

Ohlone Community College District

2012 District Facilities Master Plan Draft Environmental Impact Report

SCH No. 2013012021

Volume II - Appendices



Prepared for:
Ohlone Community College District
43600 Mission Boulevard
Fremont, California 94539

Submitted by:



IMPACT SCIENCES, INC.

555 12th Street, Suite 1650
Oakland, California 94607

June 2013

Ohlone Community College District
2012 District Facilities Master Plan
Draft Environmental Impact Report

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Notice of Preparation and Initial Study

State of California
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

**NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT**

Project Title: Ohlone Community College District 2012 District Facilities Master Plan

Lead Agency: Ohlone Community College District Board of Trustees

Project Location: Ohlone Community College, Fremont Campus
43600 Mission Boulevard, Fremont, California 94539

County: Alameda County

Contact Person: Mr. Ron Little
Vice President of Administrative Services
43600 Mission Boulevard
Fremont, California 94539

The Ohlone Community College District (OCCD) proposes to adopt the 2012 District Facilities Master Plan (DFMP) for the Ohlone Community College campus in Fremont, California. The 2012 DFMP is a plan for the reorganization and redevelopment of campus facilities and the reconfiguration of campus access and circulation to serve the projected student population as well as current and new educational programs. The recommendations contained in the 2012 DFMP address the current and projected needs of the campus through 2023. Facility recommendations contained in the plan include demolition/removal of existing buildings on campus; construction of new buildings; and renovation of existing buildings on campus to meet the future program needs.

Environmental Review and Comment

The OCCD will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the proposed project. An Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines to identify potential environmental impacts that will be addressed in the EIR (see **Attachment A**). The attached Initial Study also includes a more detailed description of the proposed project. At this time, it is anticipated that the EIR will address environmental impacts in the following resource areas: aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, transportation and traffic, and utilities and service systems.

The OCCD will hold a public scoping meeting for the OCCD 2012 DFMP EIR on January 23, 2013. The public scoping meeting will be held in Room 107 in Building 7 on the Fremont campus from 6:30 PM to 8:30 PM.

A copy of this NOP will be placed on the campus' website at ohlone.edu.

We request your views as to the scope and contents of the EIR for the proposed project. This NOP is being circulated for 30 days from January 9, 2013 through February 8, 2013. Your response must be received no later than 5:00 PM on February 8, 2013. Your name should be included with your response. Please send your response to the attention of Ron Little at the address noted above or via email to the following address: **rlittle@ohlone.edu**. **Email responses must also be received no later than 5:00 PM on February 8, 2013.**

If you have any questions regarding this NOP, please contact Ron Little at the above address or via email at **rlittle@ohlone.edu**.

Signature: _____ Date: _____
Ron Little
Vice President of Administrative Services
Ohlone Community College District

Attachment A: Initial Study

State of California
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

**NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT**

Project Title: Ohlone Community College District 2012 District Facilities Master Plan

Lead Agency: Ohlone Community College District Board of Trustees

Project Location: Ohlone Community College, Fremont Campus
43600 Mission Boulevard, Fremont, California 94539

County: Alameda County

Contact Person: Mr. Ron Little
Vice President of Administrative Services
43600 Mission Boulevard
Fremont, California 94539

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Environmental Review and Comment

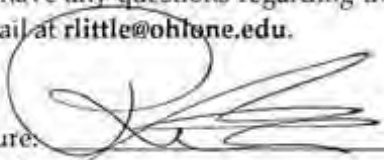
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If you have any questions regarding this NOP, please contact Ron Little at the above address or via email at rlittle@ohlone.edu.

Signature: 

Ron Little

Vice President of Administrative Services
Ohlone Community College District

Date: 1/8/13

Attachment A: Initial Study

OHLONE COMMUNITY COLLEGE 2012 DISTRICT FACILITIES MASTER PLAN

Initial Study

The following Initial Study has been prepared in compliance with CEQA.

Prepared For:

Ohlone Community College District
43600 Mission Boulevard
Fremont, California 94539
Contact: Ron Little

Prepared By:

Impact Sciences, Inc.
555 12th Street, Suite 1650
Oakland, California 94607
(510) 267-0494
Contact: Jennifer Millman

January 2013

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INTRODUCTION

Initial Study

Pursuant to Section 15063 of the *California Environmental Quality Act (CEQA) Guidelines* (Title 14, California Code of Regulations, Sections 15000 et seq.), an Initial Study is a preliminary environmental analysis that is used by the lead agency as a basis for determining whether an Environmental Impact Report (EIR), a Mitigated Negative Declaration, or a Negative Declaration is required for a project. The *State CEQA Guidelines* require that an Initial Study contain a project description, description of environmental setting, identification of environmental effects by checklist or other similar form, explanation of environmental effects, discussion of mitigation for significant environmental effects, evaluation of the project's consistency with existing, applicable land use controls, and the names of persons who prepared the study.

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed Ohlone Community College District (OCCD) 2012 District Facilities Master Plan (2012 DFMP) and to determine what level of additional environmental review, if any, is appropriate. As shown in the determination in **Section IV** of this document and based on the analysis contained in this Initial Study, the OCCD has determined that the 2012 DFMP could result in potentially significant impacts; therefore, preparation of an EIR is appropriate.

Anticipated Project Approvals

The OCCD will prepare an EIR that fully evaluates the environmental effects associated with the implementation of the 2012 DFMP. Necessary project approvals are anticipated to include, but are not limited to, consideration of the following by the OCCD Board of Trustees (anticipated in spring 2013):

- Certification of the OCCD 2012 DFMP EIR and
- Approval of the proposed OCCD 2012 DFMP.

Public and Agency Review

The Notice of Preparation (NOP) for the EIR and this Initial Study will be circulated for public and agency review from January 9, 2013 through February 8, 2013. Copies of the Initial Study are available during normal operating hours at the District office at the address below and online at <http://www.ohlone.edu/>. Comments on the NOP/Initial Study must be received by 5:00 PM on February 8, 2013. They may be e-mailed to rlittle@ohlone.edu or sent to:

Ohlone Community College District
43600 Mission Boulevard
Fremont, California 94539
Attn: Ron Little

A public scoping meeting for the 2012 DFMP EIR will be held on January 23, 2013 on the Fremont campus at 43600 Mission Boulevard, Fremont, from 6:30 PM to 8:30 PM. The public and agency review period for the Draft EIR is anticipated to commence in spring 2013.

Organization of the Initial Study

This Initial Study is organized into the following sections.

- **Section I – Project Information:** provides summary background information about the proposed project, including project location, lead agency, and contact information.
- **Section II – Project Location and Description:** includes a description of the proposed project, including the need for the project, the project's objectives, and the elements included in the project.
- **Section III – Environmental Factors Potentially Affected:** identifies what environmental resources, if any, would involve at least one significant or potentially significant impact that cannot be reduced to a less than significant level.
- **Section IV – Determination:** indicates whether impacts associated with the proposed project would be significant, and what, if any, additional environmental documentation is required.
- **Section V – Evaluation of Environmental Impacts:** contains the Environmental Checklist form for each resource. The checklist is used to assist in evaluating the potential environmental impacts of the proposed project. This section also presents an explanation of all checklist answers.
- **Section VI – Supporting Information Sources:** lists references used in the preparation of this document.
- **Section VII – Initial Study Preparers:** lists the names of individuals involved in the preparation of this document.

I. PROJECT INFORMATION

1. Project title:

Ohlone Community College District 2012 District Facilities Master Plan

2. Lead agency name and address:

Ohlone Community College District Board of Trustees
43600 Mission Boulevard
Fremont, California 94539-5847

3. Contact person and phone number:

Ron Little
(510) 659-7307
rlittle@ohlone.edu

4. Project location:

Ohlone Community College
Fremont Campus
43600 Mission Boulevard
Fremont, California 94539-5847

5. Project sponsor's name and address:

Ohlone Community College District
43600 Mission Boulevard
Fremont, California 94539

6. Custodian of the administrative record for this project (if different from response to **item 3** above.):

Same as above.

II. PROJECT DESCRIPTION

Project Location

The proposed Ohlone Community College District 2012 District Facilities Master Plan (2012 DFMP) addresses facilities at two locations: the Fremont Campus is located at 43600 Mission Boulevard in the City of Fremont and the Newark Campus is located approximately 5 miles to the west at 39399 Cherry Street in the City of Newark. However, this Initial Study and the EIR that will be prepared for the 2012 DFMP address only proposed improvements at the Fremont Campus, as the Newark campus improvements have been separately submitted for environmental review and District approval.

The Fremont Campus is located to the east of Interstate 680 (I-680) and is bounded by residential neighborhoods to the north and south, Mission Boulevard to the west and the Mission Hills to the east. The location of the Fremont Campus is identified in **Figure 1, Regional and Site Location**.

Project Need

The proposed DFMP presents a translation of the Ohlone College education program into a series of site and facilities recommendations. It includes the analysis of existing conditions, the quantification of planning data to forecast projected space needs, facilities planning principles to guide development, and the identification of site and facilities recommendations for each campus. The 2012 DFMP replaces the following previously prepared campus master plans:

- *Ohlone Fremont Campus 15-Year Facilities Master Plan*, approved in April 2010; and
- *Ohlone College Newark Center for Technology & Health Sciences Master Plan*, approved in December 2003.

In November 2010 Measure G was passed to address the majority of the recommendations included in the 2010 *Fremont Campus 15-Year Facilities Master Plan*. The 2012 DFMP builds upon the Measure G Bridge Document developed in June 2011, which identified the factors impacting the recommendations contained in previous facilities master plans.

The purpose of the 2012 DFMP is to update and consolidate all previous facilities master plan documents into a single master plan for all district facilities. The 2012 DFMP will serve as OCCD's planning roadmap and incorporates and supersedes all previous recommendations. The improvements for the Newark campus identified in the DFMP are substantially the same as those identified in the 2003 Master Plan for that campus.

Project Characteristics

The 2012 DFMP is a plan for the reorganization and redevelopment of campus facilities and the

reconfiguration of campus access and circulation to serve the projected student population as well as current and new educational programs. The 2012 DFMP for the Fremont Campus is depicted in **Figure 2, 2012 District Facilities Master Plan**. The recommendations contained in the 2012 DFMP address the current and projected needs of the campus through 2023.

The recommendations contained in the 2012 DFMP include (1) facilities recommendations; (2) site improvement recommendations; and (3) phasing priorities. A description of each of these elements is provided below.

Facilities Recommendations

The DFMP includes projections of future space needs based on enrollment forecasts and program needs. **Table 1, Existing Building Space and Future Space Needs**, shows current and projected space needs by function. These needs would be met by demolition and replacement of buildings that have exceeded their useful lifespan and are not suitable for future program needs and through renovation of some existing buildings and facilities.

Table 1
Existing Building Space and Future Space Needs

Space Type	Existing (ASF) ¹	DFMP Projected Need (ASF)
Lecture	32,356	32,429
Lab	58,837	77,000
Office	45,188	46,760
Library	30,066	36,236
Instructional Media	7,117	12,635
Other	113,182	79,115
Totals	286,746	284,175

Notes:

¹ ASF = Assignable Square Feet (gross square footage is approximately 35 percent greater than ASF)

Source: Ohlone Community College District Facilities Master Plan, 2012.

Demolition and Removal

The removal of temporary facilities will take place as functions move to new or repurposed permanent space. Permanent facilities that have aged beyond their useful lifespan will be demolished as functions move to new or renovated facilities. Buildings to be demolished and

replaced include:

- Building 1;
- Building 2;
- Building 3;
- Building 4;
- Building 8;
- Building 14 (temporary facility);
- Building 16 (temporary facility); and
- Building 18 (temporary facility).

The location of each of these facilities is shown in **Figure 3, Proposed Demolition/Removal**.

New Construction

Several new buildings would be constructed to replace outdated buildings and reconfigure the central campus to meet projected space and function needs. These are shown on **Figure 2** as Buildings A, B, C, D, and E. These buildings would replace the existing Buildings 1, 2, 3, 4, and 8 and would create a new academic core complex. The proposed new buildings would provide classroom, laboratory, office, library, and other academic and support spaces. Building F would provide support space for the reconfigured baseball and softball fields and the new soccer field. The proposed new buildings would include approximately 179,700 gross square feet (gsf) (116,805 of assignable square feet [asf]). As the new buildings would replace 178,699 gsf (104,508 asf), the 2012 DFMP would result in a slight increase of 1,031 gsf (12,297 asf).

The new buildings would be designed with floor plans and areas that would allow classroom, laboratory, office, and study/gathering space to exist on the same floor levels and would have entrances located along the main east-west axis of the campus. New plazas and open spaces would be located along the central axis and between the buildings to provide outdoor use and gathering spaces as well as connections to other campus buildings. **Figure 3, Upper Campus Conceptual View**, shows the proposed massing and general placement of Buildings A through E and their surroundings.

Three new parking structures, shown as P1, P2, and P3 on **Figure 4, Proposed Vehicle Circulation**, would be constructed on the north and south ends of the upper campus. These three structures would provide 1,620 parking spaces and existing parking lots would be reconfigured for a campus total of 2,527 parking spaces, or an increase of 122 spaces from the existing parking total.

Renovation and Modernization

The renovation of the existing buildings would include the complete or partial repurposing of the facility. Renovation projects would allow campus functions to improve student access to services, create more usable spaces to foster collaborative learning, improve operational efficiency, and address the secondary effects of constructing new space.

In addition to the buildings that have been identified for renovation, many existing buildings on the campus require significant repairs. Although the buildings are maintained, many are aged and have systems and finishes needing replacement. Modernization work is recommended for all facilities for which a significant change in use is not planned. Such work would accomplish the following objectives:

- Repairs and upgrades for safety and accessibility (ADA compliance);
- Upgrades to mechanical systems;
- Upgrades of technology systems;
- Refreshment of finishes and furniture systems; and
- Upgrades for sustainability and efficiency.

Buildings to be renovated or modernized to meet new program needs and code requirements include:

- Building 5;
- Building 6;
- Building 9 (Gymnasium); and
- Building 12 (Hyman Hall).

Site Improvement Recommendations

In addition to the recommendations for facilities, a series of site improvement recommendations were identified in the 2012 DFMP, consisting of a vehicular circulation plan (shown in **Figure 4, Proposed Vehicular Circulation**), parking capacity improvements (shown in **Figure 4**), extensive pedestrian circulation improvements (shown in **Figure 5, Proposed Pedestrian Circulation**), lighting improvements, reconfiguration of the athletic fields, and landscape improvements (shown in **Figure 6, Proposed Landscape Improvements**) (OCCD 2012).

Phasing

Construction of new instructional space for science programs is a priority to replace the buildings

scheduled for demolition. The additional new buildings and demolition of existing facilities would be coordinated to reduce swing space requirements and costs.

Site infrastructure improvements identified in the DFMP would continue to provide connections to existing facility operations as well as create connection points for future operations. Further investigation will determine the scope of needed infrastructure improvements.

Population

Enrollment at the District is projected to increase from 9,904 in 2011 to 11,271 by 2018 and 12,143 in 2023. Approximately 70 percent of the District's enrollment is at the Fremont campus.

Project Objectives

The primary objective of the 2012 DFMP is to provide the necessary facilities to accommodate the student population and current and future program needs.

Surrounding Land Uses and Environmental Setting

The Fremont campus is located in an urban settings characterized by substantial commercial and residential development, as shown in **Figure 7, Surrounding Land Uses**.

Nearby uses at the campus include residential development to the north of Witherly Lane, residential and commercial development to the west of Mission Boulevard, and residential development to the south of the campus. To the east of campus is open space. Mission San Jose Bicentennial Park is located approximately 0.2 mile north of the campus and Mission San Jose Park is located approximately 0.3 mile west.

Discretionary Approval Authority and Other Public Agency Approvals

As the public entity principally responsible for approving or carrying out the proposed project, the OCCD is the Lead Agency under CEQA and is responsible for reviewing and certifying the adequacy of the environmental document and approving the proposed project. The OCCD Board of Trustees would make decisions on project approval.

The project may also require approval from the following public agencies:

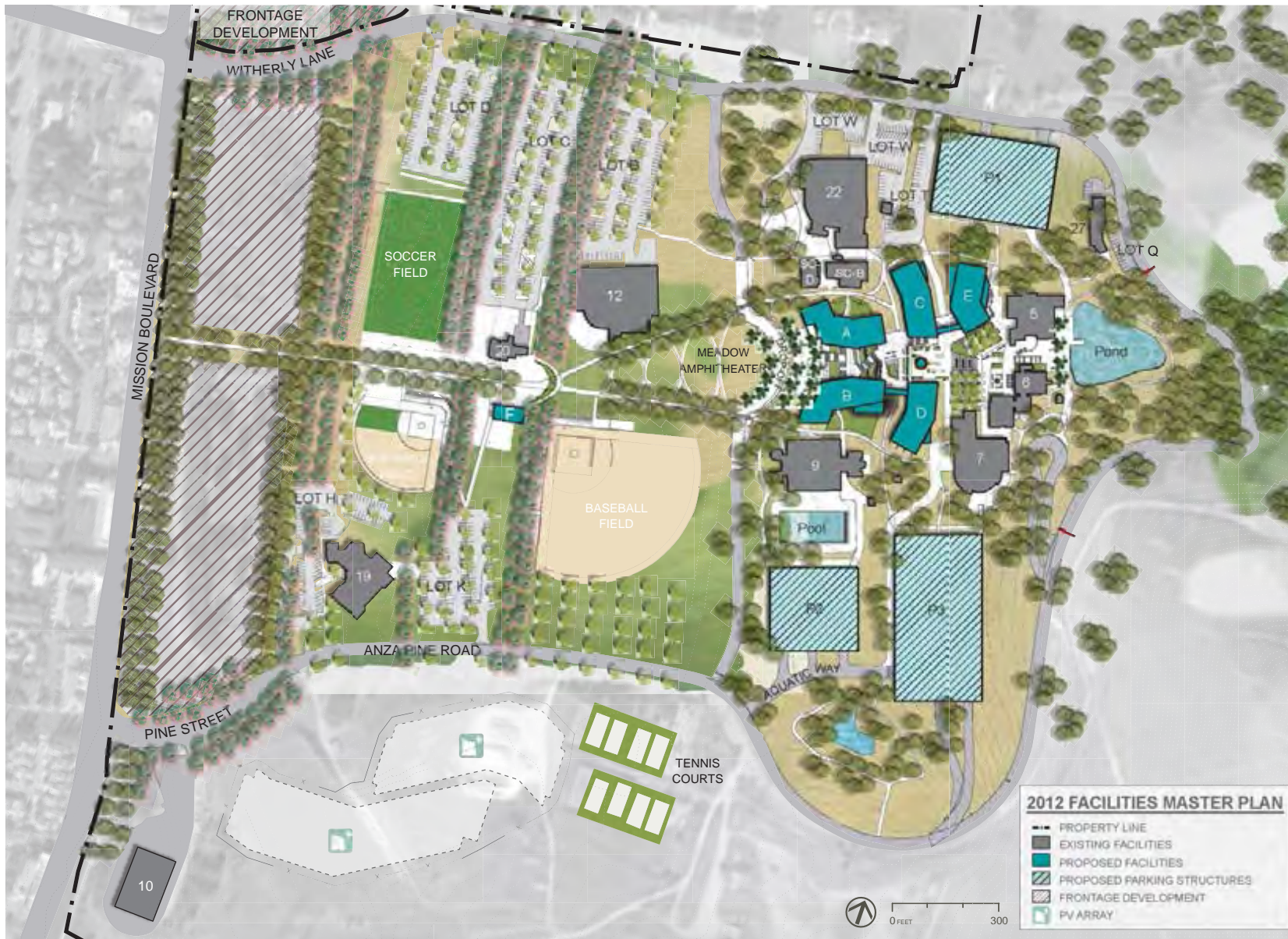
- Division of the State Architect (DSA) for buildings, handicap accessibility, and fire and life safety;
- State of California Department of Water Resources;
- Alameda County Water District;
- City of Fremont Public Works for any work involving an encroachment in a city street; and
- City of Fremont Fire Department for site access and fire hydrants/water pressure.



SOURCE: Impact Sciences, Inc., September 2012

FIGURE 1

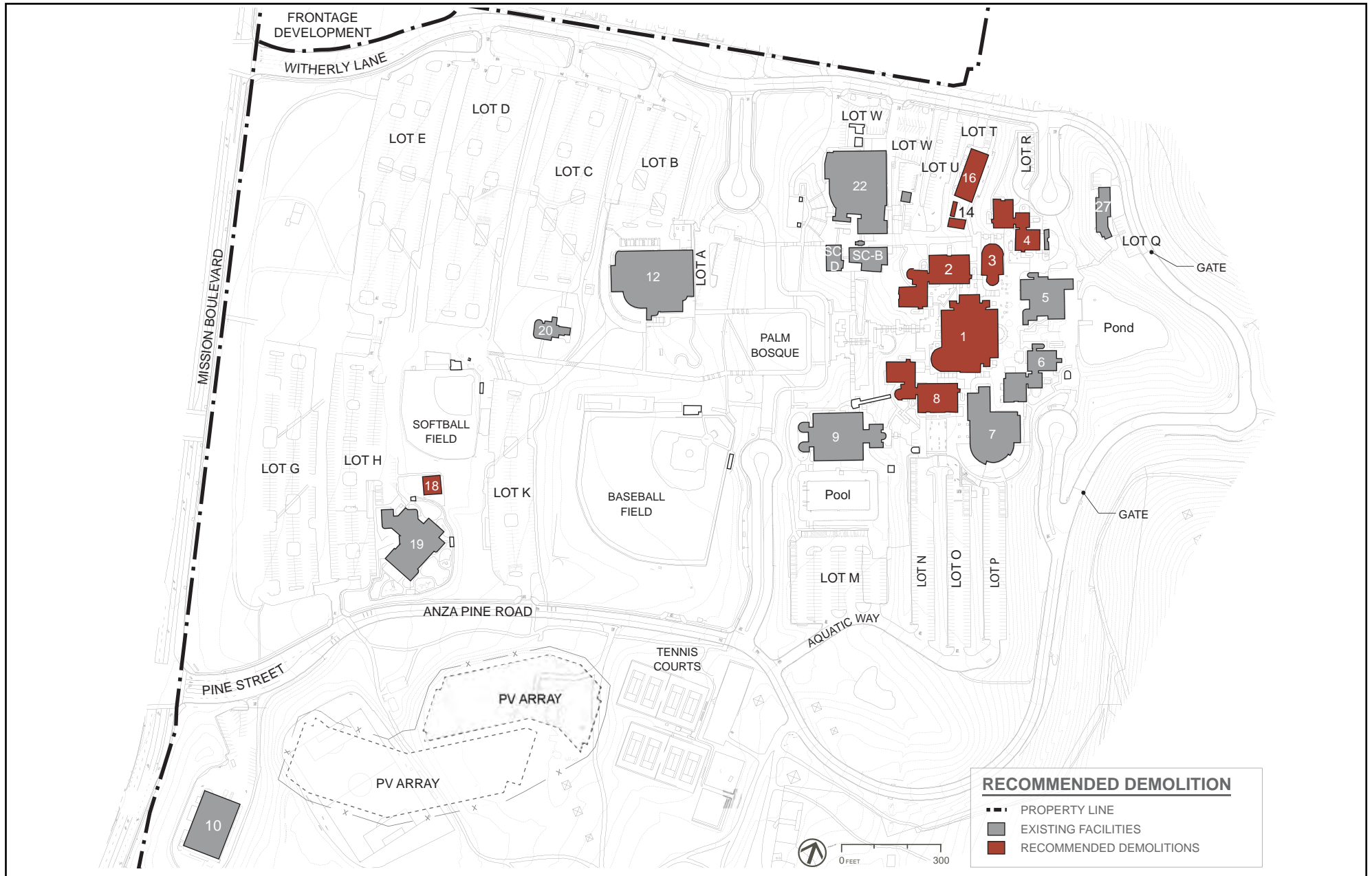
Regional and Site Location



SOURCE: OCCD, 2012

FIGURE 2

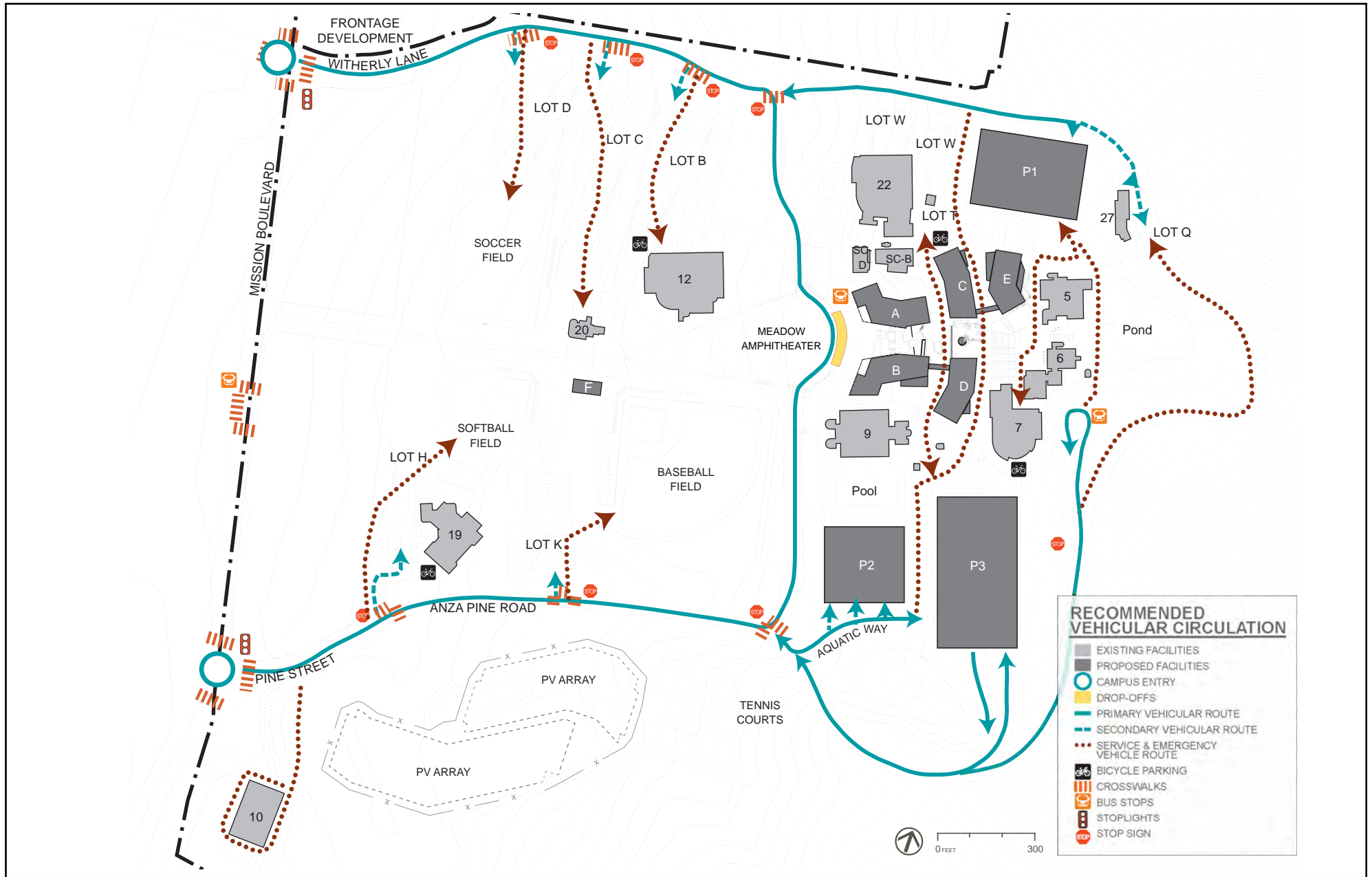
2012 District Facilities Master Plan



SOURCE: OCCD, 2012

FIGURE 3

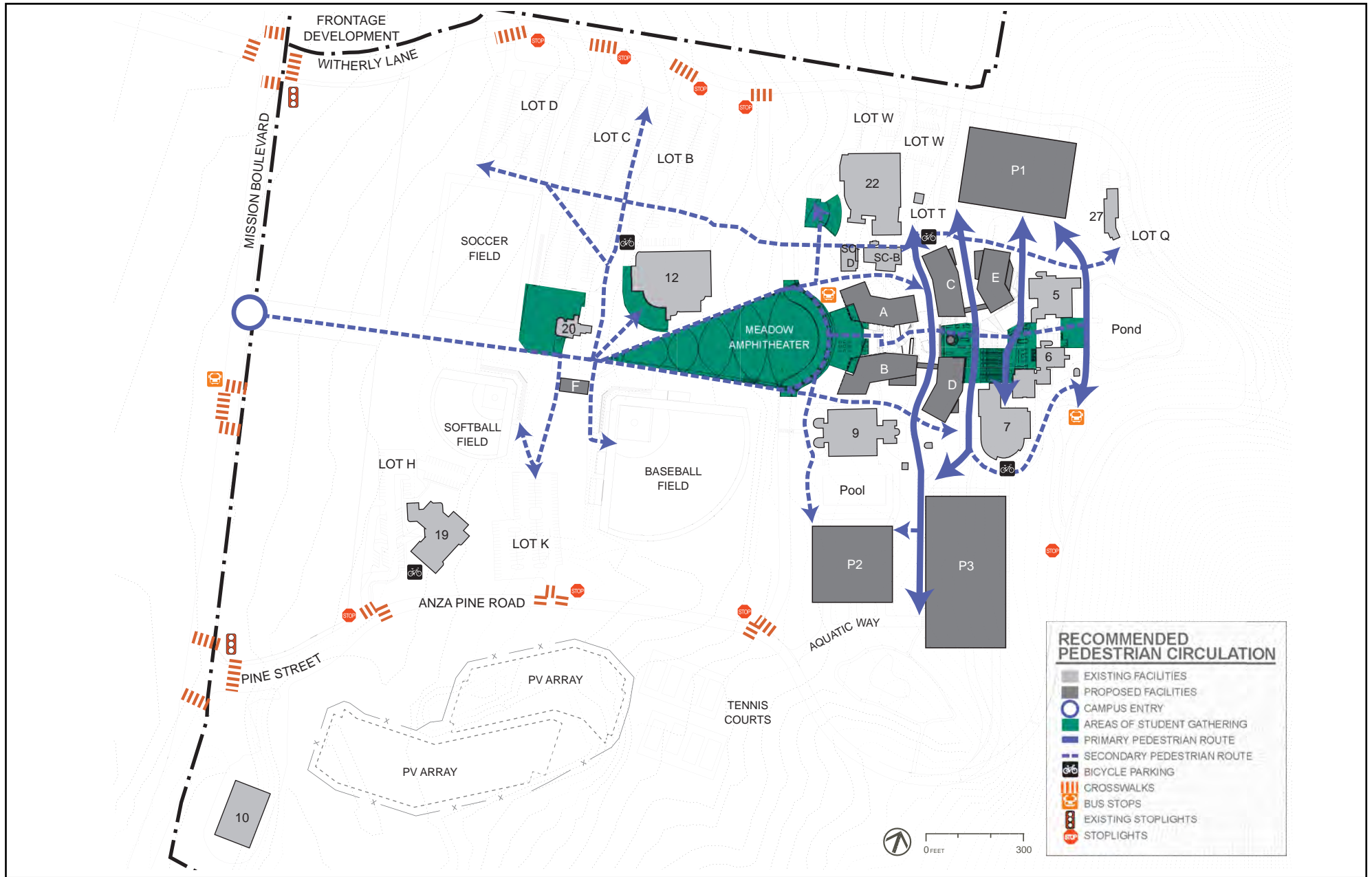
Proposed Demolition / Removal



SOURCE: OCCD, 2012

FIGURE 4

Proposed Vehicular Circulation



SOURCE: OCCD, 2012

FIGURE 5

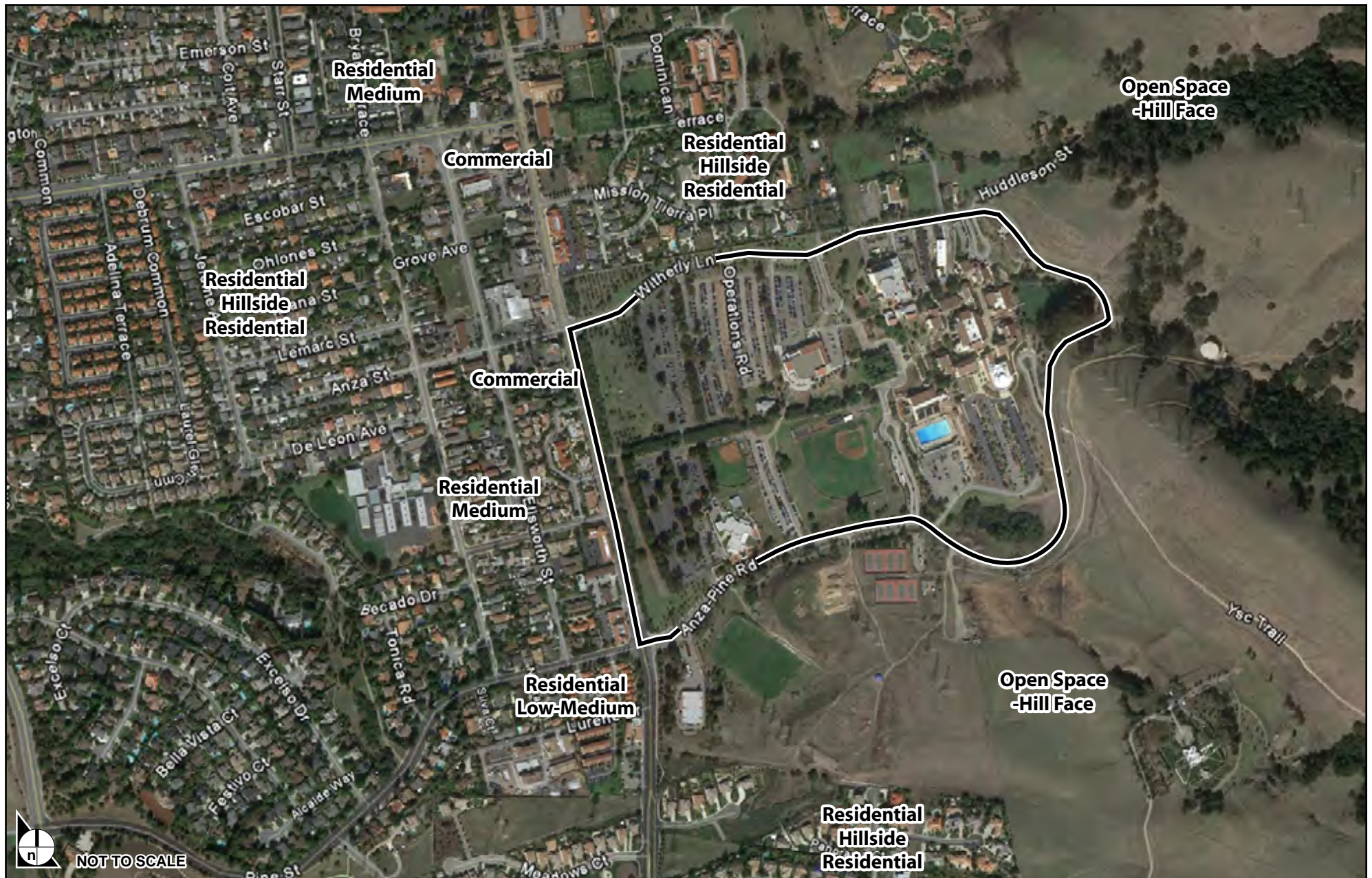
Proposed Pedestrian Circulation



SOURCE: OCCD, 2012

FIGURE 6

Proposed Landscape Improvements



SOURCE: Freemont, 2011

FIGURE 7

Surrounding Land Uses

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below could be potentially affected by the implementation of the 2012 DFMP and/or by cumulative impacts resulting from implementation of the 2012 DFMP in conjunction with other expected developments through 2023. These factors will be evaluated in the EIR.

- | | |
|-----------------------------|--------------------------------------|
| ▪ Aesthetics | □ Agriculture and Forest Resources |
| ▪ Air Quality | ▪ Biological Resources |
| ▪ Cultural Resources | ▪ Geology and Soils |
| ▪ Greenhouse Gas Emissions | □ Hazards & Hazardous Materials |
| ▪ Hydrology/Water Quality | ▪ Land Use/Planning |
| □ Mineral Resources | ▪ Noise |
| □ Population and Housing | □ Public Services |
| ▪ Recreation | ▪ Transportation/Circulation |
| ▪ Utilities/Service Systems | ▪ Mandatory Findings of Significance |


IV. DETERMINATION:

On the basis of the initial evaluation that follows:

- ☐ I find that the proposed project WOULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made that will avoid or reduce any potential significant effects to a less than significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

- ☒ I find that the proposed project MAY have a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT will be prepared.



Ron Little
Vice President of Administrative Services

1/8/13

Date

V. EVALUATION OF ENVIRONMENTAL IMPACTS

During the completion of the environmental evaluation, the OCCD relied on the following categories of impacts, noted as column headings in the IS checklist.

