0.18	0.00
Sat Flow, veh/h	221	1078	331	627	249	773	335	223	1124	1664	190	0
Grp Volume(v), veh/h	133	0	0	602	0	0	392	0	0	342	0	0
Grp Sat Flow(s),veh/h/ln	1629	0	0	1650	0	0	1682	0	0	1854	0	0
Q Serve(g_s), s	10.3	0.0	0.0	42.0	0.0	0.0	29.7	0.0	0.0	23.0	0.0	0.0
Cycle Q Clear(g_c), s	10.3	0.0	0.0	42.0	0.0	0.0	29.7	0.0	0.0	23.0	0.0	0.0
Prop In Lane	0.14		0.20	0.38		0.47	0.20		0.67	0.90		0.00
Lane Grp Cap(c), veh/h	163	0	0	538	0	0	405	0	0	331	0	0
V/C Ratio(X)	0.82	0.00	0.00	1.12	0.00	0.00	0.97	0.00	0.00	1.03	0.00	0.00
Avail Cap(c_a), veh/h	240	0	0	538	0	0	405	0	0	331	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	56.8	0.0	0.0	43.4	0.0	0.0	48.5	0.0	0.0	52.9	0.0	0.0
Incr Delay (d2), s/veh	12.8	0.0	0.0	76.1	0.0	0.0	36.5	0.0	0.0	58.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	0.0	30.3	0.0	0.0	17.9	0.0	0.0	17.0	0.0	0.0
LnGrp Delay(d),s/veh	69.6	0.0	0.0	119.6	0.0	0.0	84.9	0.0	0.0	111.4	0.0	0.0
LnGrp LOS	E			F			F			F		
Approach Vol, veh/h		133			602			392			342	
Approach Delay, s/veh		69.6			119.6			84.9			111.4	
Approach LOS		E			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.9		28.0		47.0		36.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		23.0		42.0		31.0				
Max Q Clear Time (g_c+I1), s		12.3		25.0		44.0		31.7				
Green Ext Time (p_c), s		0.3		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				103.9								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary
 9: Broadway & Naples St























2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	181	98	146	296	90	126	520	90	34	427	49
Future Volume (veh/h)	81	181	98	146	296	90	126	520	90	34	427	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.94	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	88	197	70	159	322	63	137	565	74	37	464	39
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	365	130	195	611	498	169	1042	136	45	866	72
Arrive On Green	0.06	0.28	0.28	0.11	0.33	0.33	0.10	0.33	0.33	0.03	0.26	0.26
Sat Flow, veh/h	1774	1295	460	1774	1863	1517	1774	3122	407	1774	3284	275
Grp Volume(v), veh/h	88	0	267	159	322	63	137	319	320	37	249	254
Grp Sat Flow(s),veh/h/ln	1774	0	1755	1774	1863	1517	1774	1770	1760	1774	1770	1789
Q Serve(g_s), s	3.3	0.0	8.8	6.0	9.6	2.0	5.2	10.0	10.1	1.4	8.2	8.3
Cycle Q Clear(g_c), s	3.3	0.0	8.8	6.0	9.6	2.0	5.2	10.0	10.1	1.4	8.2	8.3
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.23	1.00		0.15
Lane Grp Cap(c), veh/h	113	0	495	195	611	498	169	591	587	45	467	472
V/C Ratio(X)	0.78	0.00	0.54	0.82	0.53	0.13	0.81	0.54	0.54	0.83	0.53	0.54
Avail Cap(c_a), veh/h	169	0	669	195	737	600	169	591	587	117	467	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)	1.00	0.00	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	31.5	0.0	20.8	29.7	18.6	16.1	30.3	18.5	18.5	33.1	21.5	21.6
Incr Delay (d2), s/veh	12.4	0.0	0.9	22.7	0.7	0.1	24.8	3.5	3.6	29.7	4.3	4.4
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	2.0	0.0	4.4	4.1	5.0	0.8	3.7	5.5	5.5	1.1	4.6	4.7
LnGrp Delay(d),s/veh	43.9	0.0	21.7	52.4	19.3	16.2	55.1	22.0	22.1	62.9	25.8	25.9
LnGrp LOS	D		C	D	B	B	E	C	C	E	C	C
Approach Vol, veh/h		355			544			776			540	
Approach Delay, s/veh		27.2			28.6			27.9			28.4	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	24.2	10.0	23.0	7.8	27.4	5.2	27.8				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	7.5	26.0	6.5	18.0	6.5	27.0	4.5	20.0				
Max Q Clear Time (g_c+I1), s	8.0	10.8	7.2	10.3	5.3	11.6	3.4	12.1				
Green Ext Time (p_c), s	0.0	3.3	0.0	4.0	0.0	3.3	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			28.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary












10: Broadway & Oxford St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	4	9	155	25	140	14	661	32	37	527	12
Future Volume (veh/h)	11	4	9	155	25	140	14	661	32	37	527	12
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.95	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	12	4	7	168	27	98	15	718	30	40	573	11
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	370	294	212	105	381	20	1163	49	48	1250	24
Arrive On Green	0.01	0.20	0.20	0.12	0.31	0.31	0.01	0.34	0.34	0.03	0.35	0.35
Sat Flow, veh/h	1774	1863	1479	1774	340	1234	1774	3451	144	1774	3547	68
Grp Volume(v), veh/h	12	4	7	168	0	125	15	368	380	40	286	298
Grp Sat Flow(s),veh/h/ln	1774	1863	1479	1774	0	1574	1774	1770	1825	1774	1770	1845
Q Serve(g_s), s	0.4	0.1	0.2	4.9	0.0	3.2	0.5	9.3	9.3	1.2	6.7	6.7
Cycle Q Clear(g_c), s	0.4	0.1	0.2	4.9	0.0	3.2	0.5	9.3	9.3	1.2	6.7	6.7
Prop In Lane	1.00		1.00	1.00		0.78	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	16	370	294	212	0	486	20	596	615	48	624	651
V/C Ratio(X)	0.74	0.01	0.02	0.79	0.00	0.26	0.75	0.62	0.62	0.84	0.46	0.46
Avail Cap(c_a), veh/h	149	802	637	249	0	766	149	596	615	149	624	651
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	17.2	17.2	22.9	0.0	13.9	26.3	14.8	14.8	25.9	13.4	13.4
Incr Delay (d2), s/veh	48.0	0.0	0.0	13.9	0.0	0.3	43.2	4.7	4.6	30.2	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.1	3.2	0.0	1.4	0.5	5.3	5.4	1.0	3.7	3.8
LnGrp Delay(d),s/veh	74.4	17.2	17.3	36.8	0.0	14.1	69.6	19.6	19.4	56.0	15.8	15.7
LnGrp LOS	E	B	B	D		B	E	B	B	E	B	B
Approach Vol, veh/h		23			293			763			624	
Approach Delay, s/veh		47.1			27.1			20.5			18.3	
Approach LOS		D			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	15.6	4.1	23.8	4.0	21.5	4.9	23.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	7.5	23.0	4.5	18.0	4.5	26.0	4.5	18.0				
Max Q Clear Time (g_c+I1), s	6.9	2.2	2.5	8.7	2.4	5.2	3.2	11.3				
Green Ext Time (p_c), s	0.0	0.7	0.0	5.2	0.0	0.7	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis
 11: Bay Blvd & Palomar St

2025 No Build - AM

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	38	171	112	38	51	38
Future Volume (vph)	38	171	112	38	51	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	186	122	41	55	41
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	
Volume Total (vph)	41	186	122	41	96	
Volume Left (vph)	41	0	0	0	55	
Volume Right (vph)	0	186	0	41	0	
Hadj (s)	0.53	-0.67	0.03	-0.67	0.15	
Departure Headway (s)	5.7	4.5	5.2	4.5	5.2	
Degree Utilization, x	0.06	0.23	0.18	0.05	0.14	
Capacity (veh/h)	601	764	664	760	657	
Control Delay (s)	7.9	7.6	8.1	6.5	9.0	
Approach Delay (s)	7.7		7.7		9.0	
Approach LOS	A		A		A	
Intersection Summary						
Delay			7.9			
Level of Service			A			
Intersection Capacity Utilization			31.9%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2025 No Build - AM























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑					↑	↑	
Traffic Volume (vph)	0	84	4	251	184	0	0	0	0	806	0	26
Future Volume (vph)	0	84	4	251	184	0	0	0	0	806	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		3.5	3.5					5.0	5.0	
Lane Util. Factor		0.95		0.95	0.95					0.95	0.95	
Frbp, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.99		1.00	1.00					1.00	0.99	
Flt Protected		1.00		0.95	0.99					0.95	0.96	
Satd. Flow (prot)		3511		1681	1755					1681	1671	
Flt Permitted		1.00		0.95	0.99					0.95	0.96	
Satd. Flow (perm)		3511		1681	1755					1681	1671	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	91	4	273	200	0	0	0	0	876	0	28
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	50	0
Lane Group Flow (vph)	0	92	0	232	241	0	0	0	0	456	398	0
Confl. Peds. (#/hr)	2		19	19		2	17					17
Confl. Bikes (#/hr)			2	2			1					1
Turn Type		NA		Split	NA					Split	NA	
Protected Phases		2		6	6					4	4	
Permitted Phases												
Actuated Green, G (s)		24.7		15.4	15.4					26.4	26.4	
Effective Green, g (s)		24.7		15.4	15.4					26.4	26.4	
Actuated g/C Ratio		0.31		0.19	0.19					0.33	0.33	
Clearance Time (s)		5.0		3.5	3.5					5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		1084		323	337					554	551	
v/s Ratio Prot		c0.03		c0.14	0.14					c0.27	0.24	
v/s Ratio Perm												
v/c Ratio		0.09		0.72	0.72					0.82	0.72	
Uniform Delay, d1		19.6		30.3	30.2					24.7	23.6	
Progression Factor		1.00		0.07	0.07					1.00	1.00	
Incremental Delay, d2		0.2		6.3	5.9					9.6	4.6	
Delay (s)		19.8		8.3	7.9					34.3	28.2	
Level of Service		B		A	A					C	C	
Approach Delay (s)		19.8			8.1			0.0			31.3	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			23.1			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)			13.5			
Intersection Capacity Utilization			49.1%			ICU Level of Service				A		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St

2025 No Build - AM

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 				 				
Traffic Volume (vph)	19	873	0	0	424	906	14	0	439	0	0	0	
Future Volume (vph)	19	873	0	0	424	906	14	0	439	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0			3.5	4.0	3.5		3.5				
Lane Util. Factor		0.95			0.95	1.00	1.00		0.88				
Frbp, ped/bikes		1.00			1.00	0.99	1.00		1.00				
Flpb, ped/bikes		1.00			1.00	1.00	1.00		1.00				
Frt		1.00			1.00	0.85	1.00		0.85				
Flt Protected		1.00			1.00	1.00	0.95		1.00				
Satd. Flow (prot)		3535			3539	1563	1770		2787				
Flt Permitted		1.00			1.00	1.00	0.95		1.00				
Satd. Flow (perm)		3535			3539	1563	1770		2787				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	21	949	0	0	461	985	15	0	477	0	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	432	0	0	0	
Lane Group Flow (vph)	0	970	0	0	461	985	15	0	45	0	0	0	
Confl. Peds. (#/hr)	3		16	16		3	3					3	
Confl. Bikes (#/hr)			1	1			1					1	
Turn Type	Split	NA			NA	Free	Prot		Prot				
Protected Phases	2	2			6		3		3				
Permitted Phases						Free							
Actuated Green, G (s)		45.0			15.4	80.0	7.6		7.6				
Effective Green, g (s)		45.0			15.4	80.0	7.6		7.6				
Actuated g/C Ratio		0.56			0.19	1.00	0.09		0.09				
Clearance Time (s)		5.0			3.5		3.5		3.5				
Vehicle Extension (s)		3.0			3.0		3.0		3.0				
Lane Grp Cap (vph)		1988			681	1563	168		264				
v/s Ratio Prot		0.27			0.13		0.01		0.02				
v/s Ratio Perm						c0.63							
v/c Ratio		0.49			0.68	0.63	0.09		0.17				
Uniform Delay, d1		10.6			30.0	0.0	33.0		33.3				
Progression Factor		0.29			0.75	1.00	1.00		1.00				
Incremental Delay, d2		0.6			2.2	1.6	0.2		0.3				
Delay (s)		3.7			24.8	1.6	33.3		33.6				
Level of Service		A			C	A	C		C				
Approach Delay (s)		3.7			9.0			33.6			0.0		
Approach LOS		A			A			C			A		
Intersection Summary													
HCM 2000 Control Delay			11.4									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.74										
Actuated Cycle Length (s)			80.0									Sum of lost time (s)	12.0
Intersection Capacity Utilization			48.5%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

14: E Frontage Rd/Walnut Ave & Palomar St























2025 No Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1180	120	2	1277	24	0	0	109	0	0	25
Future Volume (Veh/h)	22	1180	120	2	1277	24	0	0	109	0	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	1283	130	2	1388	26	0	0	118	0	0	27
Pedestrians								13				4
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		267			722							
pX, platoon unblocked	0.86			0.84			0.90	0.90	0.84	0.90	0.90	0.86
vC, conflicting volume	1418			1426			1903	2831	720	2216	2883	480
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	924			1117			871	1897	271	1218	1954	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			100	100	80	100	100	97
cM capacity (veh/h)	632			514			204	59	601	95	54	931
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1			
Volume Total	24	855	558	2	555	555	304	118	27			
Volume Left	24	0	0	2	0	0	0	0	0			
Volume Right	0	0	130	0	0	0	26	118	27			
cSH	632	1700	1700	514	1700	1700	1700	601	931			
Volume to Capacity	0.04	0.50	0.33	0.00	0.33	0.33	0.18	0.20	0.03			
Queue Length 95th (ft)	3	0	0	0	0	0	0	18	2			
Control Delay (s)	10.9	0.0	0.0	12.0	0.0	0.0	0.0	12.5	9.0			
Lane LOS	B			B				B	A			
Approach Delay (s)	0.2			0.0				12.5	9.0			
Approach LOS								B	A			
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			50.0%		ICU Level of Service				A			
Analysis Period (min)			15									




















HCM 2010 Signalized Intersection Summary
 15: Industrial Blvd & Palomar St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	997	84	98	831	82	282	258	111	44	101	136
Future Volume (veh/h)	208	997	84	98	831	82	282	258	111	44	101	136
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.98		0.96	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	226	1084	73	107	903	89	307	280	78	48	110	95
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	1843	124	272	1666	164	444	597	487	343	209	180
Arrive On Green	0.03	0.13	0.13	0.02	0.12	0.12	0.12	0.32	0.32	0.03	0.23	0.23
Sat Flow, veh/h	1774	4851	326	1774	4685	460	1774	1863	1520	1774	900	777
Grp Volume(v), veh/h	226	757	400	107	652	340	307	280	78	48	0	205
Grp Sat Flow(s),veh/h/ln	1774	1695	1787	1774	1695	1755	1774	1863	1520	1774	0	1677
Q Serve(g_s), s	6.3	16.9	16.9	3.0	14.5	14.6	9.5	9.6	2.9	1.6	0.0	8.6
Cycle Q Clear(g_c), s	6.3	16.9	16.9	3.0	14.5	14.6	9.5	9.6	2.9	1.6	0.0	8.6
Prop In Lane	1.00		0.18	1.00		0.26	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	332	1288	679	272	1206	624	444	597	487	343	0	389
V/C Ratio(X)	0.68	0.59	0.59	0.39	0.54	0.54	0.69	0.47	0.16	0.14	0.00	0.53
Avail Cap(c_a), veh/h	332	1288	679	316	1206	624	444	675	551	412	0	524
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.69	0.69	0.69	0.90	0.90	0.90	0.10	0.00	0.10
Uniform Delay (d), s/veh	17.6	29.1	29.1	17.2	29.2	29.2	20.6	21.7	19.5	22.4	0.0	26.9
Incr Delay (d2), s/veh	4.6	2.0	3.7	0.2	1.2	2.4	3.4	0.5	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	8.3	9.1	1.5	7.0	7.5	5.4	5.0	1.2	0.8	0.0	3.9
LnGrp Delay(d),s/veh	22.3	31.0	32.8	17.4	30.4	31.6	24.1	22.2	19.6	22.5	0.0	27.0
LnGrp LOS	C	C	C	B	C	C	C	C	B	C		C
Approach Vol, veh/h		1383			1099			665			253	
Approach Delay, s/veh		30.1			29.5			22.8			26.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	35.4	13.0	23.6	10.0	33.4	5.9	30.7				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	6.5	22.0	9.5	25.0	6.5	22.0	5.5	29.0				
Max Q Clear Time (g_c+I1), s	5.0	18.9	11.5	10.6	8.3	16.6	3.6	11.6				
Green Ext Time (p_c), s	0.0	2.8	0.0	2.7	0.0	4.8	0.0	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay			28.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 16: Transit Center Place & Palomar St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	401	293	25	662	1	149	2	2	2	21	198
Future Volume (veh/h)	495	401	293	25	662	1	149	2	2	2	21	198
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.93	0.96		0.93	0.94		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	538	436	204	27	720	1	162	2	1	2	23	138
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	1773	780	32	1384	2	404	326	163	47	65	367
Arrive On Green	0.18	0.35	0.35	0.04	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	3403	1498	1774	5244	7	1169	1139	570	4	229	1282
Grp Volume(v), veh/h	538	434	206	27	465	256	162	0	3	163	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1511	1774	1695	1861	1169	0	1709	1514	0	0
Q Serve(g_s), s	22.0	7.3	7.8	1.2	7.1	7.1	3.9	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	22.0	7.3	7.8	1.2	7.1	7.1	10.8	0.0	0.1	6.9	0.0	0.0
Prop In Lane	1.00		0.99	1.00		0.00	1.00		0.33	0.01		0.85
Lane Grp Cap(c), veh/h	488	1766	787	32	895	491	404	0	489	479	0	0
V/C Ratio(X)	1.10	0.25	0.26	0.84	0.52	0.52	0.40	0.00	0.01	0.34	0.00	0.00
Avail Cap(c_a), veh/h	488	1766	787	111	895	491	450	0	555	538	0	0
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.6	14.9	15.0	38.4	15.6	15.6	24.5	0.0	20.4	22.8	0.0	0.0
Incr Delay (d2), s/veh	68.4	0.3	0.7	18.2	2.1	3.8	0.6	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.0	3.5	3.4	0.7	3.5	4.1	3.1	0.0	0.0	2.9	0.0	0.0
LnGrp Delay(d),s/veh	101.0	15.1	15.7	56.7	17.7	19.4	25.1	0.0	20.4	23.3	0.0	0.0
LnGrp LOS	F	B	B	E	B	B	C		C	C		
Approach Vol, veh/h		1178			748			165				163
Approach Delay, s/veh		54.5			19.7			25.0				23.3
Approach LOS		D			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	46.7		27.9	26.0	26.1		27.9				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	5.0	35.0		26.0	22.0	18.0		26.0				
Max Q Clear Time (g_c+I1), s	3.2	9.8		8.9	24.0	9.1		12.8				
Green Ext Time (p_c), s	0.0	11.6		1.5	0.0	5.8		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay				38.5								
HCM 2010 LOS				D								

HCM Signalized Intersection Capacity Analysis
 16: Transit Center Place & Palomar St

*PGD mitigation assumed
 2025 No Build - AM






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↕			↖	↖
Traffic Volume (vph)	495	401	293	25	662	1	149	2	2	2	21	198
Future Volume (vph)	495	401	293	25	662	1	149	2	2	2	21	198
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.95		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.94		1.00	1.00		1.00	1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.95			1.00	1.00
Satd. Flow (prot)	1770	4515		1770	5084		1681	1682			1855	1549
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.95			1.00	1.00
Satd. Flow (perm)	1770	4515		1770	5084		1681	1682			1855	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	538	436	318	27	720	1	162	2	2	2	23	215
RTOR Reduction (vph)	0	80	0	0	0	0	0	1	0	0	0	110
Lane Group Flow (vph)	538	674	0	27	721	0	83	82	0	0	25	105
Confl. Peds. (#/hr)	19		28	28		19	59		23	23		59
Confl. Bikes (#/hr)	1					1	2					2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	38.5	56.6		2.8	20.9		14.4	14.4			13.3	51.8
Effective Green, g (s)	38.5	56.6		2.8	20.9		14.4	14.4			13.3	51.8
Actuated g/C Ratio	0.36	0.54		0.03	0.20		0.14	0.14			0.13	0.49
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	645	2419		46	1006		229	229			233	759
v/s Ratio Prot	c0.30	0.15		0.02	c0.14		c0.05	0.05			0.01	c0.05
v/s Ratio Perm												0.02
v/c Ratio	0.83	0.28		0.59	0.72		0.36	0.36			0.11	0.14
Uniform Delay, d1	30.6	13.4		50.8	39.6		41.4	41.4			40.9	14.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	8.7	0.3		11.7	4.4		1.0	1.0			0.2	0.0
Delay (s)	39.4	13.7		62.5	44.0		42.4	42.4			41.1	14.7
Level of Service	D	B		E	D		D	D			D	B
Approach Delay (s)		24.4			44.6			42.4			17.5	
Approach LOS		C			D			D			B	

Intersection Summary		
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.62	
Actuated Cycle Length (s)	105.6	Sum of lost time (s) 18.5
Intersection Capacity Utilization	71.0%	ICU Level of Service C
Analysis Period (min)	15	
Description: Assumed PGD will mitigate this intersection, instead of GS project		
c Critical Lane Group		























HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	387	0	223	692	241	0	9	114	6	0	0
Future Volume (veh/h)	15	387	0	223	692	241	0	9	114	6	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.99	1.00		0.96	0.98		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	16	421	0	242	752	167	0	10	79	7	0	0
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	3005	0	325	2813	618	90	25	200	209	0	0
Arrive On Green	0.02	1.00	0.00	0.09	0.68	0.68	0.00	0.15	0.15	0.15	0.00	0.00
Sat Flow, veh/h	1774	5253	0	3442	4167	916	1412	174	1373	818	0	0
Grp Volume(v), veh/h	16	421	0	242	610	309	0	0	89	7	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	1721	1695	1692	1412	0	1547	818	0	0
Q Serve(g_s), s	0.7	0.0	0.0	5.5	5.7	5.8	0.0	0.0	4.2	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	5.5	5.7	5.8	0.0	0.0	4.2	4.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.54	1.00		0.89	1.00		0.00
Lane Grp Cap(c), veh/h	18	3005	0	325	2289	1143	90	0	226	209	0	0
V/C Ratio(X)	0.89	0.14	0.00	0.74	0.27	0.27	0.00	0.00	0.39	0.03	0.00	0.00
Avail Cap(c_a), veh/h	122	3005	0	495	2289	1143	378	0	541	469	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.79	0.79	0.79	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.1	0.0	0.0	35.3	5.1	5.2	0.0	0.0	31.0	33.0	0.0	0.0
Incr Delay (d2), s/veh	35.7	0.1	0.0	1.0	0.2	0.5	0.0	0.0	1.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	2.6	2.7	2.8	0.0	0.0	1.9	0.1	0.0	0.0
LnGrp Delay(d),s/veh	74.8	0.1	0.0	36.3	5.4	5.6	0.0	0.0	32.1	33.1	0.0	0.0
LnGrp LOS	E	A		D	A	A			C	C		
Approach Vol, veh/h		437			1161			89				7
Approach Delay, s/veh		2.8			11.9			32.1				33.1
Approach LOS		A			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	52.3		16.7	4.3	59.0		16.7				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	27.0		28.0	5.5	33.0		28.0				
Max Q Clear Time (g_c+I1), s	7.5	2.0		6.6	2.7	7.8		6.2				
Green Ext Time (p_c), s	0.1	11.6		0.5	0.0	11.7		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								





















HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	252	90	100	575	117	258	465	55	88	395	324
Future Volume (veh/h)	172	252	90	100	575	117	258	465	55	88	395	324
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	187	274	63	109	625	81	280	505	38	96	429	225
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	1507	327	176	1598	204	303	1104	471	160	956	406
Arrive On Green	0.06	0.36	0.36	0.05	0.35	0.35	0.09	0.31	0.31	0.05	0.27	0.27
Sat Flow, veh/h	3442	4139	898	3442	4534	579	3442	3539	1510	3442	3539	1502
Grp Volume(v), veh/h	187	221	116	109	465	241	280	505	38	96	429	225
Grp Sat Flow(s),veh/h/ln	1721	1695	1647	1721	1695	1723	1721	1770	1510	1721	1770	1502
Q Serve(g_s), s	4.3	3.5	3.8	2.5	8.2	8.4	6.4	9.1	1.4	2.2	8.0	10.2
Cycle Q Clear(g_c), s	4.3	3.5	3.8	2.5	8.2	8.4	6.4	9.1	1.4	2.2	8.0	10.2
Prop In Lane	1.00		0.55	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	1234	599	176	1195	607	303	1104	471	160	956	406
V/C Ratio(X)	0.86	0.18	0.19	0.62	0.39	0.40	0.92	0.46	0.08	0.60	0.45	0.55
Avail Cap(c_a), veh/h	217	1234	599	217	1195	607	303	1292	551	217	1202	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	17.2	17.3	36.9	19.3	19.4	36.0	21.9	19.3	37.2	24.1	24.9
Incr Delay (d2), s/veh	28.3	0.3	0.7	2.7	1.0	1.9	32.5	0.3	0.1	3.6	0.4	1.3
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	2.9	1.7	1.9	1.2	4.0	4.3	4.4	4.5	0.6	1.1	3.9	4.4
LnGrp Delay(d),s/veh	65.2	17.5	18.0	39.6	20.3	21.3	68.5	22.3	19.4	40.8	24.4	26.2
LnGrp LOS	E	B	B	D	C	C	E	C	B	D	C	C
Approach Vol, veh/h		524			815			823			750	
Approach Delay, s/veh		34.6			23.2			37.9			27.1	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	33.9	11.0	26.5	9.0	33.0	7.7	29.8				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	5.0	28.0	7.0	27.0	5.0	28.0	5.0	29.0				
Max Q Clear Time (g_c+I1), s	4.5	5.8	8.4	12.2	6.3	10.4	4.2	11.1				
Green Ext Time (p_c), s	0.0	8.2	0.0	6.6	0.0	7.3	0.0	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			30.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St
























2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	5	1	32	10	263	6	389	58	194	138	16
Future Volume (veh/h)	6	5	1	32	10	263	6	389	58	194	138	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	0.99		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	7	5	0	35	11	183	7	423	63	211	150	10
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	37	31	47	15	248	692	803	120	429	878	59
Arrive On Green	0.02	0.02	0.00	0.20	0.20	0.20	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1774	1863	1583	242	76	1265	1211	1577	235	902	1723	115
Grp Volume(v), veh/h	7	5	0	229	0	0	7	0	486	211	0	160
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1582	0	0	1211	0	1812	902	0	1838
Q Serve(g_s), s	0.2	0.1	0.0	7.4	0.0	0.0	0.2	0.0	9.8	11.2	0.0	2.6
Cycle Q Clear(g_c), s	0.2	0.1	0.0	7.4	0.0	0.0	2.7	0.0	9.8	21.0	0.0	2.6
Prop In Lane	1.00		1.00	0.15		0.80	1.00		0.13	1.00		0.06
Lane Grp Cap(c), veh/h	35	37	31	310	0	0	692	0	923	429	0	936
V/C Ratio(X)	0.20	0.14	0.00	0.74	0.00	0.00	0.01	0.00	0.53	0.49	0.00	0.17
Avail Cap(c_a), veh/h	844	886	753	753	0	0	917	0	1260	597	0	1278
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	26.3	0.0	20.6	0.0	0.0	7.9	0.0	9.0	16.0	0.0	7.2
Incr Delay (d2), s/veh	2.7	1.6	0.0	3.4	0.0	0.0	0.0	0.0	0.5	0.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	3.5	0.0	0.0	0.1	0.0	5.0	2.9	0.0	1.3
LnGrp Delay(d),s/veh	29.1	28.0	0.0	24.1	0.0	0.0	7.9	0.0	9.5	16.9	0.0	7.3
LnGrp LOS	C	C		C			A		A	B		A
Approach Vol, veh/h		12			229			493			371	
Approach Delay, s/veh		28.6			24.1			9.4			12.8	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		6.1		32.8		15.7		32.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		38.0		26.0		38.0				
Max Q Clear Time (g_c+I1), s		2.2		23.0		9.4		11.8				
Green Ext Time (p_c), s		0.0		4.8		1.3		5.9				
Intersection Summary												
HCM 2010 Ctrl Delay			13.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

20: Broadway & Anita St

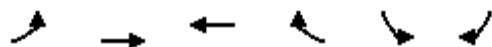
2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	61	74	71	185	130	66	579	38	49	322	114
Future Volume (veh/h)	84	61	74	71	185	130	66	579	38	49	322	114
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	91	66	51	77	201	90	72	629	32	53	350	79
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	483	403	416	483	403	569	1651	84	455	1356	302
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.04	0.48	0.48	0.03	0.47	0.47
Sat Flow, veh/h	1082	1863	1556	1266	1863	1556	1774	3421	174	1774	2859	636
Grp Volume(v), veh/h	91	66	51	77	201	90	72	325	336	53	215	214
Grp Sat Flow(s),veh/h/ln	1082	1863	1556	1266	1863	1556	1774	1770	1825	1774	1770	1726
Q Serve(g_s), s	4.5	1.6	1.5	2.9	5.3	2.7	1.2	6.9	6.9	0.9	4.3	4.4
Cycle Q Clear(g_c), s	9.8	1.6	1.5	4.5	5.3	2.7	1.2	6.9	6.9	0.9	4.3	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.37
Lane Grp Cap(c), veh/h	305	483	403	416	483	403	569	854	881	455	839	818
V/C Ratio(X)	0.30	0.14	0.13	0.19	0.42	0.22	0.13	0.38	0.38	0.12	0.26	0.26
Avail Cap(c_a), veh/h	739	1230	1028	924	1230	1028	637	854	881	538	839	818
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	22.2	16.8	16.8	18.5	18.2	17.2	7.5	9.7	9.7	7.9	9.3	9.3
Incr Delay (d2), s/veh	0.5	0.1	0.1	0.2	0.6	0.3	0.1	1.3	1.3	0.1	0.7	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	1.4	0.8	0.6	1.1	2.8	1.2	0.6	3.6	3.8	0.4	2.3	2.3
LnGrp Delay(d),s/veh	22.8	16.9	16.9	18.8	18.7	17.5	7.6	11.0	10.9	8.0	10.0	10.1
LnGrp LOS	C	B	B	B	B	B	A	B	B	A	B	B
Approach Vol, veh/h		208			368			733			482	
Approach Delay, s/veh		19.5			18.4			10.6			9.8	
Approach LOS		B			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.3	5.7	33.0		20.3	5.2	33.5				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		39.0	4.5	28.0		39.0	4.5	28.0				
Max Q Clear Time (g_c+I1), s		11.8	3.2	6.4		7.3	2.9	8.9				
Green Ext Time (p_c), s		2.8	0.0	6.8		2.8	0.0	6.4				
Intersection Summary												
HCM 2010 Ctrl Delay			13.0									
HCM 2010 LOS			B									

HCM Unsignalized Intersection Capacity Analysis

21: Main St & I-5 SB Ramps

2025 No Build - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕	↗	↖	↗
Traffic Volume (veh/h)	2	48	161	59	506	58
Future Volume (Veh/h)	2	48	161	59	506	58
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	52	175	64	550	63
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						14
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			809			
pX, platoon unblocked						
vC, conflicting volume	175				231	175
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	175				231	175
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				27	93
cM capacity (veh/h)	1401				756	868

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	54	175	64	613
Volume Left	2	0	0	550
Volume Right	0	0	64	63
cSH	1401	1700	1700	843
Volume to Capacity	0.00	0.10	0.04	0.73
Queue Length 95th (ft)	0	0	0	163
Control Delay (s)	0.3	0.0	0.0	20.1
Lane LOS	A			C
Approach Delay (s)	0.3	0.0		20.1
Approach LOS				C

Intersection Summary			
Average Delay		13.6	
Intersection Capacity Utilization		43.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps





















2025 No Build - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	21	532	212	709	161	9		
Future Volume (veh/h)	21	532	212	709	161	9		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	23	578	230	494	175	7		
Adj No. of Lanes	1	1	1	1	1	1		
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	29	1233	1067	887	233	208		
Arrive On Green	0.02	0.66	0.57	0.57	0.13	0.13		
Sat Flow, veh/h	1774	1863	1863	1549	1774	1583		
Grp Volume(v), veh/h	23	578	230	494	175	7		
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1549	1774	1583		
Q Serve(g_s), s	0.6	7.4	2.9	9.7	4.6	0.2		
Cycle Q Clear(g_c), s	0.6	7.4	2.9	9.7	4.6	0.2		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	29	1233	1067	887	233	208		
V/C Ratio(X)	0.79	0.47	0.22	0.56	0.75	0.03		
Avail Cap(c_a), veh/h	165	1233	1067	887	660	589		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	23.7	4.0	5.0	6.5	20.2	18.3		
Incr Delay (d2), s/veh	35.7	1.3	0.5	2.5	4.8	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	4.1	1.6	4.6	2.5	0.2		
LnGrp Delay(d),s/veh	59.4	5.3	5.5	9.0	25.1	18.4		
LnGrp LOS	E	A	A	A	C	B		
Approach Vol, veh/h		601	724		182			
Approach Delay, s/veh		7.4	7.9		24.8			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		37.0		11.3	4.3	32.7		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		32.0		18.0	4.5	24.0		
Max Q Clear Time (g_c+I1), s		9.4		6.6	2.6	11.7		
Green Ext Time (p_c), s		7.5		0.4	0.0	5.6		
Intersection Summary								
HCM 2010 Ctrl Delay			9.7					
HCM 2010 LOS			A					

























HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	378	135	252	571	34	258	358	338	10	93	67
Future Volume (veh/h)	61	378	135	252	571	34	258	358	338	10	93	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	66	411	94	274	621	29	280	389	305	11	101	47
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	689	156	383	868	41	500	385	302	76	479	223
Arrive On Green	0.21	0.24	0.24	0.22	0.25	0.25	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	2848	644	1774	3437	160	1232	961	754	747	1197	557
Grp Volume(v), veh/h	66	254	251	274	319	331	280	0	694	11	0	148
Grp Sat Flow(s),veh/h/ln	1774	1770	1722	1774	1770	1828	1232	0	1715	747	0	1754
Q Serve(g_s), s	2.9	12.0	12.3	13.6	15.6	15.7	18.3	0.0	38.0	0.0	0.0	5.3
Cycle Q Clear(g_c), s	2.9	12.0	12.3	13.6	15.6	15.7	23.6	0.0	38.0	38.0	0.0	5.3
Prop In Lane	1.00		0.37	1.00		0.09	1.00		0.44	1.00		0.32
Lane Grp Cap(c), veh/h	364	428	417	383	447	462	500	0	686	76	0	701
V/C Ratio(X)	0.18	0.59	0.60	0.72	0.71	0.72	0.56	0.00	1.01	0.15	0.00	0.21
Avail Cap(c_a), veh/h	364	428	417	383	447	462	500	0	686	76	0	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	31.9	31.9	34.5	32.4	32.4	26.4	0.0	28.5	47.5	0.0	18.7
Incr Delay (d2), s/veh	1.1	5.9	6.3	10.9	9.4	9.2	1.4	0.0	37.3	0.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	6.6	6.6	7.8	8.8	9.1	6.4	0.0	25.0	0.3	0.0	2.6
LnGrp Delay(d),s/veh	32.3	37.8	38.3	45.5	41.8	41.6	27.8	0.0	65.8	48.4	0.0	18.8
LnGrp LOS	C	D	D	D	D	D	C		F	D		B
Approach Vol, veh/h		571			924			974			159	
Approach Delay, s/veh		37.3			42.8			54.9			20.9	
Approach LOS		D			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.0	28.0		43.0	23.0	29.0		43.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	20.5	23.0		38.0	19.5	24.0		38.0				
Max Q Clear Time (g_c+I1), s	15.6	14.3		40.0	4.9	17.7		40.0				
Green Ext Time (p_c), s	0.4	4.4		0.0	0.1	3.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			44.8									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 24: Broadway & Main St














2025 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	409	86	214	518	120	234	479	359	122	246	101
Future Volume (veh/h)	84	409	86	214	518	120	234	479	359	122	246	101
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	91	445	59	233	563	83	254	521	250	133	267	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	818	356	248	1081	472	266	1262	552	165	1060	474
Arrive On Green	0.07	0.23	0.23	0.14	0.31	0.31	0.15	0.36	0.36	0.09	0.30	0.00
Sat Flow, veh/h	1774	3539	1540	1774	3539	1546	1774	3539	1549	1774	3539	1583
Grp Volume(v), veh/h	91	445	59	233	563	83	254	521	250	133	267	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1540	1774	1770	1546	1774	1770	1549	1774	1770	1583
Q Serve(g_s), s	5.1	11.1	3.1	13.0	13.2	3.9	14.2	11.1	12.4	7.4	5.7	0.0
Cycle Q Clear(g_c), s	5.1	11.1	3.1	13.0	13.2	3.9	14.2	11.1	12.4	7.4	5.7	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	116	818	356	248	1081	472	266	1262	552	165	1060	474
V/C Ratio(X)	0.78	0.54	0.17	0.94	0.52	0.18	0.96	0.41	0.45	0.81	0.25	0.00
Avail Cap(c_a), veh/h	213	1343	584	248	1414	618	266	1262	552	283	1060	474
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	0.00
Uniform Delay (d), s/veh	46.1	33.9	30.8	42.7	28.7	25.5	42.2	24.3	24.7	44.6	26.6	0.0
Incr Delay (d2), s/veh	10.8	0.6	0.2	40.8	0.4	0.2	43.1	1.0	2.7	9.0	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	2.8	5.4	1.3	9.2	6.5	1.7	10.2	5.6	5.7	4.0	2.9	0.0
LnGrp Delay(d),s/veh	56.9	34.4	31.0	83.5	29.1	25.7	85.3	25.3	27.4	53.6	27.1	0.0
LnGrp LOS	E	C	C	F	C	C	F	C	C	D	C	
Approach Vol, veh/h		595			879			1025			400	
Approach Delay, s/veh		37.5			43.2			40.7			35.9	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	28.1	19.0	35.0	10.6	35.6	13.3	40.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	14.0	38.0	15.0	30.0	12.0	40.0	16.0	29.0				
Max Q Clear Time (g_c+I1), s	15.0	13.1	16.2	7.7	7.1	15.2	9.4	14.4				
Green Ext Time (p_c), s	0.0	7.8	0.0	6.2	0.1	7.8	0.2	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay			40.1									
HCM 2010 LOS			D									

HCM Unsignalized Intersection Capacity Analysis





















1: Bay Blvd & L St

2025 No Build - PM

							
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		 					
Sign Control	Stop		Stop			Stop	
Traffic Volume (vph)	438	69	60	1070	182	112	
Future Volume (vph)	438	69	60	1070	182	112	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	476	75	65	1163	198	122	
Direction, Lane #	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	476	38	38	65	1163	198	122
Volume Left (vph)	476	0	0	0	0	198	0
Volume Right (vph)	0	38	38	0	1163	0	0
Hadj (s)	0.23	-0.57	-0.57	0.03	-0.57	0.53	0.03
Departure Headway (s)	5.2	3.2	3.2	6.0	3.2	6.5	6.0
Degree Utilization, x	0.69	0.03	0.03	0.11	1.03	0.36	0.20
Capacity (veh/h)	673	1121	1121	550	1135	529	569
Control Delay (s)	19.0	6.3	6.3	9.7	53.1	11.9	9.3
Approach Delay (s)	17.2			50.8		10.9	
Approach LOS	C			F		B	
Intersection Summary							
Delay			35.9				
Level of Service			E				
Intersection Capacity Utilization			83.0%		ICU Level of Service		E
Analysis Period (min)			15				

HCM 2010 Signalized Intersection Summary
 2: Industrial Blvd/Driveway & L St
























2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	577	674	101	370	7	145	7	109	3	9	4
Future Volume (veh/h)	5	577	674	101	370	7	145	7	109	3	9	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	5	627	466	110	402	5	158	8	76	3	10	3
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1666	742	139	1951	24	389	12	253	109	207	52
Arrive On Green	0.00	0.47	0.47	0.08	0.55	0.55	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	3539	1577	1774	3580	44	1473	75	1559	110	1275	320
Grp Volume(v), veh/h	5	627	466	110	199	208	166	0	76	16	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1577	1774	1770	1855	1547	0	1559	1704	0	0
Q Serve(g_s), s	0.1	5.3	10.4	2.8	2.7	2.7	1.5	0.0	2.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	5.3	10.4	2.8	2.7	2.7	4.4	0.0	2.0	4.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.95		1.00	0.19		0.19
Lane Grp Cap(c), veh/h	7	1666	742	139	965	1011	401	0	253	368	0	0
V/C Ratio(X)	0.70	0.38	0.63	0.79	0.21	0.21	0.41	0.00	0.30	0.04	0.00	0.00
Avail Cap(c_a), veh/h	171	1666	742	171	965	1011	776	0	667	811	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.3	8.0	9.3	21.2	5.4	5.4	18.1	0.0	17.3	16.6	0.0	0.0
Incr Delay (d2), s/veh	80.1	0.7	4.0	18.0	0.5	0.5	0.7	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	5.2	2.1	1.4	1.5	2.1	0.0	0.9	0.2	0.0	0.0
LnGrp Delay(d),s/veh	103.3	8.6	13.3	39.1	5.9	5.9	18.8	0.0	17.9	16.6	0.0	0.0
LnGrp LOS	F	A	B	D	A	A	B		B	B		
Approach Vol, veh/h		1098			517			242				16
Approach Delay, s/veh		11.0			13.0			18.5				16.6
Approach LOS		B			B			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	27.0		12.6	3.7	30.5		12.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	22.0		20.0	4.5	22.0		20.0				
Max Q Clear Time (g_c+I1), s	4.8	12.4		6.9	2.1	4.7		6.4				
Green Ext Time (p_c), s	0.0	5.5		1.0	0.0	7.9		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

3: Broadway & L St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	393	266	168	214	37	203	610	223	43	656	49
Future Volume (veh/h)	38	393	266	168	214	37	203	610	223	43	656	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	41	427	185	183	233	26	221	663	155	47	713	33
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	738	322	186	912	101	227	1571	852	59	1236	584
Arrive On Green	0.03	0.21	0.21	0.10	0.28	0.28	0.13	0.44	0.44	0.03	0.35	0.35
Sat Flow, veh/h	1774	3539	1545	1774	3207	354	1774	3539	1546	1774	3539	1541
Grp Volume(v), veh/h	41	427	185	183	127	132	221	663	155	47	713	33
Grp Sat Flow(s),veh/h/ln	1774	1770	1545	1774	1770	1791	1774	1770	1546	1774	1770	1541
Q Serve(g_s), s	2.0	9.3	9.2	8.8	4.8	4.9	10.7	11.0	4.3	2.3	14.1	1.2
Cycle Q Clear(g_c), s	2.0	9.3	9.2	8.8	4.8	4.9	10.7	11.0	4.3	2.3	14.1	1.2
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	738	322	186	503	509	227	1571	852	59	1236	584
V/C Ratio(X)	0.80	0.58	0.57	0.98	0.25	0.26	0.97	0.42	0.18	0.79	0.58	0.06
Avail Cap(c_a), veh/h	124	1318	576	186	721	730	227	1571	852	124	1236	584
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	30.6	30.6	38.4	23.7	23.7	37.3	16.4	9.7	41.2	22.8	17.0
Incr Delay (d2), s/veh	23.8	0.7	1.6	61.3	0.3	0.3	51.8	0.8	0.5	20.3	2.0	0.2
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	1.3	4.6	4.1	7.4	2.4	2.5	8.4	5.5	2.0	1.4	7.2	0.5
LnGrp Delay(d),s/veh	65.3	31.3	32.2	99.7	24.0	24.0	89.1	17.2	10.2	61.5	24.7	17.2
LnGrp LOS	E	C	C	F	C	C	F	B	B	E	C	B
Approach Vol, veh/h		653			442			1039			793	
Approach Delay, s/veh		33.7			55.3			31.4			26.6	
Approach LOS		C			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	22.9	15.0	35.0	6.5	29.4	6.9	43.1				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	9.0	32.0	11.0	30.0	6.0	35.0	6.0	35.0				
Max Q Clear Time (g_c+I1), s	10.8	11.3	12.7	16.1	4.0	6.9	4.3	13.0				
Green Ext Time (p_c), s	0.0	4.9	0.0	8.1	0.0	5.3	0.0	10.6				
Intersection Summary												
HCM 2010 Ctrl Delay			34.2									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis

4: Bay Blvd & I-5 SB Ramps

2025 No Build - PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	27	974	162	12	431	108
Future Volume (Veh/h)	27	974	162	12	431	108
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1059	176	13	468	117
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1236	182			176	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1236	182			176	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	78	0			67	
cM capacity (veh/h)	130	860			1400	













Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	1088	189	468	117
Volume Left	29	0	468	0
Volume Right	1059	13	0	0
cSH	884	1700	1400	1700
Volume to Capacity	1.23	0.11	0.33	0.07
Queue Length 95th (ft)	917	0	37	0
Control Delay (s)	129.7	0.0	8.9	0.0
Lane LOS	F		A	
Approach Delay (s)	129.7	0.0	7.1	
Approach LOS	F			

Intersection Summary			
Average Delay		78.0	
Intersection Capacity Utilization		76.2%	ICU Level of Service
Analysis Period (min)		15	D

HCM Unsignalized Intersection Capacity Analysis

















5: Industrial Blvd & I-5 NB Ramps

2025 No Build - PM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	104	313	885	150	581	203
Future Volume (vph)	104	313	885	150	581	203
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	340	962	163	632	221
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	113	340	962	163	632	221
Volume Left (vph)	113	0	962	0	0	0
Volume Right (vph)	0	340	0	0	0	221
Hadj (s)	0.23	-0.57	0.53	0.03	0.03	-0.57
Departure Headway (s)	7.1	3.2	6.1	5.6	5.3	3.2
Degree Utilization, x	0.22	0.30	1.64	0.25	0.94	0.20
Capacity (veh/h)	494	1113	593	633	665	1121
Control Delay (s)	12.2	7.6	309.5	9.3	43.3	7.0
Approach Delay (s)	8.7		266.0		33.9	
Approach LOS	A		F		D	
Intersection Summary						
Delay			136.6			
Level of Service			F			
Intersection Capacity Utilization			95.4%		ICU Level of Service	F
Analysis Period (min)			15			

























HCM 2010 Signalized Intersection Summary
 6: Industrial Blvd & Moss St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	5	12	4	30	472	78	344	2	315	421	157
Future Volume (veh/h)	219	5	12	4	30	472	78	344	2	315	421	157
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	238	5	11	4	33	328	85	374	2	342	458	161
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	5	11	2	19	189	73	320	2	240	321	113
Arrive On Green	0.14	0.14	0.14	0.13	0.13	0.13	0.21	0.21	0.21	0.38	0.38	0.38
Sat Flow, veh/h	1655	35	76	18	145	1439	340	1496	8	633	847	298
Grp Volume(v), veh/h	254	0	0	365	0	0	461	0	0	961	0	0
Grp Sat Flow(s),veh/h/ln	1766	0	0	1601	0	0	1844	0	0	1778	0	0
Q Serve(g_s), s	20.0	0.0	0.0	19.0	0.0	0.0	31.0	0.0	0.0	55.0	0.0	0.0
Cycle Q Clear(g_c), s	20.0	0.0	0.0	19.0	0.0	0.0	31.0	0.0	0.0	55.0	0.0	0.0
Prop In Lane	0.94		0.04	0.01		0.90	0.18		0.00	0.36		0.17
Lane Grp Cap(c), veh/h	244	0	0	210	0	0	394	0	0	674	0	0
V/C Ratio(X)	1.04	0.00	0.00	1.74	0.00	0.00	1.17	0.00	0.00	1.42	0.00	0.00
Avail Cap(c_a), veh/h	244	0	0	210	0	0	394	0	0	674	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.5	0.0	0.0	63.0	0.0	0.0	57.0	0.0	0.0	45.0	0.0	0.0
Incr Delay (d2), s/veh	69.3	0.0	0.0	351.8	0.0	0.0	100.1	0.0	0.0	199.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	0.0	0.0	28.9	0.0	0.0	26.7	0.0	0.0	64.4	0.0	0.0
LnGrp Delay(d),s/veh	131.8	0.0	0.0	414.8	0.0	0.0	157.1	0.0	0.0	244.8	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		254			365			461			961	
Approach Delay, s/veh		131.8			414.8			157.1			244.8	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		60.0		24.0		36.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		55.0		19.0		31.0				
Max Q Clear Time (g_c+I1), s		22.0		57.0		21.0		33.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				241.3								
HCM 2010 LOS				F								

















HCM 2010 Signalized Intersection Summary
 7: Broadway & Moss St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	220	32	26	240	86	107	831	49	227	699	158
Future Volume (veh/h)	71	220	32	26	240	86	107	831	49	227	699	158
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	77	239	22	28	261	59	116	903	45	247	760	136
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	538	443	33	469	386	147	1172	58	190	1091	195
Arrive On Green	0.06	0.29	0.29	0.02	0.25	0.25	0.08	0.34	0.34	0.11	0.37	0.37
Sat Flow, veh/h	1774	1863	1534	1774	1863	1530	1774	3421	170	1774	2975	532
Grp Volume(v), veh/h	77	239	22	28	261	59	116	467	481	247	452	444
Grp Sat Flow(s),veh/h/ln	1774	1863	1534	1774	1863	1530	1774	1770	1822	1774	1770	1737
Q Serve(g_s), s	3.0	7.3	0.7	1.1	8.5	2.1	4.5	16.5	16.5	7.5	15.2	15.2
Cycle Q Clear(g_c), s	3.0	7.3	0.7	1.1	8.5	2.1	4.5	16.5	16.5	7.5	15.2	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.31
Lane Grp Cap(c), veh/h	98	538	443	33	469	386	147	606	624	190	649	637
V/C Ratio(X)	0.78	0.44	0.05	0.85	0.56	0.15	0.79	0.77	0.77	1.30	0.70	0.70
Avail Cap(c_a), veh/h	114	851	701	114	851	699	165	606	624	190	649	637
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	32.7	20.3	18.0	34.3	22.8	20.4	31.5	20.6	20.6	31.3	18.9	18.9
Incr Delay (d2), s/veh	25.7	0.6	0.0	41.0	1.0	0.2	20.1	9.1	8.9	168.0	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	2.2	3.9	0.3	0.9	4.5	0.9	3.0	9.6	9.8	12.5	8.5	8.4
LnGrp Delay(d),s/veh	58.3	20.9	18.0	75.2	23.8	20.6	51.6	29.7	29.5	199.3	24.9	25.1
LnGrp LOS	E	C	B	E	C	C	D	C	C	F	C	C
Approach Vol, veh/h		338			348			1064			1143	
Approach Delay, s/veh		29.2			27.4			32.0			62.7	
Approach LOS		C			C			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.8	25.2	9.3	30.7	7.4	22.7	11.0	29.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	6.5	25.0	4.5	32.0	7.5	24.0				
Max Q Clear Time (g_c+I1), s	3.1	9.3	6.5	17.2	5.0	10.5	9.5	18.5				
Green Ext Time (p_c), s	0.0	3.1	0.0	5.8	0.0	3.1	0.0	4.3				
Intersection Summary												
HCM 2010 Ctrl Delay			43.2									
HCM 2010 LOS			D									






















HCM 2010 Signalized Intersection Summary
 8: Industrial Blvd & Naples St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	133	82	339	98	326	43	64	370	375	62	0
Future Volume (veh/h)	35	133	82	339	98	326	43	64	370	375	62	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	38	145	66	368	107	319	47	70	257	408	67	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	152	69	262	76	227	39	59	215	330	54	0
Arrive On Green	0.14	0.14	0.14	0.32	0.32	0.32	0.19	0.19	0.19	0.21	0.21	0.00
Sat Flow, veh/h	275	1050	478	807	235	700	211	315	1155	1595	262	0
Grp Volume(v), veh/h	249	0	0	794	0	0	374	0	0	475	0	0
Grp Sat Flow(s),veh/h/ln	1803	0	0	1741	0	0	1681	0	0	1857	0	0
Q Serve(g_s), s	19.9	0.0	0.0	47.0	0.0	0.0	27.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	19.9	0.0	0.0	47.0	0.0	0.0	27.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.15		0.27	0.46		0.40	0.13		0.69	0.86		0.00
Lane Grp Cap(c), veh/h	261	0	0	564	0	0	313	0	0	384	0	0
V/C Ratio(X)	0.95	0.00	0.00	1.41	0.00	0.00	1.19	0.00	0.00	1.24	0.00	0.00
Avail Cap(c_a), veh/h	261	0	0	564	0	0	313	0	0	384	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.5	0.0	0.0	49.0	0.0	0.0	59.0	0.0	0.0	57.5	0.0	0.0
Incr Delay (d2), s/veh	42.9	0.0	0.0	193.5	0.0	0.0	114.6	0.0	0.0	126.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	0.0	0.0	52.9	0.0	0.0	22.5	0.0	0.0	28.9	0.0	0.0
LnGrp Delay(d),s/veh	104.4	0.0	0.0	242.5	0.0	0.0	173.6	0.0	0.0	184.2	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		249			794			374			475	
Approach Delay, s/veh		104.4			242.5			173.6			184.2	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		35.0		52.0		32.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		30.0		47.0		27.0				
Max Q Clear Time (g_c+I1), s		21.9		32.0		49.0		29.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				196.1								
HCM 2010 LOS				F								






















HCM 2010 Signalized Intersection Summary
 9: Broadway & Naples St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	260	81	186	207	98	103	714	172	58	530	35
Future Volume (veh/h)	138	260	81	186	207	98	103	714	172	58	530	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.92	1.00		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	150	283	68	202	225	69	112	776	151	63	576	29
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	417	100	226	582	471	142	898	175	80	934	47
Arrive On Green	0.11	0.29	0.29	0.13	0.31	0.31	0.08	0.31	0.31	0.05	0.27	0.27
Sat Flow, veh/h	1774	1435	345	1774	1863	1508	1774	2908	566	1774	3411	171
Grp Volume(v), veh/h	150	0	351	202	225	69	112	472	455	63	298	307
Grp Sat Flow(s),veh/h/ln	1774	0	1780	1774	1863	1508	1774	1770	1705	1774	1770	1813
Q Serve(g_s), s	6.2	0.0	13.0	8.3	7.0	2.5	4.6	18.7	18.7	2.6	11.0	11.0
Cycle Q Clear(g_c), s	6.2	0.0	13.0	8.3	7.0	2.5	4.6	18.7	18.7	2.6	11.0	11.0
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.33	1.00		0.09
Lane Grp Cap(c), veh/h	187	0	517	226	582	471	142	546	526	80	484	496
V/C Ratio(X)	0.80	0.00	0.68	0.89	0.39	0.15	0.79	0.86	0.86	0.79	0.62	0.62
Avail Cap(c_a), veh/h	226	0	621	226	650	526	179	546	526	107	484	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	32.6	0.0	23.4	32.0	20.0	18.4	33.6	24.3	24.3	35.2	23.6	23.6
Incr Delay (d2), s/veh	15.8	0.0	2.3	32.8	0.4	0.1	16.5	16.5	17.0	23.5	5.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	6.7	6.2	3.7	1.0	2.9	11.6	11.2	1.8	6.1	6.2
LnGrp Delay(d),s/veh	48.4	0.0	25.7	64.8	20.4	18.6	50.1	40.7	41.3	58.7	29.4	29.3
LnGrp LOS	D		C	E	C	B	D	D	D	E	C	C
Approach Vol, veh/h		501			496			1039			668	
Approach Delay, s/veh		32.5			38.2			42.0			32.1	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	26.6	9.5	25.4	11.3	28.3	6.9	28.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	9.5	26.0	7.5	20.0	9.5	26.0	4.5	23.0				
Max Q Clear Time (g_c+I1), s	10.3	15.0	6.6	13.0	8.2	9.0	4.6	20.7				
Green Ext Time (p_c), s	0.0	2.8	0.0	4.7	0.0	3.4	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			37.1									
HCM 2010 LOS			D									












