Appendix A
Transportation Impact Analysis
Draft
Traffic Impact Analysis

Folsom Women’s Facility

Prepared For
Ascent Environmental

July 13, 2012
# Table of Contents

Executive Summary ........................................................................................................................................ i
Introduction ................................................................................................................................................1
Existing Conditions ....................................................................................................................................7
Baseline No Project Conditions ................................................................................................................11
Baseline Plus Project Conditions ..............................................................................................................16
Cumulative Conditions Analysis ..............................................................................................................25
Site Access Analysis ..................................................................................................................................33

Appendix A
Existing Conditions – Level of Service Calculation Worksheets

Appendix B
Signal Warrant Analysis Worksheets

Appendix C
Approved Projects Trip Generation Summary

Appendix D
Baseline No Project Conditions – Level of Service Calculation Worksheets

Appendix E
Proposed Facility Staffing by Shift

Appendix F
Baseline + Project – Level of Service Calculation Worksheets

Appendix G
Cumulative No Project – Level of Service Calculation Worksheets

Appendix H
Cumulative + Project – Level of Service Calculation Worksheets
LIST OF TABLES

Table 1 – Level of Service Definitions – Signalized Intersections .............................................................4
Table 2 – Level of Service Definitions – Unsignalized Intersections ..........................................................4
Table 3 – Level of Service Summary – Existing Conditions ....................................................................10
Table 4 – Approved Projects ............................................................................................................ 11 - 12
Table 5 – Level of Service Summary – Baseline No Project Conditions..................................................15
Table 6 – Trip Generation Rate Comparison ............................................................................................17
Table 7 – Staffing Estimate by Shift .........................................................................................................18
Table 8 – Trip Generation Estimate Summary ..........................................................................................19
Table 9 – Level of Service Summary – Baseline + Project Conditions ....................................................23
Table 10 – Level of Service Summary – Cumulative (2030) No Project Conditions ...............................28
Table 11 – Level of Service Summary – Cumulative (2030) + Project Conditions .................................31
Table 12 – Estimated Queue Length Summary ........................................................................................35
LIST OF FIGURES

Figure 1 – Project Location ........................................................................................................................2
Figure 2 – Peak Hour Traffic Volumes – Existing Conditions .................................................................8
Figure 3 – Peak Hour Traffic Volumes – Baseline No Project Conditions ..............................................14
Figure 4 – Project Trip Distribution .........................................................................................................21
Figure 5 – Peak Hour Traffic Volumes – Baseline + Project Conditions ................................................22
Figure 6 – Peak Hour Traffic Volumes – Cumulative (2030) No Project Conditions .............................27
Figure 7 – Peak Hour Traffic Volumes – Cumulative (2030) + Project Conditions ...............................30
EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Folsom Women’s Facility (FWF) at the Folsom State Prison/California State Prison – Sacramento complex in Folsom, California. The proposed project, which will be located in an existing vacant building, will house 403 female inmates. One hundred additional employees will be assigned to the new facility. Vehicular access needs of the proposed project will be served by existing roadways at the prison complex.

The study evaluates traffic operations in the vicinity of the project site under five scenarios: Existing Conditions, Baseline No Project, Baseline Plus Project, Cumulative No Project, and Cumulative Plus Project. Two peak-hour periods were examined: weekday AM and weekday PM peak hours. Impacts of the proposed project were evaluated at six existing intersections in the vicinity of the project site using methodologies and evaluation criteria generally accepted by the City of Folsom.

The key findings and recommendations resulting from the analysis are summarized below.

Existing Conditions

- In the AM peak hour, all six study intersections conform to the City of Folsom’s General Plan policy requiring Level of Service (LOS) C or better.
- Four of the six study intersections operate at LOS A or B in the weekday PM peak hour, and the remaining two locations are at LOS C. Thus, all six study intersections operate at acceptable levels of service in this time period.
- The STOP-sign-controlled access intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road has insufficient traffic to meet the minimum requirements of the “Peak Hour” signal warrant.

Baseline No Project Conditions

- The traffic associated with 21 previously-approved developments was added to the study area roadway system to evaluate traffic operations under Baseline No Project conditions. In total, those projects will generate about 2,730 AM peak hour trips and 4,440 PM peak hour trips.
- In the weekday AM peak hour, five of the six study intersections will continue to operate at LOS C or better, thereby conforming to the City of Folsom’s level of service policy. East Natoma Street/Hancock Drive/Prison Industry Authority Access Road is expected to operate at LOS D.
- Two intersections (East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road) will be at unacceptable levels of service (LOS D) in the PM peak hour. The remaining four study intersections are expected to operate at acceptable levels of service, with two locations at LOS C and two intersections at LOS B.
- The STOP-sign-controlled access intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will fall short of meeting the minimum criteria associated with the “Peak Hour” signal warrant in either peak-hour period.
**Baseline + Project Conditions**

- The proposed Folsom Women’s Facility project is expected to generate 42 weekday AM peak hour trips (28 inbound and 14 outbound) and 23 weekday PM peak hour trips (6 inbound and 17 outbound).

- No reduction was made to reflect the possibility of internal trips (i.e., trips made entirely within the prison complex). Thus, this analysis represents a conservative indication of the proposed project’s traffic impacts.

- In the AM peak hour, five of the six study intersections will continue to operate at acceptable levels of service. East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will fail to conform to the City’s General Plan policy. In all cases, the level of service is unchanged from Baseline No Project conditions and the project-related incremental impact is less than the City’s adopted significance threshold.

- In the PM peak hour, no change in LOS is projected at any of the six study intersections. Four study locations will be at LOS B or C, while the remaining two locations (East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road) are projected to operate at LOS D, the same as under Baseline No Project conditions. The incremental increase in delay directly attributable to project-generated traffic is less than the significance threshold employed by the City of Folsom.

- The STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road is projected to have insufficient traffic to meet the minimum requirements of the “Peak Hour” signal warrant.

- Project-related impacts are less than significant in both peak-hour periods. Therefore, no mitigation measures are required at any of the off-site study intersections.

**Cumulative No Project Conditions**

- The cumulative conditions analysis reflects the level of development anticipated in the Folsom Sphere of Influence (SOI) annexation area and throughout the Sacramento region through the year 2030. The peak hour traffic volume projections were based, in part, on information developed in connection with the analysis for the SOI annexation process. Adjustments were made to reflect conditions specific to the study area.

- The future year traffic forecasts used in this analysis reflect the following major roadway improvement projects:
  - Construction of the U.S. Highway 50/Empire Ranch Road interchange,
  - Construction of a new interchange at Highway 50/Oak Avenue Parkway, and
  - Widening of the East Bidwell Street overpass at Highway 50 from five to six lanes.

- Four of the six study intersections are projected to operate at acceptable levels of service in the weekday AM peak hour. The intersections of East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will fall short of the City’s LOS C standard; each will have a projected level of service of LOS F.
• In the weekday PM peak hour, two of the study intersections are expected to operate at LOS C or better. East Natoma Street/Wales Drive/City Hall Driveway is projected to operate at LOS D, while East Natoma Street/Folsom Lake Crossing will be at LOS E. The intersections of East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access will be at LOS F.

• Traffic volumes at the STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road are projected to be insufficient to meet the minimum requirements of the “Peak Hour” signal warrant.

**Cumulative + Project Conditions**

• Four of the six study intersections are expected to continue to meet the City’s LOS C policy under this analysis scenario. At East Natoma Street/Riley Street, although LOS F is projected, the project-related incremental delay value is below the City’s significance threshold. East Natoma Street/Hancock Drive/Prison Industry Authority Access Road (which will also be at LOS F), will have insufficient traffic to meet the minimum requirements of the “Peak Hour” signal warrant. Consequently, the project’s impact is less than significant in this time period.

• In the weekday PM peak hour, four study locations are projected to operate at worse than LOS C. East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will both be at LOS F, while East Natoma Street/Folsom Lake Crossing will operate at LOS E, and East Natoma Street/Wales Drive/City Hall Driveway will be at LOS D. No change in level of service is projected at these three intersections, compared to Cumulative No Project conditions. At the signal-controlled locations, the project-related impact is less than the City’s adopted significance threshold. Traffic volumes at the STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will be too low to meet minimum requirement of the “Peak Hour” signal warrant. Therefore, the project-related impact is again less than significant.

• No significant impacts were identified with regard to vehicular delay and level of service at any of the off-site intersections in either peak-hour period. Therefore, no mitigation measures are recommended with respect to the project’s off-site traffic impacts.

**Site Access Analysis**

• The Prison Industry Authority Access Road will be the primary access facility for the proposed project. At its intersection with East Natoma Street, this roadway is STOP-sign controlled and all movements are allowed. Based on input from prison officials, all traffic entering and exiting the proposed project was assumed to use this road.

• The East Natoma Street/Hancock Drive/Prison Industry Authority Access Road intersection will have insufficient traffic to meet the “Peak Hour” warrant for a traffic signal in any of the analysis scenarios. Therefore, installation of a traffic signal is not recommended at that location.

• Adequate sight distance is available for all turning movements at the East Natoma Street/Hancock Drive/Prison Industry Authority Access Road intersection.
• The existing turn lanes at the primary access intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will be sufficient to accommodate the expected queues of vehicles waiting to turn into or out of the project site, even with addition of the project-generated traffic.

• The site access analysis revealed that the vehicular access needs of the proposed project will be adequately met by the existing road system. Therefore, no mitigation measures are necessary or recommended.
INTRODUCTION

This study addresses the traffic impacts associated with the proposed Folsom Women’s Facility (FWF) at the Folsom State Prison/California State Prison – Sacramento complex in Folsom, California. The proposed project, which will be located in an existing vacant building, will house 403 female inmates. One hundred additional employees will be assigned to the new facility. Vehicular access needs of the proposed project will be served by existing roadways at the prison complex. Figure 1 illustrates the project location.

In keeping with the analysis procedures typically employed in the City of Folsom, this study analyzed traffic operations under the following five scenarios:

- Existing Conditions,
- Baseline No Project Conditions,
- Baseline Plus Project Conditions,
- Cumulative No Project Conditions, and
- Cumulative Plus Project Conditions.

Traffic operations were evaluated in the weekday AM and PM peak hours, which typically correspond to the heaviest, commute-oriented traffic volumes.

This report presents the analysis procedures as well as the findings and recommendations resulting from the evaluation.

Project Description

The proposed Folsom Women’s Facility will house 403 female offenders in a satellite facility at the existing Folsom State Prison. Approximately 100 new employees will be added in conjunction with the project. Meal preparation and delivery, basic medical and dental care, and other typical services will be provided using existing staff and facilities at Folsom State Prison and California State Prison – Sacramento. Internal roadways at the prison complex will generally be used for these activities.

The proposed project will be located in an existing vacant building, which previously housed the Folsom Transitional Treatment Facility. The existing parking lot at that location will be resurfaced and striped to accommodate 100 vehicles. If overflow parking is needed (on visitation days, for example), it will be accommodated at the adjacent Prison Industry Authority (PIA) facility since visitation would only be scheduled on Saturdays and Sundays.

Vehicular access to and from the proposed project will occur via an existing access road, which serves the Prison Industry Authority facility in the eastern portion of the prison complex. That road meets East Natoma Street at a STOP-sign-controlled intersection directly opposite Hancock Drive, a residential street on the south side of East Natoma Street. Secondary access is potentially available by way of Prison Road, which is near the western end of the prison property and meets East Natoma Street at a traffic-signal-controlled intersection. For the purposes of this analysis, however, all vehicular access has been assumed to be via the PIA access road, based on input from the Warden at Folsom State Prison.
Study Area

The off-site impacts of the proposed project were evaluated at the following existing intersections:

- East Natoma Street/Riley Street,
- East Natoma Street/Coloma Street,
- East Natoma Street/Wales Drive/City Hall Driveway,
- East Natoma Street/Prison Road,
- East Natoma Street/Hancock Drive/Prison Industry Authority Access Road, and
- East Natoma Street/Folsom Lake Crossing.

Analysis Methodology

Intersection Operations

Intersection operations are typically described in terms of level of service (LOS), which is reported on a scale from LOS A (representing free-flow conditions) to LOS F (which represents substantial congestion and delay). The level of service designations are based on a quantitative calculation of delay at the intersection. The specific approach to estimating delay is based on procedures documented in the *Highway Capacity Manual 2010* (Transportation Research Board, Fifth Edition, December 2010).

Signalized Intersections

The signalized study intersections were analyzed using the “operational analysis” methodology presented in Chapter 18 of the *HCM 2010*. This methodology determines signalized intersection level of service by comparing the “average control delay per vehicle” to the thresholds shown in Table 1. Control delay represents the delay directly associated with the traffic signal. It also acts as an indicator of driver discomfort and fuel consumption. For this analysis, the level of service calculations were performed using the *Synchro 8* software package, which implements the intersection analysis procedures documented in the *HCM 2010*.

Unsignalized Intersections

The analysis of the unsignalized intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road was conducted using the method documented in Chapter 19 of the *HCM 2010*. This method calculates average control delay for each minor movement at the intersection (i.e., movements that are required to yield to oncoming traffic, including all minor street movements and left-turn movements from the major street). Level of service results reported for STOP-controlled intersections are based upon the average control delay per vehicle for the worst-case minor movement, based on the criteria set forth in Table 2. As noted on page 19-2 of the *HCM 2010*, level of service is not calculated for the intersection as a whole. For unsignalized intersections, control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The unsignalized study intersection was analyzed using the *HCS 2010* software package, which performs level of service calculations in accordance with the *HCM 2010* procedures.
### Table 1
#### Level of Service Definitions
##### Signalized Intersections

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description</th>
<th>Average Control Delay (Seconds/Vehicle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Very low delay. Most vehicles do not stop</td>
<td>( \leq 10.0 )</td>
</tr>
<tr>
<td>B</td>
<td>Slight delay. Generally good signal progression.</td>
<td>10.1 – 20.0</td>
</tr>
<tr>
<td>C</td>
<td>Increased number of stopped vehicles. Occasional cycle failures.</td>
<td>20.1 - 35.0</td>
</tr>
<tr>
<td>D</td>
<td>Noticeable congestion. Large proportion of vehicles stopped.</td>
<td>35.1 – 55.0</td>
</tr>
<tr>
<td>E</td>
<td>Operating conditions at or near capacity. Frequent cycle failure.</td>
<td>55.1 - 80.0</td>
</tr>
<tr>
<td>F</td>
<td>Oversaturation. Forced or breakdown flow. Extensive queuing.</td>
<td>( &gt; 80.0 )</td>
</tr>
</tbody>
</table>


### Table 2
#### Level of Service Definitions
##### Unsignalized Intersections

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description</th>
<th>Average Control Delay (Seconds/Vehicle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Little or no conflicting traffic for minor movements.</td>
<td>( \leq 10.0 )</td>
</tr>
<tr>
<td>B</td>
<td>Drivers on minor movements begin to notice absence of available gaps.</td>
<td>10.1 – 15.0</td>
</tr>
<tr>
<td>C</td>
<td>Drivers on minor movements begin to experience delays waiting for adequate gaps.</td>
<td>15.1 – 25.0</td>
</tr>
<tr>
<td>D</td>
<td>Queuing occurs on minor movements due to a reduction in available gaps.</td>
<td>25.1 – 35.0</td>
</tr>
<tr>
<td>E</td>
<td>Extensive minor movement queuing due to insufficient gaps.</td>
<td>35.1 – 50.0</td>
</tr>
<tr>
<td>F</td>
<td>Insufficient gaps of adequate size to allow minor movement traffic demand to be accommodated.</td>
<td>( &gt; 50.0 )</td>
</tr>
</tbody>
</table>

Signal Warrant Analysis

The analysis of the unsignalized project access intersection also considered whether it would meet the minimum criteria for consideration of traffic signal installation. The need for installation of a traffic signal at a given location is initially judged relative to a defined set of traffic signal “warrants.” The current signal warrants are documented in “Part 4 – Highway Traffic Signals” of the California Manual on Uniform Traffic Control Devices 2012 (Caltrans, January 13, 2012). Nine such warrants have been defined in this latest revision of the California MUTCD, although not all warrants are relevant to each case. This analysis was conducted using Warrant 3, the “Peak Hour” signal warrant.

As noted in the California MUTCD 2012, “[t]he satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.” Based on this, other factors must also be considered in determining the feasibility of a traffic signal. Those factors include safety, signal spacing, maintenance of progressive traffic flow, and other considerations.

Sight Distance

To ensure that drivers will be able to enter and exit the site safely at the project access location on East Natoma Street, a stopping sight distance analysis was conducted using parameters documented in A Policy on Geometric Design of Highways and Streets (American Association of State Highway and Transportation Officials, 2004) and the Caltrans Highway Design Manual (California Department of Transportation, Sixth Edition, May 7, 2012).

Queuing/Storage Length

To minimize the potential for queuing-related problems at the primary project access location of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road, the “95th-percentile” queues were calculated for the key turning movements using the methodology accepted by the City of Folsom. The intent of this analysis is to ensure that turning vehicles have sufficient stacking distance, which minimizes the possibility that those vehicles will queue back into the through-traffic lanes, potentially causing rear-end collisions. The queue length estimates considered here were developed within the HCM 2010 intersection level of service calculation process, as described above.

Evaluation Criteria

Policy 17.17 of the City of Folsom General Plan identifies the minimum acceptable level of service for traffic operations at signal-controlled intersections in the City. Specifically, this policy states:

“The City should strive to achieve at least a traffic Level of Service ‘C’ throughout the City. During the course of Plan buildout it may occur that temporarily higher Levels of Service result where roadway improvements have not been adequately phased as development proceeds. However, this situation will be minimized based on annual traffic studies and monitoring programs.”

The City has defined appropriate standards of significance to reflect this policy, including criteria that address situations where the signalized intersection level of service is worse than LOS C under “no project” conditions. Those standards of significance are as follows:
• If the “no project” level of service is LOS C or better and the project-generated traffic causes the intersection level of service to degrade to worse than LOS C (i.e., LOS D, E, or F), then the proposed project must implement mitigation measures to return the intersection to LOS C or better.

• If the “no project” level of service is worse than LOS C (i.e., LOS D, E, or F) and the project-generated traffic causes the overall average delay value at the intersection to increase by five seconds or more, then the proposed project must implement mitigation measures to improve the intersection to the “no project” condition or better. It is not necessary to improve the intersection to LOS C.

• If the “no project” level of service is worse than LOS C (i.e., LOS D, E, or F) and the project-generated traffic causes the overall average delay value at the intersection to increase by less than five seconds, then the traffic impact is considered less than significant and no mitigation is required.
EXISTING CONDITIONS

This section describes the roadway network serving the proposed project, as well as existing traffic operations at key intersections in the vicinity of the project site.

Key Roadways

Brief descriptions of the key roadways serving the project site are provided below.

East Natoma Street is an arterial road that extends northeast from Folsom Boulevard near the Historic District of Folsom to provide a connection to the Empire Ranch area in the eastern part of the city, where it curves to the southeast. In the vicinity of the project site, East Natoma Street has one lane in each direction (plus bike lanes) and a posted speed limit of 45 MPH. To the west of the project site, the speed limit on East Natoma Street is 35 MPH, with the transition from 45 MPH to 35 MPH occurring between Hancock Drive and Prison Road.

Riley Street curves through Folsom in a generally northwest-to-southeast direction, beginning in the Historic District and ultimately connecting to Oak Avenue Parkway. In the study area, it is a two-lane street with left-turn lanes at intersections. Riley Street intersects East Natoma Street at a signalized intersection.

Coloma Street connects East Natoma Street with residential areas to the northwest, as well as to the commercial areas along East Bidwell Street and Riley Street to the southeast. It is a two-lane street, which intersects East Natoma Street at a signal-controlled location.

Wales Drive meets East Natoma Street at a traffic signal-controlled intersection, which also serves as the primary access to Folsom City Hall. It is a two-lane street that passes through a residential area before connecting to the commercial areas along East Bidwell Street and Riley Street. It has a 25 MPH posted speed limit.

Prison Road is a two-lane road that serves as the primary vehicular access to and from Folsom State Prison/California State Prison - Sacramento. It meets East Natoma Street at a signalized T-intersection, although the fourth (i.e., south) leg of that intersection will be added to serve a 32,000-square-foot office development that was approved by the City of Folsom in early 2009.

Folsom Lake Crossing is the roadway on the recently-constructed bridge across the American River, just below Folsom Dam. It provides four lanes plus bike lanes. In addition, a Class I off-street bike path is located along the north and east sides of the road. A 55 MPH speed limit is posted on Folsom Lake Crossing, which meets East Natoma Street at a signal-controlled T-intersection.

Existing Traffic Volumes

Weekday AM and PM peak-period turning movement counts were conducted at the study intersections on Wednesday, June 6, 2012. The existing peak-hour volumes and intersection lane configurations are shown on Figure 2.
Detailed review of the current traffic volumes revealed that, in many (but not all) cases, they are somewhat lower than corresponding volumes counted in May 2010. Discussions with City of Folsom staff suggested several possible explanations for this finding, as summarized below.

- First, because of the timing associated with receipt of authorization to proceed with the traffic impact analysis, the counts were performed shortly after the conclusion of the school year. This factor would have a greater effect on AM peak-hour volumes than on the PM peak-hour results, because of the typical daily school schedule. Reductions in traffic volumes were observed in both the AM and PM peak hours, though, so other factors must also be considered.

- City staff also described recent data collection efforts that suggest increased cut-through traffic activity in the neighborhood near the East Natoma Street/Riley Street intersection. This factor would change both the magnitude and the flow pattern of traffic at certain of the study intersections.

- A final significant factor is the ongoing economic downturn that has affected Folsom and the entire Sacramento region. City staff indicated that Folsom has been somewhat slow to recover from these conditions, and commercial vacancy rates are higher than they have been in recent history. As noted above, this situation affects not just the study area for this analysis, but also other areas within Folsom, as well as the Sacramento region as a whole.

Based on these discussions, City staff stated that the current traffic volumes accurately represent current conditions in the study area, and they agreed that it is appropriate to use them in the analysis.

**Existing Intersection Level of Service**

Table 3 summarizes the existing peak-hour levels of service at the designated study intersections. Appendix A contains the technical calculation sheets.

**Weekday AM Peak Hour**

In the weekday AM peak hour, all six study intersections meet the City’s General Plan policy requiring operation at LOS C or better. Two intersections are at LOS C (East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road), while the remaining four locations operate at LOS A or B.

**Weekday PM Peak Hour**

Four study intersections also operate at LOS A or B in the weekday PM peak hour, and the remaining two locations (East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road) are at LOS C. Thus, according to the City’s General Plan policy, all six study intersections operate at acceptable levels of service in this time period.

**Signal Warrant Analysis**

The STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road has insufficient traffic to meet the minimum requirements of the “Peak Hour” signal warrant. Appendix B contains the signal warrant analysis worksheets.
<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Natoma Street/Riley Street</td>
<td>Signal</td>
<td>21.6 A</td>
<td>26.3 C</td>
</tr>
<tr>
<td>East Natoma Street/Coloma Street</td>
<td>Signal</td>
<td>15.1 B</td>
<td>19.4 B</td>
</tr>
<tr>
<td>East Natoma Street/Wales Drive/City Hall Driveway</td>
<td>Signal</td>
<td>15.8 B</td>
<td>16.5 B</td>
</tr>
<tr>
<td>East Natoma Street/Prison Road</td>
<td>Signal</td>
<td>7.8 A</td>
<td>7.0 A</td>
</tr>
<tr>
<td>East Natoma Street/Hancock Drive/Prison Industry Authority Access Road</td>
<td>STOP Sign</td>
<td>21.3 C</td>
<td>17.7 C</td>
</tr>
<tr>
<td>East Natoma Street/Folsom Lake Crossing</td>
<td>Signal</td>
<td>8.4 A</td>
<td>17.0 B</td>
</tr>
</tbody>
</table>

Notes:
2. Average control delay (seconds per vehicle). Delay value represents overall average intersection delay at signal-controlled intersections and worst-case movement delay at STOP-sign-controlled location.
3. Level of service.
BASELINE NO PROJECT CONDITIONS

This section documents traffic operations in the anticipated construction year for the proposed Folsom Women’s Facility project, excluding the traffic generated by the project itself. This scenario includes the traffic associated with other previously-approved (or reasonably foreseeable) developments in the vicinity of the proposed project, as identified by City of Folsom staff.

Approved Projects

To develop a meaningful estimate of “baseline” traffic conditions, MRO Engineers, Inc., estimated the volume of peak-hour traffic to be generated by a number of approved projects in the vicinity of the proposed project, as identified by City of Folsom staff. Based on input from City staff, 21 such projects were identified. The specific land use assumptions for each of these projects were confirmed with City of Folsom staff prior to initiating the detailed analyses. Table 4 lists the projects included in this analysis scenario.

As summarized in Appendix C, the previously-approved projects included here will generate a total of about 2,730 weekday AM peak-hour trips and 4,440 weekday PM peak-hour trips. However, given the locations of the approved projects throughout the City of Folsom, not all of those trips will pass by the project site and through the study intersections.

The approved project trips were distributed and assigned to the City of Folsom road network in accordance with information presented in previous traffic analyses conducted within the city.

<table>
<thead>
<tr>
<th>Project</th>
<th>Land Use</th>
<th>Size</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creekview Professional Center</td>
<td>Medical/Professional Office</td>
<td>96,360 SF</td>
<td>Northwest quadrant of East Bidwell Street/Creekside Drive</td>
</tr>
<tr>
<td>Mammoth Professional Center</td>
<td>Office</td>
<td>58,800 SF</td>
<td>Southeast quadrant of East Bidwell Street/Creekside Drive</td>
</tr>
<tr>
<td>Folsom Pointe Highway Commercial</td>
<td>Highway Commercial Center</td>
<td></td>
<td>East side of East Bidwell St., south of Iron Point Rd.</td>
</tr>
<tr>
<td>Broadstone Park Professional Center</td>
<td>Office</td>
<td>73,829 SF</td>
<td>South side of Iron Point Road east of McAdoo Drive</td>
</tr>
<tr>
<td>Palladio Retail – Phase 1³</td>
<td>Retail</td>
<td>564,800 SF</td>
<td>Bounded by Iron Point Road, East Bidwell Street, and Broadstone Parkway</td>
</tr>
<tr>
<td>Former Fire Station</td>
<td>Office</td>
<td>3,500 SF</td>
<td>East of Prairie City Road, South of Blue Ravine Road</td>
</tr>
<tr>
<td>Island at Parkshore</td>
<td>Residential</td>
<td>350 DU⁴</td>
<td>Southwest of Parkshore Dr. in Silverbrook Island area</td>
</tr>
<tr>
<td>Wal-Mart Expansion</td>
<td>Retail</td>
<td>26,515 SF² &amp; 3,000 SF Pad</td>
<td>South side of Riley St. between Lembali Dr. and Glenn Dr.</td>
</tr>
<tr>
<td>Willow Creek Village</td>
<td>Multi-family Residential</td>
<td>86 DU⁶</td>
<td>West side of Sibley Street at Levy Road</td>
</tr>
<tr>
<td>Project</td>
<td>Land Use</td>
<td>Size</td>
<td>Location</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------</td>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Broadstone Crossing Parcel 1</td>
<td>Two Hotels, Three Restaurants</td>
<td>236 Rooms 22,230 SF</td>
<td>Southwest quadrant of Iron Point Road/Cavitt Drive</td>
</tr>
<tr>
<td>Broadstone Crossing Parcel 5</td>
<td>Green Acres Nursery</td>
<td>30,220 SF + 20,000 SF Outdoors</td>
<td>West side of Serpa Way south of Iron Point Road</td>
</tr>
<tr>
<td>Oaks at Willow Springs</td>
<td>Residential</td>
<td>200+/- DU³</td>
<td>South side Iron Point Road east of McAdoo Drive</td>
</tr>
<tr>
<td>Broadstone Oaks #2</td>
<td>Office Retail</td>
<td>56,800 SF 15,000 SF</td>
<td>Southeast quadrant of Iron Point Road/Oak Avenue Parkway</td>
</tr>
<tr>
<td>The Parkway, Lot D</td>
<td>Residential Condominium</td>
<td>80 DU³</td>
<td>East Natoma St. east of Blue Ravine Rd./Green Valley Rd.</td>
</tr>
<tr>
<td>La Collina dal Lago</td>
<td>Single-Family Residential</td>
<td>30 DU³</td>
<td>East Natoma Street west of Blue Ravine Road/Green Valley Road</td>
</tr>
<tr>
<td>Empire Ranch</td>
<td>Single-Family Residential</td>
<td>400 DU³</td>
<td>East Natoma Street east of Blue Ravine Road/Green Valley Road</td>
</tr>
<tr>
<td>Natoma Valley Subdivision</td>
<td>Single-Family Residential</td>
<td>82 DU</td>
<td>Northwest quadrant of Blue Ravine Rd./Green Valley Rd./East Natoma St.</td>
</tr>
<tr>
<td>The Parkway, Lots I &amp; J</td>
<td>Residential</td>
<td>134 DU³</td>
<td>Parkway Drive east of Blue Ravine Road</td>
</tr>
<tr>
<td>Montara Grove</td>
<td>Office</td>
<td>32,000 SF</td>
<td>South side of East Natoma Street at Prison Road</td>
</tr>
<tr>
<td>Chick-fil-A Restaurant</td>
<td>Fast Food Restaurant</td>
<td>4,296 SF</td>
<td>Southwest side of East Bidwell Street southeast of Clarksville Road/Scholar Way</td>
</tr>
<tr>
<td>Psychiatric Services Unit Office &amp; Treatment Facility</td>
<td>Medical Facility</td>
<td>17,395 SF</td>
<td>California State Prison - Sacramento</td>
</tr>
</tbody>
</table>

Notes:
1. Reference: City of Folsom, Community Development Department
2. Square feet.
3. Excludes movie theater, which is complete and occupied.
4. 290 single-family dwelling units and 60 condominiums.
5. Expansion of existing Wal-Mart store to Wal-Mart Supercenter (137,374 SF to 163,889 SF).
6. Dwelling units.
7. Approximate number of unbuilt units.
Baseline No Project Traffic Volumes

The peak-hour traffic generated by the approved projects listed above was added to the road system in the vicinity of the project site to develop a “Baseline No Project” traffic scenario. Figure 3 illustrates the result of adding the traffic associated with the related projects to the existing traffic volumes for the two peak-hour analysis periods.

Intersection Level of Service

Table 5 summarizes the results of the level of service calculations for the study intersections under Baseline No Project conditions. Appendix D contains the technical calculations.

Weekday AM Peak Hour

In the weekday AM peak hour, with addition of the traffic generated by the 21 previously-approved projects, five of the six study intersections will continue to operate at LOS C or better, thereby conforming to the City of Folsom’s level of service policy. The intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road is expected to operate at LOS D, which falls short of the City’s General Plan guideline.

Weekday PM Peak Hour

The projected weekday PM peak hour intersection level of service results reveal that two intersections (East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road) will be at unacceptable levels of service (LOS D). The remaining four study intersections are expected to operate at acceptable levels of service, with two locations at LOS B and two intersections at LOS C.

Signal Warrant Analysis

The STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will fall short of meeting the minimum criteria associated with the “Peak Hour” signal warrant in either peak-hour period under Baseline No Project conditions. The signal warrant analysis worksheets are presented in Appendix B.
PEAK HOUR TRAFFIC VOLUMES
BASELINE NO PROJECT CONDITIONS

LEGEND

TRAFFIC SIGNAL

TURN LANE

STOP SIGN

00 (00) AM (PM) PEAK HOUR TRAFFIC VOLUME

NOT TO SCALE

FIGURE 3
<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td>East Natoma Street/Riley Street</td>
<td>Signal</td>
<td>23.7</td>
<td>C</td>
</tr>
<tr>
<td>East Natoma Street/Coloma Street</td>
<td>Signal</td>
<td>14.4</td>
<td>B</td>
</tr>
<tr>
<td>East Natoma Street/Wales Drive/City Hall Driveway</td>
<td>Signal</td>
<td>14.9</td>
<td>B</td>
</tr>
<tr>
<td>East Natoma Street/Prison Road</td>
<td>Signal</td>
<td>21.7</td>
<td>C</td>
</tr>
<tr>
<td>East Natoma Street/Hancock Drive/Prison Industry Authority Access Road</td>
<td>STOP Sign</td>
<td>28.5</td>
<td>D</td>
</tr>
<tr>
<td>East Natoma Street/Folsom Lake Crossing</td>
<td>Signal</td>
<td>9.9</td>
<td>A</td>
</tr>
</tbody>
</table>

Notes:
2. Average control delay (seconds per vehicle). Delay value represents overall average intersection delay at signal-controlled intersections and worst-case movement delay at STOP-sign-controlled location.
3. Level of service.
4. Shaded cell denotes unacceptable level of service.
BASELINE PLUS PROJECT CONDITIONS

This section documents the impacts of the proposed Folsom Women’s Facility on traffic conditions in the assumed construction year. To evaluate off-site impacts, the volume of peak-hour traffic generated by the proposed project was estimated and that traffic was assigned to the adjacent street system. The levels of service at the study intersections were then analyzed for the weekday AM and PM peak hours.

Project Description

As noted above, the proposed Folsom Women’s Facility will house 403 female offenders in a currently-vacant building at Folsom State Prison. Approximately 100 new employees will be added in conjunction with the project, and the existing parking lot will be resurfaced and striped to accommodate 100 vehicles.

Primary vehicular access to and from the project will occur via an existing access road, which meets East Natoma Street at a STOP-sign-controlled intersection directly opposite Hancock Drive, a residential street on the south side of East Natoma Street. This existing access road also serves the Prison Industry Authority (PIA) facility, which is located in the eastern portion of the prison complex. Secondary access is available by way of Prison Road, which is near the western end of the prison property and meets East Natoma Street at a traffic-signal-controlled intersection.

Trip Generation

Typically, project-related trip generation estimates for this type of analysis are based on information published in Trip Generation (Institute of Transportation Engineers, Eighth Edition, 2008). In some cases, however, the specific characteristics of the proposed project are not accurately reflected in the land uses contained within the ITE publication. This can occur with unusual projects that are not often constructed, potentially including the Folsom Women’s Facility under evaluation in this study. This issue is addressed in the ITE Trip Generation Handbook (Second Edition, June 2004), which provides direction with regard to application of the trip generation rates and formulae provided in the Trip Generation manual. Specifically, the Trip Generation Handbook states that local trip data should be collected when the “study site is not compatible with [the] ITE land use code definition.”

Although the ITE Trip Generation manual includes information for prisons (Land Use Code 571), only limited data are available. Specifically, only two studies were performed in the development of the trip generation rates presented in the ITE document. Because of the limited ITE sample size and the possibility that the nature of the proposed Folsom Women’s Facility project might differ somewhat from the facilities represented in the ITE Trip Generation manual, site-specific trip generation rates were developed from the traffic count data collected at the two study intersections that serve as access points at the prison complex. Those site-specific trip rates were compared to the ITE rates and a determination was made as to which parameters would result in a conservative, yet reasonable, evaluation of project-related traffic impacts. In addition, staffing estimates (by shift) prepared by representatives of the California Department of Corrections & Rehabilitation (CDCR) were used to perform a critical reality check on the various trip generation rates.
**Site-Specific Trip Generation Rates**

The site-specific trip generation rates were developed using peak-period traffic counts conducted at the two prison access locations – East Natoma Street/Prison Road and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road. The volume of traffic entering and exiting the prison complex during the AM and PM peak hours was converted to trip generation rates in terms of trips/employee, based on the total number of existing staff members at Folsom State Prison and California State Prison – Sacramento. According to the CDCR Website, 1,041 employees are located at Folsom State Prison and 1,585 are at California State Prison – Sacramento, for a total of 2,626 employees.

Trip rates were also developed based on the number of inmates. The CDCR Website provides access to weekly population reports for all facilities under the agency’s jurisdiction. The report for June 6, 2012 (the same date as the traffic volume data collection occurred) shows 2,902 prisoners at Folsom State Prison and 2,706 at California State Prison- Sacramento, for a total of 5,608 inmates.

The trip generation rates derived from this process were compared to the corresponding values from the ITE *Trip Generation* manual. A detailed comparison is provided in Table 6. As shown there, the trip rates derived for this analysis from local data are substantially lower than the rates documented in the ITE publication, especially in terms of trips per employee. This might be due, in part, to the fact that custody staff at the prisons work shifts that generally avoid the typical commute-related peak hours (i.e., 10:00 PM – 6:00 AM, 6:00 AM – 2:00 PM, and 2:00 PM – 10:00 PM).

The trip rates derived based on the number of inmates are reasonably similar to the ITE rates for trips per bed (particularly in the PM peak hour), although the ITE rates are again higher.

Recognizing the inherent variability in trip generation rates that may exist from one location to another, the review presented here suggests that the most conservative analysis would result from use of the universally-accepted ITE rates.

<table>
<thead>
<tr>
<th>Source</th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td><strong>Trips/Employee</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rates derived from Folsom counts¹</td>
<td>0.070</td>
<td>0.011</td>
</tr>
<tr>
<td>ITE Rates²</td>
<td>0.28</td>
<td>0.14</td>
</tr>
<tr>
<td><strong>Trips/Bed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rates derived from Folsom counts¹</td>
<td>0.033</td>
<td>0.005</td>
</tr>
<tr>
<td>ITE Rates²</td>
<td>0.05</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Notes:
1. Based on counts conducted at the Folsom State Prison and California State Prison - Sacramento complex on June 6, 2012.
Staffing Estimates By Shift

As noted above, CDCR staff developed estimates of the number of staff to be assigned to each work shift at the proposed Folsom Women’s Facility. Table 7 summarizes that information, which is presented in detail in Appendix E.

<table>
<thead>
<tr>
<th></th>
<th>1st Watch (22:00 – 06:00)</th>
<th>2nd Watch (06:00 – 14:00)</th>
<th>3rd Watch (14:00 – 22:00)</th>
<th>Shift A (07:00 – 15:00)</th>
<th>Shift B (08:00 – 17:00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Staff</td>
<td>11</td>
<td>33</td>
<td>21</td>
<td>23</td>
<td>12</td>
</tr>
</tbody>
</table>

Notes:
1. Source: California Department of Corrections & Rehabilitation, July 2012.

Staff assigned to the first, second, and third watches all arrive and depart at times that are well outside the typical AM (7:00 – 9:00 AM) or PM (4:00 – 6:00 PM) peak periods. Thus, those staff will not contribute to the peak-hour trip generation estimates addressed in this analysis.

The 23 employees associated with Shift A will generally arrive at work between 6:30 and 7:00 AM, which is prior to the start of the local AM peak hour. (The data collection performed for this analysis found that one study intersection had its AM peak hour beginning at 7:15 AM, while one location had a peak hour starting at 7:30 AM, two locations at 7:45 AM, and the remaining two intersections at 8:00 AM.) Shift B employees will arrive at the site between 7:30 and 8:00 AM, thereby falling within the AM peak hours at several study intersections.

The only departing employees that are likely to affect the PM peak hours at the study intersections are those assigned to Shift B, who will typically depart the site between 5:00 and 5:30 PM. (One study intersection – East Natoma Street/Riley Street – has its PM peak hour from 4:00 to 5:00 PM. The others include all or part of the 5:00 – 5:30 PM period.)

This discussion suggests likely employee-related trips of about 12 inbound trips in the AM peak hour and approximately the same number of outbound trips in the PM peak hour, all of which are associated with employees assigned to Shift B. Deliveries, service trips, and other non-employee-commute trips would be in addition to these values.

Trip Generation Conclusion

Evaluation of the information presented above indicates that use of the ITE Trip Generation rates would provide a reasonable, yet conservative, estimate of the amount of peak-hour traffic associated with the proposed project.

Based on application of the ITE trip rates recommended for use in this analysis, Table 8 summarizes the resulting trip generation estimates for the proposed project, in terms of both trips/employee and trips/bed.
### Table 8
Trip Generation Estimate Summary

<table>
<thead>
<tr>
<th></th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td><strong>Trips/Employee</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trip Rates(^2)</td>
<td>0.28</td>
<td>0.14</td>
</tr>
<tr>
<td>Peak-Hour Trips(^3)</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td><strong>Trips/Bed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trip Rates(^2)</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Peak-Hour Trips(^4)</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Notes:
2. See Table 6.
3. Based on 100 total employees.
4. Based on 403 beds.

Regardless of whether the trip estimate is based on the number of employees or the number of beds (i.e., inmates), the total trip generation estimates are generally similar in both the AM and PM peak hours. The distribution of the total values between inbound and outbound trips varies slightly but, because the magnitude of the numbers is relatively low, this should have little or no effect on the overall analysis results.

Because the trip generation estimate based on the number of employees is slightly higher (which would provide a marginally more conservative analysis), those values were used in this study. Thus, during the weekday AM peak hour, 42 trips are projected, with 28 inbound and 14 outbound. In the weekday PM peak hour, an estimated total of 23 trips will occur, with 6 inbound and 17 outbound.

It should be noted that the location of the proposed project within the existing prison complex creates the potential for a certain amount of internal travel. Internal trips are those that occur entirely within the site, and result in no additional traffic on the public streets serving the project site. In this case, trips related to food deliveries, medical care, and other activities will be strictly internal to the prison complex. Although it would be reasonable to adjust the trip generation estimate to reflect these activities, no reduction has been applied to the trip generation estimate to reflect internal trip making. This results in a conservative analysis of project-related impacts.

**Trip Distribution**

The geographic distribution of the project-generated traffic was based primarily on information regarding the residence zip codes of existing prison employees, with the assumption that future employees will generally follow the same pattern. For this analysis, Department of Corrections &
Rehabilitation staff provided a listing of the residence zip codes for 995 Folsom State Prison employees and 1,714 California State Prison – Sacramento employees. Existing traffic patterns in the vicinity of the project site were also considered, where appropriate.