- A) "Potentially Significant Impact" is appropriate if there is substantial evidence that the project's effect may be significant. If there are one or more "Potentially Significant Impacts" for which effective mitigation may not be possible, an EIR will be prepared.
- B) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of project-specific mitigation would reduce an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."
- C) "Less Than Significant Impact" applies where the project would not result in a significant effect (i.e., the project impact would be less than significant without the need to incorporate mitigation).
- D) "No Impact" applies where the project would not result in any impact in the category or the category does not apply. This may be because the impact category does not apply to the proposed project (for instance, the project site is not within a surface fault rupture hazard zone), or because of other project-specific factors.

Impact Questions and Responses

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
1. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of existing campus buildings, construction of replacement facilities, and renovation of remaining buildings and facilities identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The proposed project would include reconfiguration of the existing baseball and softball fields and a new soccer field in the south-central portion of the campus and the addition of night lighting consisting of 80-foot light standards. The campus is currently developed, and the facilities proposed within the 2012 DFMP would occur primarily within the existing development footprint of the campus. Scenic resources in the area consist primarily of views of hillsides to the east of the campus. Based on a review of the City of Fremont General Plan, Mission Boulevard is designated a scenic route directly adjacent to the campus. Interstate 680 (I-680), located approximately 1 mile west of the campus, is a state-designated scenic highway.

Discussion of Potential Project Impacts

a) A scenic vista is generally defined as an expansive view of highly valued landscape as observable from a publicly accessible vantage point. Views from Mission Boulevard, a designated scenic route, looking east across campus consist of the rows of olive and other trees adjacent to Mission Boulevard and nearby hillsides above the campus. Similar views are available from within the campus. Existing development on the campus itself does not interfere with visual resources. Future development under the 2012 DFMP would result in changed but similar scenic views, and would not generally interfere with views of the hillsides to the east. The scale of development proposed in the 2012 DFMP would not substantially alter currently available scenic views. Based on these factors, the proposed project would have a less than significant impact with regard to this criterion.

b) I-680, located approximately 1 mile from the campus, is a state-designated scenic highway. Brief glimpses of small portions of the campus are available to drivers on I-680, mainly to those southbound north of the Mission Boulevard exit. From this distance, visible changes on the campus as a result of 2012 DFMP implementation would be minimal and would not have a substantial effect on visual resources visible from a state-designated scenic highway. Development under the 2012 DFMP would occur within currently developed areas and primarily within the existing development footprint of campus. There would be a less than significant impact with regard to this criterion.

c) Facilities identified in the 2012 DFMP would be similar in type and scale to existing facilities and would be constructed entirely within the developed portion of campus. However, implementation of the 2012 DFMP could potentially alter the existing visual character and quality of the campus as viewed from the surrounding neighborhoods. In addition, the construction of facilities identified in the 2012 DFMP could result in the loss of mature trees, which would further alter the existing visual character of the campus. This represents a potentially significant impact. The effects of the 2012 DFMP on the existing visual character or quality of the campus and its surroundings will be analyzed in the EIR.

d) Existing buildings on the campus are a source of light and glare, and cars on the campus may also be a source of glare. Other existing sources of light and glare on the campus include sports facilities, lighting and car headlights in parking lots, and lighting along pathways and roadways. New buildings proposed under the 2012 DFMP would shift some light and glare sources within the campus, and could increase light and glare in parts of the campus. The proposed lighting for the athletic fields could also be visually prominent from surrounding areas. These effects represent a potentially significant impact. The effects of light and glare associated with implementation of the 2012 DFMP on the nearby residences will be analyzed in the EIR.

Discussion of Potential Cumulative Impacts

The proposed project combined with other current projects and probable future projects and projected regional growth could result in significant cumulative impacts with regard to visual character and light and glare. These issues will be addressed in the EIR.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURE AND FORESTRY RESOURCES – Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or Timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of remaining buildings and facilities identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The campus is designated as Urban and Built-Up Land and Other Land on maps prepared by the California State Department of Conservation pursuant to the Farmland Mapping and Monitoring Program (FMMP) (FMMP 2011).

Discussion of Potential Project Impacts

a) The campus is already developed and is located in a developed area of the City of Fremont. The campus is not used for agriculture, and is not designated as Farmland on maps prepared by the California State Department of Conservation pursuant to the FMMP. There would be no impact with regard to this criterion.

b-c) Although the campus is not subject to City zoning, it is zoned for urban use by the City of Fremont. No portion of campus is zoned for agricultural use, forest land, or timberland. In addition, there is no Williamson Act contract applicable. Therefore, future development on the campus would not conflict with existing zoning for agricultural or forest land or timberland use or with a Williamson Act contract. There would be no impact with regard to this criterion.

d) The campus and surrounding areas do not include any forest land or timberland. There would be no impact with regard to this criterion.

e) No Farmland or other agricultural land is present adjacent to the campus. Therefore, implementation of the 2012 DFMP would not involve any changes that could indirectly cause conversion of Farmland to non-agricultural use. There would be no impact with regard to this criterion.

Discussion of Potential Cumulative Impacts

The City of Fremont is urban in nature, and not designated as Farmland on maps prepared pursuant to the FMMP. As a result, anticipated future development in the City, including the future development on the campus under the 2012 DFMP, would not result in the loss of Farmland. In addition, land in the City is zoned for urban uses. Therefore, anticipated future development in the City would not displace land zoned for agricultural use or forest land or timberland, and would not conflict with agricultural uses on land under a Williamson Act contract. The impact of cumulative development on agricultural and forest resources would be less than significant.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
3. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of existing campus buildings, construction of replacement facilities, and renovation of remaining buildings identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The nearest sensitive receptors to the campus consist of single-family residential uses.

Discussion of Potential Project Impacts

a-c) The campus is located in the San Francisco Bay Area Air Basin, which is currently designated a non-attainment area for PM10 (particulate matter 10 microns or less in diameter), PM2.5 (particulate matter 2.5 microns or less in diameter), and ozone. Construction and operation of facilities identified in the 2012 DFMP would add incrementally to regional ambient air pollutant emissions, including short- and long-term emissions of criteria air pollutants from mobile and stationary sources. This represents a potentially significant impact. The EIR will estimate the total emissions from construction and operation of future buildings identified in the 2012 DFMP and evaluate whether the emissions would exceed the applicable thresholds of significance for evaluating impacts from criteria pollutant emissions.

d) Construction and demolition of facilities identified in the 2012 DFMP would result in on-site emissions of diesel particulate matter, which the California Air Resources Board has identified as a toxic air contaminant. In addition, operation of facilities identified in the 2012 DFMP could affect nearby sensitive receptors by creating the potential for localized CO hotspots. This represents a potentially significant impact. The EIR will evaluate concentrations of CO, toxic air contaminants, and other pollutants associated with implementation of the 2012 DFMP to determine whether they would result in a significant effect on sensitive receptors.

e) Construction and demolition of facilities identified in the 2012 DFMP would require the use of diesel-fueled equipment and architectural coatings, both of which have an associated odor. However, these odors would be short-term and temporary and would not be pervasive enough to affect a substantial number of people or to be objectionable. Routine operation of facilities identified in the 2012 DFMP would not involve activities, such as wastewater treatment, manufacturing, or agriculture, that typically produce objectionable odors. Occasional use of maintenance products on the campus could produce odors but they would be temporary and limited in area. Consequently, odors associated with short-term construction and long-term operation of facilities under the 2012 DFMP would not cause or be affected by odors, and the impact would be less than significant.

Discussion of Potential Cumulative Impacts

The construction and operation of facilities identified in the 2012 DFMP combined with other current and probable future projects and projected regional growth could result in significant cumulative impacts with regard to air quality. This issue will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any applicable policies protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of other buildings and facilities identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The campus is located in an urban setting within the City of Fremont. The majority of the campus is developed; the undeveloped portion of the campus consists mainly of disturbed grasslands.

Discussion of Potential Project Impacts

a) The most recent versions of the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) databases were reviewed to identify special-status plant and wildlife species in the vicinity of the campus. According to CNDDDB and CNPS query results, several special-status plant and wildlife species have been documented in the project area (i.e., within 3 miles of the campus). Undeveloped grasslands may provide habitat for special-status species and development under the 2012 DFMP could disturb these species. This represents a potentially significant impact. The EIR will analyze potential impacts to special-status plant and wildlife species and associated habitat potentially occurring on or near the campus.

b-c) The campus is generally developed, and is not identified in any adopted plan as having sensitive natural communities. The campus includes two small man-made ponds and ephemeral drainages. As a result, development under the 2012 DFMP could impact the habitats present near these features. This represents a potentially significant impact. The EIR will identify and analyze potential impacts regarding sensitive and/or riparian habitats within or near the campus.

d) Undeveloped portions of the campus contain disturbed grassland that provides biological resource values, including habitat for wildlife. Therefore, the campus may provide wildlife movement corridors or nursery sites, and the implementation of the 2012 DFMP could have impacts on such resources. In addition, mature trees on the campus could provide nesting habit to migratory bird species that are protected under state and federal laws. Construction activity associated with development under the 2012 DFMP could result in the removal of some trees on the campus. If removal of trees occurred during breeding season, this action could result in the disruption of nesting activities. This represents a potentially significant impact. The EIR will identify and evaluate potential impacts related to wildlife movement corridors or nesting migratory birds.

e) Construction of facilities identified in the 2012 DFMP may require the removal of some trees, regardless of health, to facilitate development or to mitigate potentially hazardous circumstances related to their proximity to existing facilities. The City of Fremont has a tree ordinance that requires a permit for removal of any trees on private property that meet specific size requirements. As a state entity, the OCCD is exempted by the state constitution from compliance with local land use regulations and ordinances. There would be no impact with respect to this criterion.

f) There are no adopted habitat conservation plans or natural community conservation plans that apply to the campus. There would be no impact with respect to this criterion.

Discussion of Potential Cumulative Impacts

The construction and operation of facilities identified in the 2012 DFMP combined with other current projects and probable future projects and projected regional growth could result in significant cumulative impacts on biological resources. This issue will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of remaining buildings identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The buildings on the campus date from the 1970s through the 2000s, with the exception of the Orchard House, an identified local historical resource built in 1898. The campus is located in an area with a high potential for the presence of unrecorded Native American resources and historic-period archaeological resources. Construction of individual buildings and facilities would include site grading and excavation, and thus could uncover unknown resources.

Discussion of Potential Project Impacts

a) Under CEQA, “historic resources” means historic buildings or features or historic or prehistoric archaeological deposits that qualify for inclusion on the California Register of Historic Resources based on their historical or prehistoric significance. Several buildings on the campus are identified in the 2012 DFMP for demolition. The buildings that would be demolished under the 2012 2012 DFMP were built between the 1970s and 2000s. Due to their age, none of these structures appears to be potentially eligible for inclusion in the National Register of Historic Places or the California Register of Historic Resources. The Orchard House, which was built in 1898 and is located in the lower campus, may be eligible for inclusion in the National Register of Historic Places or the California Register of Historic Resources. Although there are no changes to the Orchard House identified in the 2012 DFMP, it could be affected by the construction in the area. The EIR will analyze the potential impacts related to historic resources on the campus.

b) There is a high potential for uncovering unrecorded Native American resources on or near the campus because of its location at the valley/foothill interface. In addition, there is a high potential for identifying

unrecorded historic-period archaeological resources. Any inadvertent damage to significant Native American and historic-period archaeological resources represents a potentially significant impact. The EIR will analyze the potential impacts related to Native American and historic-period archaeological resources on the campus.

c) The developed portion of campus is situated on alluvial fan sediments, sandstone and shale bedrock, which suggests that the presence of unique paleontological resources on the campus is possible. As a result, there is a possibility that paleontological resources may exist at deep levels, and disturbance of such resources would result in a potentially significant impact. However, implementation of **Mitigation Measure CUL-3** would reduce impacts to a less than significant level.

Mitigation Measure CUL-3: If known, suspected, or potential vertebrate fossil materials are discovered during construction, work will stop within a 75-foot radius of the find until a qualified professional paleontologist (as defined by the Society of Vertebrate Paleontology or consistent with Caltrans standards for a Supervising Paleontologist) can assess the nature and importance of the find and recommend appropriate treatment, if any. Based on the paleontologist's professional judgment, treatment may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection, and may also include preparation of a report for publication describing the finds. The campus will be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

d) See the responses to **Items 5(a)** and **(b)**, above. Multiple Native American archaeological resources, including burials, have been found in the vicinity of campus. It is therefore possible that human remains of Native American origin could be present on the campus. Any disturbance of human remains would represent a potentially significant impact. However, with implementation of **Mitigation Measure CUL-4**, which outlines procedures to be followed in the event that previously unknown human remains are discovered, any impacts would be reduced to a less than significant level.

Mitigation Measure CUL-4: In the event of a discovery of human bone, potential human bone, or a known or potential human burial, all ground-disturbing work in the vicinity of the find will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, the campus will notify the County Coroner of the find. Consistent with California Health and Safety Code Section 7050.5(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to the requirements of Public Resources Code Section 5097, the campus will ensure that the remains and vicinity of the find are protected against further disturbance.

If it is determined that the find is of Native American origin, the campus will comply with the provisions of Public Resources Code Section 5097.98 regarding identification and involvement of the Most Likely Descendant (MLD).

If the human remains cannot be protected in place following the Coroner's determination, the campus shall ensure that the qualified archaeologist and the MLD are provided the opportunity to confer on repatriation and/or archaeological treatment of human remains, and that any appropriate studies, as identified through this consultation, are carried out prior to

reinterment. The campus shall provide results of all such studies to the Native American community, and shall provide an opportunity for Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects on state lands are repatriated to the appropriate local tribal group if requested.

Discussion of Potential Cumulative Impacts

Anticipated future development in some portions of the City of Fremont has the potential to adversely affect cultural resources in the City. The potential for implementation of the 2012 DFMP to contribute to cumulative impacts to historic or archaeological resources will be examined in the Draft EIR. With mitigation, future development on the campus under the 2012 DFMP would have no significant project-level impacts on paleontological resources or human remains. Therefore, implementation of the 2012 DFMP would not make a cumulatively considerable contribution to a cumulative impact to such resources that could result from other development.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of remaining buildings, facilities, and infrastructure identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The topography of the campus includes both flat and moderately to steeply sloping areas; it is surrounded by hillside areas.

Discussion of Potential Project Impacts

a)(i) An Alquist-Priolo Earthquake Fault Zone¹ associated with the Hayward fault passes east of the Fremont Campus (CGS 2011). This fault is considered active. However, no new development associated with the 2012 DFMP would occur outside of existing developed areas or within the earthquake fault zone. As a result, future development on the campus would not expose structures and people to hazards associated with the rupture of a known earthquake fault. There would be no impact with regard to this criterion.

a)(ii) The campus could be subject to strong ground shaking in the event of an earthquake originating along active portions of the Hayward fault or numerous other faults listed as active or potentially active in the Bay Area. Development of new buildings and facilities under the 2012 DFMP thus could pose a risk to public safety and property by exposing people, property, or infrastructure to potentially adverse effects, including strong seismic ground shaking. This impact would be considered potentially significant. The EIR will identify and characterize potential impacts related to strong seismic ground shaking.

a)(iii) The campus is not located in a liquefaction hazard zone (CGS 2001). Future development on campus would not expose structures and people to hazards associated with seismic-related ground failure, including liquefaction. However, development on the campus would be designed and constructed in accordance with the current California Building Code (CBC), which includes provisions that specifically address seismic-related ground failure. There would be a less than significant impact with regard to this criterion.

a)(iv) The hills to the east of the campus are considered to be susceptible to earthquake-induced landslides by the State of California pursuant to the Seismic Hazards Mapping Act of 1990 (CGS 2001). Although no development is planned in the more steeply sloped hillside areas of campus, future development adjacent to these slopes could expose structures and people to hazards associated with landslides. This impact would be considered potentially significant. The EIR will identify and characterize potential impacts related to landslides originating from the surrounding hillside areas.

b) Construction of facilities identified in the 2012 DFMP would require activities such as vegetation removal and grading that could expose soil to erosion. For projects that would disturb 1 acre or more, coverage under the state National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity would be required prior to construction and the construction contractor would be required to file a notice of intent (NOI) with the State Water Resources Control Board and develop and implement a site-specific Storm Water Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) to control on-site erosion and off-site sedimentation, and to keep construction pollutants from coming into contact with storm water. The campus would have oversight responsibility and would have the authority to shut down construction in the event the SWPPP is improperly implemented. For projects that would disturb less than 1 acre, the campus would develop an erosion control plan which would include sediment and

¹ Prior to 1994, Earthquake Fault Zones were called Special Studies Zones.

erosion controls to limit on-site erosion and off-site sedimentation, and to keep construction pollutants from coming into contact with storm water. With these measures in place, impacts related to accelerated erosion and sedimentation would be less than significant.

c) Weak soil layers and lenses occur at random locations and depths beneath the campus. Therefore, future development on the campus could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of development. Issues related to seismically induced and non-seismic landslide hazards are discussed in response to **Item (a)(iv)**, above, and as noted there, will be addressed in the EIR. Issues related to liquefaction and related hazards are discussed in response to **Item (a)(iii)**, above, and as noted the impacts would be less than significant. Issues related to soil properties are discussed in response to **Item (d)** below, and the impact would be less than significant. Construction of facilities identified in the 2012 DFMP may require the creation of cut or fill slopes, which could be unstable if they are improperly designed or constructed. However, development would be designed and constructed in accordance with the current CBC, which includes provisions that specifically address good grading practices and cut and fill slope stability. Impacts related to unstable cut or fill slopes would be less than significant.

d) The expansive potential of soils on the campus could cause damage to buildings, building foundations, roads, and other structures. The properties of native materials that underlie individual development sites on the campus would be evaluated during the development of the site-specific geotechnical investigations that the campus will prepare for the project design of each new facility identified by the 2012 DFMP. As discussed above, all facilities identified in the 2012 DFMP would adhere to the current CBC, which includes detailed provisions to ensure that the design of new facilities is appropriate to site soil conditions, including requirements to address expansive and otherwise problematic soils. With adherence to the CBC, impacts related to site soil conditions—including but not limited to expansive soils, if any are present—would be less than significant.

e) Future development on the campus under the 2012 DFMP would not involve the installation of septic tanks or alternative wastewater disposal systems. There would be no impact with regard to this criterion.

Discussion of Potential Cumulative Impacts

The construction and operation of facilities identified in the 2012 DFMP combined with other current projects and probable future projects and projected regional growth could result in significant cumulative impacts with regard to geology and soils. This issue will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
7. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of remaining buildings identified in the 2012 DFMP to meet current and projected needs of the campus through 2023.

Discussion of Potential Project Impacts

a-b) Construction and operation of facilities identified in the 2012 DFMP to accommodate the student population as well as current and new education programs would generate greenhouse gas (GHG) emissions. This represents a potentially significant impact. The EIR will estimate the direct and indirect GHG emissions from the operation of facilities identified in the 2012 DFMP and discuss whether the emissions would exceed applicable thresholds of significance for evaluation of GHG impacts. The EIR will also estimate and report GHG emissions that would be generated during construction of facilities identified in the 2012 DFMP.

Discussion of Potential Cumulative Impacts

The contribution of the 2012 DFMP to the global cumulative impact will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
8. HAZARDS AND HAZARDOUS MATERIALS				
– Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of existing campus buildings, construction of replacement facilities, and renovation of remaining buildings identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The campus contains several older buildings that are identified for demolition in the 2012 DFMP. The closest school is Mission San Jose Elementary School, which is located approximately 0.2 mile to the west of campus. The nearest airports are to the west across the San Francisco Bay and include the Palo Alto Airport approximately 12 miles away, and Moffett Federal Airfield, approximately 11 miles away. San Jose International Airport is located about 15 miles south of the campus.

Discussion of Potential Project Impacts

a) Although the construction of facilities identified in the 2012 DFMP would use small quantities of hazardous materials on each construction site, compliance with local, state, and federal regulations would minimize risks associated with the routine transport, use, or disposal of hazardous materials during construction. Any hazardous materials used during the operation of facilities identified in the 2012 DFMP would be limited to those typically used in academic support and standard maintenance activities (e.g., laboratory chemicals, photoprocessing chemicals, solvents, fuels, oils, paints, cleaning agents, or pesticides). The use of all hazardous materials during operation would be required to comply with stringent local, state, and federal regulations on hazardous materials use. Given the types and small quantities of hazardous materials that would be used, as well as stringent regulations, the impacts related to the routine transport, use, and disposal of hazardous materials would be less than significant.

b) See response to **Item (a)** above. Based on their age, buildings to be demolished as part of the 2012 DFMP could contain asbestos, lead, and Polychlorinated Biphenyls (PCBs). State law requires that contractors and workers be notified of the presence of asbestos in buildings constructed before 1979. The California Department of Public Health requires the certification of employees and supervisors performing lead-related construction activities in residential and public buildings. Standard specifications included in all campus construction contracts specify that contractors who disturb or potentially disturb asbestos or lead must comply with all federal, state, and local rules and regulations regarding these materials. Contractors are also required to stop work and inform the campus if they encounter material believed to be asbestos, PCBs, lead, or other hazardous materials. Compliance with federal, state, and local regulations and campus procedures would minimize possible exposure to campus employees and students. Therefore, this impact would be less than significant.

c) See the responses to **Items 8(a)** and **8(b)** above. There would be no impact with respect to this criterion.

d) The campus is included on a list of hazardous materials sites subject to corrective action compiled pursuant to Government Code Section 65962.5 (Cortese List). This listing stems from reported cases of leaking underground storage tanks (LUST) on campus. However, the site status is identified as completed and case closed. In addition, as shown in an EDR report that was prepared for the campus, the campus is included on a number of federal, state, and local databases. The inclusion of the campus in these databases stems from generation of hazardous waste related to academic uses and the presence of underground and aboveground fuel storage tanks on the campus. The generation of hazardous waste at the campus is related to academic and facilities maintenance uses and may include laboratory chemicals,

photoprocessing chemicals, solvents, fuels, oils, paints, cleaning agents, or pesticides that are currently used in laboratory research, building and grounds maintenance, vehicle maintenance, and fine arts. In addition, hazardous materials associated with electrical transmission are also located on campus.

Based on the EDR report, there is currently no known contamination on the project site. The EDR report indicated that several sites with known or potential contamination, hazardous materials use, hazardous waste generation, or other hazardous-materials-related conditions are within 0.5 mile of the campus (EDR 2012). Known or potentially contaminated sites near the campus include the Tri City Office Machines, Figtree Service, Township Cleaners, Sisters of the Holy Family, and Mission Square Renovation. The sources of contamination on these sites are primarily from gasoline contamination from leaking underground storage tanks. Other potential sources of contamination in the vicinity of the project site could come from small quantity hazardous waste generators and hydrocarbons from leaking underground storage tanks (EDR 2012). All of the sites identified in the EDR report are located hydraulically downgradient of the campus and are unlikely to have affected soil or groundwater at the campus. However, given the uncertainty of contamination on the project site from sources off site, this assessment conservatively assumes that contamination could be present and, if encountered during construction, could result in the exposure of the public or construction workers to hazardous materials. This is considered a potentially significant impact. However, with the implementation of **Mitigation Measure HAZ-1**, which requires an assessment and cleanup of potential contamination that may be encountered during construction, this impact would be reduced to a less than significant level.

Mitigation Measure HAZ-1: If evidence of contaminated soil and/or groundwater, such as discolored soil, odors or oil sheen, is encountered during the removal of on-site debris or during excavation and/or grading both on and off site, the construction contractors shall stop work and immediately inform the campus. An environmental hazardous materials professional shall be contracted to conduct an on-site assessment. If the materials are determined to pose a risk to the public or construction workers, the construction contractor shall prepare and submit a remediation plan to the appropriate agency and comply with all federal, state, and local laws. Soil remediation methods could include excavation and on-site treatment, excavation and off-site treatment or disposal, and/or treatment without excavation. Remediation alternatives for cleanup of contaminated groundwater could include in-situ treatment, extraction and on-site treatment, or extraction and off-site treatment and/or disposal. Construction plans shall be modified or construction postponed to ensure that construction will not inhibit remediation activities and will not expose the public or construction workers to hazardous conditions.

e) The campus is not located within the immediate vicinity of any airport. Given the distance of the campus from regional airports, future development under the 2012 DFMP would not place persons within an airport hazard zone. There would be no impact with regard to this criterion.

f) The campus is not located in the vicinity of a private airstrip, and there would be no impact with regard to this criterion.

g) Construction of facilities identified in the 2012 DFMP would occur within the boundaries of the campus, and thus would not impede traffic on roadways surrounding campus. In addition, the campus would keep all roadways open during construction so that emergency response and evacuation is not affected. There would be no impact with regard to this criterion.

h) The campus is not located in a Very High Fire Hazard Severity Zone, as designated by maps prepared by the California Department of Forestry and Fire Protection (Cal Fire 2008). The campus includes and is located adjacent to open space where there is a risk of wildland fires. However, implementation of the 2012 DFMP would not place structures in or increase the use of open space, and would be limited to already developed areas. It would not increase risks related to wildland fires compared to existing conditions, and there would be no impact with regard to this criterion.

Discussion of Potential Cumulative Impacts

Anticipated future development in the City of Fremont has the potential to expose the public and the environment to risks associated with hazards from unidentified on-site contamination. However, with mitigation, future development under the 2012 DFMP would not expose the public and the environment to potential on-site contamination during construction. In addition, while the operation of campus facilities would involve the routine use of hazardous materials in small amounts, the use of these materials on campus would comply with all applicable local, state, and federal regulations. Therefore, the proposed project would not contribute to a cumulative impact during operation.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
9. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or of-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of remaining buildings identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. Construction of individual buildings and facilities would include site grading and excavation. The campus is not located within a 100-year flood plain or a flood inundation zone (FEMA 2009). The nearest body of water is the San Francisco Bay, located about 7 miles west of the campus, and Lake Elizabeth, about 2.5 miles northwest of the campus.

Discussion of Potential Project Impacts

a) During construction of facilities identified in the 2012 DFMP, there is a potential for increased erosion, sedimentation, and discharge of polluted runoff from the site. However, as discussed in **Geology and Soils Item 6(b)**, all construction contractors would be required to implement a SWPPP including erosion and pollution control measures in compliance with NPDES regulations, or implement an erosion control plan as required by campus procedures to control potential increases in off-site sediment delivery. With compliance with these required measures, the impact to water quality from construction activities would be less than significant.

The development of facilities identified in the 2012 DFMP would increase the extent of impervious surfaces on the campus and would cause a corresponding increase in the amount of runoff generated on the campus. During operation, as under existing conditions, all site drainage would continue to be routed to the City's storm drain system, which would then discharge the flow to Sabre Cat Creek and ultimately to San Francisco Bay. This runoff is subject to the conditions of the Municipal Regional Stormwater NPDES Permit No. CAS612008 for the San Francisco Bay Region. This permit requires permittees to comply with the discharge prohibitions and receiving water limitations through the timely implementation of control measures and other actions as specified in the permit (San Francisco Bay RWQCB, 2009). Future development on the campus would be required to comply with applicable NPDES requirements for stormwater quality. Therefore, implementation of the 2012 DFMP would not result in any direct or indirect discharges that would violate water quality standards or waste discharge requirements. Impacts during operation would be less than significant with regard to this criterion.

b) The campus is underlain by the Santa Clara groundwater basin, Niles Cone subbasin. However, the campus obtains potable water supply from surface water supplies provided through the local water retailer. Therefore, the increase in potable water use on the campus from implementation of the 2012

DFMP would not affect groundwater supplies. Natural recharge in the basin occurs principally as infiltration in streambeds that exit the upland areas within the drainage basin and from direct percolation of precipitation that falls on the basin floor (DWR 2003). Implementation of the 2012 DFMP would increase the amount of impervious surface on the campus. However, as this increase in impervious surface would be very small relative to the size of the groundwater basin recharge area, it would have a minimal effect on groundwater recharge. Impacts would be less than significant with regard to this criterion.

c) Stormwater generated by future development under the 2012 DFMP would be directed toward existing storm drainage facilities serving the campus. As discussed in **Geology and Soils Item 6(b)** above, each individual project on the campus would be required to control soil erosion and siltation during construction through either the preparation of a SWPPP if the project is 1 acre or more in size or the preparation of an erosion control plan if the project is less than 1 acre in size. Compliance with these requirements would reduce the potential for erosion on construction sites and minimize the discharge of sediment into the storm drain system. Once the new or replacement facilities are constructed, the project sites would be either under impervious surfaces (buildings, pavement, etc.) or would be landscaped. This would minimize the potential for erosion and sedimentation in the long run. In addition, while the implementation of the 2012 DFMP would increase the amount of impervious surface on the campus, this increase in impervious surface would be small. As a result, the amount of additional runoff entering the City's storm drain system would not be substantial enough to result in off-site erosion or siltation in downstream locations. Therefore, this impact would be considered less than significant.

d) As discussed in the previous response above, storm water generated by future development under the 2012 DFMP would be directed toward existing storm drainage facilities serving the campus. There are no existing flooding problems on the campus, and each project would be designed to avoid on-site flooding. In addition, while the implementation of the 2012 DFMP would increase the amount of impervious surface on the campus, this increase in impervious surface would be small. However, the amount of additional runoff entering the City's storm drain system could be substantial enough to exceed existing capacity. This represents a potentially significant impact. The EIR will analyze the potential impacts related to flooding on or near the campus.

e) Implementation of the 2012 DFMP would increase impervious surfaces on campus, which could increase the volume of stormwater runoff in the City's storm drain system. Although this increase in runoff would be small, it could exceed the capacity of existing or planned stormwater drainage systems because of lack of capacity in Sabre Cat Creek to accept stormwater runoff during flood conditions. This represents a potentially significant impact. The EIR will analyze the potential impacts related to stormwater system capacity.

See the response to **Item 9(a)** above with regard to water quality. Implementation of the 2012 DFMP would not provide substantial additional sources of polluted runoff. Therefore, this impact would be considered less than significant.

f) See responses to **Items 9(a)** through **(d)**, above, and related discussions in the **Hazards and Hazardous Materials** Section of this checklist. No other potential project impacts to water quality were identified.

g-h) The campus is not located within a 100-year flood zone. The majority of the campus, including the developed area that would be affected by implementation of the 2012 DFMP, is located within Flood Zone X, which is defined as an area of moderate flood hazard located between the 100-year and 500-year flood zones (FEMA 2009). There are no existing residential uses on campus and no residential uses are included in the 2012 DFMP. As a result, implementation of the 2012 DFMP would not place housing or structures within an area at risk of 100-year flood flows. There would be no impact with regard to this criterion.

i) The campus is not located within the inundation area for the San Antonio Reservoir. Therefore, implementation of the 2012 DFMP would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. There would be no impact with regard to this criterion.

j) The campus is located well inland from the San Francisco Bay and no bodies of water are located in the vicinity of the campus. As a result, the campus is not at risk of seiche or tsunami inundation. The campus is located at the base of the Mission Hills, and there are localized landslide and debris flow areas in this area. However, the proposed project would not cause ground disturbance or place new structures in previously undeveloped hillside areas. All development would take place within the existing campus footprint, and there would be no increase in the risk of debris flow or mudflow compared to existing conditions. Development under the 2012 DFMP would therefore have a less than significant impact related to debris flow or mudflow.

Discussion of Potential Cumulative Impacts

Anticipated future development in the City of Fremont could result in the violation of water quality or waste discharge requirements during construction. However, construction projects in the City involving 1 acre or more of land disturbance are required to prepare and implement a SWPPP that includes erosion and pollution control measures and measures to control increases in off-site sediment delivery. Furthermore, construction projects on the campus would be required to adhere to NPDES requirements for construction activities. As a result, the cumulative impact with regard to water quality would be less than significant.

The construction and operation of facilities identified in the 2012 DFMP combined with other current projects and probable future projects and projected regional growth could result in or contribute to existing flooding problems along local creeks. This issue will be addressed in the EIR.

Anticipated future development elsewhere in Fremont could place housing or structures within a 100-year flood zone or within a tsunami inundation area. However, as the campus is not located within either a 100-year flood zone or within a tsunami inundation area, future development anticipated under the 2012 DFMP would not contribute to this impact.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
10. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of buildings, facilities, and infrastructure identified in the 2012 DFMP to meet current and projected needs of the campus through 2023.

Discussion of Potential Project Impacts

a) Implementation of the 2012 DFMP would not physically divide an established community since the campus already exist, and future development would occur within campus boundaries. There would be no impact with regard to this criterion.

b) The OCCD is not subject to local plans, policies, or regulations. However, OCCD is required by Section 15125(d) of the *State CEQA Guidelines* to address inconsistencies between its proposed project and applicable general plans, specific plans, and regional plans. It is generally the policy of the OCCD to be consistent with local and regional plans, policies, or regulations to the maximum extent possible. Any conflict between the 2012 DFMP and applicable local and regional plans could result in a potentially significant impact. The EIR will discuss the consistency of the 2012 DFMP with applicable regional plans which include the Bay Area 2010 Clean Air Plan, State Water Quality Control Board NPDES Permit, Santa Clara Valley Urban Runoff Pollution Prevention Program, and Santa Clara County Congestion Management Program.

c) There is no habitat conservation plan or natural community conservation plan applicable to the campus. There would be no impact related to this criterion.

Discussion of Potential Cumulative Impacts

The proposed project combined with other current projects and probable future projects and projected regional growth could result in significant cumulative impacts with regard to consistency with regional plans. This issue will be addressed in the EIR.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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11. MINERAL RESOURCES – Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

☐
☐
☐
☒

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

☐
☐
☐
☒

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of existing campus buildings, construction of replacement facilities, and renovation of buildings, facilities, and infrastructure identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The campus does not contain any known mineral resources and is not designated as a mineral resource area.

Discussion of Potential Project Impacts

a, b) The campus is not designated as a mineral resource area, and no known or potential mineral resources are located on the campus. In addition, existing land uses preclude the use of the campus for mineral extraction (e.g., sand and gravel). Therefore, future development would not impede extraction or result in the loss of availability of a known mineral resource. There would be no impacts with regard to these criteria.

Discussion of Potential Cumulative Impacts

The campus and surrounding area are urban in nature, and minerals are not found to any appreciable extent within the City of Fremont. As a result, anticipated future development, including future development on the campus under the 2012 DFMP, would not result in the loss of availability of mineral resources. The cumulative impact would be less than significant.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
12. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of existing campus buildings, construction of replacement facilities, and renovation of buildings and facilities identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. Construction of each individual facility would generate noise, and once construction is completed, the operation of each individual facility would add to current sources of traffic noise by facilitating the projected increase in students and associated vehicle trips, as well as by redirecting and rerouting vehicle trips to nearby roadways. The nearest sensitive receptors to the campus consist primarily of single-family residential uses located to the north, west, and south. The nearest airports include the Palo Alto Airport, approximately 12 miles to the west across the San Francisco Bay, Moffett Federal Airfield, approximately 11 miles to the west, Hayward Executive

Airport, located approximately 11 miles north, and San Jose International Airport, about 15 miles to the south of the campus.

Discussion of Potential Project Impacts

a) Implementation of the 2012 DFMP could result in increases or changes in noise levels from sources such as construction activities, stationary sources, and increased vehicular traffic, which could exceed applicable noise standards. For example, construction activity or new stationary sources could exceed the state's exterior noise standard of 70 A-weighted decibels (dB(A)) community noise equivalent level (CNEL) for schools. These impacts are considered potentially significant. The EIR will evaluate the potential for facilities identified in the 2012 DFMP to expose people to noise in excess of State standards.

b) Construction activities associated with the 2012 DFMP could generate excessive groundborne vibration and noise on and near the campus. This represents a potentially significant impact. The EIR will evaluate the potential for increased groundborne vibration or noise levels associated with construction of facilities identified in the 2012 DFMP to affect nearby sensitive receptors.

c) Vehicle traffic associated with the increase student population anticipated with implementation of the 2012 DFMP could result in substantial permanent increases in ambient noise levels in the vicinity of the project site. These impacts are considered potentially significant. The EIR will evaluate the potential for facilities identified in the 2012 DFMP to permanently increase ambient noise levels.

d) Construction activities associated with implementation of the 2012 DFMP could result in substantial temporary increases in ambient noise levels on campus and in the vicinity of the project. These impacts are considered potentially significant. The EIR will evaluate the potential for the construction of facilities identified in the 2012 DFMP to temporarily increase ambient noise levels.

e) The campus is not located within the immediate vicinity of an airport. Other than aircraft overflights, the project site would not be exposed to noise from public airports. There would be no impact with respect to this criterion.

f) The proposed project is not located in the vicinity of a private airstrip, and there would be no impact with regard to this criterion.

Discussion of Potential Cumulative Impacts

Future development under the 2012 DFMP combined with other current projects and probable future projects and projected regional growth could result in significant cumulative noise impacts. This issue will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of buildings and facilities identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. Implementation of the 2012 DFMP would accommodate an increase in enrollment at the District to approximately 12,143 students by 2023. In 2008 the enrollment at the District was approximately 12,842.² However, enrollment decreased to about 9,904 students in fall 2011. Additional faculty and staff are anticipated to be hired.