HCM 2010 Signalized Intersection Summary
 10: Broadway & Oxford St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	67	69	119	7	124	10	711	68	142	784	8
Future Volume (veh/h)	65	67	69	119	7	124	10	711	68	142	784	8
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.94	1.00		0.92	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	71	73	48	129	8	86	11	773	63	154	852	8
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	422	333	164	34	371	15	994	81	193	1445	14
Arrive On Green	0.05	0.23	0.23	0.09	0.27	0.27	0.01	0.30	0.30	0.11	0.40	0.40
Sat Flow, veh/h	1774	1863	1471	1774	129	1383	1774	3288	268	1774	3590	34
Grp Volume(v), veh/h	71	73	48	129	0	94	11	416	420	154	420	440
Grp Sat Flow(s),veh/h/ln	1774	1863	1471	1774	0	1512	1774	1770	1787	1774	1770	1854
Q Serve(g_s), s	2.5	2.0	1.6	4.5	0.0	3.1	0.4	13.5	13.5	5.3	11.7	11.7
Cycle Q Clear(g_c), s	2.5	2.0	1.6	4.5	0.0	3.1	0.4	13.5	13.5	5.3	11.7	11.7
Prop In Lane	1.00		1.00	1.00		0.91	1.00		0.15	1.00		0.02
Lane Grp Cap(c), veh/h	90	422	333	164	0	405	15	535	540	193	712	746
V/C Ratio(X)	0.79	0.17	0.14	0.79	0.00	0.23	0.74	0.78	0.78	0.80	0.59	0.59
Avail Cap(c_a), veh/h	155	741	585	183	0	625	127	535	540	212	712	746
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	19.6	19.4	27.9	0.0	18.0	31.1	20.0	20.0	27.4	14.7	14.7
Incr Delay (d2), s/veh	13.9	0.2	0.2	18.4	0.0	0.3	52.4	10.6	10.6	17.7	3.6	3.4
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	1.6	1.0	0.7	3.0	0.0	1.3	0.4	8.2	8.2	3.6	6.3	6.6
LnGrp Delay(d),s/veh	43.4	19.8	19.6	46.4	0.0	18.3	83.5	30.7	30.6	45.1	18.3	18.1
LnGrp LOS	D	B	B	D		B	F	C	C	D	B	B
Approach Vol, veh/h		192			223			847			1014	
Approach Delay, s/veh		28.5			34.5			31.3			22.3	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	19.3	4.0	30.3	6.7	21.9	10.3	24.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	6.5	25.0	4.5	22.0	5.5	26.0	7.5	19.0				
Max Q Clear Time (g_c+I1), s	6.5	4.0	2.4	13.7	4.5	5.1	7.3	15.5				
Green Ext Time (p_c), s	0.0	1.1	0.0	5.8	0.0	1.1	0.0	2.7				
Intersection Summary												
HCM 2010 Ctrl Delay			27.4									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis
 11: Bay Blvd & Palomar St

2025 No Build - PM

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	49	85	67	72	260	77
Future Volume (vph)	49	85	67	72	260	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	92	73	78	283	84
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	
Volume Total (vph)	53	92	73	78	367	
Volume Left (vph)	53	0	0	0	283	
Volume Right (vph)	0	92	0	78	0	
Hadj (s)	0.53	-0.67	0.03	-0.67	0.19	
Departure Headway (s)	6.3	5.1	5.3	4.6	5.1	
Degree Utilization, x	0.09	0.13	0.11	0.10	0.52	
Capacity (veh/h)	530	648	650	746	693	
Control Delay (s)	8.8	7.7	7.7	6.9	13.4	
Approach Delay (s)	8.1		7.3		13.4	
Approach LOS	A		A		B	
Intersection Summary						
Delay			10.8			
Level of Service			B			
Intersection Capacity Utilization			35.1%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2025 No Build - PM

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↗					↖	↗	
Traffic Volume (vph)	0	312	20	646	119	0	0	0	0	1077	0	16
Future Volume (vph)	0	312	20	646	119	0	0	0	0	1077	0	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		3.5	3.5					5.0	5.0	
Lane Util. Factor		0.95		0.95	0.95					0.95	0.95	
Frbp, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.99		1.00	1.00					1.00	1.00	
Flt Protected		1.00		0.95	0.97					0.95	0.95	
Satd. Flow (prot)		3498		1681	1711					1681	1679	
Flt Permitted		1.00		0.95	0.97					0.95	0.95	
Satd. Flow (perm)		3498		1681	1711					1681	1679	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	339	22	702	129	0	0	0	0	1171	0	17
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	357	0	414	417	0	0	0	0	597	558	0
Confl. Peds. (#/hr)	1		15	15		1	6					6
Confl. Bikes (#/hr)			1	1								
Turn Type		NA		Split	NA					Split	NA	
Protected Phases		2		6	6					4	4	
Permitted Phases												
Actuated Green, G (s)		22.6		30.7	30.7					43.2	43.2	
Effective Green, g (s)		22.6		30.7	30.7					43.2	43.2	
Actuated g/C Ratio		0.21		0.28	0.28					0.39	0.39	
Clearance Time (s)		5.0		3.5	3.5					5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		718		469	477					660	659	
v/s Ratio Prot		c0.10		c0.25	0.24					c0.36	0.33	
v/s Ratio Perm												
v/c Ratio		0.50		0.88	0.87					0.90	0.85	
Uniform Delay, d1		38.7		37.9	37.8					31.5	30.4	
Progression Factor		1.00		0.07	0.06					1.00	1.00	
Incremental Delay, d2		2.5		2.0	1.8					15.9	9.8	
Delay (s)		41.1		4.5	4.2					47.3	40.2	
Level of Service		D		A	A					D	D	
Approach Delay (s)		41.1			4.4			0.0			43.8	
Approach LOS		D			A			A			D	
Intersection Summary												
HCM 2000 Control Delay			29.6			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			78.0%			ICU Level of Service				D		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St






















2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 	 	 		 			
Traffic Volume (vph)	45	1347	0	0	766	995	3	0	365	0	0	0
Future Volume (vph)	45	1347	0	0	766	995	3	0	365	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			3.5	4.0	3.5		3.5			
Lane Util. Factor		0.95			0.95	1.00	1.00		0.88			
Frbp, ped/bikes		1.00			1.00	1.00	1.00		1.00			
Flpb, ped/bikes		1.00			1.00	1.00	1.00		1.00			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3533			3539	1583	1770		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3533			3539	1583	1770		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	1464	0	0	833	1082	3	0	397	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	371	0	0	0
Lane Group Flow (vph)	0	1513	0	0	833	1082	3	0	26	0	0	0
Confl. Peds. (#/hr)			14	14			1		1	1		1
Confl. Bikes (#/hr)			1	1								
Turn Type	Split	NA			NA	Free	Prot		Prot			
Protected Phases	2	2			6		3		3			
Permitted Phases						Free						
Actuated Green, G (s)		65.1			25.6	110.0	7.3		7.3			
Effective Green, g (s)		65.1			25.6	110.0	7.3		7.3			
Actuated g/C Ratio		0.59			0.23	1.00	0.07		0.07			
Clearance Time (s)		5.0			3.5		3.5		3.5			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		2090			823	1583	117		184			
v/s Ratio Prot		0.43			c0.24		0.00		0.01			
v/s Ratio Perm						c0.68						
v/c Ratio		0.72			1.01	0.68	0.03		0.14			
Uniform Delay, d1		16.0			42.2	0.0	48.0		48.4			
Progression Factor		0.51			0.61	1.00	1.00		1.00			
Incremental Delay, d2		1.4			27.3	1.5	0.1		0.4			
Delay (s)		9.6			53.2	1.5	48.1		48.8			
Level of Service		A			D	A	D		D			
Approach Delay (s)		9.6			24.0			48.8			0.0	
Approach LOS		A			C			D			A	
Intersection Summary												
HCM 2000 Control Delay			20.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			110.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			73.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis























14: E Frontage Rd/Walnut Ave & Palomar St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  							
Traffic Volume (veh/h)	15	1401	310	8	1718	26	0	0	84	0	0	23
Future Volume (Veh/h)	15	1401	310	8	1718	26	0	0	84	0	0	23
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	1523	337	9	1867	28	0	0	91	0	0	25
Pedestrians		4						6			1	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		267			722							
pX, platoon unblocked	0.75			0.69			0.81	0.81	0.69	0.81	0.81	0.75
vC, conflicting volume	1896			1866			2399	3644	936	2784	3798	641
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1033			1352			422	1954	0	897	2144	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			100	100	88	100	100	97
cM capacity (veh/h)	502			346			383	48	742	159	37	811
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1			
Volume Total	16	1015	845	9	747	747	401	91	25			
Volume Left	16	0	0	9	0	0	0	0	0			
Volume Right	0	0	337	0	0	0	28	91	25			
cSH	502	1700	1700	346	1700	1700	1700	742	811			
Volume to Capacity	0.03	0.60	0.50	0.03	0.44	0.44	0.24	0.12	0.03			
Queue Length 95th (ft)	2	0	0	2	0	0	0	10	2			
Control Delay (s)	12.4	0.0	0.0	15.7	0.0	0.0	0.0	10.5	9.6			
Lane LOS	B			C				B	A			
Approach Delay (s)	0.1			0.1				10.5	9.6			
Approach LOS								B	A			
Intersection Summary												
Average Delay			0.4									
Intersection Capacity Utilization			60.6%		ICU Level of Service				B			
Analysis Period (min)			15									




















HCM 2010 Signalized Intersection Summary
 15: Industrial Blvd & Palomar St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	1215	72	177	1269	75	249	235	151	55	225	203
Future Volume (veh/h)	198	1215	72	177	1269	75	249	235	151	55	225	203
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	215	1321	66	192	1379	82	271	255	105	60	245	172
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	1960	98	265	1903	113	279	618	506	355	254	178
Arrive On Green	0.03	0.13	0.13	0.03	0.13	0.13	0.11	0.33	0.33	0.04	0.25	0.25
Sat Flow, veh/h	1774	4949	247	1774	4895	291	1774	1863	1523	1774	998	701
Grp Volume(v), veh/h	215	905	482	192	955	506	271	255	105	60	0	417
Grp Sat Flow(s),veh/h/ln	1774	1695	1806	1774	1695	1796	1774	1863	1523	1774	0	1699
Q Serve(g_s), s	7.7	28.0	28.0	6.9	29.8	29.8	12.2	11.7	5.4	2.7	0.0	26.7
Cycle Q Clear(g_c), s	7.7	28.0	28.0	6.9	29.8	29.8	12.2	11.7	5.4	2.7	0.0	26.7
Prop In Lane	1.00		0.14	1.00		0.16	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	265	1342	715	265	1318	698	279	618	506	355	0	433
V/C Ratio(X)	0.81	0.67	0.67	0.73	0.72	0.72	0.97	0.41	0.21	0.17	0.00	0.96
Avail Cap(c_a), veh/h	278	1342	715	306	1318	698	279	618	506	380	0	433
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.87	0.87	0.87	0.09	0.00	0.09
Uniform Delay (d), s/veh	25.7	41.0	41.0	24.9	42.3	42.3	28.5	28.4	26.4	28.7	0.0	40.5
Incr Delay (d2), s/veh	14.5	2.7	5.0	0.5	0.3	0.6	42.3	0.4	0.2	0.0	0.0	6.7
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	4.8	13.7	15.0	3.4	14.1	15.0	9.1	6.0	2.3	1.3	0.0	13.3
LnGrp Delay(d),s/veh	40.3	43.8	46.1	25.4	42.6	42.9	70.8	28.8	26.5	28.7	0.0	47.2
LnGrp LOS	D	D	D	C	D	D	E	C	C	C		D
Approach Vol, veh/h		1602			1653			631			477	
Approach Delay, s/veh		44.0			40.7			46.5			44.9	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	48.6	16.0	33.0	13.2	47.8	7.5	41.5				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	11.5	41.0	12.5	28.0	10.5	42.0	5.5	35.0				
Max Q Clear Time (g_c+I1), s	8.9	30.0	14.2	28.7	9.7	31.8	4.7	13.7				
Green Ext Time (p_c), s	0.0	10.3	0.0	0.0	0.0	9.6	0.0	4.6				
Intersection Summary												
HCM 2010 Ctrl Delay				43.2								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 16: Transit Center Place & Palomar St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	657	297	13	610	3	400	7	9	5	20	512
Future Volume (veh/h)	495	657	297	13	610	3	400	7	9	5	20	512
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.87	0.90		0.88	0.90		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	538	714	202	14	663	2	435	8	7	5	22	0
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	1919	532	16	1594	5	528	317	277	130	549	0
Arrive On Green	0.07	0.16	0.16	0.02	0.61	0.61	0.37	0.37	0.37	0.37	0.37	0.00
Sat Flow, veh/h	1774	3873	1074	1774	5232	16	1248	861	753	249	1493	0
Grp Volume(v), veh/h	538	623	293	14	429	236	435	0	15	27	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1556	1774	1695	1857	1248	0	1614	1742	0	0
Q Serve(g_s), s	22.0	18.0	18.5	0.9	7.3	7.3	35.7	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	22.0	18.0	18.5	0.9	7.3	7.3	36.8	0.0	0.7	1.0	0.0	0.0
Prop In Lane	1.00		0.69	1.00		0.01	1.00		0.47	0.19		0.00
Lane Grp Cap(c), veh/h	355	1680	771	16	1033	566	528	0	594	680	0	0
V/C Ratio(X)	1.52	0.37	0.38	0.87	0.42	0.42	0.82	0.00	0.03	0.04	0.00	0.00
Avail Cap(c_a), veh/h	355	1680	771	81	1033	566	693	0	807	905	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	51.4	30.7	30.9	53.9	16.4	16.4	33.4	0.0	22.2	22.3	0.0	0.0
Incr Delay (d2), s/veh	242.1	0.4	1.0	34.0	1.1	2.0	6.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	34.7	8.6	8.2	0.6	3.5	4.0	13.6	0.0	0.3	0.5	0.0	0.0
LnGrp Delay(d),s/veh	293.5	31.2	31.9	87.9	17.5	18.4	39.6	0.0	22.2	22.3	0.0	0.0
LnGrp LOS	F	C	C	F	B	B	D		C	C		
Approach Vol, veh/h		1454			679			450				27
Approach Delay, s/veh		128.4			19.2			39.0				22.3
Approach LOS		F			B			D				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	59.5		45.5	26.0	38.5		45.5				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	5.0	36.0		55.0	22.0	19.0		55.0				
Max Q Clear Time (g_c+I1), s	2.9	20.5		3.0	24.0	9.3		38.8				
Green Ext Time (p_c), s	0.0	10.1		2.0	0.0	7.0		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				83.5								
HCM 2010 LOS				F								

HCM Signalized Intersection Capacity Analysis
 16: Transit Center Place & Palomar St

*PGD mitigation assumed
 2025 No Build - PM






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↕			↗↖	↗
Traffic Volume (vph)	495	657	297	13	610	3	400	7	9	5	20	512
Future Volume (vph)	495	657	297	13	610	3	400	7	9	5	20	512
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.92		1.00	1.00		1.00	1.00			1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.95		1.00	1.00		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (prot)	1770	4441		1770	5079		1681	1675			1846	1511
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (perm)	1770	4441		1770	5079		1681	1675			1846	1511
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	538	714	323	14	663	3	435	8	10	5	22	557
RTOR Reduction (vph)	0	52	0	0	0	0	0	2	0	0	0	33
Lane Group Flow (vph)	538	985	0	14	666	0	226	225	0	0	27	524
Confl. Peds. (#/hr)	29		64	64		29	129		48	48		129
Confl. Bikes (#/hr)			2	2			1		2	2		1
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	38.1	57.4		1.9	21.2		19.5	19.5			13.5	51.6
Effective Green, g (s)	38.1	57.4		1.9	21.2		19.5	19.5			13.5	51.6
Actuated g/C Ratio	0.34	0.52		0.02	0.19		0.18	0.18			0.12	0.47
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	608	2300		30	971		295	294			224	703
v/s Ratio Prot	c0.30	0.22		0.01	c0.13		0.13	c0.13			0.01	c0.26
v/s Ratio Perm												0.09
v/c Ratio	0.88	0.43		0.47	0.69		0.77	0.77			0.12	0.75
Uniform Delay, d1	34.3	16.5		53.9	41.7		43.5	43.5			43.4	24.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	14.0	0.6		4.1	3.9		11.3	11.3			0.2	3.8
Delay (s)	48.3	17.1		58.1	45.6		54.7	54.8			43.6	28.0
Level of Service	D	B		E	D		D	D			D	C
Approach Delay (s)		27.8			45.9			54.8			28.7	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.8	Sum of lost time (s)	18.5
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Assumed PGD will mitigate this intersection, instead of GS project			
c Critical Lane Group			























HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	613	1	244	548	206	3	45	330	211	31	74
Future Volume (veh/h)	55	613	1	244	548	206	3	45	330	211	31	74
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	0.97		0.95	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	60	666	1	265	596	144	3	49	230	229	34	63
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	1846	3	327	1644	388	613	117	551	312	45	72
Arrive On Green	0.09	0.70	0.70	0.03	0.13	0.13	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1774	5243	8	3442	4070	959	1260	273	1282	596	105	168
Grp Volume(v), veh/h	60	431	236	265	494	246	3	0	279	326	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1861	1721	1695	1639	1260	0	1555	869	0	0
Q Serve(g_s), s	3.6	5.5	5.5	8.4	14.6	15.1	0.0	0.0	13.7	27.6	0.0	0.0
Cycle Q Clear(g_c), s	3.6	5.5	5.5	8.4	14.6	15.1	0.1	0.0	13.7	41.3	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.59	1.00		0.82	0.70		0.19
Lane Grp Cap(c), veh/h	77	1193	655	327	1370	662	613	0	669	429	0	0
V/C Ratio(X)	0.78	0.36	0.36	0.81	0.36	0.37	0.00	0.00	0.42	0.76	0.00	0.00
Avail Cap(c_a), veh/h	121	1193	655	360	1370	662	758	0	848	567	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.84	0.84	0.84	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.7	11.4	11.4	52.3	34.7	34.9	17.9	0.0	21.8	35.4	0.0	0.0
Incr Delay (d2), s/veh	5.0	0.7	1.2	9.2	0.6	1.3	0.0	0.0	0.4	4.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.6	3.0	4.4	7.0	7.1	0.1	0.0	6.0	9.8	0.0	0.0
LnGrp Delay(d),s/veh	54.7	12.0	12.6	61.5	35.4	36.3	17.9	0.0	22.2	39.6	0.0	0.0
LnGrp LOS	D	B	B	E	D	D	B		C	D		
Approach Vol, veh/h		727			1005			282			326	
Approach Delay, s/veh		15.7			42.5			22.1			39.6	
Approach LOS		B			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	43.7		52.3	8.2	49.4		52.3				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	25.0		60.0	7.5	29.0		60.0				
Max Q Clear Time (g_c+I1), s	10.4	7.5		43.3	5.6	17.1		15.7				
Green Ext Time (p_c), s	0.0	9.7		4.0	0.0	7.5		5.2				
Intersection Summary												
HCM 2010 Ctrl Delay				31.3								
HCM 2010 LOS				C								






















HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St

2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	507	256	97	417	69	329	409	114	209	750	253
Future Volume (veh/h)	390	507	256	97	417	69	329	409	114	209	750	253
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.93	1.00		0.95	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	424	551	178	105	453	48	358	445	79	227	815	176
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	492	1531	478	160	1429	148	421	1066	452	291	933	392
Arrive On Green	0.05	0.13	0.13	0.05	0.31	0.31	0.12	0.30	0.30	0.08	0.26	0.26
Sat Flow, veh/h	3442	3789	1183	3442	4646	482	3442	3539	1500	3442	3539	1488
Grp Volume(v), veh/h	424	491	238	105	328	173	358	445	79	227	815	176
Grp Sat Flow(s),veh/h/ln	1721	1695	1581	1721	1695	1738	1721	1770	1500	1721	1770	1488
Q Serve(g_s), s	13.5	14.5	15.1	3.3	8.2	8.4	11.2	11.1	4.3	7.1	24.2	10.9
Cycle Q Clear(g_c), s	13.5	14.5	15.1	3.3	8.2	8.4	11.2	11.1	4.3	7.1	24.2	10.9
Prop In Lane	1.00		0.75	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	1370	639	160	1042	534	421	1066	452	291	933	392
V/C Ratio(X)	0.86	0.36	0.37	0.66	0.31	0.32	0.85	0.42	0.17	0.78	0.87	0.45
Avail Cap(c_a), veh/h	532	1370	639	219	1042	534	469	1066	452	375	965	406
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	0.90	0.90	0.90	0.86	0.86	0.86
Uniform Delay (d), s/veh	51.3	34.7	35.0	51.6	29.2	29.3	47.3	30.7	28.3	49.3	38.8	33.8
Incr Delay (d2), s/veh	11.9	0.7	1.5	3.4	0.8	1.6	11.7	0.3	0.2	6.7	7.7	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	7.2	7.0	6.9	1.6	3.9	4.3	6.0	5.4	1.8	3.6	12.9	4.5
LnGrp Delay(d),s/veh	63.3	35.4	36.5	54.9	30.0	30.9	59.0	31.0	28.5	56.1	46.5	34.6
LnGrp LOS	E	D	D	D	C	C	E	C	C	E	D	C
Approach Vol, veh/h		1153			606			882			1218	
Approach Delay, s/veh		45.9			34.6			42.1			46.5	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	49.4	17.5	34.0	19.7	38.8	13.3	38.1				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	40.0	15.0	30.0	17.0	30.0	12.0	33.0				
Max Q Clear Time (g_c+I1), s	5.3	17.1	13.2	26.2	15.5	10.4	9.1	13.1				
Green Ext Time (p_c), s	0.0	10.0	0.3	2.8	0.3	9.2	0.2	10.2				
Intersection Summary												
HCM 2010 Ctrl Delay				43.4								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St
























2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	79	26	70	5	288	2	344	86	217	306	9
Future Volume (veh/h)	34	79	26	70	5	288	2	344	86	217	306	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	37	86	0	76	5	200	2	374	93	236	333	8
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	141	120	94	6	247	498	710	176	395	897	22
Arrive On Green	0.08	0.08	0.00	0.21	0.21	0.21	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1774	1863	1583	442	29	1162	1033	1433	356	920	1810	43
Grp Volume(v), veh/h	37	86	0	281	0	0	2	0	467	236	0	341
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1632	0	0	1033	0	1789	920	0	1854
Q Serve(g_s), s	1.4	3.1	0.0	11.4	0.0	0.0	0.1	0.0	12.4	16.4	0.0	7.9
Cycle Q Clear(g_c), s	1.4	3.1	0.0	11.4	0.0	0.0	8.0	0.0	12.4	28.8	0.0	7.9
Prop In Lane	1.00		1.00	0.27		0.71	1.00		0.20	1.00		0.02
Lane Grp Cap(c), veh/h	134	141	120	348	0	0	498	0	886	395	0	918
V/C Ratio(X)	0.28	0.61	0.00	0.81	0.00	0.00	0.00	0.00	0.53	0.60	0.00	0.37
Avail Cap(c_a), veh/h	664	697	592	611	0	0	551	0	978	443	0	1014
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.3	31.1	0.0	26.0	0.0	0.0	13.3	0.0	12.0	21.8	0.0	10.8
Incr Delay (d2), s/veh	1.1	4.2	0.0	4.5	0.0	0.0	0.0	0.0	0.5	1.8	0.0	0.2
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	0.7	1.8	0.0	5.5	0.0	0.0	0.0	0.0	6.2	4.3	0.0	4.0
LnGrp Delay(d),s/veh	31.4	35.3	0.0	30.5	0.0	0.0	13.3	0.0	12.5	23.6	0.0	11.1
LnGrp LOS	C	D		C			B		B	C		B
Approach Vol, veh/h		123			281			469			577	
Approach Delay, s/veh		34.1			30.5			12.5			16.2	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.3		39.4		19.8		39.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		38.0		26.0		38.0				
Max Q Clear Time (g_c+I1), s		5.1		30.8		13.4		14.4				
Green Ext Time (p_c), s		0.5		3.7		1.4		7.1				
Intersection Summary												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

20: Broadway & Anita St

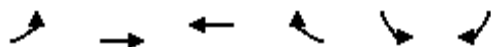
2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	200	56	85	153	115	41	542	78	159	845	113
Future Volume (veh/h)	131	200	56	85	153	115	41	542	78	159	845	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.95	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	142	217	39	92	166	80	45	589	63	173	918	102
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	379	579	477	351	579	477	287	1308	140	462	1478	164
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.03	0.41	0.41	0.08	0.46	0.46
Sat Flow, veh/h	1118	1863	1535	1109	1863	1535	1774	3210	342	1774	3196	355
Grp Volume(v), veh/h	142	217	39	92	166	80	45	324	328	173	508	512
Grp Sat Flow(s),veh/h/ln	1118	1863	1535	1109	1863	1535	1774	1770	1783	1774	1770	1781
Q Serve(g_s), s	7.4	6.1	1.2	4.7	4.5	2.5	1.0	8.9	9.0	3.5	14.5	14.5
Cycle Q Clear(g_c), s	11.9	6.1	1.2	10.8	4.5	2.5	1.0	8.9	9.0	3.5	14.5	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.20
Lane Grp Cap(c), veh/h	379	579	477	351	579	477	287	721	726	462	818	824
V/C Ratio(X)	0.37	0.37	0.08	0.26	0.29	0.17	0.16	0.45	0.45	0.37	0.62	0.62
Avail Cap(c_a), veh/h	633	1000	824	602	1000	824	361	721	726	544	818	824
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	22.0	18.0	16.3	22.2	17.5	16.8	12.0	14.4	14.4	9.8	13.6	13.6
Incr Delay (d2), s/veh	0.6	0.4	0.1	0.4	0.3	0.2	0.3	2.0	2.0	0.5	3.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.2	0.5	1.5	2.3	1.1	0.5	4.7	4.8	1.7	7.9	7.9
LnGrp Delay(d),s/veh	22.6	18.4	16.4	22.6	17.7	17.0	12.3	16.4	16.4	10.3	17.1	17.1
LnGrp LOS	C	B	B	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		398			338			697			1193	
Approach Delay, s/veh		19.7			18.9			16.2			16.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.8	5.2	36.0		25.8	8.9	32.3				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		36.0	4.5	31.0		36.0	8.5	27.0				
Max Q Clear Time (g_c+I1), s		13.9	3.0	16.5		12.8	5.5	11.0				
Green Ext Time (p_c), s		3.7	0.0	8.8		3.7	0.1	9.4				
Intersection Summary												
HCM 2010 Ctrl Delay			17.0									
HCM 2010 LOS			B									

HCM Unsignalized Intersection Capacity Analysis

21: Main St & I-5 SB Ramps

2025 No Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↑	↗	↖	↗
Traffic Volume (veh/h)	26	155	108	181	717	28
Future Volume (Veh/h)	26	155	108	181	717	28
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	168	117	197	779	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						14
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			809			
pX, platoon unblocked						
vC, conflicting volume	117				341	117
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	117				341	117
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				0	97
cM capacity (veh/h)	1471				643	935

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	196	117	197	809
Volume Left	28	0	0	779
Volume Right	0	0	197	30
cSH	1471	1700	1700	658
Volume to Capacity	0.02	0.07	0.12	1.23
Queue Length 95th (ft)	1	0	0	730
Control Delay (s)	1.2	0.0	0.0	137.2
Lane LOS	A			F
Approach Delay (s)	1.2	0.0		137.2
Approach LOS				F

Intersection Summary			
Average Delay		84.4	
Intersection Capacity Utilization		62.7%	ICU Level of Service
Analysis Period (min)		15	B

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps





















2025 No Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	55	817	277	672	127	11		
Future Volume (veh/h)	55	817	277	672	127	11		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	60	888	301	467	138	8		
Adj No. of Lanes	1	1	1	1	1	1		
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	73	1270	1054	877	187	167		
Arrive On Green	0.04	0.68	0.57	0.57	0.11	0.11		
Sat Flow, veh/h	1774	1863	1863	1551	1774	1583		
Grp Volume(v), veh/h	60	888	301	467	138	8		
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1551	1774	1583		
Q Serve(g_s), s	1.6	13.6	3.9	8.8	3.5	0.2		
Cycle Q Clear(g_c), s	1.6	13.6	3.9	8.8	3.5	0.2		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	73	1270	1054	877	187	167		
V/C Ratio(X)	0.82	0.70	0.29	0.53	0.74	0.05		
Avail Cap(c_a), veh/h	170	1270	1054	877	680	607		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	22.3	4.6	5.3	6.3	20.4	18.9		
Incr Delay (d2), s/veh	19.1	3.2	0.7	2.3	5.6	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.2	7.8	2.2	4.2	2.0	0.2		
LnGrp Delay(d),s/veh	41.5	7.8	6.0	8.7	25.9	19.0		
LnGrp LOS	D	A	A	A	C	B		
Approach Vol, veh/h		948	768		146			
Approach Delay, s/veh		9.9	7.6		25.6			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		37.0		10.0	5.4	31.6		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		32.0		18.0	4.5	24.0		
Max Q Clear Time (g_c+I1), s		15.6		5.5	3.6	10.8		
Green Ext Time (p_c), s		9.3		0.3	0.0	8.1		
Intersection Summary								
HCM 2010 Ctrl Delay			10.2					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

























2025 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	615	274	354	485	53	188	314	346	20	278	105
Future Volume (veh/h)	65	615	274	354	485	53	188	314	346	20	278	105
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	71	668	202	385	527	43	204	341	304	22	302	89
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	759	229	380	1039	85	261	334	298	69	511	151
Arrive On Green	0.19	0.29	0.29	0.21	0.31	0.31	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1774	2656	803	1774	3306	269	988	900	803	782	1376	406
Grp Volume(v), veh/h	71	445	425	385	281	289	204	0	645	22	0	391
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	1770	1805	988	0	1703	782	0	1782
Q Serve(g_s), s	3.6	25.2	25.2	22.5	13.6	13.7	20.4	0.0	39.0	0.0	0.0	18.6
Cycle Q Clear(g_c), s	3.6	25.2	25.2	22.5	13.6	13.7	39.0	0.0	39.0	39.0	0.0	18.6
Prop In Lane	1.00		0.48	1.00		0.15	1.00		0.47	1.00		0.23
Lane Grp Cap(c), veh/h	329	506	483	380	556	567	261	0	633	69	0	662
V/C Ratio(X)	0.22	0.88	0.88	1.01	0.51	0.51	0.78	0.00	1.02	0.32	0.00	0.59
Avail Cap(c_a), veh/h	329	506	483	380	556	567	261	0	633	69	0	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.3	35.8	35.8	41.3	29.4	29.4	42.9	0.0	33.0	52.5	0.0	26.6
Incr Delay (d2), s/veh	1.5	19.2	20.1	49.4	3.3	3.2	14.2	0.0	40.8	2.7	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	14.9	14.4	16.2	7.1	7.3	6.9	0.0	25.4	0.7	0.0	9.4
LnGrp Delay(d),s/veh	37.8	55.0	55.9	90.7	32.6	32.6	57.0	0.0	73.8	55.2	0.0	28.0
LnGrp LOS	D	E	E	F	C	C	E		F	E		C
Approach Vol, veh/h		941			955			849			413	
Approach Delay, s/veh		54.1			56.0			69.8			29.4	
Approach LOS		D			E			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	35.0		44.0	23.0	38.0		44.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	22.5	30.0		39.0	19.5	33.0		39.0				
Max Q Clear Time (g_c+I1), s	24.5	27.2		41.0	5.6	15.7		41.0				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.1	8.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				55.7								
HCM 2010 LOS				E								

HCM 2010 Signalized Intersection Summary

24: Broadway & Main St

2025 No Build - PM













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	570	243	363	424	131	211	411	333	195	693	97
Future Volume (veh/h)	119	570	243	363	424	131	211	411	333	195	693	97
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	129	620	169	395	461	91	229	447	232	212	753	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	875	383	384	1327	583	215	866	377	241	919	411
Arrive On Green	0.09	0.25	0.25	0.22	0.38	0.38	0.12	0.24	0.24	0.14	0.26	0.00
Sat Flow, veh/h	1774	3539	1551	1774	3539	1555	1774	3539	1542	1774	3539	1583
Grp Volume(v), veh/h	129	620	169	395	461	91	229	447	232	212	753	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1551	1774	1770	1555	1774	1770	1542	1774	1770	1583
Q Serve(g_s), s	8.3	18.5	10.6	25.0	10.8	4.5	14.0	12.6	15.5	13.6	23.1	0.0
Cycle Q Clear(g_c), s	8.3	18.5	10.6	25.0	10.8	4.5	14.0	12.6	15.5	13.6	23.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	875	383	384	1327	583	215	866	377	241	919	411
V/C Ratio(X)	0.82	0.71	0.44	1.03	0.35	0.16	1.07	0.52	0.61	0.88	0.82	0.00
Avail Cap(c_a), veh/h	246	1164	510	384	1439	632	215	866	377	292	919	411
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	0.00
Uniform Delay (d), s/veh	51.8	39.7	36.7	45.3	26.0	24.0	50.8	37.7	38.8	49.0	40.2	0.0
Incr Delay (d2), s/veh	11.8	1.3	0.8	53.7	0.2	0.1	79.8	2.2	7.3	22.0	8.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	9.2	4.6	17.9	5.3	1.9	11.6	6.4	7.4	8.1	12.3	0.0
LnGrp Delay(d),s/veh	63.5	41.0	37.5	99.0	26.1	24.1	130.6	39.9	46.1	71.0	48.3	0.0
LnGrp LOS	E	D	D	F	C	C	F	D	D	E	D	
Approach Vol, veh/h		918			947			908			965	
Approach Delay, s/veh		43.5			56.3			64.4			53.3	
Approach LOS		D			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	33.6	18.0	35.0	14.2	48.3	19.7	33.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	25.0	38.0	14.0	30.0	16.0	47.0	19.0	25.0				
Max Q Clear Time (g_c+I1), s	27.0	20.5	16.0	25.1	10.3	12.8	15.6	17.5				
Green Ext Time (p_c), s	0.0	7.7	0.0	3.3	0.1	9.9	0.2	4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			54.4									
HCM 2010 LOS			D									

**Appendix D – 2025 Intersection LOS Worksheets – Build
Alternative without Mitigation**

HCM Unsignalized Intersection Capacity Analysis





















1: Bay Blvd & L St

2025 Build - AM

							
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Sign Control	Stop		Stop			Stop	
Traffic Volume (vph)	370	203	125	644	209	107	
Future Volume (vph)	370	203	125	644	209	107	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	402	221	136	700	227	116	
Direction, Lane #	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	402	111	111	136	700	227	116
Volume Left (vph)	402	0	0	0	0	227	0
Volume Right (vph)	0	111	111	0	700	0	0
Hadj (s)	0.23	-0.57	-0.57	0.03	-0.57	0.53	0.03
Departure Headway (s)	5.4	3.2	3.2	5.8	3.2	6.5	5.9
Degree Utilization, x	0.61	0.10	0.10	0.22	0.62	0.41	0.19
Capacity (veh/h)	638	1121	1121	575	1118	536	577
Control Delay (s)	16.5	6.5	6.5	10.4	11.3	12.6	9.1
Approach Delay (s)	13.0			11.2		11.4	
Approach LOS	B			B		B	
Intersection Summary							
Delay			11.9				
Level of Service			B				
Intersection Capacity Utilization			58.1%	ICU Level of Service		B	
Analysis Period (min)			15				

HCM 2010 Signalized Intersection Summary
 2: Industrial Blvd/Driveway & L St
























2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	420	429	92	370	3	197	3	117	1	4	0
Future Volume (veh/h)	2	420	429	92	370	3	197	3	117	1	4	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	457	289	100	402	2	214	3	79	1	4	0
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1302	562	128	1582	8	294	3	521	72	222	0
Arrive On Green	0.00	0.37	0.37	0.07	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.00
Sat Flow, veh/h	1774	3539	1528	1774	3611	18	521	10	1559	0	665	0
Grp Volume(v), veh/h	2	457	289	100	197	207	217	0	79	5	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1528	1774	1770	1859	531	0	1559	665	0	0
Q Serve(g_s), s	0.1	5.6	8.8	3.3	4.2	4.2	0.0	0.0	2.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	5.6	8.8	3.3	4.2	4.2	20.0	0.0	2.1	20.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.20		0.00
Lane Grp Cap(c), veh/h	3	1302	562	128	775	815	297	0	521	295	0	0
V/C Ratio(X)	0.67	0.35	0.51	0.78	0.25	0.25	0.73	0.00	0.15	0.02	0.00	0.00
Avail Cap(c_a), veh/h	133	1302	562	133	775	815	297	0	521	295	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.8	13.7	14.7	27.3	10.6	10.6	21.7	0.0	14.0	14.7	0.0	0.0
Incr Delay (d2), s/veh	139.2	0.7	3.3	24.6	0.8	0.8	8.8	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.9	4.2	2.5	2.2	2.3	4.2	0.0	0.9	0.1	0.0	0.0
LnGrp Delay(d),s/veh	169.0	14.5	18.1	51.9	11.4	11.4	30.5	0.0	14.1	14.7	0.0	0.0
LnGrp LOS	F	B	B	D	B	B	C		B	B		
Approach Vol, veh/h		748			504			296				5
Approach Delay, s/veh		16.3			19.4			26.1				14.7
Approach LOS		B			B			C				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	27.0		25.0	3.6	31.2		25.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	22.0		20.0	4.5	22.0		20.0				
Max Q Clear Time (g_c+I1), s	5.3	10.8		22.0	2.1	6.2		22.0				
Green Ext Time (p_c), s	0.0	4.8		0.0	0.0	5.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

3: Broadway & L St

2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	258	242	194	202	37	159	615	194	32	466	23
Future Volume (veh/h)	34	258	242	194	202	37	159	615	194	32	466	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	37	280	172	211	220	25	173	668	143	35	507	15
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	699	305	230	965	108	188	1543	879	43	1253	586
Arrive On Green	0.03	0.20	0.20	0.13	0.30	0.30	0.11	0.44	0.44	0.02	0.35	0.35
Sat Flow, veh/h	1774	3539	1541	1774	3200	359	1774	3539	1545	1774	3539	1540
Grp Volume(v), veh/h	37	280	172	211	120	125	173	668	143	35	507	15
Grp Sat Flow(s),veh/h/ln	1774	1770	1541	1774	1770	1790	1774	1770	1545	1774	1770	1540
Q Serve(g_s), s	1.8	5.8	8.5	10.0	4.3	4.4	8.2	11.1	3.8	1.7	9.2	0.5
Cycle Q Clear(g_c), s	1.8	5.8	8.5	10.0	4.3	4.4	8.2	11.1	3.8	1.7	9.2	0.5
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	699	305	230	534	540	188	1543	879	43	1253	586
V/C Ratio(X)	0.81	0.40	0.56	0.92	0.23	0.23	0.92	0.43	0.16	0.81	0.40	0.03
Avail Cap(c_a), veh/h	126	1336	582	230	773	782	188	1543	879	126	1253	586
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	41.1	29.6	30.7	36.4	22.2	22.2	37.5	16.6	8.8	41.1	20.6	16.5
Incr Delay (d2), s/veh	27.1	0.4	1.6	37.3	0.2	0.2	43.1	0.9	0.4	28.9	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	3.8	7.3	2.1	2.2	6.2	5.6	1.7	1.2	4.6	0.2
LnGrp Delay(d),s/veh	68.1	30.0	32.4	73.8	22.4	22.4	80.6	17.5	9.2	70.1	21.6	16.5
LnGrp LOS	E	C	C	E	C	C	F	B	A	E	C	B
Approach Vol, veh/h		489			456			984			557	
Approach Delay, s/veh		33.7			46.2			27.4			24.5	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	21.7	13.0	35.0	6.2	30.6	6.1	41.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	11.0	32.0	9.0	30.0	6.0	37.0	6.0	33.0				
Max Q Clear Time (g_c+I1), s	12.0	10.5	10.2	11.2	3.8	6.4	3.7	13.1				
Green Ext Time (p_c), s	0.0	3.7	0.0	8.2	0.0	4.0	0.0	8.5				
Intersection Summary												
HCM 2010 Ctrl Delay			31.4									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis

4: Bay Blvd & I-5 SB Ramps

2025 Build - AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	700	65	4	375	86
Future Volume (Veh/h)	93	700	65	4	375	86
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	101	761	71	4	408	93
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	982	73			71	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	982	73			71	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	50	23			73	
cM capacity (veh/h)	203	989			1529	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	862	75	408	93
Volume Left	101	0	408	0
Volume Right	761	4	0	0
cSH	1120	1700	1529	1700
Volume to Capacity	0.77	0.04	0.27	0.05
Queue Length 95th (ft)	201	0	27	0
Control Delay (s)	21.9	0.0	8.2	0.0
Lane LOS	C		A	
Approach Delay (s)	21.9	0.0	6.7	
Approach LOS	C			

Intersection Summary			
Average Delay		15.5	
Intersection Capacity Utilization		53.7%	ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

2025 Build - AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	201	326	789	114	384	137
Future Volume (vph)	201	326	789	114	384	137
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	218	354	858	124	417	149

















Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	218	354	858	124	417	149
Volume Left (vph)	218	0	858	0	0	0
Volume Right (vph)	0	354	0	0	0	149
Hadj (s)	0.23	-0.57	0.53	0.03	0.03	-0.57
Departure Headway (s)	6.8	3.2	6.4	5.9	5.8	3.2
Degree Utilization, x	0.41	0.31	1.53	0.20	0.67	0.13
Capacity (veh/h)	511	1113	565	602	607	1121
Control Delay (s)	14.5	7.7	263.6	9.2	19.6	6.7
Approach Delay (s)	10.3		231.5		16.2	
Approach LOS	B		F		C	

Intersection Summary

Delay	114.3
Level of Service	F
Intersection Capacity Utilization	85.1%
ICU Level of Service	E
Analysis Period (min)	15

HCM 2010 Signalized Intersection Summary
6: Industrial Blvd & Moss St

























2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	0	0	0	125	381	94	300	0	246	464	0
Future Volume (veh/h)	204	0	0	0	125	381	94	300	0	246	464	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	222	0	0	0	136	275	102	326	0	267	504	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	0	0	0	114	230	88	281	0	201	380	0
Arrive On Green	0.14	0.00	0.00	0.00	0.21	0.21	0.20	0.20	0.00	0.32	0.32	0.00
Sat Flow, veh/h	1774	0	0	0	550	1113	439	1402	0	634	1197	0
Grp Volume(v), veh/h	222	0	0	0	0	411	428	0	0	771	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	0	0	0	1663	1841	0	0	1831	0	0
Q Serve(g_s), s	17.9	0.0	0.0	0.0	0.0	30.0	29.0	0.0	0.0	46.0	0.0	0.0
Cycle Q Clear(g_c), s	17.9	0.0	0.0	0.0	0.0	30.0	29.0	0.0	0.0	46.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.67	0.24		0.00	0.35		0.00
Lane Grp Cap(c), veh/h	244	0	0	0	0	344	368	0	0	581	0	0
V/C Ratio(X)	0.91	0.00	0.00	0.00	0.00	1.19	1.16	0.00	0.00	1.33	0.00	0.00
Avail Cap(c_a), veh/h	245	0	0	0	0	344	368	0	0	581	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.6	0.0	0.0	0.0	0.0	57.4	57.9	0.0	0.0	49.4	0.0	0.0
Incr Delay (d2), s/veh	34.7	0.0	0.0	0.0	0.0	112.1	98.6	0.0	0.0	158.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	0.0	0.0	0.0	0.0	24.4	24.7	0.0	0.0	48.7	0.0	0.0
LnGrp Delay(d),s/veh	96.3	0.0	0.0	0.0	0.0	169.6	156.6	0.0	0.0	207.9	0.0	0.0
LnGrp LOS	F					F	F			F		
Approach Vol, veh/h		222			411			428			771	
Approach Delay, s/veh		96.3			169.6			156.6			207.9	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.9		51.0		35.0		34.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		46.0		30.0		29.0				
Max Q Clear Time (g_c+I1), s		19.9		48.0		32.0		31.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			173.8									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary

















7: Broadway & Moss St

2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	134	17	16	260	171	113	708	62	160	475	133
Future Volume (veh/h)	47	134	17	16	260	171	113	708	62	160	475	133
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.94	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	51	146	10	17	283	125	123	770	54	174	516	103
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	503	416	22	459	379	156	1187	83	197	1102	219
Arrive On Green	0.04	0.27	0.27	0.01	0.25	0.25	0.09	0.36	0.36	0.11	0.38	0.38
Sat Flow, veh/h	1774	1863	1540	1774	1863	1537	1774	3341	234	1774	2914	578
Grp Volume(v), veh/h	51	146	10	17	283	125	123	408	416	174	312	307
Grp Sat Flow(s),veh/h/ln	1774	1863	1540	1774	1863	1537	1774	1770	1805	1774	1770	1722
Q Serve(g_s), s	1.9	4.2	0.3	0.6	9.1	4.5	4.6	13.0	13.1	6.5	9.0	9.1
Cycle Q Clear(g_c), s	1.9	4.2	0.3	0.6	9.1	4.5	4.6	13.0	13.1	6.5	9.0	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.34
Lane Grp Cap(c), veh/h	64	503	416	22	459	379	156	629	641	197	669	651
V/C Ratio(X)	0.80	0.29	0.02	0.79	0.62	0.33	0.79	0.65	0.65	0.88	0.47	0.47
Avail Cap(c_a), veh/h	118	882	729	118	882	728	197	629	641	197	669	651
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	32.3	19.5	18.1	33.3	22.6	20.9	30.2	18.2	18.3	29.6	15.9	15.9
Incr Delay (d2), s/veh	20.2	0.3	0.0	45.8	1.4	0.5	15.1	5.1	5.0	34.3	2.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.2	0.1	0.6	4.8	2.0	2.9	7.2	7.4	5.1	4.8	4.8
LnGrp Delay(d),s/veh	52.5	19.8	18.1	79.1	24.0	21.4	45.3	23.4	23.3	63.9	18.2	18.3
LnGrp LOS	D	B	B	E	C	C	D	C	C	E	B	B
Approach Vol, veh/h		207			425			947			793	
Approach Delay, s/veh		27.8			25.4			26.2			28.3	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.3	23.2	9.5	30.5	5.9	21.6	11.0	29.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	7.5	24.0	4.5	32.0	7.5	24.0				
Max Q Clear Time (g_c+I1), s	2.6	6.2	6.6	11.1	3.9	11.1	8.5	15.1				
Green Ext Time (p_c), s	0.0	3.0	0.0	7.0	0.0	2.8	0.0	5.4				
Intersection Summary												
HCM 2010 Ctrl Delay			26.9									
HCM 2010 LOS			C									






















HCM 2010 Signalized Intersection Summary
 8: Industrial Blvd & Naples St

2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	71	29	183	77	324	69	55	411	341	33	0
Future Volume (veh/h)	15	71	29	183	77	324	69	55	411	341	33	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.59	1.00		0.88	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	16	77	17	199	84	305	75	60	299	371	36	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	107	24	169	71	259	72	58	288	346	34	0
Arrive On Green	0.09	0.09	0.09	0.31	0.31	0.31	0.25	0.25	0.25	0.21	0.21	0.00
Sat Flow, veh/h	242	1166	257	549	232	841	290	232	1157	1689	164	0
Grp Volume(v), veh/h	110	0	0	588	0	0	434	0	0	407	0	0
Grp Sat Flow(s),veh/h/ln	1666	0	0	1622	0	0	1679	0	0	1853	0	0
Q Serve(g_s), s	8.8	0.0	0.0	42.0	0.0	0.0	34.0	0.0	0.0	28.0	0.0	0.0
Cycle Q Clear(g_c), s	8.8	0.0	0.0	42.0	0.0	0.0	34.0	0.0	0.0	28.0	0.0	0.0
Prop In Lane	0.15		0.15	0.34		0.52	0.17		0.69	0.91		0.00
Lane Grp Cap(c), veh/h	153	0	0	499	0	0	418	0	0	380	0	0
V/C Ratio(X)	0.72	0.00	0.00	1.18	0.00	0.00	1.04	0.00	0.00	1.07	0.00	0.00
Avail Cap(c_a), veh/h	256	0	0	499	0	0	418	0	0	380	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	60.3	0.0	0.0	47.3	0.0	0.0	51.3	0.0	0.0	54.3	0.0	0.0
Incr Delay (d2), s/veh	6.2	0.0	0.0	99.6	0.0	0.0	54.1	0.0	0.0	66.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.0	32.5	0.0	0.0	22.0	0.0	0.0	21.3	0.0	0.0
LnGrp Delay(d),s/veh	66.5	0.0	0.0	146.8	0.0	0.0	105.4	0.0	0.0	120.7	0.0	0.0
LnGrp LOS	E			F			F			F		
Approach Vol, veh/h		110			588			434			407	
Approach Delay, s/veh		66.5			146.8			105.4			120.7	
Approach LOS		E			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.5		33.0		47.0		39.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		28.0		42.0		34.0				
Max Q Clear Time (g_c+I1), s		10.8		30.0		44.0		36.0				
Green Ext Time (p_c), s		0.4		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				122.5								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary
 9: Broadway & Naples St























2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	201	121	116	299	94	119	507	61	30	418	61
Future Volume (veh/h)	131	201	121	116	299	94	119	507	61	30	418	61
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.94	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	142	218	95	126	325	67	129	551	42	33	454	52
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	369	161	151	567	460	123	1080	82	39	884	101
Arrive On Green	0.09	0.30	0.30	0.09	0.30	0.30	0.07	0.33	0.33	0.02	0.28	0.28
Sat Flow, veh/h	1774	1212	528	1774	1863	1513	1774	3316	252	1774	3175	361
Grp Volume(v), veh/h	142	0	313	126	325	67	129	293	300	33	252	254
Grp Sat Flow(s),veh/h/ln	1774	0	1741	1774	1863	1513	1774	1770	1799	1774	1770	1767
Q Serve(g_s), s	5.1	0.0	9.9	4.5	9.5	2.1	4.5	8.7	8.7	1.2	7.7	7.8
Cycle Q Clear(g_c), s	5.1	0.0	9.9	4.5	9.5	2.1	4.5	8.7	8.7	1.2	7.7	7.8
Prop In Lane	1.00		0.30	1.00		1.00	1.00		0.14	1.00		0.20
Lane Grp Cap(c), veh/h	151	0	529	151	567	460	123	576	586	39	493	492
V/C Ratio(X)	0.94	0.00	0.59	0.84	0.57	0.15	1.05	0.51	0.51	0.84	0.51	0.52
Avail Cap(c_a), veh/h	151	0	673	151	720	585	123	576	586	123	493	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	29.4	0.0	19.1	29.1	19.0	16.4	30.1	17.6	17.6	31.5	19.6	19.7
Incr Delay (d2), s/veh	55.8	0.0	1.1	31.5	0.9	0.1	93.6	3.2	3.2	35.0	3.8	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	4.9	3.5	5.0	0.9	5.4	4.7	4.8	1.0	4.3	4.3
LnGrp Delay(d),s/veh	85.2	0.0	20.1	60.6	19.9	16.5	124.1	20.8	20.8	66.5	23.4	23.5
LnGrp LOS	F		C	E	B	B	F	C	C	E	C	C
Approach Vol, veh/h		455			518			722			539	
Approach Delay, s/veh		40.5			29.4			39.3			26.1	
Approach LOS		D			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	24.7	8.0	23.0	9.0	24.7	4.9	26.1				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	5.5	25.0	4.5	18.0	5.5	25.0	4.5	18.0				
Max Q Clear Time (g_c+I1), s	6.5	11.9	6.5	9.8	7.1	11.5	3.2	10.7				
Green Ext Time (p_c), s	0.0	3.4	0.0	4.0	0.0	3.4	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			34.0									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

10: Broadway & Oxford St

2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	6	11	158	24	111	17	626	46	43	512	11
Future Volume (veh/h)	10	6	11	158	24	111	17	626	46	43	512	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.95	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	7	9	172	26	67	18	680	45	47	557	10
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	366	290	216	138	355	23	1121	74	57	1255	23
Arrive On Green	0.01	0.20	0.20	0.12	0.31	0.31	0.01	0.33	0.33	0.03	0.35	0.35
Sat Flow, veh/h	1774	1863	1478	1774	446	1148	1774	3353	222	1774	3552	64
Grp Volume(v), veh/h	11	7	9	172	0	93	18	359	366	47	277	290
Grp Sat Flow(s),veh/h/ln	1774	1863	1478	1774	0	1594	1774	1770	1805	1774	1770	1846
Q Serve(g_s), s	0.3	0.2	0.3	5.1	0.0	2.3	0.5	9.1	9.1	1.4	6.5	6.5
Cycle Q Clear(g_c), s	0.3	0.2	0.3	5.1	0.0	2.3	0.5	9.1	9.1	1.4	6.5	6.5
Prop In Lane	1.00		1.00	1.00		0.72	1.00		0.12	1.00		0.03
Lane Grp Cap(c), veh/h	15	366	290	216	0	493	23	591	603	57	625	652
V/C Ratio(X)	0.73	0.02	0.03	0.80	0.00	0.19	0.77	0.61	0.61	0.83	0.44	0.44
Avail Cap(c_a), veh/h	148	796	631	247	0	770	148	591	603	148	625	652
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	17.5	17.5	23.0	0.0	13.6	26.5	15.0	15.0	25.9	13.4	13.4
Incr Delay (d2), s/veh	50.3	0.0	0.0	14.7	0.0	0.2	40.4	4.6	4.5	24.6	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.1	3.4	0.0	1.0	0.5	5.1	5.2	1.1	3.6	3.7
LnGrp Delay(d),s/veh	76.9	17.5	17.5	37.7	0.0	13.8	66.9	19.5	19.5	50.5	15.6	15.6
LnGrp LOS	E	B	B	D		B	E	B	B	D	B	B
Approach Vol, veh/h		27			265			743			614	
Approach Delay, s/veh		41.7			29.3			20.7			18.3	
Approach LOS		D			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	15.6	4.2	24.0	4.0	21.7	5.2	23.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	7.5	23.0	4.5	18.0	4.5	26.0	4.5	18.0				
Max Q Clear Time (g_c+I1), s	7.1	2.3	2.5	8.5	2.3	4.3	3.4	11.1				
Green Ext Time (p_c), s	0.0	0.5	0.0	5.1	0.0	0.5	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			21.5									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis
 11: Bay Blvd & Palomar St