Figure 4 illustrates the detailed trip distribution for the “Baseline Plus Project” analysis. As shown there, approximately 75 percent of the project-related traffic will approach and depart to/from the west on East Natoma Street. The remaining 25 percent will be oriented to/from the east, with about 15 percent then traveling to/from El Dorado County via East Natoma Street and Green Valley Road and 10 percent using Folsom Lake Crossing and Folsom-Auburn Road to travel to/from Placer County.

Project Traffic Assignment

The peak-hour traffic volumes generated by the proposed project were added to the “Baseline No Project” traffic, with the result being the “Baseline Plus Project” scenario. Those estimated traffic volumes are shown on Figure 5, which also illustrates the assumed intersection lane configurations. Based on input from the City of Folsom Public Works Department staff, no roadway system improvements were assumed for the study intersections within this time frame.

Intersection Level of Service

Table 9 presents the peak-hour levels of service at each study intersection under Baseline Plus Project conditions. Appendix F contains the technical calculation worksheets.

Weekday AM Peak Hour

In the AM peak hour, addition of the project-generated traffic will cause relatively minor changes to the level of delay at the study intersections. Further, in all cases, the level of service is unchanged from Baseline No Project conditions. Five of the six locations will continue to operate at acceptable levels of service (i.e., LOS C or better). As under Baseline No Project conditions, one study intersection will fail to conform to the City’s General Plan policy (East Natoma Street/Hancock Drive/Prison Industry Authority Access Road). The project-related incremental impact at that location is less than the City’s adopted threshold of 5.0 seconds per vehicle of added delay. Consequently, the project-related impact is less than significant in this time period.

Weekday PM Peak Hour

In the PM peak hour, no change in LOS is again projected at any of the six study intersections. Four study locations will be at LOS B or C with the addition of project-related traffic, which conforms to the City’s LOS C policy. The remaining two locations (East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road) are both projected to operate at LOS D, the same as under Baseline No Project conditions. As in the AM peak hour, the incremental increase in delay directly attributable to project-generated traffic is less than the significance threshold employed by the City of Folsom. Thus, the project-related impact is again less than significant in this time period.

Signal Warrant Analysis

The STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road is projected to have insufficient traffic to meet the minimum requirements of the “Peak Hour” signal warrant. Appendix B includes the signal warrant analysis worksheets.
PEAK HOUR TRAFFIC VOLUMES
BASELINE + PROJECT CONDITIONS

FIGURE 5
### Table 9
#### Level of Service Summary

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline No Project</td>
<td>Baseline + Project</td>
<td>Baseline No Project</td>
</tr>
<tr>
<td></td>
<td>Delay</td>
<td>LOS</td>
<td>Delay</td>
</tr>
<tr>
<td>East Natoma Street/Riley Street</td>
<td>Signal</td>
<td>23.7</td>
<td>C</td>
</tr>
<tr>
<td>East Natoma Street/Coloma Street</td>
<td>Signal</td>
<td>14.4</td>
<td>B</td>
</tr>
<tr>
<td>East Natoma Street/Wales Drive/City Hall Driveway</td>
<td>Signal</td>
<td>14.9</td>
<td>B</td>
</tr>
<tr>
<td>East Natoma Street/Prison Road</td>
<td>Signal</td>
<td>21.7</td>
<td>C</td>
</tr>
<tr>
<td>East Natoma Street/Hancock Drive/Prison Industry Authority Access Road</td>
<td>STOP Sign</td>
<td>28.5</td>
<td>D</td>
</tr>
<tr>
<td>East Natoma Street/Folsom Lake Crossing</td>
<td>Signal</td>
<td>9.9</td>
<td>A</td>
</tr>
</tbody>
</table>

**Notes:**
2. Average control delay (seconds per vehicle). Delay value represents overall average intersection delay at signal-controlled intersections and worst-case movement delay at STOP-sign-controlled location.
3. Level of service.
4. Shaded cell denotes unacceptable level of service.
Mitigation Measures

As described above, no significant impacts were identified in connection with the proposed project. Although two study intersections will be at unacceptable levels of service in one or both of the peak hours under both Baseline No Project and Baseline Plus Project conditions, the project’s direct incremental impact falls short of the significance threshold adopted by the City. Further, although the unsignalized study intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will operate at an unacceptable level of service in both peak-hour periods (both with and without the proposed project), the projected traffic volumes are less than the minimum values associated with the “Peak Hour” signal warrant. Therefore, no mitigation measures are recommended with respect to the project’s off-site traffic impacts.
CUMULATIVE CONDITIONS ANALYSIS

This section describes the results of the analysis of study area traffic operations under cumulative conditions in the weekday AM and PM peak hours. This analysis reflects the level of development anticipated throughout the City of Folsom, including the Folsom Sphere of Influence (SOI) annexation area and the entire Sacramento region, through the year 2030. The traffic volume projections were based on the SACMET travel demand forecasting model developed and maintained by the Sacramento Area Council of Governments (SACOG).

Analyses are presented for two scenarios: Cumulative No Project conditions and Cumulative Plus Project conditions, reflecting the addition of the traffic generated by the proposed Folsom Women’s Facility to the “no project” volumes. To ensure consistency with other ongoing or recently-conducted traffic analyses in Folsom, the future year traffic forecasts employed in this analysis are based on information developed in connection with the traffic analysis for the SOI annexation process. That traffic analysis is presented in the environmental documentation for the annexation project. (Reference: AECOM and RMC Water and Environmental, Public Draft EIR/EIS – Folsom South of U.S. 50 Specific Plan Project, June 2010.)

Planned Roadway Improvements

Between now and the year 2030, a variety of major transportation system improvements will be implemented in the Folsom area. These improvements, which are reflected in the future year traffic forecasts used in this analysis, include the following:

- Addition of the third through lane in both directions on Iron Point Road,
- Addition of a third through lane in each direction on East Bidwell Street (where necessary), and
- Construction of the U.S. Highway 50/Empire Ranch Road interchange.

In addition, the Folsom SOI traffic analyses identified the transportation system improvements that will be necessary to accommodate the additional traffic generated south of Highway 50. The following major projects are likely to occur in conjunction with the annexation and were assumed in this analysis:

- Construction of a new interchange at Highway 50/Oak Avenue Parkway, and
- Widening of the East Bidwell Street overpass at Highway 50 from five to six lanes.

According to City of Folsom staff, no significant improvements are planned at the study intersections addressed in this analysis. Although the Metropolitan Transportation Plan for 2035 (SACOG, 2008) indicates that East Natoma Street will be widened to four lanes between Fargo Way and Blue Ravine Road in conjunction with construction of the Folsom Lake Crossing Bridge, that widening project did not occur due to funding constraints. Because of the uncertainty as to whether it will be accomplished, it has not been assumed for this analysis.

Land Use Forecasts

The year 2030 travel demand forecasts developed for the Folsom SOI project, which serve as the basis for the future traffic volumes used in this analysis, assumed the following land uses in the 3,584-acre SOI area:
• 11,340 - 14,630 residential dwelling units,
• 295 acres of office/business/professional and retail/commercial uses,
• 297 acres of schools and City parks, and
• 1,075 acres of open space.

In addition, the year 2030 land use estimates for the Sacramento region included in the SACMET travel demand forecasting model were assumed.

**Cumulative (2030) No Project Conditions**

The Cumulative (2030) No Project traffic volume projections were derived from peak-hour traffic forecasts developed for the analysis of a previous development proposal at the Folsom prison complex. That analysis, which addressed the Psychiatric Services Unit (PSU) at California State Prison – Sacramento, used traffic projections based on adjusted long-term traffic forecasts developed by others as part of the Folsom SOI project. (Reference: MRO Engineers, Inc., Final Traffic Impact Analysis – Psychiatric Services Unit Office and Treatment Space, California State Prison – Sacramento, August 17, 2010.) In the PSU study, because the SOI traffic forecasts did not include any intersections along East Natoma Street, a growth factor was developed for application to the existing traffic volumes. Specifically, the existing traffic volumes used in that analysis were increased by 55 percent to conservatively estimate traffic volumes for cumulative (year 2030) conditions.

For this study, the traffic generated by the Psychiatric Services Unit Office was manually added to those future year traffic forecasts to create the Cumulative No Project traffic projections. (In effect, the “cumulative plus project” forecasts in the PSU study were the basis for the “cumulative no project” volumes used here.) Other adjustments were also made, as necessary, to ensure that the 2030 traffic forecasts reasonably reflected current traffic flow patterns, especially where traffic volume increases were found. (For example, if a particular traffic volume value was found to be substantially higher in 2012 than in 2010, the 2030 traffic forecast was adjusted upward to reflect that change.)

Figure 6 illustrates the Cumulative No Project peak-hour traffic volumes derived for this study, as well as the intersection lane configurations assumed for year 2030 conditions. As noted above, no improvements were assumed at any of the study intersections.

**Intersection Level of Service**

Table 10 summarizes the peak-hour intersection level of service results for Cumulative No Project conditions. The technical calculation worksheets are presented in Appendix G.

**Weekday AM Peak Hour**

Four of the six study intersections are projected to operate at acceptable levels of service in the weekday AM peak hour under Cumulative No Project conditions. LOS B is projected at East Natoma Street/Wales Drive/City Hall Driveway and East Natoma Street/Folsom Lake Crossing, while the intersections of East Natoma Street/Coloma Street and East Natoma Street/Prison Road will be at LOS C. The intersections of East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will each fall short of the City’s LOS C standard, with a projected level of service of LOS F.
PEAK HOUR TRAFFIC VOLUMES
CUMULATIVE (2030) NO PROJECT CONDITIONS

FIGURE 6


**Weekday PM Peak Hour**

In the weekday PM peak hour, two of the study intersections are expected to operate at LOS C or better and the other four will be at LOS D, E, or F. LOS B is expected at East Natoma Street/Prison Road and at East Natoma Street/Coloma Street, LOS C is projected, which conforms to the City’s General Plan policy. East Natoma Street/Wales Drive/City Hall Driveway is projected to operate at LOS D, while East Natoma Street/Folsom Lake Crossing will be at LOS E. Finally, the intersections of East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will be at LOS F.

| Intersection                                      | Traffic Control | Weekday AM Peak Hour Delay\(^1\) | LOS\(^1\) | Weekday PM Peak Hour Delay | LOS  
|---------------------------------------------------|-----------------|---------------------------------|-----------|---------------------------|------
| East Natoma Street/Riley Street                  | Signal          | > 80.0\(^4\)                   | F         | > 80.0                    | F    
| East Natoma Street/Coloma Street                 | Signal          | 26.4                            | C         | 32.5                      | C    
| East Natoma Street/Wales Drive/City Hall Driveway| Signal          | 19.7                            | B         | 36.5                      | D    
| East Natoma Street/Prison Road                   | Signal          | 31.4                            | C         | 17.1                      | B    
| East Natoma Street/Hancock Drive/Prison Industry Authority Access Road | STOP Sign       | > 50.0                          | F         | > 50.0                    | F    
| East Natoma Street/Folsom Lake Crossing          | Signal          | 12.4                            | B         | 59.9                      | E    

**Table 10**

Level of Service Summary\(^1\)
Cumulative No Project Conditions

Notes:
2. Average control delay (seconds per vehicle). Delay value represents overall average intersection delay at signal-controlled intersections and worst-case movement delay at STOP-sign-controlled location.
3. Level of service.
4. Shaded cell denotes unacceptable level of service.

**Signal Warrant Analysis**

Traffic volumes at the STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road are projected to be insufficient to meet the minimum requirements of the “Peak Hour” signal warrant. The signal warrant analysis worksheets can be found in Appendix B.
Cumulative (2030) Plus Project Conditions

The following sections address the effects of adding the project-generated traffic to the Cumulative No Project volumes derived above.

Project Trip Generation

As described earlier, the proposed project will generate an estimated total of 42 trips (28 inbound and 14 outbound) in the weekday AM peak hour. During the weekday PM peak hour, 23 trips are projected, with 6 inbound and 17 outbound.

Project Trip Distribution

Based on the traffic volume forecasts described above, the long-term geographic distribution of the project-generated traffic was evaluated to determine whether the orientation of trips generated by the proposed project would change over time and, therefore, be different from what was assumed for “Baseline” conditions. Based on that evaluation, it was determined that even with implementation of the SOI land uses and the assumed future roadway network, the basic distribution of the traffic in the vicinity of the project site would be similar to current patterns. Therefore, the project trip distribution pattern illustrated on Figure 4 was also used for the cumulative conditions analysis.

Intersection Traffic Volumes

Using the project trip generation and trip distribution information, the project-related trips were assigned to the future road network and added to the Cumulative No Project volumes. The Cumulative Plus Project traffic volumes for the two peak-hour periods are illustrated on Figure 7.

Intersection Level of Service

Table 11 presents the results of the intersection level of service analysis for the Cumulative Plus Project scenario. Appendix H contains the level of service calculation worksheets.

Weekday AM Peak Hour

Four of the six study intersections are expected to continue to meet the City of Folsom’s LOS C policy. The two intersections where substandard levels of service are projected are East Natoma Street/Riley Street (LOS F, the same as under Cumulative No Project conditions) and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road (also the same as under Cumulative No Project conditions at LOS F). The project-related incremental delay value at East Natoma Street/Riley Street will be 2.4 seconds per vehicle, which is below the City’s significance threshold of 5.0 seconds per vehicle. The STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will have insufficient traffic on the minor legs to meet the minimum requirement of the “Peak Hour” signal warrant. Consequently, the project’s impact is less than significant in this time period.
PEAK HOUR TRAFFIC VOLUMES
CUMULATIVE (2030) + PROJECT CONDITIONS

FIGURE 7
### Table 11
Level of Service Summary¹
Cumulative + Project Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cumulative No Project</td>
<td>Cumulative + Project</td>
</tr>
<tr>
<td>East Natoma Street/Riley Street</td>
<td>Signal</td>
<td>&gt; 80.0[^4^]  F</td>
<td>&gt; 80.0  F</td>
</tr>
<tr>
<td>East Natoma Street/Coloma Street</td>
<td>Signal</td>
<td>26.4  C</td>
<td>27.9   C</td>
</tr>
<tr>
<td>East Natoma Street/Wales Drive/City Hall Driveway</td>
<td>Signal</td>
<td>19.7  B</td>
<td>20.4   C</td>
</tr>
<tr>
<td>East Natoma Street/Prison Road</td>
<td>Signal</td>
<td>31.4  C</td>
<td>32.2   C</td>
</tr>
<tr>
<td>East Natoma Street/Hancock Drive/Prison Industry Authority Access Road</td>
<td>STOP Sign</td>
<td>&gt; 50.0  F</td>
<td>&gt; 50.0  F</td>
</tr>
<tr>
<td>East Natoma Street/Folsom Lake Crossing</td>
<td>Signal</td>
<td>12.4  B</td>
<td>12.4   B</td>
</tr>
</tbody>
</table>

Notes:
² Average control delay (seconds per vehicle). Delay value represents overall average intersection delay at signal-controlled intersections and worst-case movement delay at STOP-sign-controlled location.
³ Level of service.
⁴ Shaded cell denotes unacceptable level of service.
**Weekday PM Peak Hour**

As under Cumulative No Project conditions, four study locations are projected to operate at worse than LOS C. East Natoma Street/Riley Street and East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will both be at LOS F. East Natoma Street/Folsom Lake Crossing will operate at LOS E, while East Natoma Street/Wales Drive/City Hall Driveway will be at LOS D. No change in level of service is projected at these intersections, compared to Cumulative No Project conditions. At East Natoma Street/Riley Street, the project-related traffic will increase the intersection delay value by 1.3 seconds per vehicle. The incremental impact at East Natoma Street/Wales Drive/City Hall Driveway will be 1.1 seconds per vehicle, while project-generated traffic will cause the delay at East Natoma Street/Folsom Lake Crossing to increase by 0.3 seconds per vehicle. Thus, the project-related impact at those locations is less than 5.0 seconds.

As in the AM peak hour, the projected traffic volumes on the minor legs of the STOP-sign-controlled intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will be too low to meet the “Peak Hour” signal warrant criteria. Therefore, the project-related impact is less than significant.

**Mitigation Measures**

No project-related significant impacts were identified with regard to vehicular delay and level of service at any of the off-site intersections under cumulative conditions. Although four of the six study intersections will operate at unacceptable levels of service in at least one analysis time period under both “Cumulative No Project” and “Cumulative Plus Project” conditions, the project-related incremental impact is less than the City’s adopted thresholds of significance.

Further, although the unsignalized study intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road will operate at an unacceptable level of service in both peak-hour periods (both with and without the proposed project), the projected traffic volumes are less than the minimum values associated with the “Peak Hour” signal warrant.

Therefore, no mitigation measures are recommended with respect to the project’s off-site traffic impacts.
SITE ACCESS ANALYSIS

This section describes the analysis of the proposed project’s vehicular access system. As noted earlier, vehicular access to and from the site will be via existing roadways serving the Folsom State Prison/California State Prison – Sacramento complex.

Access Roadways

Two existing roadways will serve the vehicular access needs of the proposed Folsom Women’s Facility project. Those roadways are described below:

- **Prison Industry Authority Access Road (Hancock Drive)** – As described earlier, the Prison Industry Authority Access Road will be the primary access facility for the proposed project. It is located about 0.85-mile east of Prison Road and about 0.30-mile west of Folsom Lake Crossing. At its intersection with East Natoma Street, this roadway is STOP-sign controlled and all movements are allowed. Based on input from prison officials, all traffic entering and exiting the proposed project was assumed to use this road.

- **Prison Road** – Although Prison Road is the major access point for the overall prison complex, it will serve only a minor role with respect to the proposed project. It is a two-lane road, which meets East Natoma Street at a traffic-signal-controlled T-intersection. The fourth (south) leg of this T-intersection is to be constructed in connection with a previously-approved office project on the south side of East Natoma Street.

Based on the Cumulative (2030) Plus Project peak-hour traffic volumes, analyses were performed to address the operation and configuration of the primary project access point (i.e., the intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road) with respect to:

- Traffic control (i.e., signal or STOP-sign control),
- Sight distance, and
- Queuing/vehicular storage needs.

Traffic Control Analysis

To determine the appropriate form of traffic control at East Natoma Street/Hancock Drive/Prison Industry Authority Access Road, the intersection was analyzed using the Caltrans “Peak Hour” signal warrant procedure, as documented in “Part 4 – Highway Traffic Signals” of the *California Manual on Uniform Traffic Control Devices 2012* (Caltrans, January 13, 2012). The results of this evaluation for each analysis scenario were described in previous sections of this report. In summary, under all analysis scenarios, the projected traffic volumes are expected to fall short of the minimum values needed to satisfy the “Peak Hour” signal warrant. Therefore, STOP-sign control should continue to be employed at this location.

Sight Distance Analysis

To ensure that drivers will be able to enter and exit the site safely, a stopping sight distance analysis was conducted at the project access intersection using information provided in *A Policy on Geometric Design of Highways and Streets* (American Association of State Highway and Transportation
Ascent Environmental
Folsom Women’s Facility


At the East Natoma Street/Hancock Drive/Prison Industry Authority Access Road intersection, the speed limit on East Natoma Street is 45 MPH, which calls for a minimum of 360 feet of clear sight distance. Allowing for the tendency of some drivers to exceed the speed limit, a design value of 425 feet was used, representing the sight distance needed at 50 MPH.

The analysis at the project access location was conducted relative to inbound left turns as well as to outbound left and right turns, to ensure that project-related drivers could see and react to approaching vehicles on East Natoma Street. In addition, although no project-generated traffic will use Hancock Drive, a similar evaluation was performed with respect to drivers entering and exiting Hancock Drive on the opposite side of East Natoma Street.

Field investigations revealed that drivers at this location have a clear view in both directions along East Natoma Street exceeding the 425-foot minimum requirement. This is true for drivers entering and exiting the project site via the Prison Industry Authority Access Road, as well as drivers using Hancock Drive. (Vegetation exists on private property on the northeasterly corner of East Natoma Street/Hancock Drive that could potentially impede sight distance for drivers making a left turn from Hancock Drive to westbound East Natoma Street. However, as long as this material is reasonably well-trimmed, no substantial sight distance issues are foreseen. This issue is, of course, an existing condition that is unrelated to the proposed project.)

In conclusion, the analysis determined that adequate sight distance is available to allow safe operations at the project access intersection on East Natoma Street.

Queuing/Vehicular Storage Needs Analysis

Addition of project-generated traffic to the primary access intersection of East Natoma Street/Hancock Drive/Prison Industry Authority Access Road might increase the lengths of vehicular queues at that location. Of particular interest are the queue lengths in the eastbound and westbound left-turn lanes on East Natoma Street and the northbound and southbound left/right-turn lanes on Hancock Drive and Prison Industry Authority Access Road, respectively. The queue lengths at those locations were estimated for both Baseline and Cumulative conditions.

Specifically, an analysis was conducted to determine the expected “95th-percentile” queue length (i.e., there is a 95-percent probability that the actual queue at the driveway will be equal to or shorter than the projected queue; in other words, there is only a 5-percent probability that the actual queue will exceed the estimated value.). The estimated queue lengths were taken directly from the HCS 2010 intersection level of service calculation worksheets.

Table 12 summarizes the analysis results for Baseline and Cumulative conditions, both with and without the proposed project. As described there, 50 feet of storage length is currently provided for the eastbound left-turn maneuver (i.e., vehicles entering the prison site from eastbound East Natoma Street). The same amount of storage is available for westbound left turns from East Natoma Street to Hancock Drive. Drivers making southbound (i.e., outbound) left and right turns from the Prison Industry Authority Access Road to East Natoma Street have about 185 feet of storage available (from
the stop bar at East Natoma Street to the near edge of the first cross street). The corresponding
dimension for left and right turns from Hancock Drive to East Natoma Street is about 325 feet.

Under Baseline conditions, the existing turn lanes will be sufficient to accommodate the expected
queues of vehicles waiting to turn into or out of the project site. The 25-foot eastbound and westbound
left-turn queues on East Natoma Street will be unchanged when the project traffic is added; this is true
in both the AM and PM peak hours. On the southbound/outbound movements from the Prison Industry
Authority Access Road, adequate storage will also be available in both peak-hour periods, and the
projected queue lengths are projected to be unchanged by the addition of project-generated traffic.
Although the northbound left/right-turn queue on Hancock Drive is expected to increase from 25 feet
to 50 feet in length, this can easily be accommodated within the available storage length.

Under cumulative (year 2030) conditions, the addition of the project-related traffic will cause several
of the northbound and southbound queue lengths to increase by 25 feet (i.e., one vehicle-length). In
each case, however, more than adequate storage is available. The eastbound and westbound left-turn
queues are projected to be unchanged when project traffic is added, and adequate storage is projected
to be available to serve those movements.

<table>
<thead>
<tr>
<th>Table 12</th>
<th>Estimated Queue Length Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>East Natoma Street/Hancock Drive/Prison Industry Authority Access Road</strong></td>
<td><strong>Weekday AM Peak Hour</strong></td>
</tr>
<tr>
<td><strong>Estimated Queue Length (Feet)</strong></td>
<td><strong>EB Left Turn</strong></td>
</tr>
<tr>
<td><strong>Available Storage</strong></td>
<td>50 Ft.</td>
</tr>
<tr>
<td><strong>Baseline Conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Baseline + Project</td>
<td>25 Ft.</td>
</tr>
<tr>
<td><strong>Cumulative (2030) Conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Cumulative + Project</td>
<td>25 Ft.</td>
</tr>
<tr>
<td><strong>Notes:</strong></td>
<td></td>
</tr>
<tr>
<td>1 Rounded to 25-foot increments, based on 25-foot assumed design vehicle length.</td>
<td></td>
</tr>
<tr>
<td>2 Approximate distance from stop bar at East Natoma Street to near edge of first cross-street.</td>
<td></td>
</tr>
</tbody>
</table>
Mitigation Measures

The site access analysis revealed that the vehicular access needs of the proposed project will be adequately met by the existing road system. Therefore, no mitigation measures are necessary or recommended.
APPENDIX A

EXISTING CONDITIONS
LEVEL OF SERVICE CALCULATION WORKSHEETS
### Existing Conditions

5: Riley St. & E. Natoma St.

#### AM Peak Hour

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lane Configurations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>6</td>
<td>137</td>
<td>24</td>
<td>39</td>
<td>214</td>
<td>104</td>
<td>18</td>
<td>343</td>
<td>26</td>
<td>135</td>
<td>713</td>
<td>5</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>7</td>
<td>225</td>
<td>39</td>
<td>51</td>
<td>317</td>
<td>270</td>
<td>22</td>
<td>665</td>
<td>50</td>
<td>192</td>
<td>896</td>
<td>6</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.15</td>
<td>0.15</td>
<td>0.03</td>
<td>0.17</td>
<td>0.17</td>
<td>0.01</td>
<td>0.39</td>
<td>0.39</td>
<td>0.11</td>
<td>0.49</td>
<td>0.49</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>6.6</td>
<td>0.0</td>
<td>176.9</td>
<td>42.9</td>
<td>235.2</td>
<td>114.3</td>
<td>19.8</td>
<td>0.0</td>
<td>405.5</td>
<td>148.4</td>
<td>0.0</td>
<td>789.0</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.2</td>
<td>0.0</td>
<td>4.5</td>
<td>1.2</td>
<td>5.8</td>
<td>3.1</td>
<td>0.5</td>
<td>0.0</td>
<td>8.4</td>
<td>4.0</td>
<td>0.0</td>
<td>18.5</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.2</td>
<td>0.0</td>
<td>4.5</td>
<td>1.2</td>
<td>5.8</td>
<td>3.1</td>
<td>0.5</td>
<td>0.0</td>
<td>8.4</td>
<td>4.0</td>
<td>0.0</td>
<td>18.5</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>6.8</td>
<td>0.0</td>
<td>264.1</td>
<td>50.9</td>
<td>317.3</td>
<td>270.2</td>
<td>22.1</td>
<td>0.0</td>
<td>715.7</td>
<td>192.2</td>
<td>0.0</td>
<td>902.4</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.972</td>
<td>0.000</td>
<td>0.670</td>
<td>0.842</td>
<td>0.741</td>
<td>0.424</td>
<td>0.909</td>
<td>0.000</td>
<td>0.567</td>
<td>0.772</td>
<td>0.000</td>
<td>0.874</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>145.7</td>
<td>0.0</td>
<td>335.4</td>
<td>145.7</td>
<td>344.2</td>
<td>292.6</td>
<td>145.7</td>
<td>0.0</td>
<td>831.0</td>
<td>327.8</td>
<td>0.0</td>
<td>1031.3</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.842</td>
<td>0.741</td>
<td>0.424</td>
<td>0.909</td>
<td>0.000</td>
<td>0.567</td>
<td>0.772</td>
<td>0.000</td>
<td>0.874</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>24.3</td>
<td>0.0</td>
<td>19.7</td>
<td>23.5</td>
<td>19.2</td>
<td>18.1</td>
<td>24.0</td>
<td>0.0</td>
<td>11.7</td>
<td>21.1</td>
<td>0.0</td>
<td>11.2</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>152.3</td>
<td>0.0</td>
<td>3.5</td>
<td>28.9</td>
<td>7.7</td>
<td>1.1</td>
<td>67.4</td>
<td>0.0</td>
<td>0.7</td>
<td>6.4</td>
<td>0.0</td>
<td>7.7</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>176.6</td>
<td>0.0</td>
<td>23.2</td>
<td>52.5</td>
<td>26.9</td>
<td>19.1</td>
<td>91.4</td>
<td>0.0</td>
<td>12.4</td>
<td>27.6</td>
<td>0.0</td>
<td>18.9</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>C</td>
<td>D</td>
<td>C</td>
<td>B</td>
<td>F</td>
<td>B</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>184</td>
<td>392</td>
<td>425</td>
<td>937</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>28.7</td>
<td>27.4</td>
<td>16.0</td>
<td>20.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>C</td>
<td>C</td>
<td>B</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assigned Phase</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.19</td>
<td>11.09</td>
<td>5.40</td>
<td>12.30</td>
<td>4.60</td>
<td>22.95</td>
<td>9.28</td>
<td>27.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>9.00</td>
<td>4.00</td>
<td>9.00</td>
<td>4.00</td>
<td>22.00</td>
<td>9.00</td>
<td>27.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.18</td>
<td>6.50</td>
<td>3.17</td>
<td>7.84</td>
<td>2.54</td>
<td>10.41</td>
<td>5.96</td>
<td>20.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>0.60</td>
<td>0.01</td>
<td>0.30</td>
<td>0.00</td>
<td>4.56</td>
<td>0.13</td>
<td>3.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Intersection Summary**

HCM 2010 Control Delay | 21.6
HCM 2010 Level of Service | C

---

MRO Engineers, Inc.
Synchro 8 Report
Folsom Women's Facility
Page 2
# Existing Conditions

## AM Peak Hour

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume (vph)</strong></td>
<td>2</td>
<td>262</td>
<td>16</td>
<td>49</td>
<td>371</td>
<td>28</td>
<td>21</td>
<td>26</td>
<td>51</td>
<td>36</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td><strong>Initial Queue, veh</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Ped-Bike Adj(A_pbT)</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Parking, Bus Adj</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Adj Sat Flow Rate</strong></td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td><strong>Lanes</strong></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Capacity, veh/h</strong></td>
<td>6</td>
<td>587</td>
<td>36</td>
<td>65</td>
<td>639</td>
<td>48</td>
<td>26</td>
<td>53</td>
<td>103</td>
<td>46</td>
<td>138</td>
<td>49</td>
</tr>
<tr>
<td><strong>Arriving On Green</strong></td>
<td>0.00</td>
<td>0.34</td>
<td>0.34</td>
<td>0.04</td>
<td>0.37</td>
<td>0.37</td>
<td>0.01</td>
<td>0.09</td>
<td>0.09</td>
<td>0.03</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Sat Flow, veh/h</strong></td>
<td>1774.0</td>
<td>1737.9</td>
<td>106.1</td>
<td>1774.0</td>
<td>1710.8</td>
<td>129.1</td>
<td>1774.0</td>
<td>563.2</td>
<td>1104.7</td>
<td>1774.0</td>
<td>1311.6</td>
<td>468.4</td>
</tr>
<tr>
<td><strong>Grp Volume(v), veh/h</strong></td>
<td>2.2</td>
<td>0.0</td>
<td>312.4</td>
<td>55.1</td>
<td>0.0</td>
<td>448.3</td>
<td>23.6</td>
<td>0.0</td>
<td>86.5</td>
<td>40.4</td>
<td>0.0</td>
<td>42.7</td>
</tr>
<tr>
<td><strong>Grp Sat Flow(s),veh/h/ln</strong></td>
<td>1774.0</td>
<td>0.0</td>
<td>1844.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1840.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1687.8</td>
<td>1774.0</td>
<td>0.0</td>
<td>1780.1</td>
</tr>
<tr>
<td><strong>Q Serve(g_s), s</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>4.3</td>
<td>1.0</td>
<td>0.0</td>
<td>6.4</td>
<td>0.4</td>
<td>0.0</td>
<td>1.6</td>
<td>0.7</td>
<td>0.0</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Cycle Q Clear(g_c), s</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>4.3</td>
<td>1.0</td>
<td>0.0</td>
<td>6.4</td>
<td>0.4</td>
<td>0.0</td>
<td>1.6</td>
<td>0.7</td>
<td>0.0</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Proportion In Lane</strong></td>
<td>1.00</td>
<td>0.058</td>
<td>1.00</td>
<td>0.058</td>
<td>1.00</td>
<td>0.058</td>
<td>1.00</td>
<td>0.058</td>
<td>1.00</td>
<td>0.058</td>
<td>1.00</td>
<td>0.058</td>
</tr>
<tr>
<td><strong>Lane Grp Cap(c), veh/h</strong></td>
<td>5.6</td>
<td>0.0</td>
<td>623.1</td>
<td>65.3</td>
<td>0.0</td>
<td>687.1</td>
<td>25.5</td>
<td>0.0</td>
<td>155.8</td>
<td>46.1</td>
<td>0.0</td>
<td>187.0</td>
</tr>
<tr>
<td><strong>V/C Ratio(X)</strong></td>
<td>0.401</td>
<td>0.000</td>
<td>0.501</td>
<td>0.843</td>
<td>0.000</td>
<td>0.652</td>
<td>0.925</td>
<td>0.000</td>
<td>0.555</td>
<td>0.878</td>
<td>0.000</td>
<td>0.228</td>
</tr>
<tr>
<td><strong>Avail Cap(c_a), veh/h</strong></td>
<td>336.6</td>
<td>0.0</td>
<td>2332.2</td>
<td>560.9</td>
<td>0.0</td>
<td>2559.8</td>
<td>392.6</td>
<td>0.0</td>
<td>843.7</td>
<td>448.7</td>
<td>0.0</td>
<td>956.8</td>
</tr>
<tr>
<td><strong>HCM Platoon Ratio</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Upstream Filter(I)</strong></td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>Uniform Delay (d), s veh</strong></td>
<td>15.8</td>
<td>0.0</td>
<td>8.3</td>
<td>15.1</td>
<td>0.0</td>
<td>8.2</td>
<td>15.6</td>
<td>0.0</td>
<td>13.7</td>
<td>15.4</td>
<td>0.0</td>
<td>13.0</td>
</tr>
<tr>
<td><strong>Incr Delay (d2), s veh</strong></td>
<td>40.3</td>
<td>0.0</td>
<td>0.6</td>
<td>24.0</td>
<td>0.0</td>
<td>1.1</td>
<td>64.4</td>
<td>0.0</td>
<td>3.1</td>
<td>36.5</td>
<td>0.0</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Initial Q Delay(d3), s veh</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Control Delay (d), s veh</strong></td>
<td>56.1</td>
<td>0.0</td>
<td>9.0</td>
<td>39.1</td>
<td>0.0</td>
<td>9.3</td>
<td>80.0</td>
<td>0.0</td>
<td>16.8</td>
<td>51.8</td>
<td>0.0</td>
<td>13.6</td>
</tr>
</tbody>
</table>

**Approach Volume, veh/h**
315
350
110
83

**Approach Delay, s veh**
9.3
12.5
30.3
32.2

**Approach LOS**
A
A
B
C

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase Duration (G+Y+Rc), s</strong></td>
<td>4.04</td>
<td>14.69</td>
</tr>
<tr>
<td><strong>Change Period (Y+Rc), s</strong></td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Max Green Setting (Gmax), s</strong></td>
<td>6.00</td>
<td>40.00</td>
</tr>
<tr>
<td><strong>Max Q Clear Time (g_c+I1), s</strong></td>
<td>2.04</td>
<td>6.27</td>
</tr>
<tr>
<td><strong>Green Extension Time (p_c)</strong></td>
<td>0.00</td>
<td>3.42</td>
</tr>
</tbody>
</table>

**HCM 2010 Control Delay**
15.1

**HCM 2010 Level of Service**
B
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR
#### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>5</td>
<td>257</td>
<td>16</td>
<td>49</td>
<td>376</td>
<td>51</td>
<td>43</td>
<td>24</td>
<td>63</td>
<td>16</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj (A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>6</td>
<td>598</td>
<td>37</td>
<td>61</td>
<td>604</td>
<td>82</td>
<td>53</td>
<td>48</td>
<td>125</td>
<td>18</td>
<td>127</td>
<td>27</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.34</td>
<td>0.34</td>
<td>0.03</td>
<td>0.38</td>
<td>0.38</td>
<td>0.03</td>
<td>0.10</td>
<td>0.10</td>
<td>0.01</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1735.6</td>
<td>108.1</td>
<td>1774.0</td>
<td>1606.4</td>
<td>217.9</td>
<td>1774.0</td>
<td>455.6</td>
<td>1196.0</td>
<td>1774.0</td>
<td>1487.7</td>
<td>318.8</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>5.3</td>
<td>0.0</td>
<td>290.4</td>
<td>52.1</td>
<td>0.0</td>
<td>454.3</td>
<td>45.7</td>
<td>0.0</td>
<td>92.6</td>
<td>17.0</td>
<td>0.0</td>
<td>18.1</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.1</td>
<td>0.0</td>
<td>3.9</td>
<td>0.9</td>
<td>0.0</td>
<td>6.5</td>
<td>0.8</td>
<td>0.0</td>
<td>1.7</td>
<td>0.3</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.1</td>
<td>0.0</td>
<td>3.9</td>
<td>0.9</td>
<td>0.0</td>
<td>6.5</td>
<td>0.8</td>
<td>0.0</td>
<td>1.7</td>
<td>0.3</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.059</td>
<td>1.00</td>
<td>0.176</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>5.6</td>
<td>0.0</td>
<td>635.7</td>
<td>61.3</td>
<td>0.0</td>
<td>686.5</td>
<td>52.8</td>
<td>0.0</td>
<td>173.3</td>
<td>18.0</td>
<td>0.0</td>
<td>154.0</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.949</td>
<td>0.000</td>
<td>0.457</td>
<td>0.851</td>
<td>0.000</td>
<td>0.662</td>
<td>0.866</td>
<td>0.000</td>
<td>0.534</td>
<td>0.947</td>
<td>0.000</td>
<td>0.117</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>336.4</td>
<td>0.0</td>
<td>2388.9</td>
<td>504.6</td>
<td>0.0</td>
<td>2536.8</td>
<td>448.5</td>
<td>0.0</td>
<td>939.6</td>
<td>336.4</td>
<td>0.0</td>
<td>913.5</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>15.8</td>
<td>0.0</td>
<td>8.1</td>
<td>15.2</td>
<td>0.0</td>
<td>8.2</td>
<td>15.3</td>
<td>0.0</td>
<td>13.4</td>
<td>15.7</td>
<td>0.0</td>
<td>13.4</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>160.9</td>
<td>0.0</td>
<td>5.0</td>
<td>26.1</td>
<td>0.0</td>
<td>1.1</td>
<td>31.3</td>
<td>0.0</td>
<td>2.5</td>
<td>84.7</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Initialization Delay (d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>176.7</td>
<td>0.0</td>
<td>8.6</td>
<td>41.3</td>
<td>0.0</td>
<td>9.3</td>
<td>46.6</td>
<td>0.0</td>
<td>16.0</td>
<td>100.4</td>
<td>0.0</td>
<td>13.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Movement</th>
<th>A</th>
<th>D</th>
<th>A</th>
<th>D</th>
<th>B</th>
<th>F</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach Volume, veh/h</td>
<td>296</td>
<td>506</td>
<td>138</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>11.6</td>
<td>12.6</td>
<td>26.1</td>
<td>55.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.10</td>
<td>14.91</td>
<td>5.09</td>
<td>15.91</td>
<td>4.94</td>
<td>7.32</td>
<td>4.32</td>
<td>6.70</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>6.00</td>
<td>41.00</td>
<td>9.00</td>
<td>44.00</td>
<td>8.00</td>
<td>18.00</td>
<td>6.00</td>
<td>16.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.09</td>
<td>5.88</td>
<td>2.92</td>
<td>8.54</td>
<td>2.81</td>
<td>3.68</td>
<td>2.30</td>
<td>2.29</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>3.37</td>
<td>0.05</td>
<td>3.37</td>
<td>0.03</td>
<td>0.29</td>
<td>0.00</td>
<td>0.29</td>
</tr>
</tbody>
</table>

### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>15.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>B</td>
</tr>
</tbody>
</table>
### Existing Conditions

**14: E. Natoma St. & Prison Rd.**

**AM Peak Hour**

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>WBT</th>
<th>WBR</th>
<th>SBL</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume (vph)</strong></td>
<td>92</td>
<td>262</td>
<td>553</td>
<td>43</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td><strong>Initial Queue, veh</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Ped-Bike Adj (A_pbT)</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Parking, Bus Adj</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Adj Sat Flow Rate</strong></td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td><strong>Lanes</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Capacity, veh/h</strong></td>
<td>146</td>
<td>1361</td>
<td>901</td>
<td>70</td>
<td>51</td>
<td>46</td>
</tr>
<tr>
<td><strong>Arriving On Green</strong></td>
<td>0.08</td>
<td>0.73</td>
<td>0.53</td>
<td>0.53</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>Sat Flow, veh/h</strong></td>
<td>1774.0</td>
<td>1862.7</td>
<td>1706.6</td>
<td>132.7</td>
<td>1774.0</td>
<td>1583.3</td>
</tr>
<tr>
<td><strong>Grp Volume(v), veh/h</strong></td>
<td>113.6</td>
<td>323.5</td>
<td>0.0</td>
<td>735.8</td>
<td>3.7</td>
<td>25.9</td>
</tr>
<tr>
<td><strong>Grp Sat Flow(s), veh/h/ln</strong></td>
<td>1774.0</td>
<td>1862.7</td>
<td>0.0</td>
<td>1839.3</td>
<td>1774.0</td>
<td>1583.3</td>
</tr>
<tr>
<td><strong>Q Serve(g_s), s</strong></td>
<td>2.1</td>
<td>1.9</td>
<td>0.0</td>
<td>10.5</td>
<td>0.1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Cycle Q Clear(g_c), s</strong></td>
<td>2.1</td>
<td>1.9</td>
<td>0.0</td>
<td>10.5</td>
<td>0.1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Proportion In Lane</strong></td>
<td>1.00</td>
<td>0.072</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lane Grp Cap(c), veh/h</strong></td>
<td>145.5</td>
<td>1360.8</td>
<td>0.0</td>
<td>971.5</td>
<td>51.1</td>
<td>45.6</td>
</tr>
<tr>
<td><strong>Avail Cap(c_a), veh/h</strong></td>
<td>426.9</td>
<td>2577.6</td>
<td>0.0</td>
<td>1881.2</td>
<td>320.2</td>
<td>285.8</td>
</tr>
<tr>
<td><strong>HCM Platoon Ratio</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Upstream Filter(I)</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>0.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Uniform Delay (d), s/veh</strong></td>
<td>15.0</td>
<td>1.5</td>
<td>0.0</td>
<td>6.2</td>
<td>15.7</td>
<td>15.9</td>
</tr>
<tr>
<td><strong>Incr Delay (d2), s/veh</strong></td>
<td>8.7</td>
<td>0.1</td>
<td>0.0</td>
<td>1.2</td>
<td>0.6</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>Initial Q Delay(d3), s/veh</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Control Delay (d), s/veh</strong></td>
<td>23.7</td>
<td>1.5</td>
<td>0.0</td>
<td>7.4</td>
<td>16.3</td>
<td>26.6</td>
</tr>
<tr>
<td><strong>Movement LOS</strong></td>
<td>C</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

#### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>5</th>
<th>2</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase Duration (G+Y+Rc), s</strong></td>
<td>6.73</td>
<td>28.29</td>
<td>21.56</td>
</tr>
<tr>
<td><strong>Change Period (Y+Rc), s</strong></td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Max Green Setting (Gmax), s</strong></td>
<td>8.00</td>
<td>46.00</td>
<td>34.00</td>
</tr>
<tr>
<td><strong>Max Q Clear Time (g_c+I1), s</strong></td>
<td>4.09</td>
<td>3.88</td>
<td>12.46</td>
</tr>
<tr>
<td><strong>Green Extension Time (p_c)</strong></td>
<td>0.11</td>
<td>5.65</td>
<td>5.10</td>
</tr>
</tbody>
</table>

#### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>7.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>A</td>
</tr>
</tbody>
</table>
## TWO-WAY STOP CONTROL SUMMARY

### General Information
- Analyst: NKL
- Agency/Co.: MRO Engineers, Inc.
- Date Performed: 7/9/2012
- Analysis Time Period: AM Peak Hour

### Site Information
- Intersection: E. Natoma St./Hancock Dr./PIA
- Jurisdiction: Folsom, CA
- Analysis Year: Existing Conditions

### Project Description
- Folsom Women's Facility

### East/West Street: East Natoma St.
### North/South Street: Hancock Dr./PIA Access Rd.
### Intersection Orientation: East-West
### Study Period (hrs): 0.25

### Vehicle Volumes and Adjustments

#### Major Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>27</td>
<td>499</td>
</tr>
<tr>
<td>T</td>
<td>239</td>
<td>23</td>
</tr>
<tr>
<td>R</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>L</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>T</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>R</td>
<td>23</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Heavy Vehicles</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Minor Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>T</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>R</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>L</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>T</td>
<td>28</td>
<td>3</td>
</tr>
<tr>
<td>R</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Heavy Vehicles</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

### Delay, Queue Length, and Level of Service

#### Approach

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>33</td>
<td>17</td>
<td>54</td>
<td>4</td>
</tr>
<tr>
<td>L</td>
<td>1259</td>
<td>328</td>
<td>225</td>
<td>0.02</td>
</tr>
<tr>
<td>L</td>
<td>941</td>
<td>0.16</td>
<td>0.58</td>
<td>0.05</td>
</tr>
<tr>
<td>L</td>
<td>7.9</td>
<td>18.1</td>
<td>21.3</td>
<td>21.3</td>
</tr>
<tr>
<td>L</td>
<td>18.1</td>
<td>21.3</td>
<td>21.3</td>
<td>C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Delay (s/veh)</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>7.9</td>
<td>18.1</td>
<td>21.3</td>
<td>C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approach Delay (s/veh)</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach LOS</td>
<td>--</td>
<td>--</td>
<td>18.1</td>
<td>C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approach LOS</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>21.3</td>
<td>C</td>
</tr>
</tbody>
</table>

Copyright © 2010 University of Florida, All Rights Reserved

HCS+™ Version 5.6 Generated: 7/10/2012 2:28 PM
### Existing Conditions

**2: E. Natoma St. & Folsom Lake Crossing**

**AM Peak Hour**

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lane Configurations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>130</td>
<td>122</td>
<td>318</td>
<td>1007</td>
<td>598</td>
<td>148</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>422</td>
<td>460</td>
<td>579</td>
<td>2488</td>
<td>1584</td>
<td>708</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.12</td>
<td>0.12</td>
<td>0.17</td>
<td>0.70</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>1583.3</td>
<td>3441.6</td>
<td>3632.4</td>
<td>3632.3</td>
<td>1583.3</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>142.9</td>
<td>134.1</td>
<td>349.5</td>
<td>1106.6</td>
<td>657.1</td>
<td>162.6</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1720.8</td>
<td>1583.3</td>
<td>1720.8</td>
<td>1769.6</td>
<td>1769.6</td>
<td>1583.3</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>1.7</td>
<td>3.0</td>
<td>4.3</td>
<td>6.2</td>
<td>5.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>1.7</td>
<td>3.0</td>
<td>4.3</td>
<td>6.2</td>
<td>5.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>422.2</td>
<td>460.5</td>
<td>578.7</td>
<td>2487.5</td>
<td>1583.7</td>
<td>708.5</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.338</td>
<td>0.291</td>
<td>0.604</td>
<td>0.445</td>
<td>0.415</td>
<td>0.230</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>1050.9</td>
<td>749.7</td>
<td>1801.5</td>
<td>5249.1</td>
<td>3087.7</td>
<td>1381.3</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>18.4</td>
<td>12.6</td>
<td>17.7</td>
<td>2.9</td>
<td>8.6</td>
<td>7.8</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>0.5</td>
<td>0.3</td>
<td>1.0</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>18.9</td>
<td>12.9</td>
<td>18.7</td>
<td>3.1</td>
<td>8.8</td>
<td>8.0</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>277</td>
<td></td>
<td>1456</td>
<td>820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>16.0</td>
<td></td>
<td>6.8</td>
<td>8.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td></td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 11.71 | 36.23 | 24.52 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 24.00 | 68.00 | 40.00 |
| Max Q Clear Time (g_c+I1), s | 6.31 | 8.20 | 7.78 |
| Green Extension Time (p_c) | 1.49 | 14.71 | 12.74 |

### Intersection Summary

| HCM 2010 Control Delay | 8.4 |
| HCM 2010 Level of Service | A |
### Existing Conditions

**5: Riley St. & E. Natoma St.**

**PM Peak Hour**

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Configurations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>28</td>
<td>166</td>
<td>61</td>
<td>87</td>
<td>164</td>
<td>141</td>
<td>30</td>
<td>677</td>
<td>30</td>
<td>133</td>
<td>729</td>
<td>8</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>34</td>
<td>210</td>
<td>77</td>
<td>114</td>
<td>385</td>
<td>327</td>
<td>37</td>
<td>817</td>
<td>36</td>
<td>172</td>
<td>989</td>
<td>11</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.02</td>
<td>0.16</td>
<td>0.16</td>
<td>0.06</td>
<td>0.21</td>
<td>0.21</td>
<td>0.02</td>
<td>0.46</td>
<td>0.46</td>
<td>0.10</td>
<td>0.54</td>
<td>0.54</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1300.5</td>
<td>477.9</td>
<td>1774.0</td>
<td>1862.7</td>
<td>1583.3</td>
<td>1774.0</td>
<td>1770.4</td>
<td>78.5</td>
<td>1774.0</td>
<td>1839.0</td>
<td>20.2</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>28.6</td>
<td>0.0</td>
<td>231.6</td>
<td>88.8</td>
<td>167.3</td>
<td>143.9</td>
<td>30.6</td>
<td>0.0</td>
<td>721.4</td>
<td>135.7</td>
<td>0.0</td>
<td>752.0</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>1.2</td>
<td>0.0</td>
<td>9.3</td>
<td>3.7</td>
<td>5.8</td>
<td>5.9</td>
<td>1.3</td>
<td>0.0</td>
<td>25.5</td>
<td>5.5</td>
<td>0.0</td>
<td>23.3</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>1.2</td>
<td>0.0</td>
<td>9.3</td>
<td>3.7</td>
<td>5.8</td>
<td>5.9</td>
<td>1.3</td>
<td>0.0</td>
<td>25.5</td>
<td>5.5</td>
<td>0.0</td>
<td>23.3</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>34.0</td>
<td>0.0</td>
<td>287.2</td>
<td>114.1</td>
<td>385.0</td>
<td>327.2</td>
<td>37.0</td>
<td>817.0</td>
<td>36.0</td>
<td>172.0</td>
<td>989.7</td>
<td>0.011</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.840</td>
<td>0.000</td>
<td>0.806</td>
<td>0.778</td>
<td>0.435</td>
<td>0.440</td>
<td>0.835</td>
<td>0.000</td>
<td>0.845</td>
<td>0.791</td>
<td>0.000</td>
<td>0.752</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>119.6</td>
<td>0.0</td>
<td>335.8</td>
<td>167.5</td>
<td>402.0</td>
<td>341.7</td>
<td>95.7</td>
<td>0.0</td>
<td>1072.3</td>
<td>239.3</td>
<td>0.0</td>
<td>1228.7</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>36.2</td>
<td>0.0</td>
<td>30.0</td>
<td>34.2</td>
<td>25.6</td>
<td>25.7</td>
<td>36.2</td>
<td>0.0</td>
<td>17.6</td>
<td>32.7</td>
<td>0.0</td>
<td>13.3</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>38.9</td>
<td>0.0</td>
<td>11.8</td>
<td>12.9</td>
<td>0.8</td>
<td>0.9</td>
<td>36.1</td>
<td>0.0</td>
<td>5.2</td>
<td>11.3</td>
<td>0.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>75.2</td>
<td>0.0</td>
<td>41.8</td>
<td>47.0</td>
<td>26.4</td>
<td>26.6</td>
<td>72.2</td>
<td>0.0</td>
<td>22.8</td>
<td>44.1</td>
<td>0.0</td>
<td>15.4</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>E</td>
<td>D</td>
<td>D</td>
<td>C</td>
<td>C</td>
<td>E</td>
<td>C</td>
<td>D</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>260</td>
<td>400</td>
<td>752</td>
<td>888</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>45.4</td>
<td>31.1</td>
<td>24.9</td>
<td>19.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>D</td>
<td>C</td>
<td>C</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>5.42</td>
<td>15.97</td>
<td>8.77</td>
<td>19.32</td>
<td>5.53</td>
<td>38.22</td>
<td>11.18</td>
<td>43.87</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>5.00</td>
<td>14.00</td>
<td>7.00</td>
<td>16.00</td>
<td>4.00</td>
<td>43.00</td>
<td>10.00</td>
<td>49.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>3.19</td>
<td>11.31</td>
<td>5.65</td>
<td>7.88</td>
<td>3.27</td>
<td>27.54</td>
<td>7.55</td>
<td>25.28</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.01</td>
<td>0.66</td>
<td>0.03</td>
<td>1.49</td>
<td>0.00</td>
<td>6.68</td>
<td>0.09</td>
<td>8.02</td>
</tr>
</tbody>
</table>

### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>26.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>C</td>
</tr>
</tbody>
</table>
### Existing Conditions

#### 8: Coloma St. & E. Natoma St.

**PM Peak Hour**

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lane Configurations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Volume (vph)</strong></td>
<td>8</td>
<td>367</td>
<td>22</td>
<td>53</td>
<td>453</td>
<td>60</td>
<td>53</td>
<td>128</td>
<td>124</td>
<td>70</td>
<td>54</td>
<td>10</td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td><strong>Initial Queue, veh</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Ped-Bike Adj (A_pbT)</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Parking, Bus Adj</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Adj Sat Flow Rate</strong></td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td><strong>Lanes</strong></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Capacity, veh/h</strong></td>
<td>9</td>
<td>634</td>
<td>38</td>
<td>71</td>
<td>643</td>
<td>85</td>
<td>71</td>
<td>186</td>
<td>180</td>
<td>97</td>
<td>348</td>
<td>64</td>
</tr>
<tr>
<td><strong>Arriving On Green</strong></td>
<td>0.01</td>
<td>0.36</td>
<td>0.36</td>
<td>0.04</td>
<td>0.40</td>
<td>0.40</td>
<td>0.04</td>
<td>0.21</td>
<td>0.21</td>
<td>0.05</td>
<td>0.23</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>Sat Flow, veh/h</strong></td>
<td>1774.0</td>
<td>1740.0</td>
<td>104.3</td>
<td>1774.0</td>
<td>1863.0</td>
<td>1740.0</td>
<td>1774.0</td>
<td>1863.0</td>
<td>1740.0</td>
<td>1863.0</td>
<td>1740.0</td>
<td>1863.0</td>
</tr>
<tr>
<td><strong>Grp Volume(v), veh/h</strong></td>
<td>8.7</td>
<td>0.0</td>
<td>422.8</td>
<td>57.6</td>
<td>0.0</td>
<td>557.6</td>
<td>57.6</td>
<td>0.0</td>
<td>273.9</td>
<td>76.1</td>
<td>0.0</td>
<td>69.6</td>
</tr>
<tr>
<td><strong>Grp Sat Flow(s), veh/h/ln</strong></td>
<td>1774.0</td>
<td>0.0</td>
<td>1844.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1825.1</td>
<td>1774.0</td>
<td>0.0</td>
<td>1713.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1812.8</td>
</tr>
<tr>
<td><strong>Q Serve(g_s), s</strong></td>
<td>0.2</td>
<td>0.0</td>
<td>9.2</td>
<td>1.6</td>
<td>0.0</td>
<td>12.9</td>
<td>1.6</td>
<td>0.0</td>
<td>7.3</td>
<td>2.1</td>
<td>0.0</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Cycle Q Clear(g_c), s</strong></td>
<td>0.2</td>
<td>0.0</td>
<td>9.2</td>
<td>1.6</td>
<td>0.0</td>
<td>12.9</td>
<td>1.6</td>
<td>0.0</td>
<td>7.3</td>
<td>2.1</td>
<td>0.0</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Proportion In Lane</strong></td>
<td>1.00</td>
<td>0.0</td>
<td>1.00</td>
<td>0.117</td>
<td>1.00</td>
<td>0.492</td>
<td>1.00</td>
<td>0.0</td>
<td>0.97</td>
<td>0.97</td>
<td>0.0</td>
<td>0.97</td>
</tr>
<tr>
<td><strong>Lane Grp Cap(c), veh/h</strong></td>
<td>9.1</td>
<td>0.0</td>
<td>671.6</td>
<td>71.0</td>
<td>0.0</td>
<td>728.4</td>
<td>71.0</td>
<td>0.0</td>
<td>365.3</td>
<td>97.0</td>
<td>0.0</td>
<td>412.8</td>
</tr>
<tr>
<td><strong>V/C Ratio(X)</strong></td>
<td>0.960</td>
<td>0.000</td>
<td>0.630</td>
<td>0.811</td>
<td>0.000</td>
<td>0.766</td>
<td>0.811</td>
<td>0.000</td>
<td>0.750</td>
<td>0.786</td>
<td>0.000</td>
<td>0.169</td>
</tr>
<tr>
<td><strong>Avail Cap(c_a), veh/h</strong></td>
<td>145.5</td>
<td>0.0</td>
<td>1361.3</td>
<td>254.6</td>
<td>0.0</td>
<td>1459.4</td>
<td>254.6</td>
<td>0.0</td>
<td>773.1</td>
<td>327.4</td>
<td>0.0</td>
<td>892.0</td>
</tr>
<tr>
<td><strong>HCM Platoon Ratio</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Upstream Filter(I)</strong></td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td><strong>Uniform Delay (d), s/veh</strong></td>
<td>24.3</td>
<td>0.0</td>
<td>12.8</td>
<td>23.2</td>
<td>0.0</td>
<td>12.7</td>
<td>23.2</td>
<td>0.0</td>
<td>18.0</td>
<td>22.8</td>
<td>0.0</td>
<td>15.1</td>
</tr>
<tr>
<td><strong>Incr Delay (d2), s/veh</strong></td>
<td>127.6</td>
<td>0.0</td>
<td>1.0</td>
<td>19.2</td>
<td>0.0</td>
<td>1.7</td>
<td>19.2</td>
<td>0.0</td>
<td>3.1</td>
<td>13.0</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Initial Q Delay(d3), s/veh</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Control Delay (d), s/veh</strong></td>
<td>151.9</td>
<td>0.0</td>
<td>13.8</td>
<td>42.4</td>
<td>0.0</td>
<td>14.4</td>
<td>42.4</td>
<td>0.0</td>
<td>21.1</td>
<td>35.8</td>
<td>0.0</td>
<td>15.3</td>
</tr>
<tr>
<td><strong>Approach Volume, veh/h</strong></td>
<td>432</td>
<td>615</td>
<td>332</td>
<td>146</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Approach Delay, s/veh</strong></td>
<td>16.6</td>
<td>17.0</td>
<td>24.8</td>
<td>28.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Approach LOS</strong></td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase Duration (G+Y+Rc), s</strong></td>
<td>4.25</td>
<td>21.76</td>
<td>5.95</td>
<td>23.46</td>
<td>5.95</td>
<td>14.40</td>
<td>6.66</td>
<td>15.11</td>
</tr>
<tr>
<td><strong>Change Period (Y+Rc), s</strong></td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Max Green Setting (Gmax), s</strong></td>
<td>4.00</td>
<td>36.00</td>
<td>7.00</td>
<td>39.00</td>
<td>7.00</td>
<td>22.00</td>
<td>9.00</td>
<td>24.00</td>
</tr>
<tr>
<td><strong>Max Q Clear Time (g_c+I1), s</strong></td>
<td>2.24</td>
<td>11.22</td>
<td>3.57</td>
<td>14.89</td>
<td>3.57</td>
<td>9.30</td>
<td>4.07</td>
<td>3.50</td>
</tr>
<tr>
<td><strong>Green Extension Time (p_c)</strong></td>
<td>0.00</td>
<td>4.60</td>
<td>0.03</td>
<td>4.57</td>
<td>0.03</td>
<td>1.14</td>
<td>0.07</td>
<td>1.36</td>
</tr>
</tbody>
</table>

### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>19.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>B</td>
</tr>
</tbody>
</table>
### Existing Conditions

**11: Wales Dr. & E. Natoma St.**

**PM Peak Hour**

#### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>7</td>
<td>395</td>
<td>57</td>
<td>104</td>
<td>330</td>
<td>7</td>
<td>60</td>
<td>6</td>
<td>117</td>
<td>14</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>8</td>
<td>584</td>
<td>84</td>
<td>145</td>
<td>307</td>
<td>17</td>
<td>79</td>
<td>10</td>
<td>189</td>
<td>16</td>
<td>130</td>
<td>30</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.37</td>
<td>0.37</td>
<td>0.08</td>
<td>0.44</td>
<td>0.44</td>
<td>0.04</td>
<td>0.12</td>
<td>0.12</td>
<td>0.01</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1592.4</td>
<td>229.8</td>
<td>1774.0</td>
<td>1817.4</td>
<td>38.6</td>
<td>1774.0</td>
<td>77.8</td>
<td>1517.2</td>
<td>1774.0</td>
<td>1465.0</td>
<td>338.1</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>7.6</td>
<td>0.0</td>
<td>491.3</td>
<td>113.0</td>
<td>0.0</td>
<td>366.3</td>
<td>65.2</td>
<td>0.0</td>
<td>133.7</td>
<td>15.2</td>
<td>0.0</td>
<td>17.4</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1822.2</td>
<td>1774.0</td>
<td>0.0</td>
<td>1855.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1595.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1803.1</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.2</td>
<td>0.0</td>
<td>8.9</td>
<td>2.4</td>
<td>0.0</td>
<td>5.2</td>
<td>1.4</td>
<td>0.0</td>
<td>3.1</td>
<td>0.3</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.2</td>
<td>0.0</td>
<td>8.9</td>
<td>2.4</td>
<td>0.0</td>
<td>5.2</td>
<td>1.4</td>
<td>0.0</td>
<td>3.1</td>
<td>0.3</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.126</td>
<td>1.00</td>
<td>0.021</td>
<td>1.00</td>
<td>0.951</td>
<td>1.00</td>
<td>0.188</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>7.8</td>
<td>0.0</td>
<td>668.0</td>
<td>144.8</td>
<td>0.0</td>
<td>823.7</td>
<td>79.4</td>
<td>0.0</td>
<td>198.2</td>
<td>16.1</td>
<td>0.0</td>
<td>159.7</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.976</td>
<td>0.000</td>
<td>0.735</td>
<td>0.781</td>
<td>0.000</td>
<td>0.445</td>
<td>0.821</td>
<td>0.000</td>
<td>0.674</td>
<td>0.943</td>
<td>0.000</td>
<td>0.109</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>185.6</td>
<td>0.0</td>
<td>1096.0</td>
<td>324.7</td>
<td>0.0</td>
<td>1261.9</td>
<td>278.3</td>
<td>0.0</td>
<td>417.1</td>
<td>185.6</td>
<td>0.0</td>
<td>377.2</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>19.0</td>
<td>0.0</td>
<td>10.5</td>
<td>17.2</td>
<td>0.0</td>
<td>7.4</td>
<td>18.1</td>
<td>0.0</td>
<td>16.0</td>
<td>18.9</td>
<td>0.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>142.7</td>
<td>0.0</td>
<td>1.6</td>
<td>8.8</td>
<td>0.0</td>
<td>0.4</td>
<td>18.3</td>
<td>0.0</td>
<td>4.0</td>
<td>89.2</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>161.7</td>
<td>0.0</td>
<td>12.1</td>
<td>26.0</td>
<td>0.0</td>
<td>7.7</td>
<td>36.4</td>
<td>0.0</td>
<td>20.0</td>
<td>108.2</td>
<td>0.0</td>
<td>16.3</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>B</td>
<td>C</td>
<td>A</td>
<td>D</td>
<td>B</td>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Approach Summary

**Approach Volume, veh/h**

| Movement | 499 | 479 | 199 | 33 |

**Approach Delay, s/veh**

| Movement | 14.4 | 12.1 | 25.4 | 59.2 |

**Approach LOS**

| Movement | B | B | C | E |

#### Timer

| Assigned Phase | 7 | 4 | 3 | 8 | 5 | 2 | 1 | 6 |

| Phase Duration (G+Y+Rc), s | 4.17 | 18.02 | 7.12 | 20.97 | 5.71 | 8.75 | 4.35 | 7.39 |

| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |

| Max Green Setting (Gmax), s | 4.00 | 23.00 | 7.00 | 26.00 | 6.00 | 10.00 | 4.00 | 8.00 |

| Max Q Clear Time (g_c+I1), s | 2.16 | 10.94 | 4.39 | 7.23 | 3.39 | 5.06 | 2.33 | 2.34 |

| Green Extension Time (P_c) | 0.00 | 3.08 | 0.08 | 3.62 | 0.03 | 0.22 | 0.00 | 0.25 |

#### Intersection Summary

**HCM 2010 Control Delay**

| Movement | 16.5 |

**HCM 2010 Level of Service**

| Movement | B |
## Existing Conditions

### 14: E. Natoma St. & Prison Rd.

#### PM Peak Hour

**MRO Engineers, Inc. Folsom Women’s Facility**

**Synchro 8 Report Page 5**

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>WBT</th>
<th>WBR</th>
<th>SBL</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lane Configurations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>11</td>
<td>552</td>
<td>328</td>
<td>2</td>
<td>33</td>
<td>96</td>
</tr>
<tr>
<td>Number</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>12</td>
<td>1080</td>
<td>764</td>
<td>5</td>
<td>178</td>
<td>159</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.01</td>
<td>0.58</td>
<td>0.41</td>
<td>0.41</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1862.7</td>
<td>1849.5</td>
<td>11.3</td>
<td>1774.0</td>
<td>1583.3</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>12.1</td>
<td>606.6</td>
<td>0.0</td>
<td>362.6</td>
<td>36.3</td>
<td>105.5</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>1862.7</td>
<td>0.0</td>
<td>1860.8</td>
<td>1774.0</td>
<td>1583.3</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.2</td>
<td>5.1</td>
<td>0.0</td>
<td>3.6</td>
<td>0.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.2</td>
<td>5.1</td>
<td>0.0</td>
<td>3.6</td>
<td>0.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.006</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>12.4</td>
<td>1080.1</td>
<td>0.0</td>
<td>768.5</td>
<td>178.2</td>
<td>159.0</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.974</td>
<td>0.562</td>
<td>0.000</td>
<td>0.472</td>
<td>0.204</td>
<td>0.663</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>425.4</td>
<td>4838.4</td>
<td>0.0</td>
<td>4089.6</td>
<td>1205.2</td>
<td>1075.6</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>12.4</td>
<td>3.3</td>
<td>0.0</td>
<td>5.4</td>
<td>10.3</td>
<td>10.8</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>111.4</td>
<td>0.5</td>
<td>0.0</td>
<td>0.5</td>
<td>0.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>123.8</td>
<td>3.7</td>
<td>0.0</td>
<td>5.8</td>
<td>10.9</td>
<td>15.5</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>619</td>
<td>363</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>6.1</td>
<td>5.8</td>
<td>14.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 4.18 | 18.51 | 14.34 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 6.00 | 65.00 | 55.00 |
| Max Q Clear Time (g_c+I1), s | 2.17 | 7.08 | 5.56 |
| Green Extension Time (p_c) | 0.00 | 4.80 | 4.79 |

### Intersection Summary

| HCM 2010 Control Delay | 7.0 |
| HCM 2010 Level of Service | A |
## General Information
- Analyst: NKL
- Agency/Co.: MRO Engineers, Inc.
- Date Performed: 7/9/2012
- Analysis Time Period: PM Peak Hour

## Site Information
- Intersection: E. Natoma St./Hancock Dr./PIA
- Jurisdiction: Folsom, CA
- Analysis Year: Existing Conditions

## Project Description
- Folsom Women's Facility
- East/West Street: East Natoma St.
- North/South Street: Hancock Dr./PIA Access Rd.
- Intersection Orientation: East-West
- Study Period (hrs): 0.25

## Vehicle Volumes and Adjustments

<table>
<thead>
<tr>
<th>Major Street</th>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Volume (veh/h)</td>
<td>2</td>
<td>518</td>
</tr>
<tr>
<td></td>
<td>Peak-Hour Factor, PHF</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>2</td>
<td>569</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Median Type</th>
<th>RT Channelized</th>
<th>Lanes</th>
<th>Configuration</th>
<th>Upstream Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undivided</td>
<td>0</td>
<td>1</td>
<td>L</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minor Street</th>
<th>Movement</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Volume (veh/h)</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Peak-Hour Factor, PHF</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Percent Grade (%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Flared Approach</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Storage</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lanes</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Configuration</td>
<td>LTR</td>
<td>LTR</td>
<td>LTR</td>
</tr>
</tbody>
</table>

## Delay, Queue Length, and Level of Service

<table>
<thead>
<tr>
<th>Approach</th>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Lane Configuration</td>
<td>L</td>
<td>L</td>
<td>LTR</td>
<td>LTR</td>
</tr>
<tr>
<td></td>
<td>v (veh/h)</td>
<td>2</td>
<td>36</td>
<td>27</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>C (m) (veh/h)</td>
<td>1243</td>
<td>987</td>
<td>335</td>
<td>349</td>
</tr>
<tr>
<td></td>
<td>v/c</td>
<td>0.00</td>
<td>0.04</td>
<td>0.08</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>95% Queue Length</td>
<td>0.00</td>
<td>0.11</td>
<td>0.26</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>Control Delay (s/veh)</td>
<td>7.9</td>
<td>8.8</td>
<td>16.7</td>
<td>17.7</td>
</tr>
<tr>
<td></td>
<td>LOS</td>
<td>A</td>
<td>A</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Approach Delay (s/veh)</td>
<td>--</td>
<td>--</td>
<td>16.7</td>
<td>17.7</td>
</tr>
<tr>
<td></td>
<td>Approach LOS</td>
<td>--</td>
<td>--</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>
# Existing Conditions

## E. Natoma St. & Folsom Lake Crossing

### PM Peak Hour

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lane Configurations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Volume (vph)</strong></td>
<td>148</td>
<td>386</td>
<td>204</td>
<td>812</td>
<td>1077</td>
<td>109</td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td><strong>Initial Queue, veh</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Ped-Bike Adj(A_pbT)</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Parking, Bus Adj</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Adj Sat Flow Rate</strong></td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td><strong>Lanes</strong></td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Capacity, veh/h</strong></td>
<td>510</td>
<td>406</td>
<td>373</td>
<td>2491</td>
<td>1846</td>
<td>826</td>
</tr>
<tr>
<td><strong>Arriving On Green</strong></td>
<td>0.15</td>
<td>0.15</td>
<td>0.11</td>
<td>0.70</td>
<td>0.52</td>
<td>0.52</td>
</tr>
<tr>
<td><strong>Sat Flow, veh/h</strong></td>
<td>3441.6</td>
<td>1583.3</td>
<td>1583.3</td>
<td>1583.3</td>
<td>1583.3</td>
<td>1583.3</td>
</tr>
<tr>
<td><strong>Grp Volume(v), veh/h</strong></td>
<td>155.8</td>
<td>406.3</td>
<td>214.7</td>
<td>854.7</td>
<td>1133.7</td>
<td>114.7</td>
</tr>
<tr>
<td><strong>Grp Sat Flow(s),veh/h/Ln</strong></td>
<td>1720.8</td>
<td>1583.3</td>
<td>1720.8</td>
<td>1769.6</td>
<td>1769.6</td>
<td>1583.3</td>
</tr>
<tr>
<td><strong>Q Serve(g_s), s</strong></td>
<td>2.2</td>
<td>8.0</td>
<td>3.2</td>
<td>5.1</td>
<td>12.2</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Cycle Q Clear(g_c), s</strong></td>
<td>2.2</td>
<td>8.0</td>
<td>3.2</td>
<td>5.1</td>
<td>12.2</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Proportion In Lane</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Lane Grp Cap(c), veh/h</strong></td>
<td>509.6</td>
<td>406.0</td>
<td>372.9</td>
<td>2491.1</td>
<td>1845.6</td>
<td>825.6</td>
</tr>
<tr>
<td><strong>V/C Ratio(X)</strong></td>
<td>0.306</td>
<td>1.001</td>
<td>0.576</td>
<td>0.343</td>
<td>0.614</td>
<td>0.139</td>
</tr>
<tr>
<td><strong>Avail Cap(c_a), veh/h</strong></td>
<td>509.6</td>
<td>406.0</td>
<td>1656.3</td>
<td>4847.7</td>
<td>2882.4</td>
<td>1289.5</td>
</tr>
<tr>
<td><strong>HCM Platoon Ratio</strong></td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Upstream Filter(I)</strong></td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>Uniform Delay (d), s/veh</strong></td>
<td>20.5</td>
<td>20.1</td>
<td>22.9</td>
<td>3.1</td>
<td>9.1</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Incr Delay (d2), s/veh</strong></td>
<td>0.3</td>
<td>44.9</td>
<td>1.4</td>
<td>0.1</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Initial Q Delay(d3), s/veh</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Control Delay (d), s/veh</strong></td>
<td>20.9</td>
<td>64.9</td>
<td>24.3</td>
<td>3.2</td>
<td>9.4</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Movement LOS</strong></td>
<td>C</td>
<td>F</td>
<td>C</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td><strong>Approach Volume, veh/h</strong></td>
<td>562</td>
<td>1069</td>
<td>1248</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Approach Delay, s/veh</strong></td>
<td>52.7</td>
<td>7.4</td>
<td>9.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Approach LOS</strong></td>
<td>D</td>
<td>A</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 9.85 | 42.03 | 32.17 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 26.00 | 74.00 | 44.00 |
| Max Q Clear Time (g_c+I1), s | 5.21 | 7.09 | 14.18 |
| Green Extension Time (p_c) | 0.89 | 17.63 | 13.99 |

## Intersection Summary

| HCM 2010 Control Delay | 17.0 |
| HCM 2010 Level of Service | B |
APPENDIX B

SIGNAL WARRANT ANALYSIS WORKSHEETS
PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Existing Conditions

TIME PERIOD: AM Peak Hour

Major Street Volume (Both Approaches): 808
Minor Street Volume (Higher Approach): 45

WARRANT MET? NO

Figure 4C-3. WARRANT 3 - PEAK HOUR VOLUME (Urban Areas)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Existing Conditions

TIME PERIOD: PM Peak Hour

Major Street Volume (Both Approaches): 860
Minor Street Volume (Higher Approach): 61

WARRANT MET? NO

![Figure 4C-3. Warrant 3 - Peak Hour Volume (Urban Areas)](image)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Baseline No Project

TIME PERIOD: AM Peak Hour

Major Street Volume (Both Approaches): 999
Minor Street Volume (Higher Approach): 45

WARRANT MET? NO

TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Baseline No Project

TIME PERIOD: PM Peak Hour

Major Street Volume (Both Approaches): 1113
Minor Street Volume (Higher Approach): 61

WARRANT MET? NO


Figure 4C-3.
WARRANT 3 - PEAK HOUR VOLUME
(Urban Areas)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.
TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
          Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Baseline + Project

TIME PERIOD: AM Peak Hour

Major Street Volume (Both Approaches): 1027
Minor Street Volume (Higher Approach): 45

WARRANT MET? NO

<table>
<thead>
<tr>
<th>Minor Street Approaches</th>
<th>Major Street Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Lane (Major) &amp; 1 Lane (Minor)</td>
<td>400</td>
</tr>
<tr>
<td>2 or More Lanes (Major) &amp; 1 Lane (Minor) or 1 Lane (Major) &amp; 2 or More Lanes (Minor)</td>
<td></td>
</tr>
<tr>
<td>1 Lane (Major) &amp; 1 Lane (Minor)</td>
<td>200</td>
</tr>
</tbody>
</table>

Figure 4C-3.
WARRANT 3 - PEAK HOUR VOLUME
(Urban Areas)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/East Prison Access Road (Hancock Drive)

ANALYSIS SCENARIO: Baseline + Project

TIME PERIOD: PM Peak Hour

Major Street Volume (Both Approaches): 1119
Minor Street Volume (Higher Approach): 77

WARRANT MET? NO

Figure 4C-3.
WARRANT 3 - PEAK HOUR VOLUME
(Urban Areas)

Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Cumulative No Project

TIME PERIOD: AM Peak Hour

Major Street Volume (Both Approaches): 1450
Minor Street Volume (Higher Approach): 65

WARRANT MET? NO

Figure 4C-3.
WARRANT 3 - PEAK HOUR VOLUME
(Urban Areas)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Cumulative No Project

TIME PERIOD: PM Peak Hour

Major Street Volume (Both Approaches): 1555
Minor Street Volume (Higher Approach): 67

WARRANT MET? NO

Figure 4C-3.
WARRANT 3 - PEAK HOUR VOLUME
(Urban Areas)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Cumulative + Project

TIME PERIOD: AM Peak Hour

Major Street Volume (Both Approaches): 1478
Minor Street Volume (Higher Approach): 65

WARRANT MET? NO

Figure 4C-3.
WARRANT 3 - PEAK HOUR VOLUME
(Urban Areas)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

TRAFFIC SIGNAL WARRANT ANALYSIS
Warrant 3 - Peak Hour Volume
Urban Area

PROJECT: Folsom Women's Facility
Folsom, California

INTERSECTION: East Natoma Street/Hancock Drive/Prison Industry Authority Access Road

ANALYSIS SCENARIO: Cumulative + Project

TIME PERIOD: PM Peak Hour

Major Street Volume (Both Approaches): 1561
Minor Street Volume (Higher Approach): 83

WARRANT MET? NO

APPENDIX C

APPROVED PROJECTS TRIP GENERATION SUMMARY
<table>
<thead>
<tr>
<th>Project</th>
<th>Land Use</th>
<th>Size</th>
<th>Am peak hour</th>
<th>Pm peak hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>Creekview Professional Center</td>
<td>Medical/Professional Office</td>
<td>96,360 SF</td>
<td>175</td>
<td>47</td>
</tr>
<tr>
<td>Mammoth Professional Center</td>
<td>Office</td>
<td>58,800 SF</td>
<td>108</td>
<td>15</td>
</tr>
<tr>
<td>Folsom Pointe Highway Commercial</td>
<td>Highway Commercial Center</td>
<td>115</td>
<td>103</td>
<td>218</td>
</tr>
<tr>
<td>Broadstone Park Professional Center</td>
<td>Office</td>
<td>73,829 SF</td>
<td>129</td>
<td>18</td>
</tr>
<tr>
<td>Palladio Retail – Phase 1</td>
<td>Retail</td>
<td>564,800 SF</td>
<td>234</td>
<td>151</td>
</tr>
<tr>
<td>Former Fire Station</td>
<td>Office</td>
<td>3,500 SF</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Island at Parkshore</td>
<td>Single-Family Residential</td>
<td>290 DU</td>
<td>55</td>
<td>163</td>
</tr>
<tr>
<td></td>
<td>Condominium</td>
<td>60 DU</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Subtotal</td>
<td></td>
<td>59</td>
<td>185</td>
</tr>
<tr>
<td>Wal-Mart Expansion</td>
<td>Retail</td>
<td>26,515 SF &amp; 3,000 SF Pad</td>
<td>78</td>
<td>112</td>
</tr>
<tr>
<td>Willow Creek Village</td>
<td>Multi-family Residential</td>
<td>86 DU</td>
<td>9</td>
<td>35</td>
</tr>
<tr>
<td>Broadstone Crossing Parcel 1</td>
<td>Two Hotels Three Restaurants</td>
<td>236 Rooms 22,230 SF</td>
<td>122</td>
<td>96</td>
</tr>
<tr>
<td>Broadstone Crossing Parcel 5</td>
<td>Green Acres Nursery</td>
<td>50,220 SF</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>Oaks at Willow Springs</td>
<td>Residential</td>
<td>200 DU</td>
<td>35</td>
<td>115</td>
</tr>
<tr>
<td>Broadstone Oaks #2</td>
<td>Office Retail</td>
<td>56,800 SF 15,000 SF</td>
<td>136</td>
<td>34</td>
</tr>
<tr>
<td>The Parkway, Lot D</td>
<td>Residential Condominium</td>
<td>80 DU</td>
<td>8</td>
<td>33</td>
</tr>
<tr>
<td>La Collina dal Lago</td>
<td>Single-Family Residential</td>
<td>30 DU</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Empire Ranch</td>
<td>Single-Family Residential</td>
<td>400 DU</td>
<td>37</td>
<td>113</td>
</tr>
<tr>
<td>Natoma Valley Subdivision</td>
<td>Single-Family Residential</td>
<td>82 DU</td>
<td>16</td>
<td>46</td>
</tr>
<tr>
<td>The Parkway, Lots I &amp; J</td>
<td>Single-Family Residential</td>
<td>134 DU</td>
<td>25</td>
<td>76</td>
</tr>
<tr>
<td>Montara Grove</td>
<td>Office</td>
<td>32,000 SF</td>
<td>44</td>
<td>6</td>
</tr>
<tr>
<td>Chick-fil-A Restaurant</td>
<td>Fast Food Restaurant</td>
<td>4,296 SF</td>
<td>49</td>
<td>47</td>
</tr>
<tr>
<td>Project</td>
<td>Land Use</td>
<td>Size</td>
<td>Am peak hour</td>
<td>pm peak hour</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Psychiatric Services Unit Office – California State Prison - Sacramento</td>
<td>Medical Facility</td>
<td>17,395 SF</td>
<td>46 In</td>
<td>6 Out</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>52 Total</td>
<td>7 In</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>37 Total</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>1,456 In</td>
<td>1,275 Out</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2,731 Total</td>
<td>2,138 In</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4,440 Total</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
2. Square feet.
3. Three unbuilt pads (two restaurants and one retail building).
4. Excludes movie theater, which is complete and occupied.
5. Expansion of existing Wal-Mart store to Wal-Mart Supercenter (137,374 SF to 163,889 SF).
6. Dwelling units.
7. 30,220 SF indoor sales + 20,000 SF outdoor area.
8. Approximate number of unbuilt units.
APPENDIX D