Discussion of Potential Project Impacts

a) The campus does not provide housing for students, faculty, or staff. Students and employees commute to the campus from the surrounding communities. As enrollment returns to similar numbers as in 2008, more students may commute to the campus from the surrounding communities; it is unlikely that students would move into the area with the single purpose of being closer to campus. New faculty and staff required to serve the increase in enrollment would likely be living in the Bay Area at the time of hire. The additional students and staff in the Bay Area could live anywhere in the region and commute to the campus, which would reduce the impact on the City of Fremont. Therefore, it is unlikely that a substantial number of students or employees would be added to the area as a result of project implementation. This impact would be considered less than significant.

b) The campus is currently developed with academic and related uses. No housing exists on the campus, and there would be no impact with respect to this criterion.

c) See response to **Item 13(b)**, above. There would be no impact with regard to this criterion.

² Approximately 70 percent of the District's enrollment is at the Fremont campus.

Discussion of Potential Cumulative Impacts

Anticipated future development would result in an increase in population throughout the City, however the region previously accommodated similar student enrollment and staff. As discussed above, the increase in area population as a result of 2012 DFMP implementation would not be substantial. Therefore, the contribution of the 2012 DFMP to this impact would not be cumulatively considerable.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES – Would the project:				
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of existing campus buildings, construction of replacement facilities, and renovation of remaining buildings identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The City of Fremont Fire Department (FFD) provides fire protection services to the campus. OCCD Campus Police Services provides law enforcement services for the campus. The closest parks to the campus are Mission San Jose Bicentennial Park and Mission San Jose Park. The nearest off-campus library is the Fremont Main Library operated by the Alameda County Library.

Discussion of Potential Project Impacts

a) Implementation of the 2012 DFMP would result in additional facilities and population on the campus. This increase in campus facilities and population would place incremental additional demand on the Fremont Fire Department for fire protection services. Enrollment at the District at buildout of the 2012 DFMP would increase from 9,904 students in 2011 to about 12,143 students in 2023, slightly less than enrollment at the 2008 peak of 12,842 students. Existing fire protection services and facilities are adequate for the current enrollment level and fire protection capacity was not exceeded by the previous, higher enrollment. The projected increase in enrollment thus is not expected to result in the need for new or expanded fire protection facilities, the construction of which could result in significant environmental impacts. This impact is considered less than significant.

b) Implementation of the 2012 DFMP would not require the expansion of existing on-campus OCCD Police Services facilities. The projected increase in demand for police services related to the increase in campus population can be met using existing facilities, and would not result in the need for new or expanded police protection facilities, the construction of which could result in significant environmental impacts. This impact is considered less than significant.

c) No residential uses are associated with the 2012 DFMP. Therefore, future development on the campus would not result in a direct impact on schools from an increase in residential population. As noted in response to **Item 13(a)** above, new students, faculty, and staff associated with the 2012 DFMP would likely be living in the surrounding communities or in the wider Bay Area at the time of enrollment or hire. To the extent that new students or employees move into Bay Area communities to study or work at the college, their numbers would not be large and would not add a substantial number of school age students to any one community. This impact would be considered less than significant.

d) No residential uses are associated with the 2012 DFMP. Therefore, future development on the campus would not result in a direct impact on parks from an increase in residential population. Due to the proximity of park facilities to the campus, it is possible that some students, faculty, and staff could use these facilities. However, existing recreational facilities are located on the campus and future recreational facilities identified in the 2012 DFMP would be available to meet the needs of the campus population. Therefore, the use of off-campus parks is expected to be minimal and the impact of the campus population on existing parks in the vicinity of the campus would be less than significant.

e) No residential uses are associated with the 2012 DFMP. Therefore, future development on the campus would not result in a direct impact on other public facilities such as libraries from an increase in residential population. The campus has an existing library that is available for use by students and staff. It is unlikely that students, faculty, and staff would use off-campus library facilities. For these reasons, the impact on public libraries would be less than significant.

Discussion of Potential Cumulative Impacts

Development of other current projects and probable future projects and projected regional growth could result in significant cumulative impacts with regard to fire protection services provided by the Fremont Fire Department. However, as noted above, the proposed project would not require the construction of new facilities to respond to increased demand for fire protection services, and thus would not make a considerable contribution to such impacts.

Development of other current projects and probable future projects and projected regional growth could result in significant cumulative impacts with regard to police services provided by the Fremont Police Department. However, as noted above, the proposed project would be served by the OCCD Police Department and not require the construction of new facilities to respond to increased demand for police services, and thus would not make a considerable contribution to such impacts.

Although substantial portions of the City are built out, future development or redevelopment would increase population in the City, thus resulting in an increase in demand for schools, parks and other public facilities such as libraries. As a result of the increased demand, future growth in the City may

require new or physically altered facilities to accommodate staff and equipment to meet increased demand, the construction of which could cause significant environmental impacts. As the 2012 DFMP does not include a residential component, the proposed project would not have substantial direct impacts on schools, parks, or libraries. For reasons presented in responses to **Items 14 (c), (d), and (e)** above, any indirect impacts would be minimal. Therefore, the project's contribution to the cumulative impact would be less than significant.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
15. RECREATION – Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of remaining buildings and facilities, including recreational facilities, identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The closest parks to campus are Mission San Jose Bicentennial Park and Mission San Jose Park.

Discussion of Potential Project Impacts

a) See the response to **Item 14(d)** above. Given the presence of existing recreational facilities on the campus and the construction of future facilities identified in the 2012 DFMP, the increase in campus population under the 2012 DFMP would not result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of existing facilities would occur or be accelerated. Therefore, the impact on recreational facilities would be less than significant.

b) No public parks or recreational facilities would be constructed as part of the 2012 DFMP. The 2012 DFMP includes recreational facilities for use by the campus, the construction of which could result in adverse physical effects on the environment. The EIR will analyze the potential biological, air quality, cultural resources, and noise effects of constructing these recreational facilities.

Discussion of Potential Cumulative Impacts

Anticipated future development in Fremont would increase the extent of development in the City, thus resulting in a cumulative increase in the use of recreational facilities. As a result, future growth may cause substantial physical deterioration of recreational facilities to occur or be accelerated, or may require the construction or expansion of recreational facilities, the construction of which could cause significant environmental impacts. As discussed above, no residential population is associated with 2012 DFMP that would require parks or other recreational facilities and existing and future recreational facilities on the campus would serve the campus population. Therefore, the project would not make a substantial contribution to the cumulative impact with regard to the deterioration of recreational facilities.

However, the 2012 DFMP does include recreational facilities, the construction of which could cause significant biological, air quality, or noise impacts, which could combine with the construction-phase impacts of other concurrent projects thus resulting in significant cumulative environmental impacts. These issues will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
16. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	■	□	□	□
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	■	□	□	□
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	□	□	□	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	■	□	□	□
e) Result in inadequate emergency access?	■	□	□	□
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	■	□	□	□

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of existing campus buildings, construction of replacement facilities, and renovation of remaining buildings identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. The campus is less than 1 mile south of Interstate 680. Roadways that serve the campus include Mission Boulevard to the west, Pine Street to the south, and Witherly Lane to the north.

Discussion of Potential Project Impacts

a-b) Implementation of the 2012 DFMP could potentially cause an increase in traffic on surrounding roadways or redirect traffic that is already in the area due to increased trip generation associated with higher enrollment. These potential changes in traffic and circulation in the vicinity of the campus could result in congestion. This represents a potentially significant impact. A detailed Traffic Impact Study will

be prepared to evaluate the impacts of the 2012 DFMP on local roadway capacity and this issue will be addressed in the EIR.

OCCD owns three parcels that are located along Mission Boulevard. These parcels are not part of the 2012 DFMP. In October 2012, OCCD issued a Request for Proposal for private development of a mixed-use project on the Mission Boulevard parcels. As the type, size, and timing of development of the Mission Boulevard parcels is unknown at this time, the Mission Boulevard mixed-use project will not be evaluated in the EIR for the 2012 DFMP. The CEQA document prepared for the mixed-use project will be required to assess the cumulative impact of that project in conjunction with campus development under the 2012 DFMP and other reasonably foreseeable development in this portion of Fremont.

c) The 2012 DFMP does not include uses that would affect air traffic or result in changes to air patterns. There would be no impact with regard to this criterion.

d) The 2012 DFMP includes recommended vehicular and pedestrian circulation plans. The potential for the proposed design of the circulation plans to result in pedestrian and vehicle conflicts on the campus will be analyzed in the EIR.

e) Implementation of the 2012 DFMP would result in the construction of new buildings and new roadways on the campus, thus requiring emergency access. The issue of emergency access considers both the regional accessibility and access within the campus. From a regional perspective, the accessibility for emergency vehicles is more than adequate. Once emergency vehicles have traveled to the campus, the internal roadway network is adequate to allow these vehicles to reach their designated locations. Implementation of the 2012 DFMP would improve existing vehicle circulation on campus. As a result, implementation of the 2012 DFMP would not result in inadequate emergency access and this impact would be considered less than significant.

f) The EIR will describe the existing adopted policies, plans, and/or programs supporting alternative transportation on the campus. Any conflicts between the 2012 DFMP and alternative transportation represent a potentially significant impact. The effects of the 2012 DFMP on alternative transportation will be analyzed in the EIR.

Discussion of Potential Cumulative Impacts

Implementation of the 2012 DFMP combined with other current projects and probable future projects and projected regional growth could result in significant cumulative impacts with regard to transportation/traffic. This issue will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
17. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with applicable federal, state, and local statutes and regulations related to solid waste?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relevant Elements of the Project and its Setting

The proposed project consists of the demolition of some existing campus buildings, construction of replacement facilities, and renovation of buildings, facilities, and infrastructure (including utilities) identified in the 2012 DFMP to meet current and projected needs of the campus through 2023. Wastewater generated on campus is treated by the Union Sanitary District (USD). Potable water is supplied to the campus by the Alameda County Water District (ACWD).

Discussion of Potential Project Impacts

a) The San Francisco Bay Regional Water Quality Control Board (RWQCB) regulates water quality and quantity of effluent discharged from the USD's wastewater treatment facilities. Implementation of the

2012 DFMP may increase the volume of wastewater received at these facilities for treatment. Any exceedance of treatment requirements due to the increase in wastewater from the campus under the 2012 DFMP would result in a potentially significant impact. The effects of campus development under the 2012 DFMP on the ability of the USD to meet wastewater treatment requirements set by the San Francisco Bay RWQCB will be analyzed in the EIR.

b, e) Implementation of the 2012 DFMP may result in an increase in water use and generation of wastewater. This increase may result in the need for new water or wastewater treatment and conveyance facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects. This represents a potentially significant impact. The effects of the 2012 DFMP on existing water and wastewater treatment facilities will be analyzed in the EIR.

c) Implementation of the 2012 DFMP may increase impervious surfaces on campus, which could increase the volume of stormwater drainage conveyed to existing stormwater facilities. Although the increase may be relatively small, the amount of stormwater drainage generated on campus could exceed the capacity of existing stormwater facilities, due to existing capacity constraints. New storm drain facilities may be required, the construction of which could cause significant environmental effects. This represents a potentially significant impact. The effects of the 2012 DFMP on existing stormwater facilities will be analyzed in the EIR.

d) Implementation of the 2012 DFMP may result in an increase in demand for water on campus and this demand could exceed the amount of water available to the ACWD from existing entitlements and resources. This represents a potentially significant impact. The effects of the 2012 DFMP on existing water entitlement and resources will be analyzed in the EIR.

f, g) Implementation of the 2012 DFMP could result in an increase in solid waste generated on the campus. The amount of solid waste generated on campus requiring disposal could potentially exceed the capacity of local landfills. In addition, implementation of the 2012 DFMP could conflict with applicable federal, state, and local statutes and regulations related to solid waste. This represents a potentially significant impact. The effects of the 2012 DFMP on landfill capacity and compliance with applicable regulations will be analyzed in the EIR.

Discussion of Potential Cumulative Impacts

Implementation of the 2012 DFMP combined with other current projects and probable future projects and projected regional growth could result in significant cumulative impacts with regard to utilities. This issue will be addressed in the EIR.

Issues	Potentially Significant Impact	Less than Significant with Project Mitigation	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE – Would the project:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	□	□	□
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	■	□	□	□
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	□	□	□

Discussion of Potential Project Impacts

a) Please refer to responses under Biological Resources **Items 4(a)** through **(f)**, and Cultural Resources **Items 5(a)** through **(d)**, above. While future development on campus has the potential to eliminate examples of California history or prehistory, implementation of mitigation measures identified in this Initial Study would reduce all impacts to a less than significant level. However, future development on campus could significantly affect fish or wildlife habitat. This impact would be considered potentially significant. The EIR will identify and analyze potential impacts to fish and wildlife habitat.

b) An analysis of whether the potential impacts of the proposed project combined with other current projects and probable future projects and projected regional growth in the surrounding area would result in significant cumulative impacts will be included in the EIR.

c) As indicated in the preceding discussion, implementation of the 2012 DFMP has the potential to result in potentially significant impacts. An evaluation of whether any of those impacts would have the potential to result in substantial effects to human beings will be included in the EIR.

VI. SUPPORTING INFORMATION SOURCES

California Department of Conservation, California Geological Survey (CGS), State of California Seismic Hazard Zones, Niles Quadrangle, 2001. Available at: http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_niles.pdf.

California Department of Conservation, California Geological Survey (CGS). Alquist-Priolo Earthquake Fault Zone Maps. Accessed May 17, 2011. http://www.quake.ca.gov/gmaps/ap/ap_maps.htm.

California Department of Conservation, Division of Land Resource Protection, Farmland Mitigation and Monitoring Program (FMMP). 2011. Alameda County Important Farmland 2010.

California Department of Forestry and Fire Prevention. 2008. Santa Clara County Fire Hazard Safety Zone Map – Local Area of Responsibility. Available at http://fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_santaclara.php.

California Department of Transportation, California Scenic Highway Program (CSHP). Accessed August 31, 2011. <http://www.dot.ca.gov/hq/LandArch/scenic/scpr.htm>.

California Department of Water Resources (DWR). 2003. *California's Groundwater - Bulletin 118, Update 2003*.

Environmental Data Resource (EDR). 2012. The EDR Radius Map Report. September 18.

Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map Nos. 06001C0468G and 06000C0444G. May 18.

Ohlone Community College District (OCCD). 2012. 2012 District Facilities Master Plan. May 9.

San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB). 2009. California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order R2-2009-0074, NPDES Permit No. CAS612008.

VII. INITIAL STUDY PREPARERS

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APPENDIX 4.2

Air Quality Modeling Output

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Construction.urb924

Project Name: SJCC Construction

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>
2019 TOTALS (lbs/day unmitigated)	19.17	17.17	17.40	0.01	7.25	0.90	8.02	1.51	0.83	2.23
2019 TOTALS (lbs/day mitigated)	19.17	17.17	17.40	0.01	5.03	0.90	5.80	1.05	0.83	1.76

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Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Construction.urb924

Project Name: SJCC Construction

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>
2019 TOTALS (lbs/day unmitigated)	19.17	17.17	17.40	0.01	7.25	0.90	8.02	1.51	0.83	2.23
2019 TOTALS (lbs/day mitigated)	19.17	17.17	17.40	0.01	5.03	0.90	5.80	1.05	0.83	1.76

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Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Construction.urb924

Project Name: SJCC Construction

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2019 TOTALS (tons/year unmitigated)	0.41	1.34	1.40	0.00	0.41	0.06	0.48	0.09	0.06	0.14	314.31
2019 TOTALS (tons/year mitigated)	0.41	1.34	1.40	0.00	0.38	0.06	0.44	0.08	0.06	0.14	314.31
Percent Reduction	0.00	0.00	0.00	0.00	7.79	0.00	6.75	7.78	0.00	4.64	0.00

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Proposed.urb924

Project Name: SJCC Existing

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	1.30	1.76	3.01	0.00	0.01	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	15.68	14.06	183.53	0.43	77.56	14.59

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	16.98	15.82	186.54	0.43	77.57	14.60

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Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Proposed.urb924

Project Name: SJCC Existing

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	1.18	1.74	1.46	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	17.64	21.42	190.09	0.37	77.56	14.59

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	18.82	23.16	191.55	0.37	77.56	14.59

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Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Proposed.urb924

Project Name: SJCC Existing

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (tons/year, unmitigated)	0.22	0.32	0.41	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (tons/year, unmitigated)	2.98	3.01	33.89	0.07	14.15	2.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (tons/year, unmitigated)	3.20	3.33	34.30	0.07	14.15	2.66

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Existing.urb924

Project Name: SJCC Existing

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	1.30	1.75	3.00	0.00	0.01	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	26.56	31.89	348.78	0.35	62.86	11.93

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	27.86	33.64	351.78	0.35	62.87	11.94

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Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: Z:\EBell\Ohlone CC\Modeling\Ohlone Existing.urb924

Project Name: SJCC Existing

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	1.18	1.73	1.45	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	31.47	48.39	376.13	0.30	62.86	11.93

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	32.65	50.12	377.58	0.30	62.86	11.93

BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Ohlone College DFMP
 Intersection: Mission Blvd and Washington Blvd
 Analysis Condition: Cumulative plus Project
 Nearest Air Monitoring Station measuring CO: Chapel Way Fremont
 Background 1-hour CO Concentration (ppm): 4.0
 Background 8-hour CO Concentration (ppm): 0.9
 Persistence Factor: 0.6
 Analysis Year: 2020

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Mission Blvd	AT GRADE	2	5	5
East-West Roadway:	Washington Blvd	AT GRADE	2	5	5

EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: SF Bay Area County: Alameda
 Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	179	861	0	N	106	455	0
W	<	v	>	W	<	v	>
312 ^			0	805 ^			0
0 >			0	0 >			0
306 v			0	94 v			0
S	256	468	0	S	124	1,060	0

Representative Traffic Volumes (Vehicles per Hour)

N-S Road	1,891	N-S Road	2,426
E-W Road	1,053	E-W Road	1,129
Primary Road =	N-S Road	Primary Road =	N-S Road

ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	14.0	7.6	5.7	*	1,891	*	2.65	÷	100,000
E-W Road	3.7	2.7	2.2	*	1,053	*	2.65	÷	100,000
P.M. Peak Hour									
N-S Road	14.0	7.6	5.7	*	2,426	*	2.65	÷	100,000
E-W Road	3.7	2.7	2.2	*	1,129	*	2.65	÷	100,000

TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.8	5.0	1.5
25 Feet from Roadway Edge	4.5	4.6	1.3
50 Feet from Roadway Edge	4.3	4.4	1.2

BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Ohlone College DFMP
 Intersection: Mission Blvd and Washington Blvd
 Analysis Condition: Cumulative plus Project
 Nearest Air Monitoring Station measuring CO: Chapel Way Fremont
 Background 1-hour CO Concentration (ppm): 4.0
 Background 8-hour CO Concentration (ppm): 0.9
 Persistence Factor: 0.6
 Analysis Year: 2020

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	I 680 SB Ramps	AT GRADE	2	5	5
East-West Roadway:	Durham Rd	AT GRADE	2	5	5

EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: SF Bay Area County: Alameda
 Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	0	0	0	N	0	0	0
W	<	v	>	W	<	v	>
0 ^			^	0 ^			^
771 >			<	2,424 >			<
1,714 v			v	1,599 v			v
	<	^	>		<	^	>
1,111		0	33	1,284		0	42
S				S			

Representative Traffic Volumes (Vehicles per Hour)

N-S Road	2,970	N-S Road	2,976
E-W Road	5,611	E-W Road	6,652
Primary Road =	E-W Road	Primary Road =	E-W Road

ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	2,970	*	2.65	÷	100,000
E-W Road	14.0	7.6	5.7	*	5,611	*	2.65	÷	100,000
P.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	2,976	*	2.65	÷	100,000
E-W Road	14.0	7.6	5.7	*	6,652	*	2.65	÷	100,000

TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	6.4	6.8	2.6
25 Feet from Roadway Edge	5.3	5.6	1.9
50 Feet from Roadway Edge	5.0	5.2	1.6

APPENDIX 4.4

Historical Resource Evaluation



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MEMORANDUM

Date: 20 February 2013

To: Jennifer Millman, Impact Sciences, Inc.

From: Sarah Hahn

Project: Ohlone College EIR Services - 2012026

Re: Final Narrative EIR Sections

Via: email

ORCHARD HOUSE (BUILDING 20) – OHLONE COLLEGE CAMPUS

INTRODUCTION

Garavaglia Architecture, Inc. was contracted by Impact Sciences, Inc. in August 2012 to provide professional services related to the Orchard House (Building 20) on the Ohlone College Campus. These services include the development of narrative sections for inclusion in the environmental review documentation that will be prepared by other team members. This documentation includes historical background information, a discussion of known alterations to the building, and an evaluation of the Orchard House's eligibility for listing on the California Register of Historical Resources (CRHR). A discussion of impacts and related recommendations will conclude this memo.

EXISTING HISTORICAL STATUS

The Orchard House and adjacent "Olive Alley" (a.k.a. Olive Way) are listed on the City of Fremont's Register of Historical Resources.

DESCRIPTION

The Orchard House is a two-story, wood frame, Victorian era farmhouse on the Ohlone College Campus. Facing Mission Boulevard to the west, the residence is set at the middle of the campus tract bound by

Witherly Lane (north), Anza Pine Road (east and south), and Mission Boulevard, (west). It is located just north of a line of olive trees that lead from Mission Boulevard to the center of campus.

Topped by a hipped roof with cross gables, the building is clad in a combination of painted wood shingles (upper story) and wood droplap siding (lower level). A band of diamond-shaped wood shingles wraps along the top of the upper story and the wood shingled wall flares out at the base. Compound in plan, the building features a variety of windows including one-over-one wood double-hungs with ogee lugs, fixed single and multi-pane wood windows, and fixed and double-hung windows with leaded glass. Five, diamond-paned, leaded glass panels frame the glazed wood-panel entry door, and classical columns support the roof of the curved wraparound porch.

HISTORICAL BACKGROUND

Portions of the historical background information below are quoted from a previous evaluation completed by Karen McNeill, Ph.D., entitled *Historic Resource Evaluation Report, Buildings 25 and 26, Ohlone College, Fremont, California* (Carey & Co., Inc., 2012). Other references are as noted.

Pre-European Contact

Indigenous Californians once accounted for the densest and most linguistically and culturally diverse populations in all of the territory that now makes up the continental United States. Approximately 300,000 people who spoke between sixty-four and eighty languages lived within the boundaries of modern-day California. Before the European settlement of the San Francisco Bay Area, the region was occupied by Native Americans known as the Ohlone, whom the Spanish referred to as *Costanoans*. The territory of this tribe extended along the coast from the mouth of San Francisco Bay in the north to Carmel in the south, and as far as sixty miles inland. The Ohlone are believed to have inhabited the area since 500 AD or earlier.

Like most California tribes, the Ohlone were a hunter-gatherer and “basket-maker” society that did not develop a written language or build permanent architecture. They lived in conical-shaped huts made with poles, woven reeds, and grass thatch and depended on acorns and seafood for sustenance. Traveling in *balsas*, a type of canoe made of tule reeds, the Ohlone fished the bay for their main food source: fish, mussels, oysters, and seals. Their diet also included seeds, berries, roots, land mammals, waterfowl, reptiles, and insects. The Ohlone are known to have used bows and arrows, cordage, bone tools, and twined basketry to procure and process their foodstuffs. Though not an agricultural society, the Ohlone managed the production of various plants through controlled burning (a practice that was later halted by the Spanish to the detriment of the local environment).

Indigenous Californians and their ways of life survived virtually intact for nearly two hundred years after Christopher Columbus happened upon the West Indies in 1492 and European powers established Colonial empires in North and South America. With a vast desert in the southeast, formidable mountain ranges along lengthy stretches of the eastern and western borders, and difficult tides and winds to navigate, California's natural landscape deterred Spain, the closest colonial power, to invest much time or energy in this region. The few disastrous explorations of California that Europeans made during the sixteenth and early seventeenth century – to find a northwest water passage through the continent, to find gold, or to find a safe harbor – simply reinforced conclusions that settling California presented far more difficulties than it was worth. As historians James Rawls and Walter Bean wrote, California presented little more than “a barren and dangerous coast that a ship sailed past once a year.”

Spanish and Mexican California

In 1765, Visitor-General José de Gálvez, exploited the Spanish crown's desire to expand its wealth in New Spain as well as the crown's fears of the incursion into its lands of other European powers, including England, the Netherlands, and Russia, to embark on his own mission to settle California. He convinced the crown to fund an expedition that would lead to the establishment of missions, a well-established colonial institution that ostensibly served to convert the natives to Christianity and divest them of their indigenous ways, thereby rendering a region more amenable to imperial rule. Missions also included a military unit, or *presidio*, and essentially functioned as towns, or *pueblos*. In 1769 Captain Gaspar de Portolá led three ships and two land contingents on this “Sacred Expedition.” A Franciscan priest named Junípero Serra served as the religious leader. A year later, after many disasters small and large, the Spaniards built a presidio and mission at Monterey Bay, establishing the crown's sovereignty over Alta California.

Thirty-two years later, Father Fermin Francisco de Lasuen and some neophytes from Mission Santa Clara arrived at Oroyson to found a new mission, Mission San Jose. As local historian Philip Holmes wrote, “The founding of Mission San Jose brought Christianity, the mission system, building, industry, farming, and vast herds of cattle and horses, and it completely changed the way of life for thousands of Indians who lived here and east far into the San Joaquin Valley. For the next 35 years Mission San Jose was the economic, religious, and governmental center of the East Bay and areas to the east.”

The Mexican Period officially started in 1821, when Mexico declared its independence from Spain; however, the effects of this took a number of years to reach colonial California. The new government initially granted control of Mission lands to the priests who resided at the mission,

but gradually distributed the lands to Mexican citizens, creating large ranchos. This processes accelerated with the passage of the Secularization Act of 1833. Mission San Jose lands, which once encompassed the whole of Alameda and Contra Costa Counties as well as parts of San Joaquin County, was portioned between 1820 and 1846, with the final grant of 30,000 acres going to Governor Pio Pico's brother, Andres Pico, and Juan B. Alvarado. Only the Mission church, cemetery, and priest's house remained in the hands of the Church.¹

American Period

Vineyards dominate the early American period of the Mission San Jose. According to historian Jill M. Singleton, the Fremont area was once well known for its vineyards:

Away from the coastal fog and wind, and close by a major market, this area of Alameda County was ideal for vineyards and wine production. The history began with the Spanish Missionaries in 1797, and continued until 1996, when the last winery moved out. Acreage devoted to vineyards, and wine production, increased until the 1890's when a phylloxera infestation killed many of the original vines. Faced with the cost of replacing the vines with resistant varieties, many of the vineyards were converted to growing other fruit or sold for non-agricultural use. The earthquake of 1906, further diminished production as the Gallegos/Palmdale Winery was destroyed, and Prohibition in the 1920's stopped production completely (though temporarily) until 1933. Finally, Fremont's urban growth since 1960, put an end to production, as former vineyards were converted to housing.²

Joseph Clasby Palmer, a partner in the San Francisco banking firm of Palmer, Cook & Co., purchased the land where Ohlone College now stands in 1852. At the time of purchase, the property was known as Peak Vineyard. Palmer imported 10,000 cuttings from Europe, and by 1874 operated a "120-acre vineyard with 140,000 vines that produced 40,000-60,000 gallons of wine. It was the largest winery in the county and was famous nationwide."³

Charles Clarke McIver purchased Palmer's land in the early 1880s, and renamed it Linda Vista Winery. He imported premium cuttings from Europe and expanded the winery by about 1000 acres. His wines won seven first prizes at Chicago's Columbian Exposition in 1892, and were served exclusively by the Pullman Palace Car Company by that date. McIver "imported such varieties as Beclan, Verdot, Syrah,

¹ Karen McNeill, Ph.D., Carey & Co., Inc. *Historic Resource Evaluation Report, Buildings 25 and 26, Ohlone College, Fremont, California*, (4 June 2012), 4-5.

² Jill M. Singleton, *Lost Wineries and Vineyards of Fremont, California*. Museum of Local History website at <http://www.museumoflocalhistory.org/pages/wineries.htm> (accessed 14 November 2012).

³ *Ibid*, 6. Also, "From Ohlone Indians to Ohlone College," by Philip Holmes, in *The Argus*, n.d. (article clipping provided by Keith Clark of Ohlone College).

Durif, Merlot, and Malbec. These and the more recognizable varietals...were blended by his talented cellar master E.P. Warner, into prize-winning red table wines.”⁴

McIver built a grand Victorian style residence on the property and surrounded it with orange, lemon, date, fig, and palm trees. He resided on the property with his wife Clorinda, his two daughters, and a service staff that included a laundryman, cook, coachman, and bookkeeper.⁵ Linda Vista was called “the modern garden of Eden and the model country home of Washington Township.” Writer and poet Joaquin Miller visited the property and wrote:

But the thing which charmed and possessed me most entirely then was a singular sense of rest, and a large tranquility, a quiet that lay on all things, and took hold of every sense, as if it were not only always summer here, but always afternoon, and the day’s work done.⁶

Though the winery thrived through the early 1890s, several unfortunate circumstances led to a decline in prominence in the latter portion of that decade. Divorce split Clorinda and Charles McIver in the late 1890s, and the original residence was destroyed by fire in 1897. The vineyard was also devastated by the Phylloxera aphids, and following the divorce, the property reverted to Clorinda’s mother. Charles McIver left the area and Clorinda assumed her maiden name, Stephens. She constructed a new residence on the property by 1898 and continued to operate Linda Vista Farms with her mother’s help. The pair were reported to have been crushing olives and preparing high quality olive oil in 1908.

Within the next decade, Clorinda Stephens planted a large prune orchard and established a processing plant in the old winery. She also built a fruit house to store the dried prunes.⁷ A 1913 map shows the residence (Orchard House) in roughly the same configuration as it is today, with a detached servant’s residence nearby to the northeast. East of the house, where the main portion of the campus is today, was a collection of buildings that served the former winery use on the property. This included a bottling works building, a fermenting house, a distillery building, and a brick wine cellar. Just southeast of the residence, roughly where the larger baseball diamond is today, was a collection of agricultural buildings that included a large stable, a cow shed, granary, a carriage house, livestock pens, and several outbuildings. An area labeled as a park, with winding roads, a summer house, a fountain, and specialty plantings occupied the grounds just west of the agricultural complex. The fields surrounding the house

⁴ Charles L. Sullivan, *A Companion to California Wine*, 189-190. Also: Philip Holmes, *Two Centuries at Mission San Jose, 1797-1997* (printed for The Museum of Local History in Fremont, Ca, 1997), 108. Also: “Fair Linda vista, Triumph of California Wines, Highest Premiums Won at Chicago,” (San Francisco, CA: *San Francisco Chronicle*), 17 December 1893.

⁵ U.S. Federal Census Records, various dates, Washington Twp., Alameda, County, CA (accessed September 2012).

⁶ As quoted in Philip Holmes, *Two Centuries at Mission San Jose*, 108.

⁷ Philip Holmes, *Two Centuries at Mission San Jose*, 108.

and grounds were planted with prune orchards.⁸

Blanche and Tom Witherly bought the property in 1922. They continued the prune orchard and planted peas. The Great Depression forced the Witherlys out of agriculture and they began to subdivide the land along Witherly Lane for sale as home lots. The couple turned the rest of the property into an amusement park, which included a dance pavilion, concession stands, bath houses, a swimming pool, and rides. The couple sold Linda Vista Park, which was located at the southern end of the property, to Andrew Hynes in the 1940s.⁹

Edward Huddleson purchased the rest of the Witherly property in 1948. A native of Santa Cruz, Huddleson made a fortune in the construction industry and supervising highway construction in Hawaii. He also founded the Santa Cruz Fruit Packing Company in 1920, which he sold to Stokeley-Van Camp in the 1930s, then managed the frozen food division. He retired to the Fremont ranch a wealthy man and hired help to maintain the orchards and cattle. In 1964, following the trend towards rapid suburbanization Edward Huddleson sold his land to Brad Rick Homes, a real estate development firm that was established in 1952 and constructed more than 4000 homes in Alameda County by 1964. Brad Rick Homes intended to develop the ranch with “estate type homes, smaller single family homes, some multiples and a commercial area which would contain a restaurant and a motel.” The development was to be completed in the Mission Style and retain historic features of the property, including remnants of the Terra Linda Winery. The plan met with hostility; nearby residents did not want the hills developed at all, and the Planning Commission blocked the commercial aspects of the development until well past 1970. Consequently, Brad Rick Homes appears to have backed out of the agreement, leaving Edward Huddleson in search of new investors.¹⁰

The Fremont-Newark Junior College District was approved by local voters in 1965, and the school was officially named Ohlone College on June 28, 1967. Ohlone trustees initially leased five buildings at the former Serra Center for Girls campus on Washington for temporary school facilities. Ohlone College opened at Sierra Center in September of 1967 and officials soon began looking for a more permanent campus site. After a prolonged debate over possible sites, school officials purchased the 480-acre Huddleson Ranch for 1.9 million dollars. Part of an \$11 million bond issue passed in June 1968 was used to pay for the new campus site and to hire Ernest Kump Associates to design the new college. Construction began in 1972 and the first classes at the new facility were held on September 16, 1974.¹¹

⁸ “A portion of Linda Vista Farms, Albert Stephens Owner, Mission San Jose, Alameda County, CA,” County Survey, May 1913. Map held at the Museum of History archive, Fremont, CA.

⁹ Karen McNeill, Ph.D., Carey & Co., Inc. *Historic Resource Evaluation Report, Buildings 25 and 26*, 6. Also: Philip Holmes, *Two Centuries at Mission San Jose*, 108.

¹⁰ *Ibid*, 7.

¹¹ Philip Holmes, *Two Centuries at Mission San Jose*, 172.

CONSTRUCTION CHRONOLOGY

When construction crews began developing the site in 1972, all winery, dairy, and park buildings that could not be used were demolished. All prune orchards were removed, though the college did retain two avenues of historic olive trees, one along Mission Boulevard, and one leading into campus from Mission Boulevard. The latter was originally the main driveway for the Orchard House. As part of the college development work, the Orchard House and selected buildings off Witherly Lane were remodeled for college use. Little is known about these early alterations to the building; however, it appears that much of the original residence was retained over time.

The most significant changes to the building appear to have taken place after a fire damaged a portion of the building in 2000. A set of drawings, provided by Ohlone College representatives for this study, outline the post-fire repair work completed in 2001. The major repairs associated with this work include the following:

- New site work including parking areas and concrete walkways to north and east of house; accessibility upgrades including concrete ramp and metal handrails at north rear entry.
- New mechanical unit enclosure at the north side of the building
- Repair exterior fire-damaged walls and windows
- Replace broken windows, doors, and glazing
- Replace damaged roof and roof framing
- Paint entire building
- Repair interior fire-damaged walls and finishes
- Replace basement stair
- Install new guardrail and handrails at central stair (metal guardrail with tempered glass)
- Provide one accessible toilet
- Replace plumbing and upgrade electrical systems
- Install new HVAC system
- Install new telephone and communication system

The architectural plans indicate that damaged features were replaced in kind where possible, and that features such as hardware, light fixtures, and heat registers from damaged areas were salvaged. Visual inspection of the building today reveals that a notable amount of original interior detail has been retained or repaired, including:

- Built-in cabinetry
- Decorative fireplace surrounds
- Molded wood window and door trim, chair rails, picture rails, and decorative classical columns

- Wood paneled pocket doors
- Leaded glass windows
- Central stair with turned wood balustrade
- Beamed ceilings with scrolled brackets
- Wood panel doors with original hardware
- Coved ceilings

EVALUATIVE FRAMEWORK

THE CALIFORNIA REGISTER OF HISTORICAL PLACES

Criteria for Evaluation

The California Register of Historical Resources is the official list of properties, structures, districts, and objects significant at the local, state, or national level. California Register properties must have significance under one of the four following criteria and must retain enough of their historic character or appearance to be recognizable as historical resources and convey the reasons for their significance (i.e. retain integrity). The California Register utilizes the same seven aspects of integrity as the National Register. Properties that are eligible for the National Register are automatically eligible for the California Register. Properties that do not meet the threshold for the National Register may meet the California Register criteria.

1. Associated with events that have made a significant contribution to broad patterns of local or regional history, or cultural heritage of California or the United States;
2. Associated with the lives of persons important to the local, California or national history
3. Embodies the distinctive characteristics of a design-type, period, region, or method of construction, or represents the work of a master, or possesses high artistic value; or
4. Yields important information about prehistory or history of the local area, California, or the nation.

Integrity

When evaluating a resource for the CRHR, one must assess and clearly state the significance of that resource to American history, architecture, archaeology, engineering, or culture. A resource may be considered individually eligible for listing in the CRHR if it meets one or more of the above listed criteria for significance and it possesses historic integrity. Historic properties must retain sufficient historic integrity to convey their significance.

The National Register recognizes seven aspects or qualities that define historic integrity:

- Location. The place where the historic property was constructed or the place where the historic event occurred.
- Design. The combination of elements that create the form, plan, space, structure, and style of a property.

- Setting. The physical environment of a historic property.
- Materials. The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- Workmanship. The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- Feeling. A property's expression of the aesthetic or historic sense of a particular period of time.
- Association. The direct link between an important historic event or person and a historic property.