2025 Build - AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	49	222	66	38	59	25
Future Volume (vph)	49	222	66	38	59	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	241	72	41	64	27

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	53	241	72	41	91
Volume Left (vph)	53	0	0	0	64
Volume Right (vph)	0	241	0	41	0
Hadj (s)	0.53	-0.67	0.03	-0.67	0.17
Departure Headway (s)	5.6	4.4	5.3	4.6	5.3
Degree Utilization, x	0.08	0.29	0.11	0.05	0.13
Capacity (veh/h)	620	794	640	730	640
Control Delay (s)	7.9	7.9	7.8	6.7	9.1
Approach Delay (s)	7.9		7.4		9.1
Approach LOS	A		A		A

Intersection Summary					
Delay			8.0		
Level of Service			A		
Intersection Capacity Utilization			34.0%	ICU Level of Service	A
Analysis Period (min)			15		

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2025 Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑		↖	↗					↖	↗		
Traffic Volume (vph)	0	94	3	217	240	0	0	0	0	848	0	31	
Future Volume (vph)	0	94	3	217	240	0	0	0	0	848	0	31	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		3.5	3.5					5.0	5.0		
Lane Util. Factor		0.95		0.95	0.95					0.95	0.95		
Frbp, ped/bikes		1.00		1.00	1.00					1.00	1.00		
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00		
Frt		1.00		1.00	1.00					1.00	0.99		
Flt Protected		1.00		0.95	1.00					0.95	0.96		
Satd. Flow (prot)		3520		1681	1762					1681	1669		
Flt Permitted		1.00		0.95	1.00					0.95	0.96		
Satd. Flow (perm)		3520		1681	1762					1681	1669		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	102	3	236	261	0	0	0	0	922	0	34	
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	50	0	
Lane Group Flow (vph)	0	103	0	212	285	0	0	0	0	479	427	0	
Confl. Peds. (#/hr)	2		19	19		2	17					17	
Confl. Bikes (#/hr)			2	2			1					1	
Turn Type		NA		Split	NA					Split	NA		
Protected Phases		2		6	6					4	4		
Permitted Phases													
Actuated Green, G (s)		23.0		16.5	16.5					27.0	27.0		
Effective Green, g (s)		23.0		16.5	16.5					27.0	27.0		
Actuated g/C Ratio		0.29		0.21	0.21					0.34	0.34		
Clearance Time (s)		5.0		3.5	3.5					5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0		
Lane Grp Cap (vph)		1012		346	363					567	563		
v/s Ratio Prot		c0.03		0.13	c0.16					c0.28	0.26		
v/s Ratio Perm													
v/c Ratio		0.10		0.61	0.79					0.84	0.76		
Uniform Delay, d1		20.9		28.8	30.1					24.6	23.6		
Progression Factor		1.00		0.05	0.07					1.00	1.00		
Incremental Delay, d2		0.2		2.6	8.7					11.1	5.8		
Delay (s)		21.1		4.0	10.9					35.7	29.4		
Level of Service		C		A	B					D	C		
Approach Delay (s)		21.1			8.0			0.0			32.5		
Approach LOS		C			A			A			C		
Intersection Summary													
HCM 2000 Control Delay			23.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.57										
Actuated Cycle Length (s)			80.0									Sum of lost time (s)	13.5
Intersection Capacity Utilization			51.0%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St

2025 Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕	↗	↖		↗↗				
Traffic Volume (vph)	19	923	0	0	449	932	12	0	379	0	0	0	
Future Volume (vph)	19	923	0	0	449	932	12	0	379	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0			3.5	4.0	3.5		3.5				
Lane Util. Factor		0.95			0.95	1.00	1.00		0.88				
Frbp, ped/bikes		1.00			1.00	0.99	1.00		1.00				
Flpb, ped/bikes		1.00			1.00	1.00	1.00		1.00				
Frt		1.00			1.00	0.85	1.00		0.85				
Flt Protected		1.00			1.00	1.00	0.95		1.00				
Satd. Flow (prot)		3536			3539	1563	1770		2787				
Flt Permitted		1.00			1.00	1.00	0.95		1.00				
Satd. Flow (perm)		3536			3539	1563	1770		2787				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	21	1003	0	0	488	1013	13	0	412	0	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	375	0	0	0	
Lane Group Flow (vph)	0	1024	0	0	488	1013	13	0	37	0	0	0	
Confl. Peds. (#/hr)	3		16	16		3	3					3	
Confl. Bikes (#/hr)			1	1			1					1	
Turn Type	Split	NA			NA	Free	Prot		Prot				
Protected Phases	2	2			6		3		3				
Permitted Phases						Free							
Actuated Green, G (s)		45.1			15.7	80.0	7.2		7.2				
Effective Green, g (s)		45.1			15.7	80.0	7.2		7.2				
Actuated g/C Ratio		0.56			0.20	1.00	0.09		0.09				
Clearance Time (s)		5.0			3.5		3.5		3.5				
Vehicle Extension (s)		3.0			3.0		3.0		3.0				
Lane Grp Cap (vph)		1993			694	1563	159		250				
v/s Ratio Prot		0.29			0.14		0.01		0.01				
v/s Ratio Perm						c0.65							
v/c Ratio		0.51			0.70	0.65	0.08		0.15				
Uniform Delay, d1		10.7			30.0	0.0	33.4		33.6				
Progression Factor		0.34			1.00	1.00	1.00		1.00				
Incremental Delay, d2		0.7			3.2	2.1	0.2		0.3				
Delay (s)		4.3			33.2	2.1	33.6		33.8				
Level of Service		A			C	A	C		C				
Approach Delay (s)		4.3			12.2			33.8			0.0		
Approach LOS		A			B			C			A		
Intersection Summary													
HCM 2000 Control Delay			12.6									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.76										
Actuated Cycle Length (s)			80.0									Sum of lost time (s)	12.0
Intersection Capacity Utilization			49.9%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

14: E Frontage Rd/Walnut Ave & Palomar St

2025 Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1113	177	2	1327	19	0	0	278	0	0	25
Future Volume (Veh/h)	23	1113	177	2	1327	19	0	0	278	0	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	1210	192	2	1442	21	0	0	302	0	0	27
Pedestrians								13				4
Lane Width (ft)								12.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		267										
pX, platoon unblocked				0.82			0.82	0.82	0.82	0.82	0.82	
vC, conflicting volume	1467			1415			1881	2840	714	2418	2926	495
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1467			1073			1639	2805	221	2292	2909	495
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			100			100	100	53	100	100	95
cM capacity (veh/h)	455			525			48	14	637	9	12	518
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1			
Volume Total	25	807	595	2	577	577	309	302	27			
Volume Left	25	0	0	2	0	0	0	0	0			
Volume Right	0	0	192	0	0	0	21	302	27			
cSH	455	1700	1700	525	1700	1700	1700	637	518			
Volume to Capacity	0.06	0.47	0.35	0.00	0.34	0.34	0.18	0.47	0.05			
Queue Length 95th (ft)	4	0	0	0	0	0	0	64	4			
Control Delay (s)	13.4	0.0	0.0	11.9	0.0	0.0	0.0	15.6	12.3			
Lane LOS	B			B				C	B			
Approach Delay (s)	0.2			0.0				15.6	12.3			
Approach LOS								C	B			
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			60.5%		ICU Level of Service				B			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 16: Transit Center Place & Palomar St

*PGD mitigation assumed
 2025 Build - AM






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖			↖↖	↖
Traffic Volume (vph)	535	560	295	31	952	1	137	2	3	2	19	196
Future Volume (vph)	535	560	295	31	952	1	137	2	3	2	19	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.95		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.95		1.00	1.00		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96			1.00	1.00
Satd. Flow (prot)	1770	4583		1770	5084		1681	1678			1855	1549
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96			1.00	1.00
Satd. Flow (perm)	1770	4583		1770	5084		1681	1678			1855	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	582	609	321	34	1035	1	149	2	3	2	21	213
RTOR Reduction (vph)	0	50	0	0	0	0	0	1	0	0	0	91
Lane Group Flow (vph)	582	880	0	34	1036	0	77	76	0	0	23	122
Confl. Peds. (#/hr)	19		28	28		19	59		23	23		59
Confl. Bikes (#/hr)	1					1	2					2
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	47.2	75.6		3.4	31.8		14.8	14.8			13.7	60.9
Effective Green, g (s)	47.2	75.6		3.4	31.8		14.8	14.8			13.7	60.9
Actuated g/C Ratio	0.37	0.60		0.03	0.25		0.12	0.12			0.11	0.48
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	663	2749		47	1283		197	197			201	748
v/s Ratio Prot	c0.33	0.19		0.02	c0.20		c0.05	0.05			0.01	c0.06
v/s Ratio Perm												0.02
v/c Ratio	0.88	0.32		0.72	0.81		0.39	0.39			0.11	0.16
Uniform Delay, d1	36.7	12.5		60.8	44.2		51.4	51.4			50.7	18.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	12.2	0.3		37.1	5.5		1.3	1.3			0.3	0.0
Delay (s)	48.9	12.8		97.9	49.8		52.7	52.7			50.9	18.3
Level of Service	D	B		F	D		D	D			D	B
Approach Delay (s)		26.7			51.3			52.7			21.5	
Approach LOS		C			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			36.5				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			126.0				Sum of lost time (s)			18.5		
Intersection Capacity Utilization			78.8%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 Signalized Intersection Summary

17: Plaza Entrance & Palomar St

































2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	541	1	212	992	186	1	8	116	5	0	1
Future Volume (veh/h)	19	541	1	212	992	186	1	8	116	5	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.97		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	588	1	230	1078	107	1	9	81	5	0	1
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	3242	6	308	3262	323	291	22	197	170	7	21
Arrive On Green	0.03	1.00	1.00	0.03	0.23	0.23	0.14	0.14	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1774	5242	9	3442	4700	466	1374	154	1388	681	47	146
Grp Volume(v), veh/h	21	380	209	230	777	408	1	0	90	6	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1861	1721	1695	1776	1374	0	1542	873	0	0
Q Serve(g_s), s	1.1	0.0	0.0	6.0	17.2	17.2	0.0	0.0	4.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0	6.0	17.2	17.2	0.0	0.0	4.8	4.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.26	1.00		0.90	0.83		0.17
Lane Grp Cap(c), veh/h	25	2096	1151	308	2353	1233	291	0	219	197	0	0
V/C Ratio(X)	0.85	0.18	0.18	0.75	0.33	0.33	0.00	0.00	0.41	0.03	0.00	0.00
Avail Cap(c_a), veh/h	148	2096	1151	478	2353	1233	523	0	480	418	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.69	0.69	0.69	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.7	0.0	0.0	42.7	17.2	17.3	33.1	0.0	35.2	33.3	0.0	0.0
Incr Delay (d2), s/veh	23.7	0.2	0.3	0.9	0.3	0.5	0.0	0.0	1.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.1	2.9	8.2	8.7	0.0	0.0	2.1	0.1	0.0	0.0
LnGrp Delay(d),s/veh	67.3	0.2	0.3	43.6	17.5	17.8	33.1	0.0	36.4	33.4	0.0	0.0
LnGrp LOS	E	A	A	D	B	B	C		D	C		
Approach Vol, veh/h		610			1415			91				6
Approach Delay, s/veh		2.5			21.8			36.4				33.4
Approach LOS		A			C			D				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.6	60.7		17.8	4.8	67.5		17.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	12.5	36.0		28.0	7.5	41.0		28.0				
Max Q Clear Time (g_c+I1), s	8.0	2.0		6.8	3.1	19.2		6.8				
Green Ext Time (p_c), s	0.1	18.4		0.5	0.0	14.0		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			16.9									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary






















18: Broadway & Palomar St

2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	235	314	125	93	692	108	329	457	49	71	350	368
Future Volume (veh/h)	235	314	125	93	692	108	329	457	49	71	350	368
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	255	341	101	101	752	71	358	497	31	77	380	273
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	1477	412	162	1636	153	382	1191	510	131	932	395
Arrive On Green	0.03	0.12	0.12	0.05	0.35	0.35	0.11	0.34	0.34	0.04	0.26	0.26
Sat Flow, veh/h	3442	3905	1088	3442	4705	441	3442	3539	1514	3442	3539	1500
Grp Volume(v), veh/h	255	293	149	101	540	283	358	497	31	77	380	273
Grp Sat Flow(s),veh/h/ln	1721	1695	1603	1721	1695	1756	1721	1770	1514	1721	1770	1500
Q Serve(g_s), s	6.7	7.0	7.5	2.6	11.1	11.3	9.3	9.8	1.2	2.0	8.0	14.7
Cycle Q Clear(g_c), s	6.7	7.0	7.5	2.6	11.1	11.3	9.3	9.8	1.2	2.0	8.0	14.7
Prop In Lane	1.00		0.68	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	1282	606	162	1179	610	382	1191	510	131	932	395
V/C Ratio(X)	0.95	0.23	0.25	0.62	0.46	0.46	0.94	0.42	0.06	0.59	0.41	0.69
Avail Cap(c_a), veh/h	268	1282	606	229	1179	610	382	1258	538	191	1062	450
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	0.93	0.93	0.93	0.93	0.93	0.93
Uniform Delay (d), s/veh	43.7	27.6	27.8	42.1	22.8	22.8	39.7	23.0	20.2	42.6	27.3	29.8
Incr Delay (d2), s/veh	41.8	0.4	1.0	2.9	1.3	2.5	28.9	0.2	0.1	3.9	0.3	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	4.7	3.4	3.5	1.3	5.4	5.8	6.0	4.8	0.5	1.0	3.9	6.5
LnGrp Delay(d),s/veh	85.5	28.0	28.7	45.0	24.1	25.3	68.6	23.3	20.3	46.5	27.6	33.5
LnGrp LOS	F	C	C	D	C	C	E	C	C	D	C	C
Approach Vol, veh/h		697			924			886			730	
Approach Delay, s/veh		49.2			26.7			41.5			31.8	
Approach LOS		D			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	39.0	14.0	28.7	11.0	36.3	7.4	35.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	6.0	29.0	10.0	27.0	7.0	28.0	5.0	32.0				
Max Q Clear Time (g_c+I1), s	4.6	9.5	11.3	16.7	8.7	13.3	4.0	11.8				
Green Ext Time (p_c), s	0.0	9.4	0.0	5.1	0.0	8.0	0.0	7.5				
Intersection Summary												
HCM 2010 Ctrl Delay				36.8								
HCM 2010 LOS				D								
























HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St

2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	61	13	54	45	131	51	367	94	97	138	43
Future Volume (veh/h)	39	61	13	54	45	131	51	367	94	97	138	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	66	0	59	49	39	55	399	102	105	150	40
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	139	118	89	74	59	624	648	166	380	641	171
Arrive On Green	0.07	0.07	0.00	0.13	0.13	0.13	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1774	1863	1583	694	576	458	1178	1421	363	889	1406	375
Grp Volume(v), veh/h	42	66	0	147	0	0	55	0	501	105	0	190
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1728	0	0	1178	0	1784	889	0	1781
Q Serve(g_s), s	1.0	1.5	0.0	3.6	0.0	0.0	1.3	0.0	9.3	4.5	0.0	2.9
Cycle Q Clear(g_c), s	1.0	1.5	0.0	3.6	0.0	0.0	4.2	0.0	9.3	13.8	0.0	2.9
Prop In Lane	1.00		1.00	0.40		0.27	1.00		0.20	1.00		0.21
Lane Grp Cap(c), veh/h	132	139	118	222	0	0	624	0	814	380	0	812
V/C Ratio(X)	0.32	0.48	0.00	0.66	0.00	0.00	0.09	0.00	0.62	0.28	0.00	0.23
Avail Cap(c_a), veh/h	1049	1101	936	1022	0	0	837	0	1136	541	0	1134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	19.5	0.0	18.3	0.0	0.0	8.6	0.0	9.0	14.3	0.0	7.3
Incr Delay (d2), s/veh	1.4	2.5	0.0	3.4	0.0	0.0	0.1	0.0	0.8	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.0	1.9	0.0	0.0	0.4	0.0	4.6	1.1	0.0	1.4
LnGrp Delay(d),s/veh	20.7	22.0	0.0	21.6	0.0	0.0	8.6	0.0	9.8	14.7	0.0	7.4
LnGrp LOS	C	C		C			A		A	B		A
Approach Vol, veh/h		108			147			556			295	
Approach Delay, s/veh		21.5			21.6			9.7			10.0	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.3		25.1		10.6		25.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		28.0		26.0		28.0				
Max Q Clear Time (g_c+I1), s		3.5		15.8		5.6		11.3				
Green Ext Time (p_c), s		0.4		4.3		0.7		5.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.5								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 20: Broadway & Anita St

2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	46	44	73	127	176	35	611	39	63	330	78
Future Volume (veh/h)	66	46	44	73	127	176	35	611	39	63	330	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	72	50	19	79	138	140	38	664	33	68	359	40
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	399	333	383	399	333	620	1742	87	482	1665	184
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.02	0.51	0.51	0.04	0.52	0.52
Sat Flow, veh/h	1094	1863	1555	1322	1863	1555	1774	3426	170	1774	3203	354
Grp Volume(v), veh/h	72	50	19	79	138	140	38	343	354	68	197	202
Grp Sat Flow(s),veh/h/ln	1094	1863	1555	1322	1863	1555	1774	1770	1826	1774	1770	1787
Q Serve(g_s), s	3.3	1.2	0.5	2.9	3.5	4.3	0.6	6.6	6.6	1.0	3.4	3.4
Cycle Q Clear(g_c), s	6.8	1.2	0.5	4.1	3.5	4.3	0.6	6.6	6.6	1.0	3.4	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.20
Lane Grp Cap(c), veh/h	294	399	333	383	399	333	620	900	929	482	920	929
V/C Ratio(X)	0.24	0.13	0.06	0.21	0.35	0.42	0.06	0.38	0.38	0.14	0.21	0.22
Avail Cap(c_a), veh/h	806	1269	1059	1001	1269	1059	720	900	929	594	920	929
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	21.5	17.7	17.4	19.3	18.6	18.9	6.3	8.4	8.4	6.5	7.2	7.2
Incr Delay (d2), s/veh	0.4	0.1	0.1	0.3	0.5	0.8	0.0	1.2	1.2	0.1	0.5	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	1.0	0.6	0.2	1.1	1.9	1.9	0.3	3.4	3.6	0.5	1.8	1.8
LnGrp Delay(d),s/veh	21.9	17.8	17.5	19.6	19.1	19.8	6.3	9.6	9.5	6.6	7.8	7.8
LnGrp LOS	C	B	B	B	B	B	A	A	A	A	A	A
Approach Vol, veh/h		141			357			735			467	
Approach Delay, s/veh		19.9			19.5			9.4			7.6	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.9	4.8	34.0		16.9	5.5	33.4				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		38.0	4.5	29.0		38.0	5.5	28.0				
Max Q Clear Time (g_c+I1), s		8.8	2.6	5.4		6.3	3.0	8.6				
Green Ext Time (p_c), s		2.2	0.0	7.0		2.2	0.0	6.5				
Intersection Summary												
HCM 2010 Ctrl Delay			11.9									
HCM 2010 LOS			B									

HCM Unsignalized Intersection Capacity Analysis

21: Main St & I-5 SB Ramps

2025 Build - AM

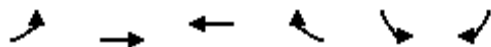


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↗	↖	↗	↖	↗
Traffic Volume (veh/h)	2	42	128	57	479	54
Future Volume (Veh/h)	2	42	128	57	479	54
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	46	139	62	521	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						14
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			809			
pX, platoon unblocked						
vC, conflicting volume	139				189	139
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	139				189	139
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				35	94
cM capacity (veh/h)	1445				799	909
Direction, Lane #	EB 1	WB 1	WB 2	SB 1		
Volume Total	48	139	62	580		
Volume Left	2	0	0	521		
Volume Right	0	0	62	59		
cSH	1445	1700	1700	889		
Volume to Capacity	0.00	0.08	0.04	0.65		
Queue Length 95th (ft)	0	0	0	125		
Control Delay (s)	0.3	0.0	0.0	16.7		
Lane LOS	A			C		
Approach Delay (s)	0.3	0.0		16.7		
Approach LOS				C		
Intersection Summary						
Average Delay			11.7			
Intersection Capacity Utilization			39.9%		ICU Level of Service	A
Analysis Period (min)			15			

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps























2025 Build - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	26	495	176	693	164	9		
Future Volume (veh/h)	26	495	176	693	164	9		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	28	538	191	476	178	7		
Adj No. of Lanes	1	1	1	1	1	1		
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	34	1230	1059	881	237	211		
Arrive On Green	0.02	0.66	0.57	0.57	0.13	0.13		
Sat Flow, veh/h	1774	1863	1863	1549	1774	1583		
Grp Volume(v), veh/h	28	538	191	476	178	7		
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1549	1774	1583		
Q Serve(g_s), s	0.8	6.7	2.4	9.3	4.7	0.2		
Cycle Q Clear(g_c), s	0.8	6.7	2.4	9.3	4.7	0.2		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	34	1230	1059	881	237	211		
V/C Ratio(X)	0.81	0.44	0.18	0.54	0.75	0.03		
Avail Cap(c_a), veh/h	165	1230	1059	881	659	588		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	23.7	3.9	5.0	6.5	20.2	18.3		
Incr Delay (d2), s/veh	34.6	1.1	0.4	2.4	4.8	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.7	3.7	1.3	4.4	2.6	0.2		
LnGrp Delay(d),s/veh	58.2	5.1	5.4	8.9	25.0	18.3		
LnGrp LOS	E	A	A	A	C	B		
Approach Vol, veh/h		566	667		185			
Approach Delay, s/veh		7.7	7.9		24.8			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		37.0		11.5	4.4	32.6		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		32.0		18.0	4.5	24.0		
Max Q Clear Time (g_c+I1), s		8.7		6.7	2.8	11.3		
Green Ext Time (p_c), s		6.8		0.4	0.0	5.2		
Intersection Summary								
HCM 2010 Ctrl Delay			10.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

























2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	64	323	131	245	516	37	252	411	311	12	116	77
Future Volume (veh/h)	64	323	131	245	516	37	252	411	311	12	116	77
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	70	351	89	266	561	32	274	447	276	13	126	58
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	616	154	420	858	49	469	429	265	76	481	221
Arrive On Green	0.21	0.22	0.22	0.24	0.25	0.25	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1774	2785	695	1774	3397	193	1192	1072	662	727	1201	553
Grp Volume(v), veh/h	70	221	219	266	292	301	274	0	723	13	0	184
Grp Sat Flow(s),veh/h/ln	1774	1770	1710	1774	1770	1821	1192	0	1733	727	0	1754
Q Serve(g_s), s	3.1	10.6	10.9	12.8	14.0	14.1	19.0	0.0	38.0	0.0	0.0	6.7
Cycle Q Clear(g_c), s	3.1	10.6	10.9	12.8	14.0	14.1	25.7	0.0	38.0	38.0	0.0	6.7
Prop In Lane	1.00		0.41	1.00		0.11	1.00		0.38	1.00		0.32
Lane Grp Cap(c), veh/h	364	391	378	420	447	460	469	0	693	76	0	702
V/C Ratio(X)	0.19	0.57	0.58	0.63	0.65	0.65	0.58	0.00	1.04	0.17	0.00	0.26
Avail Cap(c_a), veh/h	364	391	378	420	447	460	469	0	693	76	0	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	32.9	33.1	32.5	31.8	31.8	27.7	0.0	28.5	47.5	0.0	19.1
Incr Delay (d2), s/veh	1.2	5.8	6.3	7.1	7.2	7.1	1.9	0.0	45.9	1.1	0.0	0.2
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	1.6	5.8	5.8	7.1	7.7	7.9	6.5	0.0	26.9	0.4	0.0	3.3
LnGrp Delay(d),s/veh	32.4	38.7	39.4	39.6	39.0	38.9	29.6	0.0	74.4	48.6	0.0	19.3
LnGrp LOS	C	D	D	D	D	D	C		F	D		B
Approach Vol, veh/h		510			859			997				197
Approach Delay, s/veh		38.2			39.2			62.1				21.2
Approach LOS		D			D			E				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	26.0		43.0	23.0	29.0		43.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	22.5	21.0		38.0	19.5	24.0		38.0				
Max Q Clear Time (g_c+I1), s	14.8	12.9		40.0	5.1	16.1		40.0				
Green Ext Time (p_c), s	0.5	3.8		0.0	0.1	3.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				46.5								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary

24: Broadway & Main St













2025 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	364	69	210	496	130	210	481	360	125	230	92
Future Volume (veh/h)	74	364	69	210	496	130	210	481	360	125	230	92
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	80	396	41	228	539	94	228	523	251	136	250	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	820	357	200	1014	442	200	1260	552	170	1200	537
Arrive On Green	0.06	0.23	0.23	0.11	0.29	0.29	0.11	0.36	0.36	0.10	0.34	0.00
Sat Flow, veh/h	1774	3539	1540	1774	3539	1545	1774	3539	1549	1774	3539	1583
Grp Volume(v), veh/h	80	396	41	228	539	94	228	523	251	136	250	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1540	1774	1770	1545	1774	1770	1549	1774	1770	1583
Q Serve(g_s), s	3.9	8.6	1.9	10.0	11.3	4.1	10.0	9.9	11.0	6.6	4.4	0.0
Cycle Q Clear(g_c), s	3.9	8.6	1.9	10.0	11.3	4.1	10.0	9.9	11.0	6.6	4.4	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	103	820	357	200	1014	442	200	1260	552	170	1200	537
V/C Ratio(X)	0.78	0.48	0.11	1.14	0.53	0.21	1.14	0.42	0.46	0.80	0.21	0.00
Avail Cap(c_a), veh/h	200	1480	644	200	1480	646	200	1260	552	301	1200	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	0.00
Uniform Delay (d), s/veh	41.1	29.4	26.8	39.2	26.6	24.0	39.2	21.5	21.9	39.2	20.8	0.0
Incr Delay (d2), s/veh	11.7	0.4	0.1	105.4	0.4	0.2	105.4	1.0	2.7	8.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	4.2	0.8	10.7	5.6	1.8	10.7	5.0	5.1	3.6	2.2	0.0
LnGrp Delay(d),s/veh	52.8	29.9	27.0	144.6	27.0	24.2	144.6	22.5	24.6	47.5	21.2	0.0
LnGrp LOS	D	C	C	F	C	C	F	C	C	D	C	
Approach Vol, veh/h		517			861			1002			386	
Approach Delay, s/veh		33.2			57.9			50.8			30.5	
Approach LOS		C			E			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	25.5	14.0	35.0	9.1	30.3	12.5	36.5				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	10.0	37.0	10.0	30.0	10.0	37.0	15.0	25.0				
Max Q Clear Time (g_c+I1), s	12.0	10.6	12.0	6.4	5.9	13.3	8.6	13.0				
Green Ext Time (p_c), s	0.0	7.3	0.0	6.2	0.0	7.0	0.2	4.7				
Intersection Summary												
HCM 2010 Ctrl Delay			46.9									
HCM 2010 LOS			D									

HCM Unsignalized Intersection Capacity Analysis

1: Bay Blvd & L St






















2025 Build - PM

							
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Sign Control	Stop		Stop			Stop	
Traffic Volume (vph)	446	84	60	1070	175	119	
Future Volume (vph)	446	84	60	1070	175	119	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	485	91	65	1163	190	129	
Direction, Lane #	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	485	46	46	65	1163	190	129
Volume Left (vph)	485	0	0	0	0	190	0
Volume Right (vph)	0	46	46	0	1163	0	0
Hadj (s)	0.23	-0.57	-0.57	0.03	-0.57	0.53	0.03
Departure Headway (s)	5.2	3.2	3.2	6.0	3.2	6.5	6.0
Degree Utilization, x	0.70	0.04	0.04	0.11	1.03	0.34	0.22
Capacity (veh/h)	674	1121	1121	547	1135	526	567
Control Delay (s)	19.5	6.3	6.3	9.7	53.1	11.7	9.5
Approach Delay (s)	17.4			50.8		10.8	
Approach LOS	C			F		B	
Intersection Summary							
Delay			35.8				
Level of Service			E				
Intersection Capacity Utilization			82.6%		ICU Level of Service		E
Analysis Period (min)			15				

HCM 2010 Signalized Intersection Summary

2: Industrial Blvd/Driveway & L St
























2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	577	668	96	378	7	160	7	130	3	9	4
Future Volume (veh/h)	5	577	668	96	378	7	160	7	130	3	9	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	5	627	459	104	411	5	174	8	99	3	10	3
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1478	658	131	1746	21	352	13	393	95	227	56
Arrive On Green	0.00	0.42	0.42	0.07	0.49	0.49	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3539	1576	1774	3581	44	865	53	1561	56	900	221
Grp Volume(v), veh/h	5	627	459	104	203	213	182	0	99	16	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1576	1774	1770	1855	917	0	1561	1177	0	0
Q Serve(g_s), s	0.1	6.6	12.6	3.0	3.5	3.5	0.5	0.0	2.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	6.6	12.6	3.0	3.5	3.5	11.2	0.0	2.7	10.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.96		1.00	0.19		0.19
Lane Grp Cap(c), veh/h	7	1478	658	131	863	905	365	0	393	378	0	0
V/C Ratio(X)	0.71	0.42	0.70	0.79	0.24	0.24	0.50	0.00	0.25	0.04	0.00	0.00
Avail Cap(c_a), veh/h	152	1478	658	152	863	905	545	0	593	590	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.2	10.9	12.6	24.0	7.8	7.8	19.0	0.0	15.7	15.1	0.0	0.0
Incr Delay (d2), s/veh	82.3	0.9	6.0	21.6	0.6	0.6	1.1	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.4	6.5	2.3	1.8	1.9	2.6	0.0	1.2	0.2	0.0	0.0
LnGrp Delay(d),s/veh	108.5	11.7	18.6	45.6	8.4	8.4	20.1	0.0	16.1	15.1	0.0	0.0
LnGrp LOS	F	B	B	D	A	A	C		B	B		
Approach Vol, veh/h		1091			520			281			16	
Approach Delay, s/veh		15.1			15.9			18.7			15.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	27.0		18.5	3.7	30.7		18.5				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	22.0		20.0	4.5	22.0		20.0				
Max Q Clear Time (g_c+I1), s	5.0	14.6		12.9	2.1	5.5		13.2				
Green Ext Time (p_c), s	0.0	4.5		0.8	0.0	7.8		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				15.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

3: Broadway & L St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	399	272	171	208	34	214	612	239	43	651	47
Future Volume (veh/h)	35	399	272	171	208	34	214	612	239	43	651	47
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	38	434	192	186	226	23	233	665	173	47	708	31
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	746	326	185	935	94	226	1566	849	59	1232	579
Arrive On Green	0.03	0.21	0.21	0.10	0.29	0.29	0.13	0.44	0.44	0.03	0.35	0.35
Sat Flow, veh/h	1774	3539	1546	1774	3240	326	1774	3539	1546	1774	3539	1541
Grp Volume(v), veh/h	38	434	192	186	122	127	233	665	173	47	708	31
Grp Sat Flow(s),veh/h/ln	1774	1770	1546	1774	1770	1797	1774	1770	1546	1774	1770	1541
Q Serve(g_s), s	1.8	9.5	9.6	9.0	4.6	4.6	11.0	11.1	4.9	2.3	14.0	1.1
Cycle Q Clear(g_c), s	1.8	9.5	9.6	9.0	4.6	4.6	11.0	11.1	4.9	2.3	14.0	1.1
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	746	326	185	511	519	226	1566	849	59	1232	579
V/C Ratio(X)	0.80	0.58	0.59	1.00	0.24	0.24	1.03	0.42	0.20	0.79	0.57	0.05
Avail Cap(c_a), veh/h	124	1314	574	185	719	730	226	1566	849	124	1232	579
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	41.7	30.6	30.6	38.6	23.4	23.5	37.6	16.5	10.0	41.3	22.9	17.2
Incr Delay (d2), s/veh	26.0	0.7	1.7	67.1	0.2	0.2	67.5	0.8	0.5	20.3	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.7	4.3	7.8	2.2	2.3	9.6	5.5	2.2	1.4	7.2	0.5
LnGrp Delay(d),s/veh	67.8	31.3	32.3	105.7	23.7	23.7	105.2	17.3	10.5	61.7	24.8	17.4
LnGrp LOS	E	C	C	F	C	C	F	B	B	E	C	B
Approach Vol, veh/h		664			435			1071			786	
Approach Delay, s/veh		33.7			58.7			35.3			26.7	
Approach LOS		C			E			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	23.2	15.0	35.0	6.3	29.9	6.9	43.1				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	9.0	32.0	11.0	30.0	6.0	35.0	6.0	35.0				
Max Q Clear Time (g_c+I1), s	11.0	11.6	13.0	16.0	3.8	6.6	4.3	13.1				
Green Ext Time (p_c), s	0.0	4.9	0.0	8.1	0.0	5.3	0.0	10.6				
Intersection Summary												
HCM 2010 Ctrl Delay				36.1								
HCM 2010 LOS				D								

HCM Unsignalized Intersection Capacity Analysis

4: Bay Blvd & I-5 SB Ramps

2025 Build - PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	27	974	162	12	446	108
Future Volume (Veh/h)	27	974	162	12	446	108
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1059	176	13	485	117
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1270	182			176	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1270	182			176	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	76	0			65	
cM capacity (veh/h)	121	860			1400	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	1088	189	485	117
Volume Left	29	0	485	0
Volume Right	1059	13	0	0
cSH	884	1700	1400	1700
Volume to Capacity	1.23	0.11	0.35	0.07
Queue Length 95th (ft)	917	0	39	0
Control Delay (s)	129.8	0.0	8.9	0.0
Lane LOS	F		A	
Approach Delay (s)	129.8	0.0	7.2	
Approach LOS	F			

Intersection Summary			
Average Delay		77.5	
Intersection Capacity Utilization		76.2%	ICU Level of Service
Analysis Period (min)		15	D

HCM Unsignalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

















2025 Build - PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	122	315	880	168	573	203
Future Volume (vph)	122	315	880	168	573	203
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	133	342	957	183	623	221
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	133	342	957	183	623	221
Volume Left (vph)	133	0	957	0	0	0
Volume Right (vph)	0	342	0	0	0	221
Hadj (s)	0.23	-0.57	0.53	0.03	0.03	-0.57
Departure Headway (s)	7.1	3.2	6.2	5.7	5.4	3.2
Degree Utilization, x	0.26	0.30	1.66	0.29	0.94	0.20
Capacity (veh/h)	494	1113	583	622	654	1121
Control Delay (s)	12.7	7.6	318.4	9.9	44.2	7.0
Approach Delay (s)	9.0		268.9		34.5	
Approach LOS	A		F		D	
Intersection Summary						
Delay			138.2			
Level of Service			F			
Intersection Capacity Utilization			95.7%		ICU Level of Service	F
Analysis Period (min)			15			

























HCM 2010 Signalized Intersection Summary
 6: Industrial Blvd & Moss St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	249	11	32	11	43	464	114	335	4	306	474	107
Future Volume (veh/h)	249	11	32	11	43	464	114	335	4	306	474	107
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	271	12	33	12	47	319	124	364	4	333	515	106
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	11	29	8	30	207	102	300	3	208	321	66
Arrive On Green	0.16	0.16	0.16	0.15	0.15	0.15	0.22	0.22	0.22	0.33	0.33	0.33
Sat Flow, veh/h	1505	67	183	51	201	1362	463	1359	15	627	969	200
Grp Volume(v), veh/h	316	0	0	378	0	0	492	0	0	954	0	0
Grp Sat Flow(s),veh/h/ln	1754	0	0	1614	0	0	1837	0	0	1796	0	0
Q Serve(g_s), s	23.0	0.0	0.0	22.0	0.0	0.0	32.0	0.0	0.0	48.0	0.0	0.0
Cycle Q Clear(g_c), s	23.0	0.0	0.0	22.0	0.0	0.0	32.0	0.0	0.0	48.0	0.0	0.0
Prop In Lane	0.86		0.10	0.03		0.84	0.25		0.01	0.35		0.11
Lane Grp Cap(c), veh/h	278	0	0	245	0	0	405	0	0	594	0	0
V/C Ratio(X)	1.14	0.00	0.00	1.54	0.00	0.00	1.21	0.00	0.00	1.60	0.00	0.00
Avail Cap(c_a), veh/h	278	0	0	245	0	0	405	0	0	594	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.0	0.0	0.0	61.5	0.0	0.0	56.5	0.0	0.0	48.5	0.0	0.0
Incr Delay (d2), s/veh	95.5	0.0	0.0	263.8	0.0	0.0	116.9	0.0	0.0	279.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.5	0.0	0.0	27.7	0.0	0.0	29.4	0.0	0.0	70.0	0.0	0.0
LnGrp Delay(d),s/veh	156.5	0.0	0.0	325.3	0.0	0.0	173.4	0.0	0.0	328.4	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		316			378			492			954	
Approach Delay, s/veh		156.5			325.3			173.4			328.4	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		53.0		27.0		37.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		23.0		48.0		22.0		32.0				
Max Q Clear Time (g_c+I1), s		25.0		50.0		24.0		34.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			266.9									
HCM 2010 LOS			F									

















HCM 2010 Signalized Intersection Summary
 7: Broadway & Moss St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	217	29	23	235	87	108	859	47	237	680	174
Future Volume (veh/h)	76	217	29	23	235	87	108	859	47	237	680	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	83	236	19	25	255	61	117	934	43	258	739	153
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	545	449	29	464	381	148	1175	54	190	1056	219
Arrive On Green	0.06	0.29	0.29	0.02	0.25	0.25	0.08	0.34	0.34	0.11	0.37	0.37
Sat Flow, veh/h	1774	1863	1535	1774	1863	1529	1774	3436	158	1774	2892	599
Grp Volume(v), veh/h	83	236	19	25	255	61	117	481	496	258	452	440
Grp Sat Flow(s),veh/h/ln	1774	1863	1535	1774	1863	1529	1774	1770	1825	1774	1770	1721
Q Serve(g_s), s	3.2	7.2	0.6	1.0	8.4	2.2	4.5	17.2	17.2	7.5	15.3	15.3
Cycle Q Clear(g_c), s	3.2	7.2	0.6	1.0	8.4	2.2	4.5	17.2	17.2	7.5	15.3	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.35
Lane Grp Cap(c), veh/h	106	545	449	29	464	381	148	605	624	190	646	628
V/C Ratio(X)	0.78	0.43	0.04	0.85	0.55	0.16	0.79	0.79	0.79	1.36	0.70	0.70
Avail Cap(c_a), veh/h	114	849	700	114	849	697	164	605	624	190	646	628
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	32.5	20.1	17.8	34.4	22.9	20.6	31.6	20.9	20.9	31.3	19.0	19.0
Incr Delay (d2), s/veh	27.4	0.5	0.0	45.9	1.0	0.2	20.4	10.4	10.1	192.7	6.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.8	0.3	0.9	4.5	0.9	3.1	10.2	10.4	13.8	8.5	8.3
LnGrp Delay(d),s/veh	59.9	20.7	17.8	80.4	23.9	20.8	52.0	31.2	31.0	224.1	25.2	25.4
LnGrp LOS	E	C	B	F	C	C	D	C	C	F	C	C
Approach Vol, veh/h		338			341			1094			1150	
Approach Delay, s/veh		30.1			27.5			33.3			69.9	
Approach LOS		C			C			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	25.5	9.4	30.6	7.7	22.5	11.0	29.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	6.5	25.0	4.5	32.0	7.5	24.0				
Max Q Clear Time (g_c+I1), s	3.0	9.2	6.5	17.3	5.2	10.4	9.5	19.2				
Green Ext Time (p_c), s	0.0	3.1	0.0	5.8	0.0	3.0	0.0	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay			46.7									
HCM 2010 LOS			D									






















HCM 2010 Signalized Intersection Summary
 8: Industrial Blvd & Naples St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	100	68	318	96	340	51	80	371	435	82	0
Future Volume (veh/h)	32	100	68	318	96	340	51	80	371	435	82	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.96	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	35	109	51	346	104	335	55	87	258	473	89	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	124	58	234	70	227	46	73	218	357	67	0
Arrive On Green	0.12	0.12	0.12	0.31	0.31	0.31	0.20	0.20	0.20	0.23	0.23	0.00
Sat Flow, veh/h	323	1005	470	764	230	740	233	368	1093	1565	294	0
Grp Volume(v), veh/h	195	0	0	785	0	0	400	0	0	562	0	0
Grp Sat Flow(s),veh/h/ln	1799	0	0	1733	0	0	1694	0	0	1859	0	0
Q Serve(g_s), s	15.0	0.0	0.0	43.0	0.0	0.0	28.0	0.0	0.0	32.0	0.0	0.0
Cycle Q Clear(g_c), s	15.0	0.0	0.0	43.0	0.0	0.0	28.0	0.0	0.0	32.0	0.0	0.0
Prop In Lane	0.18		0.26	0.44		0.43	0.14		0.64	0.84		0.00
Lane Grp Cap(c), veh/h	223	0	0	531	0	0	338	0	0	424	0	0
V/C Ratio(X)	0.88	0.00	0.00	1.48	0.00	0.00	1.18	0.00	0.00	1.33	0.00	0.00
Avail Cap(c_a), veh/h	282	0	0	531	0	0	338	0	0	424	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	60.4	0.0	0.0	48.7	0.0	0.0	56.2	0.0	0.0	54.2	0.0	0.0
Incr Delay (d2), s/veh	21.3	0.0	0.0	225.3	0.0	0.0	108.8	0.0	0.0	162.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	0.0	53.7	0.0	0.0	23.3	0.0	0.0	35.5	0.0	0.0
LnGrp Delay(d),s/veh	81.7	0.0	0.0	274.0	0.0	0.0	165.0	0.0	0.0	216.6	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		195			785			400			562	
Approach Delay, s/veh		81.7			274.0			165.0			216.6	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.4		37.0		48.0		33.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		22.0		32.0		43.0		28.0				
Max Q Clear Time (g_c+I1), s		17.0		34.0		45.0		30.0				
Green Ext Time (p_c), s		0.4		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				215.6								
HCM 2010 LOS				F								






















HCM 2010 Signalized Intersection Summary
 9: Broadway & Naples St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	277	94	185	201	95	105	720	165	52	513	33
Future Volume (veh/h)	154	277	94	185	201	95	105	720	165	52	513	33
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.92	1.00		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	167	301	82	201	218	65	114	783	143	57	558	27
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	414	113	225	576	466	145	907	166	72	913	44
Arrive On Green	0.12	0.30	0.30	0.13	0.31	0.31	0.08	0.31	0.31	0.04	0.27	0.27
Sat Flow, veh/h	1774	1393	379	1774	1863	1507	1774	2944	538	1774	3419	165
Grp Volume(v), veh/h	167	0	383	201	218	65	114	471	455	57	288	297
Grp Sat Flow(s),veh/h/ln	1774	0	1772	1774	1863	1507	1774	1770	1712	1774	1770	1814
Q Serve(g_s), s	6.9	0.0	14.5	8.4	6.9	2.3	4.7	18.8	18.8	2.4	10.7	10.7
Cycle Q Clear(g_c), s	6.9	0.0	14.5	8.4	6.9	2.3	4.7	18.8	18.8	2.4	10.7	10.7
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.31	1.00		0.09
Lane Grp Cap(c), veh/h	205	0	527	225	576	466	145	545	527	72	473	484
V/C Ratio(X)	0.82	0.00	0.73	0.89	0.38	0.14	0.79	0.86	0.86	0.79	0.61	0.61
Avail Cap(c_a), veh/h	225	0	615	225	647	523	178	545	527	107	473	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	32.4	0.0	23.6	32.2	20.2	18.7	33.8	24.4	24.4	35.6	24.0	24.1
Incr Delay (d2), s/veh	19.0	0.0	3.6	33.0	0.4	0.1	17.1	16.5	16.9	20.8	5.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	7.5	6.1	3.6	1.0	3.0	11.6	11.3	1.6	6.0	6.1
LnGrp Delay(d),s/veh	51.3	0.0	27.2	65.2	20.7	18.8	50.9	40.9	41.4	56.4	29.8	29.7
LnGrp LOS	D		C	E	C	B	D	D	D	E	C	C
Approach Vol, veh/h		550			484			1040			642	
Approach Delay, s/veh		34.5			38.9			42.2			32.1	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	27.3	9.6	25.0	12.1	28.2	6.5	28.1				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	9.5	26.0	7.5	20.0	9.5	26.0	4.5	23.0				
Max Q Clear Time (g_c+I1), s	10.4	16.5	6.7	12.7	8.9	8.9	4.4	20.8				
Green Ext Time (p_c), s	0.0	2.7	0.0	4.8	0.0	3.6	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			37.7									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 10: Broadway & Oxford St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	74	75	115	8	114	13	723	74	141	767	9
Future Volume (veh/h)	67	74	75	115	8	114	13	723	74	141	767	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.94	1.00		0.92	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	73	80	55	125	9	75	14	786	69	153	834	9
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	425	336	159	43	360	18	989	87	192	1436	15
Arrive On Green	0.05	0.23	0.23	0.09	0.27	0.27	0.01	0.30	0.30	0.11	0.40	0.40
Sat Flow, veh/h	1774	1863	1472	1774	163	1355	1774	3265	286	1774	3584	39
Grp Volume(v), veh/h	73	80	55	125	0	84	14	426	429	153	412	431
Grp Sat Flow(s),veh/h/ln	1774	1863	1472	1774	0	1518	1774	1770	1782	1774	1770	1853
Q Serve(g_s), s	2.6	2.2	1.9	4.3	0.0	2.7	0.5	13.9	13.9	5.3	11.4	11.4
Cycle Q Clear(g_c), s	2.6	2.2	1.9	4.3	0.0	2.7	0.5	13.9	13.9	5.3	11.4	11.4
Prop In Lane	1.00		1.00	1.00		0.89	1.00		0.16	1.00		0.02
Lane Grp Cap(c), veh/h	93	425	336	159	0	403	18	536	540	192	709	742
V/C Ratio(X)	0.79	0.19	0.16	0.79	0.00	0.21	0.76	0.79	0.80	0.80	0.58	0.58
Avail Cap(c_a), veh/h	156	743	587	184	0	629	127	536	540	212	709	742
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	19.5	19.4	28.0	0.0	17.9	31.0	20.1	20.1	27.3	14.7	14.7
Incr Delay (d2), s/veh	13.5	0.2	0.2	17.6	0.0	0.3	47.1	11.5	11.5	17.5	3.5	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	1.6	1.1	0.8	2.9	0.0	1.1	0.5	8.5	8.5	3.5	6.2	6.4
LnGrp Delay(d),s/veh	42.9	19.7	19.6	45.6	0.0	18.2	78.1	31.6	31.6	44.8	18.1	18.0
LnGrp LOS	D	B	B	D		B	E	C	C	D	B	B
Approach Vol, veh/h		208			209			869			996	
Approach Delay, s/veh		27.8			34.6			32.3			22.2	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	19.3	4.1	30.1	6.8	21.7	10.3	24.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	6.5	25.0	4.5	22.0	5.5	26.0	7.5	19.0				
Max Q Clear Time (g_c+I1), s	6.3	4.2	2.5	13.4	4.6	4.7	7.3	15.9				
Green Ext Time (p_c), s	0.0	1.1	0.0	6.0	0.0	1.1	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			27.7									
HCM 2010 LOS			C									

HCM Unsignalized Intersection Capacity Analysis
 11: Bay Blvd & Palomar St

2025 Build - PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↶	↷		↶
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	53	106	57	67	291	68
Future Volume (vph)	53	106	57	67	291	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	58	115	62	73	316	74

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	58	115	62	73	390
Volume Left (vph)	58	0	0	0	316
Volume Right (vph)	0	115	0	73	0
Hadj (s)	0.53	-0.67	0.03	-0.67	0.20
Departure Headway (s)	6.3	5.1	5.4	4.7	5.1
Degree Utilization, x	0.10	0.16	0.09	0.10	0.56
Capacity (veh/h)	527	645	633	723	682
Control Delay (s)	8.9	8.0	7.8	7.0	14.4
Approach Delay (s)	8.3		7.4		14.4
Approach LOS	A		A		B

Intersection Summary					
Delay			11.5		
Level of Service			B		
Intersection Capacity Utilization			36.4%	ICU Level of Service	A
Analysis Period (min)			15		

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2025 Build - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↗					↖	↗	
Traffic Volume (vph)	0	341	17	603	142	0	0	0	0	1105	0	17
Future Volume (vph)	0	341	17	603	142	0	0	0	0	1105	0	17
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		3.5	3.5					5.0	5.0	
Lane Util. Factor		0.95		0.95	0.95					0.95	0.95	
Frbp, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.99		1.00	1.00					1.00	1.00	
Flt Protected		1.00		0.95	0.97					0.95	0.95	
Satd. Flow (prot)		3508		1681	1716					1681	1679	
Flt Permitted		1.00		0.95	0.97					0.95	0.95	
Satd. Flow (perm)		3508		1681	1716					1681	1679	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	371	18	655	154	0	0	0	0	1201	0	18
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	386	0	400	409	0	0	0	0	613	573	0
Confl. Peds. (#/hr)	1		15	15		1	6					6
Confl. Bikes (#/hr)			1	1								
Turn Type		NA		Split	NA					Split	NA	
Protected Phases		2		6	6					4	4	
Permitted Phases												
Actuated Green, G (s)		22.5		29.8	29.8					44.2	44.2	
Effective Green, g (s)		22.5		29.8	29.8					44.2	44.2	
Actuated g/C Ratio		0.20		0.27	0.27					0.40	0.40	
Clearance Time (s)		5.0		3.5	3.5					5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		717		455	464					675	674	
v/s Ratio Prot		c0.11		0.24	c0.24					c0.36	0.34	
v/s Ratio Perm												
v/c Ratio		0.54		0.88	0.88					0.91	0.85	
Uniform Delay, d1		39.1		38.4	38.4					31.0	29.9	
Progression Factor		1.00		0.05	0.05					1.00	1.00	
Incremental Delay, d2		2.9		2.0	2.0					16.0	10.0	
Delay (s)		42.0		4.0	4.0					47.0	39.9	
Level of Service		D		A	A					D	D	
Approach Delay (s)		42.0			4.0			0.0			43.5	
Approach LOS		D			A			A			D	
Intersection Summary												
HCM 2000 Control Delay			30.0			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			13.5			
Intersection Capacity Utilization			78.2%			ICU Level of Service				D		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St

2025 Build - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗	↖		↗↗			
Traffic Volume (vph)	45	1405	0	0	747	1016	3	0	373	0	0	0
Future Volume (vph)	45	1405	0	0	747	1016	3	0	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			3.5	4.0	3.5		3.5			
Lane Util. Factor		0.95			0.95	1.00	1.00		0.88			
Frbp, ped/bikes		1.00			1.00	1.00	1.00		1.00			
Flpb, ped/bikes		1.00			1.00	1.00	1.00		1.00			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3534			3539	1583	1770		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3534			3539	1583	1770		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	1527	0	0	812	1104	3	0	405	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	378	0	0	0
Lane Group Flow (vph)	0	1576	0	0	812	1104	3	0	27	0	0	0
Confl. Peds. (#/hr)			14	14			1		1	1		1
Confl. Bikes (#/hr)			1	1								
Turn Type	Split	NA			NA	Free	Prot		Prot			
Protected Phases	2	2			6		3		3			
Permitted Phases						Free						
Actuated Green, G (s)		66.1			24.5	110.0	7.4		7.4			
Effective Green, g (s)		66.1			24.5	110.0	7.4		7.4			
Actuated g/C Ratio		0.60			0.22	1.00	0.07		0.07			
Clearance Time (s)		5.0			3.5		3.5		3.5			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		2123			788	1583	119		187			
v/s Ratio Prot		0.45			c0.23		0.00		0.01			
v/s Ratio Perm						c0.70						
v/c Ratio		0.74			1.03	0.70	0.03		0.15			
Uniform Delay, d1		15.8			42.8	0.0	47.9		48.3			
Progression Factor		0.54			1.00	1.00	1.00		1.00			
Incremental Delay, d2		1.5			40.1	2.6	0.1		0.4			
Delay (s)		10.0			82.9	2.6	48.0		48.7			
Level of Service		B			F	A	D		D			
Approach Delay (s)		10.0			36.6			48.7			0.0	
Approach LOS		B			D			D			A	
Intersection Summary												
HCM 2000 Control Delay			27.1									C
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			110.0									12.0
Intersection Capacity Utilization			75.0%									D
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

14: E Frontage Rd/Walnut Ave & Palomar St

2025 Build - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1444	337	26	1743	27	0	0	249	0	0	23
Future Volume (Veh/h)	10	1444	337	26	1743	27	0	0	249	0	0	23
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	1570	366	28	1895	29	0	0	271	0	0	25
Pedestrians		4						6			1	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		267										
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	0.67
vC, conflicting volume	1925			1942			2498	3762	974	3044	3930	651
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1925			1422			2251	4136	0	3066	4388	651
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			91			100	100	63	100	100	94
cM capacity (veh/h)	303			317			13	1	724	2	1	409
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1			
Volume Total	11	1047	889	28	758	758	408	271	25			
Volume Left	11	0	0	28	0	0	0	0	0			
Volume Right	0	0	366	0	0	0	29	271	25			
cSH	303	1700	1700	317	1700	1700	1700	724	409			
Volume to Capacity	0.04	0.62	0.52	0.09	0.45	0.45	0.24	0.37	0.06			
Queue Length 95th (ft)	3	0	0	7	0	0	0	44	5			
Control Delay (s)	17.3	0.0	0.0	17.5	0.0	0.0	0.0	12.9	14.4			
Lane LOS	C			C				B	B			
Approach Delay (s)	0.1			0.3				12.9	14.4			
Approach LOS								B	B			
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			72.9%		ICU Level of Service				C			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 16: Transit Center Place & Palomar St