BASELINE NO PROJECT
LEVEL OF SERVICE CALCULATION WORKSHEETS
## Movement

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>6</td>
<td>193</td>
<td>24</td>
<td>51</td>
<td>252</td>
<td>139</td>
<td>18</td>
<td>343</td>
<td>33</td>
<td>200</td>
<td>713</td>
<td>5</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>7</td>
<td>285</td>
<td>35</td>
<td>69</td>
<td>392</td>
<td>334</td>
<td>22</td>
<td>582</td>
<td>56</td>
<td>274</td>
<td>904</td>
<td>6</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.18</td>
<td>0.18</td>
<td>0.04</td>
<td>0.21</td>
<td>0.21</td>
<td>0.01</td>
<td>0.35</td>
<td>0.35</td>
<td>0.15</td>
<td>0.49</td>
<td>0.49</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1625.0</td>
<td>202.1</td>
<td>1774.0</td>
<td>1673.3</td>
<td>1863.0</td>
<td>1774.0</td>
<td>1673.3</td>
<td>1774.0</td>
<td>1673.3</td>
<td>1863.0</td>
<td></td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>6.6</td>
<td>0.0</td>
<td>238.5</td>
<td>56.0</td>
<td>276.9</td>
<td>152.7</td>
<td>19.8</td>
<td>0.0</td>
<td>413.2</td>
<td>219.8</td>
<td>0.0</td>
<td>789.0</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1827.1</td>
<td>1774.0</td>
<td>1862.7</td>
<td>1583.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1834.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1860.5</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.2</td>
<td>0.0</td>
<td>7.0</td>
<td>1.8</td>
<td>7.8</td>
<td>4.8</td>
<td>0.6</td>
<td>0.0</td>
<td>10.7</td>
<td>6.7</td>
<td>0.0</td>
<td>21.2</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.2</td>
<td>0.0</td>
<td>7.0</td>
<td>1.8</td>
<td>7.8</td>
<td>4.8</td>
<td>0.6</td>
<td>0.0</td>
<td>10.7</td>
<td>6.7</td>
<td>0.0</td>
<td>21.2</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.000</td>
<td>0.111</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.088</td>
<td>1.000</td>
<td>0.007</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>6.8</td>
<td>0.0</td>
<td>320.6</td>
<td>69.3</td>
<td>392.4</td>
<td>333.6</td>
<td>22.0</td>
<td>0.0</td>
<td>637.6</td>
<td>273.8</td>
<td>0.0</td>
<td>910.7</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.966</td>
<td>0.000</td>
<td>0.744</td>
<td>0.809</td>
<td>0.706</td>
<td>0.458</td>
<td>0.897</td>
<td>0.000</td>
<td>0.648</td>
<td>0.803</td>
<td>0.000</td>
<td>0.866</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>125.8</td>
<td>0.0</td>
<td>388.6</td>
<td>125.8</td>
<td>396.2</td>
<td>336.7</td>
<td>125.8</td>
<td>0.0</td>
<td>845.2</td>
<td>377.3</td>
<td>0.0</td>
<td>1121.0</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>28.1</td>
<td>0.0</td>
<td>22.1</td>
<td>26.9</td>
<td>20.6</td>
<td>19.5</td>
<td>27.8</td>
<td>0.0</td>
<td>15.5</td>
<td>23.0</td>
<td>0.0</td>
<td>12.8</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>150.1</td>
<td>0.0</td>
<td>6.1</td>
<td>19.4</td>
<td>5.6</td>
<td>1.0</td>
<td>64.4</td>
<td>0.0</td>
<td>1.1</td>
<td>8.4</td>
<td>0.0</td>
<td>6.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>178.2</td>
<td>0.0</td>
<td>28.2</td>
<td>46.3</td>
<td>26.2</td>
<td>20.4</td>
<td>92.2</td>
<td>0.0</td>
<td>16.6</td>
<td>31.5</td>
<td>0.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>C</td>
<td>D</td>
<td>C</td>
<td>C</td>
<td>F</td>
<td>B</td>
<td>C</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>245</td>
<td>486</td>
<td>433</td>
<td>1009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>32.2</td>
<td>26.7</td>
<td>20.1</td>
<td>21.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Time

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.22</td>
<td>13.90</td>
<td>6.20</td>
<td>15.89</td>
<td>4.70</td>
<td>23.61</td>
<td>12.71</td>
<td>31.62</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>12.00</td>
<td>4.00</td>
<td>12.00</td>
<td>4.00</td>
<td>26.00</td>
<td>12.00</td>
<td>34.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.21</td>
<td>8.98</td>
<td>3.77</td>
<td>9.78</td>
<td>2.63</td>
<td>12.70</td>
<td>8.75</td>
<td>23.21</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>0.92</td>
<td>0.00</td>
<td>0.71</td>
<td>0.00</td>
<td>4.93</td>
<td>0.25</td>
<td>4.41</td>
</tr>
</tbody>
</table>

## Intersection Summary

| HCM 2010 Control Delay | 23.7 |
| HCM 2010 Level of Service | C |

---

MRO Engineers, Inc.
Synchro 8 Report
Folsom Women's Facility
Page 2
**Movement EBL EBT EBR WBL WBT NBL NBT NBR SBL SBT SBR**

<table>
<thead>
<tr>
<th>Lane Configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
</tr>
<tr>
<td>Number</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
</tr>
<tr>
<td>Lanes</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
</tr>
<tr>
<td>Arriving On Green</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
</tr>
<tr>
<td>Proportion In Lane</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
</tr>
<tr>
<td>Movement LOS</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
</tr>
<tr>
<td>Approach LOS</td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
</tr>
</tbody>
</table>

**Intersection Summary**

- HCM 2010 Control Delay: 14.4
- HCM 2010 Level of Service: B
### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>5 389 16 50 461 51 43 24 70 16 14 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>7 4 14 3 8 18 5 2 12 1 6 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0 0 0 0 0 0 0 0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1 1 0 1 1 0 1 1 0 1 1 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>5 708 29 63 711 79 53 43 126 18 124 26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00 0.40 0.40 0.04 0.43 0.43 0.03 0.10 0.10 0.01 0.08 0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0 1776.8 73.1 1774.0 1863.0 1863.0 1863.0 1863.0 1863.0 1863.0 1863.0 1863.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grp Vol (v), veh/h</td>
<td>5.3 0.0 430.9 53.2 0.0 544.7 45.7 0.0 100.0 17.0 0.0 18.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0 0.0 1849.8 1774.0 0.0 1830.6 1774.0 0.0 1646.4 1774.0 0.0 1806.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.1 0.0 6.5 1.1 0.0 8.5 0.9 0.0 2.1 0.3 0.0 0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.1 0.0 6.5 1.1 0.0 8.5 0.9 0.0 2.1 0.3 0.0 0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00 0.04 1.00 0.10 1.00 0.745 1.00 0.176</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>5.4 0.0 737.5 63.3 0.0 789.6 53.4 0.0 169.6 18.1 0.0 150.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.989 0.000 0.584 0.840 0.000 0.690 0.857 0.000 0.590 0.940 0.000 0.120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>301.0 0.0 2144.5 451.5 0.0 2277.4 401.3 0.0 837.9 301.0 0.0 817.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00 0.00 1.00 0.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00 0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>17.6 0.0 8.3 17.0 0.0 8.1 17.1 0.0 15.1 17.5 0.0 15.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>176.8 0.0 0.7 24.1 0.0 1.1 29.8 0.0 3.2 82.8 0.0 0.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>194.4 0.0 9.1 41.1 0.0 9.2 46.9 0.0 18.4 100.3 0.0 15.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>A</td>
<td>D</td>
<td>A</td>
<td>D</td>
<td>A</td>
<td>D</td>
<td>B</td>
<td>F</td>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>436</td>
<td>598</td>
<td>146</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>11.3</td>
<td>12.1</td>
<td>27.3</td>
<td>56.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assigned Phase</td>
<td>7 4 3 8 5 2 1 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.11 18.10 5.26 19.26 5.06 7.64 4.36 6.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>6.00 41.00 9.00 44.00 8.00 18.00 6.00 16.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.11 8.46 3.05 10.52 2.91 4.05 2.34 2.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00 4.72 0.05 4.74 0.03 0.32 0.00 0.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Intersection Summary**

- **HCM 2010 Control Delay**: 14.9
- **HCM 2010 Level of Service**: B
## Movement

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>126</td>
<td>341</td>
<td>26</td>
<td>18</td>
<td>631</td>
<td>55</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Number</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>0</td>
<td>1863</td>
<td>1863</td>
<td>0</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>195</td>
<td>1039</td>
<td>79</td>
<td>25</td>
<td>866</td>
<td>75</td>
<td>5</td>
<td>0</td>
<td>33</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.11</td>
<td>0.61</td>
<td>0.61</td>
<td>0.01</td>
<td>0.51</td>
<td>0.51</td>
<td>0.00</td>
<td>0.00</td>
<td>0.10</td>
<td>0.02</td>
<td>0.00</td>
<td>0.11</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1709.4</td>
<td>130.3</td>
<td>1774.0</td>
<td>1689.5</td>
<td>147.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### Movement LOS

<table>
<thead>
<tr>
<th>Movement</th>
<th>D</th>
<th>A</th>
<th>F</th>
<th>C</th>
<th>F</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach Volume, veh/h</td>
<td>609</td>
<td>869</td>
<td>7</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>16.5</td>
<td>24.9</td>
<td>138.9</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>C</td>
<td>F</td>
<td>A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
<th>3</th>
<th>8</th>
<th>7</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>10.72</td>
<td>41.21</td>
<td>4.87</td>
<td>35.36</td>
<td>4.17</td>
<td>10.00</td>
<td>5.13</td>
<td>10.95</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>3.00</td>
<td>39.00</td>
<td>4.00</td>
<td>35.00</td>
<td>4.00</td>
<td>6.00</td>
<td>6.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>7.24</td>
<td>9.84</td>
<td>2.77</td>
<td>27.54</td>
<td>2.17</td>
<td>8.00</td>
<td>2.0</td>
<td>8.95</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>7.30</td>
<td>0.00</td>
<td>3.82</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>21.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>C</td>
</tr>
</tbody>
</table>
## Two-Way Stop Control Summary

**General Information**
- **Analyst:** NKL
- **Agency/Co.:** MRO Engineers, Inc.
- **Date Performed:** 7/9/2012
- **Analysis Time Period:** AM Peak Hour

### Site Information
- **Intersection:** E. Natoma St./Hancock Dr./PIA Access Rd.
- **Jurisdiction:** Folsom, CA
- **Analysis Year:** Baseline No Project

### Project Description
- **Folsom Women's Facility**

#### East/West Street:
- **East Natoma St.**

#### North/South Street:
- **Hancock Dr./PIA Access Rd.**

#### Intersection Orientation:
- **East-West**

#### Study Period (hrs): 0.25

### Vehicle Volumes and Adjustments

#### Major Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>27</td>
<td>322</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>33</td>
<td>397</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>--</td>
</tr>
</tbody>
</table>

#### Minor Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

### Delay, Queue Length, and Level of Service

<table>
<thead>
<tr>
<th>Approach</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Lane Configuration</td>
<td>L</td>
<td>L</td>
<td>LTR</td>
<td>LTR</td>
</tr>
<tr>
<td>v (veh/h)</td>
<td>33</td>
<td>17</td>
<td>54</td>
<td>4</td>
</tr>
<tr>
<td>C (m) (veh/h)</td>
<td>839</td>
<td>1155</td>
<td>238</td>
<td>157</td>
</tr>
<tr>
<td>v/c</td>
<td>0.04</td>
<td>0.01</td>
<td>0.23</td>
<td>0.03</td>
</tr>
<tr>
<td>95% queue length</td>
<td>0.12</td>
<td>0.04</td>
<td>0.85</td>
<td>0.08</td>
</tr>
<tr>
<td>Control Delay (s/veh)</td>
<td>9.5</td>
<td>8.2</td>
<td>24.5</td>
<td>28.5</td>
</tr>
<tr>
<td>LOS</td>
<td>A</td>
<td>A</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Approach Delay (s/veh)</td>
<td>--</td>
<td>--</td>
<td>24.5</td>
<td>28.5</td>
</tr>
<tr>
<td>Approach LOS</td>
<td>--</td>
<td>--</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>
### Movement EBL EBR NBL NBT SBT SBR

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>165</td>
<td>170</td>
<td>397</td>
<td>1007</td>
<td>598</td>
<td>179</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>506</td>
<td>542</td>
<td>673</td>
<td>2456</td>
<td>1482</td>
<td>663</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.15</td>
<td>0.15</td>
<td>0.20</td>
<td>0.69</td>
<td>0.42</td>
<td>0.42</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>1583.3</td>
<td>3441.6</td>
<td>3632.4</td>
<td>3632.3</td>
<td>1583.3</td>
</tr>
<tr>
<td>Grp Vol(v), veh/h</td>
<td>181.3</td>
<td>186.8</td>
<td>436.3</td>
<td>1106.6</td>
<td>657.1</td>
<td>196.7</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1720.8</td>
<td>1583.3</td>
<td>1720.8</td>
<td>1769.6</td>
<td>1769.6</td>
<td>1583.3</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>2.4</td>
<td>4.4</td>
<td>5.9</td>
<td>7.0</td>
<td>6.7</td>
<td>4.1</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>2.4</td>
<td>4.4</td>
<td>5.9</td>
<td>7.0</td>
<td>6.7</td>
<td>4.1</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>505.6</td>
<td>542.0</td>
<td>672.6</td>
<td>2455.8</td>
<td>1482.4</td>
<td>663.2</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.359</td>
<td>0.345</td>
<td>0.649</td>
<td>0.451</td>
<td>0.443</td>
<td>0.297</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>958.9</td>
<td>750.6</td>
<td>1849.3</td>
<td>4789.6</td>
<td>2606.1</td>
<td>1165.9</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>19.3</td>
<td>12.3</td>
<td>18.6</td>
<td>3.4</td>
<td>10.4</td>
<td>9.7</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>0.4</td>
<td>0.4</td>
<td>1.1</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay, s/veh</td>
<td>19.7</td>
<td>12.7</td>
<td>19.7</td>
<td>3.6</td>
<td>10.6</td>
<td>9.9</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>368</td>
<td>1543</td>
<td>854</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>16.2</td>
<td>8.1</td>
<td>10.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>5</th>
<th>2</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>13.82</td>
<td>38.87</td>
<td>25.05</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>27.00</td>
<td>68.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>7.87</td>
<td>9.00</td>
<td>8.66</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>1.97</td>
<td>15.10</td>
<td>12.39</td>
</tr>
</tbody>
</table>

### Intersection Summary

- HCM 2010 Control Delay: 9.9
- HCM 2010 Level of Service: A
### Movement

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>28</td>
<td>226</td>
<td>61</td>
<td>108</td>
<td>210</td>
<td>220</td>
<td>30</td>
<td>677</td>
<td>37</td>
<td>200</td>
<td>729</td>
<td>8</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>35</td>
<td>245</td>
<td>66</td>
<td>123</td>
<td>416</td>
<td>353</td>
<td>37</td>
<td>766</td>
<td>42</td>
<td>239</td>
<td>1014</td>
<td>11</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.02</td>
<td>0.17</td>
<td>0.17</td>
<td>0.07</td>
<td>0.22</td>
<td>0.22</td>
<td>0.02</td>
<td>0.44</td>
<td>0.44</td>
<td>0.13</td>
<td>0.55</td>
<td>0.55</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1413.8</td>
<td>381.6</td>
<td>1774.0</td>
<td>1583.3</td>
<td>1583.3</td>
<td>1774.0</td>
<td>1750.2</td>
<td>95.7</td>
<td>1774.0</td>
<td>1839.0</td>
<td>20.2</td>
</tr>
<tr>
<td>Group Volume(v), veh/h</td>
<td>28.6</td>
<td>0.0</td>
<td>292.9</td>
<td>110.2</td>
<td>214.3</td>
<td>224.5</td>
<td>30.6</td>
<td>0.0</td>
<td>728.6</td>
<td>204.1</td>
<td>0.0</td>
<td>752.0</td>
</tr>
<tr>
<td>Group Sat Flow(s), veh/h-ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1795.4</td>
<td>1774.0</td>
<td>1862.7</td>
<td>1583.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1845.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1859.2</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>1.4</td>
<td>0.0</td>
<td>13.9</td>
<td>5.3</td>
<td>8.7</td>
<td>11.1</td>
<td>1.5</td>
<td>0.0</td>
<td>31.7</td>
<td>9.7</td>
<td>0.0</td>
<td>26.4</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>1.4</td>
<td>0.0</td>
<td>13.9</td>
<td>5.3</td>
<td>8.7</td>
<td>11.1</td>
<td>1.5</td>
<td>0.0</td>
<td>31.7</td>
<td>9.7</td>
<td>0.0</td>
<td>26.4</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.213</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.052</td>
<td>1.000</td>
<td>0.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Group Cap(c), veh/h</td>
<td>34.5</td>
<td>0.0</td>
<td>311.1</td>
<td>123.0</td>
<td>415.6</td>
<td>353.3</td>
<td>37.3</td>
<td>0.0</td>
<td>808.0</td>
<td>239.2</td>
<td>0.0</td>
<td>1025.5</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.827</td>
<td>0.000</td>
<td>0.941</td>
<td>0.896</td>
<td>0.516</td>
<td>0.635</td>
<td>0.822</td>
<td>0.000</td>
<td>0.902</td>
<td>0.853</td>
<td>0.000</td>
<td>0.733</td>
</tr>
<tr>
<td>Available Cap(c_a), veh/h</td>
<td>82.0</td>
<td>0.0</td>
<td>311.1</td>
<td>123.0</td>
<td>415.6</td>
<td>353.3</td>
<td>82.0</td>
<td>0.0</td>
<td>874.3</td>
<td>245.9</td>
<td>0.0</td>
<td>1052.4</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.896</td>
<td>0.516</td>
<td>0.635</td>
<td>0.822</td>
<td>0.000</td>
<td>0.902</td>
<td>0.853</td>
<td>0.000</td>
<td>0.733</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>42.3</td>
<td>0.0</td>
<td>35.3</td>
<td>40.0</td>
<td>29.5</td>
<td>30.4</td>
<td>42.2</td>
<td>0.0</td>
<td>22.6</td>
<td>36.6</td>
<td>0.0</td>
<td>14.6</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>36.7</td>
<td>0.0</td>
<td>35.8</td>
<td>50.7</td>
<td>1.1</td>
<td>3.7</td>
<td>33.8</td>
<td>0.0</td>
<td>11.9</td>
<td>23.6</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>78.9</td>
<td>0.0</td>
<td>71.1</td>
<td>90.7</td>
<td>30.6</td>
<td>34.2</td>
<td>76.0</td>
<td>0.0</td>
<td>34.5</td>
<td>60.3</td>
<td>0.0</td>
<td>17.2</td>
</tr>
</tbody>
</table>

### Approach

<table>
<thead>
<tr>
<th>Approach</th>
<th>Volume, veh/h</th>
<th>Delay, s/veh</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>321</td>
<td>549</td>
<td>C</td>
</tr>
<tr>
<td>F</td>
<td>759</td>
<td>956</td>
<td>E</td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>5.69</td>
<td>19.00</td>
<td>10.00</td>
<td>23.31</td>
<td>5.82</td>
<td>41.89</td>
<td>15.67</td>
<td>51.75</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>15.00</td>
<td>6.00</td>
<td>17.00</td>
<td>4.00</td>
<td>41.00</td>
<td>12.00</td>
<td>49.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>3.39</td>
<td>15.95</td>
<td>7.34</td>
<td>13.11</td>
<td>3.49</td>
<td>33.74</td>
<td>11.74</td>
<td>28.37</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.26</td>
<td>0.00</td>
<td>4.16</td>
<td>0.02</td>
<td>7.68</td>
</tr>
</tbody>
</table>

### Intersection Summary

| HCM 2010 Control Delay | 38.7 |
| HCM 2010 Level of Service | D |
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>8</td>
<td>500</td>
<td>22</td>
<td>55</td>
<td>599</td>
<td>61</td>
<td>128</td>
<td>124</td>
<td>70</td>
<td>54</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>9</td>
<td>775</td>
<td>34</td>
<td>75</td>
<td>790</td>
<td>80</td>
<td>72</td>
<td>175</td>
<td>170</td>
<td>97</td>
<td>329</td>
<td>61</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.01</td>
<td>0.44</td>
<td>0.44</td>
<td>0.04</td>
<td>0.48</td>
<td>0.48</td>
<td>0.04</td>
<td>0.20</td>
<td>0.20</td>
<td>0.05</td>
<td>0.22</td>
<td>0.22</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1771.1</td>
<td>77.9</td>
<td>1774.0</td>
<td>1663.5</td>
<td>169.4</td>
<td>1774.0</td>
<td>870.6</td>
<td>843.4</td>
<td>1774.0</td>
<td>1529.5</td>
<td>283.2</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>8.7</td>
<td>0.0</td>
<td>567.4</td>
<td>59.8</td>
<td>0.0</td>
<td>717.4</td>
<td>57.6</td>
<td>0.0</td>
<td>273.9</td>
<td>76.1</td>
<td>0.0</td>
<td>69.6</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1849.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1832.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1713.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1812.8</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.3</td>
<td>0.0</td>
<td>15.1</td>
<td>2.0</td>
<td>0.0</td>
<td>20.5</td>
<td>2.0</td>
<td>0.0</td>
<td>9.2</td>
<td>2.6</td>
<td>0.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.3</td>
<td>0.0</td>
<td>15.1</td>
<td>2.0</td>
<td>0.0</td>
<td>20.5</td>
<td>2.0</td>
<td>0.0</td>
<td>9.2</td>
<td>2.6</td>
<td>0.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.000</td>
<td>0.042</td>
<td>1.000</td>
<td>0.092</td>
<td>1.000</td>
<td>0.492</td>
<td>1.000</td>
<td>0.156</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>9.2</td>
<td>0.0</td>
<td>809.1</td>
<td>75.5</td>
<td>0.0</td>
<td>870.6</td>
<td>72.4</td>
<td>0.0</td>
<td>344.9</td>
<td>97.0</td>
<td>0.0</td>
<td>390.0</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.949</td>
<td>0.000</td>
<td>0.701</td>
<td>0.792</td>
<td>0.000</td>
<td>0.824</td>
<td>0.796</td>
<td>0.000</td>
<td>0.794</td>
<td>0.784</td>
<td>0.000</td>
<td>0.178</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>117.1</td>
<td>0.0</td>
<td>1189.5</td>
<td>234.1</td>
<td>0.0</td>
<td>1300.0</td>
<td>204.8</td>
<td>0.0</td>
<td>593.7</td>
<td>175.6</td>
<td>0.0</td>
<td>598.0</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>30.1</td>
<td>0.0</td>
<td>13.8</td>
<td>28.8</td>
<td>0.0</td>
<td>13.7</td>
<td>28.8</td>
<td>0.0</td>
<td>23.0</td>
<td>28.3</td>
<td>0.0</td>
<td>19.4</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>123.8</td>
<td>0.0</td>
<td>1.1</td>
<td>16.7</td>
<td>0.0</td>
<td>2.8</td>
<td>17.6</td>
<td>0.0</td>
<td>4.2</td>
<td>12.9</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>153.9</td>
<td>0.0</td>
<td>14.9</td>
<td>45.4</td>
<td>0.0</td>
<td>16.5</td>
<td>46.4</td>
<td>0.0</td>
<td>27.2</td>
<td>41.2</td>
<td>0.0</td>
<td>19.6</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>B</td>
<td>D</td>
<td>B</td>
<td>D</td>
<td>C</td>
<td>D</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>576</td>
<td>777</td>
<td>332</td>
<td>146</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>17.0</td>
<td>18.7</td>
<td>30.5</td>
<td>30.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assigned Phase</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.31</td>
<td>30.53</td>
<td>6.58</td>
<td>32.80</td>
<td>6.47</td>
<td>16.20</td>
<td>7.32</td>
<td>17.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>39.00</td>
<td>8.00</td>
<td>43.00</td>
<td>7.00</td>
<td>21.00</td>
<td>6.00</td>
<td>20.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.30</td>
<td>17.09</td>
<td>4.02</td>
<td>22.47</td>
<td>3.95</td>
<td>11.21</td>
<td>4.57</td>
<td>3.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>6.46</td>
<td>0.04</td>
<td>6.33</td>
<td>0.03</td>
<td>1.00</td>
<td>0.02</td>
<td>1.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Intersection Summary

- **HCM 2010 Control Delay**: 21.3
- **HCM 2010 Level of Service**: C
**Baseline No Project Conditions**

**PM Peak Hour**

### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>7</td>
<td>528</td>
<td>57</td>
<td>109</td>
<td>479</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>118</td>
<td>14</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>8</td>
<td>717</td>
<td>77</td>
<td>152</td>
<td>943</td>
<td>14</td>
<td>80</td>
<td>9</td>
<td>181</td>
<td>16</td>
<td>122</td>
<td>28</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.43</td>
<td>0.43</td>
<td>0.09</td>
<td>0.52</td>
<td>0.52</td>
<td>0.05</td>
<td>0.12</td>
<td>0.12</td>
<td>0.01</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1652.8</td>
<td>178.4</td>
<td>1774.0</td>
<td>1831.3</td>
<td>26.8</td>
<td>1774.0</td>
<td>77.2</td>
<td>1517.7</td>
<td>1774.0</td>
<td>1465.0</td>
<td>338.1</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>7.6</td>
<td>0.0</td>
<td>635.9</td>
<td>118.5</td>
<td>0.0</td>
<td>528.3</td>
<td>65.2</td>
<td>0.0</td>
<td>134.8</td>
<td>15.2</td>
<td>0.0</td>
<td>17.4</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1831.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1858.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1594.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1803.1</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.2</td>
<td>0.0</td>
<td>13.7</td>
<td>3.0</td>
<td>0.0</td>
<td>8.8</td>
<td>1.7</td>
<td>0.0</td>
<td>3.7</td>
<td>0.4</td>
<td>0.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.2</td>
<td>0.0</td>
<td>13.7</td>
<td>3.0</td>
<td>0.0</td>
<td>8.8</td>
<td>1.7</td>
<td>0.0</td>
<td>3.7</td>
<td>0.4</td>
<td>0.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.097</td>
<td>1.00</td>
<td>0.014</td>
<td>1.00</td>
<td>0.952</td>
<td>1.000</td>
<td>0.188</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>7.8</td>
<td>0.0</td>
<td>794.8</td>
<td>151.7</td>
<td>0.0</td>
<td>957.1</td>
<td>80.4</td>
<td>0.0</td>
<td>190.7</td>
<td>16.3</td>
<td>0.0</td>
<td>150.4</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.969</td>
<td>0.000</td>
<td>0.800</td>
<td>0.781</td>
<td>0.000</td>
<td>0.552</td>
<td>0.811</td>
<td>0.000</td>
<td>0.707</td>
<td>0.933</td>
<td>0.000</td>
<td>0.116</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>156.0</td>
<td>0.0</td>
<td>1046.6</td>
<td>234.0</td>
<td>0.0</td>
<td>1143.6</td>
<td>195.0</td>
<td>0.0</td>
<td>280.5</td>
<td>156.0</td>
<td>0.0</td>
<td>277.5</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>22.6</td>
<td>0.0</td>
<td>11.2</td>
<td>20.4</td>
<td>0.0</td>
<td>7.5</td>
<td>21.5</td>
<td>0.0</td>
<td>19.3</td>
<td>22.5</td>
<td>0.0</td>
<td>19.3</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>140.3</td>
<td>0.0</td>
<td>3.4</td>
<td>8.8</td>
<td>0.0</td>
<td>0.5</td>
<td>17.2</td>
<td>0.0</td>
<td>4.7</td>
<td>86.0</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>162.9</td>
<td>0.0</td>
<td>14.5</td>
<td>29.2</td>
<td>0.0</td>
<td>8.0</td>
<td>38.8</td>
<td>0.0</td>
<td>24.0</td>
<td>108.5</td>
<td>0.0</td>
<td>19.6</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>B</td>
<td>C</td>
<td>A</td>
<td>D</td>
<td>C</td>
<td>F</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Approach Summary

| Approach Volume, veh/h | 643 | 647 | 200 | 33 |
| Approach Delay, s/veh | 16.3 | 11.9 | 28.8 | 61.1 |
| Approach LOS | B | B | C | E |

### Timer

| Assigned Phase | 7 | 4 | 3 | 8 | 5 | 2 | 1 | 6 |
| Phase Duration (G+Y+Rc), s | 4.20 | 23.74 | 7.89 | 27.43 | 6.06 | 9.44 | 4.42 | 7.79 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 4.00 | 26.00 | 6.00 | 28.00 | 5.00 | 8.00 | 4.00 | 7.00 |
| Max Q Clear Time (g_c+11), s | 2.20 | 15.70 | 4.98 | 10.76 | 3.66 | 5.70 | 2.39 | 2.41 |
| Green Extension Time (p_c) | 0.00 | 4.05 | 0.03 | 5.18 | 0.02 | 0.11 | 0.00 | 0.21 |

### Intersection Summary

| HCM 2010 Control Delay | 17.0 |
| HCM 2010 Level of Service | B |
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR
#### Lane Configurations
- **Volume (vph)**: 16 676 5 3 435 4 24 0 16 40 0 119
- **Number**: 5 2 12 1 6 16 3 8 18 7 4 14
- **Initial Queue, 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 0 1.00 0 1.00 0
- **Paking, Bus Adj**: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
- **Lanes**: 1 1 0 1 1 0 1 1 0 1 1 0
- **Capacity, veh/h**: 19 882 7 4 864 8 30 0 0 109 0 0
- **Arriving On Green**: 0.01 0.48 0.48 0.00 0.47 0.47 0.02 0.00 0.13 0.06 0.00 0.17
- **Sat Flow, veh/h**: 1774.0 1863.0 13.7 1774.0 1863.0 16.9 1774.0 0.0 0.0 1774.0 0.0 0.0
- **Grp Volume (v), veh/h**: 17.6 0.0 748.4 3.3 0.0 482.4 26.4 0.0 17.6 44.0 0.0 130.8
- **Q Serve (g_s), s**: 0.5 0.0 16.8 0.1 0.0 8.9 0.7 0.0 6.0 1.1 0.0 8.1
- **Cycle Q Clear (g_c), s**: 0.5 0.0 16.8 0.1 0.0 8.9 0.7 0.0 6.0 1.1 0.0 8.1
- **Proportion In Lane**: 1.000 0.000 1.000 0.000 0.000 1.000 1.000 0.000 1.000 0.000 0.000 1.000
- **Lane Grp Cap (c), veh/h**: 19.1 0.0 888.4 3.7 0.0 871.5 29.7 0.0 0.0 109.0 0.0 0.0
- **V/C Ratio (X)**: 0.919 0.000 0.842 0.890 0.000 0.554 0.887 0.000 0.000 0.403 0.000 0.000
- **Avail Cap (c_a), veh/h**: 148.1 0.0 1087.1 148.1 0.0 1086.8 148.1 0.0 0.0 222.2 0.0 0.0
- **HCM Platoon Ratio**: 1.00 1.00 1.00 1.00 1.00 0.0 1.00 100.0 100.0 100.0 100.0 100.0
- **Upstream Filter (I)**: 1.00 0.000 1.000 1.000 0.000 1.000 1.000 0.000 1.000 0.000 0.000 1.000
- **Uniform Delay (d), s/veh**: 23.7 0.0 10.9 23.9 0.0 9.1 23.5 0.0 0.0 21.6 0.0 0.0
- **Incr Delay (d2), s/veh**: 75.3 0.0 5.2 182.0 0.0 0.6 51.1 0.0 0.0 2.4 0.0 0.0
- **Initial Q Delay (d3), s/veh**: 98.9 0.0 16.1 205.9 0.0 9.7 74.6 0.0 0.0 24.0 0.0 0.0
- **Movement LOS**: F B F A E C
- **Approach Volume, veh/h**: 766 486 44 175
- **Approach Delay, s/veh**: 18.0 11.0 44.8 6.0
- **Approach LOS**: B B D A

#### Timer
- **Assigned Phase**: 5 2 1 6 3 8 7 4
- **Phase Duration (G+Y+Rc), s**: 4.52 26.88 4.09 26.45 4.80 10.00 6.94 12.14
- **Change Period (Y+Rc), s**: 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00
- **Max Green Setting (Gmax), s**: 4.00 28.00 4.00 28.00 4.00 6.00 6.00 8.00
- **Max Q Clear Time (g_c+I1), s**: 2.47 18.85 2.09 10.92 2.71 8.00 3.14 10.14
- **Green Extension Time (p_c)**: 0.00 4.03 0.00 5.58 0.00 0.00 0.02 0.00

#### Intersection Summary
- **HCM 2010 Control Delay**: 15.1
- **HCM 2010 Level of Service**: B

---

MRO Engineers, Inc.  
Synchro 8 Report  
Folsom Women's Facility  
Page 5
# Two-Way Stop Control Summary

## General Information
- **Analyst**: NKL
- **Agency/Co.**: MRO Engineers, Inc.
- **Date Performed**: 7/9/2012
- **Analysis Time Period**: PM Peak Hour

## Site Information
- **Intersection**: E. Natoma St./Hancock Dr./PIA Access Rd.
- **Jurisdiction**: Folsom, CA
- **Analysis Year**: Baseline No Project

## Project Description
- **Folsom Women’s Facility**

## Vehicle Volumes and Adjustments

### Major Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>2</td>
<td>665</td>
<td>18</td>
<td>33</td>
<td>392</td>
<td>3</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>2</td>
<td>730</td>
<td>19</td>
<td>36</td>
<td>430</td>
<td>3</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>--</td>
<td>--</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

### Median Type
- **Undivided**

### Minor Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>9</td>
<td>1</td>
<td>16</td>
<td>26</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>9</td>
<td>1</td>
<td>17</td>
<td>28</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

## Delay, Queue Length, and Level of Service

### Approach Queue Length

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Configuration</td>
<td>L</td>
<td>L</td>
<td>LTR</td>
<td>LTR</td>
</tr>
<tr>
<td>v (veh/h)</td>
<td>2</td>
<td>36</td>
<td>27</td>
<td>66</td>
</tr>
<tr>
<td>C (m) (veh/h)</td>
<td>1127</td>
<td>860</td>
<td>235</td>
<td>241</td>
</tr>
<tr>
<td>v/c</td>
<td>0.00</td>
<td>0.04</td>
<td>0.11</td>
<td>0.27</td>
</tr>
<tr>
<td>95% queue length</td>
<td>0.01</td>
<td>0.13</td>
<td>0.38</td>
<td>1.08</td>
</tr>
<tr>
<td>Control Delay (s/veh)</td>
<td>8.2</td>
<td>9.4</td>
<td>22.3</td>
<td>25.5</td>
</tr>
<tr>
<td>LOS</td>
<td>A</td>
<td>A</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Approach Delay (s/veh)</td>
<td>--</td>
<td>--</td>
<td>22.3</td>
<td>25.5</td>
</tr>
<tr>
<td>Approach LOS</td>
<td>--</td>
<td>--</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>
## Movement EBL EBR NBL NBT SBT SBR

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>179</td>
<td>502</td>
<td>276</td>
<td>812</td>
<td>1077</td>
<td>149</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>547</td>
<td>468</td>
<td>471</td>
<td>2478</td>
<td>1744</td>
<td>780</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.16</td>
<td>0.16</td>
<td>0.14</td>
<td>0.70</td>
<td>0.49</td>
<td>0.49</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>1583.3</td>
<td>3441.6</td>
<td>3632.4</td>
<td>3632.3</td>
<td>1583.3</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>188.4</td>
<td>528.4</td>
<td>290.5</td>
<td>854.7</td>
<td>1133.7</td>
<td>156.8</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1720.8</td>
<td>1583.3</td>
<td>1720.8</td>
<td>1769.6</td>
<td>1769.6</td>
<td>1583.3</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>2.8</td>
<td>9.0</td>
<td>4.5</td>
<td>5.4</td>
<td>13.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>2.8</td>
<td>9.0</td>
<td>4.5</td>
<td>5.4</td>
<td>13.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>546.6</td>
<td>468.0</td>
<td>470.8</td>
<td>2477.6</td>
<td>1743.6</td>
<td>780.1</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.345</td>
<td>1.129</td>
<td>0.617</td>
<td>0.345</td>
<td>0.650</td>
<td>0.201</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>546.6</td>
<td>468.0</td>
<td>1882.6</td>
<td>4558.8</td>
<td>2373.1</td>
<td>1061.6</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>21.2</td>
<td>20.0</td>
<td>23.1</td>
<td>3.4</td>
<td>10.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>0.4</td>
<td>81.9</td>
<td>1.3</td>
<td>0.1</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>21.6</td>
<td>101.9</td>
<td>24.4</td>
<td>3.4</td>
<td>11.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>C</td>
<td>F</td>
<td>C</td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>717</td>
<td>1145</td>
<td>1291</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>80.8</td>
<td>8.8</td>
<td>10.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>F</td>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 11.75 | 43.67 | 31.92 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 31.00 | 73.00 | 38.00 |
| Max Q Clear Time (g_c+I1), s | 6.51 | 7.41 | 15.55 |
| Green Extension Time (p_c) | 1.32 | 18.16 | 12.37 |

## Intersection Summary

| HCM 2010 Control Delay | 26.0 |
| HCM 2010 Level of Service | C |
APPENDIX E

PROPOSED FACILITY STAFFING BY SHIFT
(Source: California Department of Corrections & Rehabilitation, July 2012)
<table>
<thead>
<tr>
<th>CLASSIFICATIONS</th>
<th>WORKSITE LOCATION</th>
<th>1ST WATCH (2200 - 0600)</th>
<th>2ND WATCH (0600 - 1400)</th>
<th>3RD WATCH (1400 - 2200)</th>
<th>SHIFT (0700 - 1500)</th>
<th>SHIFT (0800 - 1700)</th>
<th>PROPOSED START DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custody Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Captain</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td>1.0</td>
<td></td>
<td>Jul-2012</td>
</tr>
<tr>
<td>Custody*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctional Lieutenant</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Correctional Sergeant</td>
<td>FWF</td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Correctional Sergeant</td>
<td>FWF</td>
<td></td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Correctional Officer</td>
<td>FWF</td>
<td>4.2</td>
<td>7.0</td>
<td>7.0</td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Correctional Officer</td>
<td>FWF</td>
<td>1.4</td>
<td>5.6</td>
<td>5.6</td>
<td></td>
<td></td>
<td>Jan-2013</td>
</tr>
<tr>
<td>HCAU*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctional Officer</td>
<td>FWF</td>
<td>2.4</td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Ratio Relief*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctional Lieutenant</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Correctional Sergeant</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Correctional Officer</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Correctional Officer</td>
<td>FWF</td>
<td>1.0</td>
<td>2.2</td>
<td>2.0</td>
<td></td>
<td></td>
<td>Jan-2013</td>
</tr>
<tr>
<td>Correctional Counselors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctional Counselor II-Supervisor</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Correctional Counselor I</td>
<td>FWF</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accountant I - Specialist</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Custody Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Technician - Typing</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aug-2012</td>
</tr>
<tr>
<td>Food Services*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctional Supervising Cook</td>
<td>FWF</td>
<td>2.0</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Canteen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials and Stores Supervisor I</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Mailroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Technician - Typing</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jan-2013</td>
</tr>
<tr>
<td>Visiting*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Licensed Clinical Social Worker</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Feb-2013</td>
</tr>
<tr>
<td>Mental Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychologist</td>
<td>FWF</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Staff Psychiatrist</td>
<td>FWF</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Office Technician (Typing)</td>
<td>FSP</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel Specialist</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Plant Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationary Engineer</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Electrician II</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Plumber II</td>
<td>FWF</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Records</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervising Case Records Technician</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Case Records Technician</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td>Case Records Technician</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Warehouse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Technician</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sep-2012</td>
</tr>
<tr>
<td>Materials and Stores Supervisor I</td>
<td>FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Oct-2012</td>
</tr>
<tr>
<td>CLASSIFICATIONS</td>
<td>WORKSITE LOCATION</td>
<td>1ST WATCH (2200 - 0600)</td>
<td>2ND WATCH (0600 - 1400)</td>
<td>3RD WATCH (1400 - 2200)</td>
<td>SHIFT (0700 - 1500)</td>
<td>SHIFT (0800 - 1700)</td>
<td>PROPOSED START DATE</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
<td>-------------------------</td>
<td>-------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Correctional Health Services</strong>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient Clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician and Surgeon</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Licensed Vocational Nurse</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td><strong>Meds/Treatment/Follow-up</strong>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Licensed Vocational Nurse</td>
<td>FWF</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td><strong>Treatment and Triage Area</strong>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>FWF</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td><strong>Nursing Administration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Technician</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Supervising Registered Nurse II</td>
<td>FWF</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sep-2012</td>
</tr>
<tr>
<td>Supervising Registered Nurse II</td>
<td>FWF</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Supervising Registered Nurse II</td>
<td>FWF</td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td>Dec-2012</td>
</tr>
<tr>
<td>Associate Governmental Program Analyst</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td><strong>Medical Leadership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Secretary</td>
<td>FWF</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sep-2012</td>
</tr>
<tr>
<td>Correctional Health Services Administrator I</td>
<td>FWF</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sep-2012</td>
</tr>
<tr>
<td><strong>Medical Records</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Technician - Typing</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nov-2012</td>
</tr>
<tr>
<td><strong>Pharmacy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacist I</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sep-2012</td>
</tr>
<tr>
<td>Pharmacy Technician</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sep-2012</td>
</tr>
<tr>
<td><strong>Support Medical</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Information Systems Analyst - Specialist</td>
<td>SAC/FSP</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Oct-2012</td>
</tr>
<tr>
<td><strong>Rehabilitative Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jan-2013</td>
</tr>
<tr>
<td>Vocational Instructor</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jul-2013</td>
</tr>
<tr>
<td>Correctional Counselor III</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td>Parole Services Associate</td>
<td>FWF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jun-2013</td>
</tr>
<tr>
<td><strong>TOTAL COUNT</strong></td>
<td></td>
<td><strong>11</strong></td>
<td><strong>33</strong></td>
<td><strong>21</strong></td>
<td><strong>23</strong></td>
<td><strong>12</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Positions also work weekend shifts.
APPENDIX F

BASELINE PLUS PROJECT
LEVEL OF SERVICE CALCULATION WORKSHEETS
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

#### Lane Configurations
- Volume (vph) 6 199 24 52 255 143 18 343 34 207 713 5
- Number 7 4 14 3 8 18 5 2 12 1 6 16
- Initial Queue, 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 Rate 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863
- Lanes 1 1 0 1 1 1 1 1 0 1 1 0
- Capacity, veh/h 7 290 35 71 398 339 22 571 57 281 903 6
- Arriving On Green 0.00 0.18 0.18 0.04 0.21 0.21 0.01 0.34 0.34 0.16 0.49 0.49
- Sat Flow, veh/h 1774.0 1631.3 196.7 1774.0 1583.3 1583.3 1774.0 1668.2 165.4 1774.0 1847.5 13.0
- Grp Volume(v), veh/h 6.6 0.0 245.1 57.1 280.2 157.1 19.8 0.0 414.3 227.5 0.0 789.0
- Q Serve(g_s), s 0.2 0.0 7.2 1.8 7.9 4.9 6.0 0.0 10.9 7.0 0.0 21.4
- Cycle Q Clear(g_c), s 0.2 0.0 7.2 1.8 7.9 4.9 6.0 0.0 10.9 7.0 0.0 21.4
- Lane Grp Cap(c), veh/h 6.8 0.0 325.0 70.8 398.3 338.6 22.1 0.0 627.7 281.4 0.0 908.9
- V/C Ratio(X) 0.966 0.000 0.754 0.754 0.703 0.464 0.897 0.000 0.660 0.808 0.000 0.868
- Avail Cap(c_a), veh/h 124.8 0.0 385.7 124.8 398.3 338.6 124.8 0.0 838.3 374.3 0.0 1112.3
- HCM Platoon Ratio 1.00 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) 1.000 0.000 1.000 1.000 1.000 1.000 1.000 0.000 1.000 0.000 0.000 1.000
- Uniform Delay (d), s/veh 28.3 0.0 22.2 27.1 20.7 19.5 28.0 0.0 15.9 23.1 0.0 12.9
- Incr Delay (d2), s/veh 149.9 0.0 6.8 18.8 5.5 1.0 64.2 0.0 1.2 9.4 0.0 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
- Control Delay (d), s/veh 178.3 0.0 29.0 45.9 26.2 20.5 92.2 0.0 17.1 32.4 0.0 19.3