To retain historic integrity, a resource should possess several of the above-mentioned aspects. The retention of specific aspects of integrity is essential for a resource to convey its significance.

FINDINGS

California Register of Historical Resources (CRHR)

This section uses the historic information discussed above to evaluate the Orchard House (Building 20) property at for historic significance. The CRHR uses generally the same guidelines as the NRHP (developed by the National Park Service); as such, selected language from those guidelines will be quoted below to help clarify the evaluation discussion.

To be potentially eligible for *individual* listing on the CRHR, a structure must usually be more than 50 years old, must have historic significance, and must retain its physical integrity. The Orchard House was constructed in 1898 and therefore meets the age requirement. In terms of historic significance, the CRHR evaluates a resource based on the following four criteria:

CRITERION 1 (EVENT)

As stated by the National Park Service (NPS), this criterion "recognizes properties associated with single events, such as the founding of a town, or with a pattern of events, repeated activities, or historic trends, such as the gradual rise of a port city's prominence in trade and commerce."¹² When considering a property for significance under this criterion, the associated event or trends "must clearly be important within the associated context: settlement, in the case of the town, or development of a maritime economy,

¹² National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation, online at http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_6.htm

in the case of the port city...Moreover, the property must have an important association with the event or historic trends”¹³

The Orchard House was built in 1898 for Clorinda (McIver) Stephens, following the destruction of Charles McIver’s grand Victorian style residence on the property. Clorinda and Charles divorced in the late 1890s, and the Linda Vista vineyard was devastated by the phylloxera infestation. Following the divorce, Charles left the area and Clorinda replaced the grape vines with a prune orchard. Though many of the vineyards in the area were converted to growing other fruit following the phylloxera epidemic, research does not indicate that Clorinda Stephens’ fruit production operation at the former Linda Vista winery had an important association with this pattern of events.

The Fremont area was well known for its vineyards and wine production in the mid to late 19th century, and the Linda Vista property, under the ownership of Joseph Clasby Palmer and Charles McIver, gained nationwide notoriety under this context. If the original McIver residence or other buildings related to the property’s history as a vineyard remained, then the property may be found eligible for the CRHR under this criterion. However, Clorinda Stephens’ association with fruit production on the property does not appear significant enough to warrant listing on the California Register under this criterion.

Therefore, the Orchard House does not appear eligible for listing as a historic resource on the CRHR under Criterion 1.

CRITERION 2 (PERSON)

This criterion applies to properties associated with individuals whose specific contributions to history can be identified and documented. The NPS defines significant persons as “individuals whose activities are demonstrably important within a local, State, or national historic context. The criterion is generally restricted to those properties that illustrate (rather than commemorate) a person’s important achievements. The persons associated with the property must be individually significant within a historic context.” The NPS also specifies that these properties “are usually those associated with a person’s productive life, reflecting the time period when he or she achieved significance.”¹⁴

The Orchard House does not appear to be eligible as a historic resource under this criterion for association with its original owner Clorinda (McIver) Stephens or later owners of the property. Though Clorinda Stephens was married to Charles McIver, an award-winning wine producer, the subject property was built on the estate for Clorinda after divorce had split the couple and the winery was destroyed by a phylloxera infestation. Clorinda and her mother continued to use the estate for

¹³ Ibid.

¹⁴ National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation.

agricultural purposes, however research does not indicate that the property gained notable significance as a result of these efforts.

Blanche and Tom Witherly's greatest contribution to the site was the amusement park, no parts of which are extant today. Further, Huddleson had already achieved notoriety in Santa Cruz and Hawaii before purchasing the property in 1948. Therefore, the Orchard House does not appear to be significant for association with these later owners.

As such, the Orchard House does not appear eligible for listing as a historic resource on the CRHR under Criterion 2.

CRITERION 3 (DESIGN/CONSTRUCTION)

Under this criterion, properties may be eligible if they "embody the distinctive characteristics of a type, period, or method of construction, ...represent the work of a master, ...possess high artistic values, or...represent a significant and distinguishable entity whose components may lack individual distinction."

"Distinctive characteristics" are the physical features or traits that commonly recur in individual types, periods, or methods of construction. To be eligible, a property must clearly contain enough of those characteristics to be considered a true representative of a particular type, period, or method of construction.¹⁵

The Orchard House is a two-story Victorian era residence that incorporates stylistic elements from the Queen Anne Style and the Colonial Revival Style, both of which were popular styles at the time of construction. The residence gets its one-over-one wood windows, windows with stained glass in the upper sash, shingled wall cladding and decorative shingle detailing at the cornice line from the Queen Anne Style. The hipped roof with lower cross gable, asymmetrical façade, and extensive one-story porch also come from the Queen Anne Style. The elaborate front door surround and classical columns appear to have been inspired by the Colonial Revival Style.

Though the residence exhibits these stylistic qualities, it does not appear to be a true representation of either style. The architect is unknown; therefore, it is not known to be the work of a master. While it is a nice older residence that retains a good degree of original detail, it does not appear to possess high artistic values.

As such, the building does not appear eligible for listing on the CRHR under this criterion.

¹⁵ Ibid.

CRITERION 4 (INFORMATION POTENTIAL)

Archival research and physical investigation of the site focused on the aboveground resource only. Therefore, no informed determination could be made regarding the property's eligibility for the NRHP under Criterion D/4.

CONCLUSION

The Orchard House does not appear to exhibit a level of significance that would make it eligible for individual listing on the CRHR. However, the building is a reminder of the Mission San Jose area's agricultural past, and exhibits a level of historical association and integrity that warrants continued listing as a local resource on the City of Fremont's Register of Historical Resources.

IMPACTS AND RECOMMENDATIONS

The Orchard House is listed on the City of Fremont's Register of Historical Resources and therefore qualifies as a historical resource under CEQA.

The *2012 District Facilities Master Plan* proposes a series of improvements to the Ohlone College Campus to address accessibility, parking, circulation, landscape, and other functionality issues. The following section discusses the recommended alterations to the existing campus in relation to the Orchard House. This impacts analysis is based solely on information and diagrams shown in the *2012 District Facilities Master Plan (Master Plan)*.

Demolition

The *Master Plan* proposes demolition to Buildings 1, 2, 3, 4, 8, 14, and 16 in the upper campus, and to Building 18 in the lower campus. All proposed demolitions are located a significant distance from the Orchard House. The Orchard House (Building 20) is not proposed for demolition.

The proposed demolition plans (see "Recommended Demolition," page 1.21) will not directly or indirectly impact the Orchard House.

Vehicular Circulation

Though "Olive Way" was the original vehicular access route to the existing farmhouse, the path is currently only used for pedestrian access. According to the "Recommended Vehicular Circulation" diagram (page 1.55), vehicular circulation to and around the Orchard House will not change from the existing arrangement.

The proposed vehicular circulation plans will not directly or indirectly impact the Orchard House.

Parking

The “Recommended Parking” diagram (page 1.57) shows a reduction in surface parking campus wide, and construction of new parking structures in the upper campus area. No new parking is proposed adjacent to, or in the immediate vicinity of the Orchard House.

The proposed parking plans will not directly or indirectly impact the Orchard House.

Pedestrian Circulation

The “Recommended Pedestrian Circulation” diagram (page 1.59) identifies primary pedestrian routes in the upper campus, and secondary pedestrian routes to parking lots and other facilities in the lower campus area. Olive Alley, leading from the campus entry point at Mission Boulevard to the upper campus, is currently a pedestrian route and no new alterations are proposed to pedestrian access into or around the subject building.

The pedestrian circulation plans will not directly or indirectly impact the Orchard House.

Landscape Improvements

The landscape recommendations diagram (page 1.63) shows the introduction of new trees on both the upper and lower campus. It shows new lines of trees to the east and west of the Orchard House, screening the Orchard House from the new soccer field to the northwest and Building 12 to the northeast. The introduction of trees on the site is compatible with the historic character of the Orchard House, as it was historically set amidst an orchard, and does not constitute an impact (direct or indirect).

The diagram shows retention of most of the historic Olive Way trees, with the exception of a section near the Orchard House. These trees originally lined the vehicular access to the house and related outbuildings to the east. The tree lined path to the house remains in the proposed design and the outbuildings of the former agricultural property no longer remain. While retention of all of the Olive Way trees is ideal, the removal of a small section of the trees in the proposed locations would not constitute a significant impact to the Orchard House.

What appears to be new non-concrete hardscape is also visible in this plan near the Orchard House for the new Athletics Plaza. Though this new hardscape appears to encroach upon the existing lawn in the area south and southeast off the subject building, the area will remain open and accessible to pedestrian

(not vehicular) traffic. The setting of the former farmhouse has already been significantly altered, so the Athletics Plaza does not appear to create an impact to the Orchard House.

The proposed landscape improvement plans will not directly or indirectly impact the Orchard House.

CONCLUSION

The proposed modifications to the Ohlone College Campus, as presented in the 2012 District Facilities Master Plan, do not appear to constitute a direct or indirect impact to the Orchard House, a locally listed historic resource.

BIBLIOGRAPHY

McIver, C.C. Linda Vista Vineyards, Mission San Jose, Alameda Co., California. [Promotional booklet on file at the Museum of Local History]. San Francisco: H.S. Crocker Press, 1894.

Mission Peak Heritage Foundation, "The City of Fremont: The First Thirty Years", 1989.

Myers, Jenna, "The Incorporation of Fremont - 1956. A dedicated Civic Process Towards Home Rule." Westernday, 1974.

Oral History Tapes. Mission Peak Heritage Foundation (Maurice Marks), Fremont, CA, at Ohlone College and Fremont Main Library.

Sandoval, John, "Chapel of Chimes". A series of booklets in published in cooperation with the Hayward Historical Society.

Sandoval, John, "The History of Washington Township." Mt. Eden Historical Publishers, 1985.

Shinn, Charles Howard, "Historical Sketches of Southern Alameda County. " Alameda County Historical Society, Oakland, CA, 1991.

Thompson, E. B., "Washington Press, Special Edition." Irvington, 1898.

Thompson and West, "Historical Atlas of Alameda County, California." Oakland, CA, 1978. Bicentennial Reprint by Mission Peak Heritage Foundation, Valley Publishers, Fresno, CA, 1976.

Williamson, Gladys. Clipping file in Fremont Main Library.

Wood, M. W., "History of Alameda County". M. W. Wood Publisher, Oakland, CA, 1883. Reprints are available.

Web References:

Condensed History of Fremont by Phil Holmes

(<http://www.museumoflocalhistory.org/oldmuse/history1.htm>)

Summary Results

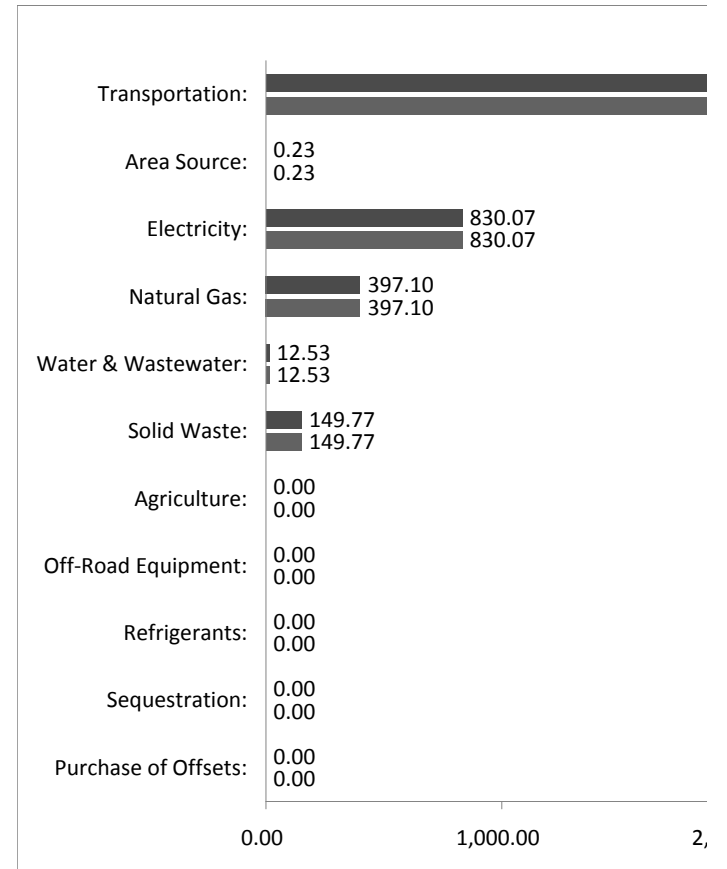
Project Name: SJCC Existing
 Project and Baseline Years: 2012 N/A

Results	Unmitigated Project- Baseline CO2e (metric tons/year)	Mitigated Project- Baseline CO2e (metric tons/year)
Transportation:	5,597.70	5,597.70
Area Source:	0.23	0.23
Electricity:	830.07	830.07
Natural Gas:	397.10	397.10
Water & Wastewater:	12.53	12.53
Solid Waste:	149.77	149.77
Agriculture:	0.00	0.00
Off-Road Equipment:	0.00	0.00
Refrigerants:	0.00	0.00
Sequestration:	N/A	0.00
Purchase of Offsets:	N/A	0.00
Total:	6,987.40	6,987.40

Baseline is currently: **OFF**

Baseline Project Name:

Go to Settings Tab to Turn On Baseline



Detailed Results

Unmitigated	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				5,597.70	80.11%
Area Source:	0.23	0.00	0.00	0.23	0.00%
Electricity:	828.74	0.01	0.00	830.07	11.88%
Natural Gas:	396.08	0.04	0.00	397.10	5.68%
Water & Wastewater:	12.51	0.00	0.00	12.53	0.18%
Solid Waste:	1.09	7.08	N/A	149.77	2.14%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	N/A	N/A
Purchase of Offsets:	N/A	N/A	N/A	N/A	N/A
Total:				6,987.40	100.00%

* Several adjustments were made to transportation emissions after they have been imported from URBEMIS.

After importing from URBEMIS, CO2 emissions are converted to metric tons and then adjusted to account for the "Pavley" regulation. Then, CO2 is converted to CO2e by multiplying by 100/95 to account for the contribution of other GHGs (CH4, N2O, and HFCs [from leaking air conditioning]). Finally, CO2e is adjusted to account for the low carbon fuels rule.

Mitigated	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				5,597.70	80.11%
Area Source:	0.23	0.00	0.00	0.23	0.00%
Electricity:	828.74	0.01	0.00	830.07	11.88%
Natural Gas:	396.08	0.04	0.00	397.10	5.68%
Water & Wastewater:	12.51	0.00	0.00	12.53	0.18%
Solid Waste:	1.09	7.08	N/A	149.77	2.14%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	0.00	0.00%
Purchase of Offsets:	N/A	N/A	N/A	0.00	0.00%
Total:				6,987.40	100.00%

Mitigation Measures Selected:

Transportation: Go to the following tab: [Transp. Detail Mit](#) for a list of the transportation mitigation measures selected (in URBE

Electricity: The following mitigation measure(s) have been selected to reduce electricity emissions.

Natural Gas: The following mitigation measure(s) have been selected to reduce natural gas emissions.

Water and Wastewater: The following mitigation measure(s) have been selected to reduce water and wastewater emissions.

Solid Waste: The following mitigation measure has been selected to reduce solid waste related GHG emissions.

Ag: No existing mitigation measures available.

Off-Road Equipment: No existing mitigation measures available.

Refrigerants: The following mitigation measure has been selected to reduce refrigerant emissions:

Carbon Sequestration: Project does not include carbon sequestration through tree planting.

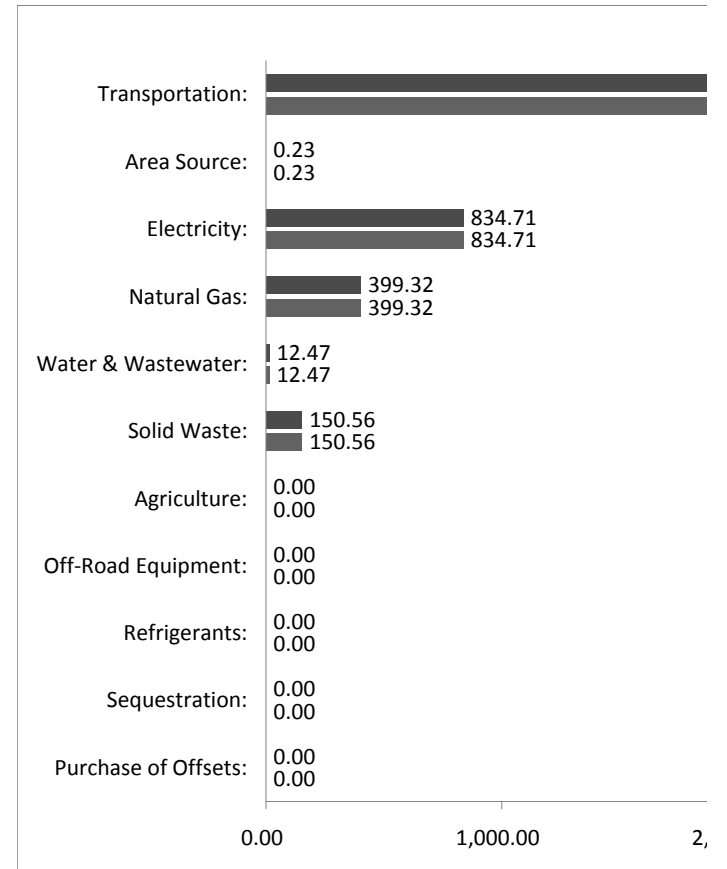
Emission Offsets/Credits: Project does not include purchase of emission offsets/credits.

Summary Results

Project Name: SJCC Existing
 Project and Baseline Years: 2025 N/A

Results	Unmitigated Project- Baseline CO2e (metric tons/year)	Mitigated Project- Baseline CO2e (metric tons/year)
Transportation:	5,336.27	5,336.27
Area Source:	0.23	0.23
Electricity:	834.71	834.71
Natural Gas:	399.32	399.32
Water & Wastewater:	12.47	12.47
Solid Waste:	150.56	150.56
Agriculture:	0.00	0.00
Off-Road Equipment:	0.00	0.00
Refrigerants:	0.00	0.00
Sequestration:	N/A	0.00
Purchase of Offsets:	N/A	0.00
Total:	6,733.55	6,733.55

Baseline is currently: **OFF**
 Baseline Project Name:
 Go to Settings Tab to Turn On Baseline



Detailed Results

Unmitigated	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				5,336.27	79.25%
Area Source:	0.23	0.00	0.00	0.23	0.00%
Electricity:	833.38	0.01	0.00	834.71	12.40%
Natural Gas:	398.30	0.04	0.00	399.32	5.93%
Water & Wastewater:	12.45	0.00	0.00	12.47	0.19%
Solid Waste:	1.05	7.12	N/A	150.56	2.24%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	N/A	N/A
Purchase of Offsets:	N/A	N/A	N/A	N/A	N/A
Total:				6,733.55	100.00%

* Several adjustments were made to transportation emissions after they have been imported from URBEMIS.

After importing from URBEMIS, CO2 emissions are converted to metric tons and then adjusted to account for the "Pavley" regulation. Then, CO2 is converted to CO2e by multiplying by 100/95 to account for the contribution of other GHGs (CH4, N2O, and HFCs [from leaking air conditioning]). Finally, CO2e is adjusted to account for the low carbon fuels rule.

Mitigated	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				5,336.27	79.25%
Area Source:	0.23	0.00	0.00	0.23	0.00%
Electricity:	833.38	0.01	0.00	834.71	12.40%
Natural Gas:	398.30	0.04	0.00	399.32	5.93%
Water & Wastewater:	12.45	0.00	0.00	12.47	0.19%
Solid Waste:	1.05	7.12	N/A	150.56	2.24%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	0.00	0.00%
Purchase of Offsets:	N/A	N/A	N/A	0.00	0.00%
Total:				6,733.55	100.00%

Mitigation Measures Selected:

Transportation: Go to the following tab: [Transp. Detail Mit](#) for a list of the transportation mitigation measures selected (in URBE

Electricity: The following mitigation measure(s) have been selected to reduce electricity emissions.

Natural Gas: The following mitigation measure(s) have been selected to reduce natural gas emissions.

Water and Wastewater: The following mitigation measure(s) have been selected to reduce water and wastewater emissions.

Solid Waste: The following mitigation measure has been selected to reduce solid waste related GHG emissions.

Ag: No existing mitigation measures available.

Off-Road Equipment: No existing mitigation measures available.

Refrigerants: The following mitigation measure has been selected to reduce refrigerant emissions:

Carbon Sequestration: Project does not include carbon sequestration through tree planting.

Emission Offsets/Credits: Project does not include purchase of emission offsets/credits.

APPENDIX 4.9

Noise Modeling Output

**Ohlone Community College Fremont Campus
2012 District Facilities Master Plan
Roadway Noise Contours**

[illegible]

APPENDIX 4.11

Traffic Modeling Output

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report												
2000 HCM Operations Method (Base Volume Alternative)												

Intersection #1 I-680 SB Ramp/Mission Blvd												

Cycle (sec):	80			Critical Vol./Cap.(X):						0.637		
Loss Time (sec):	12			Average Delay (sec/veh):						13.9		
Optimal Cycle:	50			Level Of Service:						B		

Street Name:	Mission Blvd						I-680 SB Ramp					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	0	0	0	0	0	1	0
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Volume Module: >> Count Date:	3 Oct 2012 << 7:30 - 8:30 am											
Base Vol:	76	872	0	0	819	595	0	0	0	186	5	401
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	76	872	0	0	819	595	0	0	0	186	5	401
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.00
PHF Volume:	94	1077	0	0	1011	735	0	0	0	230	6	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	1077	0	0	1011	735	0	0	0	230	6	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	94	1077	0	0	1011	735	0	0	0	230	6	0
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.89	0.89	1.00	1.00	1.00	0.85	0.85	1.00
Lanes:	1.00	2.00	0.00	0.00	1.74	1.26	0.00	0.00	0.00	0.97	0.03	1.00
Final Sat.:	1805	3610	0	0	2939	2135	0	0	0	1580	42	1900
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.15	0.15	0.00
Crit Moves:	****			****						****		
Green/Cycle:	0.08	0.62	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.23	0.23	0.00
Volume/Cap:	0.64	0.48	0.00	0.00	0.64	0.64	0.00	0.00	0.00	0.64	0.64	0.00
Delay/Veh:	44.5	8.3	0.0	0.0	13.4	13.4	0.0	0.0	0.0	31.5	31.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.5	8.3	0.0	0.0	13.4	13.4	0.0	0.0	0.0	31.5	31.5	0.0
LOS by Move:	D	A	A	A	B	B	A	A	A	C	C	A
HCM2k95thQ:	5	14	0	0	20	20	0	0	0	12	12	0

Note: Queue reported is the number of cars per lane.												

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report														
2000 HCM Operations Method (Base Volume Alternative)														

Intersection #1 I-680 SB Ramp/Mission Blvd														

Cycle (sec):	80			Critical Vol./Cap.(X):						0.450				
Loss Time (sec):	12			Average Delay (sec/veh):						10.6				
Optimal Cycle:	37			Level Of Service:						B				

Street Name:			Mission Blvd				I-680 SB Ramp							
Approach:			North Bound			South Bound			East Bound			West Bound		
Movement:			L	T	R	L	T	R	L	T	R	L	T	R
----- -----			-----			-----			-----			-----		
Control:			Protected			Protected			Protected			Protected		
Rights:			Include			Include			Include			Ignore		
Min. Green:			0	0	0	0	0	0	0	0	0	0	0	0
Y+R:			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:			1	0	2	0	0	0	0	0	0	0	1	0
----- -----			-----			-----			-----			-----		
Volume Module: >> Count Date:			3 Oct 2012 << 4:45 - 5:45 pm											
Base Vol:			80	462	0	0	882	364	0	0	0	111	4	494
Growth Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:			80	462	0	0	882	364	0	0	0	111	4	494
User Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:			0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.00
PHF Volume:			82	476	0	0	909	375	0	0	0	114	4	0
Reduct Vol:			0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			82	476	0	0	909	375	0	0	0	114	4	0
PCE Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:			82	476	0	0	909	375	0	0	0	114	4	0
----- -----			-----			-----			-----			-----		
Saturation Flow Module:														
Sat/Lane:			1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:			0.95	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.86	0.86	1.00
Lanes:			1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.97	0.03	1.00
Final Sat.:			1805	3610	0	0	3451	1726	0	0	0	1568	57	1900
----- -----			-----			-----			-----			-----		
Capacity Analysis Module:														
Vol/Sat:			0.05	0.13	0.00	0.00	0.26	0.22	0.00	0.00	0.00	0.07	0.07	0.00
Crit Moves:			****				****					****		
Green/Cycle:			0.10	0.69	0.00	0.00	0.59	0.59	0.00	0.00	0.00	0.16	0.16	0.00
Volume/Cap:			0.45	0.19	0.00	0.00	0.45	0.37	0.00	0.00	0.00	0.45	0.45	0.00
Delay/Veh:			35.6	4.5	0.0	0.0	9.4	8.8	0.0	0.0	0.0	31.5	31.5	0.0
User DelAdj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:			35.6	4.5	0.0	0.0	9.4	8.8	0.0	0.0	0.0	31.5	31.5	0.0
LOS by Move:			D	A	A	A	A	A	A	A	A	C	C	A
HCM2k95thQ:			4	4	0	0	13	10	0	0	0	6	6	0

Note: Queue reported is the number of cars per lane.														

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.592
Loss Time (sec): 10 Average Delay (sec/veh): 18.8
Optimal Cycle: 39 Level Of Service: B

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	2	1	0	1	0	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 7:15 - 8:15 am

Base Vol:	100	575	20	107	721	208	372	55	18	49	45	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	100	575	20	107	721	208	372	55	18	49	45	20
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.00	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	110	632	22	118	792	0	409	60	20	54	49	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	632	22	118	792	0	409	60	20	54	49	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	110	632	22	118	792	0	409	60	20	54	49	22

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.98	0.98	0.85
Lanes:	1.00	1.93	0.07	1.00	2.00	1.00	1.72	0.21	0.07	0.52	0.48	1.00
Final Sat.:	1805	3471	121	1805	3610	1900	3115	385	126	966	887	1615

Capacity Analysis Module:

Vol/Sat:	0.06	0.18	0.18	0.07	0.22	0.00	0.13	0.16	0.16	0.06	0.06	0.01
Crit Moves:	****			****			****			****		
Green/Cycle:	0.10	0.35	0.35	0.12	0.37	0.00	0.25	0.27	0.27	0.09	0.11	0.11
Volume/Cap:	0.59	0.52	0.52	0.52	0.59	0.00	0.52	0.59	0.59	0.59	0.52	0.13
Delay/Veh:	30.7	15.9	15.9	26.8	15.9	0.0	19.8	20.4	20.4	31.4	27.8	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.7	15.9	15.9	26.8	15.9	0.0	19.8	20.4	20.4	31.4	27.8	24.6
LOS by Move:	C	B	B	C	B	A	B	C	C	C	C	C
HCM2k95thQ:	4	10	10	4	12	0	9	11	11	6	5	1

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.949
Loss Time (sec): 10 Average Delay (sec/veh): 37.0
Optimal Cycle: 118 Level Of Service: D

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	2	1	0	1	0	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 4:45 - 5:45 pm

Base Vol:	916	496	82	52	440	515	63	26	11	27	171	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	916	496	82	52	440	515	63	26	11	27	171	29
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.00	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	985	533	88	56	473	0	68	28	12	29	184	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	985	533	88	56	473	0	68	28	12	29	184	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	985	533	88	56	473	0	68	28	12	29	184	31

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	1.00	0.95	0.95	0.95	0.99	0.99	0.85
Lanes:	1.00	1.72	0.28	1.00	2.00	1.00	1.46	0.38	0.16	0.14	0.86	1.00
Final Sat.:	1805	3033	501	1805	3610	1900	2645	688	291	257	1629	1615

Capacity Analysis Module:

Vol/Sat:	0.55	0.18	0.18	0.03	0.13	0.00	0.03	0.04	0.04	0.11	0.11	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.58	0.61	0.61	0.11	0.14	0.00	0.03	0.04	0.04	0.12	0.13	0.13
Volume/Cap:	0.95	0.29	0.29	0.29	0.95	0.00	0.86	0.95	0.95	0.95	0.86	0.15
Delay/Veh:	32.9	7.6	7.6	33.8	62.0	0.0	79.0	106	106.4	80.7	58.1	31.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.9	7.6	7.6	33.8	62.0	0.0	79.0	106	106.4	80.7	58.1	31.1
LOS by Move:	C	A	A	C	E	A	E	F	F	F	E	C
HCM2k95thQ:	36	7	7	3	14	0	6	9	9	17	15	2

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.826
Loss Time (sec): 12 Average Delay (sec/veh): 29.9
Optimal Cycle: 83 Level Of Service: C

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	0	1	1	0	0	0	0	0

Volume Module: >> Count Date: 3 Oct 2012 << 7:45 - 8:45 am

Base Vol:	201	363	0	0	636	142	248	0	230	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	201	363	0	0	636	142	248	0	230	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	218	395	0	0	691	154	270	0	250	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	395	0	0	691	154	270	0	250	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	395	0	0	691	154	270	0	250	0	0	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	1.00	0.98	0.98	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	0.82	0.18	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	1900	0	0	1514	338	1805	0	1615	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.12	0.21	0.00	0.00	0.46	0.46	0.15	0.00	0.15	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.15	0.70	0.00	0.00	0.55	0.55	0.18	0.00	0.18	0.00	0.00	0.00
Volume/Cap:	0.83	0.30	0.00	0.00	0.83	0.83	0.83	0.00	0.86	0.00	0.00	0.00
Delay/Veh:	60.2	1.6	0.0	0.0	18.1	18.1	55.2	0.0	61.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	60.2	1.6	0.0	0.0	18.1	18.1	55.2	0.0	61.0	0.0	0.0	0.0
LOS by Move:	E	A	A	A	B	B	E	A	E	A	A	A
HCM2k95thQ:	13	3	0	0	31	31	19	0	19	0	0	0

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.993
Loss Time (sec): 12 Average Delay (sec/veh): 46.7
Optimal Cycle: 180 Level Of Service: D

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	0	1	0	0	0	1	0	0

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm

Base Vol:	93	821	0	0	325	84	639	0	65	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	821	0	0	325	84	639	0	65	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	103	912	0	0	361	93	710	0	72	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	912	0	0	361	93	710	0	72	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	912	0	0	361	93	710	0	72	0	0	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	1.00	0.97	0.97	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	0.79	0.21	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	1900	0	0	1468	379	1805	0	1615	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.06	0.48	0.00	0.00	0.25	0.25	0.39	0.00	0.04	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.09	0.48	0.00	0.00	0.39	0.39	0.40	0.00	0.40	0.00	0.00	0.00
Volume/Cap:	0.63	0.99	0.00	0.00	0.63	0.63	0.99	0.00	0.11	0.00	0.00	0.00
Delay/Veh:	51.2	48.1	0.0	0.0	23.8	23.8	61.7	0.0	19.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.2	48.1	0.0	0.0	23.8	23.8	61.7	0.0	19.2	0.0	0.0	0.0
LOS by Move:	D	D	A	A	C	C	E	A	B	A	A	A
HCM2k95thQ:	6	52	0	0	17	17	47	0	3	0	0	0

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.655
Loss Time (sec): 12 Average Delay (sec/veh): 24.2
Optimal Cycle: 54 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	0	0	1	0	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am

Base Vol:	17	449	122	236	560	48	44	130	38	37	14	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	449	122	236	560	48	44	130	38	37	14	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	20	528	144	278	659	56	52	153	45	44	16	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	528	144	278	659	56	52	153	45	44	16	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	528	144	278	659	56	52	153	45	44	16	66

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.99	0.99	0.91	0.91	0.91	0.83	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	0.92	0.08	0.21	0.61	0.18	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1729	148	358	1059	309	1571	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.28	0.09	0.15	0.38	0.38	0.14	0.14	0.14	0.03	0.01	0.04
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.02	0.42	0.42	0.23	0.64	0.64	0.22	0.22	0.22	0.22	0.22	0.22
Volume/Cap:	0.59	0.65	0.21	0.65	0.59	0.59	0.65	0.65	0.65	0.13	0.04	0.18
Delay/Veh:	74.3	24.9	18.3	38.3	11.2	11.2	39.6	39.6	39.6	31.4	30.7	31.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.3	24.9	18.3	38.3	11.2	11.2	39.6	39.6	39.6	31.4	30.7	31.9
LOS by Move:	E	C	B	D	B	B	D	D	D	C	C	C
HCM2k95thQ:	1	23	5	14	22	22	15	15	15	2	1	4

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.612
Loss Time (sec): 12 Average Delay (sec/veh): 18.2
Optimal Cycle: 49 Level Of Service: B

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	0	0	1	0	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm

Base Vol:	33	707	46	55	442	15	47	40	33	76	44	116
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	33	707	46	55	442	15	47	40	33	76	44	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	37	794	52	62	497	17	53	45	37	85	49	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	794	52	62	497	17	53	45	37	85	49	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	794	52	62	497	17	53	45	37	85	49	130

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	1.00	0.82	0.82	0.82	0.84	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	0.97	0.03	0.40	0.33	0.27	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1828	62	611	520	429	1602	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.02	0.42	0.03	0.03	0.27	0.27	0.09	0.09	0.09	0.05	0.03	0.08
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.05	0.68	0.68	0.06	0.69	0.69	0.14	0.14	0.14	0.14	0.14	0.14
Volume/Cap:	0.40	0.61	0.05	0.61	0.40	0.40	0.61	0.61	0.61	0.38	0.18	0.57
Delay/Veh:	48.6	9.5	5.2	56.8	6.9	6.9	45.4	45.4	45.4	40.0	38.2	43.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.6	9.5	5.2	56.8	6.9	6.9	45.4	45.4	45.4	40.0	38.2	43.6
LOS by Move:	D	A	A	E	A	A	D	D	D	D	D	D
HCM2k95thQ:	2	23	1	4	13	13	10	10	10	6	3	9

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.459
Loss Time (sec): 12 Average Delay (sec/veh): 18.8
Optimal Cycle: 38 Level Of Service: B

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	1	0	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am

Base Vol:	36	483	147	96	490	37	54	103	126	39	14	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	483	147	96	490	37	54	103	126	39	14	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	38	508	155	101	516	39	57	108	133	41	15	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	508	155	101	516	39	57	108	133	41	15	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	508	155	101	516	39	57	108	133	41	15	46

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.95	0.85	0.76	0.87	0.87	0.54	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1435	1657	1657	1018	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.02	0.27	0.10	0.06	0.14	0.02	0.04	0.07	0.08	0.04	0.01	0.03
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.09	0.58	0.58	0.12	0.62	0.62	0.17	0.17	0.17	0.17	0.17	0.17
Volume/Cap:	0.23	0.46	0.16	0.46	0.23	0.04	0.23	0.37	0.46	0.23	0.04	0.16
Delay/Veh:	43.0	12.1	9.7	42.3	8.7	7.6	35.9	36.8	37.7	36.2	34.4	35.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.0	12.1	9.7	42.3	8.7	7.6	35.9	36.8	37.7	36.2	34.4	35.4
LOS by Move:	D	B	A	D	A	A	D	D	D	D	C	D
HCM2k95thQ:	2	16	4	6	7	1	3	7	8	3	1	3

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581
Loss Time (sec): 12 Average Delay (sec/veh): 20.5
Optimal Cycle: 47 Level Of Service: C

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	1	0	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm

Base Vol:	628	703	118	60	324	26	5	23	38	87	73	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	628	703	118	60	324	26	5	23	38	87	73	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	641	717	120	61	331	27	5	23	39	89	74	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	641	717	120	61	331	27	5	23	39	89	74	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	641	717	120	61	331	27	5	23	39	89	74	92

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.95	0.85	0.70	0.86	0.86	0.72	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1338	1637	1637	1364	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.36	0.38	0.07	0.03	0.09	0.02	0.00	0.01	0.02	0.07	0.04	0.06
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.61	0.70	0.70	0.06	0.16	0.16	0.11	0.11	0.11	0.11	0.11	0.11
Volume/Cap:	0.58	0.54	0.11	0.54	0.58	0.10	0.03	0.13	0.21	0.58	0.35	0.51
Delay/Veh:	12.5	7.4	4.8	50.3	40.6	36.3	39.7	40.1	40.8	47.8	42.0	44.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.5	7.4	4.8	50.3	40.6	36.3	39.7	40.1	40.8	47.8	42.0	44.2
LOS by Move:	B	A	A	D	D	D	D	D	D	D	D	D
HCM2k95thQ:	21	19	2	4	10	1	0	2	3	7	5	7

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report															
2000 HCM Operations Method (Base Volume Alternative)															

Intersection #6 Mission Blvd/Durham Rd															

Cycle (sec):	100				Critical Vol./Cap.(X):				0.431						
Loss Time (sec):	16				Average Delay (sec/veh):				18.6						
Optimal Cycle:	44				Level Of Service:				B						

Street Name:	Mission Blvd					Durham Rd									
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
----- ----- ----- -----															
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0		
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1		
----- ----- ----- -----															
Volume Module: >> Count Date:	3 Oct 2012 << 8:00 - 9:00 am														
Base Vol:	17	321	13	18	702	117	118	26	63	44	43	25			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	17	321	13	18	702	117	118	26	63	44	43	25			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
PHF Volume:	19	353	14	20	771	129	130	29	69	48	47	27			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	19	353	14	20	771	129	130	29	69	48	47	27			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
FinalVolume:	19	353	14	20	771	129	130	29	69	48	47	27			
----- ----- ----- -----															
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.89	0.89	0.95	1.00	0.85			
Lanes:	1.00	1.92	0.08	1.00	1.71	0.29	1.00	0.29	0.71	1.00	1.00	1.00			
Final Sat.:	1805	3449	140	1805	3029	505	1805	496	1202	1805	1900	1615			
----- ----- ----- -----															
Capacity Analysis Module:															
Vol/Sat:	0.01	0.10	0.10	0.01	0.25	0.25	0.07	0.06	0.06	0.03	0.02	0.02			
Crit Moves:	****			****			****			****					
Green/Cycle:	0.02	0.56	0.56	0.06	0.59	0.59	0.17	0.15	0.15	0.07	0.06	0.06			
Volume/Cap:	0.43	0.18	0.18	0.18	0.43	0.43	0.43	0.38	0.38	0.38	0.43	0.29			
Delay/Veh:	54.9	11.0	11.0	45.5	11.3	11.3	38.4	38.9	38.9	46.1	48.2	46.9			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	54.9	11.0	11.0	45.5	11.3	11.3	38.4	38.9	38.9	46.1	48.2	46.9			
LOS by Move:	D	B	B	D	B	B	D	D	D	D	D	D			
HCM2k95thQ:	2	6	6	1	15	15	7	5	5	4	4	2			

Note: Queue reported is the number of cars per lane.															