*PGD mitigation assumed
 2025 Build - PM























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↕			↗↖	↖
Traffic Volume (vph)	529	865	321	16	860	4	405	6	10	6	19	500
Future Volume (vph)	529	865	321	16	860	4	405	6	10	6	19	500
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.92		1.00	1.00		1.00	1.00			1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.96		1.00	1.00		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (prot)	1770	4487		1770	5079		1681	1673			1840	1501
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (perm)	1770	4487		1770	5079		1681	1673			1840	1501
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	575	940	349	17	935	4	440	7	11	7	21	543
RTOR Reduction (vph)	0	40	0	0	0	0	0	2	0	0	0	31
Lane Group Flow (vph)	575	1249	0	17	939	0	229	227	0	0	28	512
Confl. Peds. (#/hr)	29		64	64		29	129		48	48		129
Confl. Bikes (#/hr)			2	2			1		2	2		1
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	41.6	66.6		2.0	27.0		20.5	20.5			15.4	57.0
Effective Green, g (s)	41.6	66.6		2.0	27.0		20.5	20.5			15.4	57.0
Actuated g/C Ratio	0.34	0.54		0.02	0.22		0.17	0.17			0.13	0.46
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	598	2429		28	1114		280	278			230	695
v/s Ratio Prot	c0.32	0.28		0.01	c0.18		c0.14	0.14			0.02	c0.25
v/s Ratio Perm												0.09
v/c Ratio	0.96	0.51		0.61	0.84		0.82	0.82			0.12	0.74
Uniform Delay, d1	39.9	17.9		60.1	46.0		49.4	49.4			47.8	26.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	27.2	0.8		22.9	7.8		16.7	16.8			0.2	3.5
Delay (s)	67.1	18.7		83.0	53.8		66.1	66.2			48.0	30.4
Level of Service	E	B		F	D		E	E			D	C
Approach Delay (s)		33.6			54.3			66.2			31.3	
Approach LOS		C			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	123.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Assumed PGD will mitigate this intersection, instead of GS project			
c Critical Lane Group			























HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	825	1	230	808	199	3	31	334	188	18	68
Future Volume (veh/h)	49	825	1	230	808	199	3	31	334	188	18	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.97		0.94	0.98		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	53	897	1	250	878	136	3	34	234	204	20	57
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	2128	2	308	2018	311	574	76	525	279	30	66
Arrive On Green	0.08	0.81	0.81	0.03	0.15	0.15	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1774	5246	6	3442	4419	680	1279	194	1338	580	77	167
Grp Volume(v), veh/h	53	580	318	250	672	342	3	0	268	281	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1862	1721	1695	1709	1279	0	1532	824	0	0
Q Serve(g_s), s	3.5	5.9	5.9	8.7	21.6	21.8	0.0	0.0	15.5	26.0	0.0	0.0
Cycle Q Clear(g_c), s	3.5	5.9	5.9	8.7	21.6	21.8	0.2	0.0	15.5	41.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.40	1.00		0.87	0.73		0.20
Lane Grp Cap(c), veh/h	68	1375	755	308	1549	781	574	0	601	375	0	0
V/C Ratio(X)	0.78	0.42	0.42	0.81	0.43	0.44	0.01	0.00	0.45	0.75	0.00	0.00
Avail Cap(c_a), veh/h	111	1375	755	359	1549	781	712	0	766	503	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	54.9	7.3	7.3	57.2	36.9	36.9	22.2	0.0	26.8	41.1	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.6	1.1	7.8	0.7	1.4	0.0	0.0	0.5	4.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.7	3.1	4.5	10.3	10.6	0.1	0.0	6.6	9.3	0.0	0.0
LnGrp Delay(d),s/veh	59.7	7.9	8.4	65.1	37.5	38.3	22.2	0.0	27.4	45.4	0.0	0.0
LnGrp LOS	E	A	A	E	D	D	C		C	D		
Approach Vol, veh/h		951			1264			271			281	
Approach Delay, s/veh		11.0			43.2			27.3			45.4	
Approach LOS		B			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.2	53.7		52.1	8.1	59.8		52.1				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	12.5	34.0		60.0	7.5	39.0		60.0				
Max Q Clear Time (g_c+I1), s	10.7	7.9		43.5	5.5	23.8		17.5				
Green Ext Time (p_c), s	0.1	16.9		3.6	0.0	11.3		4.6				
Intersection Summary												
HCM 2010 Ctrl Delay				30.8								
HCM 2010 LOS				C								






















HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	469	588	290	80	500	61	402	365	98	194	683	335
Future Volume (veh/h)	469	588	290	80	500	61	402	365	98	194	683	335
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.93	1.00		0.95	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	510	639	215	87	543	39	437	397	62	211	742	265
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	578	1571	516	136	1407	100	496	1104	469	269	871	364
Arrive On Green	0.06	0.14	0.14	0.04	0.29	0.29	0.14	0.31	0.31	0.08	0.25	0.25
Sat Flow, veh/h	3442	3737	1227	3442	4821	342	3442	3539	1503	3442	3539	1481
Grp Volume(v), veh/h	510	578	276	87	380	202	437	397	62	211	742	265
Grp Sat Flow(s),veh/h/ln	1721	1695	1574	1721	1695	1773	1721	1770	1503	1721	1770	1481
Q Serve(g_s), s	17.7	18.7	19.2	3.0	10.7	10.9	14.9	10.4	3.6	7.2	24.0	19.7
Cycle Q Clear(g_c), s	17.7	18.7	19.2	3.0	10.7	10.9	14.9	10.4	3.6	7.2	24.0	19.7
Prop In Lane	1.00		0.78	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	578	1425	662	136	989	517	496	1104	469	269	871	364
V/C Ratio(X)	0.88	0.41	0.42	0.64	0.38	0.39	0.88	0.36	0.13	0.78	0.85	0.73
Avail Cap(c_a), veh/h	631	1425	662	172	989	517	545	1121	476	344	914	383
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	0.91	0.91	0.91	0.87	0.87	0.87
Uniform Delay (d), s/veh	55.5	38.0	38.2	56.8	33.9	34.0	50.3	32.0	29.6	54.3	43.2	41.5
Incr Delay (d2), s/veh	11.8	0.8	1.7	3.9	1.1	2.2	13.4	0.2	0.1	7.7	6.7	5.8
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	9.4	8.9	8.7	1.5	5.2	5.7	8.0	5.1	1.5	3.7	12.6	8.6
LnGrp Delay(d),s/veh	67.3	38.8	39.9	60.7	35.0	36.2	63.7	32.2	29.8	62.0	49.9	47.4
LnGrp LOS	E	D	D	E	D	D	E	C	C	E	D	D
Approach Vol, veh/h		1364			669			896			1218	
Approach Delay, s/veh		49.7			38.7			47.4			51.4	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	55.4	21.3	34.5	24.2	40.0	13.4	42.4				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	6.0	46.0	19.0	31.0	22.0	30.0	12.0	38.0				
Max Q Clear Time (g_c+I1), s	5.0	21.2	16.9	26.0	19.7	12.9	9.2	12.4				
Green Ext Time (p_c), s	0.0	12.3	0.4	3.5	0.5	9.9	0.2	10.8				
Intersection Summary												
HCM 2010 Ctrl Delay			47.9									
HCM 2010 LOS			D									

























HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	119	96	112	56	159	30	342	102	96	329	65
Future Volume (veh/h)	43	119	96	112	56	159	30	342	102	96	329	65
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	47	129	0	122	61	60	33	372	111	104	358	69
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	207	176	165	82	81	370	587	175	326	647	125
Arrive On Green	0.11	0.11	0.00	0.19	0.19	0.19	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1774	1863	1583	874	437	430	955	1369	409	907	1511	291
Grp Volume(v), veh/h	47	129	0	243	0	0	33	0	483	104	0	427
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1742	0	0	955	0	1778	907	0	1802
Q Serve(g_s), s	1.3	3.6	0.0	7.3	0.0	0.0	1.5	0.0	11.8	5.6	0.0	9.8
Cycle Q Clear(g_c), s	1.3	3.6	0.0	7.3	0.0	0.0	11.3	0.0	11.8	17.4	0.0	9.8
Prop In Lane	1.00		1.00	0.50		0.25	1.00		0.23	1.00		0.16
Lane Grp Cap(c), veh/h	197	207	176	328	0	0	370	0	762	326	0	772
V/C Ratio(X)	0.24	0.62	0.00	0.74	0.00	0.00	0.09	0.00	0.63	0.32	0.00	0.55
Avail Cap(c_a), veh/h	837	879	747	822	0	0	446	0	903	398	0	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.4	23.4	0.0	21.1	0.0	0.0	16.0	0.0	12.4	19.2	0.0	11.8
Incr Delay (d2), s/veh	0.6	3.1	0.0	3.3	0.0	0.0	0.1	0.0	1.1	0.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.0	0.0	3.7	0.0	0.0	0.4	0.0	6.0	1.4	0.0	5.0
LnGrp Delay(d),s/veh	23.0	26.5	0.0	24.4	0.0	0.0	16.1	0.0	13.5	19.7	0.0	12.4
LnGrp LOS	C	C		C			B		B	B		B
Approach Vol, veh/h		176			243			516			531	
Approach Delay, s/veh		25.5			24.4			13.6			13.9	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		11.1		28.6		15.4		28.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		28.0		26.0		28.0				
Max Q Clear Time (g_c+I1), s		5.6		19.4		9.3		13.8				
Green Ext Time (p_c), s		0.7		4.3		1.3		5.8				
Intersection Summary												
HCM 2010 Ctrl Delay			16.9									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 20: Broadway & Anita St

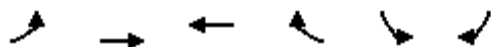
2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	155	42	82	128	136	29	545	67	159	813	94
Future Volume (veh/h)	120	155	42	82	128	136	29	545	67	159	813	94
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.95	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	130	168	24	89	139	103	32	592	51	173	884	81
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	547	451	374	547	451	311	1373	118	479	1560	143
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.02	0.42	0.42	0.08	0.48	0.48
Sat Flow, veh/h	1121	1863	1533	1173	1863	1533	1774	3284	282	1774	3265	299
Grp Volume(v), veh/h	130	168	24	89	139	103	32	318	325	173	479	486
Grp Sat Flow(s),veh/h/ln	1121	1863	1533	1173	1863	1533	1774	1770	1797	1774	1770	1794
Q Serve(g_s), s	6.5	4.5	0.7	4.1	3.7	3.3	0.7	8.3	8.3	3.3	12.6	12.6
Cycle Q Clear(g_c), s	10.2	4.5	0.7	8.7	3.7	3.3	0.7	8.3	8.3	3.3	12.6	12.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.17
Lane Grp Cap(c), veh/h	377	547	451	374	547	451	311	740	751	479	845	857
V/C Ratio(X)	0.35	0.31	0.05	0.24	0.25	0.23	0.10	0.43	0.43	0.36	0.57	0.57
Avail Cap(c_a), veh/h	669	1034	851	680	1034	851	398	740	751	569	845	857
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	21.4	17.8	16.4	21.1	17.5	17.3	11.0	13.4	13.4	9.0	12.1	12.1
Incr Delay (d2), s/veh	0.5	0.3	0.0	0.3	0.2	0.3	0.1	1.8	1.8	0.5	2.7	2.7
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	2.0	2.4	0.3	1.4	1.9	1.4	0.3	4.4	4.4	1.6	6.8	6.9
LnGrp Delay(d),s/veh	21.9	18.1	16.5	21.5	17.7	17.6	11.2	15.2	15.2	9.5	14.9	14.8
LnGrp LOS	C	B	B	C	B	B	B	B	B	A	B	B
Approach Vol, veh/h		322			331			675			1138	
Approach Delay, s/veh		19.5			18.7			15.0			14.0	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.1	4.8	36.0		24.1	8.7	32.1				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		36.0	4.5	31.0		36.0	8.5	27.0				
Max Q Clear Time (g_c+I1), s		12.2	2.7	14.6		10.7	5.3	10.3				
Green Ext Time (p_c), s		3.1	0.0	9.1		3.2	0.1	9.2				
Intersection Summary												
HCM 2010 Ctrl Delay			15.7									
HCM 2010 LOS			B									

HCM Unsignalized Intersection Capacity Analysis

21: Main St & I-5 SB Ramps

2025 Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↑	↗	↘	↗
Traffic Volume (veh/h)	27	160	95	174	714	26
Future Volume (Veh/h)	27	160	95	174	714	26
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	174	103	189	776	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						14
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			809			
pX, platoon unblocked						
vC, conflicting volume	103				335	103
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	103				335	103
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				0	97
cM capacity (veh/h)	1489				647	952

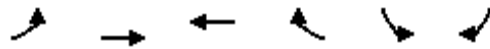
Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	203	103	189	804
Volume Left	29	0	0	776
Volume Right	0	0	189	28
cSH	1489	1700	1700	663
Volume to Capacity	0.02	0.06	0.11	1.21
Queue Length 95th (ft)	1	0	0	708
Control Delay (s)	1.2	0.0	0.0	131.0
Lane LOS	A			F
Approach Delay (s)	1.2	0.0		131.0
Approach LOS				F

Intersection Summary			
Average Delay		81.3	
Intersection Capacity Utilization		62.8%	ICU Level of Service B
Analysis Period (min)		15	

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps





















2025 Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	57	817	258	661	127	11		
Future Volume (veh/h)	57	817	258	661	127	11		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	62	888	280	455	138	8		
Adj No. of Lanes	1	1	1	1	1	1		
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	76	1270	1051	875	187	167		
Arrive On Green	0.04	0.68	0.56	0.56	0.11	0.11		
Sat Flow, veh/h	1774	1863	1863	1551	1774	1583		
Grp Volume(v), veh/h	62	888	280	455	138	8		
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1551	1774	1583		
Q Serve(g_s), s	1.6	13.6	3.6	8.5	3.5	0.2		
Cycle Q Clear(g_c), s	1.6	13.6	3.6	8.5	3.5	0.2		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	76	1270	1051	875	187	167		
V/C Ratio(X)	0.81	0.70	0.27	0.52	0.74	0.05		
Avail Cap(c_a), veh/h	170	1270	1051	875	680	607		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	22.3	4.6	5.3	6.3	20.4	18.9		
Incr Delay (d2), s/veh	18.3	3.2	0.6	2.2	5.6	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.2	7.8	2.0	4.1	2.0	0.2		
LnGrp Delay(d),s/veh	40.6	7.8	5.9	8.5	25.9	19.0		
LnGrp LOS	D	A	A	A	C	B		
Approach Vol, veh/h		950	735		146			
Approach Delay, s/veh		9.9	7.5		25.6			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		37.0		10.0	5.5	31.5		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		32.0		18.0	4.5	24.0		
Max Q Clear Time (g_c+I1), s		15.6		5.5	3.6	10.5		
Green Ext Time (p_c), s		9.1		0.3	0.0	8.0		
Intersection Summary								
HCM 2010 Ctrl Delay			10.2					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

























2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	596	258	299	422	54	178	347	328	28	367	142
Future Volume (veh/h)	73	596	258	299	422	54	178	347	328	28	367	142
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	648	184	325	459	44	193	377	285	30	399	129
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	710	201	364	856	82	190	381	288	80	523	169
Arrive On Green	0.21	0.26	0.26	0.21	0.26	0.26	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1774	2700	766	1774	3254	311	872	977	739	770	1343	434
Grp Volume(v), veh/h	79	424	408	325	249	254	193	0	662	30	0	528
Grp Sat Flow(s),veh/h/ln	1774	1770	1696	1774	1770	1795	872	0	1716	770	0	1777
Q Serve(g_s), s	3.5	22.1	22.1	16.9	11.4	11.6	12.5	0.0	36.4	0.6	0.0	24.5
Cycle Q Clear(g_c), s	3.5	22.1	22.1	16.9	11.4	11.6	37.0	0.0	36.4	37.0	0.0	24.5
Prop In Lane	1.00		0.45	1.00		0.17	1.00		0.43	1.00		0.24
Lane Grp Cap(c), veh/h	364	466	446	364	466	472	190	0	668	80	0	692
V/C Ratio(X)	0.22	0.91	0.91	0.89	0.53	0.54	1.01	0.00	0.99	0.37	0.00	0.76
Avail Cap(c_a), veh/h	364	466	446	364	466	472	190	0	668	80	0	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	33.9	33.9	36.7	30.0	30.0	43.7	0.0	28.8	47.5	0.0	25.2
Incr Delay (d2), s/veh	1.4	24.6	25.6	26.5	4.3	4.4	69.1	0.0	32.3	2.8	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	13.9	13.5	11.0	6.2	6.3	8.6	0.0	23.1	0.8	0.0	13.0
LnGrp Delay(d),s/veh	32.8	58.5	59.6	63.2	34.3	34.4	112.9	0.0	61.1	50.3	0.0	30.2
LnGrp LOS	C	E	E	E	C	C	F		E	D		C
Approach Vol, veh/h		911			828			855			558	
Approach Delay, s/veh		56.8			45.7			72.8			31.3	
Approach LOS		E			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	30.0		42.0	23.0	30.0		42.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	19.5	25.0		37.0	19.5	25.0		37.0				
Max Q Clear Time (g_c+I1), s	18.9	24.1		39.0	5.5	13.6		39.0				
Green Ext Time (p_c), s	0.1	0.6		0.0	0.1	6.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				53.7								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary

24: Broadway & Main St

2025 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	561	226	390	370	136	173	399	356	198	663	76
Future Volume (veh/h)	107	561	226	390	370	136	173	399	356	198	663	76
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	610	151	424	402	97	188	434	257	215	721	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	851	373	429	1421	625	184	796	346	244	916	410
Arrive On Green	0.08	0.24	0.24	0.24	0.40	0.40	0.10	0.22	0.22	0.14	0.26	0.00
Sat Flow, veh/h	1774	3539	1550	1774	3539	1556	1774	3539	1541	1774	3539	1583
Grp Volume(v), veh/h	116	610	151	424	402	97	188	434	257	215	721	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1550	1774	1770	1556	1774	1770	1541	1774	1770	1583
Q Serve(g_s), s	7.5	18.3	9.5	27.6	8.9	4.6	12.0	12.6	18.0	13.8	22.0	0.0
Cycle Q Clear(g_c), s	7.5	18.3	9.5	27.6	8.9	4.6	12.0	12.6	18.0	13.8	22.0	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	143	851	373	429	1421	625	184	796	346	244	916	410
V/C Ratio(X)	0.81	0.72	0.40	0.99	0.28	0.16	1.02	0.55	0.74	0.88	0.79	0.00
Avail Cap(c_a), veh/h	230	1130	495	429	1527	671	184	796	346	291	916	410
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	0.00
Uniform Delay (d), s/veh	52.4	40.4	37.0	43.8	23.4	22.1	51.9	39.7	41.8	49.0	40.0	0.0
Incr Delay (d2), s/veh	10.8	1.5	0.7	40.5	0.1	0.1	72.6	2.7	13.4	22.6	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	9.2	4.1	18.2	4.4	2.0	9.5	6.4	8.9	8.3	11.6	0.0
LnGrp Delay(d),s/veh	63.2	41.8	37.7	84.3	23.5	22.2	124.8	42.4	55.2	71.7	46.7	0.0
LnGrp LOS	E	D	D	F	C	C	F	D	E	E	D	
Approach Vol, veh/h		877			923			879			936	
Approach Delay, s/veh		44.0			51.3			63.7			52.5	
Approach LOS		D			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	32.9	16.0	35.0	13.3	51.5	19.9	31.1				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	28.0	37.0	12.0	30.0	15.0	50.0	19.0	23.0				
Max Q Clear Time (g_c+I1), s	29.6	20.3	14.0	24.0	9.5	10.9	15.8	20.0				
Green Ext Time (p_c), s	0.0	7.0	0.0	3.9	0.1	9.3	0.2	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			52.8									
HCM 2010 LOS			D									

**Appendix E – 2025 Intersection LOS Worksheets – Build
Alternative with Mitigation**

HCM Signalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

2025 Build - AM with Mitigation





















Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	201	326	789	114	384	137
Future Volume (vph)	201	326	789	114	384	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	0.96	1.00	1.00
Satd. Flow (prot)	1770	1546	1681	1706	1863	1583
Flt Permitted	0.95	1.00	0.95	0.96	1.00	1.00
Satd. Flow (perm)	1770	1546	1681	1706	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	218	354	858	124	417	149
RTOR Reduction (vph)	0	286	0	0	0	110
Lane Group Flow (vph)	218	68	489	493	417	39
Confl. Bikes (#/hr)		2				
Turn Type	Prot	Perm	Split	NA	NA	Perm
Protected Phases	2		8	8	4	
Permitted Phases		2				4
Actuated Green, G (s)	13.9	13.9	24.6	24.6	19.0	19.0
Effective Green, g (s)	13.9	13.9	24.6	24.6	19.0	19.0
Actuated g/C Ratio	0.19	0.19	0.34	0.34	0.26	0.26
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	339	296	570	578	488	414
v/s Ratio Prot	c0.12		c0.29	0.29	c0.22	
v/s Ratio Perm		0.04				0.02
v/c Ratio	0.64	0.23	0.86	0.85	0.85	0.09
Uniform Delay, d1	27.0	24.8	22.3	22.3	25.4	20.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	0.4	12.2	11.7	13.6	0.1
Delay (s)	31.2	25.2	34.5	33.9	39.1	20.3
Level of Service	C	C	C	C	D	C
Approach Delay (s)	27.4			34.2	34.1	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	72.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c	Critical Lane Group		

HCM 2010 Signalized Intersection Summary




















6: Moss St

2025 Build - AM with Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	0	0	0	125	381	94	300	0	246	464	0
Future Volume (veh/h)	204	0	0	0	125	381	94	300	0	246	464	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	222	0	0	0	136	275	102	326	0	267	504	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	0	0	0	131	264	111	373	0	266	536	0
Arrive On Green	0.20	0.00	0.00	0.00	0.24	0.24	0.06	0.20	0.00	0.15	0.29	0.00
Sat Flow, veh/h	1774	0	0	0	550	1113	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	222	0	0	0	0	411	102	326	0	267	504	0
Grp Sat Flow(s),veh/h/ln	1774	0	0	0	0	1664	1774	1863	0	1774	1863	0
Q Serve(g_s), s	9.2	0.0	0.0	0.0	0.0	19.0	4.6	13.6	0.0	12.0	21.1	0.0
Cycle Q Clear(g_c), s	9.2	0.0	0.0	0.0	0.0	19.0	4.6	13.6	0.0	12.0	21.1	0.0
Prop In Lane	1.00		0.00	0.00		0.67	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	355	0	0	0	0	395	111	373	0	266	536	0
V/C Ratio(X)	0.63	0.00	0.00	0.00	0.00	1.04	0.92	0.88	0.00	1.00	0.94	0.00
Avail Cap(c_a), veh/h	355	0	0	0	0	395	111	373	0	266	536	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.3	0.0	0.0	0.0	0.0	30.5	37.3	31.0	0.0	34.0	27.8	0.0
Incr Delay (d2), s/veh	8.1	0.0	0.0	0.0	0.0	56.1	60.7	20.1	0.0	56.0	25.1	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	5.3	0.0	0.0	0.0	0.0	14.8	4.1	9.0	0.0	10.0	14.5	0.0
LnGrp Delay(d),s/veh	37.4	0.0	0.0	0.0	0.0	86.6	98.0	51.1	0.0	90.0	52.9	0.0
LnGrp LOS	D					F	F	D		F	D	
Approach Vol, veh/h		222			411			428			771	
Approach Delay, s/veh		37.4			86.6			62.3			65.8	
Approach LOS		D			F			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0	10.0	27.0		23.0	17.0	20.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		16.0	5.0	23.0		19.0	12.0	16.0				
Max Q Clear Time (g_c+I1), s		11.2	6.6	23.1		21.0	14.0	15.6				
Green Ext Time (p_c), s		0.5	0.0	0.0		0.0	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			66.2									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
 8: Naples St

2025 Build - AM with Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	71	29	183	77	324	69	55	411	341	33	0
Future Volume (veh/h)	15	71	29	183	77	324	69	55	411	341	33	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.82	1.00		0.79	1.00		0.96	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	16	77	14	199	84	124	75	60	230	371	36	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	273	50	319	104	154	97	61	233	407	671	0
Arrive On Green	0.21	0.21	0.21	0.18	0.18	0.18	0.05	0.19	0.19	0.23	0.36	0.00
Sat Flow, veh/h	272	1309	238	1774	582	859	1774	328	1256	1774	1863	0
Grp Volume(v), veh/h	107	0	0	199	0	208	75	0	290	371	36	0
Grp Sat Flow(s),veh/h/ln	1819	0	0	1774	0	1440	1774	0	1583	1774	1863	0
Q Serve(g_s), s	4.3	0.0	0.0	8.9	0.0	11.9	3.6	0.0	15.8	17.6	1.1	0.0
Cycle Q Clear(g_c), s	4.3	0.0	0.0	8.9	0.0	11.9	3.6	0.0	15.8	17.6	1.1	0.0
Prop In Lane	0.15		0.13	1.00		0.60	1.00		0.79	1.00		0.00
Lane Grp Cap(c), veh/h	380	0	0	319	0	259	97	0	294	407	671	0
V/C Ratio(X)	0.28	0.00	0.00	0.62	0.00	0.80	0.78	0.00	0.99	0.91	0.05	0.00
Avail Cap(c_a), veh/h	380	0	0	370	0	300	185	0	294	432	671	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.7	0.0	0.0	32.7	0.0	33.9	40.3	0.0	35.0	32.4	18.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	2.5	0.0	12.9	12.4	0.0	49.0	22.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	4.6	0.0	5.7	2.1	0.0	10.8	11.1	0.6	0.0
LnGrp Delay(d),s/veh	30.6	0.0	0.0	35.2	0.0	46.8	52.6	0.0	84.0	55.2	18.0	0.0
LnGrp LOS	C			D		D	D		F	E	B	
Approach Vol, veh/h		107			407			365			407	
Approach Delay, s/veh		30.6			41.2			77.6			51.9	
Approach LOS		C			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.0	9.7	35.1		19.5	24.8	20.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		18.0	9.0	28.0		18.0	21.0	16.0				
Max Q Clear Time (g_c+I1), s		6.3	5.6	3.1		13.9	19.6	17.8				
Green Ext Time (p_c), s		0.4	0.0	2.2		0.8	0.2	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				54.0								
HCM 2010 LOS				D								

HCM Signalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

2025 Build - PM with Mitigation





















Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	122	315	880	168	573	203
Future Volume (vph)	122	315	880	168	573	203
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	0.97	1.00	1.00
Satd. Flow (prot)	1770	1583	1681	1711	1863	1560
Flt Permitted	0.95	1.00	0.95	0.97	1.00	1.00
Satd. Flow (perm)	1770	1583	1681	1711	1863	1560
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	133	342	957	183	623	221
RTOR Reduction (vph)	0	295	0	0	0	146
Lane Group Flow (vph)	133	47	565	575	623	75
Confl. Peds. (#/hr)			2			2
Turn Type	Prot	Perm	Split	NA	NA	Perm
Protected Phases	2		8	8	4	
Permitted Phases		2				4
Actuated Green, G (s)	11.4	11.4	28.0	28.0	28.0	28.0
Effective Green, g (s)	11.4	11.4	28.0	28.0	28.0	28.0
Actuated g/C Ratio	0.14	0.14	0.34	0.34	0.34	0.34
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	244	219	571	581	633	530
v/s Ratio Prot	c0.08		c0.34	0.34	c0.33	
v/s Ratio Perm		0.03				0.05
v/c Ratio	0.55	0.22	0.99	0.99	0.98	0.14
Uniform Delay, d1	33.1	31.5	27.1	27.1	27.0	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	0.5	34.6	34.3	31.5	0.1
Delay (s)	35.6	32.0	61.6	61.4	58.5	19.0
Level of Service	D	C	E	E	E	B
Approach Delay (s)	33.0			61.5	48.2	
Approach LOS	C			E	D	

Intersection Summary			
HCM 2000 Control Delay	51.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	82.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 Signalized Intersection Summary

6: Moss St





















2025 Build - PM with Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	249	11	32	11	43	464	114	335	4	306	474	107
Future Volume (veh/h)	249	11	32	11	43	464	114	335	4	306	474	107
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	271	12	33	12	47	319	124	364	4	333	515	106
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	14	39	9	36	242	138	409	4	355	516	106
Arrive On Green	0.21	0.21	0.21	0.18	0.18	0.18	0.08	0.22	0.22	0.20	0.34	0.34
Sat Flow, veh/h	1505	67	183	51	201	1363	1774	1839	20	1774	1499	309
Grp Volume(v), veh/h	316	0	0	378	0	0	124	0	368	333	0	621
Grp Sat Flow(s),veh/h/ln	1755	0	0	1615	0	0	1774	0	1859	1774	0	1808
Q Serve(g_s), s	15.6	0.0	0.0	16.0	0.0	0.0	6.2	0.0	17.3	16.6	0.0	30.9
Cycle Q Clear(g_c), s	15.6	0.0	0.0	16.0	0.0	0.0	6.2	0.0	17.3	16.6	0.0	30.9
Prop In Lane	0.86		0.10	0.03		0.84	1.00		0.01	1.00		0.17
Lane Grp Cap(c), veh/h	370	0	0	287	0	0	138	0	413	355	0	623
V/C Ratio(X)	0.85	0.00	0.00	1.32	0.00	0.00	0.90	0.00	0.89	0.94	0.00	1.00
Avail Cap(c_a), veh/h	370	0	0	287	0	0	138	0	413	355	0	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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	0.0	0.0	37.0	0.0	0.0	41.1	0.0	33.9	35.5	0.0	29.5
Incr Delay (d2), s/veh	21.3	0.0	0.0	164.9	0.0	0.0	47.6	0.0	20.7	32.3	0.0	35.3
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	9.7	0.0	0.0	20.3	0.0	0.0	4.9	0.0	11.3	11.3	0.0	21.5
LnGrp Delay(d),s/veh	55.5	0.0	0.0	201.9	0.0	0.0	88.8	0.0	54.7	67.7	0.0	64.8
LnGrp LOS	E			F			F		D	E		E
Approach Vol, veh/h		316			378			492			954	
Approach Delay, s/veh		55.5			201.9			63.2			65.8	
Approach LOS		E			F			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	12.0	35.0		20.0	23.0	24.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		19.0	7.0	31.0		16.0	18.0	20.0				
Max Q Clear Time (g_c+I1), s		17.6	8.2	32.9		18.0	18.6	19.3				
Green Ext Time (p_c), s		0.3	0.0	0.0		0.0	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				87.7								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary

8: Naples St

2025 Build - PM with Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	100	68	318	96	340	51	80	371	435	82	0
Future Volume (veh/h)	32	100	68	318	96	340	51	80	371	435	82	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	109	47	346	104	229	55	87	270	473	89	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	196	84	335	94	208	70	69	216	453	733	0
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.04	0.18	0.18	0.26	0.39	0.00
Sat Flow, veh/h	332	1035	446	1774	500	1100	1774	391	1213	1774	1863	0
Grp Volume(v), veh/h	191	0	0	346	0	333	55	0	357	473	89	0
Grp Sat Flow(s),veh/h/ln	1814	0	0	1774	0	1600	1774	0	1604	1774	1863	0
Q Serve(g_s), s	8.6	0.0	0.0	17.0	0.0	17.0	2.8	0.0	16.0	23.0	2.7	0.0
Cycle Q Clear(g_c), s	8.6	0.0	0.0	17.0	0.0	17.0	2.8	0.0	16.0	23.0	2.7	0.0
Prop In Lane	0.18		0.25	1.00		0.69	1.00		0.76	1.00		0.00
Lane Grp Cap(c), veh/h	343	0	0	335	0	302	70	0	285	453	733	0
V/C Ratio(X)	0.56	0.00	0.00	1.03	0.00	1.10	0.78	0.00	1.25	1.04	0.12	0.00
Avail Cap(c_a), veh/h	343	0	0	335	0	302	138	0	285	453	733	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.1	0.0	0.0	36.5	0.0	36.5	42.8	0.0	37.0	33.5	17.4	0.0
Incr Delay (d2), s/veh	6.4	0.0	0.0	57.8	0.0	81.9	16.8	0.0	139.0	54.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	13.7	0.0	14.3	1.7	0.0	18.1	18.0	1.4	0.0
LnGrp Delay(d),s/veh	39.5	0.0	0.0	94.3	0.0	118.4	59.7	0.0	176.0	87.5	17.4	0.0
LnGrp LOS	D			F		F	E		F	F	B	
Approach Vol, veh/h		191			679			412			562	
Approach Delay, s/veh		39.5			106.1			160.4			76.4	
Approach LOS		D			F			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.0	8.6	39.4		21.0	28.0	20.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		17.0	7.0	32.0		17.0	23.0	16.0				
Max Q Clear Time (g_c+I1), s		10.6	4.8	4.7		19.0	25.0	18.0				
Green Ext Time (p_c), s		0.5	0.0	3.1		0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				102.3								
HCM 2010 LOS				F								

2025 Build - Int #5 (NB ramps at Industrial)
 SIGNAL WARRANTED

Figure 4C-3. Warrant 3, Peak Hour

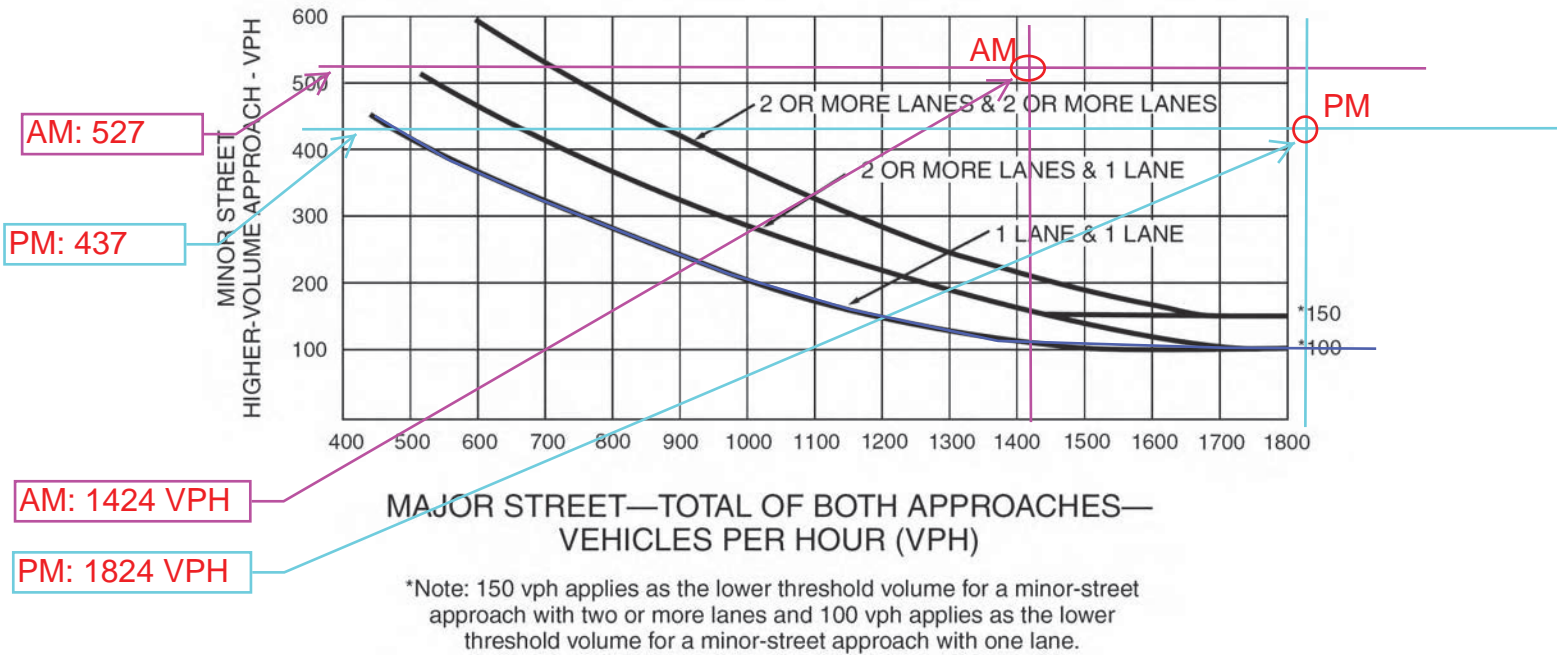
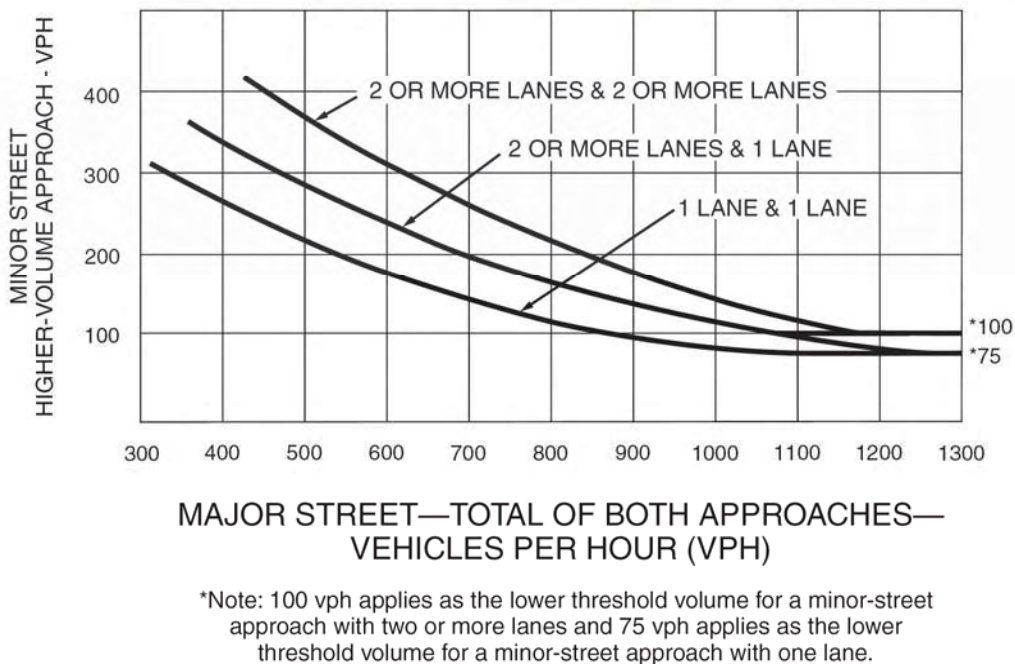


Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 64 km/h OR ABOVE 40 mph ON MAJOR STREET)















**Appendix F – 2045 Intersection LOS Worksheets – No Build
Alternative**

HCM 2010 Signalized Intersection Summary





















1: Bay Blvd & L St

2045 No Build - AM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	423	299	460	18	75	150		
Future Volume (veh/h)	423	299	460	18	75	150		
Number	1	16	8	18	7	4		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	460	325	500	20	82	163		
Adj No. of Lanes	1	1	1	1	1	1		
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	784	700	580	493	255	776		
Arrive On Green	0.44	0.44	0.31	0.31	0.05	0.42		
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863		
Grp Volume(v), veh/h	460	325	500	20	82	163		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863		
Q Serve(g_s), s	11.7	8.7	15.2	0.5	1.8	3.4		
Cycle Q Clear(g_c), s	11.7	8.7	15.2	0.5	1.8	3.4		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	784	700	580	493	255	776		
V/C Ratio(X)	0.59	0.46	0.86	0.04	0.32	0.21		
Avail Cap(c_a), veh/h	784	700	652	554	304	900		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.6	11.8	19.5	14.4	14.4	11.2		
Incr Delay (d2), s/veh	3.0	2.1	10.5	0.0	0.7	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.3	8.8	9.5	0.2	0.9	1.7		
LnGrp Delay(d),s/veh	15.6	13.8	30.0	14.4	15.1	11.3		
LnGrp LOS	B	B	C	B	B	B		
Approach Vol, veh/h	785		520			245		
Approach Delay, s/veh	14.9		29.4			12.6		
Approach LOS	B		C			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				30.0		30.0	6.3	23.7
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				29.0		22.5	4.5	21.0
Max Q Clear Time (g_c+I1), s				5.4		13.7	3.8	17.2
Green Ext Time (p_c), s				4.5		1.9	0.0	1.5
Intersection Summary								
HCM 2010 Ctrl Delay			19.4					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 2: Industrial Blvd/Driveway & L St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	473	531	126	352	3	206	3	144	1	5	0
Future Volume (veh/h)	2	473	531	126	352	3	206	3	144	1	5	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	514	369	137	383	2	224	3	100	1	5	0
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1298	573	133	1588	8	281	3	520	70	260	0
Arrive On Green	0.00	0.12	0.12	0.08	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.00
Sat Flow, veh/h	1774	3539	1564	1774	3610	19	485	9	1559	0	781	0
Grp Volume(v), veh/h	2	514	369	137	188	197	227	0	100	6	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1564	1774	1770	1859	494	0	1559	781	0	0
Q Serve(g_s), s	0.1	8.0	13.5	4.5	4.0	4.0	0.0	0.0	2.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	8.0	13.5	4.5	4.0	4.0	20.0	0.0	2.7	20.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.17		0.00
Lane Grp Cap(c), veh/h	3	1298	573	133	779	818	284	0	520	330	0	0
V/C Ratio(X)	0.68	0.40	0.64	1.03	0.24	0.24	0.80	0.00	0.19	0.02	0.00	0.00
Avail Cap(c_a), veh/h	133	1298	573	133	779	818	284	0	520	330	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.79	0.79	0.79	0.70	0.00	0.70	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.0	20.2	22.6	27.8	10.5	10.5	22.7	0.0	14.2	14.5	0.0	0.0
Incr Delay (d2), s/veh	105.2	0.6	3.7	77.3	0.6	0.6	10.9	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.0	6.4	5.0	2.1	2.2	4.6	0.0	1.2	0.1	0.0	0.0
LnGrp Delay(d),s/veh	135.2	20.8	26.3	105.5	11.1	11.1	33.6	0.0	14.4	14.5	0.0	0.0
LnGrp LOS	F	C	C	F	B	B	C		B	B		
Approach Vol, veh/h		885			522			327			6	
Approach Delay, s/veh		23.4			35.9			27.7			14.5	
Approach LOS		C			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	27.0		25.0	3.6	31.4		25.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	22.0		20.0	4.5	22.0		20.0				
Max Q Clear Time (g_c+I1), s	6.5	15.5		22.0	2.1	6.0		22.0				
Green Ext Time (p_c), s	0.0	3.6		0.0	0.0	6.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			27.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

3: Broadway & L St













2045 No Build - AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	300	274	218	238	46	172	702	206	38	541	28
Future Volume (veh/h)	42	300	274	218	238	46	172	702	206	38	541	28
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	46	326	190	237	259	32	187	763	144	41	588	19
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	750	327	230	978	119	167	1479	849	51	1249	594
Arrive On Green	0.03	0.21	0.21	0.13	0.31	0.31	0.09	0.42	0.42	0.03	0.35	0.35
Sat Flow, veh/h	1774	3539	1541	1774	3167	387	1774	3539	1540	1774	3539	1536
Grp Volume(v), veh/h	46	326	190	237	143	148	187	763	144	41	588	19
Grp Sat Flow(s),veh/h/ln	1774	1770	1541	1774	1770	1784	1774	1770	1540	1774	1770	1536
Q Serve(g_s), s	2.2	6.8	9.4	11.0	5.2	5.3	8.0	13.6	4.0	2.0	11.0	0.7
Cycle Q Clear(g_c), s	2.2	6.8	9.4	11.0	5.2	5.3	8.0	13.6	4.0	2.0	11.0	0.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	750	327	230	546	551	167	1479	849	51	1249	594
V/C Ratio(X)	0.79	0.43	0.58	1.03	0.26	0.27	1.12	0.52	0.17	0.80	0.47	0.03
Avail Cap(c_a), veh/h	125	1374	598	230	791	797	167	1479	849	125	1249	594
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	29.1	30.1	37.0	22.1	22.2	38.5	18.4	9.6	41.0	21.4	16.3
Incr Delay (d2), s/veh	20.9	0.4	1.6	68.2	0.3	0.3	105.6	1.3	0.4	23.9	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.3	4.2	9.7	2.5	2.7	8.8	6.8	1.8	1.3	5.5	0.3
LnGrp Delay(d),s/veh	61.7	29.5	31.7	105.2	22.4	22.4	144.1	19.6	10.0	65.0	22.6	16.4
LnGrp LOS	E	C	C	F	C	C	F	B	B	E	C	B
Approach Vol, veh/h		562			528			1094			648	
Approach Delay, s/veh		32.9			59.6			39.7			25.1	
Approach LOS		C			E			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	23.0	12.0	35.0	6.8	31.2	6.5	40.5				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	11.0	33.0	8.0	30.0	6.0	38.0	6.0	32.0				
Max Q Clear Time (g_c+I1), s	13.0	11.4	10.0	13.0	4.2	7.3	4.0	15.6				
Green Ext Time (p_c), s	0.0	4.4	0.0	9.0	0.0	4.8	0.0	8.8				
Intersection Summary												
HCM 2010 Ctrl Delay			38.7									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary

4: I-5 SB On-ramp/I-5 SB Off-ramp & L St













2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑					↑↑		↑
Traffic Volume (veh/h)	0	49	44	203	354	0	0	0	0	952	0	368
Future Volume (veh/h)	0	49	44	203	354	0	0	0	0	952	0	368
Number	5	2	12	1	6	16				7	4	14
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
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	53	48	221	385	0				1035	0	400
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	1196	535	315	1727	0				1189	0	547
Arrive On Green	0.00	0.34	0.34	0.03	0.16	0.00				0.35	0.00	0.35
Sat Flow, veh/h	0	3632	1583	3442	3632	0				3442	0	1583
Grp Volume(v), veh/h	0	53	48	221	385	0				1035	0	400
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1721	0	1583
Q Serve(g_s), s	0.0	0.6	1.2	3.8	5.7	0.0				16.9	0.0	13.3
Cycle Q Clear(g_c), s	0.0	0.6	1.2	3.8	5.7	0.0				16.9	0.0	13.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1196	535	315	1727	0				1189	0	547
V/C Ratio(X)	0.00	0.04	0.09	0.70	0.22	0.00				0.87	0.00	0.73
Avail Cap(c_a), veh/h	0	1196	535	315	1727	0				1262	0	581
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.98	0.98	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.4	13.6	28.3	15.3	0.0				18.4	0.0	17.2
Incr Delay (d2), s/veh	0.0	0.1	0.3	6.7	0.3	0.0				6.6	0.0	4.4
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	0.3	0.6	2.1	2.9	0.0				9.0	0.0	6.5
LnGrp Delay(d),s/veh	0.0	13.4	13.9	34.9	15.6	0.0				24.9	0.0	21.6
LnGrp LOS		B	B	C	B					C		C
Approach Vol, veh/h		101			606						1435	
Approach Delay, s/veh		13.6			22.6						24.0	
Approach LOS		B			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.0	25.3		25.7		34.3						
Change Period (Y+Rc), s	3.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	5.5	19.0		22.0		28.0						
Max Q Clear Time (g_c+I1), s	5.8	3.2		18.9		7.7						
Green Ext Time (p_c), s	0.0	2.6		1.8		2.8						
Intersection Summary												
HCM 2010 Ctrl Delay			23.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

















5: Industrial Blvd & I-5 NB Ramps

2045 No Build - AM

								
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	223	312	882	127	458	198		
Future Volume (veh/h)	223	312	882	127	458	198		
Number	5	12	3	8	4	14		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	242	217	959	138	498	138		
Adj No. of Lanes	1	1	1	1	1	1		
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	247	221	919	1490	479	407		
Arrive On Green	0.14	0.14	0.52	0.80	0.26	0.26		
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583		
Grp Volume(v), veh/h	242	217	959	138	498	138		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583		
Q Serve(g_s), s	19.0	19.1	72.5	2.2	36.0	9.9		
Cycle Q Clear(g_c), s	19.0	19.1	72.5	2.2	36.0	9.9		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	247	221	919	1490	479	407		
V/C Ratio(X)	0.98	0.98	1.04	0.09	1.04	0.34		
Avail Cap(c_a), veh/h	247	221	919	1490	479	407		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	60.0	60.1	33.7	3.0	52.0	42.3		
Incr Delay (d2), s/veh	51.3	55.9	41.8	0.0	51.8	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	12.9	11.8	45.9	1.2	25.4	4.4		
LnGrp Delay(d),s/veh	111.3	116.0	75.5	3.1	103.8	42.8		
LnGrp LOS	F	F	F	A	F	D		
Approach Vol, veh/h	459			1097	636			
Approach Delay, s/veh	113.5			66.4	90.6			
Approach LOS	F			E	F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2		3	4				8
Phs Duration (G+Y+Rc), s	23.0		76.0	41.0				117.0
Change Period (Y+Rc), s	3.5		3.5	5.0				5.0
Max Green Setting (Gmax), s	19.5		72.5	36.0				112.0
Max Q Clear Time (g_c+I1), s	21.1		74.5	38.0				4.2
Green Ext Time (p_c), s	0.0		0.0	0.0				4.8
Intersection Summary								
HCM 2010 Ctrl Delay			83.3					
HCM 2010 LOS			F					

























HCM 2010 Signalized Intersection Summary
 6: Industrial Blvd & Moss St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	0	0	0	150	457	102	329	0	306	464	0
Future Volume (veh/h)	218	0	0	0	150	457	102	329	0	306	464	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	237	0	0	0	163	392	111	358	0	333	504	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	0	0	0	107	258	90	291	0	210	319	0
Arrive On Green	0.14	0.00	0.00	0.00	0.22	0.22	0.21	0.21	0.00	0.29	0.29	0.00
Sat Flow, veh/h	1774	0	0	0	486	1168	436	1405	0	727	1100	0
Grp Volume(v), veh/h	237	0	0	0	0	555	469	0	0	837	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	0	0	0	1654	1841	0	0	1826	0	0
Q Serve(g_s), s	19.1	0.0	0.0	0.0	0.0	32.0	30.0	0.0	0.0	42.0	0.0	0.0
Cycle Q Clear(g_c), s	19.1	0.0	0.0	0.0	0.0	32.0	30.0	0.0	0.0	42.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.71	0.24		0.00	0.40		0.00
Lane Grp Cap(c), veh/h	257	0	0	0	0	365	381	0	0	529	0	0
V/C Ratio(X)	0.92	0.00	0.00	0.00	0.00	1.52	1.23	0.00	0.00	1.58	0.00	0.00
Avail Cap(c_a), veh/h	257	0	0	0	0	365	381	0	0	529	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.2	0.0	0.0	0.0	0.0	56.5	57.5	0.0	0.0	51.5	0.0	0.0
Incr Delay (d2), s/veh	36.0	0.0	0.0	0.0	0.0	248.0	125.0	0.0	0.0	270.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	0.0	0.0	0.0	0.0	39.7	28.5	0.0	0.0	61.0	0.0	0.0
LnGrp Delay(d),s/veh	97.2	0.0	0.0	0.0	0.0	304.5	182.5	0.0	0.0	322.4	0.0	0.0
LnGrp LOS	F					F	F			F		
Approach Vol, veh/h		237			555			469			837	
Approach Delay, s/veh		97.2			304.5			182.5			322.4	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		47.0		37.0		35.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		42.0		32.0		30.0				
Max Q Clear Time (g_c+I1), s		21.1		44.0		34.0		32.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				261.0								
HCM 2010 LOS				F								

















HCM 2010 Signalized Intersection Summary
 7: Broadway & Moss St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	168	24	21	323	182	141	763	75	165	545	143
Future Volume (veh/h)	52	168	24	21	323	182	141	763	75	165	545	143
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.94	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	57	183	16	23	351	126	153	829	69	179	592	114
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	557	462	27	511	423	188	1116	93	188	994	191
Arrive On Green	0.04	0.30	0.30	0.02	0.27	0.27	0.11	0.34	0.34	0.11	0.34	0.34
Sat Flow, veh/h	1774	1863	1545	1774	1863	1543	1774	3291	274	1774	2930	562
Grp Volume(v), veh/h	57	183	16	23	351	126	153	446	452	179	357	349
Grp Sat Flow(s),veh/h/ln	1774	1863	1545	1774	1863	1543	1774	1770	1795	1774	1770	1723
Q Serve(g_s), s	2.3	5.4	0.5	0.9	11.9	4.6	6.0	15.7	15.8	7.1	11.8	11.9
Cycle Q Clear(g_c), s	2.3	5.4	0.5	0.9	11.9	4.6	6.0	15.7	15.8	7.1	11.8	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.33
Lane Grp Cap(c), veh/h	72	557	462	27	511	423	188	600	609	188	600	584
V/C Ratio(X)	0.79	0.33	0.03	0.84	0.69	0.30	0.81	0.74	0.74	0.95	0.59	0.60
Avail Cap(c_a), veh/h	113	842	698	113	842	698	188	600	609	188	600	584
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	33.7	19.3	17.6	34.8	23.0	20.3	30.9	20.7	20.7	31.5	19.4	19.4
Incr Delay (d2), s/veh	18.0	0.3	0.0	45.8	1.7	0.4	23.2	8.1	8.0	51.7	4.3	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	1.5	2.8	0.2	0.8	6.4	2.0	4.1	9.0	9.1	6.1	6.5	6.4
LnGrp Delay(d),s/veh	51.7	19.6	17.6	80.6	24.6	20.7	54.1	28.7	28.7	83.2	23.6	23.8
LnGrp LOS	D	B	B	F	C	C	D	C	C	F	C	C
Approach Vol, veh/h		256			500			1051			885	
Approach Delay, s/veh		26.6			26.2			32.4			35.8	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.6	26.2	11.0	29.0	6.4	24.4	11.0	29.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	7.5	24.0	4.5	32.0	7.5	24.0				
Max Q Clear Time (g_c+I1), s	2.9	7.4	8.0	13.9	4.3	13.9	9.1	17.8				
Green Ext Time (p_c), s	0.0	3.7	0.0	6.5	0.0	3.4	0.0	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay			31.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 8: Industrial Blvd & Naples St






















2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	95	46	247	99	355	84	56	442	331	38	0
Future Volume (veh/h)	20	95	46	247	99	355	84	56	442	331	38	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.65	1.00		0.86	1.00		0.95	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	22	103	37	268	108	346	91	61	369	360	41	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	119	43	191	77	246	70	47	285	299	34	0
Arrive On Green	0.12	0.12	0.12	0.32	0.32	0.32	0.24	0.24	0.24	0.18	0.18	0.00
Sat Flow, veh/h	221	1036	372	602	243	778	287	193	1166	1664	190	0
Grp Volume(v), veh/h	162	0	0	722	0	0	521	0	0	401	0	0
Grp Sat Flow(s),veh/h/ln	1629	0	0	1623	0	0	1646	0	0	1854	0	0
Q Serve(g_s), s	13.6	0.0	0.0	44.0	0.0	0.0	34.0	0.0	0.0	25.0	0.0	0.0
Cycle Q Clear(g_c), s	13.6	0.0	0.0	44.0	0.0	0.0	34.0	0.0	0.0	25.0	0.0	0.0
Prop In Lane	0.14		0.23	0.37		0.48	0.17		0.71	0.90		0.00
Lane Grp Cap(c), veh/h	188	0	0	514	0	0	403	0	0	333	0	0
V/C Ratio(X)	0.86	0.00	0.00	1.41	0.00	0.00	1.29	0.00	0.00	1.20	0.00	0.00
Avail Cap(c_a), veh/h	258	0	0	514	0	0	403	0	0	333	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	60.4	0.0	0.0	47.5	0.0	0.0	52.5	0.0	0.0	57.0	0.0	0.0
Incr Delay (d2), s/veh	19.3	0.0	0.0	194.0	0.0	0.0	149.8	0.0	0.0	116.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	47.4	0.0	0.0	32.2	0.0	0.0	23.6	0.0	0.0
LnGrp Delay(d),s/veh	79.7	0.0	0.0	241.5	0.0	0.0	202.3	0.0	0.0	173.3	0.0	0.0
LnGrp LOS	E			F			F			F		
Approach Vol, veh/h		162			722			521			401	
Approach Delay, s/veh		79.7			241.5			202.3			173.3	
Approach LOS		E			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		30.0		49.0		39.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		22.0		25.0		44.0		34.0				
Max Q Clear Time (g_c+I1), s		15.6		27.0		46.0		36.0				
Green Ext Time (p_c), s		0.4		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				200.5								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary























9: Broadway & Naples St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	212	115	171	347	105	148	610	106	40	501	58
Future Volume (veh/h)	95	212	115	171	347	105	148	610	106	40	501	58
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.94	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	103	230	82	186	377	73	161	663	87	43	545	47
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	381	136	192	612	497	166	1007	132	53	849	73
Arrive On Green	0.07	0.29	0.29	0.11	0.33	0.33	0.09	0.32	0.32	0.03	0.26	0.26
Sat Flow, veh/h	1774	1293	461	1774	1863	1514	1774	3119	409	1774	3275	281
Grp Volume(v), veh/h	103	0	312	186	377	73	161	376	374	43	294	298
Grp Sat Flow(s),veh/h/ln	1774	0	1755	1774	1863	1514	1774	1770	1758	1774	1770	1787
Q Serve(g_s), s	4.0	0.0	10.6	7.3	11.8	2.4	6.3	12.7	12.7	1.7	10.2	10.3
Cycle Q Clear(g_c), s	4.0	0.0	10.6	7.3	11.8	2.4	6.3	12.7	12.7	1.7	10.2	10.3
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.23	1.00		0.16
Lane Grp Cap(c), veh/h	132	0	517	192	612	497	166	571	568	53	459	463
V/C Ratio(X)	0.78	0.00	0.60	0.97	0.62	0.15	0.97	0.66	0.66	0.81	0.64	0.64
Avail Cap(c_a), veh/h	166	0	657	192	724	589	166	571	568	115	459	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	31.6	0.0	21.0	30.9	19.6	16.5	31.4	20.2	20.2	33.5	22.9	22.9
Incr Delay (d2), s/veh	17.0	0.0	1.1	56.4	1.2	0.1	60.7	5.8	5.9	24.6	6.7	6.8
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	2.6	0.0	5.3	6.5	6.3	1.0	5.8	7.1	7.1	1.2	5.8	5.9
LnGrp Delay(d),s/veh	48.6	0.0	22.2	87.3	20.8	16.6	92.1	26.0	26.1	58.1	29.6	29.6
LnGrp LOS	D		C	F	C	B	F	C	C	E	C	C
Approach Vol, veh/h		415			636			911			635	
Approach Delay, s/veh		28.7			39.8			37.8			31.5	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	25.5	10.0	23.0	8.7	27.8	5.6	27.4				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	7.5	26.0	6.5	18.0	6.5	27.0	4.5	20.0				
Max Q Clear Time (g_c+I1), s	9.3	12.6	8.3	12.3	6.0	13.8	3.7	14.7				
Green Ext Time (p_c), s	0.0	3.7	0.0	3.6	0.0	3.7	0.0	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay			35.3									
HCM 2010 LOS			D									













HCM 2010 Signalized Intersection Summary
 10: Broadway & Oxford St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	5	11	182	29	164	17	775	37	43	618	14
Future Volume (veh/h)	13	5	11	182	29	164	17	775	37	43	618	14
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.95	1.00		0.93	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	14	5	8	198	32	114	18	842	33	47	672	12
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	362	287	245	111	396	23	1189	47	57	1289	23
Arrive On Green	0.01	0.19	0.19	0.14	0.32	0.32	0.01	0.34	0.34	0.03	0.36	0.36
Sat Flow, veh/h	1774	1863	1477	1774	346	1231	1774	3461	136	1774	3553	63
Grp Volume(v), veh/h	14	5	8	198	0	146	18	430	445	47	335	349
Grp Sat Flow(s),veh/h/ln	1774	1863	1477	1774	0	1577	1774	1770	1827	1774	1770	1846
Q Serve(g_s), s	0.5	0.1	0.3	6.3	0.0	4.0	0.6	12.3	12.3	1.5	8.6	8.7
Cycle Q Clear(g_c), s	0.5	0.1	0.3	6.3	0.0	4.0	0.6	12.3	12.3	1.5	8.6	8.7
Prop In Lane	1.00		1.00	1.00		0.78	1.00		0.07	1.00		0.03
Lane Grp Cap(c), veh/h	19	362	287	245	0	507	23	608	628	57	642	670
V/C Ratio(X)	0.76	0.01	0.03	0.81	0.00	0.29	0.78	0.71	0.71	0.82	0.52	0.52
Avail Cap(c_a), veh/h	137	768	609	290	0	785	137	608	628	137	642	670
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	19.0	19.0	24.3	0.0	14.8	28.6	16.6	16.6	28.0	14.6	14.6
Incr Delay (d2), s/veh	45.9	0.0	0.0	13.6	0.0	0.3	41.9	6.8	6.6	23.7	3.0	2.9
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	0.5	0.1	0.1	4.0	0.0	1.8	0.6	7.1	7.3	1.1	4.7	4.9
LnGrp Delay(d),s/veh	74.6	19.0	19.0	37.9	0.0	15.1	70.5	23.4	23.2	51.7	17.6	17.5
LnGrp LOS	E	B	B	D		B	E	C	C	D	B	B
Approach Vol, veh/h		27			344			893			731	
Approach Delay, s/veh		47.8			28.2			24.2			19.7	
Approach LOS		D			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	16.3	4.3	26.1	4.1	23.7	5.4	25.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	9.5	24.0	4.5	20.0	4.5	29.0	4.5	20.0				
Max Q Clear Time (g_c+I1), s	8.3	2.3	2.6	10.7	2.5	6.0	3.5	14.3				
Green Ext Time (p_c), s	0.1	0.9	0.0	5.9	0.0	0.9	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			23.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 11: Bay Blvd & Palomar St

2045 No Build - AM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	45	201	131	44	60	45		
Future Volume (veh/h)	45	201	131	44	60	45		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.92	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	49	140	142	31	65	49		
Adj No. of Lanes	1	1	1	1	1	1		
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	239	214	397	311	81	811		
Arrive On Green	0.13	0.13	0.21	0.21	0.05	0.44		
Sat Flow, veh/h	1774	1583	1863	1458	1774	1863		
Grp Volume(v), veh/h	49	140	142	31	65	49		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1458	1774	1863		
Q Serve(g_s), s	0.5	1.7	1.3	0.3	0.7	0.3		
Cycle Q Clear(g_c), s	0.5	1.7	1.3	0.3	0.7	0.3		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	239	214	397	311	81	811		
V/C Ratio(X)	0.20	0.66	0.36	0.10	0.80	0.06		
Avail Cap(c_a), veh/h	1748	1560	1694	1326	493	2541		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	7.6	8.1	6.6	6.3	9.4	3.2		
Incr Delay (d2), s/veh	0.4	3.4	0.5	0.1	16.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	1.6	0.7	0.1	0.7	0.2		
LnGrp Delay(d),s/veh	8.0	11.5	7.2	6.4	26.0	3.3		
LnGrp LOS	A	B	A	A	C	A		
Approach Vol, veh/h	189		173			114		
Approach Delay, s/veh	10.6		7.0			16.2		
Approach LOS	B		A			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				13.6		6.2	4.4	9.2
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				27.0		19.5	5.5	18.0
Max Q Clear Time (g_c+I1), s				2.3		3.7	2.7	3.3
Green Ext Time (p_c), s				1.1		0.5	0.0	0.9
Intersection Summary								
HCM 2010 Ctrl Delay			10.7					
HCM 2010 LOS			B					

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2045 No Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	99	5	294	216	0	0	0	0	945	0	30
Future Volume (vph)	0	99	5	294	216	0	0	0	0	945	0	30
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00
Frbp, ped/bikes		1.00	0.96	1.00	1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5085	1524	3433	3539					1681	1681	1529
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5085	1524	3433	3539					1681	1681	1529
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	108	5	320	235	0	0	0	0	1027	0	33
RTOR Reduction (vph)	0	0	4	0	0	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	108	1	320	235	0	0	0	0	513	514	12
Confl. Peds. (#/hr)	2		19	19		2	17					17
Confl. Bikes (#/hr)			1	1								
Turn Type		NA	Perm	Split	NA					Split	NA	Perm
Protected Phases		2		6	6					4	4	
Permitted Phases			2									4
Actuated Green, G (s)		23.6	23.6	13.4	13.4					29.5	29.5	29.5
Effective Green, g (s)		23.6	23.6	13.4	13.4					29.5	29.5	29.5
Actuated g/C Ratio		0.30	0.30	0.17	0.17					0.37	0.37	0.37
Clearance Time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1500	449	575	592					619	619	563
v/s Ratio Prot		c0.02		c0.09	0.07					0.31	c0.31	
v/s Ratio Perm			0.00									0.01
v/c Ratio		0.07	0.00	0.56	0.40					0.83	0.83	0.02
Uniform Delay, d1		20.3	19.9	30.6	29.7					23.0	23.0	16.1
Progression Factor		1.00	1.00	0.07	0.06					1.00	1.00	1.00
Incremental Delay, d2		0.1	0.0	1.1	0.4					9.0	9.2	0.0
Delay (s)		20.4	19.9	3.2	2.2					31.9	32.2	16.1
Level of Service		C	B	A	A					C	C	B
Approach Delay (s)		20.4			2.8			0.0			31.6	
Approach LOS		C			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			21.6									C
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			80.0							13.5		
Intersection Capacity Utilization			61.2%									B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St





















2045 No Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕			↕↕↕	↘	↘↘	↕	↘			
Traffic Volume (vph)	22	1024	0	0	497	1062	16	0	515	0	0	0
Future Volume (vph)	22	1024	0	0	497	1062	16	0	515	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			3.5	4.0	3.5	5.0	3.5			
Lane Util. Factor	0.86	0.86			0.86	1.00	0.91	0.86	0.95			
Frbp, ped/bikes	1.00	1.00			1.00	0.99	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.85	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1522	4805			6408	1563	3221	1363	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1522	4805			6408	1563	3221	1363	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	1113	0	0	540	1154	17	0	560	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	222	222	0	0	0
Lane Group Flow (vph)	22	1115	0	0	540	1154	15	60	58	0	0	0
Confl. Peds. (#/hr)	3		16	16		3	3					3
Confl. Bikes (#/hr)			1	1								
Turn Type	Split	NA			NA	Free	Prot	NA	custom			
Protected Phases	2	2			6		3	8	3			
Permitted Phases						Free						
Actuated Green, G (s)	38.6	38.6			12.7	80.0	16.7	16.7	16.7			
Effective Green, g (s)	38.6	38.6			12.7	80.0	16.7	16.7	16.7			
Actuated g/C Ratio	0.48	0.48			0.16	1.00	0.21	0.21	0.21			
Clearance Time (s)	5.0	5.0			3.5		3.5	5.0	3.5			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	734	2318			1017	1563	672	284	313			
v/s Ratio Prot	0.01	0.23			0.08		0.00	0.04	0.04			
v/s Ratio Perm						c0.74						
v/c Ratio	0.03	0.48			0.53	0.74	0.02	0.21	0.19			
Uniform Delay, d1	10.9	13.9			30.9	0.0	25.2	26.2	26.1			
Progression Factor	0.33	0.25			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.5			0.5	3.2	0.0	0.4	0.3			
Delay (s)	3.7	3.9			31.4	3.2	25.2	26.6	26.3			
Level of Service	A	A			C	A	C	C	C			
Approach Delay (s)		3.9			12.2			26.4			0.0	
Approach LOS		A			B			C			A	
Intersection Summary												
HCM 2000 Control Delay			11.8									B
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			80.0									13.5
Intersection Capacity Utilization			61.2%									B
Analysis Period (min)			15									
c Critical Lane Group												























HCM 2010 Signalized Intersection Summary
 14: E Frontage Rd/Walnut Ave & Palomar St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1381	141	2	1436	28	62	0	66	2	0	27
Future Volume (veh/h)	26	1381	141	2	1436	28	62	0	66	2	0	27
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	28	1501	119	2	1561	25	67	0	46	2	0	18
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	345	3598	285	280	3790	61	178	0	128	152	0	128
Arrive On Green	0.02	0.75	0.75	0.00	1.00	1.00	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1774	4793	380	1774	5153	83	1389	0	1583	1354	0	1583
Grp Volume(v), veh/h	28	1062	558	2	1027	559	67	0	46	2	0	18
Grp Sat Flow(s),veh/h/ln	1774	1695	1782	1774	1695	1845	1389	0	1583	1354	0	1583
Q Serve(g_s), s	0.4	10.2	10.2	0.0	0.0	0.0	4.2	0.0	2.5	0.1	0.0	1.0
Cycle Q Clear(g_c), s	0.4	10.2	10.2	0.0	0.0	0.0	5.2	0.0	2.5	2.6	0.0	1.0
Prop In Lane	1.00		0.21	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	345	2545	1338	280	2494	1357	178	0	128	152	0	128
V/C Ratio(X)	0.08	0.42	0.42	0.01	0.41	0.41	0.38	0.00	0.36	0.01	0.00	0.14
Avail Cap(c_a), veh/h	414	2545	1338	356	2494	1357	374	0	352	344	0	352
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.63	0.63	0.63	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	2.8	4.1	4.1	3.5	0.0	0.0	40.9	0.0	39.1	40.4	0.0	38.4
Incr Delay (d2), s/veh	0.1	0.4	0.8	0.0	0.3	0.6	1.3	0.0	1.7	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.9	5.3	0.0	0.1	0.2	1.7	0.0	1.1	0.0	0.0	0.4
LnGrp Delay(d),s/veh	2.9	4.5	4.9	3.6	0.3	0.6	42.2	0.0	40.8	40.4	0.0	38.9
LnGrp LOS	A	A	A	A	A	A	D		D	D		D
Approach Vol, veh/h		1648			1588			113				20
Approach Delay, s/veh		4.6			0.4			41.6				39.1
Approach LOS		A			A			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	72.6		12.3	6.5	71.2		12.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	51.0		20.0	5.0	50.0		20.0				
Max Q Clear Time (g_c+I1), s	2.0	12.2		4.6	2.4	2.0		7.2				
Green Ext Time (p_c), s	0.0	32.4		0.4	0.0	38.6		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				4.1								
HCM 2010 LOS				A								




















HCM 2010 Signalized Intersection Summary
 15: Industrial Blvd & Palomar St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	1169	98	115	975	96	331	303	130	52	119	160
Future Volume (veh/h)	182	1169	98	115	975	96	331	303	130	52	119	160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.98		0.96	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	198	1271	90	125	1060	104	360	329	90	57	129	111
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	1905	135	300	1748	171	416	595	485	307	205	176
Arrive On Green	0.17	0.79	0.79	0.02	0.12	0.12	0.13	0.32	0.32	0.04	0.23	0.23
Sat Flow, veh/h	1774	4832	342	1774	4688	459	1774	1863	1519	1774	900	775
Grp Volume(v), veh/h	198	892	469	125	766	398	360	329	90	57	0	240
Grp Sat Flow(s),veh/h/ln	1774	1695	1784	1774	1695	1757	1774	1863	1519	1774	0	1675
Q Serve(g_s), s	6.3	10.6	10.6	3.8	19.3	19.3	11.5	13.1	3.9	2.2	0.0	11.6
Cycle Q Clear(g_c), s	6.3	10.6	10.6	3.8	19.3	19.3	11.5	13.1	3.9	2.2	0.0	11.6
Prop In Lane	1.00		0.19	1.00		0.26	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	304	1336	703	300	1264	655	416	595	485	307	0	381
V/C Ratio(X)	0.65	0.67	0.67	0.42	0.61	0.61	0.87	0.55	0.19	0.19	0.00	0.63
Avail Cap(c_a), veh/h	304	1336	703	318	1264	655	416	621	506	352	0	447
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.46	0.46	0.46	0.60	0.60	0.60	0.09	0.00	0.09
Uniform Delay (d), s/veh	16.6	6.9	6.9	16.8	33.2	33.2	25.9	25.3	22.2	25.4	0.0	31.4
Incr Delay (d2), s/veh	3.6	2.4	4.5	0.2	1.0	1.9	10.7	0.6	0.1	0.0	0.0	0.2
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	5.1	5.8	1.9	9.2	9.8	7.8	6.9	1.6	1.1	0.0	5.4
LnGrp Delay(d),s/veh	20.1	9.3	11.4	16.9	34.2	35.2	36.6	25.9	22.3	25.4	0.0	31.6
LnGrp LOS	C	A	B	B	C	D	D	C	C	C		C
Approach Vol, veh/h		1559			1289			779			297	
Approach Delay, s/veh		11.3			32.8			30.4			30.4	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	40.5	15.0	25.4	11.0	38.6	6.7	33.7				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	6.5	31.0	11.5	24.0	7.5	30.0	5.5	30.0				
Max Q Clear Time (g_c+I1), s	5.8	12.6	13.5	13.6	8.3	21.3	4.2	15.1				
Green Ext Time (p_c), s	0.0	15.8	0.0	2.7	0.0	8.0	0.0	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay			23.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 16: Transit Center Place & Palomar St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	580	470	344	29	776	1	175	2	2	2	25	232
Future Volume (veh/h)	580	470	344	29	776	1	175	2	2	2	25	232
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.91	0.96		0.92	0.94		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	630	511	239	32	843	1	190	2	2	2	27	161
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	631	1854	826	39	1120	1	348	226	226	41	63	353
Arrive On Green	0.12	0.18	0.18	0.04	0.43	0.43	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	3390	1510	1774	5245	6	1143	819	819	3	227	1280
Grp Volume(v), veh/h	630	511	239	32	545	299	190	0	4	190	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1510	1774	1695	1861	1143	0	1638	1511	0	0
Q Serve(g_s), s	32.0	11.7	12.3	1.6	12.2	12.2	8.1	0.0	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	32.0	11.7	12.3	1.6	12.2	12.2	17.4	0.0	0.2	9.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.50	0.01		0.85
Lane Grp Cap(c), veh/h	631	1854	826	39	724	397	348	0	451	457	0	0
V/C Ratio(X)	1.00	0.28	0.29	0.82	0.75	0.75	0.55	0.00	0.01	0.42	0.00	0.00
Avail Cap(c_a), veh/h	631	1854	826	99	724	397	363	0	473	477	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.7	21.5	21.8	42.8	23.8	23.8	30.9	0.0	23.7	27.0	0.0	0.0
Incr Delay (d2), s/veh	30.5	0.3	0.7	13.4	6.8	11.9	1.6	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.0	5.6	5.3	0.9	6.3	7.5	4.5	0.0	0.1	4.0	0.0	0.0
LnGrp Delay(d),s/veh	70.2	21.8	22.4	56.2	30.6	35.7	32.5	0.0	23.7	27.6	0.0	0.0
LnGrp LOS	E	C	C	E	C	D	C		C	C		
Approach Vol, veh/h		1380			876			194			190	
Approach Delay, s/veh		44.0			33.2			32.3			27.6	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.0	54.2		29.8	36.0	24.2		29.8				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	5.0	45.0		26.0	32.0	18.0		26.0				
Max Q Clear Time (g_c+I1), s	3.6	14.3		11.4	34.0	14.2		19.4				
Green Ext Time (p_c), s	0.0	15.4		1.7	0.0	3.1		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				38.4								
HCM 2010 LOS				D								

HCM Signalized Intersection Capacity Analysis
 16: Transit Center Place & Palomar St

*PGD mitigation assumed
 2045 No Build - AM

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↕			↗↖↗	↖
Traffic Volume (vph)	580	470	344	29	776	1	175	2	2	2	25	232
Future Volume (vph)	580	470	344	29	776	1	175	2	2	2	25	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.94		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.94		1.00	1.00		1.00	1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.95			1.00	1.00
Satd. Flow (prot)	1770	4471		1770	5084		1681	1682			1856	1548
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.95			1.00	1.00
Satd. Flow (perm)	1770	4471		1770	5084		1681	1682			1856	1548
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	630	511	374	32	843	1	190	2	2	2	27	252
RTOR Reduction (vph)	0	71	0	0	0	0	0	1	0	0	0	69
Lane Group Flow (vph)	630	814	0	32	844	0	97	96	0	0	29	183
Confl. Peds. (#/hr)	19		28	28		19	59		23	23		59
Confl. Bikes (#/hr)			2	2			1		2	2		1
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	50.8	73.9		3.5	26.6		15.6	15.6			15.2	66.0
Effective Green, g (s)	50.8	73.9		3.5	26.6		15.6	15.6			15.2	66.0
Actuated g/C Ratio	0.40	0.58		0.03	0.21		0.12	0.12			0.12	0.52
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	709	2607		48	1067		206	207			222	806
v/s Ratio Prot	c0.36	0.18		0.02	c0.17		c0.06	0.06			0.02	c0.09
v/s Ratio Perm												0.03
v/c Ratio	0.89	0.31		0.67	0.79		0.47	0.46			0.13	0.23
Uniform Delay, d1	35.3	13.5		61.0	47.4		51.7	51.7			49.8	16.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	12.7	0.3		23.8	6.0		1.7	1.6			0.3	0.1
Delay (s)	48.0	13.8		84.8	53.4		53.4	53.3			50.1	16.5
Level of Service	D	B		F	D		D	D			D	B
Approach Delay (s)		28.0			54.6			53.4			20.0	
Approach LOS		C			D			D			C	

Intersection Summary		
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio	0.71	
Actuated Cycle Length (s)	126.7	Sum of lost time (s) 18.5
Intersection Capacity Utilization	77.9%	ICU Level of Service D
Analysis Period (min)	15	
Description: Assumed PGD will mitigate this intersection, instead of GS project		
c Critical Lane Group		























HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	18	454	0	261	811	283	0	10	134	7	0	0
Future Volume (veh/h)	18	454	0	261	811	283	0	10	134	7	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.99	1.00		0.97	0.98		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	20	493	0	284	882	197	0	11	94	8	0	0
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	23	3020	0	366	2857	635	80	25	210	191	0	0
Arrive On Green	0.03	1.00	0.00	0.04	0.23	0.23	0.00	0.15	0.15	0.15	0.00	0.00
Sat Flow, veh/h	1774	5253	0	3442	4157	924	1412	164	1401	743	0	0
Grp Volume(v), veh/h	20	493	0	284	718	361	0	0	105	8	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	1721	1695	1691	1412	0	1564	743	0	0
Q Serve(g_s), s	1.0	0.0	0.0	7.4	15.9	16.0	0.0	0.0	5.5	0.5	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0	7.4	15.9	16.0	0.0	0.0	5.5	6.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.55	1.00		0.90	1.00		0.00
Lane Grp Cap(c), veh/h	23	3020	0	366	2330	1162	80	0	234	191	0	0
V/C Ratio(X)	0.86	0.16	0.00	0.78	0.31	0.31	0.00	0.00	0.45	0.04	0.00	0.00
Avail Cap(c_a), veh/h	148	3020	0	631	2330	1162	339	0	521	422	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.00	0.72	0.72	0.72	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.7	0.0	0.0	42.4	17.0	17.1	0.0	0.0	34.9	37.6	0.0	0.0
Incr Delay (d2), s/veh	25.2	0.1	0.0	1.0	0.2	0.5	0.0	0.0	1.3	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	3.6	7.6	7.7	0.0	0.0	2.5	0.2	0.0	0.0
LnGrp Delay(d),s/veh	68.9	0.1	0.0	43.3	17.3	17.6	0.0	0.0	36.2	37.7	0.0	0.0
LnGrp LOS	E	A		D	B	B			D	D		
Approach Vol, veh/h		513			1363			105				8
Approach Delay, s/veh		2.8			22.8			36.2				37.7
Approach LOS		A			C			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.1	58.5		18.5	4.7	66.8		18.5				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	16.5	30.0		30.0	7.5	39.0		30.0				
Max Q Clear Time (g_c+I1), s	9.4	2.0		8.0	3.0	18.0		7.5				
Green Ext Time (p_c), s	0.2	14.8		0.6	0.0	12.5		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				18.4								
HCM 2010 LOS				B								





















HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	295	106	117	674	137	302	545	64	103	463	380
Future Volume (veh/h)	202	295	106	117	674	137	302	545	64	103	463	380
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	220	321	74	127	733	96	328	592	45	112	503	264
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	1517	333	194	1563	203	382	1154	500	176	942	405
Arrive On Green	0.03	0.12	0.12	0.06	0.34	0.34	0.11	0.33	0.33	0.05	0.27	0.27
Sat Flow, veh/h	3442	4141	909	3442	4532	588	3442	3539	1532	3442	3539	1521
Grp Volume(v), veh/h	220	260	135	127	546	283	328	592	45	112	503	264
Grp Sat Flow(s),veh/h/ln	1721	1695	1659	1721	1695	1730	1721	1770	1532	1721	1770	1521
Q Serve(g_s), s	5.7	6.2	6.6	3.3	11.3	11.5	8.4	12.2	1.8	2.9	10.9	13.9
Cycle Q Clear(g_c), s	5.7	6.2	6.6	3.3	11.3	11.5	8.4	12.2	1.8	2.9	10.9	13.9
Prop In Lane	1.00		0.55	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	1242	608	194	1169	597	382	1154	500	176	942	405
V/C Ratio(X)	0.82	0.21	0.22	0.65	0.47	0.47	0.86	0.51	0.09	0.64	0.53	0.65
Avail Cap(c_a), veh/h	268	1242	608	268	1169	597	382	1219	528	229	1062	456
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	0.84	0.84	0.84	0.89	0.89	0.89
Uniform Delay (d), s/veh	43.2	27.8	28.0	41.6	23.0	23.1	39.3	24.5	21.1	41.9	28.2	29.3
Incr Delay (d2), s/veh	18.1	0.4	0.8	2.8	1.3	2.7	15.0	0.3	0.1	3.4	0.5	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.0	3.2	1.6	5.5	5.9	4.8	6.0	0.8	1.5	5.4	6.1
LnGrp Delay(d),s/veh	61.3	28.2	28.8	44.4	24.4	25.8	54.3	24.9	21.1	45.2	28.7	31.9
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		615			956			965			879	
Approach Delay, s/veh		40.2			27.4			34.7			31.8	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	38.0	14.0	29.0	11.0	36.0	8.6	34.4				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	28.0	10.0	27.0	7.0	28.0	6.0	31.0				
Max Q Clear Time (g_c+I1), s	5.3	8.6	10.4	15.9	7.7	13.5	4.9	14.2				
Green Ext Time (p_c), s	0.0	9.1	0.0	6.4	0.0	7.6	0.0	8.3				
Intersection Summary												
HCM 2010 Ctrl Delay			32.9									
HCM 2010 LOS			C									

























HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	6	1	37	12	308	7	456	68	227	162	19
Future Volume (veh/h)	7	6	1	37	12	308	7	456	68	227	162	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.99	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	8	7	0	40	13	214	8	496	74	247	176	14
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	40	34	49	16	264	11	582	87	291	895	71
Arrive On Green	0.02	0.02	0.00	0.20	0.20	0.20	0.01	0.37	0.37	0.16	0.53	0.53
Sat Flow, veh/h	1774	1863	1583	241	78	1292	1774	1576	235	1774	1699	135
Grp Volume(v), veh/h	8	7	0	267	0	0	8	0	570	247	0	190
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1612	0	0	1774	0	1811	1774	0	1834
Q Serve(g_s), s	0.3	0.3	0.0	12.1	0.0	0.0	0.3	0.0	22.2	10.4	0.0	4.2
Cycle Q Clear(g_c), s	0.3	0.3	0.0	12.1	0.0	0.0	0.3	0.0	22.2	10.4	0.0	4.2
Prop In Lane	1.00		1.00	0.15		0.80	1.00		0.13	1.00		0.07
Lane Grp Cap(c), veh/h	38	40	34	329	0	0	11	0	669	291	0	967
V/C Ratio(X)	0.21	0.18	0.00	0.81	0.00	0.00	0.74	0.00	0.85	0.85	0.00	0.20
Avail Cap(c_a), veh/h	624	656	557	546	0	0	104	0	873	382	0	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	36.9	0.0	29.1	0.0	0.0	38.1	0.0	22.3	31.1	0.0	9.6
Incr Delay (d2), s/veh	2.8	2.1	0.0	4.8	0.0	0.0	64.5	0.0	6.5	13.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	5.9	0.0	0.0	0.4	0.0	12.3	6.1	0.0	2.1
LnGrp Delay(d),s/veh	39.7	39.0	0.0	33.9	0.0	0.0	102.6	0.0	28.7	44.2	0.0	9.7
LnGrp LOS	D	D		C			F		C	D		A
Approach Vol, veh/h		15			267			578			437	
Approach Delay, s/veh		39.4			33.9			29.8			29.2	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.6	4.0	45.4		20.7	16.1	33.3				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		27.0	4.5	49.0		26.0	16.5	37.0				
Max Q Clear Time (g_c+I1), s		2.3	2.3	6.2		14.1	12.4	24.2				
Green Ext Time (p_c), s		0.0	0.0	5.9		1.3	0.3	4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			30.5									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 20: Broadway & Anita St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	71	87	83	217	153	77	679	45	58	378	134
Future Volume (veh/h)	98	71	87	83	217	153	77	679	45	58	378	134
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	107	77	61	90	236	106	84	738	40	63	411	94
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	394	328	115	372	309	472	1454	79	357	1186	268
Arrive On Green	0.08	0.21	0.21	0.06	0.20	0.20	0.05	0.43	0.43	0.03	0.42	0.42
Sat Flow, veh/h	1774	1863	1549	1774	1863	1549	1774	3408	185	1774	2849	644
Grp Volume(v), veh/h	107	77	61	90	236	106	84	383	395	63	254	251
Grp Sat Flow(s),veh/h/ln	1774	1863	1549	1774	1863	1549	1774	1770	1823	1774	1770	1723
Q Serve(g_s), s	3.8	2.2	2.1	3.2	7.5	3.8	1.7	10.3	10.3	1.3	6.3	6.5
Cycle Q Clear(g_c), s	3.8	2.2	2.1	3.2	7.5	3.8	1.7	10.3	10.3	1.3	6.3	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.37
Lane Grp Cap(c), veh/h	137	394	328	115	372	309	472	755	778	357	737	717
V/C Ratio(X)	0.78	0.20	0.19	0.78	0.63	0.34	0.18	0.51	0.51	0.18	0.34	0.35
Avail Cap(c_a), veh/h	150	1034	860	150	1034	859	515	755	778	419	737	717
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	29.4	21.0	21.0	29.9	23.8	22.3	10.2	13.6	13.6	10.9	12.9	12.9
Incr Delay (d2), s/veh	21.4	0.2	0.3	17.6	1.8	0.7	0.2	2.4	2.4	0.2	1.3	1.3
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	2.7	1.2	0.9	2.1	4.1	1.7	0.8	5.5	5.7	0.6	3.4	3.3
LnGrp Delay(d),s/veh	50.8	21.3	21.3	47.5	25.6	23.0	10.4	16.0	16.0	11.2	14.2	14.3
LnGrp LOS	D	C	C	D	C	C	B	B	B	B	B	B
Approach Vol, veh/h		245			432			862			568	
Approach Delay, s/veh		34.2			29.5			15.5			13.9	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	18.7	6.4	32.0	8.5	17.9	5.8	32.7				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	5.5	36.0	4.5	27.0	5.5	36.0	4.5	27.0				
Max Q Clear Time (g_c+I1), s	5.2	4.2	3.7	8.5	5.8	9.5	3.3	12.3				
Green Ext Time (p_c), s	0.0	2.5	0.0	7.7	0.0	2.4	0.0	6.8				
Intersection Summary												
HCM 2010 Ctrl Delay			20.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

21: Main St & I-5 SB Ramps

2045 No Build - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↕	↕	↗	↗	↗		
Traffic Volume (veh/h)	2	56	189	69	593	68		
Future Volume (veh/h)	2	56	189	69	593	68		
Number	5	2	6	16	7	14		
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		
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	2	61	205	0	645	0		
Adj No. of Lanes	0	1	1	1	1	1		
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	3	79	295	251	769	686		
Arrive On Green	0.04	0.04	0.16	0.00	0.43	0.00		
Sat Flow, veh/h	59	1801	1863	1583	1774	1583		
Grp Volume(v), veh/h	63	0	205	0	645	0		
Grp Sat Flow(s),veh/h/ln	1860	0	1863	1583	1774	1583		
Q Serve(g_s), s	1.2	0.0	3.9	0.0	12.0	0.0		
Cycle Q Clear(g_c), s	1.2	0.0	3.9	0.0	12.0	0.0		
Prop In Lane	0.03			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	82	0	295	251	769	686		
V/C Ratio(X)	0.77	0.00	0.69	0.00	0.84	0.00		
Avail Cap(c_a), veh/h	903	0	904	768	1459	1302		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00		
Uniform Delay (d), s/veh	17.5	0.0	14.8	0.0	9.4	0.0		
Incr Delay (d2), s/veh	13.8	0.0	2.9	0.0	2.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.9	0.0	2.2	0.0	6.3	0.0		
LnGrp Delay(d),s/veh	31.4	0.0	17.7	0.0	11.9	0.0		
LnGrp LOS	C		B		B			
Approach Vol, veh/h		63	205		645			
Approach Delay, s/veh		31.4	17.7		11.9			
Approach LOS		C	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		6.6		19.6		10.9		
Change Period (Y+Rc), s		5.0		3.5		5.0		
Max Green Setting (Gmax), s		18.0		30.5		18.0		
Max Q Clear Time (g_c+I1), s		3.2		14.0		5.9		
Green Ext Time (p_c), s		0.2		2.1		0.8		
Intersection Summary								
HCM 2010 Ctrl Delay			14.5					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps

2045 No Build - AM























Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	25	624	249	831	189	10		
Future Volume (veh/h)	25	624	249	831	189	10		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	27	678	271	578	205	7		
Adj No. of Lanes	1	2	3	2	2	1		
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	33	2579	3296	1769	322	148		
Arrive On Green	0.02	0.73	0.65	0.65	0.09	0.09		
Sat Flow, veh/h	1774	3632	5253	2729	3442	1583		
Grp Volume(v), veh/h	27	678	271	578	205	7		
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1365	1721	1583		
Q Serve(g_s), s	0.9	3.6	1.1	5.3	3.2	0.2		
Cycle Q Clear(g_c), s	0.9	3.6	1.1	5.3	3.2	0.2		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	33	2579	3296	1769	322	148		
V/C Ratio(X)	0.83	0.26	0.08	0.33	0.64	0.05		
Avail Cap(c_a), veh/h	142	2579	3296	1769	551	253		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	27.5	2.6	3.7	4.4	24.6	23.2		
Incr Delay (d2), s/veh	38.6	0.2	0.0	0.5	2.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.8	1.8	0.5	2.0	1.6	0.2		
LnGrp Delay(d),s/veh	66.1	2.8	3.7	4.9	26.7	23.3		
LnGrp LOS	E	A	A	A	C	C		
Approach Vol, veh/h		705	849		212			
Approach Delay, s/veh		5.2	4.5		26.6			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		46.0		10.3	4.5	41.5		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		41.0		9.0	4.5	33.0		
Max Q Clear Time (g_c+I1), s		5.6		5.2	2.9	7.3		
Green Ext Time (p_c), s		11.8		0.2	0.0	10.5		
Intersection Summary								
HCM 2010 Ctrl Delay			7.5					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary

























23: Industrial Blvd & Main St

2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	443	158	296	670	40	303	420	396	12	109	78
Future Volume (veh/h)	71	443	158	296	670	40	303	420	396	12	109	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	77	482	139	322	728	39	329	457	382	13	118	60
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	531	152	320	836	45	357	463	387	15	353	179
Arrive On Green	0.13	0.20	0.20	0.18	0.25	0.25	0.20	0.50	0.50	0.01	0.31	0.31
Sat Flow, veh/h	1774	2689	769	1774	3409	183	1774	932	779	1774	1157	588
Grp Volume(v), veh/h	77	316	305	322	378	389	329	0	839	13	0	178
Grp Sat Flow(s),veh/h/ln	1774	1770	1688	1774	1770	1822	1774	0	1710	1774	0	1746
Q Serve(g_s), s	5.8	25.6	26.0	26.5	30.1	30.1	26.7	0.0	71.0	1.1	0.0	11.6
Cycle Q Clear(g_c), s	5.8	25.6	26.0	26.5	30.1	30.1	26.7	0.0	71.0	1.1	0.0	11.6
Prop In Lane	1.00		0.46	1.00		0.10	1.00		0.46	1.00		0.34
Lane Grp Cap(c), veh/h	236	350	334	320	434	447	357	0	851	15	0	532
V/C Ratio(X)	0.33	0.90	0.91	1.01	0.87	0.87	0.92	0.00	0.99	0.85	0.00	0.33
Avail Cap(c_a), veh/h	236	350	334	320	434	447	490	0	851	54	0	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.7	57.5	57.7	60.1	53.1	53.2	57.5	0.0	36.4	72.7	0.0	39.5
Incr Delay (d2), s/veh	3.7	28.9	31.7	51.6	20.6	20.2	19.0	0.0	27.4	70.5	0.0	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	3.1	15.4	15.1	17.5	17.2	17.6	14.9	0.0	39.8	0.8	0.0	5.6
LnGrp Delay(d),s/veh	61.3	86.4	89.3	111.8	73.7	73.3	76.5	0.0	63.8	143.2	0.0	39.8
LnGrp LOS	E	F	F	F	E	E	E		E	F		D
Approach Vol, veh/h		698			1089			1168				191
Approach Delay, s/veh		84.9			84.8			67.4				46.9
Approach LOS		F			F			E				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	34.0	33.0	49.8	23.0	41.0	4.8	78.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	26.5	29.0	40.5	37.0	19.5	36.0	4.5	73.0				
Max Q Clear Time (g_c+I1), s	28.5	28.0	28.7	13.6	7.8	32.1	3.1	73.0				
Green Ext Time (p_c), s	0.0	0.8	0.8	8.5	0.1	2.7	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				76.1								
HCM 2010 LOS				E								

HCM 2010 Signalized Intersection Summary
 24: Broadway & Main St













2045 No Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	480	101	251	607	141	274	562	421	143	288	118
Future Volume (veh/h)	98	480	101	251	607	141	274	562	421	143	288	118
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	107	522	71	273	660	98	298	611	293	155	313	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	899	392	241	1110	486	258	1173	513	186	1029	460
Arrive On Green	0.08	0.25	0.25	0.14	0.31	0.31	0.15	0.33	0.33	0.10	0.29	0.00
Sat Flow, veh/h	1774	3539	1544	1774	3539	1548	1774	3539	1547	1774	3539	1583
Grp Volume(v), veh/h	107	522	71	273	660	98	298	611	293	155	313	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1544	1774	1770	1548	1774	1770	1547	1774	1770	1583
Q Serve(g_s), s	6.1	13.3	3.7	14.0	16.2	4.8	15.0	14.4	16.1	8.8	7.1	0.0
Cycle Q Clear(g_c), s	6.1	13.3	3.7	14.0	16.2	4.8	15.0	14.4	16.1	8.8	7.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	135	899	392	241	1110	486	258	1173	513	186	1029	460
V/C Ratio(X)	0.79	0.58	0.18	1.13	0.59	0.20	1.16	0.52	0.57	0.84	0.30	0.00
Avail Cap(c_a), veh/h	223	1303	568	241	1337	585	258	1173	513	223	1029	460
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	0.00
Uniform Delay (d), s/veh	46.9	33.7	30.1	44.6	29.9	25.9	44.1	27.9	28.5	45.3	28.5	0.0
Incr Delay (d2), s/veh	10.1	0.6	0.2	99.1	0.5	0.2	104.8	1.7	4.6	20.1	0.8	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	3.4	6.6	1.6	13.4	8.0	2.1	14.8	7.3	7.5	5.4	3.6	0.0
LnGrp Delay(d),s/veh	57.0	34.3	30.3	143.7	30.4	26.2	148.9	29.5	33.0	65.4	29.2	0.0
LnGrp LOS	E	C	C	F	C	C	F	C	C	E	C	
Approach Vol, veh/h		700			1031			1202			468	
Approach Delay, s/veh		37.4			60.0			60.0			41.2	
Approach LOS		D			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	31.2	19.0	35.0	11.8	37.4	14.8	39.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	14.0	38.0	15.0	30.0	13.0	39.0	13.0	32.0				
Max Q Clear Time (g_c+I1), s	16.0	15.3	17.0	9.1	8.1	18.2	10.8	18.1				
Green Ext Time (p_c), s	0.0	9.5	0.0	7.3	0.1	9.1	0.1	6.0				
Intersection Summary												
HCM 2010 Ctrl Delay			52.7									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary






















1: Bay Blvd & L St

2045 No Build - PM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	292	153	614	102	349	412		
Future Volume (veh/h)	292	153	614	102	349	412		
Number	1	16	8	18	7	4		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	317	166	667	111	379	448		
Adj No. of Lanes	1	1	1	1	1	1		
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	526	469	712	605	395	1084		
Arrive On Green	0.30	0.30	0.38	0.38	0.15	0.58		
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863		
Grp Volume(v), veh/h	317	166	667	111	379	448		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863		
Q Serve(g_s), s	10.7	5.8	24.1	3.3	9.7	9.3		
Cycle Q Clear(g_c), s	10.7	5.8	24.1	3.3	9.7	9.3		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	526	469	712	605	395	1084		
V/C Ratio(X)	0.60	0.35	0.94	0.18	0.96	0.41		
Avail Cap(c_a), veh/h	526	469	718	611	395	1091		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	21.1	19.4	20.8	14.4	17.2	8.0		
Incr Delay (d2), s/veh	5.0	2.1	19.7	0.1	34.8	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	5.9	5.7	16.1	1.4	11.0	4.8		
LnGrp Delay(d),s/veh	26.1	21.4	40.5	14.5	52.0	8.3		
LnGrp LOS	C	C	D	B	D	A		
Approach Vol, veh/h	483		778			827		
Approach Delay, s/veh	24.5		36.8			28.3		
Approach LOS	C		D			C		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				45.8		24.2	14.0	31.8
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				41.0		20.5	10.5	27.0
Max Q Clear Time (g_c+I1), s				11.3		12.7	11.7	26.1
Green Ext Time (p_c), s				9.5		1.0	0.0	0.6
Intersection Summary								
HCM 2010 Ctrl Delay			30.6					
HCM 2010 LOS			C					
























HCM 2010 Signalized Intersection Summary
 2: Industrial Blvd/Driveway & L St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	725	801	119	442	8	170	8	128	4	10	5
Future Volume (veh/h)	6	725	801	119	442	8	170	8	128	4	10	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	7	788	558	129	480	6	185	9	89	4	11	3
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	1520	677	163	1847	23	255	10	446	63	138	28
Arrive On Green	0.00	0.29	0.29	0.09	0.52	0.52	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	3539	1576	1774	3580	45	541	35	1561	0	484	97
Grp Volume(v), veh/h	7	788	558	129	237	249	194	0	89	18	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1576	1774	1770	1855	576	0	1561	580	0	0
Q Serve(g_s), s	0.3	13.0	23.1	5.0	5.2	5.3	0.0	0.0	3.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	13.0	23.1	5.0	5.2	5.3	20.0	0.0	3.0	20.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.95		1.00	0.22		0.17
Lane Grp Cap(c), veh/h	10	1520	677	163	913	957	265	0	446	229	0	0
V/C Ratio(X)	0.72	0.52	0.82	0.79	0.26	0.26	0.73	0.00	0.20	0.08	0.00	0.00
Avail Cap(c_a), veh/h	114	1520	677	190	913	957	265	0	446	229	0	0
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.67	0.67	0.67	0.94	0.00	0.94	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.8	18.9	22.5	31.1	9.5	9.5	26.4	0.0	18.9	19.4	0.0	0.0
Incr Delay (d2), s/veh	42.4	0.7	6.2	12.3	0.5	0.4	9.4	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.5	11.2	3.0	2.6	2.7	4.4	0.0	1.3	0.3	0.0	0.0
LnGrp Delay(d),s/veh	77.2	19.6	28.7	43.5	9.9	9.9	35.8	0.0	19.1	19.5	0.0	0.0
LnGrp LOS	E	B	C	D	A	A	D		B	B		
Approach Vol, veh/h		1353			615			283			18	
Approach Delay, s/veh		23.6			17.0			30.6			19.5	
Approach LOS		C			B			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	35.1		25.0	3.9	41.1		25.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	7.5	29.0		20.0	4.5	32.0		20.0				
Max Q Clear Time (g_c+I1), s	7.0	25.1		22.0	2.3	7.3		22.0				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	12.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				22.7								
HCM 2010 LOS				C								













HCM 2010 Signalized Intersection Summary
 3: Broadway & L St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	461	312	197	251	43	238	715	261	51	769	58
Future Volume (veh/h)	44	461	312	197	251	43	238	715	261	51	769	58
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	48	501	217	214	273	31	259	777	182	55	836	40
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	818	357	183	960	108	204	1484	812	70	1219	585
Arrive On Green	0.03	0.23	0.23	0.10	0.30	0.30	0.11	0.42	0.42	0.04	0.34	0.34
Sat Flow, veh/h	1774	3539	1547	1774	3200	360	1774	3539	1545	1774	3539	1541
Grp Volume(v), veh/h	48	501	217	214	150	154	259	777	182	55	836	40
Grp Sat Flow(s),veh/h/ln	1774	1770	1547	1774	1770	1790	1774	1770	1545	1774	1770	1541
Q Serve(g_s), s	2.3	11.0	10.9	9.0	5.6	5.8	10.0	14.2	5.6	2.7	17.7	1.4
Cycle Q Clear(g_c), s	2.3	11.0	10.9	9.0	5.6	5.8	10.0	14.2	5.6	2.7	17.7	1.4
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	818	357	183	531	537	204	1484	812	70	1219	585
V/C Ratio(X)	0.79	0.61	0.61	1.17	0.28	0.29	1.27	0.52	0.22	0.78	0.69	0.07
Avail Cap(c_a), veh/h	143	1340	586	183	711	719	204	1484	812	163	1219	585
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	41.8	30.0	30.0	39.1	23.3	23.4	38.6	18.8	11.3	41.5	24.5	17.3
Incr Delay (d2), s/veh	19.7	0.7	1.7	118.9	0.3	0.3	155.1	1.3	0.6	16.8	3.2	0.2
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	1.5	5.4	4.8	10.4	2.8	2.9	13.6	7.2	2.5	1.6	9.1	0.6
LnGrp Delay(d),s/veh	61.4	30.8	31.6	158.0	23.6	23.7	193.6	20.1	11.9	58.3	27.7	17.5
LnGrp LOS	E	C	C	F	C	C	F	C	B	E	C	B
Approach Vol, veh/h		766			518			1218			931	
Approach Delay, s/veh		32.9			79.1			55.8			29.0	
Approach LOS		C			E			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	25.1	14.0	35.0	7.0	31.1	7.5	41.5				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	9.0	33.0	10.0	30.0	7.0	35.0	8.0	32.0				
Max Q Clear Time (g_c+I1), s	11.0	13.0	12.0	19.7	4.3	7.8	4.7	16.2				
Green Ext Time (p_c), s	0.0	5.8	0.0	7.4	0.0	6.3	0.0	10.2				
Intersection Summary												
HCM 2010 Ctrl Delay			47.0									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 4: I-5 SB On-ramp/I-5 SB Off-ramp & L St













2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑					↑↑		↑
Traffic Volume (veh/h)	0	198	253	359	253	0	0	0	0	1328	0	192
Future Volume (veh/h)	0	198	253	359	253	0	0	0	0	1328	0	192
Number	5	2	12	1	6	16				7	4	14
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
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	215	275	390	275	0				1443	0	209
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	910	407	418	1517	0				1475	0	679
Arrive On Green	0.00	0.26	0.26	0.04	0.14	0.00				0.43	0.00	0.43
Sat Flow, veh/h	0	3632	1583	3442	3632	0				3442	0	1583
Grp Volume(v), veh/h	0	215	275	390	275	0				1443	0	209
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1721	0	1583
Q Serve(g_s), s	0.0	3.4	10.9	7.9	4.8	0.0				28.9	0.0	6.1
Cycle Q Clear(g_c), s	0.0	3.4	10.9	7.9	4.8	0.0				28.9	0.0	6.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	910	407	418	1517	0				1475	0	679
V/C Ratio(X)	0.00	0.24	0.68	0.93	0.18	0.00				0.98	0.00	0.31
Avail Cap(c_a), veh/h	0	910	407	418	1517	0				1475	0	679
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.47	0.47	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.6	23.4	33.3	19.2	0.0				19.7	0.0	13.2
Incr Delay (d2), s/veh	0.0	0.3	4.2	27.6	0.3	0.0				18.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	5.2	5.4	2.4	0.0				17.4	0.0	2.7
LnGrp Delay(d),s/veh	0.0	20.9	27.6	60.9	19.5	0.0				38.1	0.0	13.4
LnGrp LOS		C	C	E	B					D		B
Approach Vol, veh/h		490			665						1652	
Approach Delay, s/veh		24.6			43.8						35.0	
Approach LOS		C			D						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.0	23.0		35.0		35.0						
Change Period (Y+Rc), s	3.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	18.0		30.0		30.0						
Max Q Clear Time (g_c+I1), s	9.9	12.9		30.9		6.8						
Green Ext Time (p_c), s	0.0	1.9		0.0		4.1						
Intersection Summary												
HCM 2010 Ctrl Delay				35.3								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary

















5: Industrial Blvd & I-5 NB Ramps

2045 No Build - PM

								
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	122	367	1038	176	681	238		
Future Volume (veh/h)	122	367	1038	176	681	238		
Number	5	12	3	8	4	14		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	133	256	1128	191	740	166		
Adj No. of Lanes	1	1	1	1	1	1		
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	242	216	846	1503	571	484		
Arrive On Green	0.14	0.14	0.48	0.81	0.31	0.31		
Sat Flow, veh/h	1774	1583	1774	1863	1863	1578		
Grp Volume(v), veh/h	133	256	1128	191	740	166		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1578		
Q Serve(g_s), s	10.5	20.5	71.5	3.3	46.0	12.2		
Cycle Q Clear(g_c), s	10.5	20.5	71.5	3.3	46.0	12.2		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	242	216	846	1503	571	484		
V/C Ratio(X)	0.55	1.18	1.33	0.13	1.30	0.34		
Avail Cap(c_a), veh/h	242	216	846	1503	571	484		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	60.4	64.8	39.3	3.1	52.0	40.3		
Incr Delay (d2), s/veh	2.6	119.4	158.3	0.0	145.6	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	5.3	16.2	72.2	1.7	46.7	5.4		
LnGrp Delay(d),s/veh	63.0	184.2	197.6	3.2	197.6	40.7		
LnGrp LOS	E	F	F	A	F	D		
Approach Vol, veh/h	389			1319	906			
Approach Delay, s/veh	142.8			169.4	168.8			
Approach LOS	F			F	F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		24.0	75.0	51.0				126.0
Change Period (Y+Rc), s		3.5	3.5	5.0				5.0
Max Green Setting (Gmax), s		20.5	71.5	46.0				121.0
Max Q Clear Time (g_c+I1), s		22.5	73.5	48.0				5.3
Green Ext Time (p_c), s		0.0	0.0	0.0				8.4
Intersection Summary								
HCM 2010 Ctrl Delay			165.3					
HCM 2010 LOS			F					

HCM 2010 Signalized Intersection Summary
 6: Industrial Blvd & Moss St
























2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	6	14	5	35	553	92	403	2	370	494	184
Future Volume (veh/h)	257	6	14	5	35	553	92	403	2	370	494	184
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	279	7	13	5	38	385	100	438	2	402	537	191
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	6	12	2	19	189	78	340	2	222	297	106
Arrive On Green	0.15	0.15	0.15	0.13	0.13	0.13	0.23	0.23	0.23	0.35	0.35	0.35
Sat Flow, veh/h	1648	41	77	19	142	1440	342	1496	7	632	845	300
Grp Volume(v), veh/h	299	0	0	428	0	0	540	0	0	1130	0	0
Grp Sat Flow(s),veh/h/ln	1766	0	0	1601	0	0	1844	0	0	1778	0	0
Q Serve(g_s), s	22.0	0.0	0.0	19.0	0.0	0.0	33.0	0.0	0.0	51.0	0.0	0.0
Cycle Q Clear(g_c), s	22.0	0.0	0.0	19.0	0.0	0.0	33.0	0.0	0.0	51.0	0.0	0.0
Prop In Lane	0.93		0.04	0.01		0.90	0.19		0.00	0.36		0.17
Lane Grp Cap(c), veh/h	268	0	0	210	0	0	420	0	0	625	0	0
V/C Ratio(X)	1.12	0.00	0.00	2.04	0.00	0.00	1.29	0.00	0.00	1.81	0.00	0.00
Avail Cap(c_a), veh/h	268	0	0	210	0	0	420	0	0	625	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.5	0.0	0.0	63.0	0.0	0.0	56.0	0.0	0.0	47.0	0.0	0.0
Incr Delay (d2), s/veh	89.6	0.0	0.0	484.3	0.0	0.0	145.9	0.0	0.0	369.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.4	0.0	0.0	36.6	0.0	0.0	33.8	0.0	0.0	89.2	0.0	0.0
LnGrp Delay(d),s/veh	151.1	0.0	0.0	547.3	0.0	0.0	201.9	0.0	0.0	416.6	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		299			428			540			1130	
Approach Delay, s/veh		151.1			547.3			201.9			416.6	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		56.0		24.0		38.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		22.0		51.0		19.0		33.0				
Max Q Clear Time (g_c+I1), s		24.0		53.0		21.0		35.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			358.5									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary

















7: Broadway & Moss St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	258	37	31	281	101	126	975	58	266	820	185
Future Volume (veh/h)	83	258	37	31	281	101	126	975	58	266	820	185
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	90	280	26	34	305	71	137	1060	56	289	891	167
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	522	430	42	466	383	169	1095	58	306	1175	220
Arrive On Green	0.05	0.28	0.28	0.02	0.25	0.25	0.10	0.32	0.32	0.17	0.40	0.40
Sat Flow, veh/h	1774	1863	1533	1774	1863	1530	1774	3409	180	1774	2951	553
Grp Volume(v), veh/h	90	280	26	34	305	71	137	550	566	289	534	524
Grp Sat Flow(s),veh/h/ln	1774	1863	1533	1774	1863	1530	1774	1770	1819	1774	1770	1734
Q Serve(g_s), s	4.3	10.7	1.0	1.6	12.3	3.1	6.4	25.7	25.7	13.5	21.9	21.9
Cycle Q Clear(g_c), s	4.3	10.7	1.0	1.6	12.3	3.1	6.4	25.7	25.7	13.5	21.9	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.32
Lane Grp Cap(c), veh/h	95	522	430	42	466	383	169	569	585	306	705	691
V/C Ratio(X)	0.95	0.54	0.06	0.82	0.65	0.19	0.81	0.97	0.97	0.94	0.76	0.76
Avail Cap(c_a), veh/h	95	709	584	95	709	582	179	569	585	306	705	691
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	39.7	25.6	22.1	40.8	28.2	24.8	37.3	28.1	28.1	34.4	21.8	21.8
Incr Delay (d2), s/veh	75.1	0.9	0.1	30.2	1.6	0.2	22.4	30.5	30.1	36.8	7.5	7.6
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	4.1	5.6	0.5	1.1	6.6	1.3	4.2	17.4	17.8	9.7	12.1	11.9
LnGrp Delay(d),s/veh	114.7	26.5	22.2	71.0	29.8	25.0	59.7	58.6	58.2	71.2	29.3	29.4
LnGrp LOS	F	C	C	E	C	C	E	E	E	E	C	C
Approach Vol, veh/h		396			410			1253			1347	
Approach Delay, s/veh		46.2			32.4			58.6			38.3	
Approach LOS		D			C			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	28.6	11.5	38.5	8.0	26.0	18.0	32.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	8.5	33.0	4.5	32.0	14.5	27.0				
Max Q Clear Time (g_c+I1), s	3.6	12.7	8.4	23.9	6.3	14.3	15.5	27.7				
Green Ext Time (p_c), s	0.0	3.6	0.0	7.4	0.0	3.5	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			46.0									
HCM 2010 LOS			D									






