#### Movement LOS
- F C D C C F B C B

#### Approach Volume, veh/h
- 252 495 434 1016

#### Approach Delay, s/veh
- 33.0 26.7 20.5 22.3

#### Approach LOS
- C C C C

#### Timer
- Assigned Phase 7 4 3 8 5 2 1 6
- Phase Duration (G+Y+Rc), s 4.22 14.11 6.27 16.16 4.71 23.47 13.02 31.78
- Change Period (Y+Rc), s 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00
- Max Green Setting (Gmax), s 4.00 12.00 4.00 12.00 4.00 26.00 12.00 34.00
- Max Q Clear Time (g+c+11), s 2.21 9.24 3.82 9.92 2.63 12.92 9.04 23.42
- Green Extension Time (p_c) 0.00 0.87 0.00 0.68 0.00 4.90 0.24 4.36

#### Intersection Summary
- HCM 2010 Control Delay 24.1
- HCM 2010 Level of Service C
### Movement EBL EBT EBR WBL WBT NBL NBT NBR SBL SBT SBR
#### Lane Configurations
- **Volume (vph)**: 2 404 16 50 463 28 21 26 56 38 28 10
- **Number**: 7 4 14 3 8 18 5 2 12 1 6 16
- **Initial Queue, 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 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 Rate**: 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863
- **Lanes**: 1 1 0 1 1 0 1 1 0 1 1 0
- **Capacity, veh/h**: 5 711 28 67 758 46 26 49 106 50 140 50
- **Arriving On Green**: 0.00 0.40 0.40 0.04 0.44 0.44 0.01 0.09 0.09 0.03 0.11 0.11
- **Sat Flow, veh/h**: 1774.0 1779.8 70.5 1774.0 1739.0 105.2 1774.0 527.1 1135.3 1774.0 1311.6 468.4
- **Grp Volume(v), veh/h**: 2.2 0.0 471.9 56.2 0.0 551.7 23.6 0.0 92.1 42.7 0.0 42.7
- **Q Serve(g_s), s**: 0.0 0.0 7.5 1.1 0.0 8.7 0.5 0.0 1.9 0.9 0.0 0.8
- **Proportion In Lane**: 1.000 0.038 1.000 0.057 1.000 0.683 1.000 0.263
- **Lane Grp Cap(c), veh/h**: 4.9 0.0 738.7 67.5 0.0 804.1 25.8 0.0 155.4 49.6 0.0 190.3
- **V/C Ratio(X)**: 0.459 0.000 0.639 0.832 0.000 0.686 0.915 0.000 0.593 0.861 0.000 0.224
- **Avail Cap(c_a), veh/h**: 195.7 0.0 2143.5 440.4 0.0 2390.8 342.5 0.0 687.8 391.5 0.0 785.6
- **HCM Platoon Ratio**: 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)**: 1.000 0.000 1.000 0.000 1.000 0.000 1.000 0.000 1.000 0.000 1.000
- **Uniform Delay (d), s/veh**: 18.1 0.0 8.8 17.3 0.0 8.2 17.8 0.0 15.8 17.6 0.0 14.8
- **Incr Delay (d2), s/veh**: 55.0 0.0 0.9 22.1 0.0 1.0 62.0 0.0 3.6 32.2 0.0 0.6
- **Initial Q Delay(d3), s/veh**: 73.1 0.0 9.7 39.4 0.0 9.3 79.8 0.0 19.3 49.7 0.0 15.4
- **Movement LOS**: E A D A E B D B
- **Approach Volume, veh/h**: 474 0.0 608 0.0 2390.8 342.5 0.0 687.8 391.5 0.0 785.6
- **Approach Delay, s/veh**: 10.0 0.0 12.1 0.0 31.7 0.0 32.6
- **Approach LOS**: B B C C
- **HCM 2010 Control Delay**: 14.4
- **HCM 2010 Level of Service**: B

#### Timer
- **Assigned Phase**: 7 4 3 8 5 2 1 6
- **Phase Duration (G+Y+Rc), s**: 4.05 18.47 5.38 19.81 4.53 7.39 5.01 7.87
- **Change Period (Y+Rc), s**: 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00
- **Max Green Setting (Gmax), s**: 4.00 42.00 9.00 47.00 7.00 15.00 8.00 16.00
- **Max Q Clear Time (g_c+I1), s**: 2.05 9.46 3.14 10.73 2.48 3.93 2.87 2.80
- **Green Extension Time (p_c)**: 0.00 5.02 0.05 5.07 0.01 0.32 0.03 0.36

#### Intersection Summary
- **HCM 2010 Control Delay**: 14.4
- **HCM 2010 Level of Service**: B
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph) 5 405 16 52 469 51 43 24 74 16 14 3</td>
</tr>
<tr>
<td>Number 7 4 14 3 8 18 5 2 12 1 6 16</td>
</tr>
<tr>
<td>Initial Queue, veh 0 0 0 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863</td>
</tr>
<tr>
<td>Lanes 1 1 0 1 1 0 1 1 0 1 1 0</td>
</tr>
<tr>
<td>Capacity, veh/h 5 717 28 66 722 79 53 42 129 18 124 27</td>
</tr>
<tr>
<td>Arriving On Green 0.00 0.40 0.40 0.04 0.44 0.44 0.03 0.10 0.10 0.01 0.08 0.08</td>
</tr>
<tr>
<td>Sat Flow, veh/h 1774.0 1780.0 70.3 1774.0 1651.5 179.6 1774.0 402.5 1241.2 1774.0 1487.7 318.8</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h 5.3 0.0 447.9 55.3 0.0 553.2 45.7 0.0 104.3 17.0 0.0 18.1</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln 1774.0 0.0 1850.3 1774.0 0.0 1831.1 1774.0 0.0 1643.7 1774.0 0.0 1806.5</td>
</tr>
<tr>
<td>Q Serve(g_s), s 0.1 0.0 6.8 1.1 0.0 8.7 0.9 0.0 2.2 0.3 0.0 0.3</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s 0.1 0.0 6.8 1.1 0.0 8.7 0.9 0.0 2.2 0.3 0.0 0.3</td>
</tr>
<tr>
<td>Proportion In Lane 1.000 0.000 1.000 1.000 0.000 1.000 1.000 0.000 1.000 1.000 0.000 1.000</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h 5.4 0.0 745.8 66.3 0.0 800.9 53.5 0.0 170.3 18.1 0.0 151.1</td>
</tr>
<tr>
<td>V/C Ratio(X) 0.988 0.000 0.601 0.835 0.000 0.691 0.855 0.000 0.612 0.940 0.000 0.120</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h 197.7 0.0 2268.2 444.8 0.0 2499.6 395.4 0.0 732.7 247.1 0.0 654.3</td>
</tr>
<tr>
<td>HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00</td>
</tr>
<tr>
<td>Upstream Filter(I) 1.000 0.000 1.000 0.000 1.000 0.000 1.000 0.000 1.000 0.000 1.000 0.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh 17.9 0.0 8.4 17.2 0.0 8.1 17.3 0.0 15.4 17.8 0.0 15.2</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh 176.7 0.0 0.8 22.7 0.0 1.1 29.6 0.0 3.5 82.7 0.0 0.3</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh 194.6 0.0 9.2 39.9 0.0 9.2 46.9 0.0 18.9 100.5 0.0 15.6</td>
</tr>
<tr>
<td>Approach Volume, veh/h 453 609 150 35</td>
</tr>
<tr>
<td>Approach Delay, s/veh 11.4 12.0 27.5 56.7</td>
</tr>
<tr>
<td>Approach LOS B B C E</td>
</tr>
</tbody>
</table>

### Time

| Assigned Phase 7 4 3 8 5 2 1 6 |
| Phase Duration (G+Y+Rc), s 4.11 18.47 5.34 19.70 5.08 7.72 4.37 7.00 |
| Change Period (Y+Rc), s 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 |
| Max Green Setting (Gmax), s 4.00 44.00 9.00 49.00 8.00 16.00 5.00 13.00 |
| Max Q Clear Time (g_c+I1), s 2.11 8.84 3.11 10.74 2.92 4.18 2.34 2.33 |
| Green Extension Time (p_c) 0.00 4.93 0.05 4.96 0.03 0.30 0.00 0.28 |

### Intersection Summary

| HCM 2010 Control Delay 14.9 |
| HCM 2010 Level of Service B |
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>126</td>
<td>362</td>
<td>26</td>
<td>18</td>
<td>641</td>
<td>55</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Number</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj (A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>0</td>
<td>1863</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>195</td>
<td>1051</td>
<td>75</td>
<td>25</td>
<td>873</td>
<td>75</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>33</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.11</td>
<td>0.61</td>
<td>0.61</td>
<td>0.01</td>
<td>0.52</td>
<td>0.52</td>
<td>0.00</td>
<td>0.00</td>
<td>0.10</td>
<td>0.02</td>
<td>0.00</td>
<td>0.11</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1717.6</td>
<td>123.4</td>
<td>1774.0</td>
<td>1692.0</td>
<td>145.2</td>
<td>1774.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>155.6</td>
<td>0.0</td>
<td>479.0</td>
<td>22.2</td>
<td>0.0</td>
<td>859.3</td>
<td>4.9</td>
<td>0.0</td>
<td>2.5</td>
<td>6.2</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1841.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1837.1</td>
<td>1774.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>1774.0</td>
<td></td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>5.3</td>
<td>0.0</td>
<td>8.4</td>
<td>0.8</td>
<td>0.0</td>
<td>26.3</td>
<td>0.2</td>
<td>0.0</td>
<td>6.0</td>
<td>0.2</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>5.3</td>
<td>0.0</td>
<td>8.4</td>
<td>0.8</td>
<td>0.0</td>
<td>26.3</td>
<td>0.2</td>
<td>0.0</td>
<td>6.0</td>
<td>0.2</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.000</td>
<td>0.067</td>
<td>1.000</td>
<td>0.079</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>194.7</td>
<td>0.0</td>
<td>1126.1</td>
<td>25.3</td>
<td>0.0</td>
<td>948.3</td>
<td>5.1</td>
<td>0.0</td>
<td>32.6</td>
<td>0.0</td>
<td>32.6</td>
<td></td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.799</td>
<td>0.000</td>
<td>0.425</td>
<td>0.880</td>
<td>0.000</td>
<td>0.906</td>
<td>0.974</td>
<td>0.000</td>
<td>0.189</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>200.8</td>
<td>0.0</td>
<td>1131.0</td>
<td>114.7</td>
<td>0.0</td>
<td>1039.6</td>
<td>114.7</td>
<td>0.0</td>
<td>127.1</td>
<td>0.0</td>
<td>127.1</td>
<td></td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>26.9</td>
<td>0.0</td>
<td>6.3</td>
<td>30.4</td>
<td>0.0</td>
<td>13.6</td>
<td>30.8</td>
<td>0.0</td>
<td>29.9</td>
<td>0.0</td>
<td>29.9</td>
<td></td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>19.5</td>
<td>0.0</td>
<td>0.3</td>
<td>55.5</td>
<td>0.0</td>
<td>10.7</td>
<td>177.7</td>
<td>0.0</td>
<td>2.8</td>
<td>0.0</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>46.4</td>
<td>0.0</td>
<td>6.6</td>
<td>86.0</td>
<td>0.0</td>
<td>24.3</td>
<td>208.6</td>
<td>0.0</td>
<td>32.7</td>
<td>0.0</td>
<td>32.7</td>
<td></td>
</tr>
<tr>
<td>Movement LOS</td>
<td>D</td>
<td>A</td>
<td>F</td>
<td>C</td>
<td>F</td>
<td>C</td>
<td>F</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>635</td>
<td>881</td>
<td>7</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>16.3</td>
<td>25.8</td>
<td>139.0</td>
<td>5.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>C</td>
<td>F</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
<th>3</th>
<th>8</th>
<th>7</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>10.79</td>
<td>41.83</td>
<td>4.88</td>
<td>35.93</td>
<td>4.18</td>
<td>10.00</td>
<td>5.14</td>
<td>10.96</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>7.00</td>
<td>38.00</td>
<td>4.00</td>
<td>35.00</td>
<td>4.00</td>
<td>6.00</td>
<td>6.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>7.29</td>
<td>10.45</td>
<td>2.77</td>
<td>28.30</td>
<td>2.17</td>
<td>8.00</td>
<td>2.21</td>
<td>8.96</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>7.57</td>
<td>0.00</td>
<td>3.63</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Intersection Summary

| HCM 2010 Control Delay | 22.0 |
| HCM 2010 Level of Service | C |
## TWO-WAY STOP CONTROL SUMMARY

### General Information
- **Analyst**: NKL
- **Agency/Co.**: MRO Engineers, Inc.
- **Date Performed**: 7/9/2012
- **Analysis Time Period**: AM Peak Hour

### Site Information
- **Intersection**: E. Natoma St./Hancock Dr./PIA Access Rd.
- **Jurisdiction**: Folsom, CA
- **Analysis Year**: Baseline + Project

### Project Description
- **Folsom Women's Facility**

### East/West Street: East Natoma St.
### North/South Street: Hancock Dr./PIA Access Rd.
### Intersection Orientation: East-West
### Study Period (hrs): 0.25

### Vehicle Volumes and Adjustments

<table>
<thead>
<tr>
<th>Major Street</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>L</td>
<td>48</td>
<td>322</td>
</tr>
<tr>
<td>T</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>R</td>
<td>6</td>
<td>607</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>59</td>
<td>397</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>Median Type</td>
<td>Undivided</td>
<td>0</td>
</tr>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Configuration</td>
<td>L</td>
<td>TR</td>
</tr>
<tr>
<td>Upstream Signal</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minor Street</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>L</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>T</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>R</td>
<td>607</td>
<td>30</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Percent Grade (%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Flared Approach</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Storage</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lanes</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Configuration</td>
<td>LTR</td>
<td>LTR</td>
</tr>
</tbody>
</table>

### Delay, Queue Length, and Level of Service

<table>
<thead>
<tr>
<th>Approach</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Lane Configuration</td>
<td>L</td>
<td>L</td>
<td>LTR</td>
<td>LTR</td>
</tr>
<tr>
<td>v (veh/h)</td>
<td>59</td>
<td>17</td>
<td>54</td>
<td>21</td>
</tr>
<tr>
<td>C (m) (veh/h)</td>
<td>833</td>
<td>1155</td>
<td>198</td>
<td>166</td>
</tr>
<tr>
<td>v/c</td>
<td>0.07</td>
<td>0.01</td>
<td>0.27</td>
<td>0.13</td>
</tr>
<tr>
<td>95% queue length</td>
<td>0.23</td>
<td>0.04</td>
<td>1.06</td>
<td>0.42</td>
</tr>
<tr>
<td>Control Delay (s/veh)</td>
<td>9.7</td>
<td>8.2</td>
<td>29.9</td>
<td>29.8</td>
</tr>
<tr>
<td>LOS</td>
<td>A</td>
<td>A</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Approach Delay (s/veh)</td>
<td>--</td>
<td>--</td>
<td>29.9</td>
<td>29.8</td>
</tr>
<tr>
<td>Approach LOS</td>
<td>--</td>
<td>--</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>
### Movement EBL EBR NBL NBT SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>166</td>
<td>173</td>
<td>401</td>
<td>1007</td>
<td>598</td>
<td>182</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>510</td>
<td>546</td>
<td>677</td>
<td>2454</td>
<td>1479</td>
<td>661</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.15</td>
<td>0.15</td>
<td>0.20</td>
<td>0.69</td>
<td>0.42</td>
<td>0.42</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>1583.3</td>
<td>3441.6</td>
<td>3632.4</td>
<td>3632.3</td>
<td>1583.3</td>
</tr>
</tbody>
</table>

| Grp Volume(v), veh/h| 182.4| 190.1| 440.7| 1106.6| 657.1| 200.0|
| Grp Sat Flow(s),veh/h/ln| 1720.8| 1583.3| 1720.8| 1769.6| 1769.6| 1583.3|
| Q Serve(g_s), s      | 2.4  | 4.5  | 6.0  | 7.0  | 6.7  | 4.3  |
| Cycle Q Clear(g_c), s| 2.4  | 4.5  | 6.0  | 7.0  | 6.7  | 4.3  |
| Proportion In Lane   | 1.000| 1.000| 1.000| 1.000| 1.000| 1.000|
| Lane Grp Cap(c), veh/h| 510.0| 545.9| 676.6| 2454.5| 1478.6| 661.5|
| V/C Ratio(X)         | 0.358| 0.348| 0.651| 0.451| 0.444| 0.302|
| Avail Cap(c_a), veh/h| 953.4| 749.9| 1838.8| 4762.2| 2591.2| 1159.2|
| HCM Platoon Ratio    | 1.000| 1.000| 1.000| 1.000| 1.000| 1.000|
| Upstream Filter(I)   | 1.000| 1.000| 1.000| 1.000| 1.000| 1.000|
| Uniform Delay (d), s/veh| 19.4 | 12.3 | 18.7 | 3.5  | 10.5 | 9.8  |
| Incr Delay (d2), s/veh| 0.4  | 0.4  | 1.1  | 0.1  | 0.2  | 0.3  |
| Initial Q Delay(d3), s/veh| 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Control Delay (d), s/veh| 19.8 | 12.7 | 19.8 | 3.6  | 10.7 | 10.1 |

### Movement LOS B B B A B B

| Approach Volume, veh/h| 373| 1547| 857|
| Approach Delay, s/veh | 16.2| 8.2 | 10.6|
| Approach LOS A B |

### Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 13.93| 39.05| 25.11|
| Change Period (Y+Rc), s | 4.00| 4.00| 4.00|
| Max Green Setting (Gmax), s | 27.00| 68.00| 37.00|
| Max Q Clear Time (g_c+I1), s | 7.96| 9.05| 8.71|
| Green Extension Time (p_c) | 1.99| 15.14| 12.40|

### Intersection Summary

| HCM 2010 Control Delay | 10.0 |
| HCM 2010 Level of Service | A |
## Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

### Lane Configurations

<table>
<thead>
<tr>
<th>Lane</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>28</td>
<td>227</td>
<td>61</td>
<td>109</td>
<td>213</td>
<td>224</td>
<td>30</td>
<td>677</td>
<td>37</td>
<td>202</td>
<td>729</td>
<td>8</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1683</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>35</td>
<td>245</td>
<td>66</td>
<td>123</td>
<td>415</td>
<td>353</td>
<td>37</td>
<td>766</td>
<td>42</td>
<td>241</td>
<td>1016</td>
<td>11</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.02</td>
<td>0.17</td>
<td>0.17</td>
<td>0.07</td>
<td>0.22</td>
<td>0.22</td>
<td>0.02</td>
<td>0.44</td>
<td>0.44</td>
<td>0.14</td>
<td>0.55</td>
<td>0.55</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1415.3</td>
<td>380.3</td>
<td>1774.0</td>
<td>1862.7</td>
<td>1583.3</td>
<td>1774.0</td>
<td>1750.2</td>
<td>95.7</td>
<td>1774.0</td>
<td>1839.0</td>
<td>20.2</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>28.6</td>
<td>0.0</td>
<td>293.9</td>
<td>111.2</td>
<td>217.3</td>
<td>228.6</td>
<td>30.6</td>
<td>0.0</td>
<td>728.6</td>
<td>206.1</td>
<td>0.0</td>
<td>752.0</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>1.4</td>
<td>0.0</td>
<td>14.0</td>
<td>5.4</td>
<td>8.9</td>
<td>11.4</td>
<td>1.5</td>
<td>0.0</td>
<td>31.8</td>
<td>9.9</td>
<td>0.0</td>
<td>26.4</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>1.4</td>
<td>0.0</td>
<td>14.0</td>
<td>5.4</td>
<td>8.9</td>
<td>11.4</td>
<td>1.5</td>
<td>0.0</td>
<td>31.8</td>
<td>9.9</td>
<td>0.0</td>
<td>26.4</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>34.5</td>
<td>0.0</td>
<td>310.6</td>
<td>122.7</td>
<td>414.8</td>
<td>352.6</td>
<td>37.3</td>
<td>0.0</td>
<td>807.5</td>
<td>241.0</td>
<td>0.0</td>
<td>1026.8</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.827</td>
<td>0.000</td>
<td>0.946</td>
<td>0.906</td>
<td>0.524</td>
<td>0.648</td>
<td>0.821</td>
<td>0.000</td>
<td>0.902</td>
<td>0.855</td>
<td>0.000</td>
<td>0.732</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>81.8</td>
<td>0.0</td>
<td>310.6</td>
<td>122.7</td>
<td>414.8</td>
<td>352.6</td>
<td>81.8</td>
<td>0.0</td>
<td>872.7</td>
<td>245.5</td>
<td>0.0</td>
<td>1050.6</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>42.4</td>
<td>0.0</td>
<td>35.5</td>
<td>40.1</td>
<td>29.7</td>
<td>30.6</td>
<td>42.3</td>
<td>0.0</td>
<td>22.7</td>
<td>36.6</td>
<td>0.0</td>
<td>14.6</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>36.6</td>
<td>0.0</td>
<td>36.9</td>
<td>53.3</td>
<td>1.2</td>
<td>4.1</td>
<td>33.8</td>
<td>0.0</td>
<td>12.0</td>
<td>24.1</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>79.0</td>
<td>0.0</td>
<td>72.4</td>
<td>93.4</td>
<td>30.9</td>
<td>34.7</td>
<td>76.1</td>
<td>0.0</td>
<td>34.6</td>
<td>60.7</td>
<td>0.0</td>
<td>17.2</td>
</tr>
</tbody>
</table>

### Movement LOS

<table>
<thead>
<tr>
<th>Movement</th>
<th>E</th>
<th>F</th>
<th>C</th>
<th>E</th>
<th>C</th>
<th>E</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach Volume, veh/h</td>
<td>322</td>
<td>557</td>
<td>759</td>
<td>958</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>73.0</td>
<td>44.9</td>
<td>36.3</td>
<td>26.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>E</td>
<td>D</td>
<td>D</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>5.69</td>
<td>19.00</td>
<td>10.00</td>
<td>23.31</td>
<td>5.82</td>
<td>41.94</td>
<td>15.78</td>
<td>51.89</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>15.00</td>
<td>6.00</td>
<td>17.00</td>
<td>4.00</td>
<td>41.00</td>
<td>12.00</td>
<td>49.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>3.39</td>
<td>16.03</td>
<td>7.40</td>
<td>13.37</td>
<td>3.49</td>
<td>33.81</td>
<td>11.85</td>
<td>28.37</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.20</td>
<td>0.00</td>
<td>4.13</td>
<td>0.01</td>
<td>7.68</td>
</tr>
</tbody>
</table>

### Intersection Summary

| HCM 2010 Control Delay | 39.1 |
| HCM 2010 Level of Service | D |
### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>8</td>
<td>503</td>
<td>22</td>
<td>56</td>
<td>608</td>
<td>62</td>
<td>53</td>
<td>128</td>
<td>124</td>
<td>70</td>
<td>54</td>
<td>10</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>9</td>
<td>781</td>
<td>34</td>
<td>77</td>
<td>797</td>
<td>81</td>
<td>72</td>
<td>175</td>
<td>169</td>
<td>97</td>
<td>328</td>
<td>61</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.01</td>
<td>0.44</td>
<td>0.44</td>
<td>0.04</td>
<td>0.48</td>
<td>0.48</td>
<td>0.04</td>
<td>0.20</td>
<td>0.20</td>
<td>0.05</td>
<td>0.21</td>
<td>0.21</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1771.6</td>
<td>77.5</td>
<td>1774.0</td>
<td>1863.2</td>
<td>1663.2</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>8.7</td>
<td>0.0</td>
<td>570.7</td>
<td>60.9</td>
<td>0.0</td>
<td>728.3</td>
<td>57.6</td>
<td>0.0</td>
<td>273.9</td>
<td>76.1</td>
<td>0.0</td>
<td>69.6</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1849.1</td>
<td>1774.0</td>
<td>0.0</td>
<td>1832.8</td>
<td>1774.0</td>
<td>0.0</td>
<td>1713.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1812.8</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.3</td>
<td>0.0</td>
<td>15.3</td>
<td>2.1</td>
<td>0.0</td>
<td>21.1</td>
<td>2.0</td>
<td>0.0</td>
<td>9.3</td>
<td>2.6</td>
<td>0.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.3</td>
<td>0.0</td>
<td>15.3</td>
<td>2.1</td>
<td>0.0</td>
<td>21.1</td>
<td>2.0</td>
<td>0.0</td>
<td>9.3</td>
<td>2.6</td>
<td>0.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.042</td>
<td>1.00</td>
<td>0.492</td>
<td>1.00</td>
<td>0.156</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>9.2</td>
<td>0.0</td>
<td>815.5</td>
<td>77.0</td>
<td>0.0</td>
<td>878.4</td>
<td>72.4</td>
<td>0.0</td>
<td>343.7</td>
<td>97.1</td>
<td>0.0</td>
<td>388.7</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.949</td>
<td>0.000</td>
<td>0.700</td>
<td>0.790</td>
<td>0.000</td>
<td>0.829</td>
<td>0.795</td>
<td>0.000</td>
<td>0.797</td>
<td>0.784</td>
<td>0.000</td>
<td>0.179</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>115.4</td>
<td>0.0</td>
<td>1173.1</td>
<td>230.9</td>
<td>0.0</td>
<td>1282.0</td>
<td>202.0</td>
<td>0.0</td>
<td>585.5</td>
<td>173.2</td>
<td>0.0</td>
<td>589.8</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.790</td>
<td>0.000</td>
<td>0.829</td>
<td>0.795</td>
<td>0.000</td>
<td>0.797</td>
<td>0.784</td>
<td>0.000</td>
<td>0.179</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>30.6</td>
<td>0.0</td>
<td>13.9</td>
<td>29.1</td>
<td>0.0</td>
<td>13.8</td>
<td>29.2</td>
<td>0.0</td>
<td>23.4</td>
<td>28.7</td>
<td>0.0</td>
<td>19.7</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>123.5</td>
<td>0.0</td>
<td>1.1</td>
<td>16.2</td>
<td>0.0</td>
<td>3.1</td>
<td>17.5</td>
<td>0.0</td>
<td>4.2</td>
<td>12.8</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>154.1</td>
<td>0.0</td>
<td>15.0</td>
<td>45.3</td>
<td>0.0</td>
<td>16.9</td>
<td>46.8</td>
<td>0.0</td>
<td>27.6</td>
<td>41.5</td>
<td>0.0</td>
<td>19.9</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>579</td>
<td>789</td>
<td>332</td>
<td>146</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>17.1</td>
<td>19.1</td>
<td>30.9</td>
<td>31.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assigned Phase</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.32</td>
<td>31.11</td>
<td>6.67</td>
<td>33.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>0.00</td>
<td>4.00</td>
<td>0.00</td>
<td>4.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>39.00</td>
<td>8.00</td>
<td>43.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.30</td>
<td>17.34</td>
<td>4.09</td>
<td>23.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>6.55</td>
<td>0.04</td>
<td>6.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Intersection Summary**

- **HCM 2010 Control Delay**: 21.6
- **HCM 2010 Level of Service**: C
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

#### Lane Configurations

<table>
<thead>
<tr>
<th>Volume (vph)</th>
<th>7</th>
<th>531</th>
<th>57</th>
<th>112</th>
<th>489</th>
<th>7</th>
<th>60</th>
<th>6</th>
<th>119</th>
<th>14</th>
<th>13</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>8</td>
<td>719</td>
<td>77</td>
<td>156</td>
<td>949</td>
<td>14</td>
<td>81</td>
<td>9</td>
<td>182</td>
<td>16</td>
<td>123</td>
<td>28</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.43</td>
<td>0.43</td>
<td>0.09</td>
<td>0.52</td>
<td>0.52</td>
<td>0.05</td>
<td>0.12</td>
<td>0.12</td>
<td>0.01</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774</td>
<td>1653.9</td>
<td>177.5</td>
<td>1774.0</td>
<td>1831.9</td>
<td>26.2</td>
<td>1774.0</td>
<td>76.6</td>
<td>1518.3</td>
<td>1774.0</td>
<td>1465.0</td>
<td>338.1</td>
</tr>
</tbody>
</table>

#### Movement LOS F B C A D C F B

<table>
<thead>
<tr>
<th>Approach Volume, veh/h</th>
<th>647</th>
<th>661</th>
<th>201</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach Delay, s/veh</td>
<td>16.6</td>
<td>12.1</td>
<td>29.0</td>
<td>61.2</td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>E</td>
</tr>
</tbody>
</table>

#### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.20</td>
<td>23.98</td>
<td>8.04</td>
<td>27.81</td>
<td>6.09</td>
<td>9.52</td>
<td>4.42</td>
<td>7.85</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>26.00</td>
<td>6.00</td>
<td>28.00</td>
<td>5.00</td>
<td>8.00</td>
<td>4.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+11), s</td>
<td>2.20</td>
<td>15.92</td>
<td>5.09</td>
<td>11.05</td>
<td>3.67</td>
<td>5.77</td>
<td>2.39</td>
<td>2.41</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>4.05</td>
<td>0.03</td>
<td>5.22</td>
<td>0.02</td>
<td>0.11</td>
<td>0.00</td>
<td>0.21</td>
</tr>
</tbody>
</table>

#### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>17.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>B</td>
</tr>
</tbody>
</table>
### Movement Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>16</td>
<td>680</td>
<td>5</td>
<td>3</td>
<td>447</td>
<td>4</td>
<td>24</td>
<td>0</td>
<td>16</td>
<td>40</td>
<td>0</td>
<td>119</td>
</tr>
<tr>
<td>Number</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>0</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>19</td>
<td>885</td>
<td>7</td>
<td>4</td>
<td>867</td>
<td>8</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>109</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.01</td>
<td>0.48</td>
<td>0.48</td>
<td>0.00</td>
<td>0.47</td>
<td>0.47</td>
<td>0.02</td>
<td>0.00</td>
<td>0.12</td>
<td>0.06</td>
<td>0.00</td>
<td>0.17</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1846.8</td>
<td>13.6</td>
<td>1774.0</td>
<td>1843.3</td>
<td>16.5</td>
<td>1774.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>17.6</td>
<td>0.0</td>
<td>752.7</td>
<td>3.3</td>
<td>0.0</td>
<td>495.6</td>
<td>26.4</td>
<td>0.0</td>
<td>17.6</td>
<td>44.0</td>
<td>0.0</td>
<td>130.8</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1860.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1859.8</td>
<td>1774.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.5</td>
<td>0.0</td>
<td>17.0</td>
<td>0.1</td>
<td>0.0</td>
<td>9.3</td>
<td>0.7</td>
<td>0.0</td>
<td>6.0</td>
<td>1.1</td>
<td>0.0</td>
<td>8.1</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.5</td>
<td>0.0</td>
<td>17.0</td>
<td>0.1</td>
<td>0.0</td>
<td>9.3</td>
<td>0.7</td>
<td>0.0</td>
<td>6.0</td>
<td>1.1</td>
<td>0.0</td>
<td>8.1</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.000</td>
<td>0.007</td>
<td>1.000</td>
<td>0.009</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>19.1</td>
<td>0.0</td>
<td>892.0</td>
<td>3.7</td>
<td>0.0</td>
<td>875.1</td>
<td>29.8</td>
<td>0.0</td>
<td>0.0</td>
<td>108.8</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.919</td>
<td>0.000</td>
<td>0.844</td>
<td>0.894</td>
<td>0.000</td>
<td>0.566</td>
<td>0.886</td>
<td>0.000</td>
<td>0.000</td>
<td>0.404</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>147.5</td>
<td>0.0</td>
<td>1082.9</td>
<td>147.5</td>
<td>0.0</td>
<td>1082.6</td>
<td>147.5</td>
<td>0.0</td>
<td>0.0</td>
<td>221.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>23.8</td>
<td>0.0</td>
<td>10.9</td>
<td>24.0</td>
<td>0.0</td>
<td>9.2</td>
<td>23.6</td>
<td>0.0</td>
<td>0.0</td>
<td>21.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>75.2</td>
<td>0.0</td>
<td>5.3</td>
<td>183.5</td>
<td>0.0</td>
<td>0.6</td>
<td>51.0</td>
<td>0.0</td>
<td>0.0</td>
<td>2.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>98.9</td>
<td>0.0</td>
<td>16.2</td>
<td>207.5</td>
<td>0.0</td>
<td>9.8</td>
<td>74.6</td>
<td>0.0</td>
<td>0.0</td>
<td>24.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### Approach Summary

<table>
<thead>
<tr>
<th>Approach</th>
<th>Volume, veh/h</th>
<th>Delay, s/veh</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>770</td>
<td>18.1</td>
<td>B</td>
</tr>
<tr>
<td>B</td>
<td>499</td>
<td>11.1</td>
<td>E</td>
</tr>
<tr>
<td>A</td>
<td>44.8</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
<th>3</th>
<th>8</th>
<th>7</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.52</td>
<td>27.06</td>
<td>4.09</td>
<td>26.64</td>
<td>4.81</td>
<td>10.00</td>
<td>6.95</td>
<td>12.14</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>28.00</td>
<td>4.00</td>
<td>28.00</td>
<td>4.00</td>
<td>6.00</td>
<td>6.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.48</td>
<td>19.02</td>
<td>2.09</td>
<td>11.25</td>
<td>2.71</td>
<td>8.00</td>
<td>3.15</td>
<td>10.14</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>4.05</td>
<td>0.00</td>
<td>5.64</td>
<td>0.00</td>
<td>0.00</td>
<td>0.02</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Intersection Summary

- HCM 2010 Control Delay: 15.1
- HCM 2010 Level of Service: B
# Two-Way Stop Control Summary

## General Information
- **Analyst:** NKL
- **Agency/Co.:** MRO Engineers, Inc.
- **Date Performed:** 7/9/2012
- **Analysis Time Period:** PM Peak Hour

## Site Information
- **Intersection:** E. Natoma St./Hancock Dr./PIA Access Rd.
- **Jurisdiction:** Folsom, CA
- **Analysis Year:** Baseline + Project

## Project Description
**Folsom Women’s Facility**

## Vehicle Volumes and Adjustments

### Major Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 L</td>
<td>665 T</td>
<td>R</td>
<td>33 L</td>
</tr>
<tr>
<td></td>
<td>2 L</td>
<td>18 T</td>
<td>R</td>
<td>392 T</td>
</tr>
<tr>
<td></td>
<td>3 L</td>
<td>18 R</td>
<td></td>
<td>5 R</td>
</tr>
<tr>
<td></td>
<td>4 L</td>
<td>33 R</td>
<td></td>
<td>5 R</td>
</tr>
<tr>
<td></td>
<td>5 L</td>
<td>392 R</td>
<td></td>
<td>5 R</td>
</tr>
<tr>
<td></td>
<td>6 L</td>
<td>5 R</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Minor Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Northbound</th>
<th>Southbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 L</td>
<td>1 L</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>2 L</td>
<td>16 R</td>
<td>30 L</td>
<td>2 R</td>
</tr>
<tr>
<td></td>
<td>3 L</td>
<td>30 R</td>
<td>2 R</td>
<td>45 R</td>
</tr>
<tr>
<td></td>
<td>4 L</td>
<td>17 R</td>
<td>32 L</td>
<td>2 R</td>
</tr>
<tr>
<td></td>
<td>5 L</td>
<td>30 R</td>
<td>2 R</td>
<td>49 R</td>
</tr>
<tr>
<td></td>
<td>6 L</td>
<td>17 R</td>
<td>32 L</td>
<td>2 R</td>
</tr>
<tr>
<td></td>
<td>7 L</td>
<td>2 R</td>
<td>2 R</td>
<td>2 R</td>
</tr>
<tr>
<td></td>
<td>8 L</td>
<td>2 R</td>
<td>2 R</td>
<td>2 R</td>
</tr>
<tr>
<td></td>
<td>9 L</td>
<td>2 R</td>
<td>2 R</td>
<td>2 R</td>
</tr>
<tr>
<td></td>
<td>10 L</td>
<td>2 R</td>
<td>2 R</td>
<td>2 R</td>
</tr>
</tbody>
</table>

## Delay, Queue Length, and Level of Service

### Approach

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 L</td>
<td>6 L</td>
<td>6 L</td>
<td>8 L</td>
</tr>
<tr>
<td></td>
<td>4 L</td>
<td>36 L</td>
<td>27 L</td>
<td>83 L</td>
</tr>
<tr>
<td></td>
<td>7 L</td>
<td>1125 L</td>
<td>227 L</td>
<td>252 L</td>
</tr>
<tr>
<td></td>
<td>8 L</td>
<td>860 L</td>
<td>0.01 C</td>
<td>0.04 v/c</td>
</tr>
<tr>
<td></td>
<td>9 L</td>
<td>227 C</td>
<td>0.02 C</td>
<td>0.13 95% qe</td>
</tr>
<tr>
<td></td>
<td>10 L</td>
<td>252 C</td>
<td>0.02 95% qe</td>
<td>0.13 95% qe</td>
</tr>
<tr>
<td></td>
<td>11 L</td>
<td>252 C</td>
<td>0.02 95% qe</td>
<td>0.13 95% qe</td>
</tr>
<tr>
<td></td>
<td>12 L</td>
<td>252 C</td>
<td>0.02 95% qe</td>
<td>0.13 95% qe</td>
</tr>
</tbody>
</table>

### Approach Delay

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.2 s/veh</td>
<td>9.4 s/veh</td>
<td>23.0 s/veh</td>
<td>26.1 s/veh</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>A</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

### Approach LOS

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>23.0</td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>
### Movement EBL EBR NBL NBT SBT SBR
Lane Configurations

| Volume (vph) | 181  | 505  | 277  | 812  | 1077 | 150  |
| Number      | 7    | 14   | 5    | 2    | 6    | 16   |
| Initial Queue, 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 |
| Adj Sat Flow Rate | 1863 | 1863 | 1863 | 1863 |
| Lanes       | 2    | 1    | 2    | 2    | 2    | 1    |
| Capacity, veh/h | 546  | 468  | 472  | 2478 |
| Arriving On Green | 0.16 | 0.16 | 0.14 | 0.70 |
| Sat Flow, veh/h | 3441.6 | 1583.3 | 3441.6 | 3632.4 |

Grp Volume (v), veh/h | 190.5 | 531.6 | 291.6 | 854.7 | 1133.7 | 157.9 |
Grp Sat Flow (s), veh/h/ln | 1720.8 | 1583.3 | 1720.8 | 1769.6 | 1769.6 | 1583.3 |
Q Serve (g_s), s | 2.8 | 9.0 | 4.5 | 5.4 | 13.6 | 3.2 |
Cycle Q Clear (g_c), s | 2.8 | 9.0 | 4.5 | 5.4 | 13.6 | 3.2 |
Proportion In Lane | 1.00 | 1.00 | 1.00 | 1.00 |
Lane Grp Cap (c), veh/h | 546.2 | 468.4 | 472.0 | 2478.3 |
V/C Ratio (X) | 0.349 | 1.135 | 0.618 | 0.345 | 0.650 | 0.202 |
Avail Cap (c_a), veh/h | 546.2 | 468.4 | 1881.2 | 4555.6 |
HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 |
Upstream Filter (I) | 1.00 | 1.00 | 1.00 | 1.00 |
Uniform Delay (d), s/veh | 21.2 | 20.0 | 23.1 | 3.4 | 10.7 | 8.1 |
Incr Delay (d2), s/veh | 0.4 | 84.0 | 1.3 | 0.1 | 0.4 | 0.1 |
Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
Control Delay (d), s/veh | 21.6 | 104.0 | 24.4 | 3.4 | 11.2 | 8.2 |

### Movement LOS

| Approach Volume, veh/h | 722 | 1146 | 1292 |
| Approach Delay, s/veh | 82.3 | 8.8 | 10.8 |
| Approach LOS | F | A | B |

### Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 11.78 | 43.71 | 31.94 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 31.00 | 73.00 | 38.00 |
| Max Q Clear Time (g_c+I1), s | 6.53 | 7.41 | 15.56 |
| Green Extension Time (p_c) | 1.33 | 18.18 | 12.37 |