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report												
2000 HCM Operations Method (Base Volume Alternative)												

Intersection #6 Mission Blvd/Durham Rd												

Cycle (sec):	100		Critical Vol./Cap.(X):						0.610			
Loss Time (sec):	16		Average Delay (sec/veh):						19.4			
Optimal Cycle:	58		Level Of Service:						B			

Street Name:	Mission Blvd						Durham Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- -----												
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	0	1	0	1	0
----- ----- ----- -----												
Volume Module:	>> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm											
Base Vol:	216	1302	31	26	271	150	119	51	19	15	29	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	216	1302	31	26	271	150	119	51	19	15	29	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	237	1431	34	29	298	165	131	56	21	16	32	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	1431	34	29	298	165	131	56	21	16	32	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	237	1431	34	29	298	165	131	56	21	16	32	27
----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.90	0.90	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	1.95	0.05	1.00	1.29	0.71	1.00	0.73	0.27	1.00	1.00	1.00
Final Sat.:	1805	3515	84	1805	2201	1218	1805	1328	495	1805	1900	1615
----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.13	0.41	0.41	0.02	0.14	0.14	0.07	0.04	0.04	0.01	0.02	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.34	0.67	0.67	0.03	0.35	0.35	0.12	0.12	0.12	0.03	0.03	0.03
Volume/Cap:	0.38	0.61	0.61	0.61	0.38	0.38	0.61	0.35	0.35	0.35	0.61	0.62
Delay/Veh:	25.3	9.8	9.8	69.4	24.5	24.5	46.9	41.4	41.4	52.4	67.3	71.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.3	9.8	9.8	69.4	24.5	24.5	46.9	41.4	41.4	52.4	67.3	71.7
LOS by Move:	C	A	A	E	C	C	D	D	D	D	E	E
HCM2k95thQ:	11	24	24	2	10	10	8	4	4	2	4	4

Note: Queue reported is the number of cars per lane.												

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 65 Critical Vol./Cap.(X): 0.484
Loss Time (sec): 8 Average Delay (sec/veh): 17.4
Optimal Cycle: 30 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	0	1	0	0	1	0	0	1	0	0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am

Base Vol:	792	6	16	0	9	88	9	295	362	47	393	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	792	6	16	0	9	88	9	295	362	47	393	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.00	0.93	0.93	0.93
PHF Volume:	852	6	17	0	10	95	10	317	0	51	423	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	852	6	17	0	10	95	10	317	0	51	423	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	852	6	17	0	10	95	10	317	0	51	423	1

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	1.00	1.00	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	2.00	0.27	0.73	1.00	1.00	1.00	1.00	2.00	0.00	1.00	1.99	0.01
Final Sat.:	3502	462	1231	1900	1900	1615	1805	3610	0	1805	3601	9

Capacity Analysis Module:

Vol/Sat:	0.24	0.01	0.01	0.00	0.01	0.06	0.01	0.09	0.00	0.03	0.12	0.12
Crit Moves:	***			***		***	***			***		
Green/Cycle:	0.50	0.62	0.62	0.00	0.12	0.12	0.01	0.19	0.00	0.06	0.24	0.24
Volume/Cap:	0.48	0.02	0.02	0.00	0.04	0.48	0.48	0.46	0.00	0.46	0.48	0.48
Delay/Veh:	10.8	4.7	4.7	0.0	25.3	28.6	49.3	23.7	0.0	32.4	21.6	21.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.8	4.7	4.7	0.0	25.3	28.6	49.3	23.7	0.0	32.4	21.6	21.6
LOS by Move:	B	A	A	A	C	C	D	C	A	C	C	C
HCM2k95thQ:	12	0	0	0	0	5	0	6	0	2	7	7

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.377
Loss Time (sec): 8 Average Delay (sec/veh): 15.1
Optimal Cycle: 26 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	0	1	0	0	1	0	0	1	0	0

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm

Base Vol:	425	8	92	0	4	43	77	513	666	8	364	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	425	8	92	0	4	43	77	513	666	8	364	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.90	0.90	0.90
PHF Volume:	472	9	102	0	4	48	86	570	0	9	404	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	472	9	102	0	4	48	86	570	0	9	404	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	472	9	102	0	4	48	86	570	0	9	404	9

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.86	0.86	1.00	1.00	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	2.00	0.08	0.92	1.00	1.00	1.00	1.00	2.00	0.00	1.00	1.96	0.04
Final Sat.:	3502	131	1507	1900	1900	1615	1805	3610	0	1805	3522	77

Capacity Analysis Module:

Vol/Sat:	0.13	0.07	0.07	0.00	0.00	0.03	0.05	0.16	0.00	0.00	0.11	0.11
Crit Moves:	***			***		***	***			***		
Green/Cycle:	0.36	0.44	0.44	0.00	0.08	0.08	0.13	0.42	0.00	0.01	0.30	0.30
Volume/Cap:	0.38	0.16	0.16	0.00	0.03	0.38	0.38	0.38	0.00	0.38	0.38	0.38
Delay/Veh:	14.5	10.3	10.3	0.0	25.6	28.1	25.1	12.3	0.0	39.3	16.6	16.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.5	10.3	10.3	0.0	25.6	28.1	25.1	12.3	0.0	39.3	16.6	16.6
LOS by Move:	B	B	B	A	C	C	C	B	A	D	B	B
HCM2k95thQ:	7	3	3	0	0	3	3	7	0	0	6	6

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 130 Critical Vol./Cap.(X): 0.689
Loss Time (sec): 10 Average Delay (sec/veh): 28.3
Optimal Cycle: 55 Level Of Service: C

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	0	0	0	0	0	0	1	1	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am

Base Vol:	927	0	11	0	0	0	0	639	511	64	1225	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	927	0	11	0	0	0	0	639	511	64	1225	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	976	0	12	0	0	0	0	673	538	67	1289	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	976	0	12	0	0	0	0	673	538	67	1289	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	976	0	12	0	0	0	0	673	538	67	1289	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.89	0.89	0.95	0.95	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	1.67	1.33	1.00	2.00	0.00
Final Sat.:	3502	0	1615	0	0	0	0	2807	2245	1805	3610	0

Capacity Analysis Module:

Vol/Sat:	0.28	0.00	0.01	0.00	0.00	0.00	0.00	0.24	0.24	0.04	0.36	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.45	0.45	0.07	0.52	0.00
Volume/Cap:	0.69	0.00	0.02	0.00	0.00	0.00	0.00	0.53	0.53	0.53	0.69	0.00
Delay/Veh:	33.4	0.0	23.2	0.0	0.0	0.0	0.0	26.2	26.2	62.8	24.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.4	0.0	23.2	0.0	0.0	0.0	0.0	26.2	26.2	62.8	24.5	0.0
LOS by Move:	C	A	C	A	A	A	A	C	C	E	C	A
HCM2k95thQ:	30	0	1	0	0	0	0	22	22	5	34	0

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 130 Critical Vol./Cap.(X): 0.666
Loss Time (sec): 10 Average Delay (sec/veh): 14.4
Optimal Cycle: 52 Level Of Service: B

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	0	0	0	0	0	0	1	1	1	0

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm

Base Vol:	346	0	53	0	0	0	0	1320	970	38	817	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	346	0	53	0	0	0	0	1320	970	38	817	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	372	0	57	0	0	0	0	1419	1043	41	878	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	372	0	57	0	0	0	0	1419	1043	41	878	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	372	0	57	0	0	0	0	1419	1043	41	878	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.89	0.89	0.95	0.95	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	1.73	1.27	1.00	2.00	0.00
Final Sat.:	3502	0	1615	0	0	0	0	2922	2147	1805	3610	0

Capacity Analysis Module:

Vol/Sat:	0.11	0.00	0.04	0.00	0.00	0.00	0.00	0.49	0.49	0.02	0.24	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.73	0.73	0.03	0.76	0.00
Volume/Cap:	0.67	0.00	0.22	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.32	0.00
Delay/Veh:	54.4	0.0	48.0	0.0	0.0	0.0	0.0	9.7	9.7	86.5	4.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.4	0.0	48.0	0.0	0.0	0.0	0.0	9.7	9.7	86.5	4.9	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	F	A	A
HCM2k95thQ:	16	0	4	0	0	0	0	31	31	4	11	0

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.658
Loss Time (sec): 12 Average Delay (sec/veh): 14.3
Optimal Cycle: 52 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 76 872 0 0 819 595 0 0 0 186 5 401
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 76 872 0 0 819 595 0 0 0 186 5 401
Added Vol: 0 10 0 0 52 0 0 0 0 8 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 76 882 0 0 871 595 0 0 0 194 5 401
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81
PHF Volume: 94 1089 0 0 1075 735 0 0 0 240 6 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 94 1089 0 0 1075 735 0 0 0 240 6 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 94 1089 0 0 1075 735 0 0 0 240 6 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.89 0.89 1.00 1.00 1.00 0.85 0.85 1.00
Lanes: 1.00 2.00 0.00 0.00 1.78 1.22 0.00 0.00 0.00 0.97 0.03 1.00
Final Sat.: 1805 3610 0 0 3021 2064 0 0 0 1582 41 1900

Capacity Analysis Module:
Vol/Sat: 0.05 0.30 0.00 0.00 0.36 0.36 0.00 0.00 0.00 0.15 0.15 0.00
Crit Moves: ****
Green/Cycle: 0.08 0.62 0.00 0.00 0.54 0.54 0.00 0.00 0.00 0.23 0.23 0.00
Volume/Cap: 0.66 0.49 0.00 0.00 0.66 0.66 0.00 0.00 0.00 0.66 0.66 0.00
Delay/Veh: 46.5 8.4 0.0 0.0 13.7 13.7 0.0 0.0 0.0 32.2 32.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 46.5 8.4 0.0 0.0 13.7 13.7 0.0 0.0 0.0 32.2 32.2 0.0
LOS by Move: D A A A B B A A A C C A
HCM2k95thQ: 5 14 0 0 22 22 0 0 0 13 13 0

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.467
Loss Time (sec): 12 Average Delay (sec/veh): 10.6
Optimal Cycle: 38 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:45 - 5:45 pm
Base Vol: 80 462 0 0 882 364 0 0 0 111 4 494
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 80 462 0 0 882 364 0 0 0 111 4 494
Added Vol: 0 23 0 0 39 0 0 0 0 6 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 80 485 0 0 921 364 0 0 0 117 4 494
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 82 500 0 0 949 375 0 0 0 121 4 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 82 500 0 0 949 375 0 0 0 121 4 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 82 500 0 0 949 375 0 0 0 121 4 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.91 0.91 1.00 1.00 1.00 0.86 0.86 1.00
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 0.00 0.00 0.00 0.97 0.03 1.00
Final Sat.: 1805 3610 0 0 3458 1729 0 0 0 1571 54 1900

Capacity Analysis Module:
Vol/Sat: 0.05 0.14 0.00 0.00 0.27 0.22 0.00 0.00 0.00 0.08 0.08 0.00
Crit Moves: ****
Green/Cycle: 0.10 0.69 0.00 0.00 0.59 0.59 0.00 0.00 0.00 0.16 0.16 0.00
Volume/Cap: 0.47 0.20 0.00 0.00 0.47 0.37 0.00 0.00 0.00 0.47 0.47 0.00
Delay/Veh: 36.1 4.6 0.0 0.0 9.5 8.7 0.0 0.0 0.0 31.5 31.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 36.1 4.6 0.0 0.0 9.5 8.7 0.0 0.0 0.0 31.5 31.5 0.0
LOS by Move: D A A A A A A A A C C A
HCM2k95thQ: 4 5 0 0 14 10 0 0 0 7 7 0

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.615
Loss Time (sec): 10 Average Delay (sec/veh): 18.7
Optimal Cycle: 41 Level Of Service: B

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:15 - 8:15 am
Base Vol: 100 575 20 107 721 208 372 55 18 49 45 20
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 100 575 20 107 721 208 372 55 18 49 45 20
Added Vol: 2 10 0 0 60 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 102 585 20 107 781 208 372 55 18 49 45 20
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 112 643 22 118 858 0 409 60 20 54 49 22
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 112 643 22 118 858 0 409 60 20 54 49 22
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 112 643 22 118 858 0 409 60 20 54 49 22

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.98 0.98 0.85
Lanes: 1.00 1.93 0.07 1.00 2.00 1.00 1.72 0.21 0.07 0.52 0.48 1.00
Final Sat.: 1805 3473 119 1805 3610 1900 3115 385 126 966 887 1615

Capacity Analysis Module:
Vol/Sat: 0.06 0.19 0.19 0.07 0.24 0.00 0.13 0.16 0.16 0.06 0.06 0.01
Crit Moves: **** **** ****
Green/Cycle: 0.10 0.36 0.36 0.13 0.39 0.00 0.24 0.26 0.26 0.09 0.10 0.10
Volume/Cap: 0.62 0.51 0.51 0.51 0.62 0.00 0.54 0.62 0.62 0.62 0.54 0.13
Delay/Veh: 32.0 15.4 15.4 26.4 15.6 0.0 20.5 21.2 21.2 32.9 28.7 24.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.0 15.4 15.4 26.4 15.6 0.0 20.5 21.2 21.2 32.9 28.7 24.8
LOS by Move: C B B C B A C C C C C C
HCM2k95thQ: 4 10 10 4 13 0 9 11 11 6 5 1

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.966
Loss Time (sec): 10 Average Delay (sec/veh): 39.6
Optimal Cycle: 129 Level Of Service: D

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:45 - 5:45 pm
Base Vol: 916 496 82 52 440 515 63 26 11 27 171 29
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 916 496 82 52 440 515 63 26 11 27 171 29
Added Vol: 3 23 0 0 45 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 919 519 82 52 485 515 63 26 11 27 171 29
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 988 558 88 56 522 0 68 28 12 29 184 31
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 988 558 88 56 522 0 68 28 12 29 184 31
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 988 558 88 56 522 0 68 28 12 29 184 31

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.93 0.93 0.95 0.95 1.00 0.95 0.95 0.95 0.99 0.99 0.85
Lanes: 1.00 1.73 0.27 1.00 2.00 1.00 1.46 0.38 0.16 0.14 0.86 1.00
Final Sat.: 1805 3055 483 1805 3610 1900 2645 688 291 257 1629 1615

Capacity Analysis Module:
Vol/Sat: 0.55 0.18 0.18 0.03 0.14 0.00 0.03 0.04 0.04 0.11 0.11 0.02
Crit Moves: **** **** ****
Green/Cycle: 0.57 0.61 0.61 0.10 0.15 0.00 0.03 0.04 0.04 0.12 0.13 0.13
Volume/Cap: 0.97 0.30 0.30 0.30 0.97 0.00 0.87 0.97 0.97 0.97 0.87 0.15
Delay/Veh: 37.0 7.4 7.4 34.0 64.0 0.0 83.1 113 112.6 86.0 61.2 31.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 37.0 7.4 7.4 34.0 64.0 0.0 83.1 113 112.6 86.0 61.2 31.2
LOS by Move: D A A C E A F F F F E C
HCM2k95thQ: 37 7 7 3 16 0 6 9 9 17 15 2

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.885
Loss Time (sec): 12 Average Delay (sec/veh): 32.9
Optimal Cycle: 103 Level Of Service: C

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 0 1 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 7:45 - 8:45 am
Base Vol: 201 363 0 0 636 142 248 0 230 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 201 363 0 0 636 142 248 0 230 0 0 0
Added Vol: 3 11 0 0 60 0 0 0 16 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 204 374 0 0 696 142 248 0 246 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 222 407 0 0 757 154 270 0 267 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 222 407 0 0 757 154 270 0 267 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 222 407 0 0 757 154 270 0 267 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.98 0.98 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.83 0.17 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1542 315 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.12 0.21 0.00 0.00 0.49 0.49 0.15 0.00 0.17 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.14 0.69 0.00 0.00 0.55 0.55 0.19 0.00 0.19 0.00 0.00 0.00
Volume/Cap: 0.89 0.31 0.00 0.00 0.89 0.89 0.80 0.00 0.89 0.00 0.00 0.00
Delay/Veh: 71.3 1.8 0.0 0.0 22.5 22.5 51.4 0.0 64.8 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 71.3 1.8 0.0 0.0 22.5 22.5 51.4 0.0 64.8 0.0 0.0 0.0
LOS by Move: E A A A C C D A E A A A
HCM2k95thQ: 14 3 0 0 38 38 19 0 20 0 0 0

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.010
Loss Time (sec): 12 Average Delay (sec/veh): 49.6
Optimal Cycle: 180 Level Of Service: D

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 0 1 0 1 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm
Base Vol: 93 821 0 0 325 84 639 0 65 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 93 821 0 0 325 84 639 0 65 0 0 0
Added Vol: 7 26 0 0 45 0 0 0 12 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 100 847 0 0 370 84 639 0 77 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 111 941 0 0 411 93 710 0 86 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 111 941 0 0 411 93 710 0 86 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 111 941 0 0 411 93 710 0 86 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.98 0.98 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.81 0.19 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1510 343 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.06 0.50 0.00 0.00 0.27 0.27 0.39 0.00 0.05 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.09 0.49 0.00 0.00 0.40 0.40 0.39 0.00 0.39 0.00 0.00 0.00
Volume/Cap: 0.68 1.01 0.00 0.00 0.68 0.68 1.01 0.00 0.14 0.00 0.00 0.00
Delay/Veh: 55.2 51.8 0.0 0.0 24.7 24.7 66.9 0.0 19.8 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 55.2 51.8 0.0 0.0 24.7 24.7 66.9 0.0 19.8 0.0 0.0 0.0
LOS by Move: E D A A C C E A B A A A
HCM2k95thQ: 7 55 0 0 19 19 48 0 3 0 0 0

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.694
Loss Time (sec): 12 Average Delay (sec/veh): 25.3
Optimal Cycle: 59 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 17 449 122 236 560 48 44 130 38 37 14 56
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 449 122 236 560 48 44 130 38 37 14 56
Added Vol: 0 7 33 38 38 0 0 8 0 6 2 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 17 456 155 274 598 48 44 138 38 43 16 63
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85
PHF Volume: 20 536 182 322 704 56 52 162 45 51 19 74
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 20 536 182 322 704 56 52 162 45 51 19 74
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 20 536 182 322 704 56 52 162 45 51 19 74

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.99 0.99 0.91 0.91 0.91 0.84 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.93 0.07 0.20 0.63 0.17 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1739 140 346 1086 299 1600 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.28 0.11 0.18 0.40 0.40 0.15 0.15 0.15 0.03 0.01 0.05
Crit Moves: ****
Green/Cycle: 0.02 0.41 0.41 0.26 0.65 0.65 0.22 0.22 0.22 0.22 0.22 0.22
Volume/Cap: 0.63 0.69 0.28 0.69 0.63 0.63 0.69 0.69 0.69 0.15 0.05 0.21
Delay/Veh: 81.8 27.2 20.0 38.1 11.5 11.5 41.7 41.7 41.7 32.0 31.1 32.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 81.8 27.2 20.0 38.1 11.5 11.5 41.7 41.7 41.7 32.0 31.1 32.6
LOS by Move: F C C D B B D D C C C C
HCM2k95thQ: 1 24 7 16 23 23 16 16 16 3 1 4

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.651
Loss Time (sec): 12 Average Delay (sec/veh): 20.0
Optimal Cycle: 53 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 33 707 46 55 442 15 47 40 33 76 44 116
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 33 707 46 55 442 15 47 40 33 76 44 116
Added Vol: 0 17 25 29 29 0 0 6 0 15 3 17
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 33 724 71 84 471 15 47 46 33 91 47 133
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
PHF Volume: 37 813 80 94 529 17 53 52 37 102 53 149
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 37 813 80 94 529 17 53 52 37 102 53 149
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 37 813 80 94 529 17 53 52 37 102 53 149

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 1.00 1.00 0.83 0.83 0.83 0.85 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.97 0.03 0.37 0.37 0.26 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1832 58 586 574 412 1617 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.43 0.05 0.05 0.29 0.29 0.09 0.09 0.09 0.06 0.03 0.09
Crit Moves: ****
Green/Cycle: 0.05 0.66 0.66 0.08 0.69 0.69 0.14 0.14 0.14 0.14 0.14 0.14
Volume/Cap: 0.42 0.65 0.08 0.65 0.42 0.42 0.63 0.63 0.63 0.44 0.20 0.65
Delay/Veh: 49.4 11.5 6.2 54.7 7.0 7.0 46.3 46.3 46.3 40.7 38.2 47.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 49.4 11.5 6.2 54.7 7.0 7.0 46.3 46.3 46.3 40.7 38.2 47.0
LOS by Move: D B A D A A D D D D D D
HCM2k95thQ: 2 26 2 6 13 13 10 10 10 7 3 11

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.504
Loss Time (sec): 12 Average Delay (sec/veh): 19.7
Optimal Cycle: 41 Level Of Service: B

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 36 483 147 96 490 37 54 103 126 39 14 44
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 36 483 147 96 490 37 54 103 126 39 14 44
Added Vol: 0 33 33 38 6 0 0 8 0 6 1 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 36 516 180 134 496 37 54 111 126 45 15 51
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 38 543 189 141 522 39 57 117 133 47 16 54
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 38 543 189 141 522 39 57 117 133 47 16 54
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 38 543 189 141 522 39 57 117 133 47 16 54

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.75 0.87 0.87 0.51 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1433 1661 1661 975 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.29 0.12 0.08 0.14 0.02 0.04 0.07 0.08 0.05 0.01 0.03
Crit Moves: ****
Green/Cycle: 0.09 0.57 0.57 0.15 0.63 0.63 0.16 0.16 0.16 0.16 0.16 0.16
Volume/Cap: 0.23 0.50 0.21 0.50 0.23 0.04 0.25 0.44 0.50 0.31 0.05 0.21
Delay/Veh: 42.9 13.5 10.7 40.2 8.0 7.0 37.5 38.7 39.3 38.4 35.8 37.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 42.9 13.5 10.7 40.2 8.0 7.0 37.5 38.7 39.3 38.4 35.8 37.0
LOS by Move: D B B D A A D D D D D D
HCM2k95thQ: 2 18 6 8 7 1 4 8 9 3 1 3

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.600
Loss Time (sec): 12 Average Delay (sec/veh): 22.2
Optimal Cycle: 48 Level Of Service: C

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm
Base Vol: 628 703 118 60 324 26 5 23 38 87 73 90
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 628 703 118 60 324 26 5 23 38 87 73 90
Added Vol: 0 25 25 29 15 0 0 6 0 15 3 17
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 628 728 143 89 339 26 5 29 38 102 76 107
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 641 743 146 91 346 27 5 30 39 104 78 109
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 641 743 146 91 346 27 5 30 39 104 78 109
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 641 743 146 91 346 27 5 30 39 104 78 109

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.69 0.87 0.87 0.71 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1317 1652 1652 1355 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.36 0.39 0.09 0.05 0.10 0.02 0.00 0.02 0.02 0.08 0.04 0.07
Crit Moves: ****
Green/Cycle: 0.59 0.67 0.67 0.09 0.16 0.16 0.13 0.13 0.13 0.13 0.13 0.13
Volume/Cap: 0.60 0.59 0.14 0.59 0.60 0.10 0.03 0.14 0.18 0.60 0.32 0.53
Delay/Veh: 13.9 9.9 6.2 49.8 40.8 36.1 38.2 38.8 39.2 46.9 40.4 43.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 13.9 9.9 6.2 49.8 40.8 36.1 38.2 38.8 39.2 46.9 40.4 43.3
LOS by Move: B A A D D D D D D D D
HCM2k95thQ: 22 22 3 5 10 1 0 2 3 8 5 8

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.471
Loss Time (sec): 16 Average Delay (sec/veh): 20.3
Optimal Cycle: 47 Level Of Service: C

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 8:00 - 9:00 am
Base Vol: 17 321 13 18 702 117 118 26 63 44 43 25
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 321 13 18 702 117 118 26 63 44 43 25
Added Vol: 0 19 0 0 4 9 48 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 17 340 13 18 706 126 166 26 63 44 43 25
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 19 374 14 20 776 138 182 29 69 48 47 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 19 374 14 20 776 138 182 29 69 48 47 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 19 374 14 20 776 138 182 29 69 48 47 27

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 0.93 0.93 0.95 0.89 0.89 0.95 1.00 0.85
Lanes: 1.00 1.93 0.07 1.00 1.70 0.30 1.00 0.29 0.71 1.00 1.00 1.00
Final Sat.: 1805 3456 132 1805 2993 534 1805 496 1202 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.11 0.11 0.01 0.26 0.26 0.10 0.06 0.06 0.03 0.02 0.02
Crit Moves: ****
Green/Cycle: 0.02 0.52 0.52 0.05 0.55 0.55 0.21 0.18 0.18 0.08 0.05 0.05
Volume/Cap: 0.47 0.21 0.21 0.21 0.47 0.47 0.47 0.32 0.32 0.32 0.47 0.32
Delay/Veh: 56.9 13.0 13.0 46.5 13.8 13.8 35.2 36.0 36.0 44.2 49.5 47.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 56.9 13.0 13.0 46.5 13.8 13.8 35.2 36.0 36.0 44.2 49.5 47.8
LOS by Move: E B B D B B D D D D D D
HCM2k95thQ: 3 7 7 1 16 16 10 6 6 3 4 2

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.641
Loss Time (sec): 16 Average Delay (sec/veh): 21.1
Optimal Cycle: 62 Level Of Service: C

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 216 1302 31 26 271 150 119 51 19 15 29 25
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 216 1302 31 26 271 150 119 51 19 15 29 25
Added Vol: 0 14 0 0 8 21 36 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 216 1316 31 26 279 171 155 51 19 15 29 25
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 237 1446 34 29 307 188 170 56 21 16 32 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 237 1446 34 29 307 188 170 56 21 16 32 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 237 1446 34 29 307 188 170 56 21 16 32 27

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.95 0.90 0.90 0.95 0.96 0.96 0.95 1.00 0.85
Lanes: 1.00 1.95 0.05 1.00 1.24 0.76 1.00 0.73 0.27 1.00 1.00 1.00
Final Sat.: 1805 3516 83 1805 2111 1294 1805 1328 495 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.13 0.41 0.41 0.02 0.15 0.15 0.09 0.04 0.04 0.01 0.02 0.02
Crit Moves: ****
Green/Cycle: 0.32 0.64 0.64 0.02 0.35 0.35 0.15 0.14 0.14 0.03 0.03 0.03
Volume/Cap: 0.42 0.64 0.64 0.64 0.42 0.42 0.64 0.30 0.30 0.30 0.64 0.65
Delay/Veh: 27.4 11.5 11.5 75.7 25.0 25.0 45.4 39.0 39.0 50.4 73.1 78.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 27.4 11.5 11.5 75.7 25.0 25.0 45.4 39.0 39.0 50.4 73.1 78.7
LOS by Move: C B B E C C D D D D E E
HCM2k95thQ: 11 26 26 2 11 11 12 5 5 2 4 4

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 65 Critical Vol./Cap.(X): 0.495
Loss Time (sec): 8 Average Delay (sec/veh): 17.7
Optimal Cycle: 30 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 1 0 1 0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 792 6 16 0 9 88 9 295 362 47 393 1
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 792 6 16 0 9 88 9 295 362 47 393 1
Added Vol: 0 0 0 0 0 0 0 55 0 0 11 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 792 6 16 0 9 88 9 350 362 47 404 1
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 852 6 17 0 10 95 10 376 0 51 434 1
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 852 6 17 0 10 95 10 376 0 51 434 1
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 852 6 17 0 10 95 10 376 0 51 434 1

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.89 0.89 1.00 1.00 0.85 0.95 0.95 0.95 0.95 0.95
Lanes: 2.00 0.27 0.73 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.99 0.01
Final Sat.: 3502 462 1231 1900 1900 1615 1805 3610 0 1805 3601 9

Capacity Analysis Module:
Vol/Sat: 0.24 0.01 0.01 0.00 0.01 0.06 0.01 0.10 0.00 0.03 0.12 0.12
Crit Moves: **** **** **** ****
Green/Cycle: 0.49 0.61 0.61 0.00 0.12 0.12 0.01 0.21 0.00 0.06 0.26 0.26
Volume/Cap: 0.49 0.02 0.02 0.00 0.04 0.49 0.47 0.49 0.00 0.49 0.47 0.47
Delay/Veh: 11.3 5.0 5.0 0.0 25.5 28.8 48.1 23.1 0.0 33.5 20.8 20.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 11.3 5.0 5.0 0.0 25.5 28.8 48.1 23.1 0.0 33.5 20.8 20.8
LOS by Move: B A A A C C D C A C C C
HCM2k95thQ: 12 0 0 0 0 5 0 7 0 4 9 9

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.393
Loss Time (sec): 8 Average Delay (sec/veh): 14.9
Optimal Cycle: 26 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 1 0 1 0

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 425 8 92 0 4 43 77 513 666 8 364 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 425 8 92 0 4 43 77 513 666 8 364 8
Added Vol: 0 0 0 0 0 0 0 42 0 0 24 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 425 8 92 0 4 43 77 555 666 8 388 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 472 9 102 0 4 48 86 617 0 9 431 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 472 9 102 0 4 48 86 617 0 9 431 9
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 472 9 102 0 4 48 86 617 0 9 431 9

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.86 0.86 1.00 1.00 0.85 0.95 0.95 0.95 0.95 0.95
Lanes: 2.00 0.08 0.92 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.96 0.04
Final Sat.: 3502 131 1507 1900 1900 1615 1805 3610 0 1805 3526 73

Capacity Analysis Module:
Vol/Sat: 0.13 0.07 0.07 0.00 0.00 0.03 0.05 0.17 0.00 0.00 0.12 0.12
Crit Moves: **** **** **** ****
Green/Cycle: 0.34 0.42 0.42 0.00 0.08 0.08 0.13 0.44 0.00 0.01 0.32 0.32
Volume/Cap: 0.39 0.16 0.16 0.00 0.03 0.39 0.38 0.39 0.00 0.39 0.38 0.38
Delay/Veh: 15.2 11.0 11.0 0.0 25.8 28.5 25.2 11.7 0.0 40.3 15.9 15.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 15.2 11.0 11.0 0.0 25.8 28.5 25.2 11.7 0.0 40.3 15.9 15.9
LOS by Move: B B B A C C C B A D B B
HCM2k95thQ: 7 3 3 0 0 3 3 8 0 1 7 7

AM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 130 Critical Vol./Cap.(X): 0.692
Loss Time (sec): 10 Average Delay (sec/veh): 28.3
Optimal Cycle: 55 Level Of Service: C

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 0 1 0 0 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 927 0 11 0 0 0 0 639 511 64 1225 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 927 0 11 0 0 0 0 639 511 64 1225 0
Added Vol: 0 0 0 0 0 0 0 55 0 0 11 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 927 0 11 0 0 0 0 694 511 64 1236 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 976 0 12 0 0 0 0 731 538 67 1301 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 976 0 12 0 0 0 0 731 538 67 1301 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 976 0 12 0 0 0 0 731 538 67 1301 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.85 1.00 1.00 1.00 1.00 0.89 0.89 0.95 0.95
Lanes: 2.00 0.00 1.00 0.00 0.00 0.00 0.00 1.73 1.27 1.00 2.00
Final Sat.: 3502 0 1615 0 0 0 0 2919 2149 1805 3610 0

Capacity Analysis Module:
Vol/Sat: 0.28 0.00 0.01 0.00 0.00 0.00 0.00 0.25 0.25 0.04 0.36 0.00
Crit Moves: **** **** ****
Green/Cycle: 0.40 0.00 0.40 0.00 0.00 0.00 0.00 0.45 0.45 0.07 0.52 0.00
Volume/Cap: 0.69 0.00 0.02 0.00 0.00 0.00 0.00 0.55 0.55 0.55 0.69 0.00
Delay/Veh: 33.7 0.0 23.4 0.0 0.0 0.0 0.0 26.2 26.2 64.1 24.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 33.7 0.0 23.4 0.0 0.0 0.0 0.0 26.2 26.2 64.1 24.5 0.0
LOS by Move: C A C A A A A C C E C A
HCM2k95thQ: 30 0 1 0 0 0 0 23 23 5 34 0

PM Peak Hour - Existing plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 130 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 10 Average Delay (sec/veh): 14.3
Optimal Cycle: 53 Level Of Service: B

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 0 1 0 0 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 346 0 53 0 0 0 0 1320 970 38 817 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 346 0 53 0 0 0 0 1320 970 38 817 0
Added Vol: 0 0 0 0 0 0 0 42 0 0 24 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 346 0 53 0 0 0 0 1362 970 38 841 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 372 0 57 0 0 0 0 1465 1043 41 904 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 372 0 57 0 0 0 0 1465 1043 41 904 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 372 0 57 0 0 0 0 1465 1043 41 904 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.85 1.00 1.00 1.00 1.00 0.89 0.89 0.95 0.95
Lanes: 2.00 0.00 1.00 0.00 0.00 0.00 0.00 1.75 1.25 1.00 2.00
Final Sat.: 3502 0 1615 0 0 0 0 2967 2113 1805 3610 0

Capacity Analysis Module:
Vol/Sat: 0.11 0.00 0.04 0.00 0.00 0.00 0.00 0.49 0.49 0.02 0.25 0.00
Crit Moves: **** **** ****
Green/Cycle: 0.16 0.00 0.16 0.00 0.00 0.00 0.00 0.73 0.73 0.03 0.77 0.00
Volume/Cap: 0.67 0.00 0.22 0.00 0.00 0.00 0.00 0.67 0.67 0.67 0.33 0.00
Delay/Veh: 54.9 0.0 48.3 0.0 0.0 0.0 0.0 9.7 9.7 88.2 4.8 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 54.9 0.0 48.3 0.0 0.0 0.0 0.0 9.7 9.7 88.2 4.8 0.0
LOS by Move: D A D A A A A A F A A
HCM2k95thQ: 16 0 4 0 0 0 0 32 32 4 11 0

AM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.643
Loss Time (sec): 12 Average Delay (sec/veh): 14.0
Optimal Cycle: 50 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 76 872 0 0 819 595 0 0 0 186 5 401
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 76 872 0 0 819 595 0 0 0 186 5 401
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 6 0 0 13 6 0 0 0 1 0 2
Initial Fut: 76 878 0 0 832 601 0 0 0 187 5 403
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Adj: 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.81 0.00
PHF Volume: 94 1084 0 0 1027 742 0 0 0 231 6 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 94 1084 0 0 1027 742 0 0 0 231 6 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
FinalVolume: 94 1084 0 0 1027 742 0 0 0 231 6 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.89 0.89 1.00 1.00 1.00 0.85 0.85 1.00
Lanes: 1.00 2.00 0.00 0.00 1.74 1.26 0.00 0.00 0.00 0.97 0.03 1.00
Final Sat.: 1805 3610 0 0 2946 2128 0 0 0 1580 42 1900

Capacity Analysis Module:
Vol/Sat: 0.05 0.30 0.00 0.00 0.35 0.35 0.00 0.00 0.00 0.15 0.15 0.00
Crit Moves: **** ****
Green/Cycle: 0.08 0.62 0.00 0.00 0.54 0.54 0.00 0.00 0.00 0.23 0.23 0.00
Volume/Cap: 0.64 0.48 0.00 0.00 0.64 0.64 0.00 0.00 0.00 0.64 0.64 0.00
Delay/Veh: 45.1 8.3 0.0 0.0 13.4 13.4 0.0 0.0 0.0 31.8 31.8 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 45.1 8.3 0.0 0.0 13.4 13.4 0.0 0.0 0.0 31.8 31.8 0.0
LOS by Move: D A A A B B A A A C C A
HCM2k95thQ: 5 14 0 0 21 21 0 0 0 12 12 0