HCM 2010 Signalized Intersection Summary
 8: Industrial Blvd & Naples St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	156	96	398	115	382	51	75	434	440	73	0
Future Volume (veh/h)	41	156	96	398	115	382	51	75	434	440	73	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	45	170	89	433	125	386	55	82	356	478	79	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	152	80	242	70	216	37	56	241	330	55	0
Arrive On Green	0.15	0.15	0.15	0.30	0.30	0.30	0.20	0.20	0.20	0.21	0.21	0.00
Sat Flow, veh/h	265	1003	525	797	230	711	187	278	1207	1594	263	0
Grp Volume(v), veh/h	304	0	0	944	0	0	493	0	0	557	0	0
Grp Sat Flow(s),veh/h/ln	1793	0	0	1738	0	0	1672	0	0	1858	0	0
Q Serve(g_s), s	22.0	0.0	0.0	44.0	0.0	0.0	29.0	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	22.0	0.0	0.0	44.0	0.0	0.0	29.0	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.15		0.29	0.46		0.41	0.11		0.72	0.86		0.00
Lane Grp Cap(c), veh/h	272	0	0	527	0	0	334	0	0	384	0	0
V/C Ratio(X)	1.12	0.00	0.00	1.79	0.00	0.00	1.47	0.00	0.00	1.45	0.00	0.00
Avail Cap(c_a), veh/h	272	0	0	527	0	0	334	0	0	384	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.5	0.0	0.0	50.5	0.0	0.0	58.0	0.0	0.0	57.5	0.0	0.0
Incr Delay (d2), s/veh	89.8	0.0	0.0	363.0	0.0	0.0	229.0	0.0	0.0	216.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	0.0	0.0	74.3	0.0	0.0	34.6	0.0	0.0	38.5	0.0	0.0
LnGrp Delay(d),s/veh	151.3	0.0	0.0	413.5	0.0	0.0	287.0	0.0	0.0	273.8	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		304			944			493			557	
Approach Delay, s/veh		151.3			413.5			287.0			273.8	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		35.0		49.0		34.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		22.0		30.0		44.0		29.0				
Max Q Clear Time (g_c+I1), s		24.0		32.0		46.0		31.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				317.8								
HCM 2010 LOS				F								






















HCM 2010 Signalized Intersection Summary
 9: Broadway & Naples St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	305	95	218	243	115	121	837	202	68	621	41
Future Volume (veh/h)	162	305	95	218	243	115	121	837	202	68	621	41
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.92	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	176	332	83	237	264	80	132	910	182	74	675	37
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	396	99	254	564	456	164	961	192	91	988	54
Arrive On Green	0.12	0.28	0.28	0.14	0.30	0.30	0.09	0.33	0.33	0.05	0.29	0.29
Sat Flow, veh/h	1774	1422	355	1774	1863	1506	1774	2895	579	1774	3394	186
Grp Volume(v), veh/h	176	0	415	237	264	80	132	556	536	74	352	360
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1774	1863	1506	1774	1770	1704	1774	1770	1810
Q Serve(g_s), s	8.5	0.0	19.2	11.5	10.1	3.4	6.4	26.7	26.8	3.6	15.4	15.4
Cycle Q Clear(g_c), s	8.5	0.0	19.2	11.5	10.1	3.4	6.4	26.7	26.8	3.6	15.4	15.4
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.34	1.00		0.10
Lane Grp Cap(c), veh/h	212	0	495	254	564	456	164	588	566	91	515	527
V/C Ratio(X)	0.83	0.00	0.84	0.93	0.47	0.18	0.81	0.95	0.95	0.81	0.68	0.68
Avail Cap(c_a), veh/h	254	0	549	254	576	465	193	588	566	91	515	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	0.00	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	37.6	0.0	29.6	37.0	24.7	22.4	38.9	28.4	28.4	41.0	27.4	27.4
Incr Delay (d2), s/veh	17.7	0.0	10.2	38.8	0.6	0.2	18.9	26.0	26.8	40.0	7.1	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	10.9	8.4	5.2	1.4	4.0	17.2	16.7	2.8	8.5	8.7
LnGrp Delay(d),s/veh	55.3	0.0	39.8	75.8	25.4	22.6	57.8	54.4	55.3	81.0	34.5	34.4
LnGrp LOS	E		D	E	C	C	E	D	E	F	C	C
Approach Vol, veh/h		591			581			1224			786	
Approach Delay, s/veh		44.4			45.6			55.1			38.9	
Approach LOS		D			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	29.3	11.6	30.4	13.9	31.4	8.0	34.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	12.5	27.0	9.5	24.0	12.5	27.0	4.5	29.0				
Max Q Clear Time (g_c+I1), s	13.5	21.2	8.4	17.4	10.5	12.1	5.6	28.8				
Green Ext Time (p_c), s	0.0	2.2	0.0	5.0	0.1	3.9	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			47.4									
HCM 2010 LOS			D									













HCM 2010 Signalized Intersection Summary
 10: Broadway & Oxford St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	79	81	139	8	146	12	834	80	166	920	9
Future Volume (veh/h)	76	79	81	139	8	146	12	834	80	166	920	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.93	1.00		0.92	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	83	86	56	151	9	101	13	907	75	180	1000	10
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	384	301	187	31	347	17	1140	94	219	1653	17
Arrive On Green	0.06	0.21	0.21	0.11	0.25	0.25	0.01	0.35	0.35	0.12	0.46	0.46
Sat Flow, veh/h	1774	1863	1462	1774	123	1382	1774	3287	272	1774	3587	36
Grp Volume(v), veh/h	83	86	56	151	0	110	13	488	494	180	493	517
Grp Sat Flow(s),veh/h/ln	1774	1863	1462	1774	0	1505	1774	1770	1789	1774	1770	1854
Q Serve(g_s), s	3.6	3.0	2.5	6.5	0.0	4.6	0.6	19.4	19.4	7.7	16.2	16.2
Cycle Q Clear(g_c), s	3.6	3.0	2.5	6.5	0.0	4.6	0.6	19.4	19.4	7.7	16.2	16.2
Prop In Lane	1.00		1.00	1.00		0.92	1.00		0.15	1.00		0.02
Lane Grp Cap(c), veh/h	107	384	301	187	0	378	17	614	621	219	815	854
V/C Ratio(X)	0.78	0.22	0.19	0.81	0.00	0.29	0.78	0.80	0.80	0.82	0.61	0.61
Avail Cap(c_a), veh/h	194	598	470	217	0	503	103	614	621	262	815	854
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	25.7	25.5	34.0	0.0	23.5	38.5	22.9	22.9	33.3	15.7	15.7
Incr Delay (d2), s/veh	11.3	0.3	0.3	17.7	0.0	0.4	52.8	10.3	10.2	16.2	3.3	3.2
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	2.1	1.6	1.0	4.1	0.0	1.9	0.5	11.1	11.2	4.7	8.6	8.9
LnGrp Delay(d),s/veh	47.4	26.0	25.8	51.8	0.0	24.0	91.2	33.2	33.1	49.5	19.0	18.9
LnGrp LOS	D	C	C	D		C	F	C	C	D	B	B
Approach Vol, veh/h		225			261			995			1190	
Approach Delay, s/veh		33.8			40.1			33.9			23.6	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	21.0	4.2	40.9	8.2	24.5	13.1	32.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	9.5	25.0	4.5	34.0	8.5	26.0	11.5	27.0				
Max Q Clear Time (g_c+I1), s	8.5	5.0	2.6	18.2	5.6	6.6	9.7	21.4				
Green Ext Time (p_c), s	0.0	1.3	0.0	10.8	0.0	1.3	0.1	4.6				
Intersection Summary												
HCM 2010 Ctrl Delay			29.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 11: Bay Blvd & Palomar St

2045 No Build - PM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	57	100	79	84	305	90		
Future Volume (veh/h)	57	100	79	84	305	90		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	62	70	86	58	332	98		
Adj No. of Lanes	1	1	1	1	1	1		
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	144	128	310	256	435	1043		
Arrive On Green	0.08	0.08	0.17	0.17	0.25	0.56		
Sat Flow, veh/h	1774	1583	1863	1539	1774	1863		
Grp Volume(v), veh/h	62	70	86	58	332	98		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1539	1774	1863		
Q Serve(g_s), s	0.8	1.0	1.0	0.8	4.1	0.6		
Cycle Q Clear(g_c), s	0.8	1.0	1.0	0.8	4.1	0.6		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	144	128	310	256	435	1043		
V/C Ratio(X)	0.43	0.55	0.28	0.23	0.76	0.09		
Avail Cap(c_a), veh/h	1462	1304	1417	1170	787	2518		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.4	10.5	8.6	8.5	8.3	2.4		
Incr Delay (d2), s/veh	2.0	3.6	0.5	0.4	2.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.5	0.4	2.3	0.3		
LnGrp Delay(d),s/veh	12.4	14.0	9.1	9.0	11.1	2.5		
LnGrp LOS	B	B	A	A	B	A		
Approach Vol, veh/h	132		144			430		
Approach Delay, s/veh	13.3		9.1			9.1		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				18.3		5.4	9.3	8.9
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				32.0		19.5	10.5	18.0
Max Q Clear Time (g_c+I1), s				2.6		3.0	6.1	3.0
Green Ext Time (p_c), s				1.2		0.3	0.4	1.0
Intersection Summary								
HCM 2010 Ctrl Delay			9.9					
HCM 2010 LOS			A					

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2045 No Build - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	366	23	758	139	0	0	0	0	1263	0	19
Future Volume (vph)	0	366	23	758	139	0	0	0	0	1263	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00
Frbp, ped/bikes		1.00	0.96	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5085	1516	3433	3539					1681	1681	1546
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5085	1516	3433	3539					1681	1681	1546
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	398	25	824	151	0	0	0	0	1373	0	21
RTOR Reduction (vph)	0	0	21	0	0	0	0	0	0	0	0	12
Lane Group Flow (vph)	0	398	4	824	151	0	0	0	0	686	687	9
Confl. Peds. (#/hr)	1		15	15		1	6					6
Confl. Bikes (#/hr)			1	1								
Turn Type		NA	Perm	Split	NA					Split	NA	Perm
Protected Phases		2		6	6					4	4	
Permitted Phases			2									4
Actuated Green, G (s)		20.8	20.8	32.2	32.2					53.5	53.5	53.5
Effective Green, g (s)		20.8	20.8	32.2	32.2					53.5	53.5	53.5
Actuated g/C Ratio		0.17	0.17	0.27	0.27					0.45	0.45	0.45
Clearance Time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		881	262	921	949					749	749	689
v/s Ratio Prot		c0.08		c0.24	0.04					0.41	c0.41	
v/s Ratio Perm			0.00									0.01
v/c Ratio		0.45	0.02	0.89	0.16					0.92	0.92	0.01
Uniform Delay, d1		44.5	41.1	42.3	33.6					31.1	31.2	18.5
Progression Factor		1.00	1.00	0.12	0.00					1.00	1.00	1.00
Incremental Delay, d2		1.7	0.1	7.7	0.1					15.8	16.0	0.0
Delay (s)		46.2	41.2	12.9	0.2					46.9	47.1	18.5
Level of Service		D	D	B	A					D	D	B
Approach Delay (s)		45.9			10.9			0.0			46.6	
Approach LOS		D			B			A			D	
Intersection Summary												
HCM 2000 Control Delay			34.0			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			74.7%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis





















13: I-5 NB Ramps & Palomar St

2045 No Build - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	53	1580	0	0	898	1167	4	0	428	0	0	0	
Future Volume (vph)	53	1580	0	0	898	1167	4	0	428	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0			3.5	4.0	3.5	5.0	3.5				
Lane Util. Factor	0.86	0.86			0.86	1.00	0.91	0.86	0.95				
Frbp, ped/bikes	1.00	1.00			1.00	1.00	1.00	0.99	1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00				
Satd. Flow (prot)	1522	4805			6408	1583	3221	1343	1504				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00				
Satd. Flow (perm)	1522	4805			6408	1583	3221	1343	1504				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	58	1717	0	0	976	1268	4	0	465	0	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	215	214	0	0	0	
Lane Group Flow (vph)	52	1723	0	0	976	1268	4	18	18	0	0	0	
Confl. Peds. (#/hr)			14	14			1		1	1		1	
Confl. Bikes (#/hr)			1	1									
Turn Type	Split	NA			NA	Free	Prot	NA	custom				
Protected Phases	2	2			6		3	8	3				
Permitted Phases						Free							
Actuated Green, G (s)	74.7	74.7			23.8	120.0	9.5	9.5	9.5				
Effective Green, g (s)	74.7	74.7			23.8	120.0	9.5	9.5	9.5				
Actuated g/C Ratio	0.62	0.62			0.20	1.00	0.08	0.08	0.08				
Clearance Time (s)	5.0	5.0			3.5		3.5	5.0	3.5				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0				
Lane Grp Cap (vph)	947	2991			1270	1583	254	106	119				
v/s Ratio Prot	0.03	0.36			0.15		0.00	0.01	0.01				
v/s Ratio Perm						c0.80							
v/c Ratio	0.05	0.58			0.77	0.80	0.02	0.17	0.15				
Uniform Delay, d1	8.9	13.3			45.5	0.0	50.9	51.6	51.5				
Progression Factor	0.89	0.62			0.60	1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.5			2.5	3.9	0.0	0.8	0.6				
Delay (s)	8.0	8.8			30.0	3.9	51.0	52.4	52.1				
Level of Service	A	A			C	A	D	D	D				
Approach Delay (s)		8.8			15.2			52.2			0.0		
Approach LOS		A			B			D			A		
Intersection Summary													
HCM 2000 Control Delay			16.5		HCM 2000 Level of Service				B				
HCM 2000 Volume to Capacity ratio			0.90										
Actuated Cycle Length (s)			120.0		Sum of lost time (s)				13.5				
Intersection Capacity Utilization			74.7%		ICU Level of Service				D				
Analysis Period (min)			15										
c Critical Lane Group													

HCM 2010 Signalized Intersection Summary
 14: E Frontage Rd/Walnut Ave & Palomar St























2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1639	363	9	1979	30	36	0	62	4	0	24
Future Volume (veh/h)	18	1639	363	9	1979	30	36	0	62	4	0	24
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	20	1782	294	10	2151	29	39	0	43	4	0	16
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	3517	574	231	4115	55	138	0	104	114	0	104
Arrive On Green	0.02	1.00	1.00	0.01	1.00	1.00	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1774	4389	716	1774	5169	70	1369	0	1555	1340	0	1555
Grp Volume(v), veh/h	20	1372	704	10	1410	770	39	0	43	4	0	16
Grp Sat Flow(s),veh/h/ln	1774	1695	1716	1774	1695	1848	1369	0	1555	1340	0	1555
Q Serve(g_s), s	0.3	0.0	0.0	0.1	0.0	0.0	3.3	0.0	3.2	0.3	0.0	1.2
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.1	0.0	0.0	4.5	0.0	3.2	3.5	0.0	1.2
Prop In Lane	1.00		0.42	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	2716	1374	231	2699	1472	138	0	104	114	0	104
V/C Ratio(X)	0.09	0.51	0.51	0.04	0.52	0.52	0.28	0.00	0.41	0.04	0.00	0.15
Avail Cap(c_a), veh/h	247	2716	1374	263	2699	1472	275	0	259	248	0	259
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.29	0.29	0.29	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	2.2	0.0	0.0	2.3	0.0	0.0	54.9	0.0	53.7	55.4	0.0	52.8
Incr Delay (d2), s/veh	0.1	0.5	1.1	0.0	0.2	0.4	1.1	0.0	2.6	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.4	0.1	0.1	0.2	1.3	0.0	1.4	0.1	0.0	0.5
LnGrp Delay(d),s/veh	2.4	0.5	1.1	2.3	0.2	0.4	56.0	0.0	56.4	55.6	0.0	53.5
LnGrp LOS	A	A	A	A	A	A	E		E	E		D
Approach Vol, veh/h		2096			2190			82				20
Approach Delay, s/veh		0.7			0.3			56.2				53.9
Approach LOS		A			A			E				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	101.1		13.0	6.5	100.5		13.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	3.0	82.0		20.0	3.0	82.0		20.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		5.5	2.3	2.0		6.5				
Green Ext Time (p_c), s	0.0	73.8		0.3	0.0	73.8		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			1.8									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary




















15: Industrial Blvd & Palomar St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	1425	84	207	1488	88	292	276	177	65	264	238
Future Volume (veh/h)	196	1425	84	207	1488	88	292	276	177	65	264	238
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	213	1549	82	225	1617	96	317	300	122	71	287	218
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1871	99	276	1918	114	274	645	528	342	257	195
Arrive On Green	0.16	0.76	0.76	0.03	0.13	0.13	0.12	0.35	0.35	0.04	0.27	0.27
Sat Flow, veh/h	1774	4932	261	1774	4896	290	1774	1863	1525	1774	963	731
Grp Volume(v), veh/h	213	1065	566	225	1119	594	317	300	122	71	0	505
Grp Sat Flow(s),veh/h/ln	1774	1695	1803	1774	1695	1797	1774	1863	1525	1774	0	1694
Q Serve(g_s), s	9.4	24.4	24.5	9.0	38.7	38.8	14.5	15.1	6.8	3.5	0.0	32.0
Cycle Q Clear(g_c), s	9.4	24.4	24.5	9.0	38.7	38.8	14.5	15.1	6.8	3.5	0.0	32.0
Prop In Lane	1.00		0.14	1.00		0.16	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	220	1286	684	276	1328	704	274	645	528	342	0	452
V/C Ratio(X)	0.97	0.83	0.83	0.81	0.84	0.84	1.16	0.47	0.23	0.21	0.00	1.12
Avail Cap(c_a), veh/h	220	1286	684	284	1328	704	274	645	528	350	0	452
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.09	0.09	0.09	0.33	0.33	0.33	0.09	0.00	0.09
Uniform Delay (d), s/veh	25.9	11.9	11.9	27.2	48.6	48.7	35.5	30.6	27.9	30.1	0.0	44.0
Incr Delay (d2), s/veh	46.7	5.3	9.5	1.6	0.6	1.2	83.3	0.2	0.1	0.0	0.0	56.4
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	11.9	13.4	4.5	18.3	19.5	15.4	7.8	2.9	1.7	0.0	22.0
LnGrp Delay(d),s/veh	72.6	17.3	21.5	28.7	49.3	49.9	118.8	30.7	27.9	30.1	0.0	100.4
LnGrp LOS	E	B	C	C	D	D	F	C	C	C		F
Approach Vol, veh/h		1844			1938			739			576	
Approach Delay, s/veh		24.9			47.1			68.0			91.7	
Approach LOS		C			D			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.5	50.5	18.0	37.0	13.0	52.0	8.5	46.5				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	11.5	45.0	14.5	32.0	9.5	47.0	5.5	41.0				
Max Q Clear Time (g_c+I1), s	11.0	26.5	16.5	34.0	11.4	40.8	5.5	17.1				
Green Ext Time (p_c), s	0.0	17.7	0.0	0.0	0.0	6.1	0.0	6.0				
Intersection Summary												
HCM 2010 Ctrl Delay				47.2								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 16: Transit Center Place & Palomar St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	581	771	348	15	715	4	469	8	10	6	24	600
Future Volume (veh/h)	581	771	348	15	715	4	469	8	10	6	24	600
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.78	1.00		0.92	0.93		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	632	838	271	16	777	4	510	9	7	7	26	417
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	340	1251	400	19	825	4	427	497	387	34	54	727
Arrive On Green	0.06	0.11	0.11	0.02	0.32	0.32	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1774	3687	1179	1774	5212	27	941	932	725	7	101	1364
Grp Volume(v), veh/h	632	770	339	16	505	276	510	0	16	450	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1476	1774	1695	1849	941	0	1657	1472	0	0
Q Serve(g_s), s	23.0	26.2	26.5	1.1	17.4	17.4	39.4	0.0	0.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	23.0	26.2	26.5	1.1	17.4	17.4	64.0	0.0	0.5	24.6	0.0	0.0
Prop In Lane	1.00		0.80	1.00		0.01	1.00		0.44	0.02		0.93
Lane Grp Cap(c), veh/h	340	1151	501	19	537	293	427	0	884	816	0	0
V/C Ratio(X)	1.86	0.67	0.68	0.85	0.94	0.94	1.19	0.00	0.02	0.55	0.00	0.00
Avail Cap(c_a), veh/h	340	1151	501	74	537	293	427	0	884	816	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.68	0.68	0.68	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	56.2	46.8	47.0	58.6	40.5	40.5	38.7	0.0	13.2	18.8	0.0	0.0
Incr Delay (d2), s/veh	392.3	1.6	3.9	22.2	20.5	31.1	108.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	48.4	12.6	11.4	0.6	9.5	11.4	26.9	0.0	0.3	10.2	0.0	0.0
LnGrp Delay(d),s/veh	448.5	48.5	50.8	80.9	60.9	71.6	146.7	0.0	13.2	19.6	0.0	0.0
LnGrp LOS	F	D	D	F	E	E	F		B	B		
Approach Vol, veh/h		1741			797			526			450	
Approach Delay, s/veh		194.1			65.0			142.6			19.6	
Approach LOS		F			E			F			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	45.7		69.0	27.0	24.0		69.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	5.0	37.0		64.0	23.0	19.0		64.0				
Max Q Clear Time (g_c+I1), s	3.1	28.5		26.6	25.0	19.4		66.0				
Green Ext Time (p_c), s	0.0	7.0		8.1	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			134.8									
HCM 2010 LOS			F									

HCM Signalized Intersection Capacity Analysis
 16: Transit Center Place & Palomar St

*PGD mitigation assumed
 2045 No Build - PM






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗↗		↗	↗↗↗		↗	↕			↖	↖
Traffic Volume (vph)	581	771	348	15	715	4	469	8	10	6	24	600
Future Volume (vph)	581	771	348	15	715	4	469	8	10	6	24	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.91		1.00	1.00		1.00	1.00			1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.95		1.00	1.00		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (prot)	1770	4395		1770	5078		1681	1675			1843	1505
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (perm)	1770	4395		1770	5078		1681	1675			1843	1505
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	632	838	378	16	777	4	510	9	11	7	26	652
RTOR Reduction (vph)	0	50	0	0	0	0	0	1	0	0	0	29
Lane Group Flow (vph)	632	1166	0	16	781	0	265	264	0	0	33	623
Confl. Peds. (#/hr)	29		64	64		29	129		48	48		129
Confl. Bikes (#/hr)			2	2			1		2	2		1
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	45.5	66.3		2.0	22.8		22.5	22.5			15.5	61.0
Effective Green, g (s)	45.5	66.3		2.0	22.8		22.5	22.5			15.5	61.0
Actuated g/C Ratio	0.36	0.53		0.02	0.18		0.18	0.18			0.12	0.49
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	645	2334		28	927		303	301			228	735
v/s Ratio Prot	c0.36	0.27		0.01	c0.15		0.16	c0.16			0.02	c0.31
v/s Ratio Perm												0.11
v/c Ratio	0.98	0.50		0.57	0.84		0.87	0.88			0.14	0.85
Uniform Delay, d1	39.2	18.7		61.0	49.3		49.8	49.8			48.7	27.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	29.9	0.8		16.3	9.2		23.2	23.7			0.3	8.6
Delay (s)	69.1	19.4		77.3	58.5		73.0	73.6			49.0	36.4
Level of Service	E	B		E	E		E	E			D	D
Approach Delay (s)		36.4			58.8			73.3			37.1	
Approach LOS		D			E			E			D	

Intersection Summary		
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio	0.91	
Actuated Cycle Length (s)	124.8	Sum of lost time (s) 18.5
Intersection Capacity Utilization	89.5%	ICU Level of Service E
Analysis Period (min)	15	
Description: Assumed PGD will mitigate this intersection, instead of GS project		
c Critical Lane Group		

HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	719	1	286	643	242	4	53	387	247	36	87
Future Volume (veh/h)	64	719	1	286	643	242	4	53	387	247	36	87
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	0.98		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	70	782	1	311	699	181	4	58	270	268	39	70
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1556	2	330	1367	348	699	137	637	348	43	78
Arrive On Green	0.07	0.39	0.39	0.03	0.11	0.11	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1774	5245	7	3442	3991	1015	1252	277	1288	600	87	157
Grp Volume(v), veh/h	70	505	278	311	592	288	4	0	328	377	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1861	1721	1695	1615	1252	0	1564	844	0	0
Q Serve(g_s), s	4.7	13.5	13.5	10.8	19.7	20.2	0.0	0.0	16.1	37.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	13.5	13.5	10.8	19.7	20.2	0.2	0.0	16.1	53.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.63	1.00		0.82	0.71		0.19
Lane Grp Cap(c), veh/h	89	1006	552	330	1161	553	699	0	774	469	0	0
V/C Ratio(X)	0.79	0.50	0.50	0.94	0.51	0.52	0.01	0.00	0.42	0.80	0.00	0.00
Avail Cap(c_a), veh/h	96	1006	552	330	1161	553	789	0	886	552	0	0
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.75	0.75	0.75	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	55.4	29.6	29.6	57.8	43.7	43.9	15.4	0.0	19.4	36.3	0.0	0.0
Incr Delay (d2), s/veh	18.2	1.0	1.9	28.7	1.2	2.6	0.0	0.0	0.4	7.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.4	7.2	6.5	9.5	9.5	0.1	0.0	7.0	12.8	0.0	0.0
LnGrp Delay(d),s/veh	73.6	30.7	31.5	86.5	44.9	46.6	15.4	0.0	19.7	43.6	0.0	0.0
LnGrp LOS	E	C	C	F	D	D	B		B	D		
Approach Vol, veh/h		853			1191			332			377	
Approach Delay, s/veh		34.5			56.2			19.7			43.6	
Approach LOS		C			E			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	40.6		64.4	9.5	46.1		64.4				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	11.5	27.0		68.0	6.5	32.0		68.0				
Max Q Clear Time (g_c+I1), s	12.8	15.5		55.1	6.7	22.2		18.1				
Green Ext Time (p_c), s	0.0	8.3		4.3	0.0	7.3		6.5				
Intersection Summary												
HCM 2010 Ctrl Delay			43.3									
HCM 2010 LOS			D									





















HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St

2045 No Build - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	457	595	300	114	489	81	386	480	134	245	880	297
Future Volume (veh/h)	457	595	300	114	489	81	386	480	134	245	880	297
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.92	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	497	647	209	124	532	61	420	522	94	266	957	207
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	556	1396	440	178	1194	134	473	1179	502	328	1029	435
Arrive On Green	0.05	0.12	0.12	0.05	0.26	0.26	0.14	0.33	0.33	0.10	0.29	0.29
Sat Flow, veh/h	3442	3773	1190	3442	4595	516	3442	3539	1508	3442	3539	1497
Grp Volume(v), veh/h	497	580	276	124	390	203	420	522	94	266	957	207
Grp Sat Flow(s),veh/h/ln	1721	1695	1572	1721	1695	1721	1721	1770	1508	1721	1770	1497
Q Serve(g_s), s	17.2	19.1	19.6	4.3	11.5	11.9	14.4	13.8	5.3	9.1	31.5	13.7
Cycle Q Clear(g_c), s	17.2	19.1	19.6	4.3	11.5	11.9	14.4	13.8	5.3	9.1	31.5	13.7
Prop In Lane	1.00		0.76	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	556	1254	582	178	881	447	473	1179	502	328	1029	435
V/C Ratio(X)	0.89	0.46	0.47	0.70	0.44	0.45	0.89	0.44	0.19	0.81	0.93	0.48
Avail Cap(c_a), veh/h	574	1254	582	229	881	447	488	1179	502	430	1062	449
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	0.74	0.74	0.74	0.84	0.84	0.84
Uniform Delay (d), s/veh	55.8	41.6	41.8	56.0	37.1	37.3	50.8	31.3	28.5	53.2	41.4	35.0
Incr Delay (d2), s/veh	12.4	0.9	2.0	5.1	1.6	3.3	13.6	0.2	0.1	7.4	11.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	9.1	8.9	2.2	5.6	6.1	7.7	6.8	2.2	4.7	17.1	5.7
LnGrp Delay(d),s/veh	68.1	42.5	43.8	61.1	38.7	40.6	64.5	31.5	28.6	60.6	53.3	35.7
LnGrp LOS	E	D	D	E	D	D	E	C	C	E	D	D
Approach Vol, veh/h		1353			717			1036			1430	
Approach Delay, s/veh		52.2			43.1			44.6			52.1	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	49.4	20.5	39.9	23.4	36.2	15.4	45.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	41.0	17.0	36.0	20.0	29.0	15.0	38.0				
Max Q Clear Time (g_c+I1), s	6.3	21.6	16.4	33.5	19.2	13.9	11.1	15.8				
Green Ext Time (p_c), s	0.0	10.8	0.1	1.4	0.2	9.2	0.3	12.8				
Intersection Summary												
HCM 2010 Ctrl Delay			49.0									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St























2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	93	31	82	6	338	2	403	101	254	359	11
Future Volume (veh/h)	40	93	31	82	6	338	2	403	101	254	359	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	101	0	89	7	234	2	438	110	276	390	11
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	148	126	99	8	261	3	480	120	308	915	26
Arrive On Green	0.08	0.08	0.00	0.23	0.23	0.23	0.00	0.34	0.34	0.17	0.51	0.51
Sat Flow, veh/h	1774	1863	1583	440	35	1158	1774	1428	359	1774	1801	51
Grp Volume(v), veh/h	43	101	0	330	0	0	2	0	548	276	0	401
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1633	0	0	1774	0	1787	1774	0	1852
Q Serve(g_s), s	2.3	5.2	0.0	19.5	0.0	0.0	0.1	0.0	29.2	15.1	0.0	13.5
Cycle Q Clear(g_c), s	2.3	5.2	0.0	19.5	0.0	0.0	0.1	0.0	29.2	15.1	0.0	13.5
Prop In Lane	1.00		1.00	0.27		0.71	1.00		0.20	1.00		0.03
Lane Grp Cap(c), veh/h	141	148	126	368	0	0	3	0	600	308	0	940
V/C Ratio(X)	0.30	0.68	0.00	0.90	0.00	0.00	0.70	0.00	0.91	0.90	0.00	0.43
Avail Cap(c_a), veh/h	464	487	414	427	0	0	80	0	647	330	0	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	44.5	0.0	37.4	0.0	0.0	49.6	0.0	31.6	40.2	0.0	15.4
Incr Delay (d2), s/veh	1.2	5.4	0.0	19.4	0.0	0.0	148.2	0.0	16.8	24.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	0.0	10.8	0.0	0.0	0.2	0.0	17.1	9.5	0.0	7.0
LnGrp Delay(d),s/veh	44.4	50.0	0.0	56.8	0.0	0.0	197.8	0.0	48.4	64.8	0.0	15.7
LnGrp LOS	D	D		E			F		D	E		B
Approach Vol, veh/h		144			330			550			677	
Approach Delay, s/veh		48.3			56.8			48.9			35.7	
Approach LOS		D			E			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.9	3.7	55.5		27.4	20.8	38.4				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		26.0	4.5	50.0		26.0	18.5	36.0				
Max Q Clear Time (g_c+I1), s		7.2	2.1	15.5		21.5	17.1	31.2				
Green Ext Time (p_c), s		0.5	0.0	7.5		0.8	0.1	2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			45.2									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary

20: Broadway & Anita St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	235	66	100	180	135	48	636	92	186	991	133
Future Volume (veh/h)	154	235	66	100	180	135	48	636	92	186	991	133
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	167	255	46	109	196	94	52	691	83	202	1077	128
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	486	399	139	418	342	197	1117	134	376	1320	157
Arrive On Green	0.11	0.26	0.26	0.08	0.22	0.22	0.03	0.35	0.35	0.09	0.42	0.42
Sat Flow, veh/h	1774	1863	1529	1774	1863	1524	1774	3162	379	1774	3169	376
Grp Volume(v), veh/h	167	255	46	109	196	94	52	386	388	202	601	604
Grp Sat Flow(s),veh/h/ln	1774	1863	1529	1774	1863	1524	1774	1770	1772	1774	1770	1775
Q Serve(g_s), s	7.3	9.3	1.8	4.8	7.2	4.0	1.5	14.3	14.4	5.4	23.8	23.9
Cycle Q Clear(g_c), s	7.3	9.3	1.8	4.8	7.2	4.0	1.5	14.3	14.4	5.4	23.8	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.21
Lane Grp Cap(c), veh/h	203	486	399	139	418	342	197	625	626	376	737	740
V/C Ratio(X)	0.82	0.53	0.12	0.79	0.47	0.27	0.26	0.62	0.62	0.54	0.81	0.82
Avail Cap(c_a), veh/h	213	869	714	190	846	692	245	625	626	422	737	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	34.3	25.1	22.3	35.9	26.6	25.4	18.1	21.2	21.2	14.9	20.4	20.4
Incr Delay (d2), s/veh	21.5	0.9	0.1	13.7	0.8	0.4	0.7	4.5	4.6	1.2	9.6	9.7
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	4.8	4.9	0.8	2.9	3.8	1.7	0.7	7.8	7.8	2.7	13.5	13.6
LnGrp Delay(d),s/veh	55.8	26.0	22.5	49.6	27.5	25.8	18.8	25.8	25.8	16.1	30.0	30.2
LnGrp LOS	E	C	C	D	C	C	B	C	C	B	C	C
Approach Vol, veh/h		468			399			826			1407	
Approach Delay, s/veh		36.3			33.1			25.3			28.1	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	25.7	5.9	38.0	12.6	22.8	10.9	33.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	8.5	37.0	4.5	33.0	9.5	36.0	9.5	28.0				
Max Q Clear Time (g_c+I1), s	6.8	11.3	3.5	25.9	9.3	9.2	7.4	16.4				
Green Ext Time (p_c), s	0.0	3.3	0.0	5.7	0.0	3.3	0.1	8.6				
Intersection Summary												
HCM 2010 Ctrl Delay			29.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

21: Main St & I-5 SB Ramps

2045 No Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↕	↕	↗	↖	↗		
Traffic Volume (veh/h)	31	182	127	212	841	33		
Future Volume (veh/h)	31	182	127	212	841	33		
Number	5	2	6	16	7	14		
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		
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	34	198	138	0	914	0		
Adj No. of Lanes	0	1	1	1	1	1		
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	72	419	176	149	896	800		
Arrive On Green	0.27	0.27	0.09	0.00	0.50	0.00		
Sat Flow, veh/h	271	1578	1863	1583	1774	1583		
Grp Volume(v), veh/h	232	0	138	0	914	0		
Grp Sat Flow(s),veh/h/ln	1849	0	1863	1583	1774	1583		
Q Serve(g_s), s	10.5	0.0	7.2	0.0	50.5	0.0		
Cycle Q Clear(g_c), s	10.5	0.0	7.2	0.0	50.5	0.0		
Prop In Lane	0.15			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	491	0	176	149	896	800		
V/C Ratio(X)	0.47	0.00	0.79	0.00	1.02	0.00		
Avail Cap(c_a), veh/h	491	0	335	285	896	800		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00		
Uniform Delay (d), s/veh	30.8	0.0	44.3	0.0	24.8	0.0		
Incr Delay (d2), s/veh	3.2	0.0	7.5	0.0	35.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.8	0.0	4.1	0.0	33.2	0.0		
LnGrp Delay(d),s/veh	34.1	0.0	51.8	0.0	60.0	0.0		
LnGrp LOS	C		D		F			
Approach Vol, veh/h		232	138		914			
Approach Delay, s/veh		34.1	51.8		60.0			
Approach LOS		C	D		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		31.6		54.0		14.4		
Change Period (Y+Rc), s		5.0		3.5		5.0		
Max Green Setting (Gmax), s		18.0		50.5		18.0		
Max Q Clear Time (g_c+I1), s		12.5		52.5		9.2		
Green Ext Time (p_c), s		0.6		0.0		0.4		
Intersection Summary								
HCM 2010 Ctrl Delay			54.4					
HCM 2010 LOS			D					

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps





















2045 No Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	64	958	325	788	149	13		
Future Volume (veh/h)	64	958	325	788	149	13		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	70	1041	353	548	162	9		
Adj No. of Lanes	1	2	3	2	2	1		
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	91	2943	3790	2034	236	109		
Arrive On Green	0.05	0.83	0.75	0.75	0.07	0.07		
Sat Flow, veh/h	1774	3632	5253	2730	3442	1583		
Grp Volume(v), veh/h	70	1041	353	548	162	9		
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1365	1721	1583		
Q Serve(g_s), s	3.9	7.0	1.9	6.4	4.6	0.5		
Cycle Q Clear(g_c), s	3.9	7.0	1.9	6.4	4.6	0.5		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	91	2943	3790	2034	236	109		
V/C Ratio(X)	0.77	0.35	0.09	0.27	0.69	0.08		
Avail Cap(c_a), veh/h	275	2943	3790	2034	516	237		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.69	0.69	1.00	1.00		
Uniform Delay (d), s/veh	46.9	2.0	3.5	4.1	45.5	43.6		
Incr Delay (d2), s/veh	12.7	0.3	0.0	0.2	3.5	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	2.2	3.5	0.9	2.4	2.3	0.5		
LnGrp Delay(d),s/veh	59.6	2.3	3.5	4.3	49.0	44.0		
LnGrp LOS	E	A	A	A	D	D		
Approach Vol, veh/h		1111	901		171			
Approach Delay, s/veh		6.0	4.0		48.8			
Approach LOS		A	A		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		88.1		11.9	8.6	79.5		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		75.0		15.0	15.5	56.0		
Max Q Clear Time (g_c+I1), s		9.0		6.6	5.9	8.4		
Green Ext Time (p_c), s		21.6		0.3	0.1	19.7		
Intersection Summary								
HCM 2010 Ctrl Delay			8.5					
HCM 2010 LOS			A					

























HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

2045 No Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	721	321	415	569	62	220	368	406	24	326	123
Future Volume (veh/h)	76	721	321	415	569	62	220	368	406	24	326	123
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	83	784	298	451	618	57	239	400	395	26	354	121
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	696	264	373	1176	108	231	323	319	33	352	120
Arrive On Green	0.13	0.28	0.28	0.21	0.36	0.36	0.13	0.38	0.38	0.02	0.27	0.27
Sat Flow, veh/h	1774	2484	943	1774	3267	301	1774	853	842	1774	1320	451
Grp Volume(v), veh/h	83	558	524	451	334	341	239	0	795	26	0	475
Grp Sat Flow(s),veh/h/ln	1774	1770	1658	1774	1770	1799	1774	0	1695	1774	0	1772
Q Serve(g_s), s	6.4	42.0	42.0	31.5	22.4	22.4	19.5	0.0	56.7	2.2	0.0	40.0
Cycle Q Clear(g_c), s	6.4	42.0	42.0	31.5	22.4	22.4	19.5	0.0	56.7	2.2	0.0	40.0
Prop In Lane	1.00		0.57	1.00		0.17	1.00		0.50	1.00		0.25
Lane Grp Cap(c), veh/h	231	495	464	373	637	648	231	0	641	33	0	472
V/C Ratio(X)	0.36	1.13	1.13	1.21	0.52	0.53	1.04	0.00	1.24	0.79	0.00	1.01
Avail Cap(c_a), veh/h	231	495	464	373	637	648	231	0	641	53	0	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.6	54.0	54.0	59.3	37.9	37.9	65.3	0.0	46.6	73.3	0.0	55.0
Incr Delay (d2), s/veh	4.3	80.0	81.7	117.2	3.1	3.0	69.1	0.0	120.9	33.4	0.0	42.8
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	3.4	31.5	29.8	27.5	11.5	11.7	14.0	0.0	48.1	1.4	0.0	25.2
LnGrp Delay(d),s/veh	63.9	134.0	135.7	176.5	40.9	40.9	134.3	0.0	167.5	106.8	0.0	97.8
LnGrp LOS	E	F	F	F	D	D	F		F	F		F
Approach Vol, veh/h		1165			1126			1034			501	
Approach Delay, s/veh		129.8			95.2			159.8			98.2	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.0	47.0	23.0	45.0	23.0	59.0	6.3	61.7				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	31.5	42.0	19.5	40.0	19.5	54.0	4.5	55.0				
Max Q Clear Time (g_c+I1), s	33.5	44.0	21.5	42.0	8.4	24.4	4.2	58.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	14.9	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			123.6									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary
 24: Broadway & Main St

2045 No Build - PM













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	669	285	426	497	154	248	482	390	229	813	114
Future Volume (veh/h)	140	669	285	426	497	154	248	482	390	229	813	114
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	152	727	198	463	540	107	270	524	272	249	884	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	862	378	443	1393	612	253	793	345	273	833	373
Arrive On Green	0.10	0.24	0.24	0.25	0.39	0.39	0.14	0.22	0.22	0.15	0.24	0.00
Sat Flow, veh/h	1774	3539	1550	1774	3539	1556	1774	3539	1540	1774	3539	1583
Grp Volume(v), veh/h	152	727	198	463	540	107	270	524	272	249	884	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1550	1774	1770	1556	1774	1770	1540	1774	1770	1583
Q Serve(g_s), s	11.8	27.4	15.5	35.0	15.3	6.3	20.0	18.9	23.3	19.4	33.0	0.0
Cycle Q Clear(g_c), s	11.8	27.4	15.5	35.0	15.3	6.3	20.0	18.9	23.3	19.4	33.0	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	177	862	378	443	1393	612	253	793	345	273	833	373
V/C Ratio(X)	0.86	0.84	0.52	1.04	0.39	0.17	1.07	0.66	0.79	0.91	1.06	0.00
Avail Cap(c_a), veh/h	266	985	432	443	1393	612	253	793	345	317	833	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.1	50.5	46.0	52.6	30.4	27.7	60.1	49.5	51.2	58.3	53.6	0.0
Incr Delay (d2), s/veh	16.1	6.1	1.1	55.0	0.2	0.1	75.2	4.3	16.5	26.8	48.5	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	6.6	14.2	6.8	23.9	7.5	2.7	15.1	9.7	11.5	11.5	21.7	0.0
LnGrp Delay(d),s/veh	78.2	56.6	47.1	107.5	30.6	27.8	135.3	53.8	67.7	85.1	102.1	0.0
LnGrp LOS	E	E	D	F	C	C	F	D	E	F	F	
Approach Vol, veh/h		1077			1110			1066			1133	
Approach Delay, s/veh		57.9			62.4			78.0			98.3	
Approach LOS		E			E			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.0	39.1	24.0	38.0	18.0	60.1	25.6	36.4				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	35.0	39.0	20.0	33.0	21.0	53.0	25.0	28.0				
Max Q Clear Time (g_c+I1), s	37.0	29.4	22.0	35.0	13.8	17.3	21.4	25.3				
Green Ext Time (p_c), s	0.0	4.7	0.0	0.0	0.2	13.0	0.2	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			74.4									
HCM 2010 LOS			E									

**Appendix G – 2045 Intersection LOS Worksheets – Build
Alternative without Mitigation**

HCM 2010 Signalized Intersection Summary





















1: Bay Blvd & L St

2045 Build - AM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	431	276	468	17	72	140		
Future Volume (veh/h)	431	276	468	17	72	140		
Number	1	16	8	18	7	4		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	468	300	509	18	78	152		
Adj No. of Lanes	1	1	1	1	1	1		
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	587	524	654	556	336	885		
Arrive On Green	0.33	0.33	0.35	0.35	0.04	0.48		
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863		
Grp Volume(v), veh/h	468	300	509	18	78	152		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863		
Q Serve(g_s), s	10.5	6.9	10.7	0.3	1.1	2.0		
Cycle Q Clear(g_c), s	10.5	6.9	10.7	0.3	1.1	2.0		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	587	524	654	556	336	885		
V/C Ratio(X)	0.80	0.57	0.78	0.03	0.23	0.17		
Avail Cap(c_a), veh/h	910	813	892	758	440	1232		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.3	12.1	12.7	9.3	9.2	6.6		
Incr Delay (d2), s/veh	2.8	1.0	3.1	0.0	0.3	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.5	6.2	5.9	0.1	0.6	1.1		
LnGrp Delay(d),s/veh	16.1	13.1	15.8	9.4	9.5	6.7		
LnGrp LOS	B	B	B	A	A	A		
Approach Vol, veh/h	768		527			230		
Approach Delay, s/veh	14.9		15.5			7.6		
Approach LOS	B		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.8		18.0	5.4	20.4
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				29.0		22.5	4.5	21.0
Max Q Clear Time (g_c+I1), s				4.0		12.5	3.1	12.7
Green Ext Time (p_c), s				4.5		2.0	0.0	2.7
Intersection Summary								
HCM 2010 Ctrl Delay			14.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
2: Industrial Blvd/Driveway & L St
























2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	490	503	108	383	3	231	3	139	1	5	0
Future Volume (veh/h)	2	490	503	108	383	3	231	3	139	1	5	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	533	339	117	416	2	251	3	94	1	5	0
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1298	573	133	1589	8	281	2	520	70	260	0
Arrive On Green	0.00	0.37	0.37	0.08	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.00
Sat Flow, veh/h	1774	3539	1564	1774	3612	17	485	6	1559	0	781	0
Grp Volume(v), veh/h	2	533	339	117	204	214	254	0	94	6	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1564	1774	1770	1859	491	0	1559	781	0	0
Q Serve(g_s), s	0.1	6.7	10.5	3.9	4.4	4.4	0.0	0.0	2.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	6.7	10.5	3.9	4.4	4.4	20.0	0.0	2.6	20.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	0.99		1.00	0.17		0.00
Lane Grp Cap(c), veh/h	3	1298	573	133	779	818	283	0	520	330	0	0
V/C Ratio(X)	0.68	0.41	0.59	0.88	0.26	0.26	0.90	0.00	0.18	0.02	0.00	0.00
Avail Cap(c_a), veh/h	133	1298	573	133	779	818	283	0	520	330	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.9	14.2	15.4	27.5	10.6	10.6	23.6	0.0	14.2	14.5	0.0	0.0
Incr Delay (d2), s/veh	140.1	1.0	4.4	44.1	0.8	0.8	28.8	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.4	5.2	3.5	2.3	2.4	6.4	0.0	1.1	0.1	0.0	0.0
LnGrp Delay(d),s/veh	170.0	15.1	19.8	71.6	11.4	11.4	52.3	0.0	14.4	14.5	0.0	0.0
LnGrp LOS	F	B	B	E	B	B	D		B	B		
Approach Vol, veh/h		874			535			348				6
Approach Delay, s/veh		17.3			24.6			42.1				14.5
Approach LOS		B			C			D				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	27.0		25.0	3.6	31.4		25.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	22.0		20.0	4.5	22.0		20.0				
Max Q Clear Time (g_c+I1), s	5.9	12.5		22.0	2.1	6.4		22.0				
Green Ext Time (p_c), s	0.0	4.8		0.0	0.0	6.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			24.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary













3: Broadway & L St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	303	284	228	237	43	186	721	227	37	547	27
Future Volume (veh/h)	40	303	284	228	237	43	186	721	227	37	547	27
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	43	329	201	248	258	29	202	784	167	40	595	18
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	54	767	334	207	971	108	187	1514	844	50	1241	587
Arrive On Green	0.03	0.22	0.22	0.12	0.30	0.30	0.11	0.43	0.43	0.03	0.35	0.35
Sat Flow, veh/h	1774	3539	1542	1774	3204	356	1774	3539	1541	1774	3539	1536
Grp Volume(v), veh/h	43	329	201	248	141	146	202	784	167	40	595	18
Grp Sat Flow(s),veh/h/ln	1774	1770	1542	1774	1770	1790	1774	1770	1541	1774	1770	1536
Q Serve(g_s), s	2.1	6.9	10.0	10.0	5.2	5.3	9.0	13.9	4.7	1.9	11.2	0.6
Cycle Q Clear(g_c), s	2.1	6.9	10.0	10.0	5.2	5.3	9.0	13.9	4.7	1.9	11.2	0.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	767	334	207	537	543	187	1514	844	50	1241	587
V/C Ratio(X)	0.80	0.43	0.60	1.20	0.26	0.27	1.08	0.52	0.20	0.80	0.48	0.03
Avail Cap(c_a), veh/h	124	1365	595	207	765	774	187	1514	844	124	1241	587
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	28.9	30.2	37.8	22.6	22.6	38.3	18.0	9.9	41.3	21.7	16.6
Incr Delay (d2), s/veh	22.6	0.4	1.7	125.4	0.3	0.3	89.5	1.3	0.5	24.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.4	4.4	12.1	2.5	2.6	9.0	7.0	2.1	1.3	5.7	0.3
LnGrp Delay(d),s/veh	63.8	29.3	31.9	163.1	22.8	22.9	127.8	19.3	10.5	65.9	23.0	16.7
LnGrp LOS	E	C	C	F	C	C	F	B	B	E	C	B
Approach Vol, veh/h		573			535			1153			653	
Approach Delay, s/veh		32.8			87.9			37.0			25.5	
Approach LOS		C			F			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	23.5	13.0	35.0	6.6	30.9	6.4	41.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	10.0	33.0	9.0	30.0	6.0	37.0	6.0	33.0				
Max Q Clear Time (g_c+I1), s	12.0	12.0	11.0	13.2	4.1	7.3	3.9	15.9				
Green Ext Time (p_c), s	0.0	4.4	0.0	9.1	0.0	4.8	0.0	9.2				
Intersection Summary												
HCM 2010 Ctrl Delay			42.9									
HCM 2010 LOS			D									













HCM 2010 Signalized Intersection Summary
 4: I-5 SB On-ramp/I-5 SB Off-ramp & L St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑					↑↑		↑
Traffic Volume (veh/h)	0	41	48	265	349	0	0	0	0	951	0	358
Future Volume (veh/h)	0	41	48	265	349	0	0	0	0	951	0	358
Number	5	2	12	1	6	16				7	4	14
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
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	45	52	288	379	0				1034	0	389
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	461	206	468	1219	0				1487	0	684
Arrive On Green	0.00	0.13	0.13	0.14	0.34	0.00				0.43	0.00	0.43
Sat Flow, veh/h	0	3632	1583	3442	3632	0				3442	0	1583
Grp Volume(v), veh/h	0	45	52	288	379	0				1034	0	389
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1721	0	1583
Q Serve(g_s), s	0.0	0.5	1.3	3.5	3.5	0.0				10.9	0.0	8.3
Cycle Q Clear(g_c), s	0.0	0.5	1.3	3.5	3.5	0.0				10.9	0.0	8.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	461	206	468	1219	0				1487	0	684
V/C Ratio(X)	0.00	0.10	0.25	0.62	0.31	0.00				0.70	0.00	0.57
Avail Cap(c_a), veh/h	0	1503	672	1269	3084	0				3153	0	1451
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	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.1	17.5	18.2	10.8	0.0				10.3	0.0	9.6
Incr Delay (d2), s/veh	0.0	0.1	0.6	1.3	0.1	0.0				0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.6	1.8	1.7	0.0				5.3	0.0	3.7
LnGrp Delay(d),s/veh	0.0	17.2	18.1	19.5	10.9	0.0				10.9	0.0	10.3
LnGrp LOS		B	B	B	B					B		B
Approach Vol, veh/h		97			667						1423	
Approach Delay, s/veh		17.7			14.6						10.7	
Approach LOS		B			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.6	10.8		24.3		20.4						
Change Period (Y+Rc), s	3.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	16.5	19.0		41.0		39.0						
Max Q Clear Time (g_c+I1), s	5.5	3.3		12.9		5.5						
Green Ext Time (p_c), s	0.7	2.5		6.4		3.1						
Intersection Summary												
HCM 2010 Ctrl Delay				12.2								
HCM 2010 LOS				B								

















HCM 2010 Signalized Intersection Summary
5: Industrial Blvd & I-5 NB Ramps

2045 Build - AM

								
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	236	382	913	134	450	161		
Future Volume (veh/h)	236	382	913	134	450	161		
Number	5	12	3	8	4	14		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	257	293	992	146	489	98		
Adj No. of Lanes	1	1	1	1	1	1		
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	260	232	931	1477	452	385		
Arrive On Green	0.15	0.15	0.52	0.79	0.24	0.24		
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583		
Grp Volume(v), veh/h	257	293	992	146	489	98		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583		
Q Serve(g_s), s	20.2	20.5	73.5	2.5	34.0	7.0		
Cycle Q Clear(g_c), s	20.2	20.5	73.5	2.5	34.0	7.0		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	260	232	931	1477	452	385		
V/C Ratio(X)	0.99	1.26	1.07	0.10	1.08	0.25		
Avail Cap(c_a), veh/h	260	232	931	1477	452	385		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	59.6	59.8	33.3	3.3	53.0	42.8		
Incr Delay (d2), s/veh	52.7	148.4	48.4	0.0	65.8	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	13.7	18.5	48.2	1.3	25.7	3.1		
LnGrp Delay(d),s/veh	112.4	208.2	81.7	3.3	118.8	43.1		
LnGrp LOS	F	F	F	A	F	D		
Approach Vol, veh/h	550			1138	587			
Approach Delay, s/veh	163.4			71.6	106.2			
Approach LOS	F			E	F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2		3	4				8
Phs Duration (G+Y+Rc), s	24.0		77.0	39.0				116.0
Change Period (Y+Rc), s	3.5		3.5	5.0				5.0
Max Green Setting (Gmax), s	20.5		73.5	34.0				111.0
Max Q Clear Time (g_c+I1), s	22.5		75.5	36.0				4.5
Green Ext Time (p_c), s	0.0		0.0	0.0				4.6
Intersection Summary								
HCM 2010 Ctrl Delay	102.7							
HCM 2010 LOS	F							
























HCM 2010 Signalized Intersection Summary
 6: Industrial Blvd & Moss St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	0	0	0	147	447	110	352	0	288	544	0
Future Volume (veh/h)	239	0	0	0	147	447	110	352	0	288	544	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	260	0	0	0	160	381	120	383	0	313	591	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	0	0	0	101	241	97	309	0	184	347	0
Arrive On Green	0.14	0.00	0.00	0.00	0.21	0.21	0.22	0.22	0.00	0.29	0.29	0.00
Sat Flow, veh/h	1774	0	0	0	489	1165	439	1402	0	634	1197	0
Grp Volume(v), veh/h	260	0	0	0	0	541	503	0	0	904	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	0	0	0	1654	1841	0	0	1831	0	0
Q Serve(g_s), s	21.0	0.0	0.0	0.0	0.0	30.0	32.0	0.0	0.0	42.0	0.0	0.0
Cycle Q Clear(g_c), s	21.0	0.0	0.0	0.0	0.0	30.0	32.0	0.0	0.0	42.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.70	0.24		0.00	0.35		0.00
Lane Grp Cap(c), veh/h	257	0	0	0	0	342	406	0	0	530	0	0
V/C Ratio(X)	1.01	0.00	0.00	0.00	0.00	1.58	1.24	0.00	0.00	1.70	0.00	0.00
Avail Cap(c_a), veh/h	257	0	0	0	0	342	406	0	0	530	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.0	0.0	0.0	0.0	0.0	57.5	56.5	0.0	0.0	51.5	0.0	0.0
Incr Delay (d2), s/veh	59.2	0.0	0.0	0.0	0.0	275.1	126.7	0.0	0.0	325.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.1	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	14.5	0.0	0.0	0.0	0.0	39.8	30.5	0.0	0.0	69.1	0.0	0.0
LnGrp Delay(d),s/veh	121.3	0.0	0.0	0.0	0.0	332.6	183.2	0.0	0.0	376.5	0.0	0.0
LnGrp LOS	F					F	F			F		
Approach Vol, veh/h		260			541			503			904	
Approach Delay, s/veh		121.3			332.6			183.2			376.5	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		47.0		35.0		37.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		42.0		30.0		32.0				
Max Q Clear Time (g_c+I1), s		23.0		44.0		32.0		34.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			291.7									
HCM 2010 LOS			F									

















HCM 2010 Signalized Intersection Summary
 7: Broadway & Moss St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	157	20	19	305	200	132	830	73	188	557	156
Future Volume (veh/h)	55	157	20	19	305	200	132	830	73	188	557	156
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.94	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	60	171	12	21	332	145	143	902	66	204	605	129
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	549	455	25	496	411	179	1138	83	189	999	212
Arrive On Green	0.04	0.29	0.29	0.01	0.27	0.27	0.10	0.34	0.34	0.11	0.35	0.35
Sat Flow, veh/h	1774	1863	1544	1774	1863	1542	1774	3328	244	1774	2871	610
Grp Volume(v), veh/h	60	171	12	21	332	145	143	480	488	204	372	362
Grp Sat Flow(s),veh/h/ln	1774	1863	1544	1774	1863	1542	1774	1770	1802	1774	1770	1712
Q Serve(g_s), s	2.4	5.0	0.4	0.8	11.2	5.3	5.5	17.2	17.2	7.5	12.2	12.3
Cycle Q Clear(g_c), s	2.4	5.0	0.4	0.8	11.2	5.3	5.5	17.2	17.2	7.5	12.2	12.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.36
Lane Grp Cap(c), veh/h	76	549	455	25	496	411	179	605	616	189	616	596
V/C Ratio(X)	0.79	0.31	0.03	0.82	0.67	0.35	0.80	0.79	0.79	1.08	0.60	0.61
Avail Cap(c_a), veh/h	114	849	704	114	849	703	189	605	616	189	616	596
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	33.3	19.2	17.6	34.5	23.0	20.8	30.9	20.9	20.9	31.4	18.9	18.9
Incr Delay (d2), s/veh	19.3	0.3	0.0	45.5	1.6	0.5	20.3	10.3	10.1	87.2	4.4	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	1.6	2.6	0.2	0.7	5.9	2.3	3.7	10.1	10.3	8.2	6.6	6.5
LnGrp Delay(d),s/veh	52.6	19.5	17.6	80.0	24.6	21.4	51.1	31.1	31.0	118.6	23.3	23.5
LnGrp LOS	D	B	B	E	C	C	D	C	C	F	C	C
Approach Vol, veh/h		243			498			1111			938	
Approach Delay, s/veh		27.6			26.0			33.6			44.1	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	25.7	10.6	29.4	6.5	23.7	11.0	29.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	32.0	7.5	24.0	4.5	32.0	7.5	24.0				
Max Q Clear Time (g_c+I1), s	2.8	7.0	7.5	14.3	4.4	13.2	9.5	19.2				
Green Ext Time (p_c), s	0.0	3.5	0.0	6.6	0.0	3.3	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			35.2									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 8: Industrial Blvd & Naples St






















2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	83	34	215	90	380	81	64	482	400	39	0
Future Volume (veh/h)	18	83	34	215	90	380	81	64	482	400	39	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.60	1.00		0.86	1.00		0.95	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	20	90	24	234	98	373	88	70	413	435	42	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	108	29	159	67	254	63	50	296	347	34	0
Arrive On Green	0.10	0.10	0.10	0.30	0.30	0.30	0.25	0.25	0.25	0.21	0.21	0.00
Sat Flow, veh/h	245	1102	294	529	222	843	253	201	1188	1690	163	0
Grp Volume(v), veh/h	134	0	0	705	0	0	571	0	0	477	0	0
Grp Sat Flow(s),veh/h/ln	1640	0	0	1594	0	0	1643	0	0	1853	0	0
Q Serve(g_s), s	10.9	0.0	0.0	41.0	0.0	0.0	34.0	0.0	0.0	28.0	0.0	0.0
Cycle Q Clear(g_c), s	10.9	0.0	0.0	41.0	0.0	0.0	34.0	0.0	0.0	28.0	0.0	0.0
Prop In Lane	0.15		0.18	0.33		0.53	0.15		0.72	0.91		0.00
Lane Grp Cap(c), veh/h	161	0	0	479	0	0	410	0	0	380	0	0
V/C Ratio(X)	0.83	0.00	0.00	1.47	0.00	0.00	1.39	0.00	0.00	1.25	0.00	0.00
Avail Cap(c_a), veh/h	265	0	0	479	0	0	410	0	0	380	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	60.4	0.0	0.0	47.7	0.0	0.0	51.2	0.0	0.0	54.2	0.0	0.0
Incr Delay (d2), s/veh	11.1	0.0	0.0	223.1	0.0	0.0	191.6	0.0	0.0	134.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	0.0	47.7	0.0	0.0	37.2	0.0	0.0	28.4	0.0	0.0
LnGrp Delay(d),s/veh	71.5	0.0	0.0	270.8	0.0	0.0	242.8	0.0	0.0	188.3	0.0	0.0
LnGrp LOS	E			F			F			F		
Approach Vol, veh/h		134			705			571			477	
Approach Delay, s/veh		71.5			270.8			242.8			188.3	
Approach LOS		E			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		18.4		33.0		46.0		39.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		22.0		28.0		41.0		34.0				
Max Q Clear Time (g_c+I1), s		12.9		30.0		43.0		36.0				
Green Ext Time (p_c), s		0.4		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			227.3									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary























9: Broadway & Naples St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	236	142	136	351	110	139	595	71	35	490	72
Future Volume (veh/h)	154	236	142	136	351	110	139	595	71	35	490	72
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.94	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	167	257	111	148	382	79	151	647	49	38	533	62
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	389	168	163	570	462	163	1065	81	46	807	94
Arrive On Green	0.11	0.32	0.32	0.09	0.31	0.31	0.09	0.32	0.32	0.03	0.26	0.26
Sat Flow, veh/h	1774	1216	525	1774	1863	1511	1774	3317	251	1774	3166	367
Grp Volume(v), veh/h	167	0	368	148	382	79	151	345	351	38	297	298
Grp Sat Flow(s),veh/h/ln	1774	0	1741	1774	1863	1511	1774	1770	1799	1774	1770	1764
Q Serve(g_s), s	6.6	0.0	12.9	5.8	12.6	2.7	6.0	11.6	11.6	1.5	10.6	10.7
Cycle Q Clear(g_c), s	6.6	0.0	12.9	5.8	12.6	2.7	6.0	11.6	11.6	1.5	10.6	10.7
Prop In Lane	1.00		0.30	1.00		1.00	1.00		0.14	1.00		0.21
Lane Grp Cap(c), veh/h	188	0	557	163	570	462	163	568	577	46	451	450
V/C Ratio(X)	0.89	0.00	0.66	0.91	0.67	0.17	0.92	0.61	0.61	0.82	0.66	0.66
Avail Cap(c_a), veh/h	188	0	666	163	686	556	163	568	577	113	451	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	31.1	0.0	20.7	31.7	21.4	17.9	31.8	20.2	20.2	34.2	23.5	23.6
Incr Delay (d2), s/veh	35.9	0.0	1.9	44.2	1.9	0.2	48.8	4.8	4.7	28.4	7.3	7.5
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	5.1	0.0	6.4	4.8	6.8	1.1	5.1	6.4	6.5	1.1	6.0	6.2
LnGrp Delay(d),s/veh	67.0	0.0	22.5	76.0	23.3	18.1	80.6	25.0	24.9	62.6	30.9	31.1
LnGrp LOS	E		C	E	C	B	F	C	C	E	C	C
Approach Vol, veh/h		535			609			847			633	
Approach Delay, s/veh		36.4			35.5			34.9			32.9	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	27.6	10.0	23.0	11.0	26.6	5.3	27.7				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	6.5	27.0	6.5	18.0	7.5	26.0	4.5	20.0				
Max Q Clear Time (g_c+I1), s	7.8	14.9	8.0	12.7	8.6	14.6	3.5	13.6				
Green Ext Time (p_c), s	0.0	3.9	0.0	3.3	0.0	3.8	0.0	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay			34.8									
HCM 2010 LOS			C									













HCM 2010 Signalized Intersection Summary
 10: Broadway & Oxford St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	7	13	185	28	130	20	734	54	50	600	13
Future Volume (veh/h)	12	7	13	185	28	130	20	734	54	50	600	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.95	1.00		0.93	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	8	10	201	30	77	22	798	52	54	652	11
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	356	282	248	144	369	27	1146	75	67	1294	22
Arrive On Green	0.01	0.19	0.19	0.14	0.32	0.32	0.02	0.34	0.34	0.04	0.36	0.36
Sat Flow, veh/h	1774	1863	1476	1774	447	1148	1774	3356	219	1774	3557	60
Grp Volume(v), veh/h	13	8	10	201	0	107	22	421	429	54	324	339
Grp Sat Flow(s),veh/h/ln	1774	1863	1476	1774	0	1596	1774	1770	1806	1774	1770	1847
Q Serve(g_s), s	0.4	0.2	0.3	6.4	0.0	2.9	0.7	12.0	12.0	1.8	8.4	8.4
Cycle Q Clear(g_c), s	0.4	0.2	0.3	6.4	0.0	2.9	0.7	12.0	12.0	1.8	8.4	8.4
Prop In Lane	1.00		1.00	1.00		0.72	1.00		0.12	1.00		0.03
Lane Grp Cap(c), veh/h	17	356	282	248	0	512	27	604	616	67	644	672
V/C Ratio(X)	0.75	0.02	0.04	0.81	0.00	0.21	0.80	0.70	0.70	0.81	0.50	0.50
Avail Cap(c_a), veh/h	136	763	605	288	0	790	136	604	616	136	644	672
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	19.2	19.3	24.5	0.0	14.5	28.8	16.7	16.7	28.0	14.5	14.5
Incr Delay (d2), s/veh	47.5	0.0	0.1	14.1	0.0	0.2	40.2	6.5	6.4	19.9	2.8	2.7
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	0.4	0.1	0.1	4.1	0.0	1.3	0.7	6.9	7.1	1.2	4.6	4.7
LnGrp Delay(d),s/veh	76.4	19.3	19.3	38.6	0.0	14.7	69.0	23.2	23.1	47.9	17.3	17.2
LnGrp LOS	E	B	B	D		B	E	C	C	D	B	B
Approach Vol, veh/h		31			308			872			717	
Approach Delay, s/veh		43.3			30.3			24.3			19.6	
Approach LOS		D			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	16.2	4.4	26.3	4.1	23.8	5.7	25.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	9.5	24.0	4.5	20.0	4.5	29.0	4.5	20.0				
Max Q Clear Time (g_c+I1), s	8.4	2.3	2.7	10.4	2.4	4.9	3.8	14.0				
Green Ext Time (p_c), s	0.1	0.6	0.0	5.9	0.0	0.7	0.0	4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			23.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 11: Bay Blvd & Palomar St

2045 Build - AM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	57	260	77	45	69	29		
Future Volume (veh/h)	57	260	77	45	69	29		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.90	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	62	205	84	32	75	32		
Adj No. of Lanes	1	1	1	1	1	1		
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	349	312	307	235	90	721		
Arrive On Green	0.20	0.20	0.16	0.16	0.05	0.39		
Sat Flow, veh/h	1774	1583	1863	1431	1774	1863		
Grp Volume(v), veh/h	62	205	84	32	75	32		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1431	1774	1863		
Q Serve(g_s), s	0.6	2.4	0.8	0.4	0.9	0.2		
Cycle Q Clear(g_c), s	0.6	2.4	0.8	0.4	0.9	0.2		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	349	312	307	235	90	721		
V/C Ratio(X)	0.18	0.66	0.27	0.14	0.83	0.04		
Avail Cap(c_a), veh/h	1694	1512	1642	1261	478	2463		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	6.8	7.6	7.5	7.3	9.6	3.9		
Incr Delay (d2), s/veh	0.2	2.4	0.5	0.3	17.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	2.3	0.4	0.2	0.8	0.1		
LnGrp Delay(d),s/veh	7.1	9.9	7.9	7.5	26.8	3.9		
LnGrp LOS	A	A	A	A	C	A		
Approach Vol, veh/h	267		116			107		
Approach Delay, s/veh	9.3		7.8			20.0		
Approach LOS	A		A			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				12.9		7.5	4.5	8.4
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				27.0		19.5	5.5	18.0
Max Q Clear Time (g_c+I1), s				2.2		4.4	2.9	2.8
Green Ext Time (p_c), s				0.7		0.7	0.0	0.6
Intersection Summary								
HCM 2010 Ctrl Delay			11.3					
HCM 2010 LOS			B					

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2045 Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	110	4	255	281	0	0	0	0	994	0	36
Future Volume (vph)	0	110	4	255	281	0	0	0	0	994	0	36
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00
Frbp, ped/bikes		1.00	0.96	1.00	1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5085	1524	3433	3539					1681	1681	1529
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5085	1524	3433	3539					1681	1681	1529
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	120	4	277	305	0	0	0	0	1080	0	39
RTOR Reduction (vph)	0	0	3	0	0	0	0	0	0	0	0	24
Lane Group Flow (vph)	0	120	1	277	305	0	0	0	0	540	540	15
Confl. Peds. (#/hr)	2		19	19		2	17					17
Confl. Bikes (#/hr)			1	1								
Turn Type		NA	Perm	Split	NA					Split	NA	Perm
Protected Phases		2		6	6					4	4	
Permitted Phases			2									4
Actuated Green, G (s)		22.7	22.7	13.2	13.2					30.6	30.6	30.6
Effective Green, g (s)		22.7	22.7	13.2	13.2					30.6	30.6	30.6
Actuated g/C Ratio		0.28	0.28	0.16	0.16					0.38	0.38	0.38
Clearance Time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1442	432	566	583					642	642	584
v/s Ratio Prot		c0.02		0.08	c0.09					c0.32	0.32	
v/s Ratio Perm			0.00									0.01
v/c Ratio		0.08	0.00	0.49	0.52					0.84	0.84	0.03
Uniform Delay, d1		21.0	20.5	30.3	30.5					22.5	22.5	15.4
Progression Factor		1.00	1.00	0.06	0.06					1.00	1.00	1.00
Incremental Delay, d2		0.1	0.0	0.6	0.8					9.7	9.7	0.0
Delay (s)		21.1	20.5	2.5	2.7					32.2	32.2	15.4
Level of Service		C	C	A	A					C	C	B
Approach Delay (s)		21.1			2.6			0.0			31.6	
Approach LOS		C			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			21.7			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)				13.5		
Intersection Capacity Utilization			61.5%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: I-5 NB Ramps & Palomar St





















2045 Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	22	1083	0	0	526	1093	14	0	445	0	0	0	
Future Volume (vph)	22	1083	0	0	526	1093	14	0	445	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0			3.5	4.0	3.5	5.0	3.5				
Lane Util. Factor	0.86	0.86			0.86	1.00	0.91	0.86	0.95				
Frbp, ped/bikes	1.00	1.00			1.00	0.99	1.00	1.00	1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00				
Satd. Flow (prot)	1522	4805			6408	1563	3221	1363	1504				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00				
Satd. Flow (perm)	1522	4805			6408	1563	3221	1363	1504				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	24	1177	0	0	572	1188	15	0	484	0	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	192	192	0	0	0	
Lane Group Flow (vph)	22	1179	0	0	572	1188	13	52	50	0	0	0	
Confl. Peds. (#/hr)	3		16	16		3	3					3	
Confl. Bikes (#/hr)			1	1									
Turn Type	Split	NA			NA	Free	Prot	NA	custom				
Protected Phases	2	2			6		3	8	3				
Permitted Phases						Free							
Actuated Green, G (s)	38.4	38.4			13.1	80.0	16.5	16.5	16.5				
Effective Green, g (s)	38.4	38.4			13.1	80.0	16.5	16.5	16.5				
Actuated g/C Ratio	0.48	0.48			0.16	1.00	0.21	0.21	0.21				
Clearance Time (s)	5.0	5.0			3.5		3.5	5.0	3.5				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0				
Lane Grp Cap (vph)	730	2306			1049	1563	664	281	310				
v/s Ratio Prot	0.01	0.25			0.09		0.00	0.04	0.03				
v/s Ratio Perm						c0.76							
v/c Ratio	0.03	0.51			0.55	0.76	0.02	0.18	0.16				
Uniform Delay, d1	11.0	14.3			30.7	0.0	25.3	26.2	26.1				
Progression Factor	0.35	0.29			1.00	1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.5			0.6	3.5	0.0	0.3	0.2				
Delay (s)	3.9	4.6			31.3	3.5	25.3	26.5	26.3				
Level of Service	A	A			C	A	C	C	C				
Approach Delay (s)		4.6			12.6			26.4			0.0		
Approach LOS		A			B			C			A		
Intersection Summary													
HCM 2000 Control Delay			11.8		HCM 2000 Level of Service				B				
HCM 2000 Volume to Capacity ratio			0.91										
Actuated Cycle Length (s)			80.0		Sum of lost time (s)				13.5				
Intersection Capacity Utilization			61.5%		ICU Level of Service				B				
Analysis Period (min)			15										
c Critical Lane Group													

HCM 2010 Signalized Intersection Summary
 14: E Frontage Rd/Walnut Ave & Palomar St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1303	208	2	1484	22	73	0	253	2	0	27
Future Volume (veh/h)	27	1303	208	2	1484	22	73	0	253	2	0	27
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	29	1416	192	2	1613	19	79	0	249	2	0	18
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	2979	404	233	3342	39	320	0	298	113	0	298
Arrive On Green	0.02	0.66	0.66	0.00	0.21	0.21	0.19	0.00	0.19	0.19	0.00	0.19
Sat Flow, veh/h	1774	4511	611	1774	5179	61	1389	0	1583	1126	0	1583
Grp Volume(v), veh/h	29	1064	544	2	1056	576	79	0	249	2	0	18
Grp Sat Flow(s),veh/h/ln	1774	1695	1732	1774	1695	1850	1389	0	1583	1126	0	1583
Q Serve(g_s), s	0.6	15.5	15.6	0.0	27.3	27.3	5.0	0.0	15.2	0.2	0.0	0.9
Cycle Q Clear(g_c), s	0.6	15.5	15.6	0.0	27.3	27.3	5.9	0.0	15.2	15.3	0.0	0.9
Prop In Lane	1.00		0.35	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	2239	1144	233	2188	1194	320	0	298	113	0	298
V/C Ratio(X)	0.13	0.48	0.48	0.01	0.48	0.48	0.25	0.00	0.84	0.02	0.00	0.06
Avail Cap(c_a), veh/h	239	2239	1144	284	2188	1194	462	0	459	228	0	459
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.37	0.37	0.37	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	8.4	8.4	7.2	24.7	24.7	35.8	0.0	39.1	46.5	0.0	33.3
Incr Delay (d2), s/veh	0.2	0.6	1.2	0.0	0.3	0.5	0.4	0.0	7.9	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.4	7.8	0.0	12.9	14.2	1.9	0.0	7.3	0.1	0.0	0.4
LnGrp Delay(d),s/veh	10.2	9.0	9.6	7.2	25.0	25.2	36.2	0.0	47.0	46.6	0.0	33.4
LnGrp LOS	B	A	A	A	C	C	D		D	D		C
Approach Vol, veh/h		1637			1634			328				20
Approach Delay, s/veh		9.2			25.1			44.4				34.7
Approach LOS		A			C			D				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	71.0		23.8	6.7	69.5		23.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	3.0	53.0		29.0	3.0	53.0		29.0				
Max Q Clear Time (g_c+I1), s	2.0	17.6		17.3	2.6	29.3		17.2				
Green Ext Time (p_c), s	0.0	30.3		1.5	0.0	21.2		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			19.7									
HCM 2010 LOS			B									

HCM Signalized Intersection Capacity Analysis
 16: Transit Center Place & Palomar St

*PGD mitigation assumed
 2045 Build - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↕			↗	↖
Traffic Volume (vph)	555	657	346	36	1117	1	161	2	3	2	22	230
Future Volume (vph)	555	657	346	36	1117	1	161	2	3	2	22	230
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.95		1.00	1.00		1.00	1.00			1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.95		1.00	1.00		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.95			1.00	1.00
Satd. Flow (prot)	1770	4579		1770	5084		1681	1679			1856	1543
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.95			1.00	1.00
Satd. Flow (perm)	1770	4579		1770	5084		1681	1679			1856	1543
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	603	714	376	39	1214	1	175	2	3	2	24	250
RTOR Reduction (vph)	0	51	0	0	0	0	0	1	0	0	0	74
Lane Group Flow (vph)	603	1039	0	39	1215	0	91	88	0	0	26	176
Confl. Peds. (#/hr)	19		28	28		19	59		23	23		59
Confl. Bikes (#/hr)			2	2			1		2	2		1
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	43.7	74.0		4.3	34.6		15.4	15.4			15.3	59.0
Effective Green, g (s)	43.7	74.0		4.3	34.6		15.4	15.4			15.3	59.0
Actuated g/C Ratio	0.34	0.58		0.03	0.27		0.12	0.12			0.12	0.46
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	606	2657		59	1379		203	202			222	714
v/s Ratio Prot	c0.34	0.23		0.02	c0.24		c0.05	0.05			0.01	c0.08
v/s Ratio Perm												0.03
v/c Ratio	1.00	0.39		0.66	0.88		0.45	0.44			0.12	0.25
Uniform Delay, d1	41.8	14.5		60.9	44.5		52.1	52.0			50.1	20.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	35.0	0.4		19.4	8.4		1.6	1.5			0.2	0.1
Delay (s)	76.8	15.0		80.3	52.8		53.7	53.5			50.3	20.8
Level of Service	E	B		F	D		D	D			D	C
Approach Delay (s)		37.0			53.7			53.6			23.6	
Approach LOS		D			D			D			C	

Intersection Summary




















HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	127.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

Description: Assumed PGD will mitigate this intersection, instead of GS project

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St























2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	635	1	249	1163	218	1	9	136	6	0	1
Future Volume (veh/h)	22	635	1	249	1163	218	1	9	136	6	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.97	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	24	690	1	271	1264	126	1	10	96	7	0	1
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	3252	5	343	3304	329	288	21	205	161	5	14
Arrive On Green	0.03	1.00	1.00	0.07	0.47	0.47	0.15	0.15	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1774	5244	8	3442	4698	468	1376	147	1413	643	31	96
Grp Volume(v), veh/h	24	446	245	271	912	478	1	0	106	8	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1861	1721	1695	1776	1376	0	1560	770	0	0
Q Serve(g_s), s	1.3	0.0	0.0	7.8	17.4	17.4	0.0	0.0	6.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	0.0	7.8	17.4	17.4	0.1	0.0	6.2	6.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.26	1.00		0.91	0.87		0.12
Lane Grp Cap(c), veh/h	29	2102	1154	343	2384	1249	288	0	227	179	0	0
V/C Ratio(X)	0.83	0.21	0.21	0.79	0.38	0.38	0.00	0.00	0.47	0.04	0.00	0.00
Avail Cap(c_a), veh/h	115	2102	1154	568	2384	1249	501	0	468	378	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.56	0.56	0.56	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.2	0.0	0.0	45.6	12.4	12.4	36.5	0.0	39.2	38.1	0.0	0.0
Incr Delay (d2), s/veh	18.3	0.2	0.4	0.9	0.3	0.5	0.0	0.0	1.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	0.1	3.7	8.2	8.6	0.0	0.0	2.8	0.2	0.0	0.0
LnGrp Delay(d),s/veh	66.5	0.2	0.4	46.5	12.7	12.9	36.5	0.0	40.7	38.2	0.0	0.0
LnGrp LOS	E	A	A	D	B	B	D		D	D		
Approach Vol, veh/h		715			1661			107				8
Approach Delay, s/veh		2.5			18.3			40.6				38.2
Approach LOS		A			B			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.5	67.0		19.5	5.1	75.3		19.5				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	16.5	40.0		30.0	6.5	50.0		30.0				
Max Q Clear Time (g_c+I1), s	9.8	2.0		8.4	3.3	19.4		8.2				
Green Ext Time (p_c), s	0.2	23.8		0.6	0.0	20.6		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				14.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

18: Broadway & Palomar St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	368	147	109	812	127	386	536	58	83	410	432
Future Volume (veh/h)	276	368	147	109	812	127	386	536	58	83	410	432
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	300	400	119	118	883	85	420	583	38	90	446	321
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	368	1421	402	179	1453	139	486	1280	556	145	929	399
Arrive On Green	0.04	0.12	0.12	0.05	0.31	0.31	0.14	0.36	0.36	0.04	0.26	0.26
Sat Flow, veh/h	3442	3901	1105	3442	4698	450	3442	3539	1537	3442	3539	1520
Grp Volume(v), veh/h	300	345	174	118	636	332	420	583	38	90	446	321
Grp Sat Flow(s),veh/h/ln	1721	1695	1615	1721	1695	1758	1721	1770	1537	1721	1770	1520
Q Serve(g_s), s	8.7	9.3	9.8	3.4	16.0	16.1	11.9	12.6	1.6	2.6	10.6	19.7
Cycle Q Clear(g_c), s	8.7	9.3	9.8	3.4	16.0	16.1	11.9	12.6	1.6	2.6	10.6	19.7
Prop In Lane	1.00		0.68	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	1235	588	179	1048	544	486	1280	556	145	929	399
V/C Ratio(X)	0.81	0.28	0.30	0.66	0.61	0.61	0.86	0.46	0.07	0.62	0.48	0.80
Avail Cap(c_a), veh/h	379	1235	588	241	1048	544	516	1310	569	206	991	426
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	0.83	0.83	0.83	0.90	0.90	0.90
Uniform Delay (d), s/veh	47.3	32.0	32.3	46.5	29.4	29.4	42.0	24.4	20.9	47.1	31.1	34.5
Incr Delay (d2), s/veh	12.5	0.6	1.3	3.1	2.6	5.0	11.6	0.2	0.0	3.8	0.4	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	4.4	4.6	1.7	7.8	8.5	6.4	6.2	0.7	1.3	5.3	9.3
LnGrp Delay(d),s/veh	59.7	32.6	33.6	49.6	32.0	34.5	53.6	24.6	20.9	50.9	31.5	43.9
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		819			1086			1041			857	
Approach Delay, s/veh		42.7			34.7			36.2			38.2	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	41.4	18.1	31.3	14.7	35.9	8.2	41.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	32.0	15.0	28.0	11.0	28.0	6.0	37.0				
Max Q Clear Time (g_c+I1), s	5.4	11.8	13.9	21.7	10.7	18.1	4.6	14.6				
Green Ext Time (p_c), s	0.0	11.3	0.2	4.0	0.0	6.8	0.0	9.4				
Intersection Summary												
HCM 2010 Ctrl Delay				37.6								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 19: Industrial Blvd & Anita St

























2045 Build - AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	71	15	63	53	154	60	430	110	114	162	51
Future Volume (veh/h)	46	71	15	63	53	154	60	430	110	114	162	51
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.99	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	50	77	0	68	58	46	65	467	120	124	176	48
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	147	125	96	82	65	83	569	146	159	621	169
Arrive On Green	0.08	0.08	0.00	0.14	0.14	0.14	0.05	0.40	0.40	0.09	0.44	0.44
Sat Flow, veh/h	1774	1863	1583	688	587	465	1774	1418	364	1774	1398	381
Grp Volume(v), veh/h	50	77	0	172	0	0	65	0	587	124	0	224
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	0	0	1774	0	1783	1774	0	1780
Q Serve(g_s), s	1.7	2.5	0.0	6.0	0.0	0.0	2.3	0.0	18.7	4.4	0.0	5.1
Cycle Q Clear(g_c), s	1.7	2.5	0.0	6.0	0.0	0.0	2.3	0.0	18.7	4.4	0.0	5.1
Prop In Lane	1.00		1.00	0.40		0.27	1.00		0.20	1.00		0.21
Lane Grp Cap(c), veh/h	140	147	125	243	0	0	83	0	716	159	0	791
V/C Ratio(X)	0.36	0.52	0.00	0.71	0.00	0.00	0.78	0.00	0.82	0.78	0.00	0.28
Avail Cap(c_a), veh/h	723	759	645	709	0	0	264	0	1006	236	0	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	28.2	0.0	26.2	0.0	0.0	30.1	0.0	17.0	28.4	0.0	11.3
Incr Delay (d2), s/veh	1.5	2.8	0.0	3.7	0.0	0.0	14.8	0.0	3.8	9.4	0.0	0.2
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	0.9	1.4	0.0	3.1	0.0	0.0	1.5	0.0	9.9	2.6	0.0	2.5
LnGrp Delay(d),s/veh	29.4	31.1	0.0	29.9	0.0	0.0	44.9	0.0	20.8	37.8	0.0	11.5
LnGrp LOS	C	C		C			D		C	D		B
Approach Vol, veh/h		127			172			652			348	
Approach Delay, s/veh		30.4			29.9			23.2			20.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.0	6.5	33.3		13.9	9.2	30.6				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		26.0	9.5	35.0		26.0	8.5	36.0				
Max Q Clear Time (g_c+I1), s		4.5	4.3	7.1		8.0	6.4	20.7				
Green Ext Time (p_c), s		0.5	0.0	6.1		0.9	0.1	4.9				
Intersection Summary												
HCM 2010 Ctrl Delay			24.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

20: Broadway & Anita St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	54	52	86	149	206	41	716	46	74	387	91
Future Volume (veh/h)	77	54	52	86	149	206	41	716	46	74	387	91
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	59	23	93	162	164	45	778	41	80	421	47
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	320	266	119	332	276	507	1505	79	376	1464	162
Arrive On Green	0.06	0.17	0.17	0.07	0.18	0.18	0.03	0.44	0.44	0.04	0.46	0.46
Sat Flow, veh/h	1774	1863	1546	1774	1863	1547	1774	3414	180	1774	3201	355
Grp Volume(v), veh/h	84	59	23	93	162	164	45	403	416	80	232	236
Grp Sat Flow(s),veh/h/ln	1774	1863	1546	1774	1863	1547	1774	1770	1824	1774	1770	1786
Q Serve(g_s), s	2.9	1.7	0.8	3.2	4.8	6.0	0.8	10.1	10.1	1.5	5.0	5.1
Cycle Q Clear(g_c), s	2.9	1.7	0.8	3.2	4.8	6.0	0.8	10.1	10.1	1.5	5.0	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.20
Lane Grp Cap(c), veh/h	107	320	266	119	332	276	507	780	804	376	809	817
V/C Ratio(X)	0.78	0.18	0.09	0.78	0.49	0.59	0.09	0.52	0.52	0.21	0.29	0.29
Avail Cap(c_a), veh/h	159	1095	909	159	1095	909	591	780	804	431	809	817
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	28.4	21.7	21.3	28.1	22.6	23.1	9.1	12.4	12.4	9.5	10.4	10.4
Incr Delay (d2), s/veh	13.7	0.3	0.1	16.2	1.1	2.0	0.1	2.4	2.4	0.3	0.9	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	1.8	0.9	0.3	2.1	2.6	2.7	0.4	5.5	5.6	0.7	2.6	2.7
LnGrp Delay(d),s/veh	42.1	22.0	21.5	44.3	23.7	25.2	9.1	14.8	14.8	9.8	11.3	11.3
LnGrp LOS	D	C	C	D	C	C	A	B	B	A	B	B
Approach Vol, veh/h		166			419			864			548	
Approach Delay, s/veh		32.1			28.9			14.5			11.1	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	15.5	5.1	33.0	7.2	15.9	6.1	32.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	5.5	36.0	4.5	27.0	5.5	36.0	4.5	27.0				
Max Q Clear Time (g_c+I1), s	5.2	3.7	2.8	7.1	4.9	8.0	3.5	12.1				
Green Ext Time (p_c), s	0.0	2.0	0.0	7.9	0.0	1.9	0.0	6.8				
Intersection Summary												
HCM 2010 Ctrl Delay			18.0									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

21: Main St & I-5 SB Ramps

2045 Build - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↕	↕	↗	↖	↗		
Traffic Volume (veh/h)	2	49	150	67	562	63		
Future Volume (veh/h)	2	49	150	67	562	63		
Number	5	2	6	16	7	14		
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		
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	2	53	163	0	611	0		
Adj No. of Lanes	0	1	1	1	1	1		
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	0	950	950	808	654	583		
Arrive On Green	0.00	0.51	0.51	0.00	0.37	0.00		
Sat Flow, veh/h	0	1863	1863	1583	1774	1583		
Grp Volume(v), veh/h	0	53	163	0	611	0		
Grp Sat Flow(s),veh/h/ln	0	1863	1863	1583	1774	1583		
Q Serve(g_s), s	0.0	1.0	3.3	0.0	23.2	0.0		
Cycle Q Clear(g_c), s	0.0	1.0	3.3	0.0	23.2	0.0		
Prop In Lane	0.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	0	950	950	808	654	583		
V/C Ratio(X)	0.00	0.06	0.17	0.00	0.93	0.00		
Avail Cap(c_a), veh/h	0	950	950	808	697	622		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	8.6	9.2	0.0	21.3	0.0		
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.0	19.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.5	1.8	0.0	14.9	0.0		
LnGrp Delay(d),s/veh	0.0	8.8	9.6	0.0	40.5	0.0		
LnGrp LOS		A	A		D			
Approach Vol, veh/h		53	163		611			
Approach Delay, s/veh		8.8	9.6		40.5			
Approach LOS		A	A		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.7		29.3	0.0	40.7		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		34.0		27.5	4.5	26.0		
Max Q Clear Time (g_c+I1), s		3.0		25.2	0.0	5.3		
Green Ext Time (p_c), s		1.3		0.6	0.0	1.1		
Intersection Summary								
HCM 2010 Ctrl Delay			32.4					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary

22: Main St & I-5 NB Ramps





















2045 Build - AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	30	580	206	813	192	11		
Future Volume (veh/h)	30	580	206	813	192	11		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	33	630	224	559	209	8		
Adj No. of Lanes	1	2	3	2	2	1		
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	40	2712	3529	1894	313	144		
Arrive On Green	0.02	0.77	0.69	0.69	0.09	0.09		
Sat Flow, veh/h	1774	3632	5253	2729	3442	1583		
Grp Volume(v), veh/h	33	630	224	559	209	8		
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1365	1721	1583		
Q Serve(g_s), s	1.3	3.5	1.0	5.5	4.1	0.3		
Cycle Q Clear(g_c), s	1.3	3.5	1.0	5.5	4.1	0.3		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	40	2712	3529	1894	313	144		
V/C Ratio(X)	0.83	0.23	0.06	0.30	0.67	0.06		
Avail Cap(c_a), veh/h	190	2712	3529	1894	590	271		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.37	0.37	1.00	1.00		
Uniform Delay (d), s/veh	34.1	2.3	3.4	4.1	30.8	29.1		
Incr Delay (d2), s/veh	33.4	0.2	0.0	0.1	2.5	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.0	1.7	0.5	2.1	2.1	0.3		
LnGrp Delay(d),s/veh	67.5	2.5	3.4	4.3	33.3	29.2		
LnGrp LOS	E	A	A	A	C	C		
Approach Vol, veh/h		663	783		217			
Approach Delay, s/veh		5.8	4.0		33.1			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		58.6		11.4	5.1	53.6		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		48.0		12.0	7.5	37.0		
Max Q Clear Time (g_c+I1), s		5.5		6.1	3.3	7.5		
Green Ext Time (p_c), s		10.9		0.3	0.0	10.0		
Intersection Summary								
HCM 2010 Ctrl Delay			8.5					
HCM 2010 LOS			A					

























HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	379	154	287	605	43	296	482	365	14	136	90
Future Volume (veh/h)	75	379	154	287	605	43	296	482	365	14	136	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	82	412	134	312	658	43	322	524	349	15	148	73
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	463	148	321	758	50	349	534	356	18	384	190
Arrive On Green	0.13	0.18	0.18	0.18	0.23	0.23	0.20	0.52	0.52	0.01	0.33	0.33
Sat Flow, veh/h	1774	2605	836	1774	3364	220	1774	1037	691	1774	1171	577
Grp Volume(v), veh/h	82	278	268	312	346	355	322	0	873	15	0	221
Grp Sat Flow(s),veh/h/ln	1774	1770	1671	1774	1770	1814	1774	0	1728	1774	0	1748
Q Serve(g_s), s	6.1	22.4	23.0	25.6	27.5	27.6	26.1	0.0	72.5	1.2	0.0	14.2
Cycle Q Clear(g_c), s	6.1	22.4	23.0	25.6	27.5	27.6	26.1	0.0	72.5	1.2	0.0	14.2
Prop In Lane	1.00		0.50	1.00		0.12	1.00		0.40	1.00		0.33
Lane Grp Cap(c), veh/h	236	314	297	321	399	409	349	0	890	18	0	574
V/C Ratio(X)	0.35	0.88	0.90	0.97	0.87	0.87	0.92	0.00	0.98	0.84	0.00	0.39
Avail Cap(c_a), veh/h	236	314	297	321	399	409	479	0	897	55	0	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.6	58.7	58.9	59.6	54.6	54.6	57.7	0.0	34.8	72.3	0.0	37.8
Incr Delay (d2), s/veh	4.0	28.4	32.3	43.5	21.6	21.4	19.1	0.0	25.3	61.0	0.0	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	3.3	13.4	13.3	16.4	15.8	16.2	14.6	0.0	40.7	0.9	0.0	6.9
LnGrp Delay(d),s/veh	61.6	87.1	91.3	103.0	76.1	76.0	76.8	0.0	60.1	133.3	0.0	38.2
LnGrp LOS	E	F	F	F	E	E	E		E	F		D
Approach Vol, veh/h		628			1013			1195				236
Approach Delay, s/veh		85.6			84.4			64.6				44.3
Approach LOS		F			F			E				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	31.0	32.3	53.0	23.0	38.0	5.0	80.4				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	26.5	26.0	39.5	41.0	19.5	33.0	4.5	76.0				
Max Q Clear Time (g_c+I1), s	27.6	25.0	28.1	16.2	8.1	29.6	3.2	74.5				
Green Ext Time (p_c), s	0.0	0.7	0.8	9.5	0.1	2.2	0.0	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				73.8								
HCM 2010 LOS				E								

HCM 2010 Signalized Intersection Summary
 24: Broadway & Main St













2045 Build - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	427	81	246	582	152	246	564	422	147	270	108
Future Volume (veh/h)	87	427	81	246	582	152	246	564	422	147	270	108
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	464	49	267	633	110	267	613	294	160	293	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	846	369	260	1123	491	260	1172	512	191	1036	463
Arrive On Green	0.07	0.24	0.24	0.15	0.32	0.32	0.15	0.33	0.33	0.11	0.29	0.00
Sat Flow, veh/h	1774	3539	1542	1774	3539	1548	1774	3539	1547	1774	3539	1583
Grp Volume(v), veh/h	95	464	49	267	633	110	267	613	294	160	293	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1542	1774	1770	1548	1774	1770	1547	1774	1770	1583
Q Serve(g_s), s	5.4	11.8	2.6	15.0	15.2	5.4	15.0	14.4	16.1	9.1	6.5	0.0
Cycle Q Clear(g_c), s	5.4	11.8	2.6	15.0	15.2	5.4	15.0	14.4	16.1	9.1	6.5	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	121	846	369	260	1123	491	260	1172	512	191	1036	463
V/C Ratio(X)	0.79	0.55	0.13	1.03	0.56	0.22	1.03	0.52	0.57	0.84	0.28	0.00
Avail Cap(c_a), veh/h	208	1278	557	260	1381	604	260	1172	512	242	1036	463
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	0.00
Uniform Delay (d), s/veh	47.0	34.2	30.7	43.7	29.1	25.7	43.7	27.7	28.3	44.8	27.9	0.0
Incr Delay (d2), s/veh	10.7	0.6	0.2	63.4	0.4	0.2	63.4	1.7	4.6	18.0	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	3.0	5.8	1.1	11.9	7.5	2.3	11.9	7.3	7.5	5.4	3.3	0.0
LnGrp Delay(d),s/veh	57.7	34.7	30.8	107.2	29.5	25.9	107.2	29.4	32.9	62.9	28.6	0.0
LnGrp LOS	E	C	C	F	C	C	F	C	C	E	C	
Approach Vol, veh/h		608			1010			1174			453	
Approach Delay, s/veh		38.0			49.7			48.0			40.7	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	29.5	19.0	35.0	11.0	37.5	15.1	38.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	37.0	15.0	30.0	12.0	40.0	14.0	31.0				
Max Q Clear Time (g_c+I1), s	17.0	13.8	17.0	8.5	7.4	17.2	11.1	18.1				
Green Ext Time (p_c), s	0.0	8.8	0.0	7.3	0.1	8.7	0.1	5.7				
Intersection Summary												
HCM 2010 Ctrl Delay			45.6									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary





















1: Bay Blvd & L St

2045 Build - PM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	267	145	610	118	329	457		
Future Volume (veh/h)	267	145	610	118	329	457		
Number	1	16	8	18	7	4		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	290	158	663	128	358	497		
Adj No. of Lanes	1	1	1	1	1	1		
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	368	329	825	701	466	1200		
Arrive On Green	0.21	0.21	0.44	0.44	0.14	0.64		
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863		
Grp Volume(v), veh/h	290	158	663	128	358	497		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863		
Q Serve(g_s), s	8.9	5.0	17.7	2.8	5.5	7.4		
Cycle Q Clear(g_c), s	8.9	5.0	17.7	2.8	5.5	7.4		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	368	329	825	701	466	1200		
V/C Ratio(X)	0.79	0.48	0.80	0.18	0.77	0.41		
Avail Cap(c_a), veh/h	634	566	975	829	605	1495		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	21.5	20.0	13.8	9.7	10.8	5.0		
Incr Delay (d2), s/veh	3.8	1.1	4.3	0.1	4.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.7	4.6	10.0	1.2	3.3	3.8		
LnGrp Delay(d),s/veh	25.3	21.1	18.1	9.8	15.2	5.2		
LnGrp LOS	C	C	B	A	B	A		
Approach Vol, veh/h	448		791			855		
Approach Delay, s/veh	23.8		16.7			9.4		
Approach LOS	C		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				41.9		15.4	11.5	30.4
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				46.0		20.5	12.5	30.0
Max Q Clear Time (g_c+I1), s				9.4		10.9	7.5	19.7
Green Ext Time (p_c), s				10.6		1.0	0.5	5.7
Intersection Summary								
HCM 2010 Ctrl Delay			15.2					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary 2: Industrial Blvd/Driveway & L St

2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	706	790	126	433	8	188	8	152	4	10	5
Future Volume (veh/h)	6	706	790	126	433	8	188	8	152	4	10	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	7	767	546	137	471	6	204	9	115	4	11	3
Adj No. of Lanes	1	2	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	1298	577	133	1561	20	298	11	521	73	161	32
Arrive On Green	0.01	0.37	0.37	0.08	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1774	3539	1575	1774	3579	46	542	32	1562	0	484	97
Grp Volume(v), veh/h	7	767	546	137	233	244	213	0	115	18	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1575	1774	1770	1854	574	0	1562	581	0	0
Q Serve(g_s), s	0.2	10.5	20.2	4.5	5.1	5.1	0.0	0.0	3.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	10.5	20.2	4.5	5.1	5.1	20.0	0.0	3.2	20.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.96		1.00	0.22		0.17
Lane Grp Cap(c), veh/h	10	1298	577	133	772	809	309	0	521	267	0	0
V/C Ratio(X)	0.72	0.59	0.95	1.03	0.30	0.30	0.69	0.00	0.22	0.07	0.00	0.00
Avail Cap(c_a), veh/h	133	1298	577	133	772	809	309	0	521	267	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.8	15.4	18.4	27.7	11.0	11.0	20.9	0.0	14.4	15.0	0.0	0.0
Incr Delay (d2), s/veh	66.3	2.0	26.2	86.1	1.0	1.0	6.4	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.5	12.8	5.4	2.7	2.8	4.0	0.0	1.4	0.2	0.0	0.0
LnGrp Delay(d),s/veh	96.1	17.3	44.6	114.3	12.0	11.9	27.3	0.0	14.6	15.1	0.0	0.0
LnGrp LOS	F	B	D	F	B	B	C		B	B		
Approach Vol, veh/h		1320			614			328			18	
Approach Delay, s/veh		29.0			34.8			22.8			15.1	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	27.0		25.0	3.8	31.2		25.0				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	4.5	22.0		20.0	4.5	22.0		20.0				
Max Q Clear Time (g_c+I1), s	6.5	22.2		22.0	2.2	7.1		22.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			29.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary













3: Broadway & L St

2045 Build - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	458	319	200	244	40	251	718	280	50	764	55
Future Volume (veh/h)	41	458	319	200	244	40	251	718	280	50	764	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	45	498	225	217	265	27	273	780	202	54	830	37
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	824	360	183	985	99	203	1483	811	69	1216	580
Arrive On Green	0.03	0.23	0.23	0.10	0.30	0.30	0.11	0.42	0.42	0.04	0.34	0.34
Sat Flow, veh/h	1774	3539	1547	1774	3240	327	1774	3539	1545	1774	3539	1541
Grp Volume(v), veh/h	45	498	225	217	144	148	273	780	202	54	830	37
Grp Sat Flow(s),veh/h/ln	1774	1770	1547	1774	1770	1797	1774	1770	1545	1774	1770	1541
Q Serve(g_s), s	2.2	11.0	11.4	9.0	5.4	5.5	10.0	14.3	6.3	2.6	17.6	1.3
Cycle Q Clear(g_c), s	2.2	11.0	11.4	9.0	5.4	5.5	10.0	14.3	6.3	2.6	17.6	1.3
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	824	360	183	538	546	203	1483	811	69	1216	580
V/C Ratio(X)	0.79	0.60	0.62	1.19	0.27	0.27	1.34	0.53	0.25	0.78	0.68	0.06
Avail Cap(c_a), veh/h	122	1337	585	183	729	741	203	1483	811	162	1216	580
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	42.0	29.9	30.1	39.2	23.0	23.1	38.7	18.9	11.5	41.6	24.6	17.4
Incr Delay (d2), s/veh	21.3	0.7	1.8	125.9	0.3	0.3	183.9	1.3	0.7	17.2	3.1	0.2
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	1.4	5.4	5.1	10.8	2.7	2.8	15.2	7.2	2.8	1.6	9.1	0.6
LnGrp Delay(d),s/veh	63.3	30.6	31.8	165.1	23.3	23.3	222.6	20.2	12.2	58.8	27.7	17.7
LnGrp LOS	E	C	C	F	C	C	F	C	B	E	C	B
Approach Vol, veh/h		768			509			1255			921	
Approach Delay, s/veh		32.9			83.8			63.0			29.1	
Approach LOS		C			F			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	25.3	14.0	35.0	6.8	31.5	7.4	41.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	9.0	33.0	10.0	30.0	6.0	36.0	8.0	32.0				
Max Q Clear Time (g_c+I1), s	11.0	13.4	12.0	19.6	4.2	7.5	4.6	16.3				
Green Ext Time (p_c), s	0.0	5.7	0.0	7.5	0.0	6.3	0.0	10.1				
Intersection Summary												
HCM 2010 Ctrl Delay			50.3									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 4: I-5 SB On-ramp/I-5 SB Off-ramp & L St













2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑					↑↑		↑
Traffic Volume (veh/h)	0	180	267	391	230	0	0	0	0	1315	0	182
Future Volume (veh/h)	0	180	267	391	230	0	0	0	0	1315	0	182
Number	5	2	12	1	6	16				7	4	14
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
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	196	290	425	250	0				1429	0	198
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	740	331	540	1440	0				1641	0	755
Arrive On Green	0.00	0.21	0.21	0.16	0.41	0.00				0.48	0.00	0.48
Sat Flow, veh/h	0	3632	1583	3442	3632	0				3442	0	1583
Grp Volume(v), veh/h	0	196	290	425	250	0				1429	0	198
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1721	0	1583
Q Serve(g_s), s	0.0	4.0	15.2	10.2	3.9	0.0				31.9	0.0	6.4
Cycle Q Clear(g_c), s	0.0	4.0	15.2	10.2	3.9	0.0				31.9	0.0	6.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	740	331	540	1440	0				1641	0	755
V/C Ratio(X)	0.00	0.26	0.88	0.79	0.17	0.00				0.87	0.00	0.26
Avail Cap(c_a), veh/h	0	783	350	1022	1978	0				2084	0	959
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	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.4	32.9	34.8	16.3	0.0				20.1	0.0	13.4
Incr Delay (d2), s/veh	0.0	0.2	20.5	2.6	0.1	0.0				3.5	0.0	0.2
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	2.0	8.6	5.0	1.9	0.0				15.9	0.0	2.8
LnGrp Delay(d),s/veh	0.0	28.6	53.4	37.4	16.3	0.0				23.6	0.0	13.6
LnGrp LOS		C	D	D	B					C		B
Approach Vol, veh/h		486			675						1627	
Approach Delay, s/veh		43.4			29.6						22.4	
Approach LOS		D			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.0	23.0		46.0		39.9						
Change Period (Y+Rc), s	3.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	25.5	19.0		52.0		48.0						
Max Q Clear Time (g_c+I1), s	12.2	17.2		33.9		5.9						
Green Ext Time (p_c), s	1.3	0.7		7.1		4.2						
Intersection Summary												
HCM 2010 Ctrl Delay				27.8								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

















5: Industrial Blvd & I-5 NB Ramps

2045 Build - PM

								
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	143	370	1032	197	671	245		
Future Volume (veh/h)	143	370	1032	197	671	245		
Number	5	12	3	8	4	14		
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		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	155	259	1122	214	729	173		
Adj No. of Lanes	1	1	1	1	1	1		
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	242	216	846	1503	571	484		
Arrive On Green	0.14	0.14	0.48	0.81	0.31	0.31		
Sat Flow, veh/h	1774	1583	1774	1863	1863	1578		
Grp Volume(v), veh/h	155	259	1122	214	729	173		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1578		
Q Serve(g_s), s	12.4	20.5	71.5	3.8	46.0	12.8		
Cycle Q Clear(g_c), s	12.4	20.5	71.5	3.8	46.0	12.8		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	242	216	846	1503	571	484		
V/C Ratio(X)	0.64	1.20	1.33	0.14	1.28	0.36		
Avail Cap(c_a), veh/h	242	216	846	1503	571	484		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	61.3	64.8	39.3	3.2	52.0	40.5		
Incr Delay (d2), s/veh	5.5	124.6	155.3	0.0	137.4	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	6.4	16.5	71.5	1.9	45.5	5.6		
LnGrp Delay(d),s/veh	66.8	189.3	194.5	3.2	189.4	40.9		
LnGrp LOS	E	F	F	A	F	D		
Approach Vol, veh/h	414			1336	902			
Approach Delay, s/veh	143.4			163.9	161.0			
Approach LOS	F			F	F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		24.0	75.0	51.0				126.0
Change Period (Y+Rc), s		3.5	3.5	5.0				5.0
Max Green Setting (Gmax), s		20.5	71.5	46.0				121.0
Max Q Clear Time (g_c+I1), s		22.5	73.5	48.0				5.8
Green Ext Time (p_c), s		0.0	0.0	0.0				8.5
Intersection Summary								
HCM 2010 Ctrl Delay			159.7					
HCM 2010 LOS			F					
























HCM 2010 Signalized Intersection Summary
6: Industrial Blvd & Moss St

2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	13	38	13	51	544	134	393	5	359	556	126
Future Volume (veh/h)	292	13	38	13	51	544	134	393	5	359	556	126
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	317	14	39	14	55	375	146	427	5	390	604	128
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	11	29	8	32	216	109	318	4	194	300	64
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.23	0.23	0.23	0.31	0.31	0.31
Sat Flow, veh/h	1503	66	185	51	200	1364	464	1357	16	624	966	205
Grp Volume(v), veh/h	370	0	0	444	0	0	578	0	0	1122	0	0
Grp Sat Flow(s),veh/h/ln	1754	0	0	1614	0	0	1837	0	0	1795	0	0
Q Serve(g_s), s	23.0	0.0	0.0	23.0	0.0	0.0	34.0	0.0	0.0	45.0	0.0	0.0
Cycle Q Clear(g_c), s	23.0	0.0	0.0	23.0	0.0	0.0	34.0	0.0	0.0	45.0	0.0	0.0
Prop In Lane	0.86		0.11	0.03		0.84	0.25		0.01	0.35		0.11
Lane Grp Cap(c), veh/h	278	0	0	256	0	0	431	0	0	557	0	0
V/C Ratio(X)	1.33	0.00	0.00	1.73	0.00	0.00	1.34	0.00	0.00	2.01	0.00	0.00
Avail Cap(c_a), veh/h	278	0	0	256	0	0	431	0	0	557	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.0	0.0	0.0	61.0	0.0	0.0	55.5	0.0	0.0	50.0	0.0	0.0
Incr Delay (d2), s/veh	171.0	0.0	0.0	346.0	0.0	0.0	168.9	0.0	0.0	462.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	0.0	0.0	34.9	0.0	0.0	37.4	0.0	0.0	93.9	0.0	0.0
LnGrp Delay(d),s/veh	232.0	0.0	0.0	407.0	0.0	0.0	224.4	0.0	0.0	512.7	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		370			444			578			1122	
Approach Delay, s/veh		232.0			407.0			224.4			512.7	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		50.0		28.0		39.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		23.0		45.0		23.0		34.0				
Max Q Clear Time (g_c+I1), s		25.0		47.0		25.0		36.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				386.4								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary
7: Broadway & Moss St

