### Intersection Summary

| HCM 2010 Control Delay | 26.4 |
| HCM 2010 Level of Service | C |
APPENDIX G

CUMULATIVE NO PROJECT
LEVEL OF SERVICE CALCULATION WORKSHEETS
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

#### Volume (vph) 20 320 90 340 315 80 720 55 365 1120 10
#### Number 7 4 14 3 8 18 5 2 12 1 6 16
#### Initial Queue, 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 Rate 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863
#### Lanes 1 1 0 1 1 1 1 1 0 1 1 0
#### Capacity, veh/h 27 289 81 71 431 366 59 763 58 355 1131 10
#### Arriving On Green 0.02 0.21 0.21 0.04 0.23 0.23 0.03 0.45 0.45 0.20 0.61 0.61
#### Sat Flow, veh/h 1774.0 1399.6 393.6 1774.0 1583.3 1583.3 1774.0 1709.1 130.6 1774.0 1843.4 16.5
#### Grp Volume(v), veh/h 22.0 0.0 450.5 98.9 373.6 346.2 87.9 0.0 851.6 401.1 0.0 1241.8
#### Grp Sat Flow(s),veh/h/ln 1774.0 1793.3 1774.0 1862.7 1583.3 1774.0 0.0 1839.7 1774.0 0.0 1859.8
#### Q Serve(g_s), s 1.9 0.0 31.0 6.0 28.9 32.3 5.0 0.0 67.0 30.0 0.0 92.0
#### Cycle Q Clear(g_c), s 1.9 0.0 31.0 6.0 28.9 32.3 5.0 0.0 67.0 30.0 0.0 92.0
#### Proportion In Lane 1.000 0.220 1.000 1.000 1.000 0.071 1.000 0.009
#### Lane Grp Cap(c), veh/h 27.3 0.0 370.6 71.0 430.8 366.2 87.9 0.0 821.7 354.8 0.0 1140.7
#### V/C Ratio(X) 0.804 0.000 1.216 1.394 0.867 0.945 1.487 0.000 1.036 1.130 0.000 1.089
#### Avail Cap(c_a), veh/h 47.3 0.0 370.6 71.0 430.8 366.2 59.1 0.0 821.7 354.8 0.0 1140.7
#### HCM Platoon Ratio 1.00 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) 1.000 0.000 1.000 1.000 1.000 1.000 1.000 0.000 1.000 1.000 0.000 1.000
#### Uniform Delay (d), s/veh 73.6 0.0 59.5 72.0 55.4 56.7 72.5 0.0 41.5 60.0 0.0 29.0
#### Incr Delay (d2), s/veh 40.1 0.0 119.3 242.7 16.9 33.1 289.4 0.0 41.2 88.0 0.0 54.1
#### Control Delay (d), s/veh 113.8 0.0 178.8 314.7 72.3 89.9 361.9 0.0 82.7 148.0 0.0 83.1
#### Movement LOS F F F E F F F F F
#### Approach Volume, veh/h 473 819 940 1643
#### Approach Delay, s/veh 175.8 109.0 108.8 99.0
#### Approach LOS F F F F F
#### Assigned Phase 7 4 3 8 5 2 1 6
#### Phase Duration (G+Y+Rc), s 6.31 35.00 10.00 38.69 9.00 71.00 34.00 96.00
#### Change Period (Y+Rc), s 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00
#### Max Green Setting (Gmax), s 4.00 31.00 6.00 33.00 5.00 67.00 30.00 92.00
#### Max Q Clear Time (g_c+I1), s 3.85 33.00 8.00 34.26 7.00 69.00 32.00 94.00
#### Green Extension Time (p_c) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
#### Approach Volume, veh/h 473 819 940 1643
#### Approach Delay, s/veh 175.8 109.0 108.8 99.0
#### Approach LOS F F F F F
#### Assigned Phase 7 4 3 8 5 2 1 6
#### Phase Duration (G+Y+Rc), s 6.31 35.00 10.00 38.69 9.00 71.00 34.00 96.00
#### Change Period (Y+Rc), s 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00
#### Max Green Setting (Gmax), s 4.00 31.00 6.00 33.00 5.00 67.00 30.00 92.00
#### Max Q Clear Time (g_c+I1), s 3.85 33.00 8.00 34.26 7.00 69.00 32.00 94.00
#### Green Extension Time (p_c) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

---

**Intersection Summary**

- **HCM 2010 Control Delay**: 112.9
- **HCM 2010 Level of Service**: F
### Movement

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
</table>

### Lane Configurations

| Volume (vph) | 5 | 645 | 80 | 90 | 585 | 50 | 90 | 70 | 85 | 40 | 50 | 10 |
| Number      | 7 | 4  | 14 | 3  | 8  | 18 | 5  | 2  | 12 | 1  | 6  | 16 |
| Initial Queue, 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 | 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 Rate | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Lanes | 1 | 1  | 0  | 1  | 1  | 0  | 1  | 1  | 0  | 1  | 1  | 0  |
| Capacity, veh/h | 6 | 783 | 97 | 125 | 930 | 79 | 129 | 103 | 125 | 54 | 139 | 28 |
| Arriving On Green | 0.00 | 0.48 | 0.48 | 0.07 | 0.55 | 0.55 | 0.07 | 0.13 | 0.13 | 0.03 | 0.09 | 0.09 |
| Sat Flow, veh/h | 1774.0 | 1625.5 | 201.6 | 1774.0 | 1692.6 | 144.7 | 1774.0 | 767.0 | 931.4 | 1774.0 | 1507.9 | 301.6 |

### Movement LOS

<table>
<thead>
<tr>
<th>Movement</th>
<th>F</th>
<th>C</th>
<th>E</th>
<th>B</th>
<th>D</th>
<th>D</th>
<th>C</th>
</tr>
</thead>
</table>

### Approach LOS

| Approach Volume, veh/h | 820 | 815 | 275 | 112 |
| Approach Delay, s/veh | 29.7 | 17.3 | 39.6 | 36.6 |

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.18</td>
<td>31.30</td>
<td>8.00</td>
<td>35.11</td>
<td>8.12</td>
<td>11.61</td>
<td>5.74</td>
<td>9.23</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>28.00</td>
<td>4.00</td>
<td>28.00</td>
<td>5.00</td>
<td>8.00</td>
<td>4.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.18</td>
<td>25.61</td>
<td>5.18</td>
<td>18.21</td>
<td>5.17</td>
<td>7.60</td>
<td>3.43</td>
<td>3.99</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>1.69</td>
<td>0.00</td>
<td>5.36</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.26</td>
</tr>
</tbody>
</table>

### Intersection Summary

| HCM 2010 Control Delay | 26.4 |
| HCM 2010 Level of Service | C |
# Cumulative No Project Conditions

## AM Peak Hour

### Movement Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>5</td>
<td>500</td>
<td>50</td>
<td>110</td>
<td>595</td>
<td>50</td>
<td>90</td>
<td>30</td>
<td>160</td>
<td>20</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>575</td>
<td>67</td>
<td>150</td>
<td>824</td>
<td>69</td>
<td>122</td>
<td>42</td>
<td>222</td>
<td>24</td>
<td>143</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.40</td>
<td>0.40</td>
<td>0.08</td>
<td>0.49</td>
<td>0.49</td>
<td>0.07</td>
<td>0.16</td>
<td>0.16</td>
<td>0.01</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1666.7</td>
<td>166.7</td>
<td>1774.0</td>
<td>1695.2</td>
<td>142.5</td>
<td>1774.0</td>
<td>256.1</td>
<td>1365.7</td>
<td>1774.0</td>
<td>1338.0</td>
<td></td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>5.3</td>
<td>0.0</td>
<td>585.1</td>
<td>117.0</td>
<td>0.0</td>
<td>686.2</td>
<td>95.7</td>
<td>0.0</td>
<td>202.1</td>
<td>21.3</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1833.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1837.6</td>
<td>1774.0</td>
<td>0.0</td>
<td>1621.7</td>
<td>1774.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.1</td>
<td>0.0</td>
<td>13.3</td>
<td>3.1</td>
<td>0.0</td>
<td>14.6</td>
<td>2.5</td>
<td>0.0</td>
<td>5.7</td>
<td>0.6</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.1</td>
<td>0.0</td>
<td>13.3</td>
<td>3.1</td>
<td>0.0</td>
<td>14.6</td>
<td>2.5</td>
<td>0.0</td>
<td>5.7</td>
<td>0.6</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>5.4</td>
<td>0.0</td>
<td>742.4</td>
<td>149.8</td>
<td>0.0</td>
<td>893.8</td>
<td>122.1</td>
<td>0.0</td>
<td>264.0</td>
<td>23.5</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.980</td>
<td>0.000</td>
<td>0.788</td>
<td>0.781</td>
<td>0.000</td>
<td>0.768</td>
<td>0.784</td>
<td>0.000</td>
<td>0.766</td>
<td>0.904</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>148.4</td>
<td>0.0</td>
<td>919.9</td>
<td>222.5</td>
<td>0.0</td>
<td>998.9</td>
<td>222.5</td>
<td>0.0</td>
<td>339.1</td>
<td>148.4</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>23.8</td>
<td>0.0</td>
<td>12.4</td>
<td>21.5</td>
<td>0.0</td>
<td>10.1</td>
<td>21.9</td>
<td>0.0</td>
<td>19.1</td>
<td>23.6</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>173.5</td>
<td>0.0</td>
<td>3.7</td>
<td>10.0</td>
<td>0.0</td>
<td>3.3</td>
<td>10.4</td>
<td>0.0</td>
<td>7.6</td>
<td>63.3</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>197.3</td>
<td>0.0</td>
<td>16.2</td>
<td>31.4</td>
<td>0.0</td>
<td>13.4</td>
<td>32.4</td>
<td>0.0</td>
<td>26.8</td>
<td>86.9</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

### Approach Summary

<table>
<thead>
<tr>
<th>Movement</th>
<th>F</th>
<th>B</th>
<th>C</th>
<th>B</th>
<th>C</th>
<th>F</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach Volume, veh/h</td>
<td>590</td>
<td>803</td>
<td>298</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>17.8</td>
<td>16.0</td>
<td>28.6</td>
<td>53.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.15</td>
<td>23.37</td>
<td>8.04</td>
<td>27.26</td>
<td>7.29</td>
<td>11.79</td>
<td>4.63</td>
<td>9.13</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>24.00</td>
<td>6.00</td>
<td>26.00</td>
<td>6.00</td>
<td>10.00</td>
<td>4.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.14</td>
<td>15.34</td>
<td>5.09</td>
<td>16.64</td>
<td>4.54</td>
<td>7.70</td>
<td>2.57</td>
<td>2.52</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>4.03</td>
<td>0.03</td>
<td>4.24</td>
<td>0.03</td>
<td>0.20</td>
<td>0.00</td>
<td>0.41</td>
</tr>
</tbody>
</table>

### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>19.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>B</td>
</tr>
</tbody>
</table>
### Cumulative No Project Conditions

**14: E. Natoma St. & Prison Rd.**

**AM Peak Hour**

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>165</td>
<td>420</td>
<td>30</td>
<td>20</td>
<td>910</td>
<td>65</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>15</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Number</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>0</td>
<td>1863</td>
<td>1863</td>
<td>0</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>229</td>
<td>1371</td>
<td>98</td>
<td>31</td>
<td>1179</td>
<td>84</td>
<td>7</td>
<td>0</td>
<td>39</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.13</td>
<td>0.80</td>
<td>0.80</td>
<td>0.02</td>
<td>0.69</td>
<td>0.69</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.02</td>
<td>0.00</td>
<td>0.06</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1718.3</td>
<td>122.7</td>
<td>1774.0</td>
<td>1718.3</td>
<td>122.7</td>
<td>1774.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>203.7</td>
<td>0.0</td>
<td>555.6</td>
<td>24.7</td>
<td>0.0</td>
<td>1203.7</td>
<td>6.2</td>
<td>0.0</td>
<td>6.2</td>
<td>18.5</td>
<td>0.0</td>
<td>30.9</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>15.3</td>
<td>0.0</td>
<td>11.8</td>
<td>1.9</td>
<td>0.0</td>
<td>80.2</td>
<td>0.5</td>
<td>0.0</td>
<td>6.0</td>
<td>1.4</td>
<td>0.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>15.3</td>
<td>0.0</td>
<td>11.8</td>
<td>1.9</td>
<td>0.0</td>
<td>80.2</td>
<td>0.5</td>
<td>0.0</td>
<td>6.0</td>
<td>1.4</td>
<td>0.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>229.0</td>
<td>0.0</td>
<td>1469.4</td>
<td>30.8</td>
<td>0.0</td>
<td>1263.7</td>
<td>6.7</td>
<td>0.0</td>
<td>39.0</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.890</td>
<td>0.000</td>
<td>0.378</td>
<td>0.803</td>
<td>0.000</td>
<td>0.953</td>
<td>0.920</td>
<td>0.000</td>
<td>0.474</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>262.1</td>
<td>0.0</td>
<td>1577.5</td>
<td>78.6</td>
<td>0.0</td>
<td>1387.1</td>
<td>52.4</td>
<td>0.0</td>
<td>0.0</td>
<td>78.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>0.000</td>
<td>1.00</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay, s/veh</td>
<td>58.0</td>
<td>0.0</td>
<td>4.0</td>
<td>66.3</td>
<td>0.0</td>
<td>19.2</td>
<td>67.4</td>
<td>0.0</td>
<td>0.0</td>
<td>65.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Incr Delay, s/veh</td>
<td>26.8</td>
<td>0.0</td>
<td>0.2</td>
<td>36.4</td>
<td>0.0</td>
<td>13.8</td>
<td>138.0</td>
<td>0.0</td>
<td>0.0</td>
<td>8.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Initial Q Delay, s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay, s/veh</td>
<td>84.8</td>
<td>0.0</td>
<td>4.1</td>
<td>102.7</td>
<td>0.0</td>
<td>33.0</td>
<td>205.4</td>
<td>0.0</td>
<td>0.0</td>
<td>74.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>A</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>759</td>
<td>1228</td>
<td>12</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>25.8</td>
<td>34.4</td>
<td>102.7</td>
<td>27.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>C</td>
<td>C</td>
<td>F</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timer</td>
<td>Assigned Phase</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>21.48</td>
<td>112.05</td>
<td>6.35</td>
<td>96.92</td>
<td>4.51</td>
<td>10.00</td>
<td>6.98</td>
<td>12.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>20.00</td>
<td>116.00</td>
<td>6.00</td>
<td>102.00</td>
<td>4.00</td>
<td>6.00</td>
<td>6.00</td>
<td>8.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>17.29</td>
<td>13.81</td>
<td>3.88</td>
<td>82.18</td>
<td>2.47</td>
<td>8.00</td>
<td>3.40</td>
<td>10.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.19</td>
<td>16.93</td>
<td>0.00</td>
<td>10.75</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Intersection Summary**

- **HCM 2010 Control Delay**: 31.4
- **HCM 2010 Level of Service**: C
# Two-Way Stop Control Summary

**General Information**

<table>
<thead>
<tr>
<th>Analyst</th>
<th>NKL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency/Co.</td>
<td>MRO Engineers, Inc.</td>
</tr>
<tr>
<td>Date Performed</td>
<td>7/9/2012</td>
</tr>
<tr>
<td>Analysis Time Period</td>
<td>AM Peak Hour</td>
</tr>
</tbody>
</table>

**Site Information**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>E. Natoma St./Hancock Dr./PIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdiction</td>
<td>Folsom, CA</td>
</tr>
<tr>
<td>Analysis Year</td>
<td>Cumulative No Project</td>
</tr>
</tbody>
</table>

**Project Description**

Folsom Women's Facility

**East/West Street:** East Natoma St.
**North/South Street:** Hancock Dr./PIA Access Rd.

**Intersection Orientation:** East-West

**Study Period (hrs):** 0.25

## Vehicle Volumes and Adjustments

### Major Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volume (veh/h)</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>T</td>
<td>435</td>
<td>20</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td>915</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Peak-Hour Factor, PHF</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>T</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hourly Flow Rate, HFR (veh/h)</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>49</td>
<td>12</td>
</tr>
<tr>
<td>T</td>
<td>537</td>
<td>24</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td>1129</td>
</tr>
<tr>
<td></td>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Heavy Vehicles</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Median Type</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Configuration</td>
<td>L</td>
<td>TR</td>
</tr>
<tr>
<td>Upstream Signal</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

### Minor Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volume (veh/h)</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>T</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>R</td>
<td>35</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Peak-Hour Factor, PHF</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>T</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hourly Flow Rate, HFR (veh/h)</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>37</td>
<td>6</td>
</tr>
<tr>
<td>T</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>R</td>
<td>43</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Heavy Vehicles</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent Grade (%)</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flared Approach</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Storage</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RT Channelized</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lanes</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTR</td>
<td>LTR</td>
<td>LTR</td>
</tr>
</tbody>
</table>

## Delay, Queue Length, and Level of Service

### Approach

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>24</td>
<td>80</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>599</td>
<td>1021</td>
<td>101</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>0.08</td>
<td>0.02</td>
<td>0.79</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>0.27</td>
<td>0.07</td>
<td>4.32</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>11.5</td>
<td>8.6</td>
<td>115.9</td>
<td>58.6</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>LTR</td>
<td>LTR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>A</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approach Delay (s/veh)</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>115.9</td>
<td>58.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approach LOS</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>115.9</td>
<td>58.6</td>
</tr>
</tbody>
</table>
### Movement EBL EBR NBL NBT SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>170</td>
<td>240</td>
<td>650</td>
<td>1440</td>
<td>1000</td>
<td>245</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>366</td>
<td>573</td>
<td>879</td>
<td>1506</td>
<td>1567</td>
<td>674</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.11</td>
<td>0.11</td>
<td>0.26</td>
<td>0.75</td>
<td>0.43</td>
<td>0.43</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>3441.6</td>
<td>3632.4</td>
<td>3632.3</td>
<td>1583.3</td>
<td></td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>186.8</td>
<td>263.7</td>
<td>714.3</td>
<td>1582.4</td>
<td>1098.9</td>
<td>269.2</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1720.8</td>
<td>1583.3</td>
<td>1720.8</td>
<td>1769.6</td>
<td>1769.6</td>
<td>1583.3</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>2.9</td>
<td>6.0</td>
<td>11.0</td>
<td>11.3</td>
<td>14.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>2.9</td>
<td>6.0</td>
<td>11.0</td>
<td>11.3</td>
<td>14.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>366.0</td>
<td>572.8</td>
<td>879.0</td>
<td>2660.9</td>
<td>1506.0</td>
<td>673.8</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.510</td>
<td>0.460</td>
<td>0.813</td>
<td>0.595</td>
<td>0.730</td>
<td>0.400</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>366.0</td>
<td>572.8</td>
<td>1037.1</td>
<td>2885.8</td>
<td>1568.4</td>
<td>701.6</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>23.8</td>
<td>13.8</td>
<td>19.7</td>
<td>3.1</td>
<td>13.5</td>
<td>11.2</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>1.2</td>
<td>0.6</td>
<td>4.3</td>
<td>0.3</td>
<td>1.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>25.0</td>
<td>14.4</td>
<td>24.1</td>
<td>3.4</td>
<td>15.2</td>
<td>11.6</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>C</td>
<td>B</td>
<td>C</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

### 2: E. Natoma St. & Folsom Lake Crossing

**AM Peak Hour**

**Intersection Summary**

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>12.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>B</td>
</tr>
<tr>
<td>Movement Configuration</td>
<td>EBL</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>40</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>52</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.03</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>40.8</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>3.4</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>3.4</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>52.5</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.778</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>59.1</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>72.3</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>43.1</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>115.4</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>474</td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>211.3</td>
</tr>
<tr>
<td>Approach LOS</td>
<td>F</td>
</tr>
</tbody>
</table>

**Timer**

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>8.44</td>
<td>32.00</td>
<td>11.00</td>
<td>34.56</td>
<td>8.00</td>
<td>81.00</td>
<td>26.00</td>
<td>99.00</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>5.00</td>
<td>28.00</td>
<td>7.00</td>
<td>30.00</td>
<td>4.00</td>
<td>77.00</td>
<td>22.00</td>
<td>95.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>5.43</td>
<td>30.00</td>
<td>9.00</td>
<td>32.56</td>
<td>5.88</td>
<td>79.00</td>
<td>24.00</td>
<td>90.03</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>4.28</td>
</tr>
</tbody>
</table>

**Intersection Summary**

| HCM 2010 Control Delay            | 129.9 |
| HCM 2010 Level of Service         | F     |

---

MRO Engineers, Inc.
Synchro 8 Report
Folsom Women's Facility
Page 2
<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Configurations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>20</td>
<td>645</td>
<td>30</td>
<td>95</td>
<td>650</td>
<td>65</td>
<td>170</td>
<td>150</td>
<td>160</td>
<td>80</td>
<td>60</td>
<td>10</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>26</td>
<td>815</td>
<td>38</td>
<td>131</td>
<td>868</td>
<td>87</td>
<td>225</td>
<td>188</td>
<td>200</td>
<td>112</td>
<td>254</td>
<td>42</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.01</td>
<td>0.46</td>
<td>0.46</td>
<td>0.07</td>
<td>0.52</td>
<td>0.52</td>
<td>0.13</td>
<td>0.23</td>
<td>0.23</td>
<td>0.06</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1766.1</td>
<td>82.1</td>
<td>1774.0</td>
<td>1666.7</td>
<td>166.7</td>
<td>1774.0</td>
<td>826.1</td>
<td>881.2</td>
<td>1774.0</td>
<td>1557.4</td>
<td>259.6</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>21.7</td>
<td>0.0</td>
<td>733.7</td>
<td>103.3</td>
<td>0.0</td>
<td>777.2</td>
<td>184.8</td>
<td>0.0</td>
<td>337.0</td>
<td>87.0</td>
<td>0.0</td>
<td>76.1</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1848.2</td>
<td>1774.0</td>
<td>0.0</td>
<td>1833.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1707.2</td>
<td>1774.0</td>
<td>0.0</td>
<td>1816.9</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>1.1</td>
<td>0.0</td>
<td>32.5</td>
<td>5.2</td>
<td>0.0</td>
<td>32.3</td>
<td>9.3</td>
<td>0.0</td>
<td>17.4</td>
<td>4.4</td>
<td>0.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>1.1</td>
<td>0.0</td>
<td>32.5</td>
<td>5.2</td>
<td>0.0</td>
<td>32.3</td>
<td>9.3</td>
<td>0.0</td>
<td>17.4</td>
<td>4.4</td>
<td>0.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.044</td>
<td>1.00</td>
<td>0.516</td>
<td>1.00</td>
<td>0.143</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>25.7</td>
<td>0.0</td>
<td>852.7</td>
<td>131.4</td>
<td>0.0</td>
<td>955.0</td>
<td>225.4</td>
<td>0.0</td>
<td>387.5</td>
<td>111.7</td>
<td>0.0</td>
<td>296.0</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.846</td>
<td>0.000</td>
<td>0.860</td>
<td>0.786</td>
<td>0.000</td>
<td>0.814</td>
<td>0.820</td>
<td>0.000</td>
<td>0.870</td>
<td>0.779</td>
<td>0.000</td>
<td>0.257</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>77.5</td>
<td>0.0</td>
<td>1089.6</td>
<td>193.7</td>
<td>0.0</td>
<td>1200.9</td>
<td>406.7</td>
<td>0.0</td>
<td>577.8</td>
<td>174.3</td>
<td>0.0</td>
<td>376.9</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>45.0</td>
<td>0.0</td>
<td>220.0</td>
<td>41.7</td>
<td>0.0</td>
<td>182.0</td>
<td>39.0</td>
<td>0.0</td>
<td>34.1</td>
<td>42.3</td>
<td>0.0</td>
<td>33.5</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>48.9</td>
<td>0.0</td>
<td>5.8</td>
<td>12.0</td>
<td>0.0</td>
<td>3.5</td>
<td>7.2</td>
<td>0.0</td>
<td>9.3</td>
<td>11.0</td>
<td>0.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>93.9</td>
<td>0.0</td>
<td>27.8</td>
<td>53.7</td>
<td>0.0</td>
<td>218.0</td>
<td>46.2</td>
<td>0.0</td>
<td>43.4</td>
<td>53.3</td>
<td>0.0</td>
<td>33.9</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>C</td>
<td>D</td>
<td>C</td>
<td>D</td>
<td>D</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>755</td>
<td>880</td>
<td>522</td>
<td>163</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>29.7</td>
<td>25.5</td>
<td>44.4</td>
<td>44.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>C</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Timers**

- **Assigned Phase**: 7, 4, 3, 8, 5, 2, 1, 6
- **Phase Duration (G+Y+Rc), s**: 5.33, 46.26, 10.78, 51.71, 15.64, 24.79, 9.77, 18.92
- **Change Period (Y+Rc), s**: 4.00, 4.00, 4.00, 4.00, 4.00, 4.00
- **Max Green Setting (Gmax), s**: 4.00, 54.00, 10.00, 60.00, 21.00, 31.00, 9.00, 19.00
- **Max Q Clear Time (g_c+I1), s**: 3.12, 34.48, 7.24, 34.29, 11.30, 19.41, 6.42, 5.35
- **Green Extension Time (p_c)**: 0.00, 7.78, 0.07, 8.64, 0.44, 1.38, 0.05, 1.48

**Intersection Summary**

- **HCM 2010 Control Delay**: 32.5
- **HCM 2010 Level of Service**: C
### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>10</td>
<td>675</td>
<td>130</td>
<td>135</td>
<td>510</td>
<td>20</td>
<td>120</td>
<td>20</td>
<td>240</td>
<td>30</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>12</td>
<td>802</td>
<td>156</td>
<td>178</td>
<td>1109</td>
<td>43</td>
<td>161</td>
<td>24</td>
<td>286</td>
<td>41</td>
<td>181</td>
<td>45</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.01</td>
<td>0.53</td>
<td>0.53</td>
<td>0.10</td>
<td>0.62</td>
<td>0.62</td>
<td>0.09</td>
<td>0.19</td>
<td>0.19</td>
<td>0.02</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1515.6</td>
<td>295.1</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>359.8</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>10.9</td>
<td>0.0</td>
<td>876.6</td>
<td>146.7</td>
<td>0.0</td>
<td>576.1</td>
<td>130.4</td>
<td>0.0</td>
<td>282.6</td>
<td>32.6</td>
<td>0.0</td>
<td>27.2</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1810.7</td>
<td>1774.0</td>
<td>0.0</td>
<td>1850.4</td>
<td>1774.0</td>
<td>0.0</td>
<td>1601.8</td>
<td>1774.0</td>
<td>0.0</td>
<td>1792.1</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>0.6</td>
<td>0.0</td>
<td>45.9</td>
<td>8.4</td>
<td>0.0</td>
<td>17.7</td>
<td>7.5</td>
<td>0.0</td>
<td>18.0</td>
<td>19.0</td>
<td>0.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>0.6</td>
<td>0.0</td>
<td>45.9</td>
<td>8.4</td>
<td>0.0</td>
<td>17.7</td>
<td>7.5</td>
<td>0.0</td>
<td>18.0</td>
<td>19.0</td>
<td>0.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.163</td>
<td>1.00</td>
<td>0.200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>12.1</td>
<td>0.0</td>
<td>958.5</td>
<td>178.0</td>
<td>0.0</td>
<td>1152.5</td>
<td>161.4</td>
<td>0.0</td>
<td>309.9</td>
<td>40.6</td>
<td>0.0</td>
<td>225.7</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.896</td>
<td>0.000</td>
<td>0.824</td>
<td>0.000</td>
<td>0.500</td>
<td>0.808</td>
<td>0.000</td>
<td>0.912</td>
<td>0.803</td>
<td>0.000</td>
<td>0.120</td>
<td></td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>68.3</td>
<td>0.0</td>
<td>1132.3</td>
<td>238.9</td>
<td>0.0</td>
<td>1335.2</td>
<td>256.0</td>
<td>0.0</td>
<td>323.6</td>
<td>68.3</td>
<td>0.0</td>
<td>225.7</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.00</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>51.6</td>
<td>0.0</td>
<td>22.3</td>
<td>45.9</td>
<td>0.0</td>
<td>10.7</td>
<td>46.4</td>
<td>0.0</td>
<td>41.0</td>
<td>50.5</td>
<td>0.0</td>
<td>40.4</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>92.8</td>
<td>0.0</td>
<td>10.2</td>
<td>15.7</td>
<td>0.0</td>
<td>0.3</td>
<td>9.8</td>
<td>0.0</td>
<td>28.2</td>
<td>29.3</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>144.4</td>
<td>0.0</td>
<td>32.6</td>
<td>61.5</td>
<td>0.0</td>
<td>11.1</td>
<td>56.1</td>
<td>0.0</td>
<td>69.2</td>
<td>79.8</td>
<td>0.0</td>
<td>40.6</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>C</td>
<td>E</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>887</td>
<td>723</td>
<td>413</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>33.9</td>
<td>21.3</td>
<td>65.1</td>
<td>62.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>C</td>
<td>C</td>
<td>E</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Intersections Summary

| HCM 2010 Control Delay | 36.5 |
| HCM 2010 Level of Service | D |
### Cumulative No Project Conditions

#### PM Peak Hour

**14: E. Natoma St. & Prison Rd.**

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lane Configurations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>35</td>
<td>900</td>
<td>5</td>
<td>5</td>
<td>570</td>
<td>15</td>
<td>25</td>
<td>0</td>
<td>20</td>
<td>50</td>
<td>0</td>
<td>140</td>
</tr>
<tr>
<td>Number</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>47</td>
<td>1101</td>
<td>6</td>
<td>6</td>
<td>1033</td>
<td>27</td>
<td>32</td>
<td>0</td>
<td>0</td>
<td>107</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.03</td>
<td>0.59</td>
<td>0.59</td>
<td>0.00</td>
<td>0.57</td>
<td>0.57</td>
<td>0.02</td>
<td>0.00</td>
<td>0.09</td>
<td>0.06</td>
<td>0.06</td>
<td>0.14</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1850.6</td>
<td>10.3</td>
<td>1774.0</td>
<td>1860.9</td>
<td>1774.0</td>
<td>1806.8</td>
<td>47.5</td>
<td>1774.0</td>
<td>1860.1</td>
<td>32.1</td>
<td>1774.0</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>38.5</td>
<td>0.0</td>
<td>994.5</td>
<td>5.5</td>
<td>0.0</td>
<td>642.9</td>
<td>27.5</td>
<td>0.0</td>
<td>22.0</td>
<td>54.9</td>
<td>0.0</td>
<td>153.8</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1860.9</td>
<td>1774.0</td>
<td>0.0</td>
<td>1854.4</td>
<td>1774.0</td>
<td>0.0</td>
<td>1744.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>1.4</td>
<td>0.0</td>
<td>30.0</td>
<td>0.2</td>
<td>0.0</td>
<td>14.6</td>
<td>1.0</td>
<td>0.0</td>
<td>6.0</td>
<td>1.9</td>
<td>0.0</td>
<td>8.7</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>1.4</td>
<td>0.0</td>
<td>30.0</td>
<td>0.2</td>
<td>0.0</td>
<td>14.6</td>
<td>1.0</td>
<td>0.0</td>
<td>6.0</td>
<td>1.9</td>
<td>0.0</td>
<td>8.7</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.006</td>
<td>1.00</td>
<td>0.026</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>46.6</td>
<td>0.0</td>
<td>1106.8</td>
<td>5.7</td>
<td>0.0</td>
<td>1060.1</td>
<td>32.1</td>
<td>0.0</td>
<td>0.0</td>
<td>107.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.825</td>
<td>0.000</td>
<td>0.899</td>
<td>0.969</td>
<td>0.000</td>
<td>0.606</td>
<td>0.856</td>
<td>0.000</td>
<td>0.000</td>
<td>0.512</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>165.3</td>
<td>0.0</td>
<td>1242.3</td>
<td>110.2</td>
<td>0.0</td>
<td>1180.3</td>
<td>137.7</td>
<td>0.0</td>
<td>0.0</td>
<td>165.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>31.2</td>
<td>0.0</td>
<td>11.4</td>
<td>32.1</td>
<td>0.0</td>
<td>9.0</td>
<td>31.5</td>
<td>0.0</td>
<td>0.0</td>
<td>29.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>28.8</td>
<td>0.0</td>
<td>8.4</td>
<td>165.9</td>
<td>0.0</td>
<td>0.7</td>
<td>43.3</td>
<td>0.0</td>
<td>0.0</td>
<td>3.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>60.0</td>
<td>0.0</td>
<td>19.7</td>
<td>198.0</td>
<td>0.0</td>
<td>9.8</td>
<td>74.8</td>
<td>0.0</td>
<td>0.0</td>
<td>33.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>E</td>
<td>B</td>
<td>F</td>
<td>A</td>
<td>E</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>1033</td>
<td>648</td>
<td>49</td>
<td>209</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>21.2</td>
<td>11.4</td>
<td>41.6</td>
<td>8.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>C</td>
<td>B</td>
<td>D</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Timer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assigned Phase</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>5.69</td>
<td>42.31</td>
<td>4.21</td>
<td>40.82</td>
<td>5.16</td>
<td>10.00</td>
<td>7.90</td>
<td>12.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>6.00</td>
<td>43.00</td>
<td>4.00</td>
<td>41.00</td>
<td>5.00</td>
<td>6.00</td>
<td>6.00</td>
<td>7.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>3.39</td>
<td>31.96</td>
<td>2.20</td>
<td>16.64</td>
<td>2.99</td>
<td>8.00</td>
<td>3.93</td>
<td>10.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.01</td>
<td>6.35</td>
<td>0.00</td>
<td>9.85</td>
<td>0.00</td>
<td>0.00</td>
<td>0.02</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Intersection Summary**

- **HCM 2010 Control Delay**: 17.1
- **HCM 2010 Level of Service**: B
# Two-Way Stop Control Summary

## General Information
- **Analyst**: NKL
- **Agency/Co.**: MRO Engineers, Inc.
- **Date Performed**: 7/9/2012
- **Analysis Time Period**: PM Peak Hour

## Site Information
- **Intersection**: E. Natoma St./Hancock Dr./PIA Access Rd.
- **Jurisdiction**: Folsom, CA
- **Analysis Year**: Cumulative No Project

## Project Description
- **Folsom Women’s Facility**

## Vehicle Volumes and Adjustments

<table>
<thead>
<tr>
<th>Major Street</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>5 920 T R L T R</td>
<td>30 50 545 5</td>
</tr>
<tr>
<td>PHF</td>
<td>0.91 0.91 0.91 0.91</td>
<td>0.91 0.91 0.91</td>
</tr>
<tr>
<td>HFR (veh/h)</td>
<td>5 1010 32 54 598 5</td>
<td></td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2 -- -- 2 -- --</td>
<td></td>
</tr>
<tr>
<td>Median Type</td>
<td>Undivided</td>
<td></td>
</tr>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lanes</td>
<td>1 1 1 1 1 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Configuration</td>
<td>L TR L TR</td>
<td></td>
</tr>
<tr>
<td>Upstream Signal</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minor Street</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>7 8 9 10 11 12</td>
<td></td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>10 1 20 30 2 35</td>
<td>2</td>
</tr>
<tr>
<td>PHF</td>
<td>0.91 0.91 0.91 0.91</td>
<td>0.91 0.91</td>
</tr>
<tr>
<td>HFR (veh/h)</td>
<td>10 1 21 32 2 38</td>
<td>2</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2 2 2 2 2 2</td>
<td></td>
</tr>
<tr>
<td>Percent Grade (%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Flared Approach</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Storage</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lanes</td>
<td>0 1 0 0 1 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Configuration</td>
<td>LTR LTR</td>
<td></td>
</tr>
</tbody>
</table>

## Delay, Queue Length, and Level of Service

<table>
<thead>
<tr>
<th>Approach</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>1 4 7 8 9 10 11 12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Configuration</td>
<td>L L LTR</td>
<td>LTR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v (veh/h)</td>
<td>5 54</td>
<td>32</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>C (m) (veh/h)</td>
<td>975 667</td>
<td>121</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>v/c</td>
<td>0.01 0.08</td>
<td>0.26</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>95% queue length</td>
<td>0.02 0.26</td>
<td>0.99</td>
<td>3.38</td>
<td></td>
</tr>
<tr>
<td>Control Delay (s/veh)</td>
<td>8.7 10.9</td>
<td>45.1</td>
<td>86.8</td>
<td></td>
</tr>
<tr>
<td>LOS</td>
<td>A B E</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay (s/veh)</td>
<td>-- --</td>
<td>45.1</td>
<td>86.8</td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>-- --</td>
<td>E</td>
<td>F</td>
<td></td>
</tr>
</tbody>
</table>
## Movement Conditions

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Configurations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>205</td>
<td>735</td>
<td>390</td>
<td>1260</td>
<td>1520</td>
<td>190</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>561</td>
<td>522</td>
<td>573</td>
<td>2449</td>
<td>1603</td>
<td>717</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.16</td>
<td>0.16</td>
<td>0.17</td>
<td>0.69</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>1583.3</td>
<td>3441.6</td>
<td>3632.4</td>
<td>3632.3</td>
<td>1583.3</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>215.8</td>
<td>773.7</td>
<td>410.5</td>
<td>1326.3</td>
<td>1600.0</td>
<td>200.0</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/Ln</td>
<td>1720.8</td>
<td>1583.3</td>
<td>1720.8</td>
<td>1769.6</td>
<td>1769.6</td>
<td>1583.3</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>3.1</td>
<td>9.0</td>
<td>6.2</td>
<td>10.2</td>
<td>24.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>3.1</td>
<td>9.0</td>
<td>6.2</td>
<td>10.2</td>
<td>24.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>561.2</td>
<td>521.9</td>
<td>573.3</td>
<td>2449.1</td>
<td>1603.1</td>
<td>717.2</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.385</td>
<td>1.482</td>
<td>0.716</td>
<td>0.542</td>
<td>0.998</td>
<td>0.279</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>561.2</td>
<td>521.9</td>
<td>873.0</td>
<td>2757.3</td>
<td>1603.1</td>
<td>717.2</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>20.6</td>
<td>18.5</td>
<td>21.8</td>
<td>4.2</td>
<td>15.1</td>
<td>9.5</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>0.4</td>
<td>227.2</td>
<td>1.7</td>
<td>0.2</td>
<td>22.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3),s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>21.1</td>
<td>245.7</td>
<td>23.5</td>
<td>4.4</td>
<td>37.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>C</td>
<td>F</td>
<td>C</td>
<td>A</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
<td>989</td>
<td>1737</td>
<td>1800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>196.7</td>
<td>8.9</td>
<td>34.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>F</td>
<td>A</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 13.19 | 42.19 | 29.00 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 14.00 | 43.00 | 25.00 |
| Max Q Clear Time (g_c+I1), s | 8.23 | 12.19 | 26.91 |
| Green Extension Time (p_c) | 0.98 | 23.20 | 0.00 |

### Intersection Summary

- HCM 2010 Control Delay: 59.9
- HCM 2010 Level of Service: E
APPENDIX H

CUMULATIVE PLUS PROJECT
LEVEL OF SERVICE CALCULATION WORKSHEETS
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

### Lane Configurations

| Volume (vph) | 20 | 326 | 90 | 91 | 343 | 319 | 80 | 720 | 56 | 372 | 1120 | 10 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Queue, 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 | 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 Rate | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Lanes | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| Capacity, veh/h | 27 | 291 | 80 | 71 | 431 | 366 | 59 | 762 | 59 | 372 | 1131 | 10 |
| Arriving On Green | 0.02 | 0.21 | 0.21 | 0.04 | 0.23 | 0.23 | 0.03 | 0.45 | 0.45 | 0.20 | 0.61 | 0.61 |
| Sat Flow, veh/h | 1774.0 | 1406.1 | 388.2 | 1774.0 | 1583.3 | 1583.3 | 1774.0 | 1706.6 | 132.7 | 1774.0 | 1843.4 | 16.5 |
| Grp Volume(v), veh/h | 22.0 | 0.0 | 457.1 | 100.0 | 376.9 | 350.5 | 87.9 | 0.0 | 852.7 | 408.8 | 0.0 | 1241.8 |
| Q Serve(g_s), s | 1.9 | 0.0 | 31.0 | 6.0 | 29.3 | 32.8 | 5.0 | 0.0 | 67.0 | 30.0 | 0.0 | 92.0 |
| Cycle Q Clear(g_c), s | 1.9 | 0.0 | 31.0 | 6.0 | 29.3 | 32.8 | 5.0 | 0.0 | 67.0 | 30.0 | 0.0 | 92.0 |
| Lane Grp Cap(c), veh/h | 27.3 | 0.0 | 370.8 | 71.0 | 430.8 | 366.2 | 59.1 | 0.0 | 821.6 | 354.8 | 0.0 | 1140.7 |
| V/C Ratio(X) | 0.804 | 0.000 | 1.233 | 1.409 | 0.875 | 0.957 | 1.487 | 0.000 | 1.038 | 1.152 | 0.000 | 1.089 |
| Avail Cap(c_a), veh/h | 47.3 | 0.0 | 370.8 | 71.0 | 430.8 | 366.2 | 59.1 | 0.0 | 821.6 | 354.8 | 0.0 | 1140.7 |
| HCM Platoon Ratio | 1.00 | 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) | 1.000 | 0.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Uniform Delay (d), s/veh | 73.6 | 0.0 | 59.5 | 72.0 | 55.6 | 56.9 | 72.5 | 0.0 | 41.5 | 60.0 | 0.0 | 29.0 |
| Incr Delay (d2), s/veh | 40.1 | 0.0 | 126.1 | 248.8 | 17.8 | 35.9 | 289.4 | 0.0 | 41.7 | 95.9 | 0.0 | 54.1 |
| Control Delay (d), s/veh | 113.8 | 0.0 | 185.6 | 320.8 | 73.4 | 92.8 | 361.9 | 0.0 | 83.2 | 155.9 | 0.0 | 83.1 |
| Movement LOS | F | F | F | F | F | F | F | F | F |