PM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.456
Loss Time (sec): 12 Average Delay (sec/veh): 10.6
Optimal Cycle: 37 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:45 - 5:45 pm
Base Vol: 80 462 0 0 882 364 0 0 0 111 4 494
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 80 462 0 0 882 364 0 0 0 111 4 494
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 15 0 0 11 4 0 0 0 3 0 7
Initial Fut: 80 477 0 0 893 368 0 0 0 114 4 501
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.00
PHF Volume: 82 492 0 0 921 379 0 0 0 118 4 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 82 492 0 0 921 379 0 0 0 118 4 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
FinalVolume: 82 492 0 0 921 379 0 0 0 118 4 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.91 0.91 1.00 1.00 1.00 0.86 0.86 1.00
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 0.00 0.00 0.00 0.97 0.03 1.00
Final Sat.: 1805 3610 0 0 3451 1726 0 0 0 1569 55 1900

Capacity Analysis Module:
Vol/Sat: 0.05 0.14 0.00 0.00 0.27 0.22 0.00 0.00 0.00 0.07 0.07 0.00
Crit Moves: **** ****
Green/Cycle: 0.10 0.69 0.00 0.00 0.59 0.59 0.00 0.00 0.00 0.16 0.16 0.00
Volume/Cap: 0.46 0.20 0.00 0.00 0.46 0.38 0.00 0.00 0.00 0.46 0.46 0.00
Delay/Veh: 35.7 4.6 0.0 0.0 9.5 8.9 0.0 0.0 0.0 31.4 31.4 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 35.7 4.6 0.0 0.0 9.5 8.9 0.0 0.0 0.0 31.4 31.4 0.0
LOS by Move: D A A A A A A A A C C A
HCM2k95thQ: 4 5 0 0 13 10 0 0 0 6 6 0

AM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.598
Loss Time (sec): 10 Average Delay (sec/veh): 18.8
Optimal Cycle: 40 Level Of Service: B

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:15 - 8:15 am
Base Vol: 100 575 20 107 721 208 372 55 18 49 45 20
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 100 575 20 107 721 208 372 55 18 49 45 20
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 3 4 0 0 8 6 2 0 0 0 0 0
Initial Fut: 103 579 20 107 729 214 374 55 18 49 45 20
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.00 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 113 636 22 118 801 0 411 60 20 54 49 22
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 113 636 22 118 801 0 411 60 20 54 49 22
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 113 636 22 118 801 0 411 60 20 54 49 22

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.98 0.98 0.85
Lanes: 1.00 1.93 0.07 1.00 2.00 1.00 1.72 0.21 0.07 0.52 0.48 1.00
Final Sat.: 1805 3472 120 1805 3610 1900 3117 384 126 966 887 1615

Capacity Analysis Module:
Vol/Sat: 0.06 0.18 0.18 0.07 0.22 0.00 0.13 0.16 0.16 0.06 0.06 0.01
Crit Moves: **** **** ****
Green/Cycle: 0.10 0.35 0.35 0.12 0.37 0.00 0.25 0.26 0.26 0.09 0.11 0.11
Volume/Cap: 0.60 0.52 0.52 0.52 0.60 0.00 0.53 0.60 0.60 0.60 0.53 0.13
Delay/Veh: 30.8 15.8 15.8 26.8 16.0 0.0 19.9 20.5 20.5 31.8 28.0 24.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 30.8 15.8 15.8 26.8 16.0 0.0 19.9 20.5 20.5 31.8 28.0 24.6
LOS by Move: C B B C B A B C C C C C
HCM2k95thQ: 4 10 10 4 12 0 9 11 11 6 5 1

PM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.955
Loss Time (sec): 10 Average Delay (sec/veh): 38.0
Optimal Cycle: 122 Level Of Service: D

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:45 - 5:45 pm
Base Vol: 916 496 82 52 440 515 63 26 11 27 171 29
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 916 496 82 52 440 515 63 26 11 27 171 29
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 1 8 0 0 10 4 7 0 0 0 0 0
Initial Fut: 917 504 82 52 450 519 70 26 11 27 171 29
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.00 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 986 542 88 56 484 0 75 28 12 29 184 31
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 986 542 88 56 484 0 75 28 12 29 184 31
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 986 542 88 56 484 0 75 28 12 29 184 31

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.93 0.93 0.95 0.95 1.00 0.95 0.95 0.95 0.99 0.99 0.85
Lanes: 1.00 1.72 0.28 1.00 2.00 1.00 1.49 0.36 0.15 0.14 0.86 1.00
Final Sat.: 1805 3040 495 1805 3610 1900 2692 654 277 257 1629 1615

Capacity Analysis Module:
Vol/Sat: 0.55 0.18 0.18 0.03 0.13 0.00 0.03 0.04 0.04 0.11 0.11 0.02
Crit Moves: **** **** ****
Green/Cycle: 0.57 0.61 0.61 0.11 0.14 0.00 0.03 0.04 0.04 0.12 0.13 0.13
Volume/Cap: 0.96 0.29 0.29 0.29 0.96 0.00 0.86 0.96 0.96 0.96 0.86 0.15
Delay/Veh: 34.3 7.6 7.6 33.9 63.1 0.0 79.1 106 106.0 82.7 59.8 31.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 34.3 7.6 7.6 33.9 63.1 0.0 79.1 106 106.0 82.7 59.8 31.2
LOS by Move: C A A C E A E F F F E C
HCM2k95thQ: 37 7 7 3 15 0 6 9 9 17 15 2

AM Peak Hour - Background Conditions
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2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.831
Loss Time (sec): 12 Average Delay (sec/veh): 30.1
Optimal Cycle: 85 Level Of Service: C

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 0 1 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 7:45 - 8:45 am
Base Vol: 201 363 0 0 636 142 248 0 230 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 201 363 0 0 636 142 248 0 230 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 7 0 0 8 0 0 0 0 0 0 0
Initial Fut: 201 370 0 0 644 142 248 0 230 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 218 402 0 0 700 154 270 0 250 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 218 402 0 0 700 154 270 0 250 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 218 402 0 0 700 154 270 0 250 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.98 0.98 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.82 0.18 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1519 335 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.12 0.21 0.00 0.00 0.46 0.46 0.15 0.00 0.15 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.15 0.70 0.00 0.00 0.55 0.55 0.18 0.00 0.18 0.00 0.00 0.00
Volume/Cap: 0.83 0.30 0.00 0.00 0.83 0.83 0.83 0.00 0.86 0.00 0.00 0.00
Delay/Veh: 61.0 1.6 0.0 0.0 18.2 18.2 55.9 0.0 61.9 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 61.0 1.6 0.0 0.0 18.2 18.2 55.9 0.0 61.9 0.0 0.0 0.0
LOS by Move: E A A A B B E A E A A A
HCM2k95thQ: 13 3 0 0 32 32 19 0 19 0 0 0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.999
Loss Time (sec): 12 Average Delay (sec/veh): 47.8
Optimal Cycle: 180 Level Of Service: D

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 0 1 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm
Base Vol: 93 821 0 0 325 84 639 0 65 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 93 821 0 0 325 84 639 0 65 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 9 0 0 10 0 0 0 0 0 0 0
Initial Fut: 93 830 0 0 335 84 639 0 65 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 103 922 0 0 372 93 710 0 72 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 103 922 0 0 372 93 710 0 72 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 103 922 0 0 372 93 710 0 72 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.97 0.97 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.80 0.20 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1478 371 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.06 0.49 0.00 0.00 0.25 0.25 0.39 0.00 0.04 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.09 0.49 0.00 0.00 0.40 0.40 0.39 0.00 0.39 0.00 0.00 0.00
Volume/Cap: 0.64 1.00 0.00 0.00 0.64 0.64 1.00 0.00 0.11 0.00 0.00 0.00
Delay/Veh: 52.0 49.4 0.0 0.0 23.8 23.8 63.6 0.0 19.3 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 52.0 49.4 0.0 0.0 23.8 23.8 63.6 0.0 19.3 0.0 0.0 0.0
LOS by Move: D D A A C C E A B A A A
HCM2k95thQ: 6 53 0 0 17 17 47 0 3 0 0 0

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.660
Loss Time (sec): 12 Average Delay (sec/veh): 24.2
Optimal Cycle: 54 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 17 449 122 236 560 48 44 130 38 37 14 56
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 449 122 236 560 48 44 130 38 37 14 56
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 7 0 0 8 0 0 0 0 0 0 0
Initial Fut: 17 456 122 236 568 48 44 130 38 37 14 56
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85
PHF Volume: 20 536 144 278 668 56 52 153 45 44 16 66
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 20 536 144 278 668 56 52 153 45 44 16 66
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 20 536 144 278 668 56 52 153 45 44 16 66

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.99 0.99 0.91 0.91 0.91 0.83 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.92 0.08 0.21 0.61 0.18 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1731 146 358 1059 309 1575 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.28 0.09 0.15 0.39 0.39 0.14 0.14 0.14 0.03 0.01 0.04
Crit Moves: ****
Green/Cycle: 0.02 0.43 0.43 0.23 0.64 0.64 0.22 0.22 0.22 0.22 0.22 0.22
Volume/Cap: 0.60 0.66 0.21 0.66 0.60 0.60 0.66 0.66 0.66 0.13 0.04 0.19
Delay/Veh: 75.7 24.8 18.1 38.6 11.3 11.3 39.9 39.9 39.9 31.5 30.8 32.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 75.7 24.8 18.1 38.6 11.3 11.3 39.9 39.9 39.9 31.5 30.8 32.1
LOS by Move: E C B D B B D C C C C
HCM2k95thQ: 1 23 5 14 22 22 15 15 15 2 1 4

PM Peak Hour - Background Conditions
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2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.618
Loss Time (sec): 12 Average Delay (sec/veh): 18.2
Optimal Cycle: 50 Level Of Service: B

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 33 707 46 55 442 15 47 40 33 76 44 116
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 33 707 46 55 442 15 47 40 33 76 44 116
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 9 0 0 10 0 0 0 0 0 0 0
Initial Fut: 33 716 46 55 452 15 47 40 33 76 44 116
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
PHF Volume: 37 804 52 62 508 17 53 45 37 85 49 130
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 37 804 52 62 508 17 53 45 37 85 49 130
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 37 804 52 62 508 17 53 45 37 85 49 130

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 1.00 1.00 0.82 0.82 0.82 0.85 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.97 0.03 0.40 0.33 0.27 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1830 61 611 520 429 1607 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.42 0.03 0.03 0.28 0.28 0.09 0.09 0.09 0.05 0.03 0.08
Crit Moves: ****
Green/Cycle: 0.05 0.68 0.68 0.06 0.69 0.69 0.14 0.14 0.14 0.14 0.14 0.14
Volume/Cap: 0.40 0.62 0.05 0.62 0.40 0.40 0.62 0.62 0.62 0.38 0.19 0.58
Delay/Veh: 48.8 9.5 5.2 57.4 6.9 6.9 45.8 45.8 45.8 40.1 38.3 43.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 48.8 9.5 5.2 57.4 6.9 6.9 45.8 45.8 45.8 40.1 38.3 43.9
LOS by Move: D A A E A A D D D D D D
HCM2k95thQ: 2 24 1 4 13 13 10 10 10 6 3 9

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463
Loss Time (sec): 12 Average Delay (sec/veh): 18.7
Optimal Cycle: 38 Level Of Service: B

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 36 483 147 96 490 37 54 103 126 39 14 44
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 36 483 147 96 490 37 54 103 126 39 14 44
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 7 0 0 8 0 0 0 0 0 0 0
Initial Fut: 36 490 147 96 498 37 54 103 126 39 14 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 38 516 155 101 524 39 57 108 133 41 15 46
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 38 516 155 101 524 39 57 108 133 41 15 46
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 38 516 155 101 524 39 57 108 133 41 15 46

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.76 0.87 0.87 0.54 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1435 1657 1657 1017 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.27 0.10 0.06 0.15 0.02 0.04 0.07 0.08 0.04 0.01 0.03
Crit Moves: ****
Green/Cycle: 0.09 0.59 0.59 0.12 0.62 0.62 0.17 0.17 0.17 0.17 0.17 0.17
Volume/Cap: 0.24 0.46 0.16 0.46 0.24 0.04 0.23 0.38 0.46 0.23 0.04 0.17
Delay/Veh: 43.1 12.1 9.5 42.5 8.6 7.5 36.1 37.0 37.8 36.3 34.5 35.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.1 12.1 9.5 42.5 8.6 7.5 36.1 37.0 37.8 36.3 34.5 35.5
LOS by Move: D B A D A A D D D D C D
HCM2k95thQ: 2 16 4 6 7 1 3 7 9 3 1 3

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.585
Loss Time (sec): 12 Average Delay (sec/veh): 20.6
Optimal Cycle: 47 Level Of Service: C

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm
Base Vol: 628 703 118 60 324 26 5 23 38 87 73 90
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 628 703 118 60 324 26 5 23 38 87 73 90
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 9 0 0 10 0 0 0 0 0 0 0
Initial Fut: 628 712 118 60 334 26 5 23 38 87 73 90
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 641 727 120 61 341 27 5 23 39 89 74 92
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 641 727 120 61 341 27 5 23 39 89 74 92
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 641 727 120 61 341 27 5 23 39 89 74 92

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.70 0.86 0.86 0.72 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1338 1637 1637 1364 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.36 0.38 0.07 0.03 0.09 0.02 0.00 0.01 0.02 0.07 0.04 0.06
Crit Moves: ****
Green/Cycle: 0.61 0.71 0.71 0.06 0.16 0.16 0.11 0.11 0.11 0.11 0.11 0.11
Volume/Cap: 0.58 0.54 0.11 0.54 0.58 0.10 0.03 0.13 0.21 0.58 0.35 0.51
Delay/Veh: 12.8 7.4 4.7 50.7 40.4 35.9 39.7 40.2 40.8 48.0 42.1 44.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 12.8 7.4 4.7 50.7 40.4 35.9 39.7 40.2 40.8 48.0 42.1 44.3
LOS by Move: B A A D D D D D D D D
HCM2k95thQ: 21 19 2 4 10 1 0 2 3 7 5 7

AM Peak Hour - Background Conditions
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.435
Loss Time (sec): 16 Average Delay (sec/veh): 18.5
Optimal Cycle: 45 Level Of Service: B

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 8:00 - 9:00 am
Base Vol: 17 321 13 18 702 117 118 26 63 44 43 25
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 321 13 18 702 117 118 26 63 44 43 25
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 3 0 0 11 0 0 0 0 0 0 0
Initial Fut: 17 324 13 18 713 117 118 26 63 44 43 25
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 19 356 14 20 784 129 130 29 69 48 47 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 19 356 14 20 784 129 130 29 69 48 47 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 19 356 14 20 784 129 130 29 69 48 47 27

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 0.93 0.93 0.95 0.89 0.89 0.95 1.00 0.85
Lanes: 1.00 1.92 0.08 1.00 1.72 0.28 1.00 0.29 0.71 1.00 1.00 1.00
Final Sat.: 1805 3450 138 1805 3036 498 1805 496 1202 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.10 0.10 0.01 0.26 0.26 0.07 0.06 0.06 0.03 0.02 0.02
Crit Moves: **** **** **** ****
Green/Cycle: 0.02 0.56 0.56 0.06 0.59 0.59 0.17 0.15 0.15 0.07 0.06 0.06
Volume/Cap: 0.43 0.18 0.18 0.18 0.43 0.43 0.43 0.38 0.38 0.38 0.43 0.30
Delay/Veh: 55.0 10.9 10.9 45.6 11.3 11.3 38.6 39.1 39.1 46.3 48.3 47.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 55.0 10.9 10.9 45.6 11.3 11.3 38.6 39.1 39.1 46.3 48.3 47.0
LOS by Move: E B B D B B D D D D D D
HCM2k95thQ: 2 6 6 1 15 15 7 5 5 4 4 2

PM Peak Hour - Background Conditions
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City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.614
Loss Time (sec): 16 Average Delay (sec/veh): 19.4
Optimal Cycle: 59 Level Of Service: B

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 216 1302 31 26 271 150 119 51 19 15 29 25
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 216 1302 31 26 271 150 119 51 19 15 29 25
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 11 0 0 7 0 0 0 0 0 0 0
Initial Fut: 216 1313 31 26 278 150 119 51 19 15 29 25
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 237 1443 34 29 305 165 131 56 21 16 32 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 237 1443 34 29 305 165 131 56 21 16 32 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 237 1443 34 29 305 165 131 56 21 16 32 27

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.95 0.90 0.90 0.95 0.96 0.96 0.95 1.00 0.85
Lanes: 1.00 1.95 0.05 1.00 1.30 0.70 1.00 0.73 0.27 1.00 1.00 1.00
Final Sat.: 1805 3516 83 1805 2223 1199 1805 1328 495 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.13 0.41 0.41 0.02 0.14 0.14 0.07 0.04 0.04 0.01 0.02 0.02
Crit Moves: **** **** **** ****
Green/Cycle: 0.34 0.67 0.67 0.03 0.35 0.35 0.12 0.12 0.12 0.03 0.03 0.03
Volume/Cap: 0.39 0.61 0.61 0.61 0.39 0.39 0.61 0.35 0.35 0.35 0.61 0.62
Delay/Veh: 25.5 9.8 9.8 70.1 24.3 24.3 47.2 41.5 41.5 52.4 68.0 72.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 25.5 9.8 9.8 70.1 24.3 24.3 47.2 41.5 41.5 52.4 68.0 72.5
LOS by Move: C A A E C C D D D D E E
HCM2k95thQ: 11 24 24 2 11 11 8 4 4 2 4 4

AM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 65 Critical Vol./Cap.(X): 0.535
Loss Time (sec): 8 Average Delay (sec/veh): 19.2
Optimal Cycle: 32 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 792 6 16 0 9 88 9 295 362 47 393 1
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 792 6 16 0 9 88 9 295 362 47 393 1
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 3 0 11 3 44 21 0 0 0 0 7
Initial Fut: 792 9 16 11 12 132 30 295 362 47 393 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 852 10 17 12 13 142 32 317 0 51 423 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 852 10 17 12 13 142 32 317 0 51 423 9
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 852 10 17 12 13 142 32 317 0 51 423 9

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.90 0.90 0.95 1.00 0.85 0.95 0.95 0.95 0.95 0.95 0.95
Lanes: 2.00 0.36 0.64 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.96 0.04
Final Sat.: 3502 618 1099 1805 1900 1615 1805 3610 0 1805 3527 72

Capacity Analysis Module:
Vol/Sat: 0.24 0.02 0.02 0.01 0.01 0.09 0.02 0.09 0.00 0.03 0.12 0.12
Crit Moves: ****
Green/Cycle: 0.45 0.44 0.44 0.18 0.16 0.16 0.03 0.20 0.00 0.06 0.22 0.22
Volume/Cap: 0.53 0.04 0.04 0.04 0.04 0.53 0.53 0.45 0.00 0.45 0.53 0.53
Delay/Veh: 13.1 10.5 10.5 21.9 22.9 27.0 40.0 23.5 0.0 32.3 22.9 22.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 13.1 10.5 10.5 21.9 22.9 27.0 40.0 23.5 0.0 32.3 22.9 22.9
LOS by Move: B B B C C C D C A C C C
HCM2k95thQ: 13 1 1 0 1 7 1 6 0 2 8 8

PM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.483
Loss Time (sec): 8 Average Delay (sec/veh): 17.3
Optimal Cycle: 30 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 425 8 92 0 4 43 77 513 666 8 364 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 425 8 92 0 4 43 77 513 666 8 364 8
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 7 0 15 7 61 65 0 0 0 0 27
Initial Fut: 425 15 92 15 11 104 142 513 666 8 364 35
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 472 17 102 17 12 116 158 570 0 9 404 39
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 472 17 102 17 12 116 158 570 0 9 404 39
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 472 17 102 17 12 116 158 570 0 9 404 39

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.87 0.87 0.95 1.00 0.85 0.95 0.95 0.95 0.95 0.94 0.94
Lanes: 2.00 0.14 0.86 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.82 0.18
Final Sat.: 3502 232 1423 1805 1900 1615 1805 3610 0 1805 3251 313

Capacity Analysis Module:
Vol/Sat: 0.13 0.07 0.07 0.01 0.01 0.07 0.09 0.16 0.00 0.00 0.12 0.12
Crit Moves: ****
Green/Cycle: 0.28 0.38 0.38 0.05 0.15 0.15 0.18 0.43 0.00 0.01 0.26 0.26
Volume/Cap: 0.48 0.19 0.19 0.19 0.04 0.48 0.48 0.37 0.00 0.37 0.48 0.48
Delay/Veh: 18.4 12.6 12.6 28.5 22.0 25.0 23.2 11.9 0.0 38.8 19.3 19.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 18.4 12.6 12.6 28.5 22.0 25.0 23.2 11.9 0.0 38.8 19.3 19.3
LOS by Move: B B B C C C C B A D B B
HCM2k95thQ: 8 3 3 1 0 5 5 7 0 0 7 7

AM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 130 Critical Vol./Cap.(X): 0.698
Loss Time (sec): 10 Average Delay (sec/veh): 28.8
Optimal Cycle: 56 Level Of Service: C

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 0 1 0 0 0 0 0 0 0 1 1 1 1 0 2 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 927 0 11 0 0 0 0 0 639 511 64 1225 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 927 0 11 0 0 0 0 0 639 511 64 1225 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 0 4 0 0 0 0 0 17 0 15 29 0
Initial Fut: 927 0 15 0 0 0 0 0 656 511 79 1254 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 976 0 16 0 0 0 0 0 691 538 83 1320 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 976 0 16 0 0 0 0 0 691 538 83 1320 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 976 0 16 0 0 0 0 0 691 538 83 1320 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.85 1.00 1.00 1.00 1.00 0.89 0.89 0.95 0.95 1.00
Lanes: 2.00 0.00 1.00 0.00 0.00 0.00 0.00 1.69 1.31 1.00 2.00 0.00
Final Sat.: 3502 0 1615 0 0 0 0 0 2843 2215 1805 3610 0

Capacity Analysis Module:
Vol/Sat: 0.28 0.00 0.01 0.00 0.00 0.00 0.00 0.24 0.24 0.05 0.37 0.00
Crit Moves: ****
Green/Cycle: 0.40 0.00 0.40 0.00 0.00 0.00 0.00 0.44 0.44 0.08 0.52 0.00
Volume/Cap: 0.70 0.00 0.02 0.00 0.00 0.00 0.00 0.55 0.55 0.55 0.70 0.00
Delay/Veh: 34.1 0.0 23.7 0.0 0.0 0.0 0.0 0.0 27.2 27.2 61.6 24.4 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 34.1 0.0 23.7 0.0 0.0 0.0 0.0 0.0 27.2 27.2 61.6 24.4 0.0
LOS by Move: C A C A A A A C C E C A
HCM2k95thQ: 30 0 1 0 0 0 0 0 23 23 6 35 0

PM Peak Hour - Background Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 130 Critical Vol./Cap.(X): 0.688
Loss Time (sec): 10 Average Delay (sec/veh): 15.1
Optimal Cycle: 55 Level Of Service: B

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 0 1 0 0 0 0 0 0 0 1 1 1 1 0 2 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 346 0 53 0 0 0 0 0 1320 970 38 817 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 346 0 53 0 0 0 0 0 1320 970 38 817 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Approved Tr: 0 0 8 0 0 0 0 0 57 0 15 46 0
Initial Fut: 346 0 61 0 0 0 0 0 1377 970 53 863 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 372 0 66 0 0 0 0 0 1481 1043 57 928 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 372 0 66 0 0 0 0 0 1481 1043 57 928 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 372 0 66 0 0 0 0 0 1481 1043 57 928 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.85 1.00 1.00 1.00 1.00 0.89 0.89 0.95 0.95 1.00
Lanes: 2.00 0.00 1.00 0.00 0.00 0.00 0.00 1.76 1.24 1.00 2.00 0.00
Final Sat.: 3502 0 1615 0 0 0 0 0 2980 2099 1805 3610 0

Capacity Analysis Module:
Vol/Sat: 0.11 0.00 0.04 0.00 0.00 0.00 0.00 0.50 0.50 0.03 0.26 0.00
Crit Moves: ****
Green/Cycle: 0.15 0.00 0.15 0.00 0.00 0.00 0.00 0.72 0.72 0.05 0.77 0.00
Volume/Cap: 0.69 0.00 0.26 0.00 0.00 0.00 0.00 0.69 0.69 0.69 0.33 0.00
Delay/Veh: 55.7 0.0 49.0 0.0 0.0 0.0 0.0 0.0 10.5 10.5 82.6 4.8 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 55.7 0.0 49.0 0.0 0.0 0.0 0.0 0.0 10.5 10.5 82.6 4.8 0.0
LOS by Move: E A D A A A A B B F A A
HCM2k95thQ: 16 0 5 0 0 0 0 0 34 34 5 12 0

AM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.664
Loss Time (sec): 12 Average Delay (sec/veh): 14.3
Optimal Cycle: 52 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	1	1	1	1	0	0	0

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am

Base Vol:	76	872	0	0	819	595	0	0	0	186	5	401
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	76	872	0	0	819	595	0	0	0	186	5	401
Added Vol:	0	10	0	0	52	0	0	0	0	8	0	0
Approved Tr:	0	6	0	0	13	6	0	0	0	1	0	2
Initial Fut:	76	888	0	0	884	601	0	0	0	195	5	403
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.00
PHF Volume:	94	1096	0	0	1091	742	0	0	0	241	6	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	1096	0	0	1091	742	0	0	0	241	6	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	94	1096	0	0	1091	742	0	0	0	241	6	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.89	0.89	1.00	1.00	1.00	0.85	0.85	1.00
Lanes:	1.00	2.00	0.00	0.00	1.79	1.21	0.00	0.00	0.00	0.97	0.03	1.00
Final Sat.:	1805	3610	0	0	3027	2058	0	0	0	1582	41	1900

Capacity Analysis Module:

Vol/Sat:	0.05	0.30	0.00	0.00	0.36	0.36	0.00	0.00	0.00	0.15	0.15	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.08	0.62	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.23	0.23	0.00
Volume/Cap:	0.66	0.49	0.00	0.00	0.66	0.66	0.00	0.00	0.00	0.66	0.66	0.00
Delay/Veh:	47.2	8.4	0.0	0.0	13.7	13.7	0.0	0.0	0.0	32.5	32.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.2	8.4	0.0	0.0	13.7	13.7	0.0	0.0	0.0	32.5	32.5	0.0
LOS by Move:	D	A	A	A	B	B	A	A	A	C	C	A
HCM2k95thQ:	5	14	0	0	22	22	0	0	0	13	13	0

PM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.473
Loss Time (sec): 12 Average Delay (sec/veh): 10.6
Optimal Cycle: 38 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	1	1	1	1	0	0	0

Volume Module: >> Count Date: 3 Oct 2012 << 4:45 - 5:45 pm

Base Vol:	80	462	0	0	882	364	0	0	0	111	4	494
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	462	0	0	882	364	0	0	0	111	4	494
Added Vol:	0	23	0	0	39	0	0	0	0	6	0	0
Approved Tr:	0	15	0	0	11	4	0	0	0	3	0	7
Initial Fut:	80	500	0	0	932	368	0	0	0	120	4	501
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.00
PHF Volume:	82	515	0	0	961	379	0	0	0	124	4	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	515	0	0	961	379	0	0	0	124	4	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	82	515	0	0	961	379	0	0	0	124	4	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.86	0.86	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.97	0.03	1.00
Final Sat.:	1805	3610	0	0	3458	1729	0	0	0	1572	52	1900

Capacity Analysis Module:

Vol/Sat:	0.05	0.14	0.00	0.00	0.28	0.22	0.00	0.00	0.00	0.08	0.08	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.10	0.68	0.00	0.00	0.59	0.59	0.00	0.00	0.00	0.17	0.17	0.00
Volume/Cap:	0.47	0.21	0.00	0.00	0.47	0.37	0.00	0.00	0.00	0.47	0.47	0.00
Delay/Veh:	36.2	4.7	0.0	0.0	9.6	8.8	0.0	0.0	0.0	31.5	31.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.2	4.7	0.0	0.0	9.6	8.8	0.0	0.0	0.0	31.5	31.5	0.0
LOS by Move:	D	A	A	A	A	A	A	A	A	C	C	A
HCM2k95thQ:	4	5	0	0	14	10	0	0	0	7	7	0

AM Peak Hour - Background plus Project Conditions
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.621
Loss Time (sec): 10 Average Delay (sec/veh): 18.7
Optimal Cycle: 41 Level Of Service: B

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:15 - 8:15 am
Base Vol: 100 575 20 107 721 208 372 55 18 49 45 20
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 100 575 20 107 721 208 372 55 18 49 45 20
Added Vol: 2 10 0 0 60 0 0 0 0 0 0 0
Approved Tr: 3 4 0 0 8 6 2 0 0 0 0 0
Initial Fut: 105 589 20 107 789 214 374 55 18 49 45 20
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.00 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 115 647 22 118 867 0 411 60 20 54 49 22
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 115 647 22 118 867 0 411 60 20 54 49 22
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 115 647 22 118 867 0 411 60 20 54 49 22

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.98 0.98 0.85
Lanes: 1.00 1.93 0.07 1.00 2.00 1.00 1.72 0.21 0.07 0.52 0.48 1.00
Final Sat.: 1805 3474 118 1805 3610 1900 3117 384 126 966 887 1615

Capacity Analysis Module:
Vol/Sat: 0.06 0.19 0.19 0.07 0.24 0.00 0.13 0.16 0.16 0.06 0.06 0.01
Crit Moves: ****
Green/Cycle: 0.10 0.36 0.36 0.13 0.39 0.00 0.24 0.25 0.25 0.09 0.10 0.10
Volume/Cap: 0.62 0.51 0.51 0.51 0.62 0.00 0.55 0.62 0.62 0.62 0.55 0.13
Delay/Veh: 32.1 15.3 15.3 26.4 15.7 0.0 20.6 21.4 21.4 33.4 28.9 24.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.1 15.3 15.3 26.4 15.7 0.0 20.6 21.4 21.4 33.4 28.9 24.9
LOS by Move: C B B C B A C C C C C C
HCM2k95thQ: 4 10 10 4 13 0 9 11 11 6 6 1

PM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.973
Loss Time (sec): 10 Average Delay (sec/veh): 40.7
Optimal Cycle: 134 Level Of Service: D

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:45 - 5:45 pm
Base Vol: 916 496 82 52 440 515 63 26 11 27 171 29
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 916 496 82 52 440 515 63 26 11 27 171 29
Added Vol: 3 23 0 0 45 0 0 0 0 0 0 0
Approved Tr: 1 8 0 0 10 4 7 0 0 0 0 0
Initial Fut: 920 527 82 52 495 519 70 26 11 27 171 29
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.00 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 989 567 88 56 532 0 75 28 12 29 184 31
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 989 567 88 56 532 0 75 28 12 29 184 31
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 989 567 88 56 532 0 75 28 12 29 184 31

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.93 0.93 0.95 0.95 1.00 0.95 0.95 0.95 0.99 0.99 0.85
Lanes: 1.00 1.73 0.27 1.00 2.00 1.00 1.49 0.36 0.15 0.14 0.86 1.00
Final Sat.: 1805 3061 476 1805 3610 1900 2692 654 277 257 1629 1615

Capacity Analysis Module:
Vol/Sat: 0.55 0.19 0.19 0.03 0.15 0.00 0.03 0.04 0.04 0.11 0.11 0.02
Crit Moves: ****
Green/Cycle: 0.56 0.61 0.61 0.10 0.15 0.00 0.03 0.04 0.04 0.12 0.13 0.13
Volume/Cap: 0.97 0.30 0.30 0.30 0.97 0.00 0.88 0.97 0.97 0.97 0.88 0.15
Delay/Veh: 38.6 7.4 7.4 34.2 65.2 0.0 83.3 112 112.1 88.1 63.1 31.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 38.6 7.4 7.4 34.2 65.2 0.0 83.3 112 112.1 88.1 63.1 31.3
LOS by Move: D A A C E A F F F F E C
HCM2k95thQ: 38 7 7 3 16 0 6 9 9 18 16 2

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.891
Loss Time (sec): 12 Average Delay (sec/veh): 33.2
Optimal Cycle: 105 Level Of Service: C

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 0 1 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 7:45 - 8:45 am
Base Vol: 201 363 0 0 636 142 248 0 230 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 201 363 0 0 636 142 248 0 230 0 0 0
Added Vol: 3 11 0 0 60 0 0 0 16 0 0 0
Approved Tr: 0 7 0 0 8 0 0 0 0 0 0 0
Initial Fut: 204 381 0 0 704 142 248 0 246 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 222 414 0 0 765 154 270 0 267 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 222 414 0 0 765 154 270 0 267 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 222 414 0 0 765 154 270 0 267 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.98 0.98 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.83 0.17 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1545 312 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.12 0.22 0.00 0.00 0.50 0.50 0.15 0.00 0.17 0.00 0.00 0.00
Crit Moves: **** ****
Green/Cycle: 0.14 0.69 0.00 0.00 0.56 0.56 0.19 0.00 0.19 0.00 0.00 0.00
Volume/Cap: 0.89 0.31 0.00 0.00 0.89 0.89 0.80 0.00 0.89 0.00 0.00 0.00
Delay/Veh: 72.5 1.8 0.0 0.0 22.8 22.8 52.0 0.0 66.0 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 72.5 1.8 0.0 0.0 22.8 22.8 52.0 0.0 66.0 0.0 0.0 0.0
LOS by Move: E A A A C C D A E A A A
HCM2k95thQ: 14 3 0 0 38 38 19 0 21 0 0 0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.016
Loss Time (sec): 12 Average Delay (sec/veh): 50.6
Optimal Cycle: 180 Level Of Service: D

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 0 1 0 1 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm
Base Vol: 93 821 0 0 325 84 639 0 65 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 93 821 0 0 325 84 639 0 65 0 0 0
Added Vol: 7 26 0 0 45 0 0 0 12 0 0 0
Approved Tr: 0 9 0 0 10 0 0 0 0 0 0 0
Initial Fut: 100 856 0 0 380 84 639 0 77 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 111 951 0 0 422 93 710 0 86 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 111 951 0 0 422 93 710 0 86 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 111 951 0 0 422 93 710 0 86 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.98 0.98 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.82 0.18 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1519 336 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.06 0.50 0.00 0.00 0.28 0.28 0.39 0.00 0.05 0.00 0.00 0.00
Crit Moves: **** ****
Green/Cycle: 0.09 0.49 0.00 0.00 0.40 0.40 0.39 0.00 0.39 0.00 0.00 0.00
Volume/Cap: 0.69 1.02 0.00 0.00 0.69 0.69 1.02 0.00 0.14 0.00 0.00 0.00
Delay/Veh: 56.1 53.1 0.0 0.0 24.7 24.7 68.7 0.0 19.9 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 56.1 53.1 0.0 0.0 24.7 24.7 68.7 0.0 19.9 0.0 0.0 0.0
LOS by Move: E D A A C C E A B A A A
HCM2k95thQ: 7 56 0 0 20 20 48 0 3 0 0 0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699
Loss Time (sec): 12 Average Delay (sec/veh): 25.4
Optimal Cycle: 59 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 17 449 122 236 560 48 44 130 38 37 14 56
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 449 122 236 560 48 44 130 38 37 14 56
Added Vol: 0 7 33 38 38 0 0 8 0 6 2 7
Approved Tr: 0 7 0 0 8 0 0 0 0 0 0 0
Initial Fut: 17 463 155 274 606 48 44 138 38 43 16 63
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85
PHF Volume: 20 545 182 322 713 56 52 162 45 51 19 74
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 20 545 182 322 713 56 52 162 45 51 19 74
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 20 545 182 322 713 56 52 162 45 51 19 74

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.99 0.99 0.91 0.91 0.91 0.84 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.93 0.07 0.20 0.63 0.17 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1741 138 346 1086 299 1604 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.29 0.11 0.18 0.41 0.41 0.15 0.15 0.15 0.03 0.01 0.05
Crit Moves: ****
Green/Cycle: 0.02 0.41 0.41 0.26 0.65 0.65 0.21 0.21 0.21 0.21 0.21 0.21
Volume/Cap: 0.63 0.70 0.28 0.70 0.63 0.63 0.70 0.70 0.70 0.15 0.05 0.21
Delay/Veh: 83.4 27.2 19.8 38.4 11.5 11.5 42.1 42.1 42.1 32.1 31.3 32.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 83.4 27.2 19.8 38.4 11.5 11.5 42.1 42.1 42.1 32.1 31.3 32.7
LOS by Move: F C B D B B D C C C
HCM2k95thQ: 1 24 7 16 24 24 16 16 16 3 1 4

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Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.657
Loss Time (sec): 12 Average Delay (sec/veh): 20.0
Optimal Cycle: 54 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 33 707 46 55 442 15 47 40 33 76 44 116
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 33 707 46 55 442 15 47 40 33 76 44 116
Added Vol: 0 17 25 29 29 0 0 6 0 15 3 17
Approved Tr: 0 9 0 0 10 0 0 0 0 0 0 0
Initial Fut: 33 733 71 84 481 15 47 46 33 91 47 133
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
PHF Volume: 37 824 80 94 540 17 53 52 37 102 53 149
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 37 824 80 94 540 17 53 52 37 102 53 149
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 37 824 80 94 540 17 53 52 37 102 53 149