2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	255	34	27	276	102	127	1007	55	278	797	204
Future Volume (veh/h)	89	255	34	27	276	102	127	1007	55	278	797	204
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	97	277	23	29	300	72	138	1095	53	302	866	188
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	526	433	35	436	357	169	1151	56	326	1215	264
Arrive On Green	0.07	0.28	0.28	0.02	0.23	0.23	0.10	0.34	0.34	0.18	0.42	0.42
Sat Flow, veh/h	1774	1863	1533	1774	1863	1527	1774	3427	166	1774	2867	622
Grp Volume(v), veh/h	97	277	23	29	300	72	138	565	583	302	534	520
Grp Sat Flow(s),veh/h/ln	1774	1863	1533	1774	1863	1527	1774	1770	1823	1774	1770	1719
Q Serve(g_s), s	5.1	11.9	1.0	1.6	14.0	3.6	7.3	29.7	29.7	16.0	23.8	23.8
Cycle Q Clear(g_c), s	5.1	11.9	1.0	1.6	14.0	3.6	7.3	29.7	29.7	16.0	23.8	23.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.36
Lane Grp Cap(c), veh/h	121	526	433	35	436	357	169	594	612	326	750	729
V/C Ratio(X)	0.80	0.53	0.05	0.82	0.69	0.20	0.81	0.95	0.95	0.93	0.71	0.71
Avail Cap(c_a), veh/h	121	645	531	102	626	513	214	594	612	326	750	729
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	43.8	28.8	24.9	46.5	33.3	29.3	42.3	30.9	30.9	38.3	22.6	22.7
Incr Delay (d2), s/veh	30.8	0.8	0.1	34.5	1.9	0.3	17.2	26.7	26.3	31.6	5.7	5.9
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	3.5	6.3	0.4	1.1	7.4	1.5	4.4	18.8	19.4	10.7	12.8	12.4
LnGrp Delay(d),s/veh	74.5	29.7	25.0	81.1	35.3	29.6	59.5	57.5	57.2	69.9	28.3	28.5
LnGrp LOS	E	C	C	F	D	C	E	E	E	E	C	C
Approach Vol, veh/h		397			401			1286			1356	
Approach Delay, s/veh		40.4			37.6			57.6			37.7	
Approach LOS		D			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	31.9	12.6	45.4	10.0	27.3	21.0	37.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	5.5	33.0	11.5	38.0	6.5	32.0	17.5	32.0				
Max Q Clear Time (g_c+I1), s	3.6	13.9	9.3	25.8	7.1	16.0	18.0	31.7				
Green Ext Time (p_c), s	0.0	3.5	0.1	9.6	0.0	3.3	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			45.4									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary

8: Industrial Blvd & Naples St






















2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	117	80	373	112	399	60	94	435	510	96	0
Future Volume (veh/h)	38	117	80	373	112	399	60	94	435	510	96	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1900	1937	1900	1900	1937	1900	1900	1937	1900
Adj Flow Rate, veh/h	41	127	72	405	122	405	65	102	357	554	104	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	137	78	213	64	213	43	68	237	356	67	0
Arrive On Green	0.14	0.14	0.14	0.28	0.28	0.28	0.21	0.21	0.21	0.23	0.23	0.00
Sat Flow, veh/h	305	946	536	752	226	752	209	328	1147	1565	294	0
Grp Volume(v), veh/h	240	0	0	932	0	0	524	0	0	658	0	0
Grp Sat Flow(s),veh/h/ln	1787	0	0	1730	0	0	1684	0	0	1859	0	0
Q Serve(g_s), s	19.2	0.0	0.0	41.0	0.0	0.0	30.0	0.0	0.0	33.0	0.0	0.0
Cycle Q Clear(g_c), s	19.2	0.0	0.0	41.0	0.0	0.0	30.0	0.0	0.0	33.0	0.0	0.0
Prop In Lane	0.17		0.30	0.43		0.43	0.12		0.68	0.84		0.00
Lane Grp Cap(c), veh/h	259	0	0	489	0	0	348	0	0	423	0	0
V/C Ratio(X)	0.93	0.00	0.00	1.91	0.00	0.00	1.50	0.00	0.00	1.56	0.00	0.00
Avail Cap(c_a), veh/h	259	0	0	489	0	0	348	0	0	423	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	61.2	0.0	0.0	52.0	0.0	0.0	57.5	0.0	0.0	56.0	0.0	0.0
Incr Delay (d2), s/veh	36.9	0.0	0.0	415.0	0.0	0.0	241.2	0.0	0.0	261.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	0.0	76.0	0.0	0.0	37.3	0.0	0.0	47.6	0.0	0.0
LnGrp Delay(d),s/veh	98.1	0.0	0.0	467.0	0.0	0.0	298.7	0.0	0.0	317.3	0.0	0.0
LnGrp LOS	F			F			F			F		
Approach Vol, veh/h		240			932			524			658	
Approach Delay, s/veh		98.1			467.0			298.7			317.3	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		38.0		46.0		35.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		33.0		41.0		30.0				
Max Q Clear Time (g_c+I1), s		21.2		35.0		43.0		32.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				350.1								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary

9: Broadway & Naples St























2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	325	110	217	236	111	123	844	194	61	602	39
Future Volume (veh/h)	181	325	110	217	236	111	123	844	194	61	602	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.92	1.00		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	197	353	100	236	257	76	134	917	173	66	654	34
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	394	112	253	555	448	166	968	182	85	969	50
Arrive On Green	0.13	0.29	0.29	0.14	0.30	0.30	0.09	0.33	0.33	0.05	0.28	0.28
Sat Flow, veh/h	1774	1379	391	1774	1863	1505	1774	2929	552	1774	3405	177
Grp Volume(v), veh/h	197	0	453	236	257	76	134	554	536	66	340	348
Grp Sat Flow(s),veh/h/ln	1774	0	1769	1774	1863	1505	1774	1770	1711	1774	1770	1812
Q Serve(g_s), s	9.5	0.0	21.6	11.5	9.9	3.3	6.5	26.8	26.8	3.2	14.9	14.9
Cycle Q Clear(g_c), s	9.5	0.0	21.6	11.5	9.9	3.3	6.5	26.8	26.8	3.2	14.9	14.9
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.32	1.00		0.10
Lane Grp Cap(c), veh/h	231	0	506	253	555	448	166	585	566	85	504	516
V/C Ratio(X)	0.85	0.00	0.90	0.93	0.46	0.17	0.81	0.95	0.95	0.78	0.67	0.68
Avail Cap(c_a), veh/h	232	0	544	253	594	480	192	585	566	91	504	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	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	37.3	0.0	30.1	37.2	25.1	22.8	39.0	28.6	28.6	41.3	27.8	27.8
Incr Delay (d2), s/veh	24.8	0.0	16.7	39.1	0.6	0.2	19.6	26.2	27.0	32.5	7.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	12.8	8.4	5.2	1.4	4.1	17.3	16.9	2.3	8.2	8.4
LnGrp Delay(d),s/veh	62.2	0.0	46.8	76.3	25.7	23.0	58.6	54.9	55.6	73.8	34.8	34.7
LnGrp LOS	E		D	E	C	C	E	D	E	E	C	C
Approach Vol, veh/h		650			569			1224			754	
Approach Delay, s/veh		51.4			46.3			55.6			38.2	
Approach LOS		D			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	30.1	11.7	30.0	14.9	31.1	7.7	34.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	12.5	27.0	9.5	24.0	11.5	28.0	4.5	29.0				
Max Q Clear Time (g_c+I1), s	13.5	23.6	8.5	16.9	11.5	11.9	5.2	28.8				
Green Ext Time (p_c), s	0.0	1.5	0.0	5.3	0.0	4.2	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			49.0									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary













10: Broadway & Oxford St

2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	87	88	135	9	134	15	848	87	165	899	10
Future Volume (veh/h)	78	87	88	135	9	134	15	848	87	165	899	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.94	1.00		0.92	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	85	95	64	147	10	88	16	922	83	179	977	11
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	405	319	183	40	352	20	1049	94	211	1539	17
Arrive On Green	0.06	0.22	0.22	0.10	0.26	0.26	0.01	0.32	0.32	0.12	0.43	0.43
Sat Flow, veh/h	1774	1863	1467	1774	155	1360	1774	3258	293	1774	3582	40
Grp Volume(v), veh/h	85	95	64	147	0	98	16	501	504	179	483	505
Grp Sat Flow(s),veh/h/ln	1774	1863	1467	1774	0	1514	1774	1770	1781	1774	1770	1852
Q Serve(g_s), s	3.4	3.0	2.5	5.8	0.0	3.7	0.6	19.1	19.1	7.1	15.3	15.3
Cycle Q Clear(g_c), s	3.4	3.0	2.5	5.8	0.0	3.7	0.6	19.1	19.1	7.1	15.3	15.3
Prop In Lane	1.00		1.00	1.00		0.90	1.00		0.16	1.00		0.02
Lane Grp Cap(c), veh/h	109	405	319	183	0	393	20	570	574	211	761	796
V/C Ratio(X)	0.78	0.23	0.20	0.80	0.00	0.25	0.79	0.88	0.88	0.85	0.63	0.63
Avail Cap(c_a), veh/h	162	626	493	186	0	530	112	570	574	211	761	796
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	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	23.0	22.9	31.3	0.0	20.9	35.2	22.9	22.9	30.8	16.0	16.0
Incr Delay (d2), s/veh	13.2	0.3	0.3	21.6	0.0	0.3	47.8	17.3	17.3	26.1	4.0	3.8
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	2.1	1.6	1.1	3.9	0.0	1.6	0.6	12.1	12.1	5.0	8.2	8.6
LnGrp Delay(d),s/veh	46.2	23.3	23.2	52.9	0.0	21.3	83.0	40.2	40.1	56.9	20.0	19.8
LnGrp LOS	D	C	C	D		C	F	D	D	E	B	B
Approach Vol, veh/h		244			245			1021			1167	
Approach Delay, s/veh		31.3			40.3			40.9			25.6	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	20.5	4.3	35.7	7.9	23.5	12.0	28.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	7.5	24.0	4.5	27.0	6.5	25.0	8.5	23.0				
Max Q Clear Time (g_c+I1), s	7.8	5.0	2.6	17.3	5.4	5.7	9.1	21.1				
Green Ext Time (p_c), s	0.0	1.3	0.0	7.4	0.0	1.3	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			33.3									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 11: Bay Blvd & Palomar St

2045 Build - PM

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	62	124	67	79	341	80		
Future Volume (veh/h)	62	124	67	79	341	80		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	67	96	73	53	371	87		
Adj No. of Lanes	1	1	1	1	1	1		
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	184	164	273	225	494	1048		
Arrive On Green	0.10	0.10	0.15	0.15	0.28	0.56		
Sat Flow, veh/h	1774	1583	1863	1537	1774	1863		
Grp Volume(v), veh/h	67	96	73	53	371	87		
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1537	1774	1863		
Q Serve(g_s), s	0.9	1.5	0.9	0.8	4.9	0.5		
Cycle Q Clear(g_c), s	0.9	1.5	0.9	0.8	4.9	0.5		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	184	164	273	225	494	1048		
V/C Ratio(X)	0.36	0.58	0.27	0.24	0.75	0.08		
Avail Cap(c_a), veh/h	1358	1212	1316	1086	1080	2706		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.6	10.9	9.7	9.6	8.4	2.6		
Incr Delay (d2), s/veh	1.2	3.3	0.5	0.5	2.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	1.4	0.5	0.4	2.7	0.3		
LnGrp Delay(d),s/veh	11.8	14.2	10.2	10.1	10.7	2.6		
LnGrp LOS	B	B	B	B	B	A		
Approach Vol, veh/h	163		126			458		
Approach Delay, s/veh	13.2		10.2			9.2		
Approach LOS	B		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				19.3		6.1	10.6	8.7
Change Period (Y+Rc), s				5.0		3.5	3.5	5.0
Max Green Setting (Gmax), s				37.0		19.5	15.5	18.0
Max Q Clear Time (g_c+I1), s				2.5		3.5	6.9	2.9
Green Ext Time (p_c), s				1.1		0.4	0.8	0.8
Intersection Summary								
HCM 2010 Ctrl Delay			10.2					
HCM 2010 LOS			B					

HCM Signalized Intersection Capacity Analysis

12: I-5 SB Ramps & Palomar St

2045 Build - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑↑↑	↗	↘↗	↑↑					↘	↗	↗	
Traffic Volume (vph)	0	400	20	707	167	0	0	0	0	1296	0	20	
Future Volume (vph)	0	400	20	707	167	0	0	0	0	1296	0	20	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0	
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00	
Frbp, ped/bikes		1.00	0.96	1.00	1.00					1.00	1.00	0.98	
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00	
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85	
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00	
Satd. Flow (prot)		5085	1524	3433	3539					1681	1681	1549	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00	
Satd. Flow (perm)		5085	1524	3433	3539					1681	1681	1549	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	435	22	768	182	0	0	0	0	1409	0	22	
RTOR Reduction (vph)	0	0	18	0	0	0	0	0	0	0	0	12	
Lane Group Flow (vph)	0	435	4	768	182	0	0	0	0	704	705	10	
Confl. Peds. (#/hr)	1		15	15		1	6					6	
Confl. Bikes (#/hr)			1	1									
Turn Type		NA	Perm	Split	NA					Split	NA	Perm	
Protected Phases		2		6	6					4	4		
Permitted Phases			2									4	
Actuated Green, G (s)		19.1	19.1	23.5	23.5					43.9	43.9	43.9	
Effective Green, g (s)		19.1	19.1	23.5	23.5					43.9	43.9	43.9	
Actuated g/C Ratio		0.19	0.19	0.24	0.24					0.44	0.44	0.44	
Clearance Time (s)		5.0	5.0	3.5	3.5					5.0	5.0	5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0	
Lane Grp Cap (vph)		971	291	806	831					737	737	680	
v/s Ratio Prot		c0.09		c0.22	0.05					0.42	c0.42		
v/s Ratio Perm			0.00									0.01	
v/c Ratio		0.45	0.01	0.95	0.22					0.96	0.96	0.01	
Uniform Delay, d1		35.8	32.8	37.7	30.8					27.1	27.1	15.8	
Progression Factor		1.00	1.00	0.10	0.00					1.00	1.00	1.00	
Incremental Delay, d2		1.5	0.1	13.6	0.1					22.6	22.8	0.0	
Delay (s)		37.3	32.9	17.5	0.2					49.7	50.0	15.8	
Level of Service		D	C	B	A					D	D	B	
Approach Delay (s)		37.1			14.2			0.0			49.3		
Approach LOS		D			B			A			D		
Intersection Summary													
HCM 2000 Control Delay			35.6									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.84										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	13.5
Intersection Capacity Utilization			75.3%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis





















13: I-5 NB Ramps & Palomar St

2045 Build - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	53	1648	0	0	876	1192	3	0	438	0	0	0	
Future Volume (vph)	53	1648	0	0	876	1192	3	0	438	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0			3.5	4.0	3.5	5.0	3.5				
Lane Util. Factor	0.86	0.86			0.86	1.00	0.91	0.86	0.95				
Frbp, ped/bikes	1.00	1.00			1.00	1.00	1.00	0.99	1.00				
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00				
Satd. Flow (prot)	1522	4805			6408	1583	3221	1343	1504				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00				
Satd. Flow (perm)	1522	4805			6408	1583	3221	1343	1504				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	58	1791	0	0	952	1296	3	0	476	0	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	215	215	0	0	0	
Lane Group Flow (vph)	52	1797	0	0	952	1296	3	23	23	0	0	0	
Confl. Peds. (#/hr)			14	14			1		1	1		1	
Confl. Bikes (#/hr)			1	1									
Turn Type	Split	NA			NA	Free	Prot	NA	custom				
Protected Phases	2	2			6		3	8	3				
Permitted Phases						Free							
Actuated Green, G (s)	60.5	60.5			18.0	100.0	9.5	9.5	9.5				
Effective Green, g (s)	60.5	60.5			18.0	100.0	9.5	9.5	9.5				
Actuated g/C Ratio	0.60	0.60			0.18	1.00	0.10	0.10	0.10				
Clearance Time (s)	5.0	5.0			3.5		3.5	5.0	3.5				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0				
Lane Grp Cap (vph)	920	2907			1153	1583	305	127	142				
v/s Ratio Prot	0.03	0.37			0.15		0.00	0.02	0.02				
v/s Ratio Perm						c0.82							
v/c Ratio	0.06	0.62			0.83	0.82	0.01	0.18	0.16				
Uniform Delay, d1	8.1	12.5			39.5	0.0	41.0	41.7	41.6				
Progression Factor	0.86	0.66			1.00	1.00	1.00	1.00	1.00				
Incremental Delay, d2	0.1	0.5			5.0	4.8	0.0	0.7	0.5				
Delay (s)	7.0	8.7			44.4	4.8	41.0	42.3	42.1				
Level of Service	A	A			D	A	D	D	D				
Approach Delay (s)		8.7			21.6			42.2			0.0		
Approach LOS		A			C			D			A		
Intersection Summary													
HCM 2000 Control Delay			18.5		HCM 2000 Level of Service				B				
HCM 2000 Volume to Capacity ratio			0.95										
Actuated Cycle Length (s)			100.0		Sum of lost time (s)				13.5				
Intersection Capacity Utilization			75.3%		ICU Level of Service				D				
Analysis Period (min)			15										
c Critical Lane Group													

HCM 2010 Signalized Intersection Summary
 14: E Frontage Rd/Walnut Ave & Palomar St

2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	1690	395	30	2007	32	37	0	254	4	0	24
Future Volume (veh/h)	12	1690	395	30	2007	32	37	0	254	4	0	24
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	1837	328	33	2182	31	40	0	252	4	0	16
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	2919	513	167	3519	50	304	0	291	93	0	291
Arrive On Green	0.01	0.67	0.67	0.02	0.68	0.68	0.18	0.00	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1774	4334	762	1774	5165	73	1383	0	1573	1123	0	1573
Grp Volume(v), veh/h	13	1431	734	33	1431	782	40	0	252	4	0	16
Grp Sat Flow(s),veh/h/ln	1774	1695	1705	1774	1695	1848	1383	0	1573	1123	0	1573
Q Serve(g_s), s	0.3	28.6	29.6	0.7	27.9	28.0	2.9	0.0	18.7	0.4	0.0	1.0
Cycle Q Clear(g_c), s	0.3	28.6	29.6	0.7	27.9	28.0	3.9	0.0	18.7	19.1	0.0	1.0
Prop In Lane	1.00		0.45	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	2283	1149	167	2310	1259	304	0	291	93	0	291
V/C Ratio(X)	0.08	0.63	0.64	0.20	0.62	0.62	0.13	0.00	0.87	0.04	0.00	0.06
Avail Cap(c_a), veh/h	182	2283	1149	212	2310	1259	383	0	380	157	0	380
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.4	11.1	11.2	10.3	10.5	10.6	41.9	0.0	47.5	56.7	0.0	40.3
Incr Delay (d2), s/veh	0.2	1.0	2.1	0.1	0.1	0.2	0.2	0.0	15.2	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	13.6	14.5	0.3	13.0	14.2	1.1	0.0	9.3	0.1	0.0	0.4
LnGrp Delay(d),s/veh	9.6	12.1	13.3	10.4	10.7	10.8	42.1	0.0	62.7	56.9	0.0	40.4
LnGrp LOS	A	B	B	B	B	B	D		E	E		D
Approach Vol, veh/h		2178			2246			292				20
Approach Delay, s/veh		12.5			10.7			59.8				43.7
Approach LOS		B			B			E				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	85.8		27.2	6.1	86.8		27.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	5.0	71.0		29.0	3.0	73.0		29.0				
Max Q Clear Time (g_c+I1), s	2.7	31.6		21.1	2.3	30.0		20.7				
Green Ext Time (p_c), s	0.0	38.1		1.1	0.0	41.4		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				14.7								
HCM 2010 LOS				B								

HCM Signalized Intersection Capacity Analysis
16: Transit Center Place & Palomar St

*PGD mitigation assumed
2045 Build - PM






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗		↖	↕			↗	↖
Traffic Volume (vph)	583	1015	376	19	1008	5	475	7	12	7	22	586
Future Volume (vph)	583	1015	376	19	1008	5	475	7	12	7	22	586
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.91		1.00	1.00		1.00	1.00			1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.96		1.00	1.00		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (prot)	1770	4433		1770	5078		1681	1672			1840	1500
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.96			0.99	1.00
Satd. Flow (perm)	1770	4433		1770	5078		1681	1672			1840	1500
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	634	1103	409	21	1096	5	516	8	13	8	24	637
RTOR Reduction (vph)	0	39	0	0	0	0	0	1	0	0	0	27
Lane Group Flow (vph)	634	1473	0	21	1101	0	268	268	0	0	32	610
Confl. Peds. (#/hr)	29		64	64		29	129		48	48		129
Confl. Bikes (#/hr)			2	2			1		2	2		1
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases												4
Actuated Green, G (s)	50.1	78.6		3.6	32.1		24.9	24.9			15.8	65.9
Effective Green, g (s)	50.1	78.6		3.6	32.1		24.9	24.9			15.8	65.9
Actuated g/C Ratio	0.35	0.56		0.03	0.23		0.18	0.18			0.11	0.47
Clearance Time (s)	3.5	5.0		3.5	5.0		5.0	5.0			5.0	3.5
Vehicle Extension (s)	2.0	3.5		2.0	3.5		3.0	3.0			3.0	2.0
Lane Grp Cap (vph)	627	2464		45	1152		296	294			205	699
v/s Ratio Prot	c0.36	0.33		0.01	c0.22		0.16	c0.16			0.02	c0.31
v/s Ratio Perm												0.10
v/c Ratio	1.01	0.60		0.47	0.96		0.91	0.91			0.16	0.87
Uniform Delay, d1	45.7	20.9		68.0	53.9		57.1	57.2			56.8	34.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	38.7	1.1		2.8	17.8		29.1	30.7			0.4	11.3
Delay (s)	84.4	22.0		70.7	71.8		86.2	87.8			57.1	45.2
Level of Service	F	C		E	E		F	F			E	D
Approach Delay (s)		40.4			71.7			87.0			45.8	
Approach LOS		D			E			F			D	

Intersection Summary

HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	141.4	Sum of lost time (s)	18.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Assumed PGD will mitigate this intersection, instead of GS project			
c Critical Lane Group			























HCM 2010 Signalized Intersection Summary
 17: Plaza Entrance & Palomar St

2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	968	1	270	948	233	4	36	392	220	21	80
Future Volume (veh/h)	58	968	1	270	948	233	4	36	392	220	21	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	0.98		0.95	0.99		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	63	1052	1	293	1030	171	4	39	275	239	23	62
Adj No. of Lanes	1	3	0	2	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	1829	2	301	1705	282	662	86	610	317	29	69
Arrive On Green	0.09	0.70	0.70	0.03	0.13	0.13	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	1774	5247	5	3442	4361	722	1276	192	1351	586	64	154
Grp Volume(v), veh/h	63	680	373	293	800	401	4	0	314	324	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1862	1721	1695	1693	1276	0	1542	803	0	0
Q Serve(g_s), s	4.2	12.2	12.2	10.2	26.8	26.8	0.0	0.0	16.8	31.8	0.0	0.0
Cycle Q Clear(g_c), s	4.2	12.2	12.2	10.2	26.8	26.8	0.2	0.0	16.8	48.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.43	1.00		0.88	0.74		0.19
Lane Grp Cap(c), veh/h	80	1182	649	301	1326	662	662	0	696	415	0	0
V/C Ratio(X)	0.79	0.58	0.58	0.97	0.60	0.61	0.01	0.00	0.45	0.78	0.00	0.00
Avail Cap(c_a), veh/h	81	1182	649	301	1326	662	746	0	797	490	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	0.63	0.63	0.63	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	54.0	13.7	13.7	58.1	43.5	43.5	18.1	0.0	22.7	39.0	0.0	0.0
Incr Delay (d2), s/veh	16.1	0.8	1.4	33.8	1.3	2.6	0.0	0.0	0.5	6.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.6	6.3	6.3	12.8	13.1	0.1	0.0	7.2	11.0	0.0	0.0
LnGrp Delay(d),s/veh	70.1	14.5	15.1	91.9	44.8	46.1	18.1	0.0	23.1	45.8	0.0	0.0
LnGrp LOS	E	B	B	F	D	D	B		C	D		
Approach Vol, veh/h		1116			1494			318			324	
Approach Delay, s/veh		17.8			54.4			23.1			45.8	
Approach LOS		B			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	46.8		59.2	8.9	51.9		59.2				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	10.5	34.0		62.0	5.5	39.0		62.0				
Max Q Clear Time (g_c+I1), s	12.2	14.2		50.6	6.2	28.8		18.8				
Green Ext Time (p_c), s	0.0	15.8		3.6	0.0	8.8		5.6				
Intersection Summary												
HCM 2010 Ctrl Delay				37.9								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 18: Broadway & Palomar St





















2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	550	690	340	94	586	71	472	428	115	227	801	393
Future Volume (veh/h)	550	690	340	94	586	71	472	428	115	227	801	393
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.92	1.00		0.95	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	598	750	253	102	637	50	513	465	73	247	871	311
Adj No. of Lanes	2	3	0	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	631	1446	481	153	1195	93	545	1158	493	307	914	384
Arrive On Green	0.06	0.13	0.13	0.04	0.25	0.25	0.16	0.33	0.33	0.09	0.26	0.26
Sat Flow, veh/h	3442	3719	1237	3442	4778	371	3442	3539	1506	3442	3539	1486
Grp Volume(v), veh/h	598	683	320	102	450	237	513	465	73	247	871	311
Grp Sat Flow(s),veh/h/ln	1721	1695	1565	1721	1695	1759	1721	1770	1506	1721	1770	1486
Q Serve(g_s), s	20.8	22.6	23.0	3.5	13.8	14.0	17.7	12.2	4.1	8.4	29.1	23.6
Cycle Q Clear(g_c), s	20.8	22.6	23.0	3.5	13.8	14.0	17.7	12.2	4.1	8.4	29.1	23.6
Prop In Lane	1.00		0.79	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	631	1318	609	153	848	440	545	1158	493	307	914	384
V/C Ratio(X)	0.95	0.52	0.53	0.67	0.53	0.54	0.94	0.40	0.15	0.80	0.95	0.81
Avail Cap(c_a), veh/h	631	1318	609	201	848	440	545	1158	493	402	914	384
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	1.00	1.00	1.00	0.77	0.77	0.77	0.82	0.82	0.82
Uniform Delay (d), s/veh	55.8	41.8	42.0	56.4	38.9	39.0	49.9	31.3	28.5	53.6	43.8	41.7
Incr Delay (d2), s/veh	17.9	1.0	2.2	4.0	2.4	4.7	20.7	0.2	0.1	7.2	16.9	10.4
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	11.5	10.8	10.3	1.8	6.7	7.4	10.0	6.0	1.7	4.3	16.3	10.8
LnGrp Delay(d),s/veh	73.7	42.8	44.1	60.4	41.3	43.7	70.6	31.4	28.6	60.8	60.7	52.2
LnGrp LOS	E	D	D	E	D	D	E	C	C	E	E	D
Approach Vol, veh/h		1601			789			1051			1429	
Approach Delay, s/veh		54.6			44.5			50.4			58.9	
Approach LOS		D			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	51.7	23.0	36.0	26.0	35.0	14.7	44.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	45.0	19.0	31.0	22.0	30.0	14.0	36.0				
Max Q Clear Time (g_c+I1), s	5.5	25.0	19.7	31.1	22.8	16.0	10.4	14.2				
Green Ext Time (p_c), s	0.0	12.8	0.0	0.0	0.0	9.8	0.3	12.0				
Intersection Summary												
HCM 2010 Ctrl Delay			53.3									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary

19: Industrial Blvd & Anita St

























2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	139	112	131	66	187	35	401	120	113	386	76
Future Volume (veh/h)	51	139	112	131	66	187	35	401	120	113	386	76
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	55	151	0	142	72	70	38	436	130	123	420	82
Adj No. of Lanes	1	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	219	186	176	89	87	47	484	144	133	607	118
Arrive On Green	0.12	0.12	0.00	0.20	0.20	0.20	0.03	0.35	0.35	0.07	0.40	0.40
Sat Flow, veh/h	1774	1863	1583	871	442	429	1774	1369	408	1774	1507	294
Grp Volume(v), veh/h	55	151	0	284	0	0	38	0	566	123	0	502
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1742	0	0	1774	0	1777	1774	0	1801
Q Serve(g_s), s	2.1	5.7	0.0	11.4	0.0	0.0	1.6	0.0	22.2	5.1	0.0	17.0
Cycle Q Clear(g_c), s	2.1	5.7	0.0	11.4	0.0	0.0	1.6	0.0	22.2	5.1	0.0	17.0
Prop In Lane	1.00		1.00	0.50		0.25	1.00		0.23	1.00		0.16
Lane Grp Cap(c), veh/h	209	219	186	352	0	0	47	0	629	133	0	725
V/C Ratio(X)	0.26	0.69	0.00	0.81	0.00	0.00	0.82	0.00	0.90	0.93	0.00	0.69
Avail Cap(c_a), veh/h	652	684	582	616	0	0	109	0	677	133	0	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	31.1	0.0	28.0	0.0	0.0	35.6	0.0	22.5	33.8	0.0	18.2
Incr Delay (d2), s/veh	0.7	3.8	0.0	4.4	0.0	0.0	27.9	0.0	14.5	56.1	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.2	0.0	5.9	0.0	0.0	1.1	0.0	13.4	4.5	0.0	8.9
LnGrp Delay(d),s/veh	30.2	34.9	0.0	32.4	0.0	0.0	63.5	0.0	37.0	89.9	0.0	21.0
LnGrp LOS	C	C		C			E		D	F		C
Approach Vol, veh/h		206			284			604			625	
Approach Delay, s/veh		33.7			32.4			38.7			34.6	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.7	5.4	34.6		19.8	9.0	31.0				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		27.0	4.5	29.0		26.0	5.5	28.0				
Max Q Clear Time (g_c+I1), s		7.7	3.6	19.0		13.4	7.1	24.2				
Green Ext Time (p_c), s		0.9	0.0	5.0		1.3	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			35.5									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary

20: Broadway & Anita St

2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	182	49	96	150	160	34	639	79	187	954	110
Future Volume (veh/h)	141	182	49	96	150	160	34	639	79	187	954	110
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	153	198	27	104	163	121	37	695	69	203	1037	103
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	439	359	115	412	337	224	1260	125	374	1399	139
Arrive On Green	0.08	0.24	0.24	0.06	0.22	0.22	0.02	0.39	0.39	0.06	0.43	0.43
Sat Flow, veh/h	1774	1863	1525	1774	1863	1523	1774	3236	321	1774	3237	321
Grp Volume(v), veh/h	153	198	27	104	163	121	37	380	384	203	567	573
Grp Sat Flow(s),veh/h/ln	1774	1863	1525	1774	1863	1523	1774	1770	1787	1774	1770	1788
Q Serve(g_s), s	5.5	6.3	1.0	4.0	5.2	4.7	0.9	11.6	11.6	4.5	18.5	18.6
Cycle Q Clear(g_c), s	5.5	6.3	1.0	4.0	5.2	4.7	0.9	11.6	11.6	4.5	18.5	18.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.18
Lane Grp Cap(c), veh/h	141	439	359	115	412	337	224	689	696	374	765	773
V/C Ratio(X)	1.09	0.45	0.08	0.90	0.40	0.36	0.17	0.55	0.55	0.54	0.74	0.74
Avail Cap(c_a), veh/h	141	994	814	115	967	791	300	689	696	374	765	773
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	31.9	22.7	20.6	32.2	23.0	22.8	14.2	16.5	16.5	12.9	16.4	16.4
Incr Delay (d2), s/veh	101.1	0.7	0.1	54.8	0.6	0.6	0.3	3.2	3.1	1.6	6.4	6.3
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	6.6	3.3	0.4	3.7	2.7	2.0	0.4	6.2	6.3	1.3	10.3	10.4
LnGrp Delay(d),s/veh	133.0	23.4	20.7	87.0	23.7	23.5	14.5	19.6	19.6	14.5	22.8	22.8
LnGrp LOS	F	C	C	F	C	C	B	B	B	B	C	C
Approach Vol, veh/h		378			388			801			1343	
Approach Delay, s/veh		67.6			40.6			19.4			21.5	
Approach LOS		E			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	21.3	5.0	35.0	9.0	20.3	8.0	32.0				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	4.5	37.0	4.5	27.0	5.5	36.0	4.5	27.0				
Max Q Clear Time (g_c+I1), s	6.0	8.3	2.9	20.6	7.5	7.2	6.5	13.6				
Green Ext Time (p_c), s	0.0	2.7	0.0	5.1	0.0	2.7	0.0	9.3				
Intersection Summary												
HCM 2010 Ctrl Delay			29.5									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

21: Main St & I-5 SB Ramps

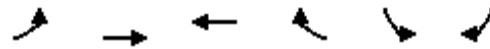
2045 Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↕	↕	↗	↖	↗		
Traffic Volume (veh/h)	32	188	111	204	837	31		
Future Volume (veh/h)	32	188	111	204	837	31		
Number	5	2	6	16	7	14		
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		
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	35	204	121	0	910	0		
Adj No. of Lanes	0	1	1	1	1	1		
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	0	732	732	622	951	849		
Arrive On Green	0.00	0.39	0.39	0.00	0.54	0.00		
Sat Flow, veh/h	0	1863	1863	1583	1774	1583		
Grp Volume(v), veh/h	0	204	121	0	910	0		
Grp Sat Flow(s),veh/h/ln	0	1863	1863	1583	1774	1583		
Q Serve(g_s), s	0.0	9.0	5.1	0.0	58.6	0.0		
Cycle Q Clear(g_c), s	0.0	9.0	5.1	0.0	58.6	0.0		
Prop In Lane	0.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	0	732	732	622	951	849		
V/C Ratio(X)	0.00	0.28	0.17	0.00	0.96	0.00		
Avail Cap(c_a), veh/h	0	732	732	622	1220	1089		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	24.8	23.6	0.0	26.5	0.0		
Incr Delay (d2), s/veh	0.0	0.9	0.5	0.0	14.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.8	2.7	0.0	32.4	0.0		
LnGrp Delay(d),s/veh	0.0	25.8	24.1	0.0	41.0	0.0		
LnGrp LOS		C	C		D			
Approach Vol, veh/h		204	121		910			
Approach Delay, s/veh		25.8	24.1		41.0			
Approach LOS		C	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.2		67.8	0.0	52.2		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		29.0		82.5	4.5	21.0		
Max Q Clear Time (g_c+I1), s		11.0		60.6	0.0	7.1		
Green Ext Time (p_c), s		1.7		3.7	0.0	1.5		
Intersection Summary								
HCM 2010 Ctrl Delay			36.8					
HCM 2010 LOS			D					

HCM 2010 Signalized Intersection Summary
 22: Main St & I-5 NB Ramps

2045 Build - PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↑↑	↑↑↑	↗↘	↖↗	↗		
Traffic Volume (veh/h)	67	958	302	775	149	13		
Future Volume (veh/h)	67	958	302	775	149	13		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	73	1041	328	533	162	9		
Adj No. of Lanes	1	2	3	2	2	1		
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	93	2678	3283	1762	264	121		
Arrive On Green	0.05	0.76	0.65	0.65	0.08	0.08		
Sat Flow, veh/h	1774	3632	5253	2729	3442	1583		
Grp Volume(v), veh/h	73	1041	328	533	162	9		
Grp Sat Flow(s),veh/h/ln	1774	1770	1695	1365	1721	1583		
Q Serve(g_s), s	2.4	6.1	1.5	5.2	2.7	0.3		
Cycle Q Clear(g_c), s	2.4	6.1	1.5	5.2	2.7	0.3		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	93	2678	3283	1762	264	121		
V/C Ratio(X)	0.78	0.39	0.10	0.30	0.61	0.07		
Avail Cap(c_a), veh/h	251	2678	3283	1762	459	211		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.62	0.62	1.00	1.00		
Uniform Delay (d), s/veh	28.1	2.5	4.0	4.7	26.8	25.7		
Incr Delay (d2), s/veh	13.2	0.4	0.0	0.3	2.3	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	1.5	3.1	0.7	2.0	1.4	0.3		
LnGrp Delay(d),s/veh	41.3	2.9	4.1	5.0	29.1	26.0		
LnGrp LOS	D	A	A	A	C	C		
Approach Vol, veh/h		1114	861		171			
Approach Delay, s/veh		5.5	4.6		29.0			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		50.4		9.6	6.7	43.7		
Change Period (Y+Rc), s		5.0		5.0	3.5	5.0		
Max Green Setting (Gmax), s		42.0		8.0	8.5	30.0		
Max Q Clear Time (g_c+I1), s		8.1		4.7	4.4	7.2		
Green Ext Time (p_c), s		16.7		0.2	0.0	13.4		
Intersection Summary								
HCM 2010 Ctrl Delay			7.0					
HCM 2010 LOS			A					

























HCM 2010 Signalized Intersection Summary
 23: Industrial Blvd & Main St

2045 Build - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	699	302	351	495	63	209	407	385	33	430	167
Future Volume (veh/h)	86	699	302	351	495	63	209	407	385	33	430	167
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	93	760	277	382	538	58	227	442	372	36	467	169
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	705	257	325	1071	115	183	368	310	46	416	150
Arrive On Green	0.13	0.28	0.28	0.18	0.33	0.33	0.10	0.40	0.40	0.03	0.32	0.32
Sat Flow, veh/h	1774	2517	917	1774	3213	345	1774	927	781	1774	1299	470
Grp Volume(v), veh/h	93	534	503	382	296	300	227	0	814	36	0	636
Grp Sat Flow(s),veh/h/ln	1774	1770	1664	1774	1770	1789	1774	0	1708	1774	0	1769
Q Serve(g_s), s	7.2	42.0	42.0	27.5	20.0	20.2	15.5	0.0	59.6	3.0	0.0	48.0
Cycle Q Clear(g_c), s	7.2	42.0	42.0	27.5	20.0	20.2	15.5	0.0	59.6	3.0	0.0	48.0
Prop In Lane	1.00		0.55	1.00		0.19	1.00		0.46	1.00		0.27
Lane Grp Cap(c), veh/h	231	495	466	325	590	596	183	0	679	46	0	566
V/C Ratio(X)	0.40	1.08	1.08	1.17	0.50	0.50	1.24	0.00	1.20	0.78	0.00	1.12
Avail Cap(c_a), veh/h	231	495	466	325	590	596	183	0	679	53	0	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.9	54.0	54.0	61.3	40.0	40.1	67.3	0.0	45.2	72.6	0.0	51.0
Incr Delay (d2), s/veh	5.2	63.2	64.6	106.1	3.0	3.0	145.0	0.0	103.6	46.3	0.0	76.6
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	3.9	29.2	27.6	23.0	10.3	10.4	15.0	0.0	47.6	2.1	0.0	35.5
LnGrp Delay(d),s/veh	65.1	117.2	118.6	167.3	43.0	43.1	212.2	0.0	148.8	118.9	0.0	127.6
LnGrp LOS	E	F	F	F	D	D	F		F	F		F
Approach Vol, veh/h		1130			978			1041			672	
Approach Delay, s/veh		113.5			91.6			162.6			127.2	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.0	47.0	19.0	53.0	23.0	55.0	7.4	64.6				
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0				
Max Green Setting (Gmax), s	27.5	42.0	15.5	48.0	19.5	50.0	4.5	59.0				
Max Q Clear Time (g_c+I1), s	29.5	44.0	17.5	50.0	9.2	22.2	5.0	61.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	13.2	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				123.7								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary
24: Broadway & Main St

2045 Build - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	658	265	457	434	159	203	468	417	232	777	89
Future Volume (veh/h)	125	658	265	457	434	159	203	468	417	232	777	89
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	136	715	176	497	472	113	221	509	301	252	845	0
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	826	362	491	1486	653	227	730	317	276	829	371
Arrive On Green	0.09	0.23	0.23	0.28	0.42	0.42	0.13	0.21	0.21	0.16	0.23	0.00
Sat Flow, veh/h	1774	3539	1550	1774	3539	1556	1774	3539	1538	1774	3539	1583
Grp Volume(v), veh/h	136	715	176	497	472	113	221	509	301	252	845	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1550	1774	1770	1556	1774	1770	1538	1774	1770	1583
Q Serve(g_s), s	10.6	27.3	13.8	39.0	12.6	6.4	17.5	18.8	27.2	19.7	33.0	0.0
Cycle Q Clear(g_c), s	10.6	27.3	13.8	39.0	12.6	6.4	17.5	18.8	27.2	19.7	33.0	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	160	826	362	491	1486	653	227	730	317	276	829	371
V/C Ratio(X)	0.85	0.87	0.49	1.01	0.32	0.17	0.98	0.70	0.95	0.91	1.02	0.00
Avail Cap(c_a), veh/h	239	929	407	491	1486	653	227	730	317	315	829	371
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	0.00
Uniform Delay (d), s/veh	63.1	51.9	46.7	51.0	27.4	25.6	61.2	51.8	55.2	58.5	54.0	0.0
Incr Delay (d2), s/veh	16.3	7.9	1.0	43.7	0.1	0.1	52.6	5.5	38.9	27.5	36.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	14.3	6.0	24.9	6.2	2.8	11.8	9.7	15.0	11.8	20.2	0.0
LnGrp Delay(d),s/veh	79.5	59.8	47.7	94.7	27.5	25.7	113.8	57.3	94.1	86.1	90.2	0.0
LnGrp LOS	E	E	D	F	C	C	F	E	F	F	F	
Approach Vol, veh/h		1027			1082			1031			1097	
Approach Delay, s/veh		60.3			58.2			80.1			89.2	
Approach LOS		E			E			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	43.0	37.9	22.0	38.0	16.7	64.2	25.9	34.1				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	39.0	37.0	18.0	33.0	19.0	57.0	25.0	26.0				
Max Q Clear Time (g_c+I1), s	41.0	29.3	19.5	35.0	12.6	14.6	21.7	29.2				
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.2	12.5	0.2	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			72.1									
HCM 2010 LOS			E									

**Appendix H – 2045 Intersection LOS Worksheets – Build
Alternative with Mitigation**

HCM Signalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

2045 Build - AM with Mitigation



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	236	382	913	134	450	161
Future Volume (vph)	236	382	913	134	450	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	0.96	1.00	1.00
Satd. Flow (prot)	1770	1583	1681	1706	1863	1583
Flt Permitted	0.95	1.00	0.95	0.96	1.00	1.00
Satd. Flow (perm)	1770	1583	1681	1706	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	257	415	992	146	489	175
RTOR Reduction (vph)	0	337	0	0	0	126
Lane Group Flow (vph)	257	78	565	573	489	49
Turn Type	Prot	Perm	Split	NA	NA	Perm
Protected Phases	2		8	8	4	
Permitted Phases		2				4
Actuated Green, G (s)	16.4	16.4	31.3	31.3	24.1	24.1
Effective Green, g (s)	16.4	16.4	31.3	31.3	24.1	24.1
Actuated g/C Ratio	0.19	0.19	0.36	0.36	0.28	0.28
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	334	299	606	615	517	439
v/s Ratio Prot	c0.15		c0.34	0.34	c0.26	
v/s Ratio Perm		0.05				0.03
v/c Ratio	0.77	0.26	0.93	0.93	0.95	0.11
Uniform Delay, d1	33.4	30.0	26.7	26.7	30.7	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.2	0.5	21.4	21.0	26.4	0.1
Delay (s)	43.6	30.5	48.1	47.8	57.1	23.5
Level of Service	D	C	D	D	E	C
Approach Delay (s)	35.5			47.9	48.2	
Approach LOS	D			D	D	

Intersection Summary

HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 2010 Signalized Intersection Summary




















6: Moss St

2045 Build - AM with Mitigation

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	0	0	0	147	447	110	352	0	288	544	0
Future Volume (veh/h)	239	0	0	0	147	447	110	352	0	288	544	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	260	0	0	0	160	381	120	383	0	313	591	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	281	0	0	0	155	369	118	388	0	310	590	0
Arrive On Green	0.16	0.00	0.00	0.00	0.32	0.32	0.07	0.21	0.00	0.17	0.32	0.00
Sat Flow, veh/h	1774	0	0	0	489	1165	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	260	0	0	0	0	541	120	383	0	313	591	0
Grp Sat Flow(s),veh/h/ln	1774	0	0	0	0	1655	1774	1863	0	1774	1863	0
Q Serve(g_s), s	17.3	0.0	0.0	0.0	0.0	38.0	8.0	24.6	0.0	21.0	38.0	0.0
Cycle Q Clear(g_c), s	17.3	0.0	0.0	0.0	0.0	38.0	8.0	24.6	0.0	21.0	38.0	0.0
Prop In Lane	1.00		0.00	0.00		0.70	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	281	0	0	0	0	524	118	388	0	310	590	0
V/C Ratio(X)	0.93	0.00	0.00	0.00	0.00	1.03	1.01	0.99	0.00	1.01	1.00	0.00
Avail Cap(c_a), veh/h	281	0	0	0	0	524	118	388	0	310	590	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.8	0.0	0.0	0.0	0.0	41.0	56.0	47.3	0.0	49.5	41.0	0.0
Incr Delay (d2), s/veh	37.6	0.0	0.0	0.0	0.0	47.9	86.7	42.1	0.0	53.2	37.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	0.0	0.0	0.0	0.0	24.3	6.8	17.2	0.0	14.8	25.6	0.0
LnGrp Delay(d),s/veh	87.4	0.0	0.0	0.0	0.0	88.9	142.8	89.4	0.0	102.7	78.5	0.0
LnGrp LOS	F					F	F	F		F	F	
Approach Vol, veh/h		260			541			503			904	
Approach Delay, s/veh		87.4			88.9			102.2			86.9	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	13.0	42.0		42.0	26.0	29.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		19.0	8.0	38.0		38.0	21.0	25.0				
Max Q Clear Time (g_c+I1), s		19.3	10.0	40.0		40.0	23.0	26.6				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			90.9									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary
 8: Naples St

2045 Build - AM with Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	83	34	215	90	380	81	64	482	400	39	0
Future Volume (veh/h)	18	83	34	215	90	380	81	64	482	400	39	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.77	1.00		0.79	1.00		0.94	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	20	90	17	234	98	184	88	70	304	435	42	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	226	43	355	98	185	113	55	238	434	688	0
Arrive On Green	0.18	0.18	0.18	0.20	0.20	0.20	0.06	0.19	0.19	0.24	0.37	0.00
Sat Flow, veh/h	283	1273	240	1774	492	923	1774	290	1259	1774	1863	0
Grp Volume(v), veh/h	127	0	0	234	0	282	88	0	374	435	42	0
Grp Sat Flow(s),veh/h/ln	1796	0	0	1774	0	1415	1774	0	1549	1774	1863	0
Q Serve(g_s), s	5.6	0.0	0.0	10.9	0.0	17.9	4.4	0.0	17.0	22.0	1.3	0.0
Cycle Q Clear(g_c), s	5.6	0.0	0.0	10.9	0.0	17.9	4.4	0.0	17.0	22.0	1.3	0.0
Prop In Lane	0.16		0.13	1.00		0.65	1.00		0.81	1.00		0.00
Lane Grp Cap(c), veh/h	319	0	0	355	0	283	113	0	293	434	688	0
V/C Ratio(X)	0.40	0.00	0.00	0.66	0.00	1.00	0.78	0.00	1.28	1.00	0.06	0.00
Avail Cap(c_a), veh/h	319	0	0	355	0	283	197	0	293	434	688	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.7	0.0	0.0	33.2	0.0	36.0	41.5	0.0	36.5	34.0	18.3	0.0
Incr Delay (d2), s/veh	3.7	0.0	0.0	4.5	0.0	52.5	10.9	0.0	149.0	44.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	5.8	0.0	11.1	2.5	0.0	19.3	16.0	0.7	0.0
LnGrp Delay(d),s/veh	36.4	0.0	0.0	37.6	0.0	88.4	52.4	0.0	185.5	78.0	18.3	0.0
LnGrp LOS	D			D		F	D		F	F	B	
Approach Vol, veh/h		127			516			462			477	
Approach Delay, s/veh		36.4			65.4			160.1			72.7	
Approach LOS		D			E			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.0	10.7	37.3		22.0	27.0	21.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		16.0	10.0	29.0		18.0	22.0	17.0				
Max Q Clear Time (g_c+I1), s		7.6	6.4	3.3		19.9	24.0	19.0				
Green Ext Time (p_c), s		0.4	0.1	3.0		0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				92.9								
HCM 2010 LOS				F								

HCM Signalized Intersection Capacity Analysis

5: Industrial Blvd & I-5 NB Ramps

2045 Build - PM with Mitigation



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	143	370	1032	197	671	245
Future Volume (vph)	143	370	1032	197	671	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	0.97	1.00	1.00
Satd. Flow (prot)	1770	1583	1681	1711	1863	1557
Flt Permitted	0.95	1.00	0.95	0.97	1.00	1.00
Satd. Flow (perm)	1770	1583	1681	1711	1863	1557
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	155	402	1122	214	729	266
RTOR Reduction (vph)	0	356	0	0	0	95
Lane Group Flow (vph)	155	46	662	674	729	171
Confl. Peds. (#/hr)			2			2
Turn Type	Prot	Perm	Split	NA	NA	Perm
Protected Phases	2		8	8	4	
Permitted Phases		2				4
Actuated Green, G (s)	16.9	16.9	58.0	58.0	57.0	57.0
Effective Green, g (s)	16.9	16.9	58.0	58.0	57.0	57.0
Actuated g/C Ratio	0.12	0.12	0.39	0.39	0.39	0.39
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	203	182	663	675	722	604
v/s Ratio Prot	c0.09		0.39	c0.39	c0.39	
v/s Ratio Perm		0.03				0.11
v/c Ratio	0.76	0.25	1.00	1.00	1.01	0.28
Uniform Delay, d1	63.1	59.3	44.4	44.4	45.0	30.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.6	0.7	34.3	34.0	35.9	0.3
Delay (s)	78.6	60.0	78.7	78.4	80.9	31.2
Level of Service	E	E	E	E	F	C
Approach Delay (s)	65.2			78.6	67.6	
Approach LOS	E			E	E	



















Intersection Summary

HCM 2000 Control Delay	72.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	146.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 Signalized Intersection Summary




















6: Moss St

2045 Build - PM with Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	13	38	13	51	544	134	393	5	359	556	126
Future Volume (veh/h)	292	13	38	13	51	544	134	393	5	359	556	126
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	317	14	39	14	55	375	146	427	5	390	604	128
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	286	13	35	10	40	273	142	404	5	390	537	114
Arrive On Green	0.19	0.19	0.19	0.20	0.20	0.20	0.08	0.22	0.22	0.22	0.36	0.36
Sat Flow, veh/h	1503	66	185	51	200	1364	1774	1837	22	1774	1491	316
Grp Volume(v), veh/h	370	0	0	444	0	0	146	0	432	390	0	732
Grp Sat Flow(s),veh/h/ln	1754	0	0	1615	0	0	1774	0	1859	1774	0	1806
Q Serve(g_s), s	19.0	0.0	0.0	20.0	0.0	0.0	8.0	0.0	22.0	22.0	0.0	36.0
Cycle Q Clear(g_c), s	19.0	0.0	0.0	20.0	0.0	0.0	8.0	0.0	22.0	22.0	0.0	36.0
Prop In Lane	0.86		0.11	0.03		0.84	1.00		0.01	1.00		0.17
Lane Grp Cap(c), veh/h	333	0	0	323	0	0	142	0	409	390	0	650
V/C Ratio(X)	1.11	0.00	0.00	1.37	0.00	0.00	1.03	0.00	1.06	1.00	0.00	1.13
Avail Cap(c_a), veh/h	333	0	0	323	0	0	142	0	409	390	0	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	0.0	0.0	40.0	0.0	0.0	46.0	0.0	39.0	39.0	0.0	32.0
Incr Delay (d2), s/veh	82.3	0.0	0.0	186.9	0.0	0.0	83.4	0.0	60.1	45.3	0.0	75.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.8	0.0	0.0	25.7	0.0	0.0	7.2	0.0	18.1	15.6	0.0	31.5
LnGrp Delay(d),s/veh	122.8	0.0	0.0	226.9	0.0	0.0	129.7	0.0	99.1	84.3	0.0	107.2
LnGrp LOS	F			F			F		F	F		F
Approach Vol, veh/h		370			444			578			1122	
Approach Delay, s/veh		122.8			226.9			106.9			99.2	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	13.0	40.0		24.0	27.0	26.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		19.0	8.0	36.0		20.0	22.0	22.0				
Max Q Clear Time (g_c+I1), s		21.0	10.0	38.0		22.0	24.0	24.0				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			127.0									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary
8: Naples St

2045 Build - PM with Mitigation

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	117	80	373	112	399	60	94	435	510	96	0
Future Volume (veh/h)	38	117	80	373	112	399	60	94	435	510	96	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.97	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
Adj Sat Flow, veh/h/ln	1900	1937	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	41	127	58	405	122	287	65	102	335	554	104	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	148	68	423	114	268	83	81	265	478	815	0
Arrive On Green	0.15	0.15	0.15	0.24	0.24	0.24	0.05	0.22	0.22	0.27	0.44	0.00
Sat Flow, veh/h	327	1014	463	1774	478	1125	1774	374	1229	1774	1863	0
Grp Volume(v), veh/h	226	0	0	405	0	409	65	0	437	554	104	0
Grp Sat Flow(s),veh/h/ln	1805	0	0	1774	0	1603	1774	0	1603	1774	1863	0
Q Serve(g_s), s	15.9	0.0	0.0	29.3	0.0	31.0	4.7	0.0	28.0	35.0	4.3	0.0
Cycle Q Clear(g_c), s	15.9	0.0	0.0	29.3	0.0	31.0	4.7	0.0	28.0	35.0	4.3	0.0
Prop In Lane	0.18		0.26	1.00		0.70	1.00		0.77	1.00		0.00
Lane Grp Cap(c), veh/h	264	0	0	423	0	382	83	0	345	478	815	0
V/C Ratio(X)	0.86	0.00	0.00	0.96	0.00	1.07	0.78	0.00	1.27	1.16	0.13	0.00
Avail Cap(c_a), veh/h	264	0	0	423	0	382	136	0	345	478	815	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.2	0.0	0.0	48.8	0.0	49.5	61.3	0.0	51.0	47.5	21.8	0.0
Incr Delay (d2), s/veh	28.4	0.0	0.0	32.9	0.0	65.9	14.5	0.0	140.6	93.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.0	0.0	18.1	0.0	20.7	2.6	0.0	25.9	29.5	2.2	0.0
LnGrp Delay(d),s/veh	82.5	0.0	0.0	81.7	0.0	115.4	75.8	0.0	191.6	140.6	21.8	0.0
LnGrp LOS	F			F		F	E		F	F	C	
Approach Vol, veh/h		226			814			502			658	
Approach Delay, s/veh		82.5			98.6			176.6			121.8	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	11.1	60.9		35.0	40.0	32.0				
Change Period (Y+Rc), s		4.0	5.0	4.0		4.0	5.0	4.0				
Max Green Setting (Gmax), s		19.0	10.0	53.0		31.0	35.0	28.0				
Max Q Clear Time (g_c+I1), s		17.9	6.7	6.3		33.0	37.0	30.0				
Green Ext Time (p_c), s		0.1	0.0	4.2		0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				121.7								
HCM 2010 LOS				F								