### Approach Volume, veh/h

| Approach Volume, veh/h | 479 | 827 | 941 | 1651 |

### Approach Delay, s/veh

| Approach Delay, s/veh | 182.3 | 111.5 | 109.2 | 101.2 |

### Approach LOS

| Approach LOS | F | F | F | F |

### Timer

| Assigned Phase | 7 | 4 | 3 | 8 | 5 | 2 | 1 | 6 |

### Phase Duration (G+Y+Rc), s

| Phase Duration (G+Y+Rc), s | 6.31 | 35.00 | 10.00 | 38.69 | 9.00 | 71.00 | 34.00 | 96.00 |

### Change Period (Y+Rc), s

| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |

### Max Green Setting (Gmax), s

| Max Green Setting (Gmax), s | 4.00 | 31.00 | 6.00 | 33.00 | 5.00 | 67.00 | 30.00 | 92.00 |

### Max Q Clear Time (g_c+I1), s

| Max Q Clear Time (g_c+I1), s | 3.85 | 33.00 | 8.00 | 34.79 | 7.00 | 69.00 | 32.00 | 94.00 |

### Green Extension Time (p_c)

| Green Extension Time (p_c) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### Intersection Summary

| HCM 2010 Control Delay | 115.3 |
| HCM 2010 Level of Service | F |
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>5</td>
<td>659</td>
<td>80</td>
<td>91</td>
<td>592</td>
<td>50</td>
<td>90</td>
<td>70</td>
<td>87</td>
<td>41</td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>6</td>
<td>788</td>
<td>96</td>
<td>124</td>
<td>932</td>
<td>79</td>
<td>129</td>
<td>102</td>
<td>127</td>
<td>56</td>
<td>142</td>
<td>28</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.48</td>
<td>0.48</td>
<td>0.07</td>
<td>0.55</td>
<td>0.55</td>
<td>0.07</td>
<td>0.14</td>
<td>0.14</td>
<td>0.03</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1630.0</td>
<td>197.9</td>
<td>1774.0</td>
<td>1694.4</td>
<td>143.1</td>
<td>1774.0</td>
<td>756.5</td>
<td>940.3</td>
<td>1774.0</td>
<td>1507.9</td>
<td>301.6</td>
</tr>
</tbody>
</table>

### Approach Volume, veh/h

<table>
<thead>
<tr>
<th>Movement</th>
<th>836</th>
<th>824</th>
<th>278</th>
<th>113</th>
</tr>
</thead>
</table>

### Approach Delay, s/veh

<table>
<thead>
<tr>
<th>Movement</th>
<th>32.3</th>
<th>18.0</th>
<th>40.4</th>
<th>38.5</th>
</tr>
</thead>
</table>

### Approach LOS

<table>
<thead>
<tr>
<th>Movement</th>
<th>C</th>
<th>B</th>
<th>D</th>
<th>D</th>
<th>C</th>
</tr>
</thead>
</table>

### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.19</td>
<td>31.63</td>
<td>8.00</td>
<td>35.44</td>
<td>8.16</td>
<td>11.73</td>
<td>5.81</td>
<td>9.38</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>28.00</td>
<td>4.00</td>
<td>28.00</td>
<td>5.00</td>
<td>8.00</td>
<td>4.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+11), s</td>
<td>2.18</td>
<td>26.59</td>
<td>5.25</td>
<td>18.62</td>
<td>5.20</td>
<td>7.74</td>
<td>3.48</td>
<td>4.00</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>1.04</td>
<td>0.00</td>
<td>5.29</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.27</td>
</tr>
</tbody>
</table>

### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>27.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>C</td>
</tr>
</tbody>
</table>

---

MRO Engineers, Inc.  
Synchro 8 Report  
Folsom Women's Facility  
Page 3
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
<th>Volume (vph)</th>
<th>5</th>
<th>516</th>
<th>50</th>
<th>112</th>
<th>603</th>
<th>50</th>
<th>90</th>
<th>30</th>
<th>164</th>
<th>20</th>
<th>15</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>5</td>
<td>684</td>
<td>66</td>
<td>153</td>
<td>835</td>
<td>69</td>
<td>122</td>
<td>41</td>
<td>225</td>
<td>24</td>
<td>146</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.00</td>
<td>0.41</td>
<td>0.41</td>
<td>0.09</td>
<td>0.49</td>
<td>0.49</td>
<td>0.07</td>
<td>0.16</td>
<td>0.16</td>
<td>0.01</td>
<td>0.11</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1672.1</td>
<td>162.0</td>
<td>1774.0</td>
<td>140.7</td>
<td>1774.0</td>
<td>250.7</td>
<td>1370.3</td>
<td>1774.0</td>
<td>1338.0</td>
<td>446.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Movement LOS</th>
<th>F</th>
<th>B</th>
<th>C</th>
<th>B</th>
<th>C</th>
<th>F</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach Volume, veh/h</td>
<td>607</td>
<td>814</td>
<td>302</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>18.8</td>
<td>16.5</td>
<td>29.7</td>
<td>53.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>4.15</td>
<td>23.98</td>
<td>8.20</td>
<td>28.04</td>
<td>7.37</td>
<td>12.04</td>
<td>4.65</td>
<td>9.32</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>4.00</td>
<td>24.00</td>
<td>6.00</td>
<td>26.00</td>
<td>6.00</td>
<td>10.00</td>
<td>4.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>2.15</td>
<td>16.12</td>
<td>5.22</td>
<td>17.09</td>
<td>4.60</td>
<td>7.96</td>
<td>2.59</td>
<td>2.53</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>3.86</td>
<td>0.03</td>
<td>4.19</td>
<td>0.03</td>
<td>0.18</td>
<td>0.00</td>
<td>0.42</td>
</tr>
</tbody>
</table>

#### Intersection Summary

<table>
<thead>
<tr>
<th>HCM 2010 Control Delay</th>
<th>20.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 2010 Level of Service</td>
<td>C</td>
</tr>
</tbody>
</table>
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR
#### Lane Configurations
| Volume (vph) | 165 441 30 20 920 65 5 0 5 15 0 25 |
| Number | 5 2 12 1 6 16 3 8 18 7 4 14 |
| Initial Queue, 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 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 |
| Adj Sat Flow Rate | 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 1863 |
| Lanes | 1 1 0 1 1 0 1 1 0 1 1 0 |
| Capacity, veh/h | 228 1382 94 31 1186 84 7 0 0 39 0 0 |
| Arriving On Green | 0.13 0.80 0.80 0.02 0.69 0.69 0.00 0.00 0.04 0.02 0.00 0.06 |
| Sat Flow, veh/h | 1774.0 1724.7 117.3 1774.0 1719.8 121.5 1774.0 0.0 0.0 1774.0 0.0 0.0 |
| Group Volume(v), veh/h | 203.7 0.0 581.5 24.7 0.0 1216.0 6.2 0.0 6.2 18.5 0.0 30.9 |
| Group Sat Flow(s),veh/h|ln | 1774.0 0.0 1842.0 1774.0 0.0 1841.3 1774.0 0.0 0.0 1774.0 0.0 0.0 |
| Q Serve(g_s), s | 15.6 0.0 12.6 1.9 0.0 83.2 0.5 0.0 6.0 1.4 0.0 8.5 |
| Cycle Q Clear(g_c), s | 15.6 0.0 12.6 1.9 0.0 83.2 0.5 0.0 6.0 1.4 0.0 8.5 |
| Proportion In Lane | 1.000 0.064 1.000 0.066 1.000 1.000 1.000 1.000 |
| Lane Grp Cap(c), veh/h | 228.3 0.0 1475.9 30.8 0.0 1270.3 6.7 0.0 38.8 0.0 0.0 |
| V/C Ratio(X) | 0.082 0.000 0.394 0.801 0.000 0.957 0.919 0.000 0.000 0.477 0.000 0.000 |
| Avail Cap(c_a), veh/h | 257.3 0.0 1549.3 77.2 0.0 1361.8 51.5 0.0 0.0 77.2 0.0 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 |
| Upstream Filter(I) | 1.000 0.000 1.000 1.000 0.000 1.000 1.000 0.000 1.000 0.000 1.000 |
| Uniform Delay (d), s/veh | 59.1 0.0 4.0 67.5 0.0 19.5 68.7 0.0 0.0 66.7 0.0 0.0 |
| Incr Delay (d2), s/veh | 27.9 0.0 0.2 36.2 0.0 14.9 137.5 0.0 0.0 8.8 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 |
| Control Delay (d), s/veh | 87.0 0.0 4.2 103.7 0.0 34.4 206.2 0.0 0.0 75.5 0.0 0.0 |
#### Movement LOS
- F
- A
- F
- C
- E
| Approach Volume, veh/h | 785 1241 12 49 |
| Approach Delay, s/veh | 25.7 35.8 103.1 28.3 |
| Approach LOS | C D F C |
#### Timer
- Assigned Phase | 5 2 1 6 3 8 7 4 |
| Phase Duration (G+Y+Rc), s | 21.75 114.51 6.40 99.15 4.52 10.00 7.02 12.50 |
| Change Period (Y+Rc), s | 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 |
| Max Green Setting (Gmax), s | 20.00 116.00 6.00 102.00 4.00 6.00 6.00 8.00 |
| Max Q Clear Time (g_c+I1), s | 17.59 14.65 3.91 85.18 2.48 8.00 3.42 10.50 |
| Green Extension Time (p_c) | 0.17 17.81 0.00 9.96 0.00 0.00 0.00 0.00 |
| Intersection Summary
- HCM 2010 Control Delay | 32.2 |
- HCM 2010 Level of Service | C |
## TWO-WAY STOP CONTROL SUMMARY

### General Information

<table>
<thead>
<tr>
<th>Analyst</th>
<th>NKL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency/Co.</td>
<td>MRO Engineers, Inc.</td>
</tr>
<tr>
<td>Date Performed</td>
<td>7/9/2012</td>
</tr>
<tr>
<td>Analysis Time Period</td>
<td>AM Peak Hour</td>
</tr>
</tbody>
</table>

### Site Information

<table>
<thead>
<tr>
<th>Intersection</th>
<th>E. Natoma St./Hancock Dr./PIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdiction</td>
<td>Folsom, CA</td>
</tr>
<tr>
<td>Analysis Year</td>
<td>Cumulative + Project</td>
</tr>
</tbody>
</table>

### Project Description

Folsom Women's Facility

### East/West Street:

<table>
<thead>
<tr>
<th>East Natoma St.</th>
</tr>
</thead>
</table>

### North/South Street:

<table>
<thead>
<tr>
<th>Hancock Dr./PIA Access Rd.</th>
</tr>
</thead>
</table>

### Intersection Orientation:

<table>
<thead>
<tr>
<th>East-West</th>
</tr>
</thead>
</table>

### Analysis Time Period:

<table>
<thead>
<tr>
<th>0.25</th>
</tr>
</thead>
</table>

### Vehicle Volumes and Adjustments

#### Major Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>61</td>
<td>435</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>75</td>
<td>537</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>Median Type</td>
<td>Undivided</td>
<td></td>
</tr>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Configuration</td>
<td>L</td>
<td>TR</td>
</tr>
<tr>
<td>Upstream Signal</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

#### Minor Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.81</td>
<td>0.81</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>37</td>
<td>0</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Percent Grade (%)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Flared Approach</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>RT Channelized</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Configuration</td>
<td>LTR</td>
<td></td>
</tr>
</tbody>
</table>

### Delay, Queue Length, and Level of Service

<table>
<thead>
<tr>
<th>Approach</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Lane Configuration</td>
<td>L</td>
<td>L</td>
<td>LTR</td>
<td>LTR</td>
</tr>
<tr>
<td>v (veh/h)</td>
<td>75</td>
<td>24</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>C (m) (veh/h)</td>
<td>595</td>
<td>1021</td>
<td>85</td>
<td>86</td>
</tr>
<tr>
<td>v/c</td>
<td>0.13</td>
<td>0.02</td>
<td>0.94</td>
<td>0.34</td>
</tr>
<tr>
<td>95% queue length</td>
<td>0.43</td>
<td>0.07</td>
<td>5.17</td>
<td>1.29</td>
</tr>
<tr>
<td>Control Delay (s/veh)</td>
<td>11.9</td>
<td>8.6</td>
<td>168.7</td>
<td>66.8</td>
</tr>
<tr>
<td>LOS</td>
<td>B</td>
<td>A</td>
<td>F</td>
<td>F</td>
</tr>
</tbody>
</table>

### Approach Delay (s/veh)

| -- | -- |

### Approach LOS

| -- | -- |

---

Copyright © 2010 University of Florida, All Rights Reserved

HCS+™ Version 5.6  Generated: 7/10/2012  2:44 PM
### Movements

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBR</th>
<th>NBL</th>
<th>NBT</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>171</td>
<td>243</td>
<td>654</td>
<td>1440</td>
<td>1000</td>
<td>248</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td></td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>366</td>
<td>574</td>
<td>882</td>
<td>2662</td>
<td>1504</td>
<td>673</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.11</td>
<td>0.11</td>
<td>0.26</td>
<td>0.75</td>
<td>0.43</td>
<td>0.43</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>1583.3</td>
<td>3441.6</td>
<td>3632.4</td>
<td>3632.3</td>
<td>1583.3</td>
</tr>
</tbody>
</table>

### Movement LOS

<table>
<thead>
<tr>
<th>Movement</th>
<th>C</th>
<th>B</th>
<th>C</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach Volume, veh/h</td>
<td>455</td>
<td>2301</td>
<td>1371</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
<td>18.8</td>
<td>9.9</td>
<td>14.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach LOS</td>
<td>B</td>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Timer

| Assigned Phase | 5 | 2 | 6 |
| Phase Duration (G+Y+Rc), s | 18.48 | 46.50 | 28.02 |
| Change Period (Y+Rc), s | 4.00 | 4.00 | 4.00 |
| Max Green Setting (Gmax), s | 17.00 | 46.00 | 25.00 |
| Max Q Clear Time (g_c+I1), s | 13.09 | 13.32 | 16.63 |
| Green Extension Time (p_c) | 1.39 | 22.75 | 7.39 |

### Intersection Summary

| HCM 2010 Control Delay | 12.4 |
| HCM 2010 Level of Service | B |
### Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

#### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
<td>40</td>
<td>307</td>
<td>120</td>
<td>110</td>
<td>228</td>
<td>434</td>
<td>45</td>
<td>1060</td>
<td>20</td>
<td>307</td>
<td>1100</td>
<td>20</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>4</td>
<td>14</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj (A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>52</td>
<td>238</td>
<td>93</td>
<td>83</td>
<td>380</td>
<td>323</td>
<td>47</td>
<td>935</td>
<td>18</td>
<td>260</td>
<td>1155</td>
<td>21</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.03</td>
<td>0.19</td>
<td>0.19</td>
<td>0.05</td>
<td>0.20</td>
<td>0.20</td>
<td>0.03</td>
<td>0.51</td>
<td>0.51</td>
<td>0.15</td>
<td>0.63</td>
<td>0.63</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>1774.0</td>
<td>1276.0</td>
<td>498.8</td>
<td>1774.0</td>
<td>1862.7</td>
<td>1583.3</td>
<td>1774.0</td>
<td>1822.3</td>
<td>34.4</td>
<td>1774.0</td>
<td>1823.7</td>
<td>33.2</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>40.8</td>
<td>0.0</td>
<td>435.7</td>
<td>112.2</td>
<td>232.7</td>
<td>442.9</td>
<td>45.9</td>
<td>0.0</td>
<td>1102.0</td>
<td>313.3</td>
<td>0.0</td>
<td>1142.9</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1774.0</td>
<td>0.0</td>
<td>1774.0</td>
<td>1774.0</td>
<td>1862.7</td>
<td>1583.3</td>
<td>1774.0</td>
<td>0.0</td>
<td>1856.7</td>
<td>1774.0</td>
<td>0.0</td>
<td>1856.9</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>3.4</td>
<td>0.0</td>
<td>28.0</td>
<td>7.0</td>
<td>17.0</td>
<td>30.6</td>
<td>3.9</td>
<td>0.0</td>
<td>77.0</td>
<td>22.0</td>
<td>0.0</td>
<td>88.0</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>3.4</td>
<td>0.0</td>
<td>28.0</td>
<td>7.0</td>
<td>17.0</td>
<td>30.6</td>
<td>3.9</td>
<td>0.0</td>
<td>77.0</td>
<td>22.0</td>
<td>0.0</td>
<td>88.0</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.00</td>
<td>0.281</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>0.018</td>
<td>0.019</td>
<td>1.000</td>
<td>0.000</td>
<td>0.019</td>
<td>1.000</td>
<td>0.018</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>52.5</td>
<td>0.0</td>
<td>331.3</td>
<td>82.8</td>
<td>379.5</td>
<td>322.6</td>
<td>47.3</td>
<td>0.0</td>
<td>953.1</td>
<td>260.2</td>
<td>0.0</td>
<td>1176.0</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.778</td>
<td>0.000</td>
<td>1.315</td>
<td>1.356</td>
<td>0.613</td>
<td>1.373</td>
<td>0.971</td>
<td>0.000</td>
<td>1.156</td>
<td>1.204</td>
<td>0.000</td>
<td>1.117</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>59.1</td>
<td>0.0</td>
<td>331.3</td>
<td>82.8</td>
<td>379.5</td>
<td>322.6</td>
<td>47.3</td>
<td>0.0</td>
<td>953.1</td>
<td>260.2</td>
<td>0.0</td>
<td>1176.0</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>72.3</td>
<td>0.0</td>
<td>61.0</td>
<td>71.5</td>
<td>54.3</td>
<td>59.7</td>
<td>72.9</td>
<td>0.0</td>
<td>36.5</td>
<td>64.0</td>
<td>0.0</td>
<td>26.2</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>43.1</td>
<td>0.0</td>
<td>161.7</td>
<td>220.3</td>
<td>2.9</td>
<td>186.2</td>
<td>119.5</td>
<td>0.0</td>
<td>82.3</td>
<td>122.4</td>
<td>0.0</td>
<td>19.7</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>115.4</td>
<td>0.0</td>
<td>222.7</td>
<td>291.8</td>
<td>57.2</td>
<td>246.0</td>
<td>192.4</td>
<td>0.0</td>
<td>118.8</td>
<td>186.4</td>
<td>0.0</td>
<td>46.0</td>
</tr>
<tr>
<td>Movement LOS</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>D</td>
<td>F</td>
<td>F</td>
<td></td>
</tr>
</tbody>
</table>

#### Approach Summary

| Approach Volume, veh/h | 477 | 788 | 1148 | 1456 |
| Approach Delay, s/veh | 213.5 | 196.8 | 121.7 | 76.2 |
| Approach LOS | F | F | F | E |

#### Timer

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>7</th>
<th>4</th>
<th>3</th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>8.44</td>
<td>32.00</td>
<td>11.00</td>
<td>34.56</td>
<td>8.00</td>
<td>81.00</td>
<td>26.00</td>
<td>99.00</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>5.00</td>
<td>28.00</td>
<td>7.00</td>
<td>30.00</td>
<td>4.00</td>
<td>77.00</td>
<td>22.00</td>
<td>95.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+11), s</td>
<td>5.43</td>
<td>30.00</td>
<td>9.00</td>
<td>32.56</td>
<td>5.88</td>
<td>79.00</td>
<td>24.00</td>
<td>90.03</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>4.28</td>
</tr>
</tbody>
</table>

#### Intersection Summary

| HCM 2010 Control Delay | 131.2 |
| HCM 2010 Level of Service | F |
### Movement

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
</table>

| Volume (vph) | 20 | 648 | 30 | 96 | 659 | 66 | 170 | 150 | 160 | 80 | 60 | 10 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Queue, 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 | 1.00 | 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 |
| Adj Sat Flow Rate | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Capacity, veh/h | 26 | 819 | 38 | 132 | 873 | 87 | 225 | 187 | 199 | 112 | 253 | 42 |
| Arriving On Green | 0.01 | 0.46 | 0.46 | 0.07 | 0.52 | 0.52 | 0.13 | 0.23 | 0.23 | 0.06 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1774.0 | 1766.5 | 818.0 | 1774.0 | 1666.4 | 166.9 | 1774.0 | 826.1 | 811.2 | 1774.0 | 1557.4 | 259.6 |

### Lane Configurations

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
</table>

| Volume (vph) | 20 | 648 | 30 | 96 | 659 | 66 | 170 | 150 | 160 | 80 | 60 | 10 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Queue, 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 | 1.00 | 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 |
| Adj Sat Flow Rate | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Capacity, veh/h | 26 | 819 | 38 | 132 | 873 | 87 | 225 | 187 | 199 | 112 | 253 | 42 |
| Arriving On Green | 0.01 | 0.46 | 0.46 | 0.07 | 0.52 | 0.52 | 0.13 | 0.23 | 0.23 | 0.06 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1774.0 | 1766.5 | 818.0 | 1774.0 | 1666.4 | 166.9 | 1774.0 | 826.1 | 811.2 | 1774.0 | 1557.4 | 259.6 |

<table>
<thead>
<tr>
<th>Movement</th>
<th>EBL</th>
<th>EBT</th>
<th>EBR</th>
<th>WBL</th>
<th>WBT</th>
<th>WBR</th>
<th>NBL</th>
<th>NBT</th>
<th>NBR</th>
<th>SBL</th>
<th>SBT</th>
<th>SBR</th>
</tr>
</thead>
</table>

| Volume (vph) | 20 | 648 | 30 | 96 | 659 | 66 | 170 | 150 | 160 | 80 | 60 | 10 |
| Number | 7 | 4 | 14 | 3 | 8 | 18 | 5 | 2 | 12 | 1 | 6 | 16 |
| Initial Queue, 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 | 1.00 | 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 |
| Adj Sat Flow Rate | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 | 1863 |
| Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Capacity, veh/h | 26 | 819 | 38 | 132 | 873 | 87 | 225 | 187 | 199 | 112 | 253 | 42 |
| Arriving On Green | 0.01 | 0.46 | 0.46 | 0.07 | 0.52 | 0.52 | 0.13 | 0.23 | 0.23 | 0.06 | 0.16 | 0.16 |
| Sat Flow, veh/h | 1774.0 | 1766.5 | 818.0 | 1774.0 | 1666.4 | 166.9 | 1774.0 | 826.1 | 811.2 | 1774.0 | 1557.4 | 259.6 |

### Intersection Summary

- **HCM 2010 Control Delay**: 32.9
- **HCM 2010 Level of Service**: C

---

MRO Engineers, Inc.
Synchro 8 Report
Folsom Women's Facility
Page 3
## Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

<table>
<thead>
<tr>
<th>Lane Configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (vph)</td>
</tr>
<tr>
<td>Number</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
</tr>
<tr>
<td>Lanes</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
</tr>
<tr>
<td>Arriving On Green</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
</tr>
<tr>
<td>Proportion In Lane</td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
</tr>
<tr>
<td>Upstream Filter(l)</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
</tr>
<tr>
<td>Movement LOS</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
</tr>
<tr>
<td>Approach LOS</td>
</tr>
<tr>
<td>Timer</td>
</tr>
<tr>
<td>Assigned Phase</td>
</tr>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+11), s</td>
</tr>
<tr>
<td>Green Extension Time (p_c)</td>
</tr>
<tr>
<td>Intersection Summary</td>
</tr>
<tr>
<td>HCM 2010 Control Delay</td>
</tr>
<tr>
<td>HCM 2010 Level of Service</td>
</tr>
<tr>
<td>Movement</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Movement LOS</td>
</tr>
<tr>
<td>Approach Volume, veh/h</td>
</tr>
<tr>
<td>Approach Delay, s/veh</td>
</tr>
<tr>
<td>Approach LOS</td>
</tr>
</tbody>
</table>

**Timer**

<table>
<thead>
<tr>
<th>Assigned Phase</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>6</th>
<th>3</th>
<th>8</th>
<th>7</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Duration (G+Y+Rc), s</td>
<td>5.70</td>
<td>42.56</td>
<td>4.21</td>
<td>41.06</td>
<td>5.17</td>
<td>10.00</td>
<td>7.90</td>
<td>12.73</td>
</tr>
<tr>
<td>Change Period (Y+Rc), s</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Max Green Setting (Gmax), s</td>
<td>6.00</td>
<td>43.00</td>
<td>4.00</td>
<td>41.00</td>
<td>5.00</td>
<td>6.00</td>
<td>6.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Max Q Clear Time (g_c+I1), s</td>
<td>3.40</td>
<td>32.26</td>
<td>2.20</td>
<td>17.11</td>
<td>3.00</td>
<td>8.00</td>
<td>3.94</td>
<td>10.73</td>
</tr>
<tr>
<td>Green Extension Time (p_c), s</td>
<td>0.01</td>
<td>6.30</td>
<td>0.00</td>
<td>9.93</td>
<td>0.00</td>
<td>0.00</td>
<td>0.02</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Intersection Summary**

- HCM 2010 Control Delay: 17.2
- HCM 2010 Level of Service: B
# TWO-WAY STOP CONTROL SUMMARY

## General Information

<table>
<thead>
<tr>
<th>Analyst</th>
<th>Site Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>NKL</td>
<td>Intersection: E. Natoma St./Hancock Dr./PIA</td>
</tr>
<tr>
<td>Agency/Co.</td>
<td>Jurisdiction: Folsom, CA</td>
</tr>
<tr>
<td>Date Performed</td>
<td>Analysis Year: Cumulative + Project</td>
</tr>
<tr>
<td>7/9/2012</td>
<td></td>
</tr>
</tbody>
</table>

## Project Description

- **Folsom Women's Facility**
- **East/West Street:** East Natoma St.
- **North/South Street:** Hancock Dr./PIA Access Rd.
- **Intersection Orientation:** East-West
- **Study Period (hrs):** 0.25

## Vehicle Volumes and Adjustments

### Major Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Eastbound</th>
<th>Westbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>T</td>
<td>920</td>
<td>30</td>
</tr>
<tr>
<td>R</td>
<td>50</td>
<td>545</td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>9</td>
<td>1010</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>9</td>
<td>1010</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Median Type</th>
<th>RT Channelized</th>
<th>Lanes</th>
<th>Configuration</th>
<th>Upstream Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undivided</td>
<td>0</td>
<td>1</td>
<td>L TR</td>
<td>0</td>
</tr>
</tbody>
</table>

### Minor Street

<table>
<thead>
<tr>
<th>Movement</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>T</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Volume (veh/h)</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Peak-Hour Factor, PHF</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>Hourly Flow Rate, HFR (veh/h)</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Percent Heavy Vehicles</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Percent Grade (%)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Delay, Queue Length, and Level of Service

<table>
<thead>
<tr>
<th>Approach</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Lane Configuration</td>
<td>L LTR</td>
<td>LTR LTR</td>
<td>LTR LTR</td>
<td>LTR LTR</td>
</tr>
<tr>
<td>v (veh/h)</td>
<td>9</td>
<td>54</td>
<td>32</td>
<td>90</td>
</tr>
<tr>
<td>C (m) (veh/h)</td>
<td>973</td>
<td>667</td>
<td>115</td>
<td>114</td>
</tr>
<tr>
<td>v/c</td>
<td>0.01</td>
<td>0.08</td>
<td>0.28</td>
<td>0.79</td>
</tr>
<tr>
<td>95% queue length</td>
<td>0.03</td>
<td>0.26</td>
<td>1.05</td>
<td>4.50</td>
</tr>
<tr>
<td>Control Delay (s/veh)</td>
<td>8.7</td>
<td>10.9</td>
<td>48.0</td>
<td>105.2</td>
</tr>
<tr>
<td>LOS</td>
<td>A</td>
<td>B</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>Approach Delay (s/veh)</td>
<td>--</td>
<td>--</td>
<td>48.0</td>
<td>105.2</td>
</tr>
<tr>
<td>Approach LOS</td>
<td>--</td>
<td>--</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>Movement</td>
<td>EBL</td>
<td>EBR</td>
<td>NBL</td>
<td>NBT</td>
</tr>
<tr>
<td>----------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Lane Configurations</td>
<td>🚦</td>
<td>🚦</td>
<td>🚹</td>
<td>🚹</td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>207</td>
<td>737</td>
<td>391</td>
<td>1260</td>
</tr>
<tr>
<td>Number</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Initial Queue, veh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ped-Bike Adj(A_pbT)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Parking, Bus Adj</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Adj Sat Flow Rate</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
<td>1863</td>
</tr>
<tr>
<td>Lanes</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Capacity, veh/h</td>
<td>561</td>
<td>522</td>
<td>574</td>
<td>2450</td>
</tr>
<tr>
<td>Arriving On Green</td>
<td>0.16</td>
<td>0.16</td>
<td>0.17</td>
<td>0.69</td>
</tr>
<tr>
<td>Sat Flow, veh/h</td>
<td>3441.6</td>
<td>1583.3</td>
<td>3441.6</td>
<td>1583.3</td>
</tr>
<tr>
<td>Grp Volume(v), veh/h</td>
<td>217.9</td>
<td>775.8</td>
<td>411.6</td>
<td>1326.3</td>
</tr>
<tr>
<td>Grp Sat Flow(s),veh/h/ln</td>
<td>1720.8</td>
<td>1583.3</td>
<td>1720.8</td>
<td>1769.6</td>
</tr>
<tr>
<td>Q Serve(g_s), s</td>
<td>3.1</td>
<td>9.0</td>
<td>6.2</td>
<td>10.2</td>
</tr>
<tr>
<td>Cycle Q Clear(g_c), s</td>
<td>3.1</td>
<td>9.0</td>
<td>6.2</td>
<td>10.2</td>
</tr>
<tr>
<td>Proportion In Lane</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Lane Grp Cap(c), veh/h</td>
<td>561.0</td>
<td>522.3</td>
<td>574.3</td>
<td>2449.5</td>
</tr>
<tr>
<td>V/C Ratio(X)</td>
<td>0.388</td>
<td>1.485</td>
<td>0.717</td>
<td>0.541</td>
</tr>
<tr>
<td>Avail Cap(c_a), veh/h</td>
<td>561.0</td>
<td>522.3</td>
<td>872.7</td>
<td>2756.3</td>
</tr>
<tr>
<td>HCM Platoon Ratio</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Upstream Filter(I)</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Uniform Delay (d), s/veh</td>
<td>20.6</td>
<td>18.5</td>
<td>21.8</td>
<td>4.2</td>
</tr>
<tr>
<td>Incr Delay (d2), s/veh</td>
<td>0.4</td>
<td>228.5</td>
<td>1.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Initial Q Delay(d3), s/veh</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Control Delay (d), s/veh</td>
<td>21.1</td>
<td>247.0</td>
<td>23.5</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Intersection Summary

| HCM 2010 Control Delay | 60.2 |
| HCM 2010 Level of Service | E |
Appendix B
Traffic Noise Prediction Model
<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Segment Description and Location</th>
<th>Existing Conditions</th>
<th>Existing + Project Conditions</th>
<th>Δ Existing + Existing + Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Natomia St</td>
<td>Folsom Blvd to Riley St</td>
<td>62.1</td>
<td>62.2</td>
<td>0.1</td>
</tr>
<tr>
<td>2</td>
<td>Natomia St</td>
<td>Riley St to Coloma St</td>
<td>60.1</td>
<td>60.2</td>
<td>0.1</td>
</tr>
<tr>
<td>3</td>
<td>Natomia St</td>
<td>Coloma St to Wales Dr</td>
<td>61.5</td>
<td>61.5</td>
<td>0.1</td>
</tr>
<tr>
<td>4</td>
<td>Natomia St</td>
<td>Wales Dr to Prison Rd</td>
<td>51.7</td>
<td>51.8</td>
<td>0.1</td>
</tr>
<tr>
<td>5</td>
<td>Natomia St</td>
<td>Prison Rd to Hancock Dr</td>
<td>65.1</td>
<td>65.2</td>
<td>0.1</td>
</tr>
<tr>
<td>6</td>
<td>Natomia St</td>
<td>Hancock Dr to Folsom Lake Crossing</td>
<td>62.6</td>
<td>62.6</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.*
## Traffic Noise Spreadsheet Calculator

**Project: Folsom Women's Facility**

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>From</th>
<th>To</th>
<th>ADT</th>
<th>Speed (mph)</th>
<th>Distance to Directional Centerline, (feet)</th>
<th>% Auto</th>
<th>% Medium</th>
<th>% Heavy</th>
<th>% Day</th>
<th>% Eve</th>
<th>% Night</th>
<th>Ldn, (dBA)_{A,4,7}</th>
<th>Distance to Contour, (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Natoma St</td>
<td>Folsom Blvd</td>
<td>Riley St</td>
<td>3,900</td>
<td>35</td>
<td>25</td>
<td>97.0%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
<td>62.1</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Natoma St</td>
<td>Riley St</td>
<td>Coloma St</td>
<td>6,300</td>
<td>35</td>
<td>50</td>
<td>97.0%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
<td>60.1</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Natoma St</td>
<td>Coloma St</td>
<td>Wales Dr</td>
<td>8,700</td>
<td>35</td>
<td>50</td>
<td>97.0%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
<td>61.5</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Natoma St</td>
<td>Wales Dr</td>
<td>Prison Rd</td>
<td>8,100</td>
<td>35</td>
<td>220</td>
<td>97.0%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
<td>51.7</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Natoma St</td>
<td>Prison Rd</td>
<td>Hancock Dr</td>
<td>8,100</td>
<td>45</td>
<td>245</td>
<td>97.0%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
<td>65.1</td>
<td>23</td>
</tr>
<tr>
<td>6</td>
<td>Natoma St</td>
<td>Hancock Dr</td>
<td>Folsom Lake Crossing</td>
<td>7,700</td>
<td>45</td>
<td>55</td>
<td>97.0%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
<td>62.6</td>
<td>23</td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.*
### Traffic Noise Spreadsheet Calculator

**Project:** Folsom Women's Facility

**Noise Level Descriptor:** Ldn  
**Site Conditions:** Soft  
**Traffic Input:** ADT  
**Traffic K-Factor:**

<table>
<thead>
<tr>
<th>Number</th>
<th>Name From</th>
<th>Name To</th>
<th>ADT (vehicles/day)</th>
<th>Speed (mph)</th>
<th>Distance to Directional Centerline, (feet)</th>
<th>Traffic Distribution Characteristics</th>
<th>Ldn, (dBA)_{4,7}</th>
<th>Distance to Contour, (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Natoma St</td>
<td>Folsom Blvd</td>
<td>Riley St</td>
<td>3,960</td>
<td>35 25 35</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>62.2</td>
<td>9 19 41 89</td>
</tr>
<tr>
<td>2</td>
<td>Natoma St</td>
<td>Riley St</td>
<td>Coloma St</td>
<td>6,450</td>
<td>35 50 60</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>60.2</td>
<td>12 26 56 121</td>
</tr>
<tr>
<td>3</td>
<td>Natoma St</td>
<td>Coloma St</td>
<td>Wales Dr</td>
<td>8,880</td>
<td>35 50 60</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>61.5</td>
<td>15 32 69 150</td>
</tr>
<tr>
<td>4</td>
<td>Natoma St</td>
<td>Wales Dr</td>
<td>Prison Rd</td>
<td>8,325</td>
<td>35 220 245</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>51.8</td>
<td>14 31 66 143</td>
</tr>
<tr>
<td>5</td>
<td>Natoma St</td>
<td>Prison Rd</td>
<td>Hancock Dr</td>
<td>8,325</td>
<td>45 40 60</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>65.2</td>
<td>23 50 109 234</td>
</tr>
<tr>
<td>6</td>
<td>Natoma St</td>
<td>Hancock Dr</td>
<td>Folsom Lake Crossing</td>
<td>7,775</td>
<td>45 55 50</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>62.6</td>
<td>23 40 105 227</td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.*
<table>
<thead>
<tr>
<th>Citation</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60.</td>
</tr>
<tr>
<td>2</td>
<td>Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60.</td>
</tr>
<tr>
<td>12</td>
<td>Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49.</td>
</tr>
<tr>
<td>Number</td>
<td>Name</td>
</tr>
<tr>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>1</td>
<td>Natoma St</td>
</tr>
<tr>
<td>2</td>
<td>Natoma St</td>
</tr>
<tr>
<td>3</td>
<td>Natoma St</td>
</tr>
<tr>
<td>4</td>
<td>Natoma St</td>
</tr>
<tr>
<td>5</td>
<td>Natoma St</td>
</tr>
<tr>
<td>6</td>
<td>Natoma St</td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.
**Traffic Noise Spreadsheet Calculator**

**Project:** Folsom Women’s Facility

**Noise Level Descriptor:** Ldn  
**Site Conditions:** Soft  
**Traffic Input:** Peak  
**Traffic K-Factor:** 10

<table>
<thead>
<tr>
<th>Segment Description and Location</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Hour Volume</td>
<td>Speed (mph)</td>
<td>Distance to Directional Centerline, (feet)</td>
</tr>
<tr>
<td>From</td>
<td>To</td>
<td>Near</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Baseline Conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Natoma St</td>
<td>Folsom Blvd</td>
<td>Riley St</td>
</tr>
<tr>
<td>2 Natoma St</td>
<td>Riley St</td>
<td>Coloma St</td>
</tr>
<tr>
<td>3 Natoma St</td>
<td>Coloma St</td>
<td>Wales Dr</td>
</tr>
<tr>
<td>4 Natoma St</td>
<td>Wales Dr</td>
<td>Prison Rd</td>
</tr>
<tr>
<td>5 Natoma St</td>
<td>Prison Rd</td>
<td>Hancock Dr</td>
</tr>
<tr>
<td>6 Natoma St</td>
<td>Hancock Dr</td>
<td>Folsom Lake Crossing</td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.*
## Traffic Noise Spreadsheet Calculator

**Project:** Folsom Women’s Facility  
**Noise Level Descriptor:** $L_{dn}$  
**Site Conditions:** Soft  
**Traffic Input:** Peak  
**Traffic K-Factor:** 10

### Baseline vs Project Conditions

<table>
<thead>
<tr>
<th>Number</th>
<th>Name From</th>
<th>Name To</th>
<th>Peak Hour Volume</th>
<th>Speed (mph)</th>
<th>Distance to Directional Centerline, (feet),%</th>
<th>Traffic Distribution Characteristics</th>
<th>$L_{dn}$, dB(A)</th>
<th>Distance to Contour, (feet),%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Natoma St Folsom Blvd</td>
<td>Riley St</td>
<td>943</td>
<td>35</td>
<td>25 25 35 97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>60.5 60 34 73 158</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Natoma St Riley St</td>
<td>Coloma St</td>
<td>1,088</td>
<td>35</td>
<td>50 60 97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>62.4 50 37 80 171</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Natoma St Coloma St</td>
<td>Wales Dr</td>
<td>1,134</td>
<td>35</td>
<td>50 60 97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>62.6 60 38 82 176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Natoma St Wales Dr</td>
<td>Prison Rd</td>
<td>1,264</td>
<td>35</td>
<td>220 245 97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>53.6 60 41 88 189</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Natoma St Prison Rd</td>
<td>Hancock Dr</td>
<td>1,088</td>
<td>45</td>
<td>40 60 97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>66.4 45 50 130 280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Natoma St Hancock Dr</td>
<td>Folsom Lake Crossing</td>
<td>922</td>
<td>45</td>
<td>55 90 97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>63.4 55 55 118 254</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.*
### Traffic Noise Spreadsheet Calculator

**Project:** Folsom Women's Facility

#### Noise Level Description:
- Ldn

#### Site Conditions:
- Soft

#### Traffic Input:
- Peak

#### Traffic K-Factor: 10

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Segment Description and Location</th>
<th>Peak Hour Volume</th>
<th>Speed (mph)</th>
<th>Distance to Directional Centerline, (feet)</th>
<th>Traffic Distribution Characteristics</th>
<th>Ldn, (dBA)$_{1/3}$</th>
<th>Distance to Contour, (feet)$_3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Natoma St</td>
<td>Folsom Blvd Riley St</td>
<td>1,685</td>
<td>35</td>
<td>25 35</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>68.4</td>
<td>23 50 108 233</td>
</tr>
<tr>
<td>2</td>
<td>Natoma St</td>
<td>Riley St Coloma St</td>
<td>1,680</td>
<td>35</td>
<td>50 60</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>64.3</td>
<td>23 49 106 229</td>
</tr>
<tr>
<td>3</td>
<td>Natoma St</td>
<td>Coloma St Wales Dr</td>
<td>1,585</td>
<td>35</td>
<td>50 60</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>64.1</td>
<td>22 47 102 220</td>
</tr>
<tr>
<td>4</td>
<td>Natoma St</td>
<td>Wales Dr Prison Rd</td>
<td>1,660</td>
<td>35</td>
<td>220 245</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>54.8</td>
<td>23 49 105 226</td>
</tr>
<tr>
<td>5</td>
<td>Natoma St</td>
<td>Prison Rd Hancock Dr</td>
<td>1,525</td>
<td>45</td>
<td>40 60</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>67.8</td>
<td>35 76 163 351</td>
</tr>
<tr>
<td>6</td>
<td>Natoma St</td>
<td>Hancock Dr Folsom Lake Crossing</td>
<td>1,305</td>
<td>45</td>
<td>55 90</td>
<td>97.0% 2.0% 1.0% 80.0% 15.0% 5.0%</td>
<td>64.9</td>
<td>32 69 149 320</td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.*
**Traffic Noise Spreadsheet Calculator**

**Project:** Folsom Women’s Facility

- **Noise Level Descriptor:** Ldn
- **Site Conditions:** Soft
- **Traffic Input:** Peak
- **Traffic K-Factor:** 10

### Traffic Input

<table>
<thead>
<tr>
<th>Segment Description and Location</th>
<th>Peak Hour Volume</th>
<th>Speed (mph)</th>
<th>Traffic Distribution Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Near</td>
<td>Far</td>
</tr>
<tr>
<td>1 Folsom Blvd to Riley St</td>
<td>1,707</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>2 Natoma St to Coloma St</td>
<td>1,705</td>
<td>35</td>
<td>60</td>
</tr>
<tr>
<td>3 Natoma St to Wales Dr</td>
<td>1,615</td>
<td>35</td>
<td>60</td>
</tr>
<tr>
<td>4 Natoma St to Prison Rd</td>
<td>1,691</td>
<td>35</td>
<td>245</td>
</tr>
<tr>
<td>5 Natoma St to Hancock Dr</td>
<td>1,567</td>
<td>45</td>
<td>60</td>
</tr>
<tr>
<td>6 Natoma St to Folsum Lake Crossing</td>
<td>1,316</td>
<td>45</td>
<td>90</td>
</tr>
</tbody>
</table>

### Traffic Output

<table>
<thead>
<tr>
<th>Cumulative Project Conditions</th>
<th>Ldn, (dBA)_&lt;sub&gt;1/3&lt;/sub&gt;</th>
<th>Distance to Contour, (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>68.5</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>64.4</td>
<td>23</td>
</tr>
<tr>
<td>3</td>
<td>64.1</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>54.9</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>67.9</td>
<td>36</td>
</tr>
<tr>
<td>6</td>
<td>64.9</td>
<td>32</td>
</tr>
</tbody>
</table>

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.*
<table>
<thead>
<tr>
<th>Citation</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60.</td>
</tr>
<tr>
<td>2</td>
<td>Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60.</td>
</tr>
<tr>
<td>12</td>
<td>Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49.</td>
</tr>
</tbody>
</table>
## Attenuation Calculations for Stationary Noise Sources

**KEY:**
- Orange cells are for input.
- Grey cells are intermediate calculations performed by the model.
- Green cells are data to present in a written analysis (output).