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 1.00 1.00 0.83 0.83 0.83 0.85 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.97 0.03 0.37 0.37 0.26 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1835 57 586 574 412 1621 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.43 0.05 0.05 0.29 0.29 0.09 0.09 0.09 0.06 0.03 0.09
Crit Moves: ****
Green/Cycle: 0.05 0.66 0.66 0.08 0.69 0.69 0.14 0.14 0.14 0.14 0.14 0.14
Volume/Cap: 0.43 0.66 0.07 0.66 0.43 0.43 0.64 0.64 0.64 0.45 0.20 0.66
Delay/Veh: 49.6 11.5 6.1 55.3 7.0 7.0 46.7 46.7 46.7 40.8 38.3 47.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 49.6 11.5 6.1 55.3 7.0 7.0 46.7 46.7 46.7 40.8 38.3 47.5
LOS by Move: D B A E A A D D D D D D
HCM2k95thQ: 2 26 2 6 14 14 10 10 10 7 3 11

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City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.509
Loss Time (sec): 12 Average Delay (sec/veh): 19.6
Optimal Cycle: 41 Level Of Service: B

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 36 483 147 96 490 37 54 103 126 39 14 44
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 36 483 147 96 490 37 54 103 126 39 14 44
Added Vol: 0 33 33 38 6 0 0 8 0 6 1 7
Approved Tr: 0 7 0 0 8 0 0 0 0 0 0 0
Initial Fut: 36 523 180 134 504 37 54 111 126 45 15 51
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 38 551 189 141 531 39 57 117 133 47 16 54
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 38 551 189 141 531 39 57 117 133 47 16 54
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 38 551 189 141 531 39 57 117 133 47 16 54

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.75 0.87 0.87 0.51 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1433 1661 1661 973 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.29 0.12 0.08 0.15 0.02 0.04 0.07 0.08 0.05 0.01 0.03
Crit Moves: ****
Green/Cycle: 0.09 0.57 0.57 0.15 0.63 0.63 0.16 0.16 0.16 0.16 0.16 0.16
Volume/Cap: 0.23 0.51 0.21 0.51 0.23 0.04 0.25 0.45 0.51 0.31 0.05 0.21
Delay/Veh: 43.0 13.5 10.6 40.4 8.0 6.9 37.6 38.8 39.5 38.5 35.9 37.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.0 13.5 10.6 40.4 8.0 6.9 37.6 38.8 39.5 38.5 35.9 37.2
LOS by Move: D B B D A A D D D D D D
HCM2k95thQ: 2 19 6 8 7 1 4 8 9 3 1 3

PM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.603
Loss Time (sec): 12 Average Delay (sec/veh): 22.3
Optimal Cycle: 49 Level Of Service: C

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 4:15 - 5:15 pm
Base Vol: 628 703 118 60 324 26 5 23 38 87 73 90
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 628 703 118 60 324 26 5 23 38 87 73 90
Added Vol: 0 25 25 29 15 0 0 6 0 15 3 17
Approved Tr: 0 9 0 0 10 0 0 0 0 0 0 0
Initial Fut: 628 737 143 89 349 26 5 29 38 102 76 107
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 641 752 146 91 356 27 5 30 39 104 78 109
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 641 752 146 91 356 27 5 30 39 104 78 109
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 641 752 146 91 356 27 5 30 39 104 78 109

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.69 0.87 0.87 0.71 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1317 1652 1652 1355 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.36 0.40 0.09 0.05 0.10 0.02 0.00 0.02 0.02 0.08 0.04 0.07
Crit Moves: ****
Green/Cycle: 0.59 0.67 0.67 0.08 0.16 0.16 0.13 0.13 0.13 0.13 0.13 0.13
Volume/Cap: 0.60 0.59 0.14 0.59 0.60 0.10 0.03 0.14 0.18 0.60 0.32 0.53
Delay/Veh: 14.1 9.9 6.1 50.2 40.6 35.7 38.3 38.9 39.2 47.1 40.5 43.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 14.1 9.9 6.1 50.2 40.6 35.7 38.3 38.9 39.2 47.1 40.5 43.5
LOS by Move: B A A D D D D D D D D D
HCM2k95thQ: 22 22 3 6 10 1 0 2 3 8 5 8

AM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.475
Loss Time (sec): 16 Average Delay (sec/veh): 20.2
Optimal Cycle: 47 Level Of Service: C

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 8:00 - 9:00 am
Base Vol: 17 321 13 18 702 117 118 26 63 44 43 25
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 321 13 18 702 117 118 26 63 44 43 25
Added Vol: 0 19 0 0 4 9 48 0 0 0 0 0
Approved Tr: 0 3 0 0 11 0 0 0 0 0 0 0
Initial Fut: 17 343 13 18 717 126 166 26 63 44 43 25
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 19 377 14 20 788 138 182 29 69 48 47 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 19 377 14 20 788 138 182 29 69 48 47 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 19 377 14 20 788 138 182 29 69 48 47 27

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 0.93 0.93 0.95 0.89 0.89 0.95 1.00 0.85
Lanes: 1.00 1.93 0.07 1.00 1.70 0.30 1.00 0.29 0.71 1.00 1.00 1.00
Final Sat.: 1805 3457 131 1805 3003 528 1805 496 1202 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.11 0.11 0.01 0.26 0.26 0.10 0.06 0.06 0.03 0.02 0.02
Crit Moves: ****
Green/Cycle: 0.02 0.52 0.52 0.05 0.55 0.55 0.21 0.18 0.18 0.08 0.05 0.05
Volume/Cap: 0.47 0.21 0.21 0.21 0.47 0.47 0.47 0.32 0.32 0.32 0.47 0.32
Delay/Veh: 57.1 12.9 12.9 46.5 13.7 13.7 35.4 36.2 36.2 44.3 49.6 47.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 57.1 12.9 12.9 46.5 13.7 13.7 35.4 36.2 36.2 44.3 49.6 47.9
LOS by Move: E B B D B B D D D D D D
HCM2k95thQ: 3 7 7 1 17 17 10 6 6 4 4 2

PM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.645
Loss Time (sec): 16 Average Delay (sec/veh): 21.1
Optimal Cycle: 62 Level Of Service: C

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 216 1302 31 26 271 150 119 51 19 15 29 25
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 216 1302 31 26 271 150 119 51 19 15 29 25
Added Vol: 0 14 0 0 8 21 36 0 0 0 0 0
Approved Tr: 0 11 0 0 7 0 0 0 0 0 0 0
Initial Fut: 216 1327 31 26 286 171 155 51 19 15 29 25
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 237 1458 34 29 314 188 170 56 21 16 32 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 237 1458 34 29 314 188 170 56 21 16 32 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 237 1458 34 29 314 188 170 56 21 16 32 27

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.95 0.90 0.90 0.95 0.96 0.96 0.95 1.00 0.85
Lanes: 1.00 1.95 0.05 1.00 1.25 0.75 1.00 0.73 0.27 1.00 1.00 1.00
Final Sat.: 1805 3517 82 1805 2133 1275 1805 1328 495 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.13 0.41 0.41 0.02 0.15 0.15 0.09 0.04 0.04 0.01 0.02 0.02
Crit Moves: ****
Green/Cycle: 0.31 0.64 0.64 0.02 0.35 0.35 0.15 0.14 0.14 0.03 0.03 0.03
Volume/Cap: 0.42 0.64 0.64 0.64 0.42 0.42 0.64 0.30 0.30 0.30 0.64 0.65
Delay/Veh: 27.5 11.5 11.5 76.6 24.8 24.8 45.6 39.1 39.1 50.4 74.0 79.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 27.5 11.5 11.5 76.6 24.8 24.8 45.6 39.1 39.1 50.4 74.0 79.7
LOS by Move: C B B E C C D D D D E E
HCM2k95thQ: 11 27 27 2 11 11 12 5 5 2 4 4

AM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 65 Critical Vol./Cap.(X): 0.538
Loss Time (sec): 8 Average Delay (sec/veh): 19.5
Optimal Cycle: 33 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am
Base Vol: 792 6 16 0 9 88 9 295 362 47 393 1
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 792 6 16 0 9 88 9 295 362 47 393 1
Added Vol: 0 0 0 0 0 0 0 55 0 0 11 0
Approved Tr: 0 3 0 11 3 44 21 0 0 0 0 7
Initial Fut: 792 9 16 11 12 132 30 350 362 47 404 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 852 10 17 12 13 142 32 376 0 51 434 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 852 10 17 12 13 142 32 376 0 51 434 9
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 852 10 17 12 13 142 32 376 0 51 434 9

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.90 0.90 0.95 1.00 0.85 0.95 0.95 0.95 0.95 0.95 0.95
Lanes: 2.00 0.36 0.64 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.96 0.04
Final Sat.: 3502 618 1099 1805 1900 1615 1805 3610 0 1805 3529 70

Capacity Analysis Module:
Vol/Sat: 0.24 0.02 0.02 0.01 0.01 0.09 0.02 0.10 0.00 0.03 0.12 0.12
Crit Moves: ****
Green/Cycle: 0.45 0.43 0.43 0.18 0.16 0.16 0.03 0.21 0.00 0.06 0.23 0.23
Volume/Cap: 0.54 0.04 0.04 0.04 0.04 0.54 0.54 0.51 0.00 0.51 0.54 0.54
Delay/Veh: 13.3 10.6 10.6 22.0 23.0 27.2 40.4 23.4 0.0 33.9 22.8 22.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 13.3 10.6 10.6 22.0 23.0 27.2 40.4 23.4 0.0 33.9 22.8 22.8
LOS by Move: B B B C C C D C A C C C
HCM2k95thQ: 13 1 1 0 1 7 1 7 0 4 9 9

PM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.491
Loss Time (sec): 8 Average Delay (sec/veh): 17.2
Optimal Cycle: 30 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 0 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 << 5:00 - 6:00 pm
Base Vol: 425 8 92 0 4 43 77 513 666 8 364 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 425 8 92 0 4 43 77 513 666 8 364 8
Added Vol: 0 0 0 0 0 0 0 42 0 0 24 0
Approved Tr: 0 7 0 15 7 61 65 0 0 0 0 27
Initial Fut: 425 15 92 15 11 104 142 555 666 8 388 35
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 472 17 102 17 12 116 158 617 0 9 431 39
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 472 17 102 17 12 116 158 617 0 9 431 39
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 472 17 102 17 12 116 158 617 0 9 431 39

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.87 0.87 0.95 1.00 0.85 0.95 0.95 0.95 0.95 0.94 0.94
Lanes: 2.00 0.14 0.86 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.83 0.17
Final Sat.: 3502 232 1423 1805 1900 1615 1805 3610 0 1805 3272 295

Capacity Analysis Module:
Vol/Sat: 0.13 0.07 0.07 0.01 0.01 0.07 0.09 0.17 0.00 0.00 0.13 0.13
Crit Moves: ****
Green/Cycle: 0.27 0.37 0.37 0.05 0.15 0.15 0.18 0.43 0.00 0.01 0.27 0.27
Volume/Cap: 0.49 0.19 0.19 0.19 0.04 0.49 0.49 0.39 0.00 0.39 0.49 0.49
Delay/Veh: 18.6 12.9 12.9 28.5 22.1 25.2 23.4 11.8 0.0 40.4 18.9 18.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 18.6 12.9 12.9 28.5 22.1 25.2 23.4 11.8 0.0 40.4 18.9 18.9
LOS by Move: B B B C C C C B A D B B
HCM2k95thQ: 9 3 3 1 0 5 5 8 0 1 9 9

AM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report															
2000 HCM Operations Method (Future Volume Alternative)															

Intersection #8 I-680 SB Ramp/Durham Rd															

Cycle (sec):	130			Critical Vol./Cap.(X):			0.701								
Loss Time (sec):	10			Average Delay (sec/veh):			28.8								
Optimal Cycle:	57			Level Of Service:			C								

Street Name:	I-680 SB Ramp						Auto Mall Pkwy								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	0	0	1	0	0	0	0	0	1	1	1	1	
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Volume Module: >> Count Date: 3 Oct 2012 << 7:30 - 8:30 am															
Base Vol:	927	0	11	0	0	0	0	639	511	64	1225	0			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	927	0	11	0	0	0	0	639	511	64	1225	0			
Added Vol:	0	0	0	0	0	0	0	55	0	0	11	0			
Approved Tr:	0	0	4	0	0	0	0	17	0	15	29	0			
Initial Fut:	927	0	15	0	0	0	0	711	511	79	1265	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
PHF Volume:	976	0	16	0	0	0	0	748	538	83	1332	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	976	0	16	0	0	0	0	748	538	83	1332	0			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
FinalVolume:	976	0	16	0	0	0	0	748	538	83	1332	0			
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.89	0.89	0.95	0.95	1.00			
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	1.75	1.25	1.00	2.00	0.00			
Final Sat.:	3502	0	1615	0	0	0	0	2952	2122	1805	3610	0			
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Capacity Analysis Module:															
Vol/Sat:	0.28	0.00	0.01	0.00	0.00	0.00	0.00	0.25	0.25	0.05	0.37	0.00			
Crit Moves:	****							****			****				
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.44	0.44	0.08	0.53	0.00			
Volume/Cap:	0.70	0.00	0.02	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.70	0.00			
Delay/Veh:	34.4	0.0	23.9	0.0	0.0	0.0	0.0	27.2	27.2	62.8	24.4	0.0			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	34.4	0.0	23.9	0.0	0.0	0.0	0.0	27.2	27.2	62.8	24.4	0.0			
LOS by Move:	C	A	C	A	A	A	A	C	C	E	C	A			
HCM2k95thQ:	30	0	1	0	0	0	0	24	24	6	35	0			

PM Peak Hour - Background plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report												
2000 HCM Operations Method (Future Volume Alternative)												

Intersection #8 I-680 SB Ramp/Durham Rd												

Cycle (sec):	130			Critical Vol./Cap.(X):						0.697		
Loss Time (sec):	10			Average Delay (sec/veh):						15.1		
Optimal Cycle:	56			Level Of Service:						B		

Street Name:	I-680 SB Ramp						Auto Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	0	0	1	0	0	0	0	1	1	1
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Volume Module: >> Count Date:	3 Oct 2012 << 5:00 - 6:00 pm											
Base Vol:	346	0	53	0	0	0	0	1320	970	38	817	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	346	0	53	0	0	0	0	1320	970	38	817	0
Added Vol:	0	0	0	0	0	0	0	42	0	0	24	0
Approved Tr:	0	0	8	0	0	0	0	57	0	15	46	0
Initial Fut:	346	0	61	0	0	0	0	1419	970	53	887	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	372	0	66	0	0	0	0	1526	1043	57	954	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	372	0	66	0	0	0	0	1526	1043	57	954	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	372	0	66	0	0	0	0	1526	1043	57	954	0
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.89	0.89	0.95	0.95	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	1.78	1.22	1.00	2.00	0.00
Final Sat.:	3502	0	1615	0	0	0	0	3020	2065	1805	3610	0
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.04	0.00	0.00	0.00	0.00	0.51	0.51	0.03	0.26	0.00
Crit Moves:	****						****			****		
Green/Cycle:	0.15	0.00	0.15	0.00	0.00	0.00	0.00	0.73	0.73	0.05	0.77	0.00
Volume/Cap:	0.70	0.00	0.27	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.34	0.00
Delay/Veh:	56.3	0.0	49.2	0.0	0.0	0.0	0.0	10.5	10.5	84.3	4.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.3	0.0	49.2	0.0	0.0	0.0	0.0	10.5	10.5	84.3	4.7	0.0
LOS by Move:	E	A	D	A	A	A	A	B	B	F	A	A
HCM2k95thQ:	16	0	5	0	0	0	0	34	34	5	12	0

AM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 90 Critical Vol./Cap.(X): 0.832
Loss Time (sec): 12 Average Delay (sec/veh): 15.9
Optimal Cycle: 82 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 1

Volume Module:

Base Vol: 127 1750 0 0 1719 954 0 0 0 233 0 1202
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 127 1750 0 0 1719 954 0 0 0 233 0 1202
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Volume: 127 1750 0 0 1719 954 0 0 0 233 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 127 1750 0 0 1719 954 0 0 0 233 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
FinalVolume: 127 1750 0 0 1719 954 0 0 0 233 0 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.90 0.90 1.00 1.00 1.00 0.95 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.93 1.07 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 1805 3610 0 0 3294 1828 0 0 0 1809 0 1900

Capacity Analysis Module:

Vol/Sat: 0.07 0.48 0.00 0.00 0.52 0.52 0.00 0.00 0.00 0.13 0.00 0.00
Crit Moves: **** **** ****
Green/Cycle: 0.08 0.71 0.00 0.00 0.63 0.63 0.00 0.00 0.00 0.15 0.00 0.00
Volume/Cap: 0.83 0.68 0.00 0.00 0.83 0.83 0.00 0.00 0.00 0.83 0.00 0.00
Delay/Veh: 71.0 8.0 0.0 0.0 15.1 15.1 0.0 0.0 0.0 55.5 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 71.0 8.0 0.0 0.0 15.1 15.1 0.0 0.0 0.0 55.5 0.0 0.0
LOS by Move: E A A A B B A A A E A A
HCM2k95thQ: 7 24 0 0 38 38 0 0 0 17 0 0

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 105 Critical Vol./Cap.(X): 0.894
Loss Time (sec): 12 Average Delay (sec/veh): 27.8
Optimal Cycle: 110 Level Of Service: C

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 1

Volume Module:

Base Vol: 186 1687 0 0 1383 937 0 0 0 357 23 911
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 186 1687 0 0 1383 937 0 0 0 357 23 911
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Volume: 186 1687 0 0 1383 937 0 0 0 357 23 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 186 1687 0 0 1383 937 0 0 0 357 23 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
FinalVolume: 186 1687 0 0 1383 937 0 0 0 357 23 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.89 0.89 1.00 1.00 1.00 0.86 0.86 1.00
Lanes: 1.00 2.00 0.00 0.00 1.79 1.21 0.00 0.00 0.00 0.94 0.06 1.00
Final Sat.: 1805 3610 0 0 3031 2054 0 0 0 1533 99 1900

Capacity Analysis Module:

Vol/Sat: 0.10 0.47 0.00 0.00 0.46 0.46 0.00 0.00 0.00 0.23 0.23 0.00
Crit Moves: **** **** ****
Green/Cycle: 0.12 0.63 0.00 0.00 0.51 0.51 0.00 0.00 0.00 0.26 0.26 0.00
Volume/Cap: 0.89 0.75 0.00 0.00 0.89 0.89 0.00 0.00 0.00 0.89 0.89 0.00
Delay/Veh: 80.9 15.2 0.0 0.0 27.6 27.6 0.0 0.0 0.0 58.2 58.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 80.9 15.2 0.0 0.0 27.6 27.6 0.0 0.0 0.0 58.2 58.2 0.0
LOS by Move: F B A A C C A A A E E A
HCM2k95thQ: 12 33 0 0 44 44 0 0 0 27 27 0

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.878
Loss Time (sec): 10 Average Delay (sec/veh): 32.4
Optimal Cycle: 86 Level Of Service: C

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 0 1

Volume Module:

Base Vol:	183	1131	47	209	1050	573	663	128	29	31	72	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	183	1131	47	209	1050	573	663	128	29	31	72	44
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	183	1131	47	209	1050	0	663	128	29	31	72	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	183	1131	47	209	1050	0	663	128	29	31	72	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	183	1131	47	209	1050	0	663	128	29	31	72	44

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	1.00	0.96	0.96	0.96	0.99	0.99	0.85
Lanes:	1.00	1.92	0.08	1.00	2.00	1.00	1.68	0.26	0.06	0.30	0.70	1.00
Final Sat.:	1805	3445	143	1805	3610	1900	3050	476	108	563	1308	1615

Capacity Analysis Module:

Vol/Sat:	0.10	0.33	0.33	0.12	0.29	0.00	0.22	0.27	0.27	0.06	0.06	0.03
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.37	0.37	0.13	0.38	0.00	0.29	0.31	0.31	0.06	0.07	0.07
Volume/Cap:	0.78	0.88	0.88	0.88	0.78	0.00	0.74	0.88	0.88	0.88	0.74	0.37
Delay/Veh:	48.4	30.2	30.2	62.8	24.9	0.0	28.1	35.8	35.8	84.7	54.9	37.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.4	30.2	30.2	62.8	24.9	0.0	28.1	35.8	35.8	84.7	54.9	37.1
LOS by Move:	D	C	C	E	C	A	C	D	D	F	D	D
HCM2k95thQ:	9	27	27	10	21	0	19	26	26	10	8	3

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 85 Critical Vol./Cap.(X): 0.894
Loss Time (sec): 10 Average Delay (sec/veh): 37.3
Optimal Cycle: 95 Level Of Service: D

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 0 1

Volume Module:

Base Vol:	461	1007	23	186	710	856	709	109	34	39	78	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	461	1007	23	186	710	856	709	109	34	39	78	56
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	461	1007	23	186	710	0	709	109	34	39	78	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	461	1007	23	186	710	0	709	109	34	39	78	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	461	1007	23	186	710	0	709	109	34	39	78	56

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.98	0.98	0.85
Lanes:	1.00	1.96	0.04	1.00	2.00	1.00	1.71	0.22	0.07	0.33	0.67	1.00
Final Sat.:	1805	3519	80	1805	3610	1900	3105	397	124	623	1246	1615

Capacity Analysis Module:

Vol/Sat:	0.26	0.29	0.29	0.10	0.20	0.00	0.23	0.27	0.27	0.06	0.06	0.03
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.29	0.37	0.37	0.13	0.22	0.00	0.30	0.31	0.31	0.07	0.08	0.08
Volume/Cap:	0.89	0.77	0.77	0.77	0.89	0.00	0.77	0.89	0.89	0.89	0.77	0.43
Delay/Veh:	47.0	26.3	26.3	49.6	44.8	0.0	30.7	39.0	39.0	87.3	59.6	39.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.0	26.3	26.3	49.6	44.8	0.0	30.7	39.0	39.0	87.3	59.6	39.4
LOS by Move:	D	C	C	D	D	A	C	D	D	F	E	D
HCM2k95thQ:	20	21	21	9	18	0	21	28	28	11	10	4

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.965
Loss Time (sec): 12 Average Delay (sec/veh): 45.3
Optimal Cycle: 151 Level Of Service: D

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0

Volume Module: >> Count Date: 3 Oct 2012 <<
Base Vol: 201 363 0 0 636 142 248 0 230 0 0 0
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 253 457 0 0 801 179 312 0 290 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 253 457 0 0 801 179 312 0 290 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 253 457 0 0 801 179 312 0 290 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 253 457 0 0 801 179 312 0 290 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.98 0.98 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.82 0.18 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1514 338 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.14 0.24 0.00 0.00 0.53 0.53 0.17 0.00 0.18 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.15 0.69 0.00 0.00 0.55 0.55 0.19 0.00 0.19 0.00 0.00 0.00
Volume/Cap: 0.96 0.35 0.00 0.00 0.96 0.96 0.93 0.00 0.96 0.00 0.00 0.00
Delay/Veh: 88.1 1.9 0.0 0.0 34.9 34.9 71.8 0.0 82.6 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 88.1 1.9 0.0 0.0 34.9 34.9 71.8 0.0 82.6 0.0 0.0 0.0
LOS by Move: F A A A C C E A F A A A
HCM2k95thQ: 17 3 0 0 48 48 24 0 24 0 0 0

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Mission Blvd/Washington Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.126
Loss Time (sec): 12 Average Delay (sec/veh): 78.2
Optimal Cycle: 180 Level Of Service: E

Street Name: Mission Blvd Washington Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 0

Volume Module:
Base Vol: 93 821 0 0 325 84 639 0 65 0 0 0
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 117 1034 0 0 410 106 805 0 82 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 117 1034 0 0 410 106 805 0 82 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 117 1034 0 0 410 106 805 0 82 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 117 1034 0 0 410 106 805 0 82 0 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 1.00 0.97 0.97 0.95 1.00 0.85 1.00 1.00 1.00
Lanes: 1.00 1.00 0.00 0.00 0.79 0.21 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1805 1900 0 0 1468 379 1805 0 1615 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.06 0.54 0.00 0.00 0.28 0.28 0.45 0.00 0.05 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.09 0.48 0.00 0.00 0.39 0.39 0.40 0.00 0.40 0.00 0.00 0.00
Volume/Cap: 0.71 1.13 0.00 0.00 0.71 0.71 1.13 0.00 0.13 0.00 0.00 0.00
Delay/Veh: 57.7 91.0 0.0 0.0 26.4 26.4 104.0 0.0 19.3 0.0 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 57.7 91.0 0.0 0.0 26.4 26.4 104.0 0.0 19.3 0.0 0.0 0.0
LOS by Move: E F A A C C F A B A A A
HCM2k95thQ: 7 72 0 0 21 21 62 0 3 0 0 0

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.702
Loss Time (sec): 12 Average Delay (sec/veh): 25.5
Optimal Cycle: 60 Level Of Service: C

Street Name:	Mission Blvd				Witherly Ln				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Permitted		Permitted		
Rights:	Include		Include		Include		Include		
Min. Green:	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	1

Volume Module: >> Count Date: 3 Oct 2012 <<

	Base Vol:	Growth Adj:	Initial Bse:	User Adj:	PHF Adj:	PHF Volume:	Reduct Vol:	Reduced Vol:	PCE Adj:	MLF Adj:	Final Volume:	
	17	449	122	236	560	48	44	130	38	37	14	56
	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
	21	566	154	297	706	60	55	164	48	47	18	71
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	21	566	154	297	706	60	55	164	48	47	18	71
	0	0	0	0	0	0	0	0	0	0	0	0
	21	566	154	297	706	60	55	164	48	47	18	71
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	21	566	154	297	706	60	55	164	48	47	18	71

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	0.99	0.99	0.91	0.91	0.91	0.84	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	0.92	0.08	0.21	0.61	0.18	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1729	148	358	1056	309	1594	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.30	0.10	0.16	0.41	0.41	0.16	0.16	0.16	0.03	0.01	0.04
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.02	0.42	0.42	0.23	0.64	0.64	0.22	0.22	0.22	0.22	0.22	0.22
Volume/Cap:	0.64	0.70	0.22	0.70	0.64	0.64	0.70	0.70	0.70	0.13	0.04	0.20
Delay/Veh:	82.9	26.4	18.5	40.3	12.1	12.1	41.7	41.7	41.7	31.4	30.7	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.9	26.4	18.5	40.3	12.1	12.1	41.7	41.7	41.7	31.4	30.7	32.0
LOS by Move:	F	C	B	D	B	B	D	D	D	C	C	C
HCM2k95thQ:	1	25	6	15	24	24	17	17	17	2	1	4

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.687
Loss Time (sec): 12 Average Delay (sec/veh): 19.8
Optimal Cycle: 58 Level Of Service: B

Street Name:	Mission Blvd				Witherly Ln				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Permitted		Permitted		
Rights:	Include		Include		Include		Include		
Min. Green:	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	1

Volume Module:

	Base Vol:	Growth Adj:	Initial Bse:	User Adj:	PHF Adj:	PHF Volume:	Reduct Vol:	Reduced Vol:	PCE Adj:	MLF Adj:	Final Volume:	
	33	707	46	55	442	15	47	40	33	76	44	116
	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
	42	891	58	69	557	19	59	50	42	96	55	146
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	42	891	58	69	557	19	59	50	42	96	55	146
	0	0	0	0	0	0	0	0	0	0	0	0
	42	891	58	69	557	19	59	50	42	96	55	146
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	42	891	58	69	557	19	59	50	42	96	55	146

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	1.00	0.81	0.81	0.81	0.86	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	0.97	0.03	0.40	0.33	0.27	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1828	62	606	516	426	1638	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.02	0.47	0.04	0.04	0.30	0.30	0.10	0.10	0.10	0.06	0.03	0.09
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.05	0.68	0.68	0.06	0.69	0.69	0.14	0.14	0.14	0.14	0.14	0.14
Volume/Cap:	0.44	0.69	0.05	0.69	0.44	0.44	0.69	0.69	0.69	0.41	0.21	0.64
Delay/Veh:	49.3	11.1	5.3	64.4	7.3	7.3	49.6	49.6	49.6	40.3	38.3	46.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.3	11.1	5.3	64.4	7.3	7.3	49.6	49.6	49.6	40.3	38.3	46.3
LOS by Move:	D	B	A	E	A	A	D	D	D	D	D	D
HCM2k95thQ:	3	28	1	4	14	14	11	11	11	6	3	10

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 12 Average Delay (sec/veh): 19.6
Optimal Cycle: 44 Level Of Service: B

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 <<
Base Vol: 36 483 147 96 490 37 54 103 126 39 14 44
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 45 609 185 121 617 47 68 130 159 49 18 55
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 45 609 185 121 617 47 68 130 159 49 18 55
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 45 609 185 121 617 47 68 130 159 49 18 55
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 45 609 185 121 617 47 68 130 159 49 18 55

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.75 0.87 0.87 0.47 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1431 1657 1657 895 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.03 0.32 0.11 0.07 0.17 0.03 0.05 0.08 0.10 0.05 0.01 0.03
Crit Moves: ****
Green/Cycle: 0.09 0.58 0.58 0.12 0.62 0.62 0.17 0.17 0.17 0.17 0.17 0.17
Volume/Cap: 0.28 0.55 0.20 0.55 0.28 0.05 0.27 0.45 0.55 0.31 0.05 0.20
Delay/Veh: 43.4 13.4 9.9 44.2 9.0 7.6 36.4 37.5 38.9 37.2 34.5 35.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.4 13.4 9.9 44.2 9.0 7.6 36.4 37.5 38.9 37.2 34.5 35.6
LOS by Move: D B A D A A D D D D C D
HCM2k95thQ: 3 21 5 7 9 1 4 8 10 3 1 3

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.720
Loss Time (sec): 12 Average Delay (sec/veh): 23.6
Optimal Cycle: 62 Level Of Service: C

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module:
Base Vol: 628 703 118 60 324 26 5 23 38 87 73 90
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 791 886 149 76 408 33 6 29 48 110 92 113
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 791 886 149 76 408 33 6 29 48 110 92 113
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 791 886 149 76 408 33 6 29 48 110 92 113
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 791 886 149 76 408 33 6 29 48 110 92 113

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.63 0.86 0.86 0.71 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1193 1637 1637 1341 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.44 0.47 0.09 0.04 0.11 0.02 0.01 0.02 0.03 0.08 0.05 0.07
Crit Moves: ****
Green/Cycle: 0.61 0.70 0.70 0.06 0.16 0.16 0.11 0.11 0.11 0.11 0.11 0.11
Volume/Cap: 0.72 0.66 0.13 0.66 0.72 0.13 0.05 0.16 0.26 0.72 0.43 0.62
Delay/Veh: 15.9 9.5 4.9 59.5 44.5 36.5 39.6 40.1 40.9 58.1 42.6 48.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 15.9 9.5 4.9 59.5 44.5 36.5 39.6 40.1 40.9 58.1 42.6 48.5
LOS by Move: B A A E D D D D D E D D
HCM2k95thQ: 29 26 3 5 12 2 0 2 3 9 6 9

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.494
Loss Time (sec): 16 Average Delay (sec/veh): 19.1
Optimal Cycle: 49 Level Of Service: B

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 0 1 0 1

Volume Module:

Base Vol:	17	321	13	18	702	117	118	26	63	44	43	25
Growth Adj:	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
Initial Bse:	21	404	16	23	885	147	149	33	79	55	54	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	404	16	23	885	147	149	33	79	55	54	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	404	16	23	885	147	149	33	79	55	54	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	404	16	23	885	147	149	33	79	55	54	32

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.89	0.89	0.95	1.00	0.85
Lanes:	1.00	1.92	0.08	1.00	1.71	0.29	1.00	0.29	0.71	1.00	1.00	1.00
Final Sat.:	1805	3449	140	1805	3029	505	1805	496	1202	1805	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.12	0.12	0.01	0.29	0.29	0.08	0.07	0.07	0.03	0.03	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.02	0.56	0.56	0.06	0.59	0.59	0.17	0.15	0.15	0.07	0.06	0.06
Volume/Cap:	0.49	0.21	0.21	0.21	0.49	0.49	0.49	0.43	0.43	0.43	0.49	0.34
Delay/Veh:	56.8	11.2	11.2	45.8	12.0	12.0	39.1	39.5	39.5	46.8	49.2	47.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.8	11.2	11.2	45.8	12.0	12.0	39.1	39.5	39.5	46.8	49.2	47.4
LOS by Move:	E	B	B	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	3	7	7	1	18	18	8	6	6	4	5	3

Note: Queue reported is the number of cars per lane.

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Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699
Loss Time (sec): 16 Average Delay (sec/veh): 21.3
Optimal Cycle: 69 Level Of Service: C

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 1

Volume Module:

Base Vol:	216	1302	31	26	271	150	119	51	19	15	29	25
Growth Adj:	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
Initial Bse:	272	1641	39	33	341	189	150	64	24	19	37	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	272	1641	39	33	341	189	150	64	24	19	37	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	272	1641	39	33	341	189	150	64	24	19	37	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	272	1641	39	33	341	189	150	64	24	19	37	32

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.90	0.90	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	1.95	0.05	1.00	1.29	0.71	1.00	0.73	0.27	1.00	1.00	1.00
Final Sat.:	1805	3515	84	1805	2201	1218	1805	1328	495	1805	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.15	0.47	0.47	0.02	0.16	0.16	0.08	0.05	0.05	0.01	0.02	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.34	0.67	0.67	0.03	0.35	0.35	0.12	0.12	0.12	0.03	0.03	0.03
Volume/Cap:	0.44	0.70	0.70	0.70	0.44	0.44	0.70	0.40	0.40	0.40	0.70	0.71
Delay/Veh:	26.0	11.3	11.3	85.9	25.1	25.1	52.1	41.9	41.9	53.5	82.5	89.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.0	11.3	11.3	85.9	25.1	25.1	52.1	41.9	41.9	53.5	82.5	89.6
LOS by Move:	C	B	B	F	C	C	D	D	D	D	F	F
HCM2k95thQ:	13	30	30	2	12	12	9	5	5	2	5	4

Note: Queue reported is the number of cars per lane.

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City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 90 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 8 Average Delay (sec/veh): 17.9
Optimal Cycle: 47 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 1718 4 31 9 7 75 7 193 565 77 196 6
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1718 4 31 9 7 75 7 193 565 77 196 6
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 1718 4 31 9 7 75 7 193 0 77 196 6
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1718 4 31 9 7 75 7 193 0 77 196 6
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 1718 4 31 9 7 75 7 193 0 77 196 6

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.87 0.87 0.95 1.00 0.85 0.95 0.95 0.95 0.95 0.95 0.95
Lanes: 2.00 0.11 0.89 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.94 0.06
Final Sat.: 3502 188 1459 1805 1900 1615 1805 3610 0 1805 3489 107

Capacity Analysis Module:

Vol/Sat: 0.49 0.02 0.02 0.00 0.00 0.05 0.00 0.05 0.00 0.04 0.06 0.06
Crit Moves: **** **** **** ****
Green/Cycle: 0.71 0.63 0.63 0.15 0.07 0.07 0.01 0.08 0.00 0.06 0.13 0.13
Volume/Cap: 0.69 0.03 0.03 0.03 0.06 0.69 0.43 0.69 0.00 0.69 0.43 0.43
Delay/Veh: 8.5 6.4 6.4 33.0 39.5 59.0 62.0 48.0 0.0 58.9 36.8 36.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 8.5 6.4 6.4 33.0 39.5 59.0 62.0 48.0 0.0 58.9 36.8 36.8
LOS by Move: A A A C D E E D A E D D
HCM2k95thQ: 26 1 1 0 0 0 7 0 5 0 5 5

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 55 Critical Vol./Cap.(X): 0.479
Loss Time (sec): 8 Average Delay (sec/veh): 13.3
Optimal Cycle: 29 Level Of Service: B

Street Name: I-680 NB Ramp Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 915 25 66 2 7 49 39 379 1944 23 256 5
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 915 25 66 2 7 49 39 379 1944 23 256 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 915 25 66 2 7 49 39 379 0 23 256 5
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 915 25 66 2 7 49 39 379 0 23 256 5
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 915 25 66 2 7 49 39 379 0 23 256 5

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.89 0.89 0.95 1.00 0.85 0.95 0.95 0.95 0.95 0.95 0.95
Lanes: 2.00 0.27 0.73 1.00 1.00 1.00 1.00 2.00 0.00 1.00 1.96 0.04
Final Sat.: 3502 465 1228 1805 1900 1615 1805 3610 0 1805 3530 69

Capacity Analysis Module:

Vol/Sat: 0.26 0.05 0.05 0.00 0.00 0.03 0.02 0.10 0.00 0.01 0.07 0.07
Crit Moves: **** **** **** ****
Green/Cycle: 0.55 0.60 0.60 0.01 0.06 0.06 0.06 0.22 0.00 0.03 0.19 0.19
Volume/Cap: 0.48 0.09 0.09 0.09 0.06 0.48 0.38 0.48 0.00 0.48 0.38 0.38
Delay/Veh: 7.9 4.8 4.8 28.6 24.4 28.4 27.4 19.2 0.0 33.7 19.8 19.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 7.9 4.8 4.8 28.6 24.4 28.4 27.4 19.2 0.0 33.7 19.8 19.8
LOS by Move: A A A C C C C B A C B B
HCM2k95thQ: 10 1 1 0 0 0 3 1 5 0 1 4

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 110 Critical Vol./Cap.(X): 1.001
Loss Time (sec): 10 Average Delay (sec/veh): 42.2
Optimal Cycle: 180 Level Of Service: D

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 0 1 0 0 0 0 0 0 0

Volume Module:

Base Vol: 1111 0 33 0 0 0 0 716 1714 112 2004 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1111 0 33 0 0 0 0 716 1714 112 2004 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 1111 0 33 0 0 0 0 716 1714 112 2004 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1111 0 33 0 0 0 0 716 1714 112 2004 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 1111 0 33 0 0 0 0 716 1714 112 2004 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.85 1.00 1.00 1.00 1.00 0.85 0.85 0.95 0.95
Lanes: 2.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 2.00 1.00 0.00
Final Sat.: 3502 0 1615 0 0 0 0 1614 3227 1805 3610 0

Capacity Analysis Module:

Vol/Sat: 0.32 0.00 0.02 0.00 0.00 0.00 0.00 0.44 0.53 0.06 0.56 0.00
Crit Moves: **** ****
Green/Cycle: 0.32 0.00 0.32 0.00 0.00 0.00 0.00 0.53 0.53 0.06 0.59 0.00
Volume/Cap: 1.00 0.00 0.06 0.00 0.00 0.00 0.00 0.84 1.00 1.00 0.94 0.00
Delay/Veh: 64.9 0.0 26.3 0.0 0.0 0.0 0.0 24.1 44.4 137.1 29.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 64.9 0.0 26.3 0.0 0.0 0.0 0.0 24.1 44.4 137.1 29.2 0.0
LOS by Move: E A C A A A A C D F C A
HCM2k95thQ: 43 0 2 0 0 0 0 39 60 10 57 0

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Cumulative 2035 Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 I-680 SB Ramp/Durham Rd

Cycle (sec): 130 Critical Vol./Cap.(X): 1.275
Loss Time (sec): 10 Average Delay (sec/veh): 129.8
Optimal Cycle: 180 Level Of Service: F

Street Name: I-680 SB Ramp Auto Mall Pkwy
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 0 0 1 0 0 0 0 0 0 0

Volume Module:

Base Vol: 1284 0 42 0 0 0 0 2382 1599 51 1321 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1284 0 42 0 0 0 0 2382 1599 51 1321 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 1284 0 42 0 0 0 0 2382 1599 51 1321 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1284 0 42 0 0 0 0 2382 1599 51 1321 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 1284 0 42 0 0 0 0 2382 1599 51 1321 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 1.00 0.85 1.00 1.00 1.00 1.00 0.89 0.89 0.95 0.95
Lanes: 2.00 0.00 1.00 0.00 0.00 0.00 0.00 1.80 1.20 1.00 2.00
Final Sat.: 3502 0 1615 0 0 0 0 3046 2044 1805 3610 0

Capacity Analysis Module:

Vol/Sat: 0.37 0.00 0.03 0.00 0.00 0.00 0.00 0.78 0.78 0.03 0.37 0.00
Crit Moves: **** ****
Green/Cycle: 0.29 0.00 0.29 0.00 0.00 0.00 0.00 0.61 0.61 0.02 0.64 0.00
Volume/Cap: 1.28 0.00 0.09 0.00 0.00 0.00 0.00 1.28 1.28 1.28 0.58 0.00
Delay/Veh: 177.9 0.0 34.0 0.0 0.0 0.0 0.0 152 151.6 297.7 14.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 177.9 0.0 34.0 0.0 0.0 0.0 0.0 152 151.6 297.7 14.0 0.0
LOS by Move: F A C A A A A F F F B A
HCM2k95thQ: 71 0 2 0 0 0 0 139 139 7 27 0

Note: Queue reported is the number of cars per lane.

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 90 Critical Vol./Cap.(X): 0.847
Loss Time (sec): 12 Average Delay (sec/veh): 16.6
Optimal Cycle: 86 Level Of Service: B

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 0 1

Volume Module:
Base Vol: 127 1750 0 0 1719 954 0 0 0 233 0 1202
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 127 1750 0 0 1719 954 0 0 0 233 0 1202
Added Vol: 0 10 0 0 52 0 0 0 0 8 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 127 1760 0 0 1771 954 0 0 0 241 0 1202
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Volume: 127 1760 0 0 1771 954 0 0 0 241 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 127 1760 0 0 1771 954 0 0 0 241 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
FinalVolume: 127 1760 0 0 1771 954 0 0 0 241 0 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.90 0.90 1.00 1.00 1.00 0.95 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.95 1.05 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 1805 3610 0 0 3336 1797 0 0 0 1809 0 1900

Capacity Analysis Module:
Vol/Sat: 0.07 0.49 0.00 0.00 0.53 0.53 0.00 0.00 0.00 0.13 0.00 0.00
Crit Moves: **** ****
Green/Cycle: 0.08 0.71 0.00 0.00 0.63 0.63 0.00 0.00 0.00 0.16 0.00 0.00
Volume/Cap: 0.85 0.69 0.00 0.00 0.85 0.85 0.00 0.00 0.00 0.85 0.00 0.00
Delay/Veh: 74.5 8.2 0.0 0.0 15.7 15.7 0.0 0.0 0.0 57.3 0.0 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 74.5 8.2 0.0 0.0 15.7 15.7 0.0 0.0 0.0 57.3 0.0 0.0
LOS by Move: E A A A B B A A A E A A
HCM2k95thQ: 7 24 0 0 39 39 0 0 0 17 0 0

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-680 SB Ramp/Mission Blvd

Cycle (sec): 105 Critical Vol./Cap.(X): 0.907
Loss Time (sec): 12 Average Delay (sec/veh): 28.6
Optimal Cycle: 116 Level Of Service: C

Street Name: Mission Blvd I-680 SB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 1 0 0 0 1

Volume Module:
Base Vol: 186 1687 0 0 1383 937 0 0 0 357 23 911
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 186 1687 0 0 1383 937 0 0 0 357 23 911
Added Vol: 0 23 0 0 39 0 0 0 0 6 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 186 1710 0 0 1422 937 0 0 0 363 23 911
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
PHF Volume: 186 1710 0 0 1422 937 0 0 0 363 23 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 186 1710 0 0 1422 937 0 0 0 363 23 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00
FinalVolume: 186 1710 0 0 1422 937 0 0 0 363 23 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 1.00 1.00 0.89 0.89 1.00 1.00 1.00 0.86 0.86 1.00
Lanes: 1.00 2.00 0.00 0.00 1.81 1.19 0.00 0.00 0.00 0.94 0.06 1.00
Final Sat.: 1805 3610 0 0 3068 2022 0 0 0 1535 97 1900

Capacity Analysis Module:
Vol/Sat: 0.10 0.47 0.00 0.00 0.46 0.46 0.00 0.00 0.00 0.24 0.24 0.00
Crit Moves: **** ****
Green/Cycle: 0.11 0.62 0.00 0.00 0.51 0.51 0.00 0.00 0.00 0.26 0.26 0.00
Volume/Cap: 0.91 0.76 0.00 0.00 0.91 0.91 0.00 0.00 0.00 0.91 0.91 0.00
Delay/Veh: 84.0 15.6 0.0 0.0 28.5 28.5 0.0 0.0 0.0 60.2 60.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 84.0 15.6 0.0 0.0 28.5 28.5 0.0 0.0 0.0 60.2 60.2 0.0
LOS by Move: F B A A C C A A A E E A
HCM2k95thQ: 12 34 0 0 46 46 0 0 0 28 28 0

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.881
Loss Time (sec): 10 Average Delay (sec/veh): 32.9
Optimal Cycle: 87 Level Of Service: C

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 0 1

Volume Module:

Base Vol: 183 1131 47 209 1050 573 663 128 29 31 72 44
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 183 1131 47 209 1050 573 663 128 29 31 72 44
Added Vol: 2 10 0 0 60 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 185 1141 47 209 1110 573 663 128 29 31 72 44
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 185 1141 47 209 1110 0 663 128 29 31 72 44
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 185 1141 47 209 1110 0 663 128 29 31 72 44
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 185 1141 47 209 1110 0 663 128 29 31 72 44

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 0.95 1.00 0.96 0.96 0.96 0.99 0.99 0.85
Lanes: 1.00 1.92 0.08 1.00 2.00 1.00 1.68 0.26 0.06 0.30 0.70 1.00
Final Sat.: 1805 3446 142 1805 3610 1900 3050 476 108 563 1308 1615

Capacity Analysis Module:

Vol/Sat: 0.10 0.33 0.33 0.12 0.31 0.00 0.22 0.27 0.27 0.06 0.06 0.03
Crit Moves: ****
Green/Cycle: 0.13 0.38 0.38 0.13 0.38 0.00 0.29 0.31 0.31 0.06 0.07 0.07
Volume/Cap: 0.81 0.88 0.88 0.88 0.81 0.00 0.74 0.88 0.88 0.88 0.74 0.37
Delay/Veh: 52.8 30.4 30.4 63.5 25.8 0.0 28.2 36.2 36.2 85.6 55.3 37.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 52.8 30.4 30.4 63.5 25.8 0.0 28.2 36.2 36.2 85.6 55.3 37.1
LOS by Move: D C C E C A C D D F E D
HCM2k95thQ: 10 28 28 10 22 0 19 26 26 10 8 3

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-680 NB Ramp/Mission Blvd

Cycle (sec): 85 Critical Vol./Cap.(X): 0.910
Loss Time (sec): 10 Average Delay (sec/veh): 38.3
Optimal Cycle: 102 Level Of Service: D

Street Name: Mission Blvd I-680 NB Ramp
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 0 1

Volume Module:

Base Vol: 461 1007 23 186 710 856 709 109 34 39 78 56
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 461 1007 23 186 710 856 709 109 34 39 78 56
Added Vol: 3 23 0 0 45 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 464 1030 23 186 755 856 709 109 34 39 78 56
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 464 1030 23 186 755 0 709 109 34 39 78 56
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 464 1030 23 186 755 0 709 109 34 39 78 56
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 464 1030 23 186 755 0 709 109 34 39 78 56

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.95 0.95 1.00 0.95 0.95 0.95 0.98 0.98 0.85
Lanes: 1.00 1.96 0.04 1.00 2.00 1.00 1.71 0.22 0.07 0.33 0.67 1.00
Final Sat.: 1805 3521 79 1805 3610 1900 3105 397 124 623 1246 1615

Capacity Analysis Module:

Vol/Sat: 0.26 0.29 0.29 0.10 0.21 0.00 0.23 0.27 0.27 0.06 0.06 0.03
Crit Moves: ****
Green/Cycle: 0.28 0.38 0.38 0.13 0.23 0.00 0.29 0.30 0.30 0.07 0.08 0.08
Volume/Cap: 0.91 0.77 0.77 0.77 0.91 0.00 0.79 0.91 0.91 0.91 0.79 0.44
Delay/Veh: 49.8 26.0 26.0 49.9 45.9 0.0 31.6 41.3 41.3 92.1 61.9 39.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 49.8 26.0 26.0 49.9 45.9 0.0 31.6 41.3 41.3 92.1 61.9 39.6
LOS by Move: D C C D D A C D D F E D
HCM2k95thQ: 20 21 21 9 19 0 22 29 29 11 10 4

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report															
2000 HCM Operations Method (Future Volume Alternative)															

Intersection #3 Mission Blvd/Washington Blvd															

Cycle (sec):	100			Critical Vol./Cap.(X):			1.013								
Loss Time (sec):	12			Average Delay (sec/veh):			53.4								
Optimal Cycle:	180			Level Of Service:			D								

Street Name:	Mission Blvd						Washington Blvd								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
----- ----- ----- -----															
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0		
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Lanes:	1	0	1	0	0	0	1	0	1	0	0	0	0		
----- ----- ----- -----															
Volume Module: >> Count Date: 3 Oct 2012 <<															
Base Vol:	201	363	0	0	636	142	248	0	230	0	0	0			
Growth Adj:	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26			
Initial Bse:	253	457	0	0	801	179	312	0	290	0	0	0			
Added Vol:	3	11	0	0	60	0	0	0	16	0	0	0			
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0			
Initial Fut:	256	468	0	0	861	179	312	0	306	0	0	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Volume:	256	468	0	0	861	179	312	0	306	0	0	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	256	468	0	0	861	179	312	0	306	0	0	0			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
FinalVolume:	256	468	0	0	861	179	312	0	306	0	0	0			
----- ----- ----- -----															
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.95	1.00	1.00	1.00	0.98	0.98	0.95	1.00	0.85	1.00	1.00	1.00			
Lanes:	1.00	1.00	0.00	0.00	0.83	0.17	1.00	0.00	1.00	0.00	0.00	0.00			
Final Sat.:	1805	1900	0	0	1537	319	1805	0	1615	0	0	0			
----- ----- ----- -----															
Capacity Analysis Module:															
Vol/Sat:	0.14	0.25	0.00	0.00	0.56	0.56	0.17	0.00	0.19	0.00	0.00	0.00			
Crit Moves:	****			****			****		****						
Green/Cycle:	0.14	0.69	0.00	0.00	0.55	0.55	0.19	0.00	0.19	0.00	0.00	0.00			
Volume/Cap:	1.01	0.36	0.00	0.00	1.01	1.01	0.93	0.00	1.01	0.00	0.00	0.00			
Delay/Veh:	103.0	1.9	0.0	0.0	46.5	46.5	70.7	0.0	95.9	0.0	0.0	0.0			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	103.0	1.9	0.0	0.0	46.5	46.5	70.7	0.0	95.9	0.0	0.0	0.0			
LOS by Move:	F	A	A	A	D	D	E	A	F	A	A	A			
HCM2k95thQ:	18	4	0	0	58	58	24	0	26	0	0	0			

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report												
2000 HCM Operations Method (Future Volume Alternative)												

Intersection #3 Mission Blvd/Washington Blvd												

Cycle (sec):	100			Critical Vol./Cap.(X):			1.141					
Loss Time (sec):	12			Average Delay (sec/veh):			81.9					
Optimal Cycle:	180			Level Of Service:			F					

Street Name:	Mission Blvd						Washington Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	0	0	1	0	0	0	0	0
----- ----- ----- -----												
Volume Module:												
Base Vol:	93	821	0	0	325	84	639	0	65	0	0	0
Growth Adj:	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
Initial Bse:	117	1034	0	0	410	106	805	0	82	0	0	0
Added Vol:	7	26	0	0	45	0	0	0	12	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	124	1060	0	0	455	106	805	0	94	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	124	1060	0	0	455	106	805	0	94	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	1060	0	0	455	106	805	0	94	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	1060	0	0	455	106	805	0	94	0	0	0
----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	1.00	0.97	0.97	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	0.81	0.19	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	1900	0	0	1501	350	1805	0	1615	0	0	0
----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.07	0.56	0.00	0.00	0.30	0.30	0.45	0.00	0.06	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.09	0.49	0.00	0.00	0.40	0.40	0.39	0.00	0.39	0.00	0.00	0.00
Volume/Cap:	0.76	1.14	0.00	0.00	0.76	0.76	1.14	0.00	0.15	0.00	0.00	0.00
Delay/Veh:	62.9	96.5	0.0	0.0	27.9	27.9	110.4	0.0	19.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.9	96.5	0.0	0.0	27.9	27.9	110.4	0.0	19.8	0.0	0.0	0.0
LOS by Move:	E	F	A	A	C	C	F	A	B	A	A	A
HCM2k95thQ:	8	75	0	0	23	23	63	0	4	0	0	0

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.734
Loss Time (sec): 12 Average Delay (sec/veh): 26.6
Optimal Cycle: 64 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module: >> Count Date: 3 Oct 2012 <<
Base Vol: 17 449 122 236 560 48 44 130 38 37 14 56
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 21 566 154 297 706 60 55 164 48 47 18 71
Added Vol: 0 7 33 38 38 0 0 8 0 6 2 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 21 573 187 335 744 60 55 172 48 53 20 78
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 21 573 187 335 744 60 55 172 48 53 20 78
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 21 573 187 335 744 60 55 172 48 53 20 78
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 21 573 187 335 744 60 55 172 48 53 20 78

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.99 0.99 0.91 0.91 0.91 0.85 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.92 0.08 0.20 0.63 0.17 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1738 141 349 1080 301 1619 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.30 0.12 0.19 0.43 0.43 0.16 0.16 0.16 0.03 0.01 0.05
Crit Moves: ****
Green/Cycle: 0.02 0.41 0.41 0.25 0.65 0.65 0.22 0.22 0.22 0.22 0.22 0.22
Volume/Cap: 0.66 0.73 0.28 0.73 0.66 0.66 0.73 0.73 0.73 0.15 0.05 0.22
Delay/Veh: 90.2 28.5 19.9 40.4 12.4 12.4 43.9 43.9 43.9 31.9 31.1 32.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 90.2 28.5 19.9 40.4 12.4 12.4 43.9 43.9 43.9 31.9 31.1 32.6
LOS by Move: F C B D B B D D C C C C
HCM2k95thQ: 1 26 7 16 25 25 18 18 18 3 1 4

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Mission Blvd/Witherly Ln

Cycle (sec): 100 Critical Vol./Cap.(X): 0.720
Loss Time (sec): 12 Average Delay (sec/veh): 21.7
Optimal Cycle: 62 Level Of Service: C

Street Name: Mission Blvd Witherly Ln
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 0 1 0 0 1

Volume Module:
Base Vol: 33 707 46 55 442 15 47 40 33 76 44 116
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 42 891 58 69 557 19 59 50 42 96 55 146
Added Vol: 0 17 25 29 29 0 0 6 0 15 3 17
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 42 908 83 98 586 19 59 56 42 111 58 163
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 42 908 83 98 586 19 59 56 42 111 58 163
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 42 908 83 98 586 19 59 56 42 111 58 163
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 42 908 83 98 586 19 59 56 42 111 58 163

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 1.00 1.00 0.82 0.82 0.82 0.87 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 0.97 0.03 0.38 0.36 0.26 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 1831 59 585 557 411 1659 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.48 0.05 0.05 0.32 0.32 0.10 0.10 0.10 0.07 0.03 0.10
Crit Moves: ****
Green/Cycle: 0.05 0.66 0.66 0.08 0.69 0.69 0.14 0.14 0.14 0.14 0.14 0.14
Volume/Cap: 0.46 0.72 0.08 0.72 0.46 0.46 0.72 0.72 0.72 0.47 0.22 0.72
Delay/Veh: 50.0 12.9 6.0 62.1 7.3 7.3 52.1 52.1 52.1 41.1 38.5 51.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 50.0 12.9 6.0 62.1 7.3 7.3 52.1 52.1 52.1 41.1 38.5 51.7
LOS by Move: D B A E A A D D D D D D
HCM2k95thQ: 3 30 2 6 15 15 12 12 12 7 4 12

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.592
Loss Time (sec): 12 Average Delay (sec/veh): 20.5
Optimal Cycle: 48 Level Of Service: C

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module: >> Count Date: 3 Oct 2012 <<
Base Vol: 36 483 147 96 490 37 54 103 126 39 14 44
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 45 609 185 121 617 47 68 130 159 49 18 55
Added Vol: 0 33 33 38 6 0 0 8 0 6 1 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 45 642 218 159 623 47 68 138 159 55 19 62
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 45 642 218 159 623 47 68 138 159 55 19 62
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 45 642 218 159 623 47 68 138 159 55 19 62
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 45 642 218 159 623 47 68 138 159 55 19 62

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.75 0.87 0.87 0.45 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1429 1661 1661 849 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.03 0.34 0.14 0.09 0.17 0.03 0.05 0.08 0.10 0.06 0.01 0.04
Crit Moves: ****
Green/Cycle: 0.09 0.57 0.57 0.15 0.63 0.63 0.16 0.16 0.16 0.16 0.16 0.16
Volume/Cap: 0.28 0.59 0.24 0.59 0.28 0.05 0.30 0.51 0.59 0.40 0.06 0.24
Delay/Veh: 43.3 14.8 10.8 43.3 8.5 7.2 37.6 39.1 40.8 39.5 35.6 37.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.3 14.8 10.8 43.3 8.5 7.2 37.6 39.1 40.8 39.5 35.6 37.1
LOS by Move: D B B D A A D D D D D D
HCM2k95thQ: 3 23 6 9 9 1 4 9 11 4 1 4

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Mission Blvd/Pine St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.738
Loss Time (sec): 12 Average Delay (sec/veh): 25.5
Optimal Cycle: 65 Level Of Service: C

Street Name: Mission Blvd Anza-Pine Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 2 0 1 1 0 1 1 0 1

Volume Module:
Base Vol: 628 703 118 60 324 26 5 23 38 87 73 90
Growth Adj: 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26 1.26
Initial Bse: 791 886 149 76 408 33 6 29 48 110 92 113
Added Vol: 0 25 25 29 15 0 0 6 0 15 3 17
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 791 911 174 105 423 33 6 35 48 125 95 130
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 791 911 174 105 423 33 6 35 48 125 95 130
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 791 911 174 105 423 33 6 35 48 125 95 130
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 791 911 174 105 423 33 6 35 48 125 95 130

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 0.85 0.95 0.95 0.85 0.63 0.87 0.87 0.70 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1805 1900 1615 1805 3610 1615 1193 1648 1648 1334 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.44 0.48 0.11 0.06 0.12 0.02 0.01 0.02 0.03 0.09 0.05 0.08
Crit Moves: ****
Green/Cycle: 0.59 0.67 0.67 0.08 0.16 0.16 0.13 0.13 0.13 0.13 0.13 0.13
Volume/Cap: 0.74 0.71 0.16 0.71 0.74 0.13 0.04 0.17 0.23 0.74 0.39 0.64
Delay/Veh: 17.4 12.3 6.1 60.1 45.1 36.3 38.5 39.1 39.6 57.7 41.2 48.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 17.4 12.3 6.1 60.1 45.1 36.3 38.5 39.1 39.6 57.7 41.2 48.0
LOS by Move: B B A E D D D D D D D
HCM2k95thQ: 30 30 4 7 13 2 0 2 3 10 6 10

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.530
Loss Time (sec): 16 Average Delay (sec/veh): 20.7
Optimal Cycle: 51 Level Of Service: C

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module:

Base Vol:	17	321	13	18	702	117	118	26	63	44	43	25
Growth Adj:	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
Initial Bse:	21	404	16	23	885	147	149	33	79	55	54	32
Added Vol:	0	19	0	0	4	9	48	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	423	16	23	889	156	197	33	79	55	54	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	423	16	23	889	156	197	33	79	55	54	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	423	16	23	889	156	197	33	79	55	54	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	423	16	23	889	156	197	33	79	55	54	32

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.89	0.89	0.95	1.00	0.85
Lanes:	1.00	1.93	0.07	1.00	1.70	0.30	1.00	0.29	0.71	1.00	1.00	1.00
Final Sat.:	1805	3455	134	1805	3002	529	1805	496	1202	1805	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.12	0.12	0.01	0.30	0.30	0.11	0.07	0.07	0.03	0.03	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.02	0.53	0.53	0.05	0.56	0.56	0.21	0.18	0.18	0.08	0.05	0.05
Volume/Cap:	0.53	0.23	0.23	0.23	0.53	0.53	0.53	0.37	0.37	0.37	0.53	0.36
Delay/Veh:	61.1	12.8	12.8	46.5	14.1	14.1	36.9	37.0	37.0	45.0	51.3	48.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.1	12.8	12.8	46.5	14.1	14.1	36.9	37.0	37.0	45.0	51.3	48.2
LOS by Move:	E	B	B	D	B	B	D	D	D	D	D	D
HCM2k95thQ:	3	7	7	1	19	19	11	7	7	4	5	3

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Mission Blvd/Durham Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 16 Average Delay (sec/veh): 23.0
Optimal Cycle: 74 Level Of Service: C

Street Name: Mission Blvd Durham Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module:

Base Vol:	216	1302	31	26	271	150	119	51	19	15	29	25
Growth Adj:	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
Initial Bse:	272	1641	39	33	341	189	150	64	24	19	37	32
Added Vol:	0	14	0	0	8	21	36	0	0	0	0	0
Approved Tr:	0	11	0	0	7	0	0	0	0	0	0	0
Initial Fut:	272	1666	39	33	356	210	186	64	24	19	37	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	272	1666	39	33	356	210	186	64	24	19	37	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	272	1666	39	33	356	210	186	64	24	19	37	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	272	1666	39	33	356	210	186	64	24	19	37	32

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.90	0.90	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	1.95	0.05	1.00	1.26	0.74	1.00	0.73	0.27	1.00	1.00	1.00
Final Sat.:	1805	3517	82	1805	2144	1263	1805	1328	495	1805	1900	1615

Capacity Analysis Module:

Vol/Sat:	0.15	0.47	0.47	0.02	0.17	0.17	0.10	0.05	0.05	0.01	0.02	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.32	0.65	0.65	0.02	0.35	0.35	0.14	0.14	0.14	0.03	0.03	0.03
Volume/Cap:	0.47	0.73	0.73	0.73	0.47	0.47	0.73	0.35	0.35	0.35	0.73	0.74
Delay/Veh:	27.8	13.0	13.0	94.5	25.4	25.4	51.5	39.9	39.9	51.5	90.6	98.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.8	13.0	13.0	94.5	25.4	25.4	51.5	39.9	39.9	51.5	90.6	98.9
LOS by Move:	C	B	B	F	C	C	D	D	D	D	F	F
HCM2k95thQ:	13	33	33	2	13	13	14	6	6	2	5	5

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 90 Critical Vol./Cap.(X): 0.712
Loss Time (sec): 8 Average Delay (sec/veh): 19.2
Optimal Cycle: 49 Level Of Service: B

Street Name:		I-680 NB Ramp			Durham Rd								
Approach:		North Bound			South Bound			East Bound			West Bound		
Movement:		L	T	R	L	T	R	L	T	R	L	T	R
Control:		Protected			Protected			Protected			Protected		
Rights:		Include			Include			Ignore			Include		
Min. Green:		0	0	0	0	0	0	0	0	0	0	0	0
Y+R:		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:		2	0	0	1	0	1	0	1	1	0	1	1

Volume Module:

Base Vol:	1718	4	31	9	7	75	7	193	565	77	196	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1718	4	31	9	7	75	7	193	565	77	196	6
Added Vol:	0	0	0	0	0	0	0	55	0	0	11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1718	4	31	9	7	75	7	248	565	77	207	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	1718	4	31	9	7	75	7	248	0	77	207	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1718	4	31	9	7	75	7	248	0	77	207	6
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	1718	4	31	9	7	75	7	248	0	77	207	6

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.87	0.87	0.95	1.00	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	2.00	0.11	0.89	1.00	1.00	1.00	1.00	2.00	0.00	1.00	1.94	0.06
Final Sat.:	3502	188	1459	1805	1900	1615	1805	3610	0	1805	3494	101

Capacity Analysis Module:

Vol/Sat:	0.49	0.02	0.02	0.00	0.00	0.05	0.00	0.07	0.00	0.04	0.06	0.06
Crit Moves:	****			****		****				****		
Green/Cycle:	0.69	0.61	0.61	0.14	0.07	0.07	0.01	0.10	0.00	0.06	0.15	0.15
Volume/Cap:	0.71	0.03	0.03	0.03	0.06	0.71	0.40	0.71	0.00	0.71	0.40	0.40
Delay/Veh:	9.5	7.0	7.0	33.2	39.7	61.5	58.9	46.2	0.0	61.4	35.3	35.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.5	7.0	7.0	33.2	39.7	61.5	58.9	46.2	0.0	61.4	35.3	35.3
LOS by Move:	A	A	A	C	D	E	E	D	A	E	D	D
HCM2k95thQ:	28	1	1	0	0	7	0	7	0	7	6	6

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 I-680 NB Ramp/Durham Rd

Cycle (sec): 55 Critical Vol./Cap.(X): 0.493
Loss Time (sec): 8 Average Delay (sec/veh): 13.6
Optimal Cycle: 30 Level Of Service: B

Street Name:		I-680 NB Ramp			Durham Rd								
Approach:		North Bound			South Bound			East Bound			West Bound		
Movement:		L	T	R	L	T	R	L	T	R	L	T	R
Control:		Protected			Protected			Protected			Protected		
Rights:		Include			Include			Ignore			Include		
Min. Green:		0	0	0	0	0	0	0	0	0	0	0	0
Y+R:		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:		2	0	0	1	0	1	0	1	1	0	1	1

Volume Module:

Base Vol:	915	25	66	2	7	49	39	379	1944	23	256	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	915	25	66	2	7	49	39	379	1944	23	256	5
Added Vol:	0	0	0	0	0	0	0	42	0	0	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	915	25	66	2	7	49	39	421	1944	23	280	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	915	25	66	2	7	49	39	421	0	23	280	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	915	25	66	2	7	49	39	421	0	23	280	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	915	25	66	2	7	49	39	421	0	23	280	5

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	1.00	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	2.00	0.27	0.73	1.00	1.00	1.00	1.00	2.00	0.00	1.00	1.96	0.04
Final Sat.:	3502	465	1228	1805	1900	1615	1805	3610	0	1805	3536	63

Capacity Analysis Module:

Vol/Sat:	0.26	0.05	0.05	0.00	0.00	0.03	0.02	0.12	0.00	0.01	0.08	0.08
Crit Moves:	****			****		****				****		
Green/Cycle:	0.53	0.58	0.58	0.01	0.06	0.06	0.06	0.24	0.00	0.03	0.21	0.21
Volume/Cap:	0.49	0.09	0.09	0.09	0.06	0.49	0.38	0.49	0.00	0.49	0.38	0.38
Delay/Veh:	8.4	5.2	5.2	28.7	24.5	28.8	27.4	18.6	0.0	34.4	19.1	19.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.4	5.2	5.2	28.7	24.5	28.8	27.4	18.6	0.0	34.4	19.1	19.1
LOS by Move:	A	A	A	C	C	C	C	B	A	C	B	B
HCM2k95thQ:	11	1	1	0	0	3	1	6	0	2	5	5

AM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report																
2000 HCM Operations Method (Future Volume Alternative)																

Intersection #8 I-680 SB Ramp/Durham Rd																

Cycle (sec):	110				Critical Vol./Cap.(X):		0.999									
Loss Time (sec):	10				Average Delay (sec/veh):		42.5									
Optimal Cycle:	180				Level of Service:		D									

Street Name:	I-680 SB Ramp				Auto Mall Pkwy											
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
----- ----- ----- -----																
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	0	0	1	0	0	0	0	0	1	1	1	1	0	
----- ----- ----- -----																
Volume Module:																
Base Vol:	1111	0	33	0	0	0	0	716	1714	112	2004	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	1111	0	33	0	0	0	0	716	1714	112	2004	0				
Added Vol:	0	0	0	0	0	0	0	55	0	0	11	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	1111	0	33	0	0	0	0	771	1714	112	2015	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	1111	0	33	0	0	0	0	771	1714	112	2015	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	1111	0	33	0	0	0	0	771	1714	112	2015	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	1111	0	33	0	0	0	0	771	1714	112	2015	0				
----- ----- ----- -----																
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.85	0.85	0.95	0.95	1.00				
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	2.00	1.00	2.00	0.00				
Final Sat.:	3502	0	1615	0	0	0	0	1619	3238	1805	3610	0				
----- ----- ----- -----																
Capacity Analysis Module:																
Vol/Sat:	0.32	0.00	0.02	0.00	0.00	0.00	0.00	0.48	0.53	0.06	0.56	0.00				
Crit Moves:	****								****	****						
Green/Cycle:	0.32	0.00	0.32	0.00	0.00	0.00	0.00	0.53	0.53	0.06	0.59	0.00				
Volume/Cap:	1.00	0.00	0.06	0.00	0.00	0.00	0.00	0.90	1.00	1.00	0.94	0.00				
Delay/Veh:	64.4	0.0	26.2	0.0	0.0	0.0	0.0	27.7	43.8	136.4	30.1	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	64.4	0.0	26.2	0.0	0.0	0.0	0.0	27.7	43.8	136.4	30.1	0.0				
LOS by Move:	E	A	C	A	A	A	A	C	D	F	C	A				
HCM2k95thQ:	43	0	2	0	0	0	0	46	60	10	58	0				

PM Peak Hour - Cumulative plus Project Conditions
Fremont Ohlone Community College DEIR
City of Fremont

Level Of Service Computation Report													
2000 HCM Operations Method (Future Volume Alternative)													

Intersection #8 I-680 SB Ramp/Durham Rd													

Cycle (sec):	130	Critical Vol./Cap.(X):						1.284					
Loss Time (sec):	10	Average Delay (sec/veh):						132.6					
Optimal Cycle:	180	Level Of Service:						F					

Street Name:	I-680 SB Ramp						Auto Mall Pkwy						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
----- ----- ----- -----													
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	0	0	1	0	0	0	0	1	0	0	
----- ----- ----- -----													
Volume Module:													
Base Vol:	1284	0	42	0	0	0	0	2382	1599	51	1321	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	1284	0	42	0	0	0	0	2382	1599	51	1321	0	
Added Vol:	0	0	0	0	0	0	0	42	0	0	24	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	1284	0	42	0	0	0	0	2424	1599	51	1345	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	1284	0	42	0	0	0	0	2424	1599	51	1345	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	1284	0	42	0	0	0	0	2424	1599	51	1345	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	1284	0	42	0	0	0	0	2424	1599	51	1345	0	
----- ----- ----- -----													
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	1.00	0.85	1.00	1.00	1.00	1.00	0.89	0.89	0.95	0.95	1.00	
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	1.81	1.19	1.00	2.00	0.00	
Final Sat.:	3502	0	1615	0	0	0	0	3067	2023	1805	3610	0	
----- ----- ----- -----													
Capacity Analysis Module:													
Vol/Sat:	0.37	0.00	0.03	0.00	0.00	0.00	0.00	0.79	0.79	0.03	0.37	0.00	
Crit Moves:	****							****					
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.62	0.62	0.02	0.64	0.00	
Volume/Cap:	1.28	0.00	0.09	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.58	0.00	
Delay/Veh:	181.9	0.0	34.1	0.0	0.0	0.0	0.0	155	155.4	301.5	14.0	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	181.9	0.0	34.1	0.0	0.0	0.0	0.0	155	155.4	301.5	14.0	0.0	
LOS by Move:	F	A	C	A	A	A	A	F	F	F	B	A	
HCM2k95thQ:	71	0	2	0	0	0	0	141	141	7	28	0	

**Freeway Segments Analysis
Ohlone Community College 2023 DFMP**

AM Peak Hour

						Volumes/Capacity Ratio (v/c)		
	Cumulative Volume	Number of Lanes		Cumulative Capacity (GP = 2000; HOV = 1400)	Project Added Volume	Cumulative	Cumulative + Project	Change in v/c
I-680 from Mission Boulevard (SR 262) to Scott Creek Road								
NB	6,585	4	1	9,400	11	0.701	0.702	0.001
SB	12,591	4	1	9,400	2	1.339	1.340	0.000
I-680 from Vargas Road to Mission Boulevard								
NB	5,547	4	1	9,400	2	0.590	0.590	0.000
SB	12,254	4	1	9,400	8	1.304	1.304	0.001

**Freeway Segments Analysis
Ohlone Community College 2023 DFMP**

PM Peak Hour

						Volumes/Capacity Ratio (v/c)		
	Cumulative Volume	Number of Lanes		Cumulative Capacity (GP = 2000; HOV = 1400)	Project Added Volume	Cumulative	Cumulative + Project	Change in v/c
I-680 from Mission Boulevard (SR 262) to Scott Creek Road								
NB	11,681	4	1	9,400	9	1.243	1.244	0.001
SB	6,889	4	1	9,400	5	0.733	0.733	0.001
I-680 from Vargas Road to Mission Boulevard								
NB	12,160	4	1	9,400	3	1.294	1.294	0.000
SB	5,423	4	1	9,400	6	0.577	0.578	0.001

Arterial Segmnet Analysis Calculations
Ohlone Community College 2023 DFMP

AM Peak Hour

	2035 GP Cumulative Volume	Speed	Arterial Class	Cumulative Capacity (800 vphpl)	Project Added Volume	Cumulative V/C	LOS	Cumulative plus Project V/C	Change in v/c
Mission Boulevard (SR 238) from Stevenson Blvd to I-680 NB Ramp SB	2253	15	I	1,600	52	1.408	E	1.441	0.033

**Arterial Segmnet Analysis Calculations
Ohlone Community College 2023 DFMP**

PM Peak Hour

	2035 GP Cumulative Volume	Speed	Arterial Class	Cumulative Capacity (800 vphpl)	Project Added Volume	Cumulative V/C	LOS	Cumulative plus Project V/C	Change in v/c
Mission Boulevard (SR 238) from Stevenson Blvd to I-680 NB Ramp									
SB	2284	14	I	1,600	39	1.428	E	1.452	0.024