### STEP 1: Identify the noise source and enter the reference noise level (dBA and distance).

### STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.

### STEP 3: Select the distance to the receiver.

<table>
<thead>
<tr>
<th>Noise Source/ID</th>
<th>Reference Noise Level</th>
<th>Attenuation Characteristics</th>
<th>Attenuated Noise Level at Receptor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>noise level @ distance</td>
<td>Ground Type</td>
<td>Source Height (ft)</td>
</tr>
<tr>
<td>Construction</td>
<td>85.0 dBA @ 50 ft</td>
<td>soft</td>
<td>6 ft</td>
</tr>
<tr>
<td>Diesel Backup</td>
<td>82.0 dBA @ 50 ft</td>
<td>soft</td>
<td>6 ft</td>
</tr>
<tr>
<td>HVAC</td>
<td>79.0 dBA @ 50 ft</td>
<td>soft</td>
<td>6 ft</td>
</tr>
</tbody>
</table>

**Notes:**

Estimates of attenuated noise levels do not account for reductions from intervening barriers, including walls, trees, vegetation, or structures of any type.

Computation of the attenuated noise level is based on the equation presented on pg. 12-3 and 12-4 of FTA 2006.

Computation of the ground factor is based on the equation presented in Figure 6-23 on pg. 6-23 of FTA 2006, where the distance of the reference noise level can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

**Sources:**

Appendix C

Air Quality and Greenhouse Gas Emissions Model
1.0 Project Characteristics

1.1 Land Usage

<table>
<thead>
<tr>
<th>Land Uses</th>
<th>Size</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>400</td>
<td>Bed</td>
</tr>
</tbody>
</table>

1.2 Other Project Characteristics

<table>
<thead>
<tr>
<th>Urbanization</th>
<th>Wind Speed (m/s)</th>
<th>Utility Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>3.5</td>
<td>Pacific Gas &amp; Electric Company</td>
</tr>
</tbody>
</table>

1.3 User Entered Comments

Project Characteristics -

Land Use - project site is approximately 7 acre parcel; existing structures cover a footprint of approximately 100,000 square feet; all new facilities would be contained within the existing structures through renovations.

Construction Phase - estimated construction schedule

Vehicle Trips - 225 average daily trips divided by 400 beds = 0.5625 trips/bed. Source: MRO Traffic Engineers

Off-road Equipment - utility improvements include fencing, lighting, and other installations

Off-road Equipment -
## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

| Year | ROG | NOx | CO  | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|------|-----|-----|-----|-----|----------------|--------------|------------|----------------|--------------|------------|----------|-----------|-----------|----------|------|------|------|
| 2012 | 0.14| 1.07| 0.60| 0.00| 0.01           | 0.05         | 0.06       | 0.05           | 0.05         | 0.05       | 0.00     | 132.03    | 132.03    | 0.01    | 0.00 | 132.26|
| 2013 | 1.95| 6.09| 3.58| 0.01| 0.07           | 0.29         | 0.36       | 0.29           | 0.29         | 0.29       | 0.00     | 810.66    | 810.66    | 0.06    | 0.00 | 811.99|
| Total | 2.09| 7.16| 4.18| 0.01| 0.08           | 0.34         | 0.42       | 0.34           | 0.34         | 0.34       | 0.00     | 942.69    | 942.69    | 0.07    | 0.00 | 944.25|

#### Mitigated Construction

| Year | ROG | NOx | CO  | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|------|-----|-----|-----|-----|----------------|--------------|------------|----------------|--------------|------------|----------|-----------|-----------|----------|------|------|------|
| 2012 | 0.14| 1.07| 0.60| 0.00| 0.00           | 0.05         | 0.05       | 0.05           | 0.05         | 0.05       | 0.00     | 132.03    | 132.03    | 0.01    | 0.00 | 132.26|
| 2013 | 1.95| 6.09| 3.58| 0.01| 0.00           | 0.29         | 0.29       | 0.29           | 0.29         | 0.29       | 0.00     | 810.66    | 810.66    | 0.06    | 0.00 | 811.99|
| Total | 2.09| 7.16| 4.18| 0.01| 0.00           | 0.34         | 0.34       | 0.34           | 0.34         | 0.34       | 0.00     | 942.69    | 942.69    | 0.07    | 0.00 | 944.25|
### 2.2 Overall Operational

#### Unmitigated Operational

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>0.51</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Energy</td>
<td>0.04</td>
<td>0.33</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>973.65</td>
<td>973.65</td>
<td>0.03</td>
<td>0.02</td>
<td>979.68</td>
</tr>
<tr>
<td>Mobile</td>
<td>0.27</td>
<td>0.58</td>
<td>2.53</td>
<td>0.00</td>
<td>0.31</td>
<td>0.32</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
<td>0.00</td>
<td>286.03</td>
<td>286.03</td>
<td>0.02</td>
<td>0.00</td>
<td>286.38</td>
<td></td>
</tr>
<tr>
<td>Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>237.09</td>
<td>0.00</td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>63.92</td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.82</td>
<td>0.91</td>
<td>2.81</td>
<td>0.00</td>
<td>0.31</td>
<td>0.02</td>
<td>0.35</td>
<td>0.01</td>
<td>0.02</td>
<td>0.06</td>
<td>237.09</td>
<td>1,323.60</td>
<td>1,560.69</td>
<td>15.16</td>
<td>0.05</td>
<td>1,893.18</td>
</tr>
</tbody>
</table>
2.2 Overall Operational

### Mitigated Operational

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tons/yr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>0.51</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Mobile</td>
<td>0.27</td>
<td>0.58</td>
<td>2.53</td>
<td>0.00</td>
<td>0.31</td>
<td>0.02</td>
<td>0.32</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
<td>0.00</td>
<td>979.68</td>
<td>973.65</td>
<td>973.65</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Waste</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>237.09</td>
<td>0.00</td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>63.92</td>
<td>63.92</td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.82</td>
<td>0.91</td>
<td>2.81</td>
<td>0.00</td>
<td>0.31</td>
<td>0.02</td>
<td>0.35</td>
<td>0.01</td>
<td>0.02</td>
<td>0.06</td>
<td>237.09</td>
<td>1,323.60</td>
<td>1,560.69</td>
<td>15.16</td>
<td>0.05</td>
<td>1,893.18</td>
</tr>
</tbody>
</table>

3.0 Construction Detail

3.1 Mitigation Measures Construction
### 3.2 Utility Improvements - 2012

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBIo-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.04</td>
<td>0.43</td>
<td>0.14</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>59.38</td>
<td>59.38</td>
<td>0.00</td>
<td>0.00</td>
<td>59.45</td>
</tr>
<tr>
<td>Total</td>
<td>0.04</td>
<td>0.43</td>
<td>0.14</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>59.38</td>
<td>59.38</td>
<td>0.00</td>
<td>0.00</td>
<td>59.45</td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBIo-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>Total</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.91</td>
<td>0.91</td>
</tr>
</tbody>
</table>
3.2 Utility Improvements - 2012

Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.04</td>
<td>0.43</td>
<td>0.14</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>59.38</td>
<td>59.38</td>
<td>0.00</td>
<td>0.00</td>
<td>59.45</td>
</tr>
<tr>
<td>Total</td>
<td>0.04</td>
<td>0.43</td>
<td>0.14</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>59.38</td>
<td>59.38</td>
<td>0.00</td>
<td>0.00</td>
<td>59.45</td>
</tr>
</tbody>
</table>

Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.91</td>
<td>0.1</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>Total</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.91</td>
<td>0.91</td>
<td>0.00</td>
<td>0.00</td>
<td>0.91</td>
</tr>
</tbody>
</table>
### 3.2 Utility Improvements - 2013

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.23</td>
<td>2.37</td>
<td>0.82</td>
<td>0.00</td>
<td>0.00</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
<td>360.43</td>
<td>0.02</td>
<td>0.00</td>
<td>360.82</td>
</tr>
<tr>
<td>Total</td>
<td>0.23</td>
<td>2.37</td>
<td>0.82</td>
<td>0.00</td>
<td>0.00</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
<td>360.43</td>
<td>0.02</td>
<td>0.00</td>
<td>360.82</td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>5.41</td>
<td>0.00</td>
<td>5.42</td>
</tr>
<tr>
<td>Total</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>5.41</td>
<td>0.00</td>
<td>5.42</td>
</tr>
</tbody>
</table>
### 3.2 Utility Improvements - 2013

#### Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>PM10 Total</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>N-Bio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.23</td>
<td>2.37</td>
<td>0.82</td>
<td>0.00</td>
<td>0.08</td>
<td>0.08</td>
<td>0.00</td>
<td>360.43</td>
<td>360.43</td>
<td>0.02</td>
<td>0.00</td>
<td>360.82</td>
</tr>
<tr>
<td>Total</td>
<td>0.23</td>
<td>2.37</td>
<td>0.82</td>
<td>0.00</td>
<td>0.08</td>
<td>0.08</td>
<td>0.00</td>
<td>360.43</td>
<td>360.43</td>
<td>0.02</td>
<td>0.00</td>
<td>360.82</td>
</tr>
</tbody>
</table>

#### Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>PM10 Total</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>N-Bio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>5.41</td>
<td>5.41</td>
<td>0.00</td>
<td>0.00</td>
<td>5.42</td>
</tr>
<tr>
<td>Total</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>5.41</td>
<td>5.41</td>
<td>0.00</td>
<td>0.00</td>
<td>5.42</td>
</tr>
</tbody>
</table>
### 3.3 Building Construction - 2012

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.09</td>
<td>0.58</td>
<td>0.35</td>
<td>0.00</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
<td>57.65</td>
<td>57.65</td>
<td>0.01</td>
<td>0.00</td>
<td>57.79</td>
</tr>
<tr>
<td>Total</td>
<td>0.09</td>
<td>0.58</td>
<td>0.35</td>
<td>0.00</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
<td>57.65</td>
<td>57.65</td>
<td>0.01</td>
<td>0.00</td>
<td>57.79</td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.01</td>
<td>0.06</td>
<td>0.06</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>8.24</td>
<td>8.24</td>
<td>0.00</td>
<td>0.00</td>
<td>8.25</td>
</tr>
<tr>
<td>Worker</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>5.84</td>
<td>5.84</td>
<td>0.00</td>
<td>0.00</td>
<td>5.85</td>
</tr>
<tr>
<td>Total</td>
<td>0.01</td>
<td>0.06</td>
<td>0.10</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>14.08</td>
<td>14.08</td>
<td>0.00</td>
<td>0.00</td>
<td>14.10</td>
</tr>
</tbody>
</table>
### Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.09</td>
<td>0.58</td>
<td>0.35</td>
<td>0.00</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
<td>57.65</td>
<td>57.65</td>
<td>0.01</td>
<td>0.00</td>
<td>57.79</td>
</tr>
<tr>
<td>Total</td>
<td>0.09</td>
<td>0.58</td>
<td>0.35</td>
<td>0.00</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
<td>57.65</td>
<td>57.65</td>
<td>0.01</td>
<td>0.00</td>
<td>57.79</td>
</tr>
</tbody>
</table>

### Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.01</td>
<td>0.06</td>
<td>0.06</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>8.24</td>
<td>8.24</td>
<td>0.00</td>
<td>0.00</td>
<td>8.25</td>
</tr>
<tr>
<td>Worker</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>5.84</td>
<td>5.84</td>
<td>0.00</td>
<td>0.00</td>
<td>5.85</td>
</tr>
<tr>
<td>Total</td>
<td>0.01</td>
<td>0.06</td>
<td>0.10</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>14.08</td>
<td>14.08</td>
<td>0.00</td>
<td>0.00</td>
<td>14.10</td>
</tr>
</tbody>
</table>

3.3 Building Construction - 2012
### 3.3 Building Construction - 2013

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.48</td>
<td>3.27</td>
<td>2.09</td>
<td>0.00</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.00</td>
<td>349.89</td>
<td>349.89</td>
<td>0.04</td>
<td>0.00</td>
<td>350.72</td>
</tr>
<tr>
<td>Total</td>
<td>0.48</td>
<td>3.27</td>
<td>2.09</td>
<td>0.00</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.00</td>
<td>349.89</td>
<td>349.89</td>
<td>0.04</td>
<td>0.00</td>
<td>350.72</td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vendor</td>
<td>0.04</td>
<td>0.32</td>
<td>0.31</td>
<td>0.00</td>
<td>0.02</td>
<td>0.01</td>
<td>0.03</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>50.21</td>
<td>50.21</td>
<td>0.00</td>
<td>0.00</td>
<td>50.25</td>
</tr>
<tr>
<td>Worker</td>
<td>0.03</td>
<td>0.02</td>
<td>0.25</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.05</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>34.65</td>
<td>34.65</td>
<td>0.00</td>
<td>0.00</td>
<td>34.70</td>
</tr>
<tr>
<td>Total</td>
<td>0.07</td>
<td>0.34</td>
<td>0.56</td>
<td>0.00</td>
<td>0.06</td>
<td>0.01</td>
<td>0.08</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>84.86</td>
<td>84.86</td>
<td>0.00</td>
<td>0.00</td>
<td>84.95</td>
</tr>
</tbody>
</table>
### 3.3 Building Construction - 2013

#### Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>0.48</td>
<td>3.27</td>
<td>2.09</td>
<td>0.00</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.00</td>
<td>349.89</td>
<td>349.89</td>
<td>0.04</td>
<td>0.00</td>
<td>350.72</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.48</td>
<td>3.27</td>
<td>2.09</td>
<td>0.00</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.00</td>
<td>349.89</td>
<td>349.89</td>
<td>0.04</td>
<td>0.00</td>
<td>350.72</td>
<td></td>
</tr>
</tbody>
</table>

#### Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.04</td>
<td>0.32</td>
<td>0.31</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>50.21</td>
<td>50.21</td>
<td>0.00</td>
<td>50.25</td>
</tr>
<tr>
<td>Worker</td>
<td>0.03</td>
<td>0.02</td>
<td>0.25</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>34.65</td>
<td>34.65</td>
<td>0.00</td>
<td>34.70</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.07</td>
<td>0.34</td>
<td>0.56</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>84.86</td>
<td>84.86</td>
<td>0.00</td>
<td>0.00</td>
<td>84.95</td>
<td></td>
</tr>
</tbody>
</table>
### 3.4 Architectural Coating - 2013

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archit. Coating</td>
<td>1.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off-Road</td>
<td>0.02</td>
<td>0.10</td>
<td>0.06</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>8.42</td>
<td>8.42</td>
<td>0.00</td>
<td>0.00</td>
<td>8.44</td>
</tr>
<tr>
<td>Total</td>
<td>1.18</td>
<td>0.10</td>
<td>0.06</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>8.42</td>
<td>8.42</td>
<td>0.00</td>
<td>0.00</td>
<td>8.44</td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.64</td>
<td>1.64</td>
<td>0.00</td>
<td>0.00</td>
<td>1.65</td>
</tr>
<tr>
<td>Worker</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.64</td>
<td>1.64</td>
<td>0.00</td>
<td>0.00</td>
<td>1.65</td>
</tr>
<tr>
<td>Total</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.64</td>
<td>1.64</td>
<td>0.00</td>
<td>0.00</td>
<td>1.65</td>
</tr>
</tbody>
</table>
### 3.4 Architectural Coating - 2013

#### Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archit. Coating</td>
<td>1.16</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Off-Road</td>
<td>0.02</td>
<td>0.10</td>
<td>0.06</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>8.42</td>
<td>8.42</td>
<td>0.00</td>
<td>0.00</td>
<td>8.44</td>
</tr>
<tr>
<td>Total</td>
<td>1.18</td>
<td>0.10</td>
<td>0.06</td>
<td>0.00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>8.42</td>
<td>8.42</td>
<td>0.00</td>
<td>0.00</td>
<td>8.44</td>
</tr>
</tbody>
</table>

#### Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.64</td>
<td>1.64</td>
<td>0.00</td>
<td>0.00</td>
<td>1.65</td>
</tr>
<tr>
<td>Total</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1.64</td>
<td>1.64</td>
<td>0.00</td>
<td>0.00</td>
<td>1.65</td>
</tr>
</tbody>
</table>

### 4.0 Mobile Detail

#### 4.1 Mitigation Measures Mobile
### 4.2 Trip Summary Information

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Average Daily Trip Rate</th>
<th>Unmitigated</th>
<th>Mitigated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Weekly</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td>225.00</td>
<td>621,409</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Saturday</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td>225.00</td>
<td>621,409</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sunday</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td>225.00</td>
<td>621,409</td>
</tr>
</tbody>
</table>

|          |                        | Total       |           |
| Hospital |                        | 225.00      | 621,409   |

### 4.3 Trip Type Information

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Hours</th>
<th>Trip %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours</th>
<th>64.90</th>
<th>16.10</th>
<th>19.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>10.80</td>
<td>7.30</td>
<td>7.30</td>
</tr>
</tbody>
</table>

### 5.0 Energy Detail
5.1 Mitigation Measures Energy

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Mitigated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>611.79</td>
<td>611.79</td>
<td>0.03</td>
<td>0.01</td>
<td></td>
<td>615.62</td>
</tr>
<tr>
<td>Electricity Unmitigated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>611.79</td>
<td>611.79</td>
<td>0.03</td>
<td>0.01</td>
<td></td>
<td>615.62</td>
</tr>
<tr>
<td>NaturalGas Mitigated</td>
<td>0.04</td>
<td>0.33</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>361.86</td>
<td>361.86</td>
<td>0.01</td>
<td>0.01</td>
<td></td>
<td>364.06</td>
</tr>
<tr>
<td>NaturalGas Unmitigated</td>
<td>0.04</td>
<td>0.33</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>361.86</td>
<td>361.86</td>
<td>0.01</td>
<td>0.01</td>
<td></td>
<td>364.06</td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

5.2 Energy by Land Use - NaturalGas

**Unmitigated**

<table>
<thead>
<tr>
<th>NaturalGas Use</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td>kBTU</td>
<td>tons/yr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td>6.781e+006</td>
<td>0.04</td>
<td>0.33</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.03</td>
<td>361.86</td>
<td>361.86</td>
<td>0.01</td>
<td>0.01</td>
<td></td>
<td>364.06</td>
</tr>
<tr>
<td>Total</td>
<td>0.04</td>
<td>0.33</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.03</td>
<td>361.86</td>
<td>361.86</td>
<td>0.01</td>
<td>0.01</td>
<td></td>
<td>364.06</td>
</tr>
</tbody>
</table>
### 5.2 Energy by Land Use - NaturalGas

**Mitigated**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>NaturalGas Use</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>Bio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>6.781e+006</td>
<td>0.04</td>
<td>0.33</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>361.86</td>
<td>0.01</td>
<td>0.01</td>
<td>364.06</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>0.04</td>
<td>0.33</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>361.86</td>
<td>0.01</td>
<td>0.01</td>
<td>364.06</td>
</tr>
</tbody>
</table>

### 5.3 Energy by Land Use - Electricity

**Unmitigated**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Electricity Use</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>2.103e+006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>611.79</td>
<td>0.03</td>
<td>0.01</td>
<td>615.62</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>611.79</td>
<td>0.03</td>
<td>0.01</td>
<td>615.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.3 Energy by Land Use - Electricity

**Mitigated**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Electricity Use kWh</th>
<th>ROG tons/yr</th>
<th>NOx tons/yr</th>
<th>CO tons/yr</th>
<th>SO2 tons/yr</th>
<th>Total CO2 MT</th>
<th>CH4 MT</th>
<th>N2O MT</th>
<th>CO2e MT</th>
<th>Total CO2 MT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>2.103e+006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>611.79</td>
<td>0.03</td>
<td>0.01</td>
<td>615.62</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>611.79</td>
<td>0.03</td>
<td>0.01</td>
<td>615.62</td>
<td></td>
</tr>
</tbody>
</table>

6.0 Area Detail

6.1 Mitigation Measures Area

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG tons/yr</th>
<th>NOx tons/yr</th>
<th>CO tons/yr</th>
<th>SO2 tons/yr</th>
<th>Fugitive PM10 tons/yr</th>
<th>Exhaust PM10 tons/yr</th>
<th>PM10 Total tons/yr</th>
<th>Fugitive PM2.5 tons/yr</th>
<th>Exhaust PM2.5 tons/yr</th>
<th>PM2.5 Total tons/yr</th>
<th>Bio-CO2 MT</th>
<th>NBio-CO2 MT</th>
<th>Total CO2 MT</th>
<th>CH4 MT</th>
<th>N2O MT</th>
<th>CO2e MT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigated</td>
<td>0.51</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Unmitigated</td>
<td>0.51</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
### 6.2 Area by SubCategory

#### Unmitigated

<table>
<thead>
<tr>
<th>SubCategory</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Coating</td>
<td>0.12</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>0.39</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Landscaping</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.51</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Mitigated

<table>
<thead>
<tr>
<th>SubCategory</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Coating</td>
<td>0.12</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>0.39</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Landscaping</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.51</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### 7.0 Water Detail
### 7.1 Mitigation Measures Water

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.78</td>
</tr>
<tr>
<td>Unmitigated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.78</td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

### 7.2 Water by Land Use

#### Unmitigated

<table>
<thead>
<tr>
<th>Indoor/Outdoor Use</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.78</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.78</td>
</tr>
</tbody>
</table>
7.2 Water by Land Use

Mitigated

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Indoor/Outdoor Use</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>35.9255 / 6.84294</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.78</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.92</td>
<td>1.10</td>
<td>0.03</td>
<td>95.78</td>
</tr>
</tbody>
</table>

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

<table>
<thead>
<tr>
<th></th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tons/yr</td>
<td>MT/yr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitigated</td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmitigated</td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
### 8.2 Waste by Land Use

#### Unmitigated

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Waste Disposed</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>1168</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
</tr>
</tbody>
</table>

#### Mitigated

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Waste Disposed</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>1168</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>237.09</td>
<td>14.01</td>
<td>0.00</td>
<td>531.34</td>
</tr>
</tbody>
</table>

### 9.0 Vegetation
1.0 Project Characteristics

1.1 Land Usage

<table>
<thead>
<tr>
<th>Land Uses</th>
<th>Size</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>400</td>
<td>Bed</td>
</tr>
</tbody>
</table>

1.2 Other Project Characteristics

<table>
<thead>
<tr>
<th>Urbanization</th>
<th>Wind Speed (m/s)</th>
<th>Climate Zone</th>
<th>Precipitation Freq (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>3.5</td>
<td>6</td>
<td>58</td>
</tr>
</tbody>
</table>

Utility Company: Pacific Gas & Electric Company

1.3 User Entered Comments

- Project Characteristics:
  - Land Use - project site is approximately 7 acre parcel; existing structures cover a footprint of approximately 100,000 square feet; all new facilities would be contained within the existing structures through renovations.
  - Construction Phase - estimated construction schedule

- Vehicle Trips: 225 average daily trips divided by 400 beds = 0.5625 trips/bed. Source: MRO Traffic Engineers

- Off-road Equipment - utility improvements include fencing, lighting, and other installations

- Off-road Equipment -
## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

<table>
<thead>
<tr>
<th>Year</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>6.41</td>
<td>49.83</td>
<td>27.74</td>
<td>0.07</td>
<td>0.63</td>
<td>2.38</td>
<td>3.01</td>
<td>0.03</td>
<td>2.38</td>
<td>2.41</td>
<td>0.00</td>
<td>6,807.17</td>
<td>0.00</td>
<td>0.56</td>
<td>0.00</td>
<td>6,818.93</td>
</tr>
<tr>
<td>2013</td>
<td>41.57</td>
<td>48.91</td>
<td>29.15</td>
<td>0.07</td>
<td>0.71</td>
<td>2.42</td>
<td>3.13</td>
<td>0.03</td>
<td>2.42</td>
<td>2.45</td>
<td>0.00</td>
<td>7,141.74</td>
<td>0.00</td>
<td>0.57</td>
<td>0.00</td>
<td>7,153.66</td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

#### Mitigated Construction

<table>
<thead>
<tr>
<th>Year</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>6.41</td>
<td>49.83</td>
<td>27.74</td>
<td>0.07</td>
<td>0.03</td>
<td>2.38</td>
<td>2.41</td>
<td>0.03</td>
<td>2.38</td>
<td>2.41</td>
<td>0.00</td>
<td>6,807.17</td>
<td>0.00</td>
<td>0.56</td>
<td>0.00</td>
<td>6,818.93</td>
</tr>
<tr>
<td>2013</td>
<td>41.57</td>
<td>48.91</td>
<td>29.15</td>
<td>0.07</td>
<td>0.03</td>
<td>2.42</td>
<td>2.45</td>
<td>0.03</td>
<td>2.42</td>
<td>2.45</td>
<td>0.00</td>
<td>7,141.74</td>
<td>0.00</td>
<td>0.57</td>
<td>0.00</td>
<td>7,153.66</td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
### 2.2 Overall Operational

#### Unmitigated Operational

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>2.77</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>2.18566</td>
<td>0.04</td>
<td>0.04</td>
<td>2.19896</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>1.62</td>
<td>3.09</td>
<td>14.30</td>
<td>0.02</td>
<td>2.06</td>
<td>0.11</td>
<td>2.16</td>
<td>0.07</td>
<td>0.11</td>
<td>0.18</td>
<td>1.87025</td>
<td>0.10</td>
<td></td>
<td>1.87230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.59</td>
<td>4.91</td>
<td>15.83</td>
<td>0.03</td>
<td>2.06</td>
<td>0.11</td>
<td>2.30</td>
<td>0.07</td>
<td>0.11</td>
<td>0.32</td>
<td>4.05591</td>
<td>0.14</td>
<td>0.04</td>
<td>4.07126</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Mitigated Operational

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>2.77</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>2.18566</td>
<td>0.04</td>
<td>0.04</td>
<td>2.19896</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>1.62</td>
<td>3.09</td>
<td>14.30</td>
<td>0.02</td>
<td>2.06</td>
<td>0.11</td>
<td>2.16</td>
<td>0.07</td>
<td>0.11</td>
<td>0.18</td>
<td>1.87025</td>
<td>0.10</td>
<td></td>
<td>1.87230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.59</td>
<td>4.91</td>
<td>15.83</td>
<td>0.03</td>
<td>2.06</td>
<td>0.11</td>
<td>2.30</td>
<td>0.07</td>
<td>0.11</td>
<td>0.32</td>
<td>4.05591</td>
<td>0.14</td>
<td>0.04</td>
<td>4.07126</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.0 Construction Detail
### 3.1 Mitigation Measures Construction

### 3.2 Utility Improvements - 2012

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>1.82</td>
<td>19.85</td>
<td>6.49</td>
<td>0.03</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>3.045.32</td>
<td>0.16</td>
<td>3.048.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.82</td>
<td>19.85</td>
<td>6.49</td>
<td>0.03</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>3.045.32</td>
<td>0.16</td>
<td>3.048.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.04</td>
<td>0.03</td>
<td>0.35</td>
<td>0.00</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
<td>51.58</td>
<td>0.00</td>
<td>51.65</td>
<td>51.58</td>
<td>0.00</td>
<td></td>
<td>51.65</td>
</tr>
<tr>
<td>Total</td>
<td>0.04</td>
<td>0.03</td>
<td>0.35</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>51.58</td>
<td>0.00</td>
<td>51.65</td>
<td>51.58</td>
<td>0.00</td>
<td></td>
<td>51.65</td>
</tr>
</tbody>
</table>
3.2 Utility Improvements - 2012

**Mitigated Construction On-Site**

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>1.82</td>
<td>19.85</td>
<td>6.49</td>
<td>0.03</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.00</td>
<td>3,045.32</td>
<td>0.16</td>
<td>3,048.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.82</td>
<td>19.85</td>
<td>6.49</td>
<td>0.03</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.00</td>
<td>3,045.32</td>
<td>0.16</td>
<td>3,048.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Mitigated Construction Off-Site**

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker</td>
<td>0.04</td>
<td>0.03</td>
<td>0.35</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>51.58</td>
<td>0.00</td>
<td>51.58</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.04</td>
<td>0.03</td>
<td>0.35</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>51.58</td>
<td>0.00</td>
<td>51.65</td>
<td>51.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.2 Utility Improvements - 2013

### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>1.74</td>
<td>18.19</td>
<td>6.27</td>
<td>0.03</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>3,045.32</td>
<td>0.16</td>
<td>3,048.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.74</td>
<td>18.19</td>
<td>6.27</td>
<td>0.03</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>3,045.32</td>
<td>0.16</td>
<td>3,048.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.03</td>
<td>0.03</td>
<td>0.32</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>50.41</td>
<td>0.00</td>
<td>50.47</td>
<td>0.00</td>
<td>0.00</td>
<td>50.47</td>
</tr>
<tr>
<td>Total</td>
<td>0.03</td>
<td>0.03</td>
<td>0.32</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>50.41</td>
<td>0.00</td>
<td>50.47</td>
<td>0.00</td>
<td>0.00</td>
<td>50.47</td>
</tr>
</tbody>
</table>
### Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>1.74</td>
<td>18.19</td>
<td>6.27</td>
<td>0.03</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.00</td>
<td>3,045.32</td>
<td>0.16</td>
<td>3,048.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.74</td>
<td>18.19</td>
<td>6.27</td>
<td>0.03</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.58</td>
<td>0.00</td>
<td>3,045.32</td>
<td>0.16</td>
<td>3,048.59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.03</td>
<td>0.03</td>
<td>0.32</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>50.41</td>
<td>0.00</td>
<td>50.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.03</td>
<td>0.03</td>
<td>0.32</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>50.41</td>
<td>0.00</td>
<td>50.47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3.3 Building Construction - 2012

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>4.03</td>
<td>27.07</td>
<td>16.28</td>
<td>0.03</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>2,956.30</td>
<td>0.36</td>
<td>2,963.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.03</td>
<td>27.07</td>
<td>16.28</td>
<td>0.03</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>2,956.30</td>
<td>0.36</td>
<td>2,963.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.29</td>
<td>2.67</td>
<td>2.36</td>
<td>0.00</td>
<td>0.15</td>
<td>0.08</td>
<td>0.23</td>
<td>0.01</td>
<td>0.08</td>
<td>0.09</td>
<td>423.85</td>
<td>0.01</td>
<td>424.14</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Worker</td>
<td>0.23</td>
<td>0.20</td>
<td>2.25</td>
<td>0.00</td>
<td>0.42</td>
<td>0.01</td>
<td>0.43</td>
<td>0.02</td>
<td>0.01</td>
<td>0.03</td>
<td>330.12</td>
<td>0.02</td>
<td>330.54</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Total</td>
<td>0.52</td>
<td>2.87</td>
<td>4.61</td>
<td>0.00</td>
<td>0.57</td>
<td>0.09</td>
<td>0.66</td>
<td>0.03</td>
<td>0.09</td>
<td>0.12</td>
<td>753.97</td>
<td>0.03</td>
<td>754.68</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
</tr>
</tbody>
</table>
### 3.3 Building Construction - 2012

#### Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>4.03</td>
<td>27.07</td>
<td>16.28</td>
<td>0.03</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>0.00</td>
<td>2,956.30</td>
<td>0.36</td>
<td>2,963.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.03</td>
<td>27.07</td>
<td>16.28</td>
<td>0.03</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>1.64</td>
<td>0.00</td>
<td>2,956.30</td>
<td>0.36</td>
<td>2,963.91</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.29</td>
<td>2.67</td>
<td>2.36</td>
<td>0.00</td>
<td>0.01</td>
<td>0.08</td>
<td>0.09</td>
<td>0.01</td>
<td>0.08</td>
<td>0.09</td>
<td>423.85</td>
<td>0.01</td>
<td>424.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker</td>
<td>0.23</td>
<td>0.20</td>
<td>2.25</td>
<td>0.00</td>
<td>0.02</td>
<td>0.01</td>
<td>0.03</td>
<td>0.02</td>
<td>0.01</td>
<td>0.03</td>
<td>330.12</td>
<td>0.02</td>
<td>330.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.52</td>
<td>2.87</td>
<td>4.61</td>
<td>0.00</td>
<td>0.03</td>
<td>0.09</td>
<td>0.12</td>
<td>0.03</td>
<td>0.09</td>
<td>0.12</td>
<td>753.97</td>
<td>0.03</td>
<td>754.68</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

9 of 18
### 3.3 Building Construction - 2013

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-Road</td>
<td>3.72</td>
<td>25.09</td>
<td>16.06</td>
<td>0.03</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>2,956.30</td>
<td>0.33</td>
<td>2,963.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.72</td>
<td>25.09</td>
<td>16.06</td>
<td>0.03</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>1.48</td>
<td>2,956.30</td>
<td>0.33</td>
<td>2,963.27</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vendor</td>
<td>0.26</td>
<td>2.42</td>
<td>2.13</td>
<td>0.00</td>
<td>0.15</td>
<td>0.07</td>
<td>0.22</td>
<td>0.01</td>
<td>0.07</td>
<td>0.08</td>
<td>425.40</td>
<td>0.01</td>
<td>425.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker</td>
<td>0.21</td>
<td>0.18</td>
<td>2.05</td>
<td>0.00</td>
<td>0.42</td>
<td>0.01</td>
<td>0.43</td>
<td>0.02</td>
<td>0.01</td>
<td>0.03</td>
<td>322.63</td>
<td>0.02</td>
<td>323.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.47</td>
<td>2.60</td>
<td>4.18</td>
<td>0.00</td>
<td>0.57</td>
<td>0.08</td>
<td>0.65</td>
<td>0.03</td>
<td>0.08</td>
<td>0.11</td>
<td>748.03</td>
<td>0.03</td>
<td>748.67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3.3 Building Construction - 2013

#### Mitigated Construction On-Site

| Category         | ROG | NOx | CO  | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------------------|-----|-----|-----|-----|----------------|--------------|------------|----------------|--------------|------------|----------|----------|----------|----------|-----|-----|------|
| Off-Road         | 3.72| 25.09| 16.06| 0.03| 1.48           | 1.48         | 1.48       | 1.48           | 1.48         | 0.00       | 2,956.30 | 0.33     | 2,963.27 |
| Total            | 3.72| 25.09| 16.06| 0.03| 1.48           | 1.48         | 1.48       | 1.48           | 1.48         | 0.00       | 2,956.30 | 0.33     | 2,963.27 |

#### Mitigated Construction Off-Site

| Category | ROG | NOx | CO  | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|-----|-----|-----|-----|----------------|--------------|------------|----------------|--------------|------------|----------|----------|----------|----------|-----|-----|------|
| Hauling  | 0.00| 0.00| 0.00| 0.00| 0.00           | 0.00         | 0.00       | 0.00           | 0.00         | 0.00       | 0.00     | 0.00     | 0.00     | 0.00     |     |
| Vendor   | 0.26| 2.42| 2.13| 0.00| 0.01           | 0.07         | 0.08       | 0.07           | 0.08         | 0.00       | 425.40   | 0.01     | 425.66   | 0.00     | 0.00     |     |
| Worker   | 0.21| 0.18| 2.05| 0.00| 0.02           | 0.01         | 0.03       | 0.02           | 0.01         | 0.00       | 322.63   | 0.02     | 323.01   | 0.00     | 0.00     |     |
| Total    | 0.47| 2.60| 4.18| 0.00| 0.03           | 0.08         | 0.11       | 0.03           | 0.08         | 0.11       | 748.03   | 0.03     | 748.67   | 0.00     | 0.00     |     |
### 3.4 Architectural Coating - 2013

#### Unmitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archit. Coating</td>
<td>35.08</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Off-Road</td>
<td>0.49</td>
<td>2.96</td>
<td>1.94</td>
<td>0.00</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>281.19</td>
<td>0.04</td>
<td>282.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35.57</td>
<td>2.96</td>
<td>1.94</td>
<td>0.00</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>281.19</td>
<td>0.04</td>
<td>282.10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Unmitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.04</td>
<td>0.03</td>
<td>0.38</td>
<td>0.00</td>
<td>0.08</td>
<td>0.00</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>60.49</td>
<td>0.00</td>
<td>60.56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.04</td>
<td>0.03</td>
<td>0.38</td>
<td>0.00</td>
<td>0.08</td>
<td>0.00</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>60.49</td>
<td>0.00</td>
<td>60.56</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3.4 Architectural Coating - 2013

#### Mitigated Construction On-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect. Coating</td>
<td>35.08</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Off-Road</td>
<td>0.49</td>
<td>2.96</td>
<td>1.94</td>
<td>0.00</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.00</td>
<td>281.19</td>
<td>0.04</td>
<td>282.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35.57</td>
<td>3.45</td>
<td>3.88</td>
<td>0.00</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.27</td>
<td>0.00</td>
<td>281.19</td>
<td>0.04</td>
<td>282.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Mitigated Construction Off-Site

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hauling</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vendor</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Worker</td>
<td>0.04</td>
<td>0.03</td>
<td>0.38</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>60.49</td>
<td>0.00</td>
<td>60.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.04</td>
<td>0.03</td>
<td>0.38</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>60.49</td>
<td>0.00</td>
<td>60.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4.0 Mobile Detail

#### 4.1 Mitigation Measures Mobile
### 4.2 Trip Summary Information

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Average Daily Trip Rate</th>
<th>Unmitigated</th>
<th>Mitigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>225.00</td>
<td>225.00</td>
<td>225.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>621,409</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>621,409</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>225.00</td>
<td>225.00</td>
<td>225.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>621,409</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>621,409</td>
</tr>
</tbody>
</table>

### 4.3 Trip Type Information

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Miles</th>
<th>Trip %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>H-W or C-W</td>
<td>H-S or C-C</td>
</tr>
<tr>
<td></td>
<td>10.80</td>
<td>7.30</td>
</tr>
</tbody>
</table>

### 5.0 Energy Detail
## 5.1 Mitigation Measures Energy

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>NaturalGas Mitigated</td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>2,185.66</td>
<td>0.04</td>
<td>2,198.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NaturalGas Unmitigated</td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>2,185.66</td>
<td>0.04</td>
<td>2,198.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

<table>
<thead>
<tr>
<th>Land Use</th>
<th>NaturalGas Use</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>18578.1</td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>2,185.66</td>
<td>0.04</td>
<td>2,198.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>2,185.66</td>
<td>0.04</td>
<td>0.04</td>
<td>2,198.96</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.2 Energy by Land Use - NaturalGas

**Mitigated**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>NaturalGas Use</th>
<th>ROG lb/day</th>
<th>NOx lb/day</th>
<th>CO lb/day</th>
<th>SO2 lb/day</th>
<th>Fugitive PM10 lb/day</th>
<th>Exhaust PM10 lb/day</th>
<th>PM10 lb/day</th>
<th>Fugitive PM2.5 lb/day</th>
<th>Exhaust PM2.5 lb/day</th>
<th>PM2.5 lb/day</th>
<th>Bio- CO2 lb/day</th>
<th>NBio-CO2 lb/day</th>
<th>Total CO2 lb/day</th>
<th>CH4 lb/day</th>
<th>N2O lb/day</th>
<th>CO2e lb/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>18.5781</td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>2,185.66</td>
<td>0.04</td>
<td>0.04</td>
<td>2,198.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>0.20</td>
<td>1.82</td>
<td>1.53</td>
<td>0.01</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
<td>0.14</td>
<td>2,185.66</td>
<td>0.04</td>
<td>0.04</td>
<td>2,198.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.0 Area Detail

6.1 Mitigation Measures Area

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG lb/day</th>
<th>NOx lb/day</th>
<th>CO lb/day</th>
<th>SO2 lb/day</th>
<th>Fugitive PM10 lb/day</th>
<th>Exhaust PM10 lb/day</th>
<th>PM10 lb/day</th>
<th>Fugitive PM2.5 lb/day</th>
<th>Exhaust PM2.5 lb/day</th>
<th>PM2.5 lb/day</th>
<th>Bio- CO2 lb/day</th>
<th>NBio-CO2 lb/day</th>
<th>Total CO2 lb/day</th>
<th>CH4 lb/day</th>
<th>N2O lb/day</th>
<th>CO2e lb/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigated</td>
<td>2.77</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Unmitigated</td>
<td>2.77</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
### 6.2 Area by SubCategory

#### Unmitigated

<table>
<thead>
<tr>
<th>SubCategory</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Coating</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>2.14</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Landscaping</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>2.77</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Mitigated

<table>
<thead>
<tr>
<th>SubCategory</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Coating</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>2.14</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Landscaping</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>2.77</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

### 7.0 Water Detail
7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation