PUBLIC REVIEW DRAFT

EASTSHORE PARK PROJECT GENERAL PLAN ENVIRONMENTAL IMPACT REPORT

TECHNICAL APPENDICES

STATE CLEARINGHOUSE # 2002022051

July 2002

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Gray Davis
Governor

Mary D. Nichols
Secretary for Resources

Ruth Coleman
Acting Director of Parks and Recreation
P.O.Box 942896
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Coastal Conservancy

July 2002

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NOTICE OF PREPARATION, INITIAL STUDY, AND WRITTEN COMMENTS

APPENDIX A-1

NOTICE OF PREPARATION

Notice of Preparation of Draft Environmental Impact Report for the Eastshore Park Project General Plan

TO: INTERESTED PERSONS AND AGENCIES

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report for the Eastshore Park Project General Plan

Lead Agency:
CA Dept. of Parks and Recreation
Ronald Schaefer
Dist. Superintendent, Bay Area District
250 Executive Park Boulevard
Suite 4900
San Francisco, CA 94134
Fax: (415) 330-6312

Applicant:
East Bay Regional Park District
Larry Tong
Interagency Planning Manager
P.O. Box 5381
Oakland, CA 94605
Fax: (510) 569-1417

Consultant:
LSA Associates, Inc.
David Clore
Principal-in-Charge
2215 Fifth Street
Berkeley, CA 94710
Fax: (510) 751-7344

The California Department of Parks and Recreation (State Parks), as represented by the East Bay Regional Park District (EBRPD), will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Eastshore Park Project General Plan, as described below. The EBRPD has decided to prepare an EIR in compliance with the California Environmental Quality Act (CEQA). EBRPD needs to know the views of your agency as to the scope and content of this environmental analysis that is germane to your agency's statutory responsibilities in connection with the proposed project. The project description, location, and preliminary EIR scope are included with this notice.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but ***no later than 5 p.m. on March 17, 2002***, 30 days after this Notice of Preparation is posted with the State Clearinghouse in the Office of Planning and Research. Comments on the proposed scope of the EIR may be sent by mail, email, or fax to LSA (see address below), or comments may be submitted at the scoping meeting scheduled for February 27, 2002 at 4:00 p.m. at Hs. Lordship's Restaurant, 199 Seawell Drive, Berkeley Marina.

Eastshore Park Project General Plan EIR Contact Person

Judith Malamut, LSA Associates, Inc. 2215 Fifth Street, Berkeley CA 94705
Fax: (510) 540-7344
Email: judith.malamut@lsa-assoc.com

Project Title: Eastshore Park Project General Plan

Project Location: The project site occupies approximately 8.5 miles of the eastern San Francisco Bay shoreline extending from the Bay Bridge in Oakland north to the Marina Bay neighborhood in Richmond. The park would be located within five cities (Oakland, Emeryville, Berkeley, Albany, and Richmond) and two counties (Alameda and Contra Costa). The site is accessible from I-80 and various local roads.

Project Description: The Eastshore Park Project General Plan (also referred to as California State Parks – Eastshore Project) is a long-range master plan for a new State park unit along the eastern shore of San Francisco Bay. The project includes approximately eight and half miles of shoreline, extending from the Oakland Bay Bridge north to the Marina Bay neighborhood in Richmond. The site consists of approximately 1,800 acres along the waterfronts of Oakland, Emeryville, Berkeley, Albany, and Richmond. Of this area, approximately 185 acres are upland, and the remainder (1,615 acres) is tidelands.

The General Plan proposes to protect and enhance the area's natural values while improving public access to the shoreline and creating new opportunities for public recreation. The Plan proposes three general land use designations: natural preserves, conservation areas, and recreation areas. Natural preserves are those areas with unique or fragile habitat values that need to be protected and preserved. The Emeryville Crescent, Albany Mudflats, and Hoffman Marsh are identified as preserves. Public access in these areas will be restricted to safety, scientific, and maintenance activities. Conservation areas are areas whose natural habitat values will be protected and enhanced while accommodating lower intensity recreation that is compatible with and dependent on those values. The Berkeley Meadow and Albany Bulb are examples of designated conservation areas. Proposed environmental enhancements to the conservation areas will include activities such as creek daylighting, wetlands enhancement, uplands revegetation, removal of exotic species, and debris removal. Recreation areas are those areas of the park designated for more intensive recreation. These areas are characterized as having limited habitat value, and sufficient size to support the necessary parking, utilities, and infrastructure needed to support recreational uses. Areas designated for recreation include portions of the Brickyard, the North Basin Strip, the Albany Plateau, Pt. Isabel and North Pt. Isabel. Recreation facilities proposed for these areas include interpretive facilities, visitor-serving and operations facilities, enhanced water access points, turf areas, picnic facilities, off-leash dog areas, sports fields, public art, parking lots, restrooms, and commercial recreation-oriented concessions.

Access to the shoreline will be provided via several modes of travel, including walking, biking, bus, car, and potentially, boat. The San Francisco Bay Trail, which extends the length of the park, will provide a primary means of shoreline access for bicyclists and pedestrians. Interstate 80 (I-80) will provide the primary regional access to the project area with six interchanges serving the site. Additionally, AC Transit provides bus service to the area.

Scope of EIR: The EIR will evaluate each of the environmental topics that were developed according to recommendations in CEQA Guidelines, input from the lead agency and the consultant team, and the results of an Initial Study Environmental Checklist that was prepared for the project. The topics to be evaluated in the EIR include: Land Use; Hydrology and Storm Drainage; Geology, Soils and Seismicity; Transportation, Circulation and Parking; Air Quality; Noise; Biological Resources; Hazards; Public Services; Utilities; Cultural Resources; and Aesthetics.

Judith H. Malamut

Judith H. Malamut, EIR Project Manager, LSA Associates, Inc.
February 14, 2002

APPENDIX A-2

INITIAL STUDY

INITIAL STUDY
ENVIRONMENTAL CHECKLIST
EASTSHORE PARK PROJECT GENERAL PLAN

A. SUMMARY INFORMATION

1. Project Title:

Eastshore Park Project General Plan

2. Lead Agency Name and Address:

California Department of Parks and Recreation
250 Executive Park Boulevard, Suite 4900
San Francisco, CA 94134

3. Contact Person and Phone Number:

Judith Malamut, Associate, EIR Project Manager, LSA Associates Inc.
(510) 540-7331

4. Project Location:

The project site occupies approximately 8.5 miles of the eastern San Francisco Bay shoreline extending from the Bay Bridge in Oakland north to the Marina Bay neighborhood in Richmond. The park would be located within five cities (Oakland, Emeryville, Berkeley, Albany, and Richmond) and two counties (Alameda and Contra Costa). The site is accessible from Interstate-80 (I-80) and various local roads, see attached Figure I-6, Project Site Features.

5. Project Sponsor's Name and Address:

Larry Tong
Interagency Planning Manager
East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605

6. General Plan Designation:

See maps L-2, L-3, L-4 of the *Eastshore Park Project Resource Inventory* ("Resource Inventory") revised September 2001, and incorporated herein by reference.

The Resource Inventory is available on the Eastshore Park Project website (www.eastshorestatepark.org).

7. Zoning:

See pages L-8 to L-16 of the Resource Inventory .

8. Description of Project:

See Project Description below, in Section B.

9. Surrounding Land Uses and Setting:

The project site is generally bordered by I-80 to the east and San Francisco Bay to the west. Land uses to the east of I-80 and north and south of the project site range from residential, commercial, and industrial areas to undeveloped land, bridges, and wetlands.

10. Other Agencies Whose Approval Is Required (e.g., Permits, Financing Approval, or Participation Agreement):

- Regional Water Quality Control Board
- Bay Conservation and Development Commission
- California Department of Fish and Game
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- California State Lands Commission
- National Marine Fisheries Service

B. PROJECT DESCRIPTION

The Eastshore Park Project General Plan (also referred to as California State Parks – Eastshore Project) is a long-range master plan for a new State park unit along the eastern shore of San Francisco Bay. The project includes approximately 8.5 miles of shoreline, extending from the Oakland Bay Bridge north to the Marina Bay neighborhood in Richmond. The site consists of approximately 1,800 acres along the waterfronts of Oakland, Emeryville, Berkeley, Albany, and Richmond. Of this area, approximately 185 acres are upland, and the remainder (1,615 acres) is tidelands. The tideland areas include rich habitat areas such as the Emeryville Crescent, Albany Mudflats, and Hoffman Marsh, as well as areas of more open Bay waters. The upland area, most which was created by past landfill practices, includes extensive areas covered with construction debris and miscellaneous fill material. Over the years, less disturbed upland areas have been colonized by a mixture of native and exotic species that now provide some environmental values.

The General Plan proposes to protect and enhance the area's natural values while improving public access to the shoreline and creating new opportunities for public recreation. The Plan proposes three general land use designations: natural preserves, conservation areas, and recreation areas.

Natural preserves are those areas with unique or fragile habitat values that need to be protected and preserved. The Emeryville Crescent, Albany Mudflats, and Hoffman Marsh are identified as preserves. Public access in these areas will be restricted to safety, scientific, and maintenance activities.

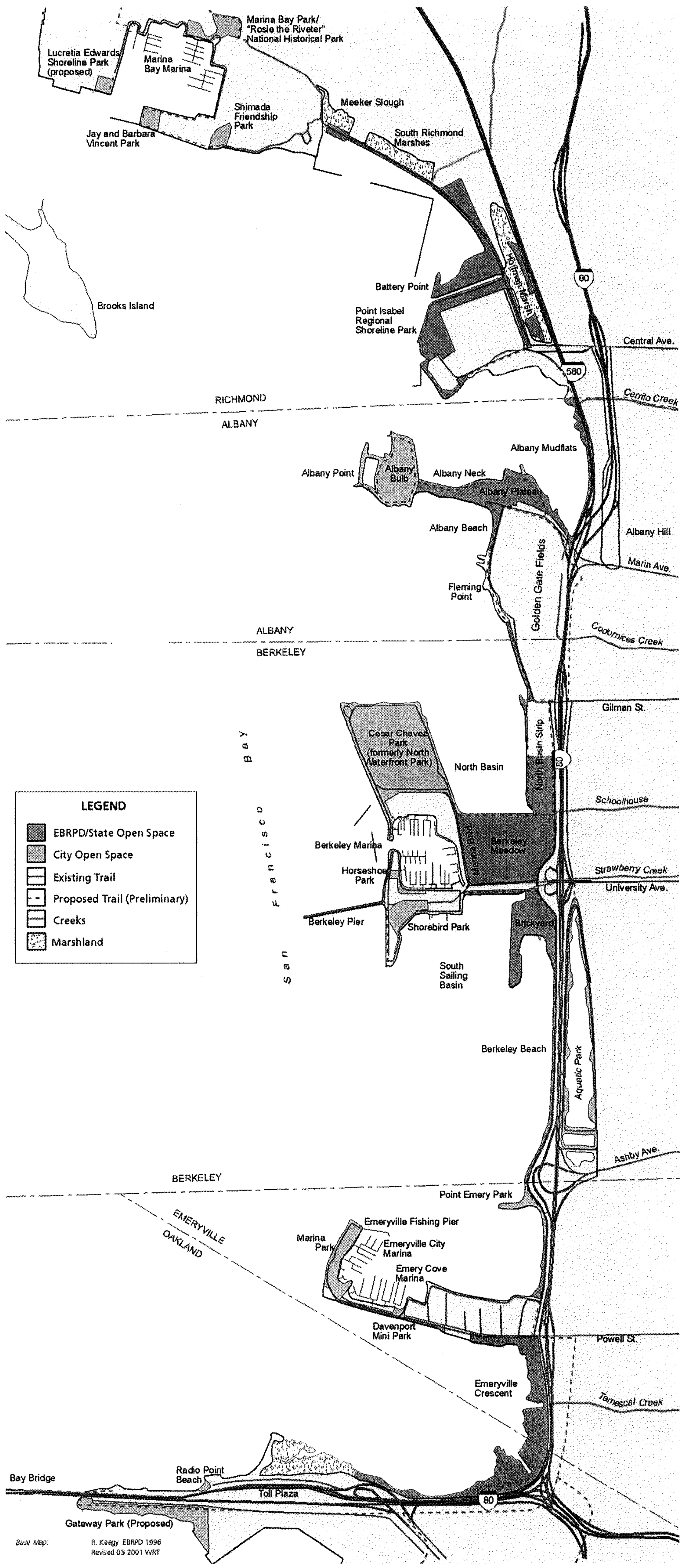
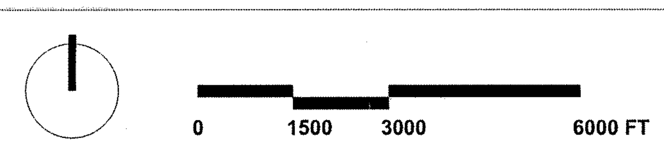


FIGURE
I-6
PROJECT SITE FEATURES

Prepared by LSA Associates, Inc.



Conservation areas are areas whose natural habitat values will be protected and enhanced while accommodating lower intensity recreation that is compatible with and dependent on those values. The Berkeley Meadow and Albany Bulb are examples of designated conservation areas. Proposed environmental enhancements to the conservation areas will include activities such as creek daylighting, wetlands enhancement, uplands revegetation, removal of exotic species, and debris removal.

Recreation areas are those areas of the park designated for more intensive recreation. These areas are characterized as having limited habitat value, and sufficient size to support the necessary parking, utilities, and infrastructure needed to support recreational uses. Areas designated for recreation include portions of the Brickyard, the North Basin Strip, the Albany Plateau, Pt. Isabel and North Pt. Isabel. Recreation facilities proposed for these areas include interpretive facilities, visitor-serving and operations facilities, enhanced water access points, turf areas, picnic facilities, off-leash dog areas, sports fields, public art, parking lots, restrooms, and commercial recreation-oriented concessions.

Access to the shoreline will be provided via several modes of travel, including walking, biking, bus, car, and potentially, boat. The San Francisco Bay Trail, which extends the length of the park, will provide a primary means of shoreline access for bicyclists and pedestrians. Interstate 80 (I-80) will provide the primary regional access to the project area with six interchanges serving the site. Additionally, AC Transit provides bus service to the area.

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agricultural Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☒ Hazards & Hazardous Materials	☒ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population/Housing
☒ Public Services	☐ Recreation	☒ Transportation/Traffic
☐ Utilities/Service Systems	☒ Mandatory Findings of Significance	

Determination. (To be completed by the Lead Agency.)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD 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 by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Judith H. Malamut, LSA Associates, Inc.	Date For: Ronald Schaefer, California Department of Parks and Recreation

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

a) Have a substantial adverse effect on a scenic vista?

The project site's significant visual resources are panoramic views and scenic vistas of the San Francisco Bay and San Francisco city skyline to the west, and the Richmond/Berkeley/Oakland hills to the east. Some buildings would be constructed as a result of implementation of the General Plan, but these buildings (e.g., headquarters, visitor center, restrooms) would be low and sited so as not to obstruct important scenic viewpoints. By developing land into park space and restoring natural habitats, the General Plan would enhance pre-existing scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no scenic highways in the vicinity of the project site. Implementation of the General Plan would not substantially damage scenic resources. Development of a park along the San Francisco Bay waterfront that protects and enhances the area's natural values while improving public access to the shoreline would enhance the area's scenic resources.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

The visual quality and character of the project site is diverse, ranging from wetlands to degraded industrial areas. The General Plan, by developing a planned park incorporating open space, recreational areas, and restored natural communities, would benefit the existing visual character and quality of the site and its surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Buildout of the General Plan could include the installation of safety or recreational lighting, and could potentially create new sources of light or glare which could adversely affect day or nighttime views in the area. This impact could be reduced to a less-than-significant level through implementation of standard mitigation measures.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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 a non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

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 a non-agricultural use?

No agricultural resources are located on or near the project site, which currently contains predominantly industrial and resource conservation uses. Therefore, implementation of the General Plan would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to a non-agricultural use.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Because neither the project site nor the surrounding area is zoned for agricultural use, the project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use?

Because the proposed project would occur entirely within an urban setting and would involve the redevelopment of infill land into parkland, it would not result in the conversion of farmland into other uses.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. 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?	☐	☒	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
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)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☒	☐	☐

a) Conflict with or obstruct implementation of the applicable air quality plan?

The air pollution potential in the Bay Area is lowest for the parts of the subregion that are closest to the Bay, due largely to the presence of good ventilation and less influx of pollutants from upwind sources. Nevertheless, implementation of the General Plan could result in increased visitation and an associated increase in the number of car trips to the project site as well as emissions and particulates related to construction activities. Therefore, implementation of the project could potentially conflict with or obstruct implementation of the BAAQMD Clean Air Plan. This issue will be evaluated in the EIR; however, standard mitigation measures are available to reduce this impact to a less-than-significant level.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Implementation of the General Plan, which could increase visitation and the number of car trips to the project site, could potentially violate air quality standards established by the State and federal governments, or contribute to an existing or projected air quality violation. This issue will be evaluated in the EIR.

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)?

Currently, the Bay Area is classified as non-attainment for ozone standards by the EPA. Buildout of the General Plan, which could increase the number of car trips to the area, could potentially contribute to this non-attainment status for ozone. This issue will be evaluated in the EIR.

d) Expose sensitive receptors to substantial pollutant concentrations?

Implementation of the General Plan could result in higher levels of pollutant emissions in the area and could potentially expose sensitive receptors, such as schools and hospitals, to air quality pollutants. The location of any sensitive receptors and the level of pollutants associated with the project will be evaluated in the EIR. However, few sensitive receptors are expected to be identified in the area and the pollutant concentrations associated with the project are not expected to be substantial.

e) Create objectionable odors affecting a substantial number of people?

Implementation of the General Plan, which could involve the dredging or removal of hydric soils, could potentially result in objectionable odors. This issue will be evaluated in the EIR; however, odors associated with dredging hydric soils are temporary and standard mitigation measures are available to reduce this impact to a less-than-significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. 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?	☐	☒	☐	☐
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 U.S. Fish and Wildlife Service?	☐	☒	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

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?

Plant and animal species that are identified as candidate, sensitive, or special status species have been found in and around the project site. Although the General Plan proposes to improve wildlife habitat through the restoration of natural communities on the project site, buildout of the General Plan could potentially result in adverse impacts to protected species. This issue will be evaluated in the EIR; however, mitigation measures are available to reduce this impact to a less-than-significant level.

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 U.S. Fish and Wildlife Service?

Sensitive natural communities such as eelgrass beds, coastal salt marshes, and sandy beaches are located within the project site. Buildout of the General Plan could potentially impact these communities, some of which are protected by State and regional agencies. This issue will be evaluated in the EIR; however, standard mitigation measures are available to reduce this impact to a less-than-significant level.

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?

Federally-protected wetlands exist on the project site. Implementation of the General Plan (which proposes the development of a park incorporating recreational, open space, and natural habitat uses) could potentially impact these resources. This issue will be evaluated in the EIR; however, mitigation measures are available to reduce this impact to a less-than-significant level.

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?

Implementation of the General Plan, which proposes a park with recreational, open space, and habitat preservation and restoration uses, could affect the movement of native resident or migratory fish or wildlife species. However, the project would not interfere substantially with or impede the use of migratory wildlife corridors or a native wildlife nursery site. Biological resources at the project site have been identified in the Resource Inventory, and any migratory corridors and nursery sites have been identified as "natural preserve" areas that would be protected and preserved. Any access in these areas would be restricted to safety, scientific and maintenance activities. Therefore, the project would have less-then-significant impacts to these resource and habitat areas.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Buildout of the General Plan, which would result in the creation of a park along the San Francisco Bay shoreline, would be consistent with local policies and ordinances protecting biological resources. The project proposes to protect and preserve unique and fragile habitat areas and enhance degraded natural areas. See response to IV.d.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?

No approved local, regional, or State habitat conservation plans apply to the project area. Therefore, implementation of the General Plan would not conflict with the provisions of habitat conservation plans.

	Potentially Significant Impact	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

There are several locations within the project site or within a half-mile radius of the site that contain historical or archaeological resources. These resources include historic piers, a landing used during the early European settlement of the area, sections of the Bay Bridge, and shell mounds. Because of the project site's location near San Francisco Bay, the locus of a wide range of historical activity, it has a relatively high potential to contain additional undiscovered cultural resources. Cultural resources within the project site have been studied in the Resource Inventory. Groundbreaking activities associated with implementation of the project could affect historical and archaeological resources. Mitigation measures are available to reduce impacts to cultural resources that are discovered during construction to a less-than-significant level.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

No known or recorded prehistoric sites are located within the project site. However, because of settlement patterns, there is the possibility that prehistoric archaeological deposits are buried below bay mud, fill, and alluvial overburden throughout the study area. As bay levels rose approximately 3,000 years ago, it is probable that bay shore prehistoric sites were inundated. Groundbreaking activities associated with implementation of the project could affect archaeological resources. Mitigation measures are available to reduce impacts to cultural resources that are discovered during construction to a less-than-significant level. See explanation V.a.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No known unique geologic or paleontological resources are located in or around the project site. However, there is a potential for paleontological resources to occur within the site. Buildout of the General Plan could potentially result in a significant impact to these resources unless mitigation measures are incorporated.

d) Disturb any human remains, including those interred outside of formal cemeteries?

No human remains are expected to be found within the project site; however, prehistoric burial mounds are located in the vicinity of the project area. Buildout of the project would not disturb known burial mounds. Mitigation measures are available to reduce potential impacts to less-than-significant levels if human remains are discovered as a result of groundbreaking activities associated with construction of the project.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. 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.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐

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; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides?

i) The project site is not within an Alquist-Priolo Special Studies Zone as designated by the State of California. There are no active or potentially active faults that are known to cross the project site. Therefore, the potential for fault surface rupture at the site is remote.

ii) Because the project site is underlain by Bay Mud, ground shaking would be more intense at the site than at nearby areas underlain by bedrock. Buildout of the General Plan could potentially expose people and structures to strong seismic ground shaking unless mitigation measures are incorporated.

iii) Ground failure hazards of potential concern at the project site include liquefaction, earthquake-induced settlement, and lurching. Liquefaction susceptibility maps of the San Francisco Bay Area show that the entire upland portion of the site may have very high liquefaction susceptibility, depending on the type of material and placement methods used to create the landfill. Because the site is underlain by Bay Mud, the area is also susceptible to lurching and settlement. Buildout of the Master Plan could potentially expose people and structures to adverse effects, due to the potential for ground failure on the site, unless mitigation measures are implemented.

iv) The majority of the project site is flat and not susceptible to landslides. Therefore, implementation of the General Plan would not expose people or structures to damage due to landslides.

b) Result in substantial soil erosion or the loss of topsoil?

Buildout of the General Plan, which would result in the development of a large park along the shoreline of San Francisco Bay, would not result in substantial soil erosion or the loss of topsoil because the upland portion of the site is generally flat and composed primarily of past landfills.

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 landslides, lateral spreading, subsidence, liquefaction or collapse?

Much of the project site is underlain by soft and compressible marsh and soft bay deposits that could potentially be unstable. Impacts to buildings and people could result from implementation of the project due to the presence of unstable soil. This issue will be studied in the EIR; mitigation measures are available to reduce potential impacts to a less-than-significant level.

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?

The project site is potentially located on expansive soils. Buildout of the General Plan could result in a exposure of people and structures to hazards due to the presence of expansive soils. This issue will be studied in the EIR, and mitigation measures are available to reduce potential impacts to a less-than-significant level.

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?

No septic tanks or septic systems are proposed as part of the General Plan. Sewers are generally available to serve the project area; however, fully enclosed vault toilets could also be constructed on the project site as part of the implementation of the General Plan. No impacts associated soils would result from the construction of vault toilets.

VII. HAZARDS. Would the project:	**Potentially Significant Impact**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Buildout of the General Plan, which would result in the development of a park, would not involve the routine transport, use, or disposal of hazardous materials. Potentially hazardous materials could temporarily be transported to and from the project site during the construction period, but routine transport or use of hazardous materials would not occur after buildout of the General Plan.

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?

Potentially hazardous materials, such as gasoline and oil, would be used at the construction site during the construction period and could be subject to upset. Although Catellus Corporation has completed hazardous materials remediation throughout the previously contaminated areas of the project site, the site potentially contains un-remediated hazardous materials, such as landfill gases, that could be subject to accident or upset during the construction period. However, mitigation measures are available to reduce this impact to a less-than-significant level.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?

No existing or proposed schools are located within ¼ mile of the project site.

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?

The project site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

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?

The project site is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Implementation of the proposed project would not expose people working in the project area to airport-related hazards.

f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

The project site is not located within the vicinity of a private airstrip. Implementation of the proposed project would not expose people working in the project area to airport-related hazards.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Implementation of the General Plan would not substantially alter roads or other infrastructure comprising emergency response and evacuation routes. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

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?

The General Plan does not propose the construction of housing on the project site. Because the project is located in an urban area adjacent to the San Francisco Bay, land uses proposed in the General Plan have a low risk of producing or being susceptible to wildland fires, the project would not expose people or structures to a significant wildland fire-related risk.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	☐	☐	☒	☐
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 off-site?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☒	☐	☐	☐

a) *Violate any water quality standards or waste discharge requirements?*

Implementation of the General Plan would result in the development of a park comprising recreational, ecological, and open space uses on previously developed industrial and recreational land, some of which was previously contaminated. Restoration of natural landscapes and the development of open space on the site could potentially result in beneficial impacts to water quality standards due to higher levels of stormwater infiltration and the cleansing effects of vegetation. Implementation of the General Plan would not result in waste discharge violations as appropriate measures to reduce erosion and siltation associated with construction of park facilities would be incorporated into the project by the project applicant. Additionally, as each individual project is evaluated for environmental effects and permitting, stormwater pollution prevention measures would be incorporated into each project.

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)?*

The General Plan does not propose a significant increase in land surfaces such as lawns that would require large amounts of water, or the construction of large areas of impervious surfaces that would prevent water from infiltrating into the groundwater system. The project would not involve the use of groundwater for irrigation. If feasible, the project would utilize reclaimed water provided by the East Bay Municipal Utilities District for irrigation purposes. Therefore, implementation of the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

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 off-site?*

A number of freshwater creeks flow from the coastal hills of Richmond, El Cerrito, Albany, Berkeley, Emeryville, and Oakland and enter the Bay through the project site. The project site is subject to a complex interaction of hydrological resources, including these aforementioned creeks, tides, and urban runoff. The project would result in the restoration of hydrological systems on the project site, the development of vegetated recreational areas, and the restoration of natural communities, and so would not substantially alter existing drainage patterns in ways that would lead to substantial erosion or siltation.

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?*

Implementation of the project would not result in flooding on- or off-site. See explanation VIII.b and VIII.c.

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?

The General Plan does not propose the construction of large areas of impervious surfaces that would contribute large volumes of stormwater runoff to drainage systems. In addition, land uses proposed in the General Plan would not require significant uses of fertilizers, pesticides, and herbicides that would result in polluted runoff. The restoration of upland and shoreline habitats, as proposed in the General Plan, would decrease runoff after large precipitation events, benefitting the existing stormwater drainage system and reducing polluted surface runoff.

f) Otherwise substantially degrade water quality?

Buildout of the General Plan, through the development of recreational, open space, and natural community restoration uses, would generally benefit water quality. See explanations VIII.a and VIII.e.

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?

The General Plan does not propose the construction of any residential housing. Therefore, the project would not place housing within a 100-year flood hazard area.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The General Plan does not propose the construction of large structures that could potentially impede or redirect flood flows.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?

See explanations VIII.g and VIII.h.

j) Inundation by seiche, tsunami, or mudflow?

A tsunami with a 200-year recurrence interval has an estimated run up of 7 to 10 feet in the vicinity of the project site. Because of the location of the project on the San Francisco Bay shoreline, the project site's potential for inundation by seiche, tsunami, or mudflow is an unavoidable significant impact. However, the land uses proposed in the General Plan would sustain less damage in the event of a seiche, tsunami, or mudflow than would other uses, such as residential, commercial, or industrial uses.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a) Physically divide an established community?

The project site is bounded by San Francisco Bay to the west and residential, commercial, or industrial areas to the east. No established communities are located on the project site. Therefore, implementation of the General Plan would not divide an established community.

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?

Land use policies of agencies with jurisdiction over the project are in accordance with the land uses proposed in the General Plan. Buildout of the General Plan would uphold these land use policies, which call for the provision of public, open space uses along the San Francisco Bay shoreline.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The project site is not subject to any habitat conservation or natural community conservation plans. See explanation IV.f.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
X. 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?	☐	☐	☐	☒

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?

No known mineral resources are present at the project site. Therefore, buildout of the General Plan would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of California.

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?

See explanation X.b.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☒	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Most of the existing noise within the project site is generated from I-80 and I-580, which are adjacent to the project site. Construction of the park would expose people to noise associated with I-80 and I-580; however park facilities and uses would be sited so as to reduce potential impacts associated with the ambient noise levels. This topic will be evaluated in the EIR. In addition, construction of the project could temporarily expose nearby residents and workers to high noise levels. However, this impact would be temporary and can be mitigated to a less-than-significant level through the implementation of standard mitigation measures.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Construction of the project, which could include the use of equipment such as pile drivers, could temporarily expose nearby residents and workers to increases in ground-borne vibration or ground-borne noise levels. These impacts would be temporary and can be mitigated to a less-than-significant level through the implementation of standard mitigation measures, including compliance with local construction restrictions.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Implementation of the General Plan would result in the development of a park. Besides the relatively slight noise increase resulting from additional park visitors, permanent ambient noise levels would not increase substantially above levels that already exist within the project area.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction of the project would temporarily increase ambient noise levels in the project vicinity. Impacts resulting from temporary construction noise could be mitigated to a less-than-significant level through the implementation of standard mitigation measures, including compliance with local construction restrictions.

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?

The project site is not located within an airport land use plan or within 2 miles of a public airport, public use airport, or a private airstrip. Implementation of the General Plan would not expose people working in the project area to excessive noise levels.

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?

See explanation XI.e.

XII. POPULATION AND HOUSING. Would the project:	**Potentially Significant Impact**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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)?

Implementation of the General Plan would result in the development of a park on infill land. The proposed park would not include new homes or businesses, and would not require the extension of roads and other infrastructure into previously undeveloped areas. Therefore, implementation of the General Plan would not result in substantial population growth in the area.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No permanent housing or residents are located on the project site. Therefore, buildout of the General Plan would not displace existing housing or residents.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

See explanation XII.b.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES.				
a) 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:	☐	☐	☒	☐
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☒	☐	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a) 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: Fire protection, police protection, schools, parks, other public facilities?

No new or altered government facilities or the need for new or altered facilities are proposed as a result of implementation of the project. Therefore no adverse significant environmental impacts would occur.

Fire protection and emergency response services for the project site and surrounding vicinity are provided by the respective fire departments of each municipality in the area. According to communication with fire department personnel, proposed park buildings or restrooms in the area would not require additional fire protection services.

EBRPD and respective municipal police departments provide police protection services to the project site and surrounding vicinity. According to police department representatives, implementation of the General Plan could potentially result in the need for additional police services, depending on the amount of traffic generated by the project. This issue will be studied in the EIR.

Because the General Plan would not result in any local or regional population increase (with a subsequent increase in students attending public schools), buildout of the proposed project would not require the construction of new schools, or result in schools exceeding their capacities.

Because the General Plan proposes to greatly increase the acreage of park space in the area, buildout of the project would not adversely impact existing parks. Indeed, implementation of the General Plan could potentially alleviate stress on overused existing local, regional, and State park facilities.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION.				
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?	❐	❐	❐	☒
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?	❐	❐	☒	❐

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?*

The General Plan proposes to redevelop an area with habitat protection and park uses. Because the General Plan would significantly expand the overall amount of park space in the area, buildout of the project would not increase the use of existing regional and neighborhood parks. Implementation of the General Plan could potentially reduce use at other overused existing parks due to the creation of alternative park space.

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?*

Recreational facilities proposed in the General Plan would be expected to result in beneficial effects on recreation. Physical impacts on natural resources and urban systems that would be associated with the development of recreational uses and facilities will be evaluated in the EIR.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC. Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency or 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?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Result in inadequate parking capacity?	❑	☒	❑	❑
g) Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	❑	❑	❑	☒

a) *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?*

Currently, the I-80 westbound and eastbound ramps that would serve the proposed park, and the intersection of West Frontage Road/University Avenue in Berkeley are operating at unsatisfactory levels of service (LOS F) during the PM peak hour. The Alameda County Congestion Management Program defines LOS E as the threshold for unacceptable intersection operations. All other analyzed intersections that would serve the park, for which data are currently available, operate with satisfactory levels of service. Buildout of the General Plan could potentially result in an increase in visitation that could cause an increase in vehicle traffic that would exacerbate the unsatisfactory LOS on I-80 interchanges near the park and the West Frontage Road/University Avenue intersection. Increased traffic could also result in the deterioration of traffic conditions around intersections that currently operate with satisfactory levels of service. This issue will be evaluated in the EIR.

b) *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*

See explanation XV.b.

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?*

Implementation of the General Plan would not result in a change in air traffic patterns.

d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Implementation of the General Plan would not result in the significant redesign of a roadway or an intersection. New land uses resulting from the General Plan, namely recreational and natural areas, would be consistent with park safety standards, and would be more safe than the uses that currently exist on much of the site (marginal land and industrial areas). Therefore, implementation of the General Plan would not substantially increase hazards on the project site.

e) Result in inadequate emergency access?

Implementation of the General Plan would not substantially alter roads or other infrastructure comprising emergency access routes. Therefore, the project would not result in inadequate emergency access.

f) Result in inadequate parking capacity?

New parking areas will be provided as part of the General Plan. However, buildout of the General Plan, depending upon the volume of increased visitation and the modes of transportation visitors use, could potentially result in inadequate parking capacity. This issue will be evaluated in the EIR.

g) Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

The General Plan includes design features that encourage the use of alternative modes of transportation, such as walking, bicycling, and using public buses. The General Plan is consistent with policies, plans, and programs supporting alternative transportation.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	❒	❒	☒	❒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	❒	❒	☒	❒

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Implementation of the General Plan could result in the construction of a few small permanent structures (e.g., restroom facilities, park headquarters, visitor center). The relatively small amount of wastewater generated from these structures can be accommodated by local sanitary sewer treatment systems and would not exceed the wastewater treatment requirements of the Regional Water Quality Control Board.

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?

Land uses proposed in the General Plan would not require large amounts of water or produce large amounts of wastewater. The project does not propose large areas of irrigated fields or other high water-use facilities. The restrooms on the site would not produce large volumes of wastewater. Buildout of the project would not exceed the capacity of existing water and wastewater treatment facilities that would serve the project.

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?

The General Plan does not propose the construction of very large areas of impervious surfaces that would require extensive new storm water drainage facilities. Additionally, as each individual project associated with implementation of the General Plan is evaluated for environmental effects and permitting, appropriate best management practices for stormwater management would be incorporated into each project.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The General Plan proposes a park that would serve existing residents and would not result in the use of substantial amounts of water. If feasible, the proposed park would utilize reclaimed water for irrigation. Therefore, existing water supplies are expected to be sufficient to serve the proposed project.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

See explanation XVI.a.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Buildout of the General Plan would not result in the generation of significant amounts of solid waste. Users of the park would dispose of garbage, but not in amounts that would greatly exceed per capita garbage generation rates. The project would be served by a landfill that could accommodate waste produced by users of the proposed park.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

The proposed project would contain receptacles for recyclable waste, and park managers would contract with appropriate entities for the removal and processing of recyclable waste. The project would comply with federal, State, and local statutes related to solid waste.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE.				
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, 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 considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

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, 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?

The General Plan proposes to develop recreational, open space, and natural community restoration and preservation uses on previously developed land. The new land uses proposed in the General Plan, because they represent contiguous parkland, would have higher ecological value than the uses that currently exist at the site. Therefore, the project would enhance the environmental values on the site, and would benefit wildlife and fish habitat and population, and plant and animal communities that are protected under State and federal law.

b) Does the project have impacts that are individually limited, but cumulatively considerable?

The proposed project could potentially have impacts that are cumulatively considerable. Cumulative impacts will be evaluated in the forthcoming EIR.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Implementation of the General Plan would result in the development of a park on previously developed industrial and marginal land. The construction of recreational areas, and the restoration of natural systems on the site would allow for outdoor recreation uses, educational opportunities, and nature appreciation, and would generally have a beneficial effect on human beings.

APPENDIX A-3

WRITTEN COMMENTS

Comment Sheet - February 27, 2002

PLANNING THE EASTSHORE
A Park for the 21st Century

a partnership of

California State Parks
East Bay Regional Park District
California State Coastal Conservancy

FILE

Comment Sheet

Comment sheets may be deposited in the comment box or mailed to:

Eastshore Park Project
2215 5th Street
Berkeley, CA 94710
1-888-988-PARK (7275)
www.eastshorestatepark.org
Fax: 510.540.7344

Name: Teddi Baggins Date: 2/27/02

Affiliation: CESP, EB Public Lands Comm - Sierra Club

I want to support the notion of more bicycle and pedestrian access to the park, particularly at Powell, Gilman and Central to provide alternate transportation into the park. I also want to encourage consideration of pedestrian walkways (landscaped?) along the daylighted Strawberry and Schoolhouse creeks, where it won't interfere with encouraging habitat.

Please continue on back side.

Coastal Conservancy

Comment Sheet - February 27, 2002

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www.eastshorestatepark.org
Fax: 510.540.7344

Name: Carol Bledsoe Date: 2.27.02

Affiliation: PIDO

Very important that you maintain both Pt Isabel AND North Pt Isabel (formerly Battery Point) for OFF-LEASH dog walking!!!

This area is essential for our pets' SOCIALIZATION and EXERCISE needs, also important for the human species.

Please continue on back side.

Coastal Conservancy

Comment Sheet - February 27, 2002

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2215 5th Street
Berkeley, CA 94710
1-888-988-PARK (7275)
www.eastshorestatepark.org
Fax: 510.540.7344

Name: Lucile Cain Date: Feb. 27, 2002

Affiliation: "Sunset" magazine has designated Pt Isabel as one of 10 best public sites on the entire S.F. Bay shore. As It Is. Has anyone among you are directing this Project visited the area to witness the present use & pleasure of the many dog owners (some come from Marin Co or Piedmont & Orinda) who are allowed ~~to~~ let their dogs exercise off leash? Please preserve the pleasure of this unique area. Because dogs are required to be on leash in all Calif. State Parks does not mean it ~~should~~ must be the rule at Pt Isabel / rather institute off leash areas in other State Parks! Berkeley should once again lead the way.

Please continue on back side.

Coastal Conservancy

LSA ASSOCIATES, INC.

MAR 04 2002

Jim McGrath
2301 Russell Street
Berkeley, CA 94705

February 27, 2002

Judith Malamut
LSA Associates, Inc.
2215 Fifth Street
Berkeley, CA 94705

Subject: Scoping comments on Notice of Preparation (NOP) of Environmental Impact Report for the Eastshore Park Project General Plan

Dear Ms. Malamut:

The following comments respond to the NOP of February 14, 2002. Based upon my review of the source documents, the underlying legislation, and the content of California's Comprehensive Coastal Management Program, I believe that the inconsistencies between the public access proposed in the plan and that mandated by the various State programs constitutes a significant impact as generally defined under the California Environmental Quality Act. This letter will establish the background showing how I reached this conclusion.

The plan as currently constituted does not provide enhanced windsurfing access to the Albany Bulb, the only location suitable for improving access for windsurfing. However, the failure to recognize extant recreational activities goes much further, ignores established legislative direction, and constitutes a significant impact on its face. This letter is submitted on behalf of recreational users, including windsurfers and kayakers, which must reach the shoreline with our equipment in order to have the recreational access that is mandated under the State law creating this park. I have examined the land and shoreline of all of the Eastshore State Park from either a windsurfer or a kayak in the past year, and this letter reflects my direct observations and expertise as a recreational user of the area. The plan is presently considering measures to restore habitat in areas where such restoration will, in fact, preclude public access. The EIR must, therefore, analyze the impacts of those land use designations, and consider alternative land use designations. Where the plan appears to conflict with established State policy, the EIR must show that compliance is not feasible or provide an overriding circumstances rationale. This letter will lay out the conflicts I believe are readily apparent.

ACCESS TO THE WATER FOR NAVIGATION HAS CONSTITUTIONAL STANDING IN CALIFORNIA

Section 2 of Article XV of the California Constitution provides:

> No individual ... shall be permitted to exclude the right of way to such water ... or obstruct the free navigation of such water; and the Legislature shall enact such laws as will give the most liberal construction to this provision, so that access to the navigable waters of this State shall always be attainable for the people thereof. (emphasis added)

In any weighing of competing interests in the shoreline, the recognition in the Constitution that navigational access, including access to the shoreline to launch a craft, is a fundamental right must be given great weight.

BOTH THE FEDERAL COASTAL ZONE MANAGEMENT ACT AND THE MACATEER-PETRIS ACT MANDATE INCREASED ACCESS FOR WINDSURFING AND KAYAKING

Section 303(2)(D) of the Coastal Zone Management Act of 1972 calls for state's to develop coastal management programs that provide "...priority consideration ... to coastal dependent uses and orderly processes for siting ... facilities related to ... recreation." In California, this provision is implemented through the MacAteer-Petris Act, the parent legislation for the regulatory programs of the Bay Conservation and Development Commission. Various policies under that Act apply, including Section 66605, which gives "water-oriented recreation" priority consideration, and Section 66602 that declares that uses such as "water-oriented recreation" are "essential to the public welfare of the bay area." The latter section also includes the legislative finding that "existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided. (emphasis added)" This provision must be read in conjunction with the constitutional mandate cited above.

Without doubt, windsurfing and kayaking are coastal dependent and water-oriented recreational uses that warrant priority consideration in planning. It is also clear that nature walks along the shoreline, the use favored by the Citizens for the Eastshore State Park (CESP) is also a form of water-oriented recreation. All are thus deserving of priority consideration in the planning processes for the Eastshore State Park, and the issue becomes providing a balance among competing uses.

THE AUTHORIZATION FOR THE EASTSHORE STATE PARK ALSO INCLUDES PROVISIONS FOR ASSURING NEW ACCESS

The enabling legislation established the Eastshore State Park as a park system that is to provide a balance of both recreational facilities and habitat. Public Resources Code Section 5003.3 calls for a "... recreational facility within its natural setting ...(emphasis added)" The mission statement for the planning effort calls for a "...recreational facility harmonious with its natural setting." The clear language of these mandates calls for protection of, and development in harmony with, the *existing* natural setting. The NOP indicates that two areas of the Park, the Albany Bulb, and the Meadow, have been designated as conservation areas. However, contrary to the mandate of the authorization, this designation is based on the *potential* for habitat restoration in those areas, rather than the existing natural setting. This would be of no concern if the plan did not also propose to limit public access in those areas. The language in the document, and the low intensity use proposed, demonstrates that in those areas public access is to be subservient not to existing habitat values, but will in fact be compromised to restore habitat. Even without the Constitutional recognition of access to the shoreline for launching windsurfers and kayaks, this proposal falls outside of the legislative mandate for the park.

The supporting document prepared for the planning effort, the "Eastshore Park Project Resource Inventory", April 2001, does not demonstrate that existing habitat values of those two areas warrant such protection. Indeed, the plain language of the mandate recognizes that the park exists within a much larger natural setting—San Francisco Bay! It is that setting that generates both the recreational and habitat values, or setting, for the park. Neither Albany Bulb nor the Meadow are recognized as having an *existing natural setting* that warrants preclusion of access. The legislation could not possibly have speculated on a future setting; it established a planning process to suggest that future setting. In doing so, it called for a balance, not for recreating habitat at a scale that would preclude recreational use. The Inventory describes the Albany Bulb accurately as a "large and isolated landfill area with edges steeply sloped from the Bay to upland areas. The shoreline is armored with concrete debris around the entire perimeter of the landfill." The Inventory continues (PL-11) that no plant species observed in the study area ... are of 'scientific, educational, or interpretive value' from a native plant ... perspective." Indeed, about "95% of the plant species observed ... were exotic species..." Nor, as some have argued, is the site quickly recovering from disturbance. Regarding succession, the Inventory states, "No natural plant communities would be expected to develop in upland (non-wetland) areas unless the existing exotic vegetation were removed and propagules of native species were introduced." (PL-7) Later on, the Inventory identifies seasonal wetlands in some areas of the Meadow as sensitive habitat, but it is clear that such existing values constitute only a small portion of the Meadow, and the remaining habitat is characteristic of a highly disturbed area. The shoreline of all of these areas is highly disturbed, consisting of debris. Only in the limited areas of the Bay Bridge (Radio Beach) and Albany Beach has sedimentation recreated a nearly natural community.

The windsurfing and kayaking communities strongly support preservation and enhancement of the existing habitat of the Eastshore State Park. As resource dependent users that rely on self-propelled watercraft, we recognize preservation of the resource as the underlying principle of stewardship of its use. However, the mandate in the legislative authorization, and in your mission statement, is to create "... a recreational facility harmonious with its natural setting..." Designating areas suitable for recreational access *only* for conservation, or for recreation on a unnecessarily restrictive basis, does not strike such a harmonious balance. Neither does it reflect the mandates in the State

Constitution and the Coastal Management Program. These conflicts must be recognized, contrary to the conclusion in IX b) of the checklist, which concludes without analysis that there are no conflicts. (p. 22)

WINDSURFING, KAYAKING, AND OTHER WATER-ORIENTED ACTIVITIES ARE RESOURCE DEPENDENT AND MUST OCCUR WHERE THE RESOURCES ARE PRESENT

Windsurfing is resource dependent in two different ways. First, windsurfing can only occur on the waters of the Bay that are deep enough (at least 2 to 3 feet deep) to accommodate the equipment. Second, windsurfing can only occur where there is sufficient wind to support the activity. In San Francisco Bay, winds are generated by storm activity, and by the spring and summer pattern where strong winds blow from the location of the Pacific high to the low-pressure area in the Central Valley. Nearly every day between March and October there are winds on the Bay strong enough to sail. (Those winds are absolutely dependent on the Bay itself as part of the engine that generates the wind.) However, quite frequently those winds are weaker near the shore.

Albany Bulb is uniquely located in the entire East Bay as a site that extends further into the wind field than any other location. It is not unusual that the Albany Bulb will be the only windsurfing site in the developed portion of the East Bay with sufficient wind to allow windsurfing at the site. Further, the Bulb is also located at a point on the north-south running shoreline where the westerly winds tend to be stronger as the mass of air turns northwest toward the Delta and Sacramento. As such, this site is of unique resource value.

Kayaks weigh considerably more than windsurfers, and can only be carried a very short distance to the water. Although there are cart-like devices that allow kayaks to be moved, the weight of kayaks is generally above 50 pounds, limiting their mobility significantly.

WINDSURFING AND KAYAKING ACCESS DEPENDS ON VEHICULAR ACCESS

There are thousands of windsurfers in the Bay area. Many of those windsurfers sail after work. Twenty to fifty windsurfers can be found on any windy weekday at Berkeley Marina, with another fifty or more sailing at Pt. Isabel. In all cases, windsurfers bring their equipment in their vehicle, and need to rig within a reasonable walking distance from the launch location. It is not reasonable to try to walk a quarter mile or further with a 10-foot long board, and a 17-foot high sail! Denying parking within a hundred feet of the location in the wind to launch is, in fact, denying access. Although kayaking does not depend on wind, it does depend absolutely on vehicular success to an area near the water where a kayak may be safely launched. Because kayaks are generally paddled at 1 to 3 miles per hour, launching sites must be located about every 2 miles for the Bay to be effectively accessible.

PLANNING FOR THE EASTSHORE STATE PARK MUST PROVIDE AN INCLUSIONARY VISION FOR PUBLIC ACCESS, NOT AN EXCLUSIONARY INTEREST

The windsurfing community supports the vision that Albany Bulb be a location that promotes the values of solitude, nature walks, and wildlife promotion. However, our vision is *inclusionary*, not exclusionary. We believe that windsurfing, and parking to allow windsurfing, is compatible with those values as long as the parking area for windsurfing is subservient to the visual character of the recreational experience, and the provision of access for windsurfers does not conflict directly with the enjoyment of solitude, nature walks, and wildlife promotion. A small area for parking could readily be hidden within the over forty acres of the Albany Bulb. A parking area for 100 cars would occupy less than an acre, including landscaping. The parking area and trails could be located where the parking area would not be visible to users seeking a shoreline nature walk. Indeed, the most visually prominent feature of public access, a road, would be required for the facility to be managed by the East Bay Regional Park District. Thus, we believe that a small access area can readily be accommodated on the Albany Bulb without compromising the fundamental values of solitude, nature walks, or wildlife promotion. The converse is not true; denying any opportunity for parking effectively eliminates Albany Bulb as a windsurfing location. Such a result is clearly inconsistent with the constitutional standing of navigational access.

While I understand and appreciate the value of natural wilderness, and agree that such areas should remain road less, the wilderness in question at the Albany Bulb is the Bay itself. The Bulb is an artificial feature, characterized by concrete slabs and rubble everywhere, particularly along the shoreline. While the area has some habitat value, it cannot be described as a natural wilderness of the character and magnitude that warrants road less protection. Indeed, restoration of the area to a more natural habitat, and to a more natural shoreline, will take substantial intervention and construction activities. Cover or removal of rubble and exotic vegetation will take both construction equipment and substantial public investment. Under these circumstances, it cannot be said that allowing a small area for windsurfing access will compromise the values that the site presently represents.

NOT PROVIDING PUBLIC ACCESS AT SUITABLE AREAS IN THE EASTSHORE STATE PARK WILL LEAD TO LONGER RECREATIONAL TRIPS AND GREATER AIR QUALITY IMPACTS

Most windsurfers use computers or pagers to determine where the wind is blowing. Wind measurement devices are located on Angel and Treasure Islands, as well as most popular launch locations. If sensing devices indicate that there is wind in the center of the Bay (i.e. Angel and Treasure Islands), but not at Berkeley or Pt. Isabel, windsurfers will drive to Crissy Field, Treasure Island, or Coyote Point to find wind if it is not possible to launch at an East Bay location within the wind field. Provision of access at Albany Bulb will reduce these trips. Conversely, limiting access at Albany Bulb will lead to increased vehicular traffic, and this impact must be studied in the EIR.

THE EIR MUST INCLUDE ALTERNATIVES THAT PROVIDE HIGHER DENSITY RECREATIONAL DEVELOPMENT AT ALBANY BULB AND THE MEADOW

Nothing in the Inventory suggests that recreational development of greater intensity could not be accommodated on the Albany Bulb and the Meadow by locating development to avoid existing habitat. To adequately address the fundamental questions of access to the Bay, which we repeat has constitutional standing, the EIR must include at least one higher intensity scenario that provides the recreational facilities for the meadow and the Bulb suggested in the public outreach process.

Very truly yours,

Jim McGrath

Jim McGrath

Copies: San Francisco Boardsailing Association
BayAccess

27 Feb. 2002 ESP EIR Scoping Mtg.

FILE COPY

From OSHA NEUMANN

STATEMENT:

Please convey to the meeting, which we understand is to solicit input into the scope of the Environmental Impact Report on the plans for the Eastshore State Park, these comments pertaining to issues that should be considered when assessing the environmental impact of any plans for the Albany Bulb.

1.. The report should address the impact of any plan on the biodiversity of the Bulb. There needs to be a full and complete inventory of the species diversity of the Bulb ecosystem. How does it compare with biodiversity in other areas of the park?

1.. To what degree can we be assured that any plan which destroys the existing ecosystem, would successfully establish an ecosystem of comparable diversity?

1.. What kind of maintenance would be required by the planned changes in habitat?. Would it require irrigation? If so, how much water would it require? How certain could we be that funding for maintenance would be available? What would happen if it wasn't available?

1.. To what degree would the currently thriving species of plant life on the Bulb need to be suppressed? What is the likelihood of successful suppression of existing species? What means would need to be employed. How damaging/toxic would those means be? Would they entail the use of herbicides?

1.. To what degree would planned changes in the ecosystem require restrictions on the current uses of the Bulb: off leash dog walking, art-making ,etc.? What impact would changes have on those activities? How will the value of intangibles such as pleasure in "wildness' be considered and evaluated?

1.. To what degree is the Bulb's ecosystem unique? What is the value of preserving an example of the successful establishment of a diverse ecosystem on industrial fill? To what degree must the pejorative evaluation of colonizing "invasive" and "exotic" species be reexamined in the light of their demonstrated ability on the Bulb to coexist without choking out diversity? What is the historical, cultural, biological value of preserving the ecosystem in its current form?

Speaking for SNIFF we are disappointed we could not attend the meeting and are dismayed that it was scheduled for 4:00 p.m. when those of us who work regular jobs are unable to attend. That scheduling decision necessarily limits the participation of large portions of the community with concerns regarding the planning process.

Osha

Comment Sheet - February 27, 2002

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California State Parks
East Bay Regional Park District
California State Coastal Conservancy

FILE

PLANNING THE EASTSHORE
A Park for the 21st Century

Comment Sheet

Comment sheets may be deposited in the comment box or mailed to:

Eastshore Park Project
2215 5th Street
Berkeley, CA 94710
1-888-988-PARK (7275)
www.eastshorestatepark.org
Fax: 510.540.7344

Name: Sylvia Schild Date: 2/27/02

Affiliation: Point Isabel Dog Owners + Friends

In view of the fact that the Bay Area population has increased enormously and will continue to do so, I feel that there is a real need for more recreational areas and thereby limiting the preserved areas. The only exceptions are the marsh areas which are very important to maintain. Every area should have off leash dog sections so that Point Isabel does not become totally overrun, over-used which would ruin it.

Please continue on back side.

Coastal Conservancy

27 Feb. 2002 ESP EIR Scoping Mtg.

FILE COPY

Hi. Jill. Please present this for me at the meeting today. Thanks.

To the people managing the Albany landfill:

Hi. This was about a year ago. One afternoon I was visiting the Albany landfill with my dog. We saw this man standing at the 'circle' frowning at the metal bird statues. He had a pair of binoculars hanging in front of his chest. I am not a bird person. But he looked like one. So I asked he if there was anything 'wrong' with those metal birds. He said that they look fine, but they are "Metal!" "The live ones used to come back every year to nest in a big tree over there." He said, pointing east towards the road leading up to the statues. "Haven't seen them come back since they chopped down that tree. What is the point of having the metal ones after getting rid of the live ones." He slowly walked away after petting my big dog gently on the head.

I like the roughness of this place. It is a treasure in the urban environment. Nature knows best how to heal its wounds and develop it according to all natures needs. We should respect this land and stay out of the way of this natural process. Please do not 'develop' it any more.

Sincerely,
May Soong
Albany Resident

Comment Sheet - February 27, 2002

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Fax: 510.540.7344

Name: ______________________ Date: ____________

Affiliation: ______________________

Thank you for not allowing dogs on Albany Beach. The dogs make it so people can't enjoy the beach. It is hard to speak out about this because the dog people are so aggressive & hostile.

Please continue on back side.

Coastal Conservancy

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Fax: 510.540.7344

Name: Jerry Yukie Date: 2-28-02

Affiliation: PIDO

I thought your explanations and outline of the process were excellent. Our major concern is the fate of Pt. Isabel and North Pt Isabel where folks have been walking with their dogs off leash for over 15 years. Consequently, the presence of their dogs should have no environmental consequences for whatever was going to happen already has.

Pt. Isabel, itself, is surrounded by the Post Office, Costco, Costco's gas station and the EBMUD waste water treatment plant. The land belongs to the US Postal Office & not the State of California.

Incidentally, when the gas station was proposed and a hearing held by the City of Richmond, not one Sierra Club, Audubon or CESP member was present — only PIDO and the Richmond Annex Neighborhood association. And my son, who is an engineer dealing with ground water and the removal of abandoned gas station underground storage tanks, says that in an earthquake the tanks could fail and 100's of gallons of gas will contaminate the Bay. Where was the Coastal Conservancy, Save the Bay, etc.? How

Please continue on back side.

Coastal Conservancy

come no [illegible] we greatly [illegible] about The purity of The bay water surely knows The bay is no place to go swimming. And dog sewage from PT. Isabel does not occur. We pick up after our dogs and PIDO has a monthly cleanup to pick up after The small percentage of people who do not obey The rules.

As for North PT. Isabel, There is only a clay topping over The former battery dump. The only critters I have ever seen There are gophers -- not an endangered species -- and They are mostly in The shoreline rocks having enough sense not to burrow into The battery acid. There are a lot of birds who feed on The grasses and many varieties swimming off shore. I walk There very early every morning and The birds ignore The dogs and vice versa. On weekends There may be an occasional ignorant owner permitting a dog in at low tide but mostly That is due to horrible signage. Since The fence was built along The bay Trail, dogs do not enter Hoffman Marsh contrary to what one gentleman said.

PIDO is ready to help pay for any fencing or signs.

Sincerely,

Jerry Jukich
Chairperson, PIDO

SAN FRANCISCO BOARDSAILING ASSOCIATION

1592 UNION STREET, BOX 301 • SAN FRANCISCO, CALIFORNIA 94123

March 11, 2002

Judith Malamut
LSA Associates, Inc.
2215 Fifth Street
Berkeley, CA 94705

Eastshore State Park Planning
101 The Embarcadero, Suite 210
San Francisco, CA 94105

Re. Eastshore State Park – Scoping Comments re.
Notice of Preparation of Environmental Impact Report

Dear Sir/Madam,

I am writing to express the concerns and recommendations of the San Francisco Boardsailing Association (SFBA) with regard to the planning of the Eastshore State Park. The SFBA is a 1,600-member organization that promotes public access and safety for the windsurfing/sailboarding community.

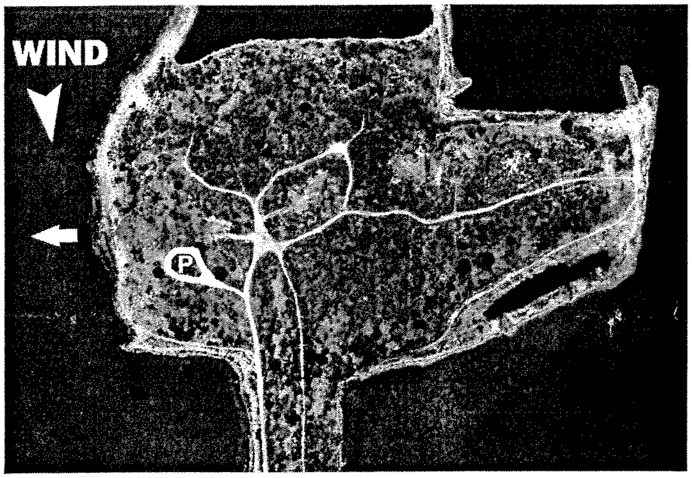
The environmental analysis for development of the Eastshore State Park should include an examination of the impacts that would result from having a publicly accessible parking area on the Albany Bulb. With regard to public access, a parking area on the Bulb would be highly beneficial to windsurfers and other members of the public. I believe that negative view impacts can be limited through proper siting and negative environmental impacts can be limited through moderating the size of such a parking area. Access to such a parking area would be via an existing road that runs along the south side of the neck.

The Albany Bulb provides the only significant opportunity within the Eastshore State Park for a new windsurfing launch. The Bulb extends out into an area of the Bay where the wind is usually stronger that it is at Point Isabel or at the Berkeley Marina. An access site on the Bulb would allow for growth in the number of users and would be usable by the average windsurfer more often than the existing sites. Because windsurfing equipment is bulky, effective access means vehicular access. It is not practical or even possible for most windsurfers to carry their equipment hundreds of yards in order to reach a point where there the wind and water conditions will allow access the Bay.

The ideal launching point for windsurfers would be from the south side of the Albany Bulb. An ideal launch has side shore winds and deeper water.

SAN FRANCISCO BOARDSAILING ASSOCIATION

1592 UNION STREET, BOX 301 • SAN FRANCISCO, CALIFORNIA 94123



<u>Aerial View of Albany Bulb</u>:

◁ prevailing wind direction

P potential parking area

⇦ ideal launch area

(Top of Picture = West)

A parking area for windsurfing access would need to be located near the south shore of the Albany Bulb. A parking area in that vicinity could be sited so that it would not be very noticeable to users heading to the north and west sides of the Bulb and users who walk out to the Bulb using the trail that is on top of the neck.

I believe that state law provides that access to the waters of the Bay should have a high priority in the planning process. As you know, access to the shoreline and to the waters of the Bay is a cornerstone of the Bay Conservation and Development Commission's authorizing legislation, and fundamental to the legislative authorization of Eastshore State Park. I concur with the comments that you have previously received from James McGrath. Where there is no serious conflict with habitat values, access should be provided for as required by law. Consideration and analysis of a parking area should not be omitted from the process because of opposition that is based only on aesthetic values or an ideological opposition to the use of motor vehicles

The Albany Bulb has been designated a Conservation Area within the Draft Preferred Park Concept Plan. Within that plan a Conservation Area is defined as an area, "whose natural habitat values will be protected and enhanced while accommodating lower intensity recreation that is compatible with and dependent on those values." Windsurfing access is compatible with such a Conservation Area. Windsurfing is a low intensity activity while windsurfers are onshore. It only becomes high intensity recreation once windsurfers have crossed the shoreline and accessed the Bay. Windsurfing is dependent upon natural habitat values, because windsurfers use windsurfing not just as exercise, but also as away to get out on the Bay to interact with nature and the elements. I frequently see birds, seals and sea lions while out on the Bay and have even been lucky enough to spot whales on more than one occasion. Most of us would not be as enamored with windsurfing if we were sailing in a reservoir. The BCDC guidelines call for maximum feasible public access to the waters of the San Francisco Bay. Windsurfing is our way to access the Bay and all it offers without relying on a powerboat or a jet ski. The access provided must be effective access as well as technical access. Shoreline access without vehicular access could be a reasonable access point for swimmers, but the fact is that the vast majority of the recreational users of the Bay that do not rely on motorized craft do rely on bulky equipment such as windsurfing boards or kayaks.

Windsurfing is a use that is not only highly appropriate for the Park, it is also a use that cannot be supported by shifting it upland or to another area. A windsurfing launch area must have open water, reliable wind, and reasonable vehicular access. In recent years, there has been a net loss of windsurfing access in the Bay Area as vehicular access or parking has been restricted near existing launches. As new opportunities for windsurfing access have arisen over the last few years, the tendency has been for the agencies or municipalities involved to be sympathetic but insistent that windsurfing access should be accommodated elsewhere. The result is that our access to the waters of the Bay can continue to be degraded even as the population grows and the amount of shoreline open to the public increases.

<u>South Side of Albany Bulb is Ideal Windsurfing Location</u>

The south side of the Albany bulb presents as opportunity for an excellent windsurfing launch. Under prevailing conditions, the site has sideshore winds that are ideal for launching. Onshore winds can make it difficult to sail away from shore against the wind and offshore winds be hazardous because they may make it difficult to return to shore. At most times, the wind on the south side of the bulb is significantly stronger than the wind at Pt. Isabel or Albany Beach. Launching from the Albany Bulb would allow windsurfers to quickly get into deeper waters and stronger winds and would separate windsurfers from any swimmers or dogs that would use the waters directly offshore of Albany Beach. The location on the south side of the bulb would also concentrate water sports away from the art zone on the north side of the bulb and the environmentally sensitive areas on the west and northeast sides of the bulb.

<u>Windsurfing Launch Requires Vehicular Access</u>

A windsurfing launch on the south side of the Albany bulb would require vehicular access to the bulb. The distance between the existing parking area to the ideal launching area would make the carrying of gear nearly impossible. The fully rigged windsurfing board and sail weigh approximately 50 pounds. The equipment is bulky and can be very difficult to carry in windy conditions, especially near irregular terrain where the wind may varied and turbulent.

Carting gear would eliminate the weight factor but would create a problem in the selection of the gear. Windsurfers usually select between a number of boards and sails to find a combination that is appropriate to the wind conditions. It is extremely difficult to accurately evaluate the wind conditions from a distance. If a windsurfer selected the wrong equipment based on their observations from Albany Beach, they would have to make a 20-30 minute round trip back to their vehicle to get the appropriate equipment.

Proposal for Vehicular Access to the Albany Bulb

The road would need to be widened at some points to allow for two cars to pass in opposite directions. A parking lot could be located on the southeast corner of the bulb. A modest parking lot in the southwest corner of the bulb could be sited so that it would not be visible to users walking in on the trail that is on top of the neck. It is not necessary from the user standpoint that the road or lot be paved. An unpaved road would be more in character with the area and might encourage drivers to keep their speed down. A trail on the south side of the lot would lead to a launch for windsurfers on the south side of the bulb while a trail on the east side of the lot would lead to a kayak launch in the sheltered water to the east where the bulb meets the neck.

Benefits of Vehicular Access – Access to the Waters of the Bay

Vehicular access would allow for an exceptional new windsurfing launch that would be usable even on many of the days when the launch at Pt. Isabel provides only marginal conditions. A launch on the south side of the bulb would be superior to a launch at Albany Beach and would separate windsurfers on the water from the dogs and swimmers they would encounter at Albany Beach. A kayak launching area where the neck meets the bulb would allow for the combination of a sheltered launch and easy access to the open waters of the Bay.

The BCDC guidelines call for maximum feasible public access to the waters of the San Francisco Bay. For users who rely on their vehicles to carry their equipment, this access is only truly realized if they have launching areas that are accessible to vehicles. This level of access opens up thousands of acres of open water to non-motorized watercraft.

Benefits of Vehicular Access – Access for Non-Aquatic Users

A modest parking area on the bulb itself would allow users who have difficulty hiking over longer distances and users who have limited time to get out onto the Bulb and enjoy the unique features. While we would all like to find ways to use our cars less, there are practicality issues for those who have extensive time commitments to work and family. Users who have limited time due to work commitments and family obligations would be able to visit the bulb without having to reserve enough time to walk out and back. This would allow for visits by the type of user who might want to have an experience by the Bay during a short period of time between leaving work and nightfall.

Impacts of Vehicular Access

Use Level - Vehicular access would increase the use level on the bulb to some degree. The extent of this increase would be influenced by the size of the parking area and could be further limited if there were a fee for parking on the bulb.

Noise – Vehicles accessing the bulb would create road noise and engine noise. This noise could be limited by limiting the speed of vehicles accessing the bulb through a speed limit and speed bumps. Slots in the speed bumps could allow bicycles to avoid riding over the bumps.

Visual – The parking area and cars would have some visual impact. If the trail on top of the neck were used as the primary pedestrian access, then the visual impact would be limited because the road is at a lower elevation and is blocked by foliage. The visual impacts of the road itself would change very little if the road could remain unpaved. The parking lot itself could be located where it would also be at a lower elevation than the trail and minimally visible.

Thank you for your consideration of this information.

Sincerely,

Peter Thorner
President, San Francisco Boardsailing Association

phone: (415) 454-3522 x 104
e-mail: thorner@sfba.org

Please send written responses to : Peter Thorner
143 Third Street
San Rafael, CA 94901

Department of Toxic Substances Control

Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

March 12, 2002

Ms. Judith Malamut
Department of Parks and Recreation
250 Executive Park Boulevard, Suite 4900
San Francisco, California 94134

Dear Ms. Malamut:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the Eastshore Park Project General Plan [SCH2002022051]. The project site occupies approximately 8.5 miles of the eastern San Francisco Bay shoreline extending from the Bay Bridge in Oakland north to the Marina Bay Neighborhood in Richmond. The project site is generally bordered by I-80 to the east and San Francisco Bay to the west. Land uses to the east of I-80 and north and south of the project site range from residential, commercial, and industrial areas to undeveloped land, bridges, and wetlands. As you may be aware, the California Department of Toxic Substances Control (DTSC) oversees the cleanup of sites where hazardous substances have been released pursuant to the California Health and Safety Code, Division 20, Chapter 6.8. As a potential resource agency, DTSC is submitting comments to ensure that the environmental documentation prepared for this project to address the California Environmental Quality Act (CEQA) adequately addresses any required remediation activities which may be required to address any hazardous substances release.

The project, also referred to as California State Parks - Eastshore Project, is a long-range master plan for a new State park unit along the eastern shore of San Francisco Bay. The site consists of approximately 1,800 acres along the waterfronts of Oakland, Emeryville, Berkeley, Albany, and Richmond. Of this area, approximately 185 acres are upland, and the remainder (1,615 acres) is tidelands. The upland area, most of which was created by past landfill practices, includes extensive areas covered with construction debris and miscellaneous fill material.

As discussed in Section VII b of the NOP, although hazardous materials remediation has been completed throughout the previously contaminated areas of the project site, the site still potentially contains un-remediated hazardous materials, such as landfill gases, that could be subject to accident or upset during the construction period. Since the upland area was historically created by past landfill practices and still contains construction debris and miscellaneous fill materials, sampling of this area should be conducted to determine whether this is an issue which needs to be addressed in the

CEQA compliance document. The project description does not include descriptions of the past uses of properties within the length of the project corridor. Without this information, we are unable to determine whether hazardous substances may have been released. If hazardous substances have been released in the upland area or in any area of the project not previously remediated, they will need to be addressed as part of this document.

For example, if the remediation activities include the need for soil excavation, the CEQA document should include: (1) an assessment of air impacts and health impacts associated with the excavation activities; (2) identification of any applicable local standards which may be exceeded by the excavation activities, including dust levels and noise; (3) transportation impacts from the removal or remedial activities; and (4) risk of upset should there be an accident at the site.

DTSC can assist your agency in overseeing characterization and cleanup activities through our Voluntary Cleanup Program. A fact sheet describing this program is enclosed. We are aware that projects such as this one are typically on a compressed schedule, and in an effort to use the available review time efficiently, we request that DTSC be included in any meetings where issues relevant to our statutory authority are discussed.

Please contact Annina Antonio of my staff at (510) 540-3844 if you have any questions or would like to schedule a meeting. Thank you in advance for your cooperation in this matter.

Sincerely,

Barbara J Cook

Barbara J. Cook, P.E., Chief
Northern California - Coastal Cleanup
Operations Branch

Enclosures

cc See next page

cc: without enclosures

Governor's Office of Planning and Research
State Clearinghouse
P. O. Box 3044
Sacramento, California 95812-3044

Guenther Moskat
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

BAY ACCESS

A California Non-Profit Corporation

11 MARGARET AVENUE
SAN FRANCISCO, CA 94112
PHONE 415-337-7864 FAX 415-337-7863

March 12, 2002

Judith Malamut
LSA Associates, Inc.
2215 Fufth Street
Berkeley, CA 94705

Re: Public Access at Eastshore State Park

Dear Ms. Malamut,

As you may know, Bay Access is a non-profit corporation dedicated to enhancing access and amenities for non-motorized watercraft where environmentally appropriate, and to the creation of a San Francisco Bay Water Trail.

On behalf of the Board of Directors of Bay Access, Bay Access members, and the constituency represented by Bay Access I write to support the position regarding small boat access in the future Eastshore State Park laid out by Jim McGrath in his letter to you dated March 5, 2002.

Casey Walker, Attorney
Executive Director, Bay Access, Inc.

Citizens for the Eastshore State Park
P.O. Box 6087, Albany, CA 94706
(510) 526-2629

March 13, 2002

To: CA Dept. of Parks and Recreation
Ronald Shaefer
250 Executive Blvd., #4900
San Francisco 94134

Eastbay Regional Park District
Larry Tong
P O Box 5381
Oakland 94605

LSA Associates, Inc.
Judith Malamut and David Clore
2215 Fifth Street
Berkeley 94710

Re: Scoping EIR for Eastshore State Park General Plan

Gentlepersons:

We appreciate you supplying us your February 14 Notice of Preparation of Draft EIR and your explanations on February 27. We have not had a chance to review the draft of Preferred Alternative Plan, so these comments are based on the contents of your Notice, your Resource Inventory and other reports and information gathered over many years.

These comments and suggestions call for some changes in the Initial Environmental Checklist, with page references to your February 14 draft. Check boxes will be identified as PSI for Potentially Significant Impact, PSUMI for Potentially Significant Unless Mitigation Incorporated and LTSI for Less Than Significant Impact.

Page 7 AESTHETICS

The PSI boxes should be checked for a) and c), rather than LTSI.

You report there will be several buildings, parking and other facilities that will change internal views and block views of the Bay and its surroundings.

Although these will be low, they will inevitably change the scenery and interfere with existing scenic values.

And it is not possible to mitigate loss of aesthetic values,or decline in visual character and site quality by changing something elsewhere, or paying into a mitigation fund.

Certainly these should be identified as "potentially" significant for special attention in the EIR.

Page 9 . AIR QUALITY

Pending more information and analysis, a) should be PSI instead of PSUMI. Your explanation includes "..the General Plan could result in....increase in the number of car trips to the project site as well as emissions and particulates related to construction activities." and "..implementation ...could potentially conflict with or obstruct implementation of the (Regional) Clean Air Plan."

It is premature to assume the negative impacts will be mitigated.

At least until it is clear how impacts of more auto trips and construction emissions and particulates can be mitigated these are potential problems.

age 10. BIOLOGICAL RESOURCES

Check PSI for a) and b) - and maybe c) and d), rather than PSUMI.

You have already identified wildlife habitats of sensitive species and say that "buildout of the General Plan could potentially result in adverse impacts.."

Maybe these can be avoided, or mitigated, but you cannot know until the EIR process is completed.

There is surely a "potential" (unmitigatable) impact.

Page 12. CULTURAL RESOURCES

Check PSI instead of PSUMI for a).

There are already many identified historical resources and more will no doubt come to light (you say "relatively high potential").

It is at least premature to say that damage to them can be mitigated.

We believe it is impossible to mitigate loss or damage to some such resources.

Page 18. HYDROLOGY AND WATER QUALITY

a) and b) probably should initially be PSI.

It is too early to assume that development and restoration work will not cause significant adverse impacts either to the surface or groundwaters. .

On page 20 you admit that each such project in the park will have to be evaluated for pollution effects and possible remediation.

Page 23 Typo? (At end of MINERAL RESOURCES. Should "X b." be "X.a)?

NOISE

Change a) and b) from PSUMI to PSI

It may be impossible to reduce or eliminate traffic noise from I-80 and 580 without doing other harm (eg obnoxious sound walls, tree planting, etc) So you should not conclude that such impacts can be satisfactorily mitigated.

Re construction noise, mitigation can help, but until the extent of expected construction noise is known, this is "Potentially Significant"

Page 26. PUBLIC SERVICES

Change a) to PSI, rather than LTSI

Although the text on page 27 says "No new or altered government facilities.... are proposed.....", page 2 says there will be "interpretive facilities, visitor-serving and operations facilities,....picnic facilities,...parking lots, restrooms and commercial recreations-oriented concessions."

Certainly the proposed, or possible, buildings and other facilities have the potential of causing significant impacts, to be analyzed in the EIR.

Pages 27/8. TRANSPORTATION

Certainly a), and maybe b), should be checked PSI.

There is little auto traffic now for most of the area, except for visitors to the hotel, restaurants, marina and Cesar Chavez Park (which you so far have not included in the planning). On page 28 it says "an increase in visitation..could cause .(increased traffic)..."

At least until more information is available about traffic impacts, (particularly details about how the plan will get visitors to use means other than autos), this should be considered as potentially significant.

Page 28 Typo? ("See explanation XV.b." should be XV.a.?)

Page 31/2. UTILITIES AND SERVICE SYSTEMS

Check a), b) and f) as PSI.

Re a) and b), your tentative conclusion is that there will be a net gain in ecological values, but on page 33 is "...could potentially have impacts that are cumulative significant."

Pending further details and study, questions of degradation vs. enhancement of habitats, etc. is open, and should be noted "potential impact".

Re f) the text on page 32 says the "project would be served by a landfill.... (to accommodate waste produced by park users)"

Until the size and impact of such landfill is detailed and impacts studied, its impacts should be considered as potentially significant.

We will appreciate your favorable consideration of the above comments and suggestions, and thank you for continuing to foster our participation in this process.

Very truly yours,

CITIZENS FOR THE EASTSHORE STATE PARK

Dwight Steele

Dwight Steele, Chairman

Norman La Force

Norman LaForce, Vice Chairman

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
P. O. BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
(510) 286-4454 TDD

Flex your power!
Be energy efficient!

March 14, 2002

ALA-080-5.82
File #ALA080129
SCH #2002022051

Ms. Judith Malamut
Department of Parks and Recreation
250 Executive Boulevard
Suite 4900
San Francisco, CA 94134

Dear Ms. Malamut:

Eastshore Park Project General Plan – Notice of Preparation

Thank you for including the California Department of Transportation in the early stages of the environmental review process for the above-referenced project. We have examined the Notice of Preparation (NOP) and have the following comments to offer:

Our primary concern with the project is the potential impact it may have on existing traffic volumes and congestion on State highways in the vicinity of the project including Interstates 80 and 580 (I-80, I-580). In order to adequately address our concerns regarding the operation of these freeways, please ensure the following information is provided in the environmental document:

a. Information on the project's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed.

b. Current Average Daily Traffic (ADT) and AM and PM peak hour volumes on all significantly affected streets and highways, including crossroads and controlled intersections for the following scenarios: 1) existing, 2) existing plus project, and 3) cumulative.

c. Schematic illustration of the traffic conditions should include trip distribution percentages and volumes for the scenarios described above. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the facilities being evaluated.

d. Mitigation measures that consider highway and non-highway improvements and services. Special attention should be given to the development of alternative solutions to circulation problems which do not rely on increased highway construction.

e. Financing, scheduling, implementation responsibilities, and lead agency monitoring should be fully discussed for all proposed mitigation measures.

We recommend that you utilize the Department's *"Guide for the Preparation of Traffic Impact Studies,"* which can be accessed from the following website:
http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf

We look forward to reviewing the Draft Environmental Impact Report for this project. We do expect to receive a copy from the State Clearinghouse, but in order to expedite our review, you may send two copies in advance to:

Paul Svedersky
Office of Transportation Planning B
California Dept of Transportation, District 4
P.O. Box 23660
Oakland, CA 94623-0660

Should you require further information or have any questions regarding this letter, please call Paul Svedersky of my staff at (510) 622-1639.

Sincerely,

Jean CR Finney

JEAN C. R. FINNEY
District Branch Chief
IGR/CEQA

c: Katie Shulte Joung, State Clearinghouse

> -----Original Message-----
> From: Paul Kamen [SMTP:pk@well.com]
> Sent: Friday, March 15, 2002 8:26 AM
> To: eastshore_statepark@hotmail.com; Steve Hammond; Don Neuwirth
> Subject: Comments on the Environmental Scoping
>
> Not sure where the correct email destination for this is, but I'm sure one
> of these will hit the appropriate target.
>
> ---
>
> Comments on the Environmental Scoping for the Eastshore State Park
>
> by Paul Kamen
> Chair, Berkeley Waterfront Commission
> March 14 2002
>
> The most important elements that appear to be missing from the
> environmental impact studies as proposed involve the broad regional scope
> and the long-term temporal evaluation.
>
> 1) The Spatial Scope: Narrow or Broad?
>
> Examined on the very local level, every structure, parking space, or kayak
> storage rack on the waterfront Is an environmental negative. These things
> all take up open space, displace wildlife, and may even offend the visual
> aesthetic sensibilities of some park users.
>
> However, as soon as the environmental analysis is broadened to a regional
> scope, the equation becomes much more complex and the environmental value
> of the facility may change from negative to positive.
>
> For every kayak, windsurfer or sailboat launched locally, there is going
> to be one less SUV or other large vehicle driving a much longer distance
> to gain access to an equally attractive launch site and an equally
> attractive body of water to play in.
>
> For every kayak, windsurfer or sailboat stored on-site there is one less
> park user who is constrained to come to the park by car. Even when the
> user rarely takes public transit, on-site storage allows much shorter
> travel routes between work and recreation, and allows much smaller
> vehicles to be used. (This has been the clear effect of on-site windsurfer
> storage facilities at Cal Sailing Club, to use the example with which we
> are most familiar. Although the top end windsurfers who have been most
> vocal about access issues generally drive their equipment around in search
> of the "perfect wind," there is another large strata of users who enjoy
> operating from a fixed location where their equipment is permanently
> stored - e.g., the popular and oversubscribed windsurfer storage lockers
> at Cal Sailing Club.)
>
> For every entry-level participant who steps into a rental rowboat, who
> finds a spot on a dragon boat team, or who takes beginner kayak lessons,
> there is one less person engaged in some other form of recreation that
> involves burning a lot of fuel or driving a long distance. But entry-level
> activities require on-site storage facilities, so the local negatives of
> small storage yards need to be weighed against the benefits to regional
> air quality and traffic congestion.
>
>

> 2) Temporal Scope: Short or Long?
>
> The time frame of the study is also important. When we take the long
view,
> we find that environmental protection depends on political factors that
> need broad support to succeed. "Stewardship" is the key word.
> Non-motorized boating is a breeding ground for the future stewards of the
> Bay and the shoreline.
>
> Every time a new participant becomes engaged in a non-motorized
> water-borne activity, there is a strong probability that another
dedicated
> protector and advocate of a clean and healthy bay will be created.
>
> The attraction of floating on water is compelling. There is a sublime
> pleasure in moving about on water, with no engine running, directing
one's
> own course with the forces of wind and muscle. There is a connection
> between the floating human and the Bay that is seldom achieved by walking
> along the shore as a passive observer.
>
> The emotional, sociological, and health benefits of providing diverse
> recreational opportunities close to a large population center are very
> difficult to quantify. But these effects are real, and they factor into
> the way in which our culture treats the natural environment.
>
> The environmental evaluation of the Eastshore State Park must use the
> broadest scope in both geography and time. We can't predict the outcome
> ahead of the study, but it is vital to use the broader scope if
> water-borne activities are to receive a fair evaluation.
>
>
> Paul Kamen
> Chair, Berkeley Waterfront Commission
> 510-540-7968
> www.BerkeleyWaterfront.org

SAN FRANCISCO
BAY TRAIL

LSA ASSOCIATES, INC.
MAR 19 2002

March 14, 2002

Judith Malamut
LSA Associates, Inc.
2215 Fifth Street
Berkeley, CA 94705

Subject: Notice of Preparation of a Draft EIR for the Eastshore State Park Project General Plan

Dear Ms. Malamut:

I am writing to submit comments on behalf of the San Francisco Bay Trail Project on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Eastshore Park Project General Plan. As you know, the Bay Trail Project is a nonprofit organization administered by the Association of Bay Area Governments (ABAG) that coordinates the implementation of the Bay Trail. When complete, the Bay Trail will be a continuous 400-mile network of bicycling and hiking facilities that will encircle San Francisco and San Pablo bays in their entirety. It will link the shoreline of all nine Bay Area counties, as well as 47 cities. To date, more than half the length of the proposed system has been developed.

The Bay Trail Project strongly supports the subject project, as it will both protect and enhance the natural environment and provide shoreline access, two major goals of the Bay Trail. It will enhance the Bay Trail experience, and provide a variety of recreational opportunities for trail users. While the NOP has included the correct Bay Trail alignment within the document, we noticed that portions of the Bay Trail alignment were omitted from the draft Concept Plan map, as detailed on the attached comment sheet. A map of the area is also attached for your reference.

We appreciate the opportunity to review the NOP for this project, and look forward to working with you to complete the Bay Trail through the Eastshore State Park. If you have any questions pertaining to these comments or about the Bay Trail in general, please feel free to call me at 510/464-7919 at any time.

Sincerely,

Melissa Barry

Melissa Barry
Bay Trail Planner

Attachments: Bay Trail Comments
Bay Trail Map

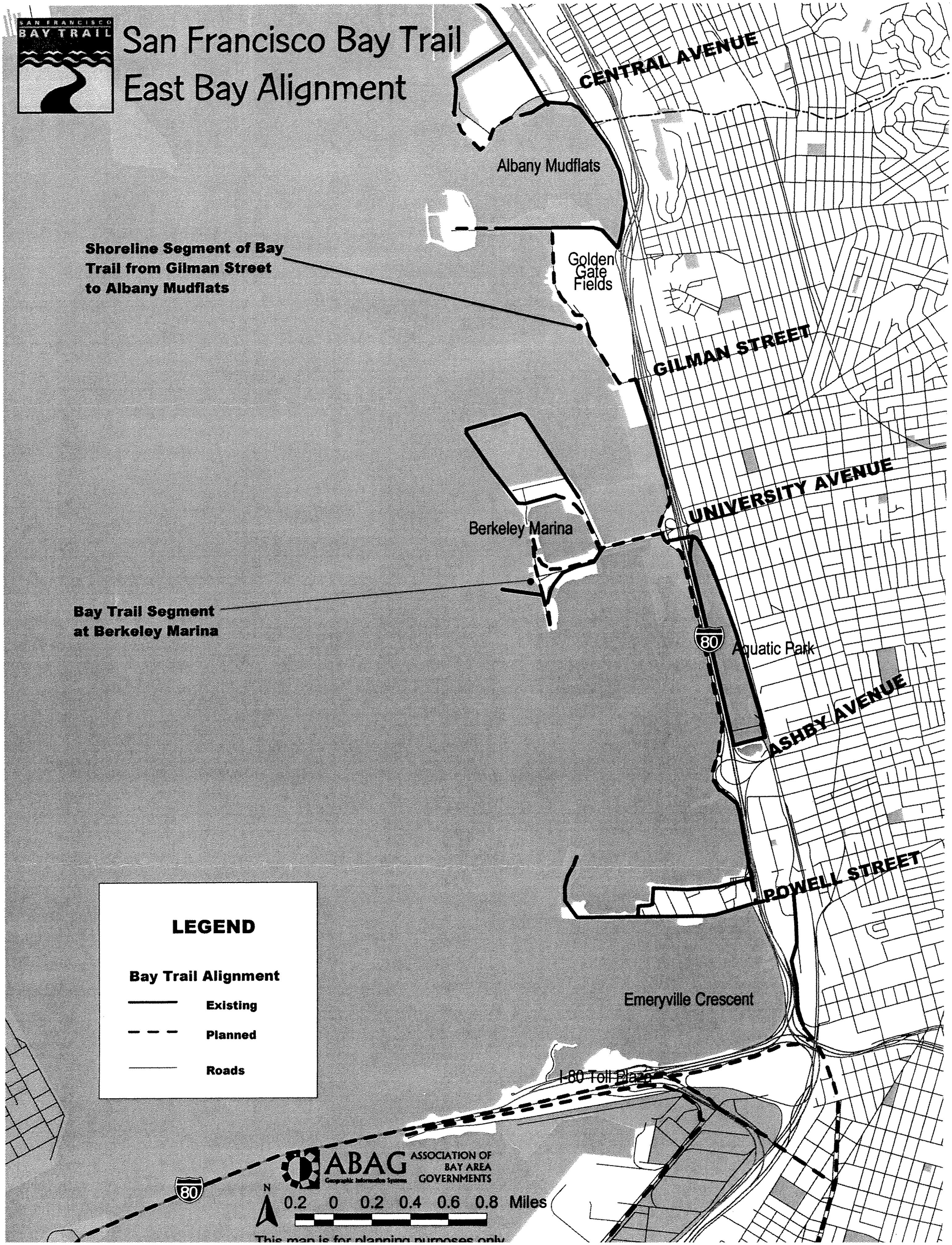
Administered by the Association of Bay Area Governments
P.O. Box 2050 • Oakland California 94604-2050
Joseph P. Bort MetroCenter • 101 Eighth Street • Oakland California 94607-4756
Phone: 510•464•7935
Fax: 510•464•7970

San Francisco Bay Trail Project
Bay Trail Comments, Draft Concept Plan

We request that the following two segments of Bay Trail alignment (which were omitted from the draft Concept Plan map) be included in the final Concept Plan map. These segments are indicated on the attached map.

Shoreline segment of Bay Trail from Gilman Street to Albany Mudflats – This segment, aligned close to the shoreline, travels through Golden Gate Fields and meets up with existing trail at the Albany Mudflats.

Bay Trail segment at Berkeley Marina – This Bay Trail segment extends through the southern portion of the Berkeley Marina to the Berkeley Pier.



SAN FRANCISCO BAY TRAIL
San Francisco Bay Trail
East Bay Alignment
CENTRAL AVENUE
Albany Mudflats
Shoreline Segment of Bay Trail from Gilman Street to Albany Mudflats
Golden Gate Fields
GILMAN STREET
UNIVERSITY AVENUE
Berkeley Marina
Bay Trail Segment at Berkeley Marina
80
Aquatic Park
ASHBY AVENUE
POWELL STREET
LEGEND
Bay Trail Alignment
Existing
Planned
Roads
Emeryville Crescent
I-80 Toll Plaza
80
ABAG
Geographic Information System
ASSOCIATION OF BAY AREA GOVERNMENTS
N
0.2 0 0.2 0.4 0.6 0.8 Miles
This map is for planning purposes only

1600 Broadway, Suite 300
Oakland, CA 94612-2100

t. 510.452.9261
f. 510.452.9266

www.savesfbay.org

March 15, 2002

Ms. Judith Malamut
LSA Associates, Inc.
2215 Fifth Street
Berkeley, CA 94705

Re: Scoping Comments for the Plan Environmental Impact Report for the Eastshore Park Project General Plan

Dear Ms. Malamut:

Save The Bay is the region-wide membership organization devoted to protecting and restoring the San Francisco Bay-Delta Estuary. Approximately 90 percent of the Bay's tidal wetlands have been diked, drained or filled. These lost wetlands played a vital and frequently overlooked role in maintaining a healthy Bay ecosystem, including cleansing pollutants from runoff, recharging overdrawn water supplies, protecting shorelines from erosion, and providing habitat for hundreds of fish and wildlife species. Wetlands and riparian habitat also provide economic benefits such as flood protection, recreational opportunities, and higher quality of life for humans, especially in densely populated areas such as the East Bay.

Save The Bay feels strongly that there are important opportunities to restore wetlands at Eastshore State Park that must be incorporated into the park planning and design process. Very few locations around the Bay are still open to a full range tidal system. The creek mouths and associated wetland habitat within Eastshore State Park are fully tidal and wetland restoration or enhancement projects at these sites have a high likelihood of success.

The outlets of Strawberry and Schoolhouse Creeks, in particular, are prime sites for creek mouth and associated tidal wetland habitat restoration and enhancement. These sites, and other potential restoration sites throughout the park should be included in the EIR as sensitive habitats to be protected from potential adverse affects. Such adverse affects might include construction and development of roads, paths, nearby facilities as well as recreational and maintenance activities in the vicinity of these wetland habitats.

Save The Bay recognizes that recreational activities and sites will be a major use within Eastshore State Park. However, the park mission is to be a recreational facility harmonious with its natural environment. Underlying the park plan is an understanding that public recreation and environmental restoration need to go hand in hand. With this in mind, the EIS should study the potential impacts of recreational and other activities on potential habitat enhancement and restoration sites within Eastshore State Park.

SAVE THE BAY

Save The Bay has developed a "Creeks to the Bay" restoration vision for Eastshore State Park. The vision seeks to restore the critical linkage between the creeks that flow to San Francisco Bay, both functionally and ecologically, including protection and restoration of the creek mouths, associated tidal wetlands, and upstream creek corridors. We enclose our vision statement which has been endorsed by other groups who support protection, enhancement, and restoration of creek mouth and tidal wetland habitat within Eastshore State Park.

Sincerely,

BNisbet

Briggs Nisbet
Restoration Associate

Save The Bay's "Creeks to the Bay" Restoration Vision for Eastshore State Park

Save The Bay has a 40-year history of protecting the East Bay shoreline, and based on this experience, we have developed a comprehensive vision for Eastshore State Park (ESP). While it is not possible to return the East Bay shoreline to what it once was because of extensive filling and urban development, it is possible to protect, enhance, and restore our existing natural resources. Doing so in ESP will help create a more balanced, sustainable environment for humans and wildlife alike.

As stated in the ESP unit vision, "Bay Area residents have long hoped to reclaim their East Bay shoreline by enhancing this area with an inviting mix of recreational, scenic, and natural resources." This couldn't come at a better time. We have lost nearly 95 percent of the Estuary's tidal wetlands, and as the Bay Area's population soars in the next few decades, our wetlands and creeks will face increasing encroachment. The need for open space and recreational opportunities, particularly along the East Bay shoreline, will also grow. Increased public access to the shoreline, including compatible recreational facilities in appropriate locations, will re-connect people to the Bay watershed, educate them about the Bay's diverse ecosystem, encourage civic pride in the Bay, and build public support for Bay restoration. After decades of development (and development proposals) and more than a century of private ownership of much of the East Bay shoreline, we are finally able to reclaim and restore this priceless resource for both humans and wildlife. To accomplish this goal, we must strive to balance the park's recreational opportunities with protection and restoration of its natural resources.

Eastshore State Park has a unique opportunity to improve public access to the shoreline while protecting and enhancing the San Francisco Estuary and the creeks that flow to it. Rather than creating a conceptual plan that overlays a variety of recreational uses onto the landscape, Save The Bay believes that the underlying historical landscape must shape the plan. Although successive reconfiguration of the original landscape has occurred, the park's creeks are still present and represent what remains of the original landscape. Surrounded by artificial landforms, the creek mouths sustain critical biological resources and significant wetland habitat.

Ten creeks flow into the San Francisco Estuary within ESP boundaries. The collective watersheds of Meeker Slough and Baxter (Stege), Central, Cerrito, Codornices, Schoolhouse, Strawberry, Potter, Derby, and Temescal Creeks represent an important ecological link to the Bay. Because these watersheds are essential to the Bay's long-term health, we must restore the critical linkage between these creeks and the Bay, both functionally and ecologically. For this reason, Save The Bay strongly recommends that the ESP conceptual plan include protection and restoration of the park's creek mouths, associated tidal wetlands, and upstream creek corridors.

Our vision of restored creek-to-bay linkages can be achieved only if recreational activities are not superimposed onto the existing landscape, but are well-integrated with an ecologically focused plan that emphasizes protection and restoration of the shoreline and its creeks. Once this ecological framework is in place, recreational opportunities can be incorporated in a manner that minimizes impacts to plant and wildlife habitat. Save The Bay believes that the growing public support for creek and wetland restoration will serve as the foundation for a collaborative restoration project within ESP, particularly if articulated in the conceptual plan. Save The Bay, the Urban Creeks Council, local creek groups, and others are interested in participating in such an effort.

Save The Bay is committed to our "creeks to the Bay" restoration vision. To help achieve this goal, we strongly support the following general principles for protection and enhancement of wetlands and creeks within ESP:

- Restore or enhance all wetlands, creek mouths, creek corridors, and associated habitat within ESP. Creek mouths should be "de-piped" and allowed to create tidal and seasonal wetlands. Provide appropriate conditions for the restoration of native flora.
- Buffer wetlands, creek mouths, creek corridors, and associated habitat from areas of intensive human use (e.g., parking lots, playing fields, and multi-use paths). Provide habitat transitions wherever possible.
- Public access must be provided, but should be sited, designed, and managed to prevent significant adverse effects on wildlife and habitat.
- Provide a continuous Bay Trail linkage throughout ESP. Completing the Bay Trail along the East Bay shoreline will provide the public with a rich shoreline experience that includes wildlife observation and environmental education.
- Limit or exclude grass playing fields that require heavy use of pesticides and fertilizers that can negatively impact wetlands, wildlife, and Bay water quality. If such uses are included within ESP, artificial turf or buffer zones and swales must be used to prevent contaminants from flowing into sensitive habitat areas or the Bay.
- Distinction should be made between general recreation uses and recreational opportunities that require shoreline access. For example, unlike playing fields or motorized watercraft, human- and wind-powered watercraft (e.g., kayaks, windsurfers, canoes) require localized shoreline access with appropriate site conditions. Such uses should be accommodated where possible while minimizing impacts to plant and wildlife habitat.
- Manage the park in a manner that minimizes impacts to plant and wildlife habitat. Particular attention should be paid to migratory birds wintering within ESP.
- Provide opportunities for environmental education, including field trips for the public, with a focus on Bay ecology and the important environmental connection between freshwater creeks and the Estuary.
- Link creek corridors within ESP with upstream creek corridors and associated habitat. Not only will this provide essential wildlife corridors, but also much needed human transportation corridors. Emphasis should be placed on providing linkages between ESP and the Ohlone Greenway.
- Strive to retain the park in a "natural," ecologically functional state. Urban development and impervious paving should be limited to the extent possible.

With respect to specific areas within ESP, Save The Bay has the following recommendations to help create the park's ecological framework:

- Preserve the Emeryville Crescent and Albany Mudflats as protected wetland and wildlife habitat with extremely limited public access.
- Protect, enhance, and restore the Brickyard, the Berkeley Meadow, and the Albany Bulb as wildlife habitat with limited public access. These areas currently provide valuable habitat and offer numerous opportunities for tidal and seasonal wetland restoration. Developed trails should be located around the perimeter of the Meadow and opportunities for nature interpretation provided.
- Preserve the Albany shoreline near Golden Gate Fields (i.e., Fleming Point) as one of the last remaining portions of historic shoreline in the East Bay. A Bay Trail linkage between the North Basin strip and the Albany Bulb should be developed.

- proximity to the Albany Mudflats, this is a poor location for such uses and should be modified to prevent impacts to wildlife habitat or Bay water quality (see comments above).
- Acquire Hoffman Marsh, Stege Marsh, the former Liquid Gold site, the freshwater ponds near Zeneca, and other appropriate parcels along the Richmond shoreline at the earliest opportunity. The wetlands between Meeker Slough and the Albany Mudflats should be restored and managed as an integrated unit, including the wetlands and associated uplands contained at the U.C. Field Station—one of the last pristine moist grassland habitats in the Bay Area. Add all of these parcels to ESP and preserve them as a protected wildlife area similar to the Emeryville Crescent and Albany Mudflats.

It is not often that we are provided an opportunity to recreate our communities, to rethink assumptions and actions made years before. The creation of ESP is one such historic opportunity, and the chance to plan a contiguous 8 ½-mile strip of Bay shoreline should not be squandered. Yet it is a daunting task to juggle competing interests in a densely urban setting. Eastshore State Park provides a unique opportunity to expand public access to the Bay shoreline while protecting and enhancing the crucial link between the San Francisco Estuary and the creeks that flow to it.

Save The Bay is confident that we can create a park that will be a showcase of sustainable development with a strong creek-to-bay connection. Working together, we can reclaim the East Bay shoreline and create a park that not only sustains humans and celebrates our connection to the San Francisco Bay, but also sustains the plants and animals sharing it with us and keeps the Bay and its watershed healthy for future generations.

Save The Bay's "Creeks to the Bay" Restoration Vision for Eastshore State Park has been endorsed by the following organizations:

- Urban Creeks Council
- Friends of Baxter Creek
- Friends of Five Creeks
- Friends of Strawberry Creek

Friends of the ESTUARY

PROTECTING • RESTORING • ENHANCING
THE SAN FRANCISCO BAY-DELTA ESTUARY

February 28, 2002

To Whom It May Concern:

Recognizing that a unique opportunity exists at Eastshore State Park to improve public access to the shoreline while protecting and enhancing the San Francisco Estuary and the creeks that flow to it, Save San Francisco Bay Association has initiated the "Creeks to the Bay" vision concept for the park. This vision focuses on the ten creeks that flow into the San Francisco Estuary within park's boundaries. The collective watersheds of Meeker Slough and Baxter (Stege), Central, Cerrito, Codornices, Schoolhouse, Strawberry, Potter, Derby, and Temescal Creeks represent an important ecological link to the Bay. Save San Francisco Bay Association strongly recommends that the Eastshore State Park plan restore that link, by protecting and enhancing critical wetland habitats, creek mouths, tidal wetlands, and upstream creek corridors within the park.

We, the board of directors of Friends of the Estuary, through unanimous motion at the January 25, 2002 board meeting, support Save San Francisco Bay Association's "Creeks to the Bay" vision statement for Eastshore State Park.

Sincerely,

Ted Smith

Ted Smith,
President

P.O. Box 791
Oakland, CA 94604-0791

(510) 622-2337
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San Francisco Bay Chapter
Serving the counties of Alameda, Contra Costa, Marin and San Francisco

LSA ASSOCIATES, INC.
MAR 18 2002

Reply to 802 Balra Drive, El Cerrito, CA 94530

March 15, 2002

Judith Malamut
LSA Associates
2215 Fifth Street
Berkeley, CA 94710

Larry Tong
Interagency Planning Manager
East Bay Regional Park District
Box 5381
Oakland, CA 94601

Ronald Shaefer
Calif. Dept. of Parks and Recreation
250 Executive Blvd. #4900
San Francisco, CA 94134

Re: Comments on Notice of Preparation of EIR for Eastshore Park Project General Plan

Dear Ms. Malamut and Messrs. Tong and Shaefer:

The Sierra Club provides the following comments regarding the proposed EIR for the Eastshore State Park project.

B. Project Description:

The description is inadequate and fails to identify the wildlife and habitat values for both the wetland areas within the park and the upland areas. The statement that upland areas "now provide some environmental values" is an inaccurate description of those lands, especially of the Meadow and Albany Bulb. Moreover, there is no description of the seasonal wetlands located on the Meadow and their value as habitat. No criteria are provided to explain the basis of the conclusions regarding the type of habitat and the is value.

The scoping document is inadequate because it fails to identify with specificity the preferred plan and the other alternatives. Hence, one is unable to determine the nature and extent of a proposed use, structure, or other activity in order to determine whether the appropriate box was checked off on the check list.

I. Aesthetics

Proposals for structured facilities such as boat houses, a café, and other types of buildings may have an impact on scenic vistas that cannot be mitigated. Consequently, the check list under this category should identify potentially significant impacts which cannot be mitigated.

Similarly, lighting in the evening in such areas as the Meadow, Brickyard, North Basin Cove, the Tidal Basin, and the Albany Plateau will have significant negative impacts on wildlife in those areas and in areas adjacent to the lights. Therefore, this impact should be shown as one that is potentially significant for which there is no mitigation.

III. Air Quality

Unfortunately, without knowing what the "Preferred Plan" is for the park, it is impossible to make any intelligent analysis of air quality impacts. If automobile parking is non-existent or limited, then the use of automobiles, the single greatest source of air pollution, will presumably be very low and there will be a corresponding small amount of air pollution generated for such low auto use. Alternatively, if the plan proposes large scale parking sites, this will promote automobile use which will result in a corresponding high amount of air pollution and air quality impacts. Since the project as describe provides no description of the mitigation measures that would be incorporated, it is inaccurate for the Scoping document to identify air quality impacts as ones which would potentially significant unless mitigated.

Moreover, since the project description does not provide any description of the types of mass transit that would or could be provided, it is questionable whether reliance on auto use for access to the park can be mitigated.

IV. Biological Resources

The Scoping document fails to properly characterize the impacts on biological resources from various proposed facilities identified in the "Concept" plan. Moreover, it is questionable from a legal and policy standpoint for the "Preferred Plan" to propose uses within the park which would have a potentially significant adverse environmental impact that would require mitigation. Mitigation should not be used to allow the development of park areas with uses or facilities that would be damaging to wildlife and habitat. Yet, this is what is proposed.

At this early stage, the "Concept" Plan shows the location of parking lots, structures and facilities, and boat launch facilities in the area of the Meadow where the Nature Resource Inventory identifies the nest of a Harrier, a species of Special Concern. Is it proposed in the plan that the destruction of this habitat will be mitigated? If so, why is that allowed in a park plan? What mitigation is proposed that one can say with a reasonable degree of scientific certainty would result in a mitigation of the impact? None of these questions are asked in the scoping document. Nor does the document adequately identify whether those questions will even be asked, let along answered. The same problem and issue applies to proposals for ballfields on the Albany Plateau, an area rich in bird life, the North Basin Cove, which harbors rafting waterfowl in the winter, yet is proposed to be a site for active water recreation, and the proposed water access point on the Brickyard.

Since we know that the "Preferred Plan" proposes development and uses in these wildlife areas, but does not describe the mitigation that could legally be implemented or should be used, the scoping document should show there will be potentially significant impacts that cannot be mitigated. Thus, the first box should be checked for categories a), b), c), and d).

As for category e), conflict with local policies, the scoping document fails to identify the local policies or ordinances protecting biological resources and incorrectly identifies the impact will be less than significant. This is because the City of Berkeley passed policies in 1983-84 protecting the seasonal wetlands in the Meadow and requiring their continued protection and enhancement. Nor is there any proposal for analysis of impacts from development on the Albany mudflats, especially the impact from ball fields on the mudlfats.

Moreover, the North Basin Cove area is within one of the major identified wildlife corridors for migratory birds. Proposed active recreational use in the North Basin Cove could have a potentially devastating impact on migratory birds protected by the Migratory Bird and Treaty Act. (We are relying memory here for the correct title of the act). The scoping document does not identify this potentially conflicting treaty and corresponding federal regulations regarding it.

VIII. Hydrology and Water Quality

Again, the absence of any identification of what constitutes the project makes this section meaningless at this time. If we rely on the "Concept" Plan, we see that turfed, manicured playing fields are proposed for the Albany Plateau. If these fields are natural grass fields, then standard maintenance practices will require extensive use of fertilizers, herbicides, and pesticides to ensure that the are in a suitable condition for sports. The drainage of the residue from fertilizers, herbicides, and pesticides could have a significant adverse environmental impact on the Albany mudflats, which may not be mitigatable. Similarly, the runoff from automobile oil and tire residues will have a significant adverse impact that cannot be mitigated. Indeed, on page 20 of the scoping document, it is stated that the project will have to be evaluated for the effects of pollution. Therefore, category a), needs to show that this is a potentially significant impact.

IX Land Use and Planning

As noted earlier, the City of Berkeley passed a resolution calling for the protection of seasonal wetlands on the Meadow. Bay Conservation and Development Commission regulations concerning playing fields on the shoreline may also conflict with proposed uses in the park. Therefore, it is inaccurate to check off the box for "no impacts."

XIII Public Services

The proposed project as sketchily identified in the "Concept" plan shows extensive public facilities such as parking lots, eateries, storage facilities, bathrooms, and other such facilities. These facilities can have a major impact on wildlife and habitat as discussed above. Therefore, the box in category a) is inaccurate when it states that the impact of these facilities will be less than significant. These facilities can have a potentially significant impact that cannot be mitigated, and the scoping document should more accurately note that.

XIV Recreation

Category b) is simply inaccurate when the box for having a less than significant impact is checked. As noted above, the location of a boat launch facilities, parking lots, and other facilities right smack dab in the area of the Harrier nest site, a species of special concern, will create a an actual significant adverse environmental impact, to wit, the nest site will be wiped out!! The construction of turfed playing fields on the Albany Plateau will also destroy existing wildlife habitat on that site. The use of the North Basin Cove for active water recreation during the winter months will adversely affect rafting waterfowl which use that area. The location of water access at the small cove on the eastern side of the Brickyard will adversely impact shorebirds and waterfowl in that area, too. Therefore, to be accurate, the box under "Potentially Significant Impact"should be checked.

XV. Transportation

Depending on the amount of auto parking made available, there could be extensively adverse traffic impacts that might not be mitigable. Many adverse impacts from the use of the automobile could result from extensive automobile use. Therefore, until the level of traffic is know it is premature to check off boxes that indicate that impacts can be mitigated. Many probably cannot be adequately mitigated.

XVII Mandatory Findings

The statement that the "new land uses proposed in the General Plan, because they represent contiguous parkland, would have higher ecological value than the uses that currently exist on the site" is simply inaccurate. Currently, the Meadow, North Basin Cove, Albany Bulb, and Albany Plateau all have tremendous ecological value. Therefore, that statement should be changed to reflect the environmental reality of the site.

Sincerely yours,

Norman La Force

Norman La Force, Chair
Sierra Club East Bay Public Lands Committee &
General Counsel for the Sierra Club San Francisco
Bay Chapter

cc: Dwight Steele, CESP
Art Feinstein, Golden Gate Audubon Society
Briggs Nesbit, Save the Bay

EAST BAY
MUNICIPAL UTILITY DISTRICT

March 17, 2002

Ms. Judith Malamut,
LSA Associates Inc.
2215 Fifth Street
Berkeley, CA 94705

Dear Ms. Malamut:

Re: Notice of Preparation for a Draft Environmental Impact Report- Eastshore Park Project General Plan

East Bay Municipal Utility District (District) appreciates this opportunity to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (EIR) for the Eastshore Park Project General Plan. The District notes that the Initial Study and NOP (pages 2, and 30-31, respectively) state that the EIR will evaluate environmental topics including Utilities, and that the Initial Study indicates that the Project will have a Less Than Significant Impact relative to construction of new water or wastewater facilities or expansion of existing facilities, and the requirement for new or expanded water entitlements to serve the Project (none required). The District submits the following information for your consideration and/or use in preparing the Draft EIR.

WATER SERVICE

As identified in the Initial Study (Page 2), all locations proposed for development of recreational facilities are in the Central Pressure Zone. Facilities serving these areas are: Richmond Reservoir, North Reservoir, San Pablo Water Treatment Plant Clearwell, LaHonda Rate Control Station, Road 20 Rate Control Station, Clayton-Fairmount Throttling Valve, Genoa Number 1 Rate Control Station, and the San Pablo Rate Control Station.

Depending upon the locations that water service is requested, water main extensions at applicant expense may be required. Fire flow requirements should be determined before water service is requested. Installation of water mains often require substantial lead time, which should be accounted for in the project sponsor's schedule. Project sponsors should contact the District's New Business Office at (510) 287-1008 to request a water service estimate to determine the costs and conditions for providing water service to the project sites.

The District believes that the potential exists for contaminated soils at various points in the project site corridor. The Draft EIR should address the potential for contaminated soils to exist in the corridor. Should contaminated soils be found to exist in the corridor, the Draft EIR should specify and quantify the nature and level of the contamination and remediation measures to correct the situation. The District will not install pipelines in soil with contamination levels which would expose workers to dermal or respiratory impacts that cannot be mitigated by Level "D" personal protective equipment or which would generate soil or groundwater that requires disposal as a hazardous waste.

Water conservation for new and redeveloped properties should be included in the preparation of the General Plan Draft EIR. To help mitigate the impacts of additional water demands on the District's finite water supply, the District recommends that water conservation measures for both internal and external use be incorporated in the design and construction policies and goals of the proposed General Plan and analyzed in the Draft EIR. The District encourages the use of equipment, devices, and methodology that furthers water conservation and provides for long-term efficient water use. The District also recommends the use of drought resistant plants, use of inert materials, and minimal use of turf areas. Due to the District's limited water supply, all customers should plan for shortages in times of drought. The District's Manager of Water Conservation at (510) 287-0591 should be contacted for more comprehensive information.

WASTEWATER SERVICE

The District currently has wastewater facilities located within areas designated in Figure I-6 of the NOP as East Bay Regional Park District/open space in the Point Isabel Regional Shoreline Park (the District's wet weather facility outfall which crosses under the shoreline trail) and City open space under the utility road on the west side of Aquatic Park. The District needs to maintain it's current rights of ownership and access to operate and maintain these wastewater facilities.

WATER RECYCLING SERVICE

The City of Oakland and the City of Emeryville have adopted ordinances requiring their respective planning departments to contact the District for new developments which occur within a water reuse zone to determine if it is feasible to serve recycled water and whether dual plumbing should be required. The City of Berkeley and the City of Albany are in the process of adopting the similar ordinances. These adoption of these ordinances is in compliance with the provisions of California's Water in Landscaping Act, also know as Senate Bill 2095 (S.B. 2095).

The Eastshore Park project is located within the water reuse zone for the District's East Bayshore Recycled Water Project and is a prospective candidate for use of recycled water for irrigation and toilet flushing. On page 20 of the NOP of the Draft EIR, it is stated that "if feasible, the project would utilize reclaimed water provided by the East Bay Municipal Utilities District for irrigation purposes", and on page 31 it is stated that "if feasible, the proposed park would utilize reclaimed water for irrigation". However, no mention is made of using recycled water for toilet flushing. The Office of Water Recycling recommends that the project sponsor work closely with District staff, as the detailed park plans are developed to assess the feasibility of providing recycled water for irrigation and toilet water flushing. For questions related to wastewater or water recycling, please contact Maura Bonnarens at (510) 287-1141.

If you have questions concerning this letter or need further information to prepare the subject Draft EIR, please contact Marie Valmores, Senior Civil Engineer, at (510) 287-1084.

Sincerely,

W.R. Kirkpatrick

WILLIAM R. KIRKPATRICK
Manager of Water Distribution and Planning

WRK: GAA:sb
sb02_101.doc

TRAC

Trails for Richmond Action Committee
San Francisco Bay Trail

March 18, 2002

73 Belvedere Ave.
Richmond, CA 94801
Phone/Fax: 510-235-2835
Email: beyaert@earthlink.net

Via Fax to:
Ms. Judith Malamut
LSA Associates, Inc.
Berkeley, CA 94705

Dear Ms. Malamut:

In response to the Notice of Preparation for Eastshore State Park, TRAC, the Trails for Richmond Action Committee, requests that the DEIR evaluate siting of a new Bay Trail loop on the north side of the South Richmond Marshes and Meeker Slough. TRAC supports inclusion in ESP of additional Richmond lands as described the March 12 letter from the Richmond Recreation and Parks Commission to Ms. Kay Wilson and Dawn Schellenberg of California State Parks. This TRAC letter recommends evaluation in the DEIR of a Gateway trailhead and trail alignment involving these lands in the City of Richmond.

At South 51st Street in Richmond, there is an existing entrance to the Bay Trail spine connecting Point Isabel Regional Shoreline to Marina Bay. An important feature of this trailhead is its location along the mouth of Baxter Creek, which lends itself to interpretive exhibits. The South 51st Street trailhead should be designated as a "Gateway" to ESP with appropriate improvements and amenities and evaluated in the DEIR.

TRAC also recommends that the DEIR evaluate an attractive addition to the Bay Trail spine connecting Point Isabel Regional Shoreline to Marina Bay. This would be a loop exiting the Bay Trail from Pt. Isabel at South 51st Street and heading NW on the uplands near the edges of the South Richmond Marshes and Meeker Slough. This loop could continue to the Marina Bay Parkway and rejoin the existing Bay Trail on the south side of Meeker Slough. Sensitively sited and designed, this loop would offer excellent opportunities for bird watching and nature interpretation. An important factor to evaluate is whether this loop trail could be constructed on existing public lands and easements or would require acquisition of easements or lands from nearby private property owners such as Zeneca and UC, Berkeley.

Thank you very much for considering thes recommendations.

Sincerely,

Bruce Beyaert, TRAC Chair

cc: Larry Tong, EBRPD
Ronald Schaefer, CA Dept. of Parks and Recreation
Jesse Washington and Mel Davis, City of Richmond

State of California

Memorandum

To : Ms. Judith Malamut
Department of Parks and Recreation
250 Executive Park Boulevard, Suite 4900
San Francisco, California 94134
Fax (510) 540-7344

Date: March 22, 2002

LSA ASSOCIATES, INC.
APR 10 2002
Berkeley

FAXED TO LSA
3/22/02

From : Robert W. Floerke, Regional Manager
Department of Fish and Game - Central Coast Region, Post Office Box 47, Yountville, California 94599

Subject: Proposed Eastshore Park Project General Plan Notice of Preparation (NOP), Cities of Emeryville, Oakland, Berkeley, Alameda, Richmond, Alameda and Contra Costa Counties SCH # 2002022051

Department of Fish and Game personnel have reviewed the NOP of the Draft Environmental Impact Report (DEIR), dated February 19, 2002, for the proposed Eastshore Park Project General Plan. The Eastshore Park Project General Plan is a long-range master plan for a new State Park unit along the eastern shore of the San Francisco Bay. The project includes approximately 8.5 miles of shoreline, consisting of approximately 1,800 acres. Of this, approximately 185 acres are upland, and the remainder (1,615 acres) are tidelands. The project proposes to enhance the area's natural values while improving public access to the shoreline and creating new opportunities for public recreation. The project includes activities such as creek "daylighting," wetland enhancements, upland revegetation, removal of exotic species, debris removal, interpretive facilities, visitor-serving and operations facilities, enhanced public access, parking lots and commercial recreation-oriented concessions in the Cities of Emeryville, Oakland, Berkeley, Alameda, Richmond.

The Department will need to be able to identify and evaluate all activities in both the construction and operational phases of the project which may impact fish and wildlife populations or their habitats, energy supplies, and reproductive requirements.

The DEIR should contain a complete description and map of the vegetation communities, wildlife habitats, creeks, wetlands, and other habitat features on-site, including their acreage. Impacts to biological resources and mitigation measures necessary to offset those impacts should be identified and discussed in the DEIR. We recommend impacts be mitigated by avoidance and minimization, as unavoidable impacts require added mitigation. Recreational activities, including passive activities such as hiking and birdwatching, can have significant impacts on species sensitive to increased public use. The potential impacts to sensitive species and habitats due to recreational activities should be considered in the document and in the design of the project.

The project site provides potential habitat for numerous species of concern, as well as supporting numerous large areas of sensitive habitat. Existing fish and wildlife populations, habitat uses and types, and human uses such as fishing, clamming, or nature study in and adjacent to the project area should be identified and described. The presence of any vegetated intertidal or subtidal area at the project site is always of particular concern to the Department. The presence of eelgrass (*Zostera marina*) within the project area was confirmed in the Initial Study. Any potential impacts which relate to the resource values of these vegetated intertidal or subtidal habitats should also be thoroughly described and discussed in conjunction with compensation for unavoidable, project-induced losses. It is the policy of the Department that a project should cause no net loss of wetland (e.g., intertidal mudflat) acreage or wetland habitat value. Compensation for direct impacts to fish and wildlife habitat should be proposed in the form of habitat replacement, restoration, and improvement.

Surveys should be conducted for any rare, threatened or endangered species that may exist on-site, including wildlife species of special concern and plants identified by the California Native Plant Society on Lists 1 and 2. Surveys for sensitive species, including plants, should be conducted at the proper time of the year. Surveys for all bayland species are not necessary if most of the property with such marsh areas will include a setback from areas where no impacts due to recreational activities are expected. The Department's California Natural Diversity Data Base (CNDDB) should be consulted for any known site-specific occurrences and for a list of species found in the general area. A report from the CNDDB which lists no findings for the project site does not indicate these species do not exist there, only that no information is in the file. Consequently, a negative result from a CNDDB search must not be used to obviate the need for requisite surveys.

Surveys conducted and results must be included in the document. Surveys to be conducted at a later time, or mitigation measures to be identified at some future time, are not acceptable. It has been determined by court ruling that such studies and mitigation measures would be improperly exempt from the process of public and governmental scrutiny which is required under the California Environmental Quality Act (CEQA). A document which requests future studies or future identification of mitigation will be considered incomplete.

The Department must comply with the requirements of CEQA in issuing incidental take permits for State-listed threatened and endangered species. As a responsible agency, the Department will use the EIR to issue permits in the event State-listed species are adversely affected by the project. The DEIR should include an adequate description of mitigation measures to allow the Department to use the document in the issuance of an endangered species permit. The Department should be consulted early in the planning process regarding the need for such a permit.

The project identifies proposed daylighting activities in the creeks within the project area. The Department may support such activities, as the result may improve riparian habitat and water quality. The Department will act as a responsible agency for all activities altering creeks or other stream channels that require a Streambed Alteration Agreement (SAA) to divert, obstruct or otherwise alter stream flow or modify the bed, bank or channel of a stream or its riparian vegetation, and for any storm drains or other associated structures to be constructed within the banks of the stream channels. The DEIR should be developed in consultation with the Department to adequately discuss project design and mitigation requirements for all SAAs. Department personnel are available to assist with the design of the project's creek daylighting activities.

The NOP discusses areas delineated as Federal jurisdictional wetlands and also notes potentially significant impacts to creeks or other unnamed drainages. The U. S. Army Corps of Engineers (Corps) has jurisdiction over activities which include the discharge of fill material in wetland areas under Section 404 of the Clean Water Act. We recommend the Corps be notified to determine their permit requirements. It is the policy of this Department that a project should cause no net loss of either wetland acreage or habitat value. In this case, "wetland" means both marshy areas and stream zones. If the project results in unavoidable impacts to scattered, small wetlands, which would be lost to grading and construction activities, those impacts should be mitigated to provide comparable habitat to the impacted habitat functions and values. Any unavoidable impacts to wetland habitat should be mitigated on-site and in-kind. If such mitigation is not available on-site, enhancement of on-site, out-of-kind habitat or off-site, in-kind compensatory mitigation should include sufficient acreage to mitigate for the loss of impacted habitat, functions and values and to satisfy all applicable regulatory requirements.

Furthermore, for wetlands, the Department recommends that a 100-foot set-back buffer be established measuring from the top of the stream bank, riparian canopy or wetland edge. Construction, including roads and trails, should not be allowed within the buffer area to provide adequate protection of the resources and to minimize the need for future maintenance and bank armoring in the channel. The Department also discourages the use of structures and rip-rap for erosion protection in stream areas, and recommends that suitable landscaping, consisting of native species, be planted.

The Department is also concerned with any potential for excessive turbidity or siltation. Your report should address any erosion which might be caused by deflected wave or water current energy or other forces influenced by structures proposed to be placed in the water. Department staff must consider any influences on water currents, flushing, sedimentation, and normal sediment transport.

Where a seawall, bulkhead, or rip-rap is proposed, construction materials should be identified and impacts discussed. Where rip-rap or rubble is to be used, materials should be considered for use which are of suitable diameter to approximate natural rock habitat. The Department also has a position of not approving the placement of creosote-treated wood products (e.g., pilings) into waters of the State.

Where dredging and dredge material disposal are concerned, the DEIR should demonstrate whether this is maintenance or new work dredging, describe the areal extent and types of habitat impacted, identify the volume of materials and proposed location of disposal, and discuss the quality of sediments to be removed. Potential water and sediment quality problems which should be addressed include operational discharges during dredging and various resource-related impacts from disposal specific to individual disposal sites.

Any removal of any trees should not be conducted during the nesting season (February-August), as this would be considered a significant impact if the trees are actively used for nesting and fledgling. Grassland areas are used for nesting by Northern harriers, a species of special concern. Disturbance to such areas should consider potential impacts to harriers. Any disturbance to nesting activities or the loss of nests is a violation of both State and Federal laws.

The Department recommends any permitted use be consistent with maintaining sensitive wildlife habitat in areas such as wetland, riparian and upland habitat. Three land-use designations are indicated in the project description, including natural preserves, conservation areas and recreation areas. The document should describe anticipated future recreational and maintenance activities, their potential for significant impacts to natural resources and potential enhancement or mitigation measures. If the recreational or maintenance activities include fire breaks for fuels management, the Department recommends that fuel loads be reduced in break areas by mowing. Discing should be avoided.

A thorough description of mitigation measures proposed to reduce or eliminate any significant direct, indirect, or cumulative impacts to biological resources should be included in the project and identified in the DEIR. The length of the mitigation monitoring period should be based on the impacts and mitigation proposed. For example, wetland restoration or creek daylighting activities should be monitored annually for five years or until the criteria described in the monitoring plan are successfully met. Any measures included in the DEIR should address both permanent and temporary impacts. The proposed mitigation measures should be initiated concurrently with the main project's implementation.

As the project includes parking facilities, the Department recommends that methods to intercept oil and grease be developed to ensure that water quality is protected when stormwater discharges into wetland areas.

We appreciate your consideration of our comments. Department personnel are available to address these concerns in greater detail. For terrestrial resources, please contact

Mr. John Krause, Associate Wildlife Biologist, at (415) 454-8050; or Scott Wilson, Habitat Conservation Supervisor, at (707) 944-5584. For marine resources, please contact Ms. Becky Ota, Environmental Scientist, California Department of Fish and Game, Marine Region Office, 350 Harbor Boulevard, Belmont, CA 94002, telephone (650) 631-6789

cc: Mr. David Clore
LSA Associates
2215 5th Street
Berkeley CA 94705

Mr. Ronald Schaefer
Department of Parks and Recreation
Via fax (415) 330-6312

STATE OF CALIFORNIA GRAY DAVIS, *Governor*

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

FIFTY CALIFORNIA STREET, SUITE 2600
SAN FRANCISCO, CALIFORNIA 94111
PHONE: (415) 352-3600
http://www.bcdc.ca.gov

LSA ASSOCIATES, INC.
APR 09 2002
Berkeley

March 22, 2002

Judith Malamut
Department of Parks and Recreation
250 Executive Park Boulevard, Suite 4900
San Francisco, California 94134

Subject: BCDC Inquiry File Nos. MC.MC.8804.1, AL.MC.8205.1, AL.EY.6505.1, AL.EY.6505.4, AL.NO.6917.1, AL.NO.6902.1, AL.BY.7035.1, and AL.AY.6906.1; Notice of Preparation Environmental Impact Report for the East Shore State Park General Plan Draft, State Clearinghouse Number 2002022051

Dear Ms. Malamut:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (EIR) for the Eastshore State Park General Plan, State Clearinghouse Number 2002022051. The NOP is dated February 19, 2002 and was received in our office on February 20, 2002. The Commission has not reviewed the NOP, but we hope you will consider the following staff comments which are based on the *San Francisco Waterfront Special Area Plan*, the *San Francisco Bay Plan*, the McAteer-Petris Act and staff review of the NOP.

Jurisdiction. The Commission has "Bay" jurisdiction over all areas of the Bay subject to tidal action which is defined by the shoreline that extends up to mean high tide, except in marsh areas, where the Commission's Bay jurisdiction extends to five feet above mean sea level. The Commission also has "shoreline band" jurisdiction over an area 100 feet wide inland and parallel to the shoreline. The Commission has land use jurisdiction over water-oriented priority use areas identified in the Bay Plan, including substantial portions of the shoreline covered by the proposed Eastshore State Park General Plan (General Plan). Although specific improvements are not called out in detail in the proposed General Plan, the Commission has jurisdiction over the portions of the project within its 100-foot shoreline band jurisdiction, and any project elements that would be located on fill in San Francisco Bay. Some segments of the shoreline are adjacent to marsh areas, and some are not. The location of the shoreline in the are covered by the proposed General Plan will vary, based on the presence or absence of adjacent marshlands.

McAteer-Petris Act. Section 66605 of the McAteer-Petris Act states, in part that "that further filling of San Francisco Bay....should be authorized only when public benefits from fill clearly exceed public detriment from the loss of the water areas and should be limited to water-oriented uses (such as ports, water-related industry, airports, bridges, wildlife refuges, water-oriented recreation and public assembly, ...) or minor fill for improving shoreline appearance or public access to the Bay;...that fill in the Bay....for any purpose should be authorized only when no alternative upland location is available for such purposes; ...that the water area authorized to be filled should be the minimum necessary to achieve the purpose of the fill;...that the nature, location and extent of any fill should be such that it will minimize harmful effects to the Bay Area, such as, the reduction or impairment of the volume surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment, as defined in Section 21060.5 of the Public Resources Code. That fill should be authorized when the filling would, to the maximum extent feasible, establish a permanent shoreline;

This authority limits the uses for which the Commission can authorize Bay fill and requires that when fill is authorized the amount is limited to minimum amount necessary. The EIR should discuss any new fill proposed, and whether the fill would be for a water-oriented use identified in the McAteer-Petris Act, and whether it would be the minimum necessary, would minimize harmful effects to the Bay and establish a permanent shoreline.

Section 66602 of the McAteer-Petris Act states, in part, "that that existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided. The EIR should discuss whether the project would provide the maximum feasible public access consistent with the project. For a more detailed discussion of the Commission's public access policies, please see the *San Francisco Bay Plan.*

San Francisco Bay Plan Policies Appearance Design and Scenic Views. The Bay Plan Policies on Appearance Design and Scenic Views state, in part, that "all bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance or preserve views of the Bay and shoreline, especially from public areas....Shoreline developments should be built in clusters, leaving open area around them to permit more frequent views of the Bay....Views of the Bay from....roads should be maintained by appropriate arrangements and heights of all developments and landscaping between the view areas and the water." The Bay Plan Map No. 4 designates the Interstate 80 and the Bay Bridge as a scenic roadway. The Initial Study states that "there are no scenic highways in the vicinity of the project site."

The draft EIR should discuss the effect, if any, the project would have on public views of the Bay, particularly down street corridors. Also, the EIR should discuss the effects, if any, on views of the Bay and the East Bay Waterfront from the Bay Bridge and Interstate 80, since Interstate 80 and the Bay Bridge are identified as scenic roadways in the Bay Plan.

Bay Plan Policies on Public Access. The Commission can only approve a project within its jurisdiction if it provides maximum feasible public access, consistent with the project. The Bay Plan policies on public access state, in part that:

> "in addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline....Whenever public access to the Bay is provided as a condition of development, on fill or on the shoreline, the access should be permanently guaranteed.... Public access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of natural resources, and provide for the public's safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier-free access for the physically handicapped to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs.....Access to the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available...."

The EIR should discuss whether the proposed General Plan would be consistent with the public access policies in the San Francisco Bay Plan.

San Francisco Bay Plan Recreation Policies. The Bay Plan Recreation Policies state in part that, "Launching lanes should be placed where wind and water conditions would be most favorable for smaller boats...some launching lanes should be located near prime fishing areas and others near calm, clear water suitable for waterskiing....additional launching facilities should be located around the Bay shoreline, especially where there are few existing facilities. These facilities should be available free or at moderate cost. Launching facilities should include adequate car and trailer parking, restrooms and public access. (4) In marinas, launching facilities should be encouraged where there is adequate upland to provide needed support facilities. Fill for ramps into the water, docks and similar facilities should be permitted. In shoreside parks...where possible, parks should provide some camping facilities accessible by boat, and docking and picnic facilities for boaters...to capitalize on the attractiveness of their Bayfront location, parks should emphasize hiking, bicycling and riding trails, picnic facilities, viewpoints, beaches, and fishing facilities. Recreational facilities that do not need a waterfront location, e.g., golf courses and playing fields, should generally be placed inland, but may be permitted in shoreline areas if they are part of a park complex that is primarily devoted to water-oriented uses...public launching facilities for a variety of boats should be provided in shoreside parks where feasible...where open areas include ecological reserves, access via catwalk or other means should be provided for nature study to the extent that such access does not excessively disturb the natural habitat...limited commercial recreation facilities, such as small restaurants, should be permitted within waterfront parks provided they are clearly incidental to the park use, are in keeping with the basic character of the park, and do not obstruct public access to and enjoyment of the Bay...limited commercial development may be appropriate (at the option of the park agency responsible) in all parks shown on the Plan maps except where there is a specific note to the contrary... Because of the need to increase the recreational opportunities available to Bay Area residents, small amounts of Bay filling may be allowed for shoreline parks and recreational areas that provide substantial public benefits and that cannot be developed without some filling."

Bay Plan map Nos. 4 and 5 indicate that significant portions of the project area are designated waterfront park, beach priority use in the Bay Plan. Map No. 4 Notes 14 and 15 address specific recreation issues in the area covered by the proposed General Plan. Note 14 requires that one "protect and provide public access to shellfish areas offshore." Note15 states, "Albany, Berekeley, Emeryville - Develop public and commercial recreation areas. Some fill may be needed to create usable shoreline areas, protected water areas and park space."

The draft EIR should discuss the relevant San Francisco Bay Plan recreation policies and plan notes, and how the proposed General Plan will be consistent with these policy requirements.

San Francisco Bay Plan Fish and Wildlife and Marshes and Mudflats Policies. The Bay Plan Fish and Wildlife Policies state, in part that "the benefits of fish and wildlife in the Bay should be insured for present and future generations of Californians. Therefore, to the greatest extent feasible, the remaining marshes and mudflats around the Bay, the remaining water volume and surface area of the Bay, and adequate fresh water inflow into the Bay should be maintained. Specific habitats that are needed to prevent the extinction of any species, or to maintain or increase any species that would provide substantial public benefits, should be protected, whether in the Bay or on the shoreline behind dikes. Such areas on the shoreline are designated as Wildlife Areas on the Plan maps."

The Bay Plan Marshes and Mudflats policies state, in part that, "Marshes and mudflats should be maintained to the fullest possible extent to conserve fish and wildlife and to abate air and water pollution. Filling and diking that eliminate marshes and mudflats should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative. Marshes and mudflats are an integral part to the Bay tidal system and therefore should be protected in the same manner as open water areas....Any proposed fills, dikes, or piers should be thoroughly evaluated to determine their effects on marshes and mudflats, and then modified as necessary to minimize any harmful effects....To offset possible additional losses of marshes due to necessary filling and to augment the present marshes, (a) former marshes should be restored when possible through removal of existing dikes, (b) in areas selected on the basis of competent ecological study, some new marshes should be created through carefully placed lifts of dredged spoils, and (c) the quality of existing marshes should be improved by a appropriate measures whenever possible.

The Commission is currently considering amendments to its Marshes and Mudflats and Fish and Wildlife policies, and is scheduled to vote on Staff's recommendation at its April 18, 2002 meeting. A copy of the staff report and preliminary recommendation is attached for your information. Staff's final recommendation should be available by the end of March. These amended policies, if adopted by the Commission in April, would be in effect by approximately August 1, 2002. Although the amended policies will not govern Commission decisions until they are adopted and in force and effect, these policies are likely to guide Commission decisions on future permit decisions in the Eastshore State Park.

Finally, the shoreline of the Emeryville Crescent between Powell Street and the I-880 connector ramp to westbound I-80 is designated as a wildlife priority land use area in the Bay Plan. The Commission uses its Marshes and Mudflats and its Fish and Wildlife policies to evaluate proposed actions within wildlife priority land use areas. The EIR should discuss whether the proposed General Plan would be consistent with the existing marshes and mudflats and fish and wildlife policies, and the wildlife area priority use designation.

Existing BCDC Permits. The EIR should discuss the effects the project would have on existing public access required by the Commission in this area and whether the project would be consistent with the Commission's San Francisco Bay Plan policies on public access. The Commission issued Permit Nos. 4-92, 11-93, M92-13 and 8-92 to Caltrans for the I-80 Operational Improvement project and the Cypress Replacement Project. These permits require, in part, that continuous shoreline public access be provided in the project area. These permits also require the installation and maintenance of substantial mitigation improvements to offset the environmental effects of these project. The EIR should evaluate whether the proposed project would have any effects on the public access or mitigation required in these permits. The Commission also issued permit M94-40 for trail and other improvements between Point Isabel and Meeker Slough in Richmond. The draft EIR should evaluate whether the project would affect these required public access areas.

Thank you for the opportunity to comment on the NOP for the Preparation draft Environmental Impact Report for the Eastshore State Park General Plan. If you have any questions regarding this letter, or any other matter, please do not hesitate to contact me by phone at 415 352-3656 or email joel@bcdc.ca.gov.

Sincerely,

Joe LaClair

JOSEPH LaCLAIR
Senior Planner

Encl.

JL/gg

cc: Katie Shulte Joung, State Clearinghouse
Ronald Schaefer, Department of Parks and Recreation
Larry Tong, East Bay Regional Park District
David Clore, LSA Associates

Alameda County
Congestion Management Agency

April 2, 2002

Mr. Ronald Schaefer
California Department of Parks and Recreation
District Superintendent, Bay Area District
250 Executive Park Boulevard, Suite 4900
San Francisco, CA 94134

SUBJECT: Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Eastshore Park Project General Plan in the East Bay

Dear Mr. Schaefer:

Thank you for the opportunity to comment on the California Department of Parks and Recreation's Notice of Preparation of a Draft Environmental Impact Report for the Eastshore Park Project. The project site occupies approximately 8.5 miles of the eastern San Francisco Bay shoreline between the Bay Bridge in Oakland and the Marina Bay neighborhood in Richmond. The park would be located within five cities (Oakland, Emeryville, Berkeley, Albany, and Richmond) and two counties (Alameda and Contra Costa). The project is a long-range Master Plan for a new State park and includes 1,800 acres of shoreline. The Plan proposes three general land use designations: natural preserves, conservation areas, and recreation areas.

Based on our review of the Notice of Preparation, the ACCMA has no comment because the project does not appear to meet the Tier 1 requirements of generating 100 or more p.m. peak hour trips over existing conditions. Therefore it is exempt from the Land Use Analysis Program of the Congestion Management Program.

Once again, thank you for the opportunity to comment on this Notice of Preparation. Please do not hesitate to contact me at 510/836-2560 ext. 13 if you require additional information.

Sincerely,

Beth Walukas

Beth Walukas
Senior Transportation Planner

cc: Judith Malamut, LSA Associates, Inc.
file: CMP/Environmental Review Opinions - Responses - 2002

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
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California Regional Water Quality Control Board
San Francisco Bay Region

Winston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov
1515 Clay Street, Suite 1400, Oakland, California 94612
Phone (510) 622-2300 FAX (510) 622-2460

Gray Davis
Governor

April 19, 2002
File No: 2199.9317
01S0349 (BG)

LSA ASSOCIATES, INC.
APR 22 2002
Berkeley

East Bay Regional Park District
Attn: Mr. Larry Tong
Interagency Planning Manager
P.O. Box 5381
Oakland, CA 94605

SUBJECT: Comments on the Notice of Preparation and Initial Study for a Draft Environmental Impact Report for the Eastshore Park Project General Plan

Dear Mr. Tong:

Thank you for meeting with us on March 27, 2002, to review the Eastshore Park planning process and the intended scope of the environmental document being prepared pursuant to a February 14, 2002, Notice of Preparation and Initial Study (NOP) for the Draft Environmental Impact Report for the Eastshore Park Project General Plan (DEIR). This letter transmits our comments on the NOP.

Background:

The project site occupies approximately 8.5 miles of the eastern San Francisco Bay shoreline (including upland and tidal lands) extending from the Bay Bridge in Oakland north to the Marina Bay neighborhood in Richmond. The site is located within five cities (Oakland, Emeryville, Berkeley, Albany, and Richmond), and two counties (Contra Costa and Alameda). It consists of lands acquired from Catellus (as described in the 1996 Eastshore Park Transaction), lands owned by the East Bay Regional Park District (EBRPD), and lands owned by the cities. The upland areas consist entirely of former landfills which received a variety of municipal, construction, and industrial wastes.

The Board acted as lead regulatory oversight agency for the investigation and remediation of soil and groundwater contamination for lands within the project area. Site cleanup requirements were issued in 1997 (Order No. 97-069) for Catellus Emeryville Cresent properties and in 1998 (Order No. 98-072) for Catellus properties in Berkeley, Albany, and Richmond. Waste discharge requirements were issued in 1999 (Order No. 99-068) for the Albany Bulb. Waste discharge requirements were issued in 1987 (Order No. 87-014) and rescinded in 1998 (Order No. 98-072) for Point Isabel (Battery Bay).

Orders 97-069 and 98-072 set action levels for acceptable contaminant concentrations in soil and groundwater (attachment one), based on ecological and direct contact human exposure scenarios, and approved a remediation and risk management plan (RRMP). The RRMP required removal of surface soils at about 15 locations (mostly for metals) and implementation of on-going risk management measures (attachment two). The RRMP assumed that surface soils would not be disturbed in the future and would prevent direct contact with subsurface soils (greater than two feet below ground surface).

In 1998, Catellus completed remediation activities, the Board issued a Notice of Completion, and EBRPD and the California Department of Parks and Recreation assumed responsibility for implementation of the on-going risk management measures.

Comments:

As we discussed, the DEIR should identify: 1) Board Orders applicable to Eastshore Park lands, 2) on-going requirements for risk management and reporting, and 3) mitigation measures to avoid or minimize leachate discharges from these former landfills. The DEIR should discuss these potential constraints to future park development and propose mitigation measures, in concept, to be included in project level environmental documents. Three specific points of concern are listed below.

1) As part of the remedial effort prescribed by Order No. 87-014, lead contaminated soils were placed at Point Isabel and covered with an engineered cap. Order No. 98-072 requires on-going risk management measures to maintain the integrity of the cap, prevent erosion, and prevent human or ecological exposures to contaminated materials. Planned uses of the Point Isabel area should be conditioned to assure the integrity of the engineered cap and conformance with the Board Order.

2) The RRMP approved by Order No. 98-072 required remediation of surface soils to protect human health under a direct exposure scenario. The subsurface soils were not remediated. If future park development or use results in surface soil disturbing activities, then additional characterization or remedial action may be necessary.

3) Increased stormwater infiltration or irrigation of the former landfills that will be developed as the Eastshore Park could leach recalcitrant contaminants (petroleum hydrocarbons, and volatile organic compounds) from the fill materials and release them to San Francisco Bay. This potential detrimental impact to water quality should be identified and mitigation measures proposed, as appropriate.

Thank you again for meeting with us, and giving us the opportunity to submit our comments on the NOP.

If you have any further questions, please contact Betty Graham of my staff at (510) 622-2358 [e-mail bg@rb2.swrcb.ca.gov].

Sincerely,

Stephen A. Hill
Toxics Cleanup Division Chief

For Loretta K. Barsamian
Executive Officer

cc: Mailing List

East Bay Regional Park District
Attn. Mr. Brad Olson
Environmental Progams Manager
P.O. Box 5381
Oakland, CA 94605

LSA Associates, Inc.
Attn. Mr. David Clore
Principal in Charge
2215 Fifth Street
Berkeley, CA 94710

CA Department of Parks and Recreation
Attn: Mr. Ronald Schaefer
District Superintendent, Bay Area District
250 Executive Park Boulevard, Suite 4900
San Francisco, CA 94134

Department of Toxic Substances Control
Attn: Ms. Barbara Cook
700 Heinz Ave.
Berkeley, CA 94710

Table 1 - Action Levels for Upland Soil and Groundwater

Constituents of Concern (by category)	Upland Soil All (mg/kg) (1)	Upland Soil Buffer (mg/kg) (2)	Groundwater Non-buffer (mg/l) (3)	Groundwater Buffer (mg/l) (4)
METALS:				
Antimony	340		5	0.5
Arsenic	14*	70	0.36	0.036
Barium	1,170			
Beryllium	1.7			
Cadmium	33	9.6	0.093	0.0093
Chromium	91.4*	370	0.5	0.05
Cobalt	51,000			
Copper	415	270	0.029	0.0029
Lead (5)	840	218	0.056	0.0056
Mercury	0.9	0.71	0.00025	0.000025
Molybdenum	16.4			
Nickel	345	120.2*	0.071	0.0071
Selenium	5.7		0.71	0.071
Silver	4,300	3.7	0.023	0.0023
Thallium	42.5*		2.13	0.213
Vanadium	237			
Zinc	1,140	410	0.58	0.058
VOCS:				
Benzene			5.1	0.51
Chlorobenzene			1.29	0.129
Chloroform			64	6.4
1,4-Dichlorobenzene			1.29	0.129
Trichloroethene (TCE)			2.0	0.2
Tetrachloroethene (PCE)			4.5	0.45
Ethylbenzene			0.43	0.043
Toluene			50	5
SVOCS:				
Anthracene	5.7**	1.1	0.3	0.03
Benzo(a)anthracene	3.9	1.6		
Benzo(a)pyrene	0.39	1.6		
Benzo(b)fluoranthene	3.9			
Benzo(g,h,i)perylene	20,000			
Bis(2-ethylhexyl)-phthalate	640		0.059	0.0059
Chrysene	7.2**	2.8		
Di-n-octyl-phthalate			2.94	0.294

Constituents of Concern (by category)	Upland Soil All (mg/kg) (1)	Upland Soil Buffer (mg/kg) (2)	Groundwater Non-buffer (mg/l) (3)	Groundwater Buffer (mg/l) (4)
Fluoranthene	27,000	5.1		
Indeno(1,2,3-cd)pyrene	3.9			
2-Methyl naphthalene	11,000	0.67		
4-Methyl phenol	3,600			
Naphthalene	242**	2.1	2.35	0.235
N-Nitroso-diphenylamine	600		3,300	330
Phenanthrene	8,100	1.5	0.3	0.03
Pyrene	100**	2.6		
OTHER:				
TPHg (6)	1,000		3 to 30	0.3 to 3
TPHd (6)	1,000	520	3 to 30	0.3 to 3
PCB-1254	11.8			
PCB-1260	0.63			
Total PCBs	1.5	0.18		
Total PAHs		44.8	0.15	0.015

Notes:

1. Lesser of human health and ecological action levels. Human health action levels are "regional park PRGs", based on USEPA Region 9 preliminary remediation goals (PRGs) for residential use (1996) as adjusted for typical regional-park exposure duration. Ecological action levels are from DOE Oak Ridge ecological risk assessment (Lockheed-Martin, "Preliminary Remediation Goals for Ecological Endpoints", 1996, white-footed mouse). These action levels apply to buffer and non-buffer soils.
2. From National Oceanic and Atmospheric Administration, Effect Range Median Levels (NOAA ERMs), Long et al., 1995. Where the column 1 action level is more stringent than the column 2 action level for a given constituent, the column 1 value takes precedence (e.g. arsenic) in the upland buffer.
3. Ten times relevant water quality objectives for saltwater organisms.
4. Using relevant water quality objectives for saltwater organisms.
5. Upland soil action level for lead based on cleanup goals calculated in human health risk assessments conducted for several Bay Area sites, including the Presidio Army Base in San Francisco.
6. TPHg and TPHd action levels for groundwater based on literature survey of chronic-toxicity in aquatic species and on site-specific chronic-toxicity studies at San Francisco International Airport. Lower value represents concentration that caused no effects in 90% of studies identified in literature survey. Higher value represents no-effect concentration based on SFIA studies.

* Corrected for ambient soil concentrations as reported in LBNL 1995.

** Soil-saturation concentration (adjusted downward from health-based value).

LONG-TERM RISK MANAGEMENT ACTIVITIES
East Shore Properties
Emeryville/Oakland/Berkeley/Albany/Richmond, California

Long-Term Obligation (Emeryville Crescent Property)	Document	Reference
Periodic inspections and maintenance of vegetation/cover in "remediation and risk management areas"	Crescent RP[i]	Page 2 paragraphs 2 and 3[ii]; page 7 paragraphs 1, 2, and 4 and Figures 1 and 2; page 8 paragraphs 1, 2, and 4; Table A Category II.
Annual reporting of risk management measures	Crescent RP	Page 8 paragraphs 2 through 6.
Measures to be taken in cases of excavation in a cover area	Crescent RP	Page 7 paragraph 5; page 8 paragraph 1.
Protective measures for worker health and safety in designated locations	Crescent RP	Page 2 paragraph 4; Appendix A.

Long-Term Obligation (Berkeley/Albany/Richmond Properties)	Document	Reference
Periodic inspection and maintenance of vegetation/cover/erosion control in all "risk management areas" included in RRMP	RRMP[iii] and RRMP Addendum[iv]	Table 1-2 Category II; page 1-15 paragraph 1; page 1-16 paragraphs 4 and 5; page B-5 paragraphs 1 and 2; page 4-9 paragraph 2 and revised Figure 4-5 (included in RRMP Addendum); page 5-7 paragraph 2 and revised Figure 5-5 (included in the RRMP addendum).
Periodic inspection and maintenance of vegetation/cover in all "remediated areas" included in RRMP	RRMP and RRMP Addendum	Table 1-2 Category II; page 1-15 paragraph 2; page 1-16 paragraph 3; page B-5 paragraph 2; page 3-13 paragraph 6 and Figure 3-4; page 4-14 paragraph 6 and revised Figure 4-5 (included in RRMP Addendum); page 5-13 paragraph 3 and revised Figure 5-5 (included in RRMP Addendum); page 6-14 paragraph 6 and Figure 6-5.

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i *Addendum to Remediation Plan, Emeryville Crescent, Emeryville/Oakland, California*, ERM-West 16 March 1998

ii For purposes of this table, paragraphs are counted from the first full paragraph on the indicated page and individual bulleted or numbered items are counted as separate paragraphs.

iii *Remediation and Risk Management Plan, East Shore Properties, Berkeley/Albany/Richmond, California*. ERM-West/Erler & Kalinowski, Inc. 18 May 1998.

iv *Addendum to Remediation and Risk Management Plan, East Shore Properties, Berkeley/Albany/Richmond, California*, ERM-West/Erler & Kalinowski, Inc. 30 June 1998

LONG-TERM RISK MANAGEMENT ACTIVITIES

East Shore Properties

Emeryville/Oakland/Berkeley/Albany/Richmond, California

Long-Term Obligation (Berkeley/Albany/Richmond Properties)	**Document**	**Reference**
Measures to be taken in cases of excavation in a cover area	RRMP	Table 1-2 Category II; page 1-15 paragraph2; pages 5-16 paragraph 1; page B-3 paragraphs 4 and 5.
Annual reporting of risk management measures	RRMP	Page 1-15 paragraphs 3, 4, and 5; page 1-16 paragraphs 1, 2, and 3; page B-6 paragraphs 1 through 6.
Point Isabel cap maintenance	RRMP	Page 6-13 paragraph 2.
Hoffman Marsh environmental offset	RRMP	Page 6-27 paragraph 7.
Protection of environmental resources at Hoffman Marsh	RRMP	Page 6-27 paragraph 8; page 6-28 paragraph 4.
Protective measures for worker health and safety in designated locations	RRMP	Page 1-15 paragraph 2; page B-6 paragraphs 1 and 2; page B-7 paragraphs 1 and 2.

APPENDIX B

DRAFT GENERAL PLAN GUIDELINES

A. PROJECT PURPOSE AND VISION

The Plan section establishes the overall long-range purpose and vision for the future of the Eastshore park project. Specific goals and supporting guidelines further clarify the vision for the future of the Eastshore park project. The goals and guidelines are designed to address the issues identified as critical in Section II. C.: Issues and Analysis, while providing a solid foundation for future resource protection, preservation, enhancement, as well as development and interpretation within the park project. The goals and guidelines provide direction for the design and implementation of subsequent management and development plans to be prepared in the future as funding becomes available.

Although much of the content of this plan has been driven by current issues, the intent is that the General Plan provide a vision for the future. This General Plan cannot predict the future with any degree of accuracy and as such is intended as a dynamic document that will allow managers the opportunity to incorporate newly emerging technologies and improved management concepts for resolving both current issues, along with the ability to provide adequate direction for resolving those that may arise in the future.

1. Project Purpose

The Declaration of Purpose describes the purpose of the park project and is the broadest statement of management goals. This declaration is required by Public Resources Code, Section 5002.2 (b), "setting forth specific long-range management objectives for the park consistent with the park's classification..."

The Public Resources Code, Section 5003.03(h) has proposed that the Eastshore park project shall be:

> *"...a recreational facility harmonious with its natural setting."*

To accomplish this purpose, the park project's resources will be managed by balancing its scenic and recreational resources with the protection and restoration of its natural resources. Opportunities to enjoy the on-shore breezes, the wildlife, as well as the world-renowned vistas of urban skylines and the Bay and Golden Gate Bridges shall be enhanced. Public access to the San Francisco Bay and its shoreline shall be provided, consistent with resource protection, to meet recreational needs through use of the Bay Trail and waterfront recreational areas.

2. Project Vision

The park project vision provides an image of the park project's ideal future appearance and character. The vision for the Eastshore park project is as follows:

> Bay Area residents have long hoped to reclaim their East Bay shoreline by enhancing this area with an inviting mix of recreational, scenic and natural resources. The Eastshore park project will become an eight-and-one-half-mile ribbon of parkland seamlessly connecting recreational and habitat areas to the cities of Oakland, Emeryville, Berkeley, Albany and Richmond. The Bay Trail will be the primary means of shoreline access and passage through the park project. A balanced and diverse range of recreational and cultural improvements, which are unique to this shoreline, will be provided. Windsurfing, kayaking, sailing and other appropriate recreational uses of San Francisco Bay shall be encouraged. All recreational, maintenance and interpretive facilities shall be located in a manner that will protect natural , cultural, and scenic resources. Habitat values shall be preserved and enhanced at appropriate upland, creek, open water and wetland areas. Wildlife observation and interpretation opportunities will be offered. The Eastshore park project will become one of the rare places where an urban area reconnects with its waterfront to enjoy magnificent vistas and quality outdoor recreational activities.

B. CLASSIFICATION AND MANAGEMENT ZONES

Management of the Eastshore park project is directed by a hierarchy of mandates, the most general of which is the mission of the Department of Parks and Recreation, which is to:

> *Provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.*

1. Classification

Typically, the naming and classification of a State park unit occurs after the preparation of the Resource Inventory and prior to the preparation of the General Plan. This is done so that the Resource Inventory and the classification can inform the process of identifying appropriate visitor activities and guide the formulation of resource management guidelines. However, during the Eastshore planning process it became clear that given the unique characteristics of this project (i.e., its urban context, dramatic visual and aquatic habitat resources, and ruderal upland habitats and landfill), there was not a clear consensus on the appropriate classification. Rather than prematurely proposing a classification that could then constrain the planning for the park project, it was decided to proceed with the planning and let the classification evolve out of the process.

Based on the extensive public input during the formulation of the plan, and the resource base identified in the Resource Inventory, it is recommended that the Eastshore park project be classified and named "Eastshore State Recreation Area". This recommendation is based on several criteria including consistency with the Resource Code, consistency with DPR practice, consistency with public use and acceptability, and unit management flexibility. It is also based on the legislation that authorized purchase of the Eastshore project, which called for "...a recreational facility harmonious with its natural setting" (Public Resources Code, Section 5002.2 (b)).

Based on the range of recreational uses and environmental enhancements proposed in the plan, the State Recreation Area classification appears to provide the appropriate balance between potential recreation uses and natural resource protection. While there is considerable overlap in the level of protection provided and potential uses permitted by each classification identified in the Resource Code, key concepts in the definition of State Recreation Area support this recommendation, including:

- *"...consisting of areas selected and developed to provide multiple recreational opportunities to meet other than purely local needs. The areas shall be selected for their having terrain capable of withstanding extensive human impact and for their proximity to large population centers, major routes of travel, or proven recreational resources such as manmade or natural bodies of water."* (PRC § 5019.56 a)
- *"In the planning of improvements...consideration shall be given to compatibility of design with the surrounding scenic and environmental characteristics."* (PRC § 5019.56)

From the perspective of past experience, the Recreation Area classification also appears more consistent with the use patterns and resource base of local State recreation areas such as Candlestick Point State Recreation Area and Benecia State Recreation Area, than it does with local State Parks such as China Camp, Mt. Tamalpais, or Mount Diablo, each of which has a resource base that is in more pristine condition.

In addition to the overall unit classification, it is also recommended that two sub-units, the Emeryville Crescent, and the Albany Mudflats, be classified as Natural Preserves in recognition of their significant and sensitive resource value (PRC § 5019.71). These two tidal marsh areas are major feeding and resting areas in the North Bay for birds migrating along the Pacific Flyway. Since these areas are predominantly aquatic in nature, it is also recommended that those areas within the Preserves that are seaward of mean high tide line should also be classified as State Estuarine Reserves (PRC § 5019.56 a). Pursuant to the Marine Managed Areas Improvement Act (Chapter 7, § 36600 of Division 27), the State Parks Commission must receive the concurrence of the Fish and Game Commission on any classification of a marine managed area established after January 1, 2001. Thus, the recommendation that these two areas be classified as State Estuarine Reserves will be reviewed by the Fish and Game Commission at a future date.

The Hoffman Marsh and South Richmond Shoreline area shares similar resource values to the Emeryville Crescent and Albany Mudflats. However, due to the fragmented nature of the parcels within the park project, this subunit is not recommended for classification as a Natural Preserve at this time. If, in the future, acquisition of additional contiguous marsh lands results in the creation of a more complete ecological unit within the park project boundaries, classification of this sub-unit as a Natural Preserve should be considered.

2. Management Zones

The creation of management zones is the first and most general attempt to spatially define the management scheme for the Eastshore park project. Five broad management zones have been established within the park project, along with nineteen sub-zones. These management zones and sub-zones reflect consideration of a number of factors including the resource values of the various areas, the type and intensity of proposed land use and visitor experience, and practicalities of day-to-day management and operations. The zones represent portions of the park project that share common characteristics and will be managed as identifiable components or subareas.

The initial step in formulating the management zones was to designate each area of the park project, including both upland and aquatic areas, with one of three broad land use classifications: "preservation areas", "conservation areas", or "recreation areas". The determination of the appropriate land use designation for each area was based on the character and quality of the existing natural resources in each area, and the resources' potential sensitivity to disturbance. The intent of the land use classifications is to establish the appropriate land use character and intensity for each area within the park project, and to provide a resource-based framework for establishing the management zones and for making future management decisions. Figures III-1 through III-3 show the land use classifications within the Eastshore park project. The definitions for these three land use categories are as follows:

- **Preservation Areas** are those areas with unique or fragile habitat and resource values that need to be protected and preserved. The Emeryville Crescent, Albany Mudflats, and Hoffman Marsh/South Richmond Shoreline are identified as preservation areas. Public access to these areas will be restricted to safety, scientific, maintenance, and controlled interpretive and educational activities.
- **Conservation Areas** are areas whose natural habitat values will be protected and enhanced while accommodating lower intensity recreation that is compatible with and dependent on those values. The Berkeley Meadow and Albany Neck and Bulb are examples of designated Conservation Areas. Proposed environmental enhancements to the Conservation Areas may include activities such as creek daylighting, wetlands enhancement, uplands re-vegetation, removal of exotic species, and debris removal.
- **Recreation Areas** are those areas that can accommodate more intensive recreation. These areas are characterized as having limited habitat value, and sufficient size to support the necessary parking, utilities, and infrastructure needed to support recreational uses. Areas designated for recreation include portions of the Brickyard, North Basin Strip, Albany Plateau, Pt. Isabel, and North Pt. Isabel. Recreation areas may include facilities such as interpretive centers, visitor-serving and operations facilities, enhanced water access points, turf areas, picnic facilities, off-leash dog areas, sports fields, public art, parking lots, restrooms, and commercial recreation-oriented concessions.

Once the general land use patterns within the park project were established, other factors such as the location, size, and adjacencies of the areas were considered in defining the larger management zones. Given the length of the Eastshore park project, geographic relationships play a significant role in defining the five management zones. The definition of the management sub-zones generally corresponds to areas with a single land use classification (e.g., recreation), although a few sub-zones contain two land use classifications (e.g., conservation and recreation).

The Management Zones and Sub-Zones for the Eastshore park project include the following:

- Emeryville Crescent
  - Tidal Marsh, Open Water and Area/Preserve
  - Open Water/Conservation
  - Powell Street Frontage/Upland

- South Berkeley/North Emeryville Shoreline Area
  - Emeryville-Berkeley Beach Shoreline
  - Brickyard Cove
  - Brickyard Upland
  - University Avenue Shoreline
  - South Sailing Basin

- Berkeley Meadow/North Basin Area
  - Meadow
  - North Basin Strip
  - North Basin

- Albany Area
  - Albany Beach
  - Albany Plateau
  - Albany Neck/Bulb
  - Albany Mudflats
  - Open Waters

- Point Isabel/South Richmond Shoreline
  - Pt Isabel/North Point Isabel
  - Hoffman Marsh
  - South Richmond Shoreline

Figure III-4 shows the location of each of the Management Zones and Sub-zones.

3. Land Use Summary

The General Plan has been developed to guide future use and enhancement of the Eastshore park project over the next decades. The General Plan strives to provide a balance of uses that protects the park project's natural and cultural resources while enhancing the public's ability to enjoy and understand them. The total land area of the

Eastshore park project consists of approximately 2,262 acres, of which roughly 2,002 acres are tidelands and 260 acres are uplands (i.e., generally above mean high tide).

As described above, the General Plan divides this total acreage into three broad land use categories: preservation areas, conservation areas, and recreation areas. Table III-1 provides a summary of the land use area associated with each land use category. Figures III-1 through III-3 illustrate the distribution and extent of each land use designation.

Approximately 29 percent of the park project area, or 650 acres, is designated as preservation area. Preservation areas include approximately 10 acres of upland area and 640 acres of tideland areas. Lands abutting the Emeryville Crescent, Albany Mudflats, and the three non-contiguous parcels in the Hoffman Marsh are identified as upland preservation areas. Tideland preservation areas are located in the Emeryville Crescent and the Albany Mudflats.

Approximately 15 percent of the park project area, or 345 acres, is designated as conservation area. Conservation areas include approximately 158 acres of upland area and 187 acres of tideland area. Upland conservation areas include: the Albany Neck and Bulb, the northern and eastern perimeter of the Albany Plateau, Albany Beach, the Berkeley Meadow, the shoreline around Brickyard Cove, the shoreline south of University Avenue, and the shoreline south of Powell Street. Tideland conservation areas include the Brickyard Cove, the west end of the Albany Bulb, and the westernmost portion of the Emeryville Crescent.

Approximately 56 percent of the park project area, or 1,267 acres, is designated as recreation area. Recreation areas include approximately 116 acres of upland areas and 1,151 acres of tideland areas. Upland recreation areas include upland portions of the Brickyard, the North Basin Strip, the Albany Plateau, Point Isabel Regional Shoreline, and North Point Isabel. Tideland recreation areas extend from just north of the Emeryville Peninsula through the South and North Basins in Berkeley to the southwest tip of Pt. Isabel.

C. GENERAL PROJECT-WIDE MANAGEMENT GOALS AND GUIDELINES

1. Resource Management and Protection

This section presents project-wide goals and guidelines relating to resource management, visitor services, interpretation, operations and visitor capacity. This section provides goals and guidelines that apply to all geographic areas of the park (more detailed, area-specific guidelines can be found in the subsequent section of this chapter). These goals and guidelines are intended to implement the Declaration of Purpose and Vision for the Eastshore park project. The park project's resources will be managed by balancing its scenic and recreational resources with the protection and restoration of its natural resources.

a. Parkwide Management Goals & Guidelines for Natural Resources

The Department of Parks and Recreation's mission is to "provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation." Toward this end, the following goals and guidelines create a management framework that will protect existing natural resources while establishing an active program for enhancing the site's natural resource values and supporting nature's re-integration of the largely man-made shoreline into the Bay ecology.

Goals

- Manage the park project's resources by balancing access to its scenic and recreational resources with the protection and restoration of its natural resources for the enjoyment of the people of the San Francisco Bay region and the State of California.

- Preserve and enhance habitat values at appropriate upland, creek, open water, and wetland areas so that the character of the park project's conservation and preservation areas more closely resemble the natural Bay shoreline.

b. Plant Life Management

The General Plan has been designed to protect existing native vegetation and plant communities, which provide important wildlife habitat values. Wetlands represent one of the most significant communities in the park project, in that they are communities that are dominated by native plants. Wetlands in the Eastshore park project include tidal salt marshes, brackish marshes, seasonal wetlands, and seeps. Park project areas that support wetlands have, for the most part, been designated as Preservation or Conservation Areas, with strict limitations on development. The Preservation Areas include tidal marshes at Emeryville Crescent, Albany Mudflats, Hoffman Marsh, and the South Richmond Shoreline. The Conservation areas include seasonal wetlands in the Berkeley Meadow and the Albany Neck and Bulb. In addition, the following management guidelines will be implemented to protect and enhance native plant populations and wetlands:

1) Park-wide Management Guidelines for Plants and Wetlands

Goal

- The long-term preservation and enhancement of the native plant communities within the park project.

Guidelines

The following management guidelines will be implemented on a parkwide basis, to the extent feasible, given the availability of adequate funding:

PLANTS-1: As soon as possible, develop a control plan for the most invasive plant species, especially those that invade wetlands. Implementation of the control plan should be a high priority collaboration with adjacent land owners. These species include non-native cordgrass species and perennial pepperweed. Control measures for such species could be much more costly if deferred to a later date, when the invasive species could be much more widespread. The following should be the highest priority efforts:

- Remove all known stands of non-native cordgrass species from the tidal wetlands in the park as soon as possible (existing stands are relatively small, so complete removal may be possible) and control future incursions of this species. Existing stands have been reported at the Emeryville Crescent, Albany Mudflats, and South Richmond Marshes;

- Remove all known stands of perennial pepperweed from the park as soon as possible. These include stands near the outfall of Strawberry Creek, at the south end of the Brickyard Peninsula, on the west side of Brickyard Cove, and in the North Basin Strip. Stands may also be present along the Albany Mudflat, as one stand was recently removed near the mouth of Cerritos Creek, and another stand is present upstream along the creek, east of Pierce Street.

PLANTS-2: As specific projects are planned and implemented, develop and implement programs to remove invasive plant species to the extent possible, giving priority to the most noxious weeds. The Resource Inventory provides additional information about key invasive species (e.g., French broom, pampas grass, false bamboo, Kikuyu grass, fennel, yellow star-thistle, purple star-thistle, cardoon artichoke thistle, spurge, etc.) and their known locations in the park.

PLANTS-3: After removing invasive, exotic plant species, the affected areas generally should be re-vegetated with locally native plant species.

PLANTS-4: In addition to increasing the presence of locally native plant species, a goal of all area specific enhancement programs should be to explore the potential for the re-introduction of rare and endangered plant species in appropriate locations.

2) Wetlands

Goal

- The long-term preservation and enhancement of the park project's diverse wetlands areas.

Guidelines

PLANTS-5: As part of the planning and design process for area-specific projects, and prior to commencement of any grading or construction related to new facilities or enhancements, a qualified wetland scientist will identify and delineate any "jurisdictional wetlands" that could be affected. The delineation will follow standard Corps of Engineers protocol and will be submitted to the Corps for review and verification.

PLANTS-6: If jurisdictional wetlands are located within or adjacent to areas that will be affected by the proposed activities, such activities will be planned and designed to avoid or minimize impacts to the delineated wetlands.

PLANTS-7: In the event that some disturbance to wetlands is unavoidable, appropriate measures will be identified and implemented in consultation with appropriate resource agencies, and monitored to ensure their long-term success. Such measures shall be consistent with all applicable rules and regulations relating to the protection of wetlands, and shall ensure that proposed activities will not result in a net loss of wetland acreage or habitat value. Disturbed wetland areas will be re-vegetated entirely with locally native plant species.

PLANTS-8: As part of the planning and design process for area-specific projects, explore the possibility of enhancing existing wetlands through re-vegetation and control of exotic species and/or expansion of wetland areas. Potentially suitable wetland restoration areas are present in the Berkeley Meadow, the North Basin Strip (southern portion) and the Albany Bulb.

3) Native Plant Populations

Goal

- The long-term preservation and enhancement of native plant populations within the park project.

Guidelines

PLANTS-9: Provide long-term management to ensure the persistence and health of native plant communities.

PLANTS-10: To the extent feasible, enhance or restore native plant communities in areas that have been identified as important for wildlife habitat restoration.

PLANTS-11: To the extent feasible, use only locally native species in future plantings within Conservation or Preservation areas. "Locally native" species are defined here as those that are indigenous to the park, or native to Alameda and Contra Costa counties, and occur naturally in bayside settings. Limited plantings of non-native species may be acceptable in Recreation areas, if such plantings are limited to species that are non-invasive and do not conflict with wildlife habitat values.

PLANTS-12: As part of the planning and design process for area-specific projects, and prior to commencement of any grading or construction related to new facilities or enhancements, a qualified botanist will identify any special-status plant species that potentially occur in the affected area, and will conduct appropriately-timed surveys for the area. The Resource Inventory and appropriate resource agencies will be consulted to identify species of concern.

PLANTS-13: If any special-status species are found within the areas that would be affected by the proposed activities, such activities will be planned and designed to avoid or minimize potential impacts during both the construction and post-construction periods.

PLANTS-14: In the event that some disturbance to special-status species is unavoidable, appropriate measures to offset those impacts will be identified and implemented in consultation with a qualified botanist and appropriate resource agencies. Such measures shall be consistent with all applicable rules and regulations relating to the protection of rare, endangered, and federally- and state-listed species, and necessary authorizations will be obtained from the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG).

PLANTS-15: Minimize disturbance to sandy foredune areas and relatively undisturbed beaches. These are rare habitat types along the Bay shoreline, and often support specialized native plant species.

PLANTS-16: Over time, develop and maintain a cumulative list of native and non-native plant species observed during plant surveys conducted for individual improvement projects. This list should be kept in the Unit Data File, and used for educational purposes and as a baseline for future botanical studies. Any botanical observations (e.g., records of special-status species, plant lists for specific areas of the park, and records of invasive species) that are reported by park personnel and other qualified observers should also be preserved in the Unit Data File.

c. Animal Life Management

The park plan has been designed to protect the most valuable wildlife habitat areas by designating them as Preservation Areas or Conservation Areas. These include nearly all of the existing wetlands, as well as large blocks of existing upland habitat, most notably the Berkeley Meadow and the Albany Neck and Bulb. Additional upland habitat is protected at the Brickyard, Albany Beach, Albany Plateau (northern and eastern edges), and along the shorelines of the Emeryville Crescent, North Point Isabel, and South

Richmond Marshes. In addition, the following management measures will be implemented to protect wildlife species and enhance wildlife habitats:

Goal

- The long-term preservation and enhancement of the park project's wildlife habitat.

Guidelines

WILDLIF-1: Provide long-term protection for the existing upland and non-tidal wetland habitat within designated Preserves and Conservation Areas, and minimize impacts on these areas due to development of trails and other park facilities. These areas provide habitat for the burrowing owl, northern harrier, white-tailed kite, other raptors, and loggerhead shrike. Upland wildlife habitat should also be protected within Recreation Areas to the extent feasible, consistent with the design of planned facilities.

WILDLIF-2: Provide long-term protection and enhancement of foraging and nesting habitat for burrowing owls at the upland Conservation Areas in the park, particularly at the Berkeley Meadow and the Albany Neck and Bulb. To the extent feasible, preserve burrowing owl den-sites (rodent burrows, riprap, or rubble piles) that are present in the park, and allow ground squirrel populations to persist (as a source of burrows).

WILDLIF-3: To the extent feasible, locate visitor-serving facilities in areas already subject to considerable disturbance or of low resource value in order to minimize disturbance to existing habitat areas.

WILDLIF-4: As part of the planning and design process for area-specific projects, and prior to commencement of any grading or construction related to new facilities or enhancements, a qualified wildlife biologist will identify any potential habitat for special-status wildlife species or important shorebird roost sites that exist in the affected area, and will conduct appropriately-timed surveys if such species may be disturbed by the proposed project (see Appendix A for procedures). The Resource Inventory and appropriate resource agencies will be consulted to identify species of concern.

WILDLIF-5: If any special-status species or important shorebird roost sites are found within the areas that would be affected by the proposed activities, such activities will be planned and designed to avoid or minimize potential impacts during both the construction and post-construction periods (see Appendix A for procedures).

WILDLIF-6: In the event that some disturbance to special-status species or important shorebird roost site is unavoidable, appropriate measures to offset those impacts will be identified and implemented in consultation with a qualified wildlife biologist and appropriate resource agencies. Such measures shall be consistent with all applicable rules and regulations relating to the protection of rare, endangered, and federally- and state-listed species, and necessary authorizations will be obtained from the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG).

WILDLIF-7: A program of interpretive signs and exhibits that discuss the value of tidal marshes, tidal mudflats, and subtidal habitats for California clapper rails, California black rails, shorebirds, waterfowl, marine mammals, and other wildlife will be implemented. Other interpretive exhibits should discuss the wildlife values associated with upland and seasonal wetland habitats and any associated special-status species.

WILDLIF -8: Over time, a cumulative list of wildlife species observed during surveys conducted for individual improvement projects will be developed and maintained. This list should be kept in the Unit Data File, and used for educational purposes and as a baseline for future studies. Any fish and wildlife observations (e.g., records of special-status species, wildlife observed in specific areas of the park, and records of invasive species) that are reported by park personnel and other qualified observers should also be preserved in the Unit Data File.

WILDLIF -9: Plantings in upland buffers between trails and sensitive habitat areas where necessary to provide a visual screen to minimize wildlife disturbance will be installed. At a minimum, the plantings should consist of locally native shrubs, but they may also include locally native herbaceous species. Such plantings would also provide cover for wildlife and could be used to screen fencing from view, if desired.

WILDLIF -10: Trees will generally not be planted within 200 feet of tidal marsh areas and occupied burrowing owl nest or roost sites. Raptors, crows, and ravens often perch in trees to search for prey, and tree plantings near tidal marshes and burrowing owl nest sites may expose burrowing owls and special-status species in the marshes to a higher incidence of predation.

WILDLIF -11: Disturbance to wildlife will be minimized by restricting access by people and dogs to sensitive wetland and upland habitat areas. Marsh birds, shorebirds, waterfowl, and other water birds are vulnerable to disturbance when people and dogs are allowed too close to important nesting, feeding, or roosting areas. Park visitors and dogs can also disrupt nesting activities of raptors and other birds in upland areas. Trails and other facilities should be sited to maintain appropriate distances from sensitive areas. Signs should be posted restricting access to sensitive habitat areas. Fencing and vegetative buffers can be used between trails and sensitive habitat areas, as necessary to minimize disturbance of wildlife. Dogs can be prohibited from sensitive habitat areas or restricted to access while on leash.

WILDLIF -12: Pest control activities will be conducted as necessary to maintain healthy populations of native wildlife species, while minimizing adverse impacts on native wildlife and plants. Control measures may be necessary for Norway rats and roof rats (which prey on bird eggs and young), feral cats (which prey on many species of birds and mammals), red foxes, and perhaps some native predators (if necessary to preserve special-status species). Control measures for California ground squirrels should be avoided, except as necessary for public health reasons or for structural maintenance, as these rodents provide burrows for burrowing owls and serve as an important prey item for several species of raptors.

d. Marine Life Management

The General Plan has been designed to protect the most valuable marine habitat areas in the park by designating them as Aquatic Preservation Areas or Aquatic Conservation Areas. These include the Emeryville Crescent, Albany Mudflats, South Richmond Marshes, Brickyard Cove, and two subtidal areas at the west end of Albany Bulb. In addition, the following management measures will be implemented as part of the specific area development plans to protect the marine life of the park:

Goal

- The long-term preservation and enhancement of the park project's marine habitat areas.

Guidelines

MARINE-1: To the degree permitted by Federal and State law, prohibit the use of motorized boats and motorized personal watercraft throughout the park, in order to minimize disturbance of aquatic habitats for eelgrass, waterfowl, and other water birds. Work with local marinas to help notify boaters of these restrictions, and post conspicuous signs near boat ramps and other access points, identifying restrictions on use of watercraft in the park project.

MARINE-2: To the degree permitted by Federal and State law, prohibit the use of non-motorized vessels (e.g., kayaks, sailboats, rowboats, dragon boats, and sailboards) in all aquatic preservation areas (Albany Mudflat, Emeryville Crescent, Hoffman Marsh, and South Richmond marshes) to protect waterfowl and other water birds.

MARINE-3: Work with a qualified wildlife biologist and appropriate resource agencies to develop guidelines for the use of non-motorized vessels in selected aquatic areas (e.g., the North Basin and Brickyard Cove), as necessary to minimize disturbance to water birds or other marine species.

MARINE-4: Discourage launching of non-motorized vessels from environmentally sensitive areas of the shoreline.

MARINE-5: To the degree permitted by Federal and State law, fishing should be prohibited in aquatic preservation areas.

MARINE-6: In aquatic recreation and conservation areas, encourage fishing from designated piers, structurally-protected shoreline areas, and from vessels.

MARINE-7: To the degree permitted by Federal and State law, prohibit the collection of invertebrates for food or bait in tidal mudflats, tidal marshes, and natural rocky shoreline areas within the park project.

MARINE-8: Post signs in appropriate areas identifying the restrictions on fishing and collection of invertebrates within the park project.

MARINE-9: Incorporate management measures for marine mammals as part of the Operations and Maintenance Manual for the park. The manual should address the handling of marine mammals such as harbor seals, California sea lions, and whales that are beached in the park. It also should provide information such as: (1) organizations that can provide technical assistance; (2) how to determine whether beached animals require treatment; (3) how to treat sick or injured animals; (4) how to remove and dispose of dead animals; and (5) institutions that may wish to preserve the remains for scientific research.

MARINE-10: Provide training to park staff regarding the management and protection of marine resources in the park project. Park staff should work with boaters, fishermen, and other park visitors to ensure that the protection measures for marine life are observed.

e. Potential Habitat Enhancement Activities

Given the disturbed condition of much of the upland habitat within the park project, and the absence of facilities to accommodate the public, the General Plan identifies numerous improvements that need to be made, including many habitat enhancement projects. Beyond the specific enhancements identified, the general intent is also to support the general long-term enhancement of habitat values in the park project to the degree that funding is available to plan and implement it. The following represent examples of long-range actions that should be considered for implementation, to the extent that the projects are feasible and that funding becomes available:

- Create tidal salt marsh habitat along the northern perimeter of the Berkeley Meadow (the south shore of the North Basin);
- Create or expand tidal salt marsh at other suitable locations (e.g., South Richmond Marshes, Hoffman Marsh, and Strawberry Creek outfall area);
- Enhance seasonal wetlands, particularly at the Berkeley Meadow. Explore the feasibility of enhancing seasonal wetlands by deepening or enlarging them to pond water for increased lengths of time, thereby benefiting water birds, amphibians, and aquatic invertebrates;

- Restore coastal scrub habitat at the Berkeley Meadow, Albany Neck and Bulb, Brickyard, and other upland areas by removing invasive species and planting locally native species;

- Remove invasive plant species, and restore native marsh and riparian vegetation, along the drainage channels at the eastern edge of the Brickyard and the southeastern edge of the Albany Plateau;

- Restore old piers, or install new structures, to provide shorebird roosting habitat, particularly on the south side of Emeryville Crescent (near the radio towers). It is particularly important to provide adequate shorebird roosting habitat near major shorebird foraging areas, such as Emeryville Crescent and Albany Mudflat;

- Create artificial islands to provide roost-sites for shorebirds and potential nest-sites for California least terns, American avocets, black-necked stilts, and killdeer. Islands provide protection from disturbance by humans, dogs, and predators. The most suitable locations for creating islands include the aquatic preservation areas at Emeryville Crescent, the Albany Mudflats, and the waters north of North Point Isabel;

- Construct artificial burrowing owl burrows within suitable foraging habitat for this species, such as in the Berkeley Meadow or the Albany Neck and Bulb. The artificial burrows should be located as far as possible from trails and other park facilities, to minimize disturbance by park visitors and dogs. Preferably, they should be at least 200 feet from trees and other potential perch-sites for raptors that prey on burrowing owls;

- Restore and expand eelgrass beds in the tidal waters of the park, including sites off the South Richmond Shoreline, Albany Beach, the North Basin, and Emeryville Crescent.

Prior to implementing each of these measures, a feasibility study should be conducted to assess the costs and the benefits to wildlife.

f. Hydrologic Resources

Goal

- Creation, over time, of a safer and more stable shoreline that is both more attractive and better integrated with the Bay's hydrologic and biologic systems.

Guidelines

HYDRO-1: Replace areas of shoreline protection that currently consist of unconsolidated construction debris, concrete, and slag material with appropriate shoreline protection alternatives to improve long-term function, respond to project program priorities, and enhance shoreline appearance. Two different shoreline enhancement strategies should be considered. The shoreline can either be structurally reinforced to provide greater shoreline protection and allow for more intensive public use, or "softened" (i.e., removal of structural elements and re-graded to more natural contours) to re-establish more natural shoreline contours and enhance habitat values. The specific strategy employed will be determined on a case-by-case basis as funding becomes available. The strategy selected will be dependent on site-specific factors such as hydrodynamics, soil conditions, and land use and resource management objectives for the area.

HYDRO-2: Consider engineered rock revetment where spatial constraints of land use and project priorities limit options for alternative softer shoreline treatments.

HYDRO-3: Give high priority to shoreline protection improvements in areas of high activity and attractive views, current or pending, with implementation of additional areas phased in the future.

HYDRO-4: Give highest priority to improvements in areas of observed erosion that potentially threaten infrastructure, water quality, stability of landfill areas, and/or new facilities for shoreline protection improvements.

HYDRO-5: An "adaptive management" approach is recommended for some of the shoreline stabilization alternatives. Pilot projects should be implemented to refine the design of the most environmentally sensitive approaches. Shoreline enhancement projects should be monitored and maintained to develop a responsive adaptive management program. A strong need exists for an experimental approach, particularly towards shoreline treatment options. Except when it is necessary to protect important infrastructure immediately adjacent to the shoreline, less structural treatment options generally should be considered. In addition, opportunities to backfill (i.e., cover) existing shoreline debris may be considerably cheaper than removal and replacement. Considering the extent of non-engineered shoreline, a pilot scale approach in a number of different wave climate settings may be beneficial in determining the optimal approach.

HYDRO-6: Design and construct all proposed resource enhancements (e.g., daylighting of Schoolhouse Creek, shoreline re-contouring at mouth of Strawberry Creek) and facilities (e.g., restrooms, boat launches, etc.) only after site-specific environmental analysis has been conducted for factors such as local hydrology, soil suitability, visual resources, cultural resources, subsurface toxics, water quality protection, and wetland habitat.

HYDRO-7: All of the recommendations and considerations for improvements to shoreline protection, existing or proposed environmental enhancement projects and wetland creation must be integrated with other project priorities such as biological considerations, access and circulation, recreation and economics. Implementation of these recommended approaches can be phased over time.

g. Cultural Resources

Despite the relatively recent formation of much of the park project's upland area as a result of local landfill practices, the Resource Inventory identifies a number of areas that have the potential to contain cultural resources of some significance. "Cultural resources", as referred to in this General Plan, consist of historical, archaeological, and traditional cultural properties that are eligible or potentially eligible for listing on California or National registers of historic resources. These may include, but are not limited to, prehistoric archaeological sites, historical archaeological sites, and historic structures.

Protecting and interpreting cultural resources is a way of preserving remnants of the East Bay waterfront's diverse heritage, helping park visitors understand the multifaceted prehistory and history of this unique area.

Goal

- Appropriate protection, preservation, and interpretation of significant cultural resources identified within the park project.

Guidelines

CULT-1: As part of the planning and design process for area-specific projects, and prior to commencement of any ground disturbance, grading, or construction related to new facilities or enhancements, a qualified cultural resource professional will conduct appropriate record reviews and any necessary fieldwork to determine the presence of cultural resources or culturally sensitive areas.

CULT-2: If the cultural resource investigations indicate the presence of cultural resources or culturally sensitive areas within or adjacent to areas that will be affected by the proposed activities, such activities will be planned and designed to avoid or minimize impacts to the identified resources.

CULT-3: In the event that some disturbance to cultural resources is unavoidable, appropriate measures will be identified and implemented in consultation with a qualified cultural resource professional. Such measures shall be consistent with all applicable rules and regulations relating to the protection of cultural resources.

2. Project-wide Interpretation

Unlike most state park units in California, the Eastshore park project is not an unspoiled landscape with exemplary habitat. A century of human modification has dramatically altered both the uplands and tidelands. The original shoreline in the vicinity of the park was a relatively smooth, sweeping curve with the exception of minor creek deltas and an occasional rocky promontory. As the practice of filling the bay extended the shoreline westward, native vegetative communities and wildlife either adapted to the change in conditions or disappeared altogether. Indeed, 95% of the existing terrestrial plant species found within the park project are non-native. As such, the Eastshore park project presents a unique opportunity to demonstrate the often-precarious relationship between human and natural systems.

Regardless of its modified characteristics, the park project offers an unusually rich array of resources that can contribute to the public's appreciation and understanding of the East Bay shoreline, the Bay ecology, and the effect of man's habits of consumption and disposal. Casual visitors have too few opportunities to achieve significant understanding of natural and cultural forces that shape the landscape around them, and can easily take for granted that resources as rich as the Emeryville Crescent or areas as developed as Pt. Isabel have always been with us. Interpretation provided in the context of the Eastshore park project can enhance the public's park experience by adding depth and breadth to the visitor's understanding and appreciation of this unique setting, and assist in educating the public on the steps being taken to preserve, restore, and enhance the park.

Goals

Two main goals exist for the park's interpretive program:

- To demonstrate the delicate interplay between human intervention and the natural systems' resilient response.
- To foster public understanding of the need for ongoing protection and enhancement of the parks' natural and cultural resources for the education, inspiration, and enjoyment of present and future generations.

PARK UNIFYING THEME: "Connections: Linking the Urban and Natural Environments on the Eastshore"

The park project's interpretive potential embodies the confluence of the urban environment and nature. Thus, the unifying theme encourages an appreciation of the significant natural and cultural influences on the park in the past, present and future.

PRIMARY THEME: "Connecting with the Water: The Evolution of a Shoreline"

An exploration of the natural and cultural processes that have shaped the shoreline through history, and which will continue to exert pressure for change in the future.

Guidelines

INTERP-1: Discuss the original shoreline conditions influenced largely by natural processes.

INTERP-2: Interpret the changes over time to the shoreline by human modification

INTERP-3: Interpret the role of transportation in evolution of the shoreline including boat and ferry traffic, the creation of the railroad, the introduction of freeways, and the creation of the Bay Trail

INTERP-4: Explore society's changing attitudes about the Bay and the shoreline and how those attitudes have influenced the physical and cultural landscape of the Eastshore

INTERP-5: Interpret the response by natural processes to form tidal mudflats and marshlands in the wake of human disturbance.

PRIMARY THEME: "Connecting with the Land: Nature and the City"

An exploration of the vegetation and wildlife native to San Francisco Bay, its role in the larger environment, and nature's incredible adaptability and transformative powers.

Guidelines

INTERP-6: Provide opportunities for visitors to gain an understanding of the parks' significant natural resources, including how the present day habitats have developed on highly disturbed land, and how they change through succession.

INTERP-7: Describe the Pacific Flyway and interpret the role of the park project in supporting the phenomenon of seasonal migration.

INTERP-8: Interpret the rich diversity of avian species that use the park project for resting, nesting, and foraging, and explore their compatibility with a bustling, noisy urban waterfront.

INTERP-9: Describe the invasiveness of certain species and how they affect and displace native flora and fauna.

INTERP-10: Interpret the park project's several wetlands as primary producers and highly productive communities in the marine ecosystem. Describe how they have formed and will continue to change through both creek and Bay influences, and creation and restoration efforts.

INTERP-11: Interpret landscape rehabilitation efforts with topics such as creek daylighting, tidal and freshwater wetlands

PRIMARY THEME: "Connecting with the Future: 'Garbage' vs. Resource Recovery"

An exploration of the role of refuse in the formation of the park and how today's responsible conservation and waste management practices can prevent future degradation of the environment.

Guidelines

INTERP-12: Interpret the shifting values over time regarding bay fill along the shoreline. Discuss the implications of early 20th century urban planning and the effect of municipal landfill practices.

INTERP-13: Interpret changes in how society views 'waste', and the subsequent management of all materials to their highest and best use to better protect public health and safety and the environment.

INTERP-14: Interpret the "plop" art phenomenon on the Eastshore which uses refuse as its main ingredient, and explore its relationship to other Bay Area traditions in art and activism.

INTERP-15: Interpret the life cycle of the waste material that comprises the upland area, exploring the original composition of materials in the fill, what those materials were used for, what happens to those when exposed to the elements both above and below ground, how long it takes them to decompose, etc.

INTERP-16: Interpret the variety of applications for the re-use of recycled materials as an option for reducing waste and energy consumption. Explore the potential of recycling surface debris for re-use within the park project as an ongoing interpretive exhibit (e.g., the crushing of concrete to create gravel/aggregate for new construction).

INTERP-17: Identify the challenges of managing parks built on landfill, including managing toxic materials, hazardous waste and geologically unstable conditions associated with construction debris landfills. This includes the challenges of preventing contamination of the natural environment and public use areas.

INTERP-18: Educate park visitors on how the planning, design and operations of the park project can incorporate practices to reuse and recycle materials as a means to reduce energy use and waste.

INTERP-19: Explore the idea of the "Modern midden" i.e., that today's garbage is tomorrow's archaeology.

PRIMARY THEME: "Connecting with the Past: Indigenous Peoples"
An exploration of the Ohlone and how the shoreline influenced their culture.

Guidelines

INTERP-20: Interpret the Native American history of the park project area, particularly Ohlone traditions and their use of bay resources.

INTERP-21: Enhance visitors understanding of Native American cultures, contrasting Native American and Euroamerican land use practices, identifying similarities as well as differences.

INTERP-22: Involve Native American tribes and groups when researching interpretive programs regarding Native American cultural values and the enhancement of public appreciation of those values.

3. Project-wide Visitor Services

Visitor services provide the means for allowing the public to enjoy and benefit from the many resources and recreational opportunities provided by the Eastshore park project. Both State Park and concession-offered visitor services should provide enhanced, quality recreation opportunities for the widest possible range of visitors with respect to age, race, income, education, and physical ability. However, such facilities should not be provided at the expense of the park project's natural and cultural resources.

This General Plan assumes that the formal classification of the park project, planned improvements to park project access, and the significant projected population increases in the cities, counties, and region within which the park project is located, will result in significant visitation rates. Not only must visitor services be provided that anticipate increases in visitation to the park project, but also to ensure that the number of visitors does not exceed the park project's ability to accommodate without damaging its resources.

The following goals and guidelines are intended guide the development and implementation of new visitor services within the Eastshore park project.

a. Recreation

The Eastshore park unit provides the potential for a wide range of recreational activities, from the more passive nature appreciation to active sports activities, and from water-oriented to land-oriented facilities.

Goals

- A setting where all Californians can enjoy dramatic Bay views and natural open space in the midst of an urban setting.
- A balanced range of high quality recreational opportunities that facilitate and enhance the public's enjoyment and appreciation of the Eastshore park project's natural, cultural, and scenic resources.
- A range of recreational opportunities and facilities that recognizes and responds to the unique pressures on the Eastshore park project to address the continually shifting demand for public recreation.
- Recreational facilities that are sensitively sited and designed to ensure protection of resource values as well as contributing to the park project's identity and sense of place.

Guidelines

Visitor-Serving Facilities

VISIT-1: Prepare a Specific Project Plan for each Management Zone in order to establish the nature, scale, and location of new visitor facilities and associated services, including facilities related to recreation, interpretation and education, visitor services, and operations. Such facilities and associated services must reflect the intent of the land use designations of the park project with respect to resource protection, permitted uses, intensity of uses, and access. Specific Project Plans will also specify where and how utilities (e.g., sewer, water, and drainage) will be provided.

VISIT-2: Provide visitor-serving and operations facilities within the park project as needed to facilitate the public's enjoyment of the natural setting.

VISIT-3: Ensure that new visitor facilities and associated services reflect a balance between the need for resource protection, recreation, and interpretation and education.

VISIT-4: Larger visitor-serving facilities should generally be located in areas that have convenient access and are suitable for higher intensities of use.

VISIT-5: The primary location for major visitor-serving facilities such as a park headquarters, interpretive center(s), a hostel, boathouse, café/restaurant, market, and recreational equipment rentals will be the recreational zones in the Brickyard and North Basin Strip.

VISIT-6: In the planning of new visitor-serving facilities, evaluate services provided by local entities, such as those in the Berkeley Marina area, to provide complementary facilities and programs.

VISIT-7: Visitor-serving services, including operations such as equipment rentals and food purveyors, may be operated as concessions. Non-profit organizations and other public agencies, as well as private businesses, will have an opportunity to contract to provide these services.

Upland Recreation

VISIT-8: The public's enjoyment of this shoreline will be facilitated by providing for a wide range of recreational activities, from nature appreciation to active sports activities, and by providing water-oriented and land-oriented facilities.

VISIT-9: Recreational opportunities and facilities should be planned within a regional context, focusing on complementing, rather than duplicating, existing regional facilities and on creating new opportunities that respond to the specific characteristics of the Eastshore.

VISIT-10: Site facilities and areas for more intense recreational use in areas with less significant habitat value.

VISIT-11: Visitor support facilities such as restrooms, water fountains, benches, picnic tables, and parking will be provided in convenient locations throughout the park project.

Aquatic Recreation

VISIT-12: Support the concept of an aquatic Bay Trail by providing conveniently spaced shoreline access/resting points along the length of the park project.

VISIT-13: Comply with applicable local and State laws and regulations that restrict or prohibit the use of motorized watercraft within the park project waters.

VISIT-14: Enhance the recreational use of Bay waters by kayakers, windsurfers, dragon boats, and other human-powered watercraft by providing safe and convenient Bay access facilities. Such facilities will be sited so that they respect sensitive shoreline habitat and features. The character of access accommodations (e.g., ramps, steps, gravel/sand beach, etc.) and their design shall be responsive to both the specific setting and the nature of the projected use. Such facilities should be designed to minimize dependence on regular, on-going maintenance operations, and to avoid altogether activities that would require damaging the environment to remain operational.

VISIT-15: Provide upland facilities such as parking, restrooms, potable water, lay-down areas, etc. that support aquatic recreation uses.

Nature Appreciation

VISIT-16: Incorporate interpretive and educational facilities and programs into the park project. Appropriate facilities may include interpretive centers, observation platforms/bird blinds, vista points, interpretive signage, and public art.

VISIT-17: Enhance existing trails and introduce new trails that ensure opportunities for visitors to enjoy the diverse topography, biotic communities, avian habitat areas, and scenic views in the park project. Provide fencing or signing of trails where necessary to protect adjacent resources.

VISIT-18: Work with appropriate bird watching groups and other groups specializing in avian resources to identify services, programs, and facilities that would enhance the public's ability to understand and appreciate the avian resource.

h. Circulation

A number of factors related to the park project's location and configuration result in circulation and access being an important and complex management issue. The long, narrow, and non-contiguous configuration of the park, the adjacency of the I-80/580 freeways, the urban setting and associated traffic congestion problems, and the limited amount of upland area within the park project, all contribute to conditions which complicate the provision of access to and circulation within the park project.

Goal

- An integrated and efficient multi-modal circulation system that facilitates visitor access to, and movement within, the park project.

Guidelines

General

CIRC-1: Establish standards for new and improved circulation facilities within the park project, including project entry points and gateways, roadways, pedestrian and bicycle facilities, transit facilities, parking, and signage.

CIRC-2: Design a circulation system that separates vehicular from non-vehicular traffic as much as possible in order to enhance non-vehicular modes and reduce potential conflicts.

CIRC-3: In order to minimize increases in traffic and the demand for parking, provide facilities that encourage and support alternate modes of transportation to Eastshore park project, including pedestrian, bicycle, bus, and boat.

CIRC-4: Emphasize walking, biking, and non-motorized boating as the primary and preferred modes of transportation within the Eastshore park project.

CIRC-5: Work with Caltrans to establish a coordinated wayfinding program that provides clear direction to visitors as to how to access the park in the most convenient and efficient manner. Such a program should address appropriate locations for directional signs related to both regional freeway access and local access to the park.

Trails

CIRC-6: Provide a convenient and attractive system of multi-use trails throughout the park that links all subareas of the park project into an integrated whole.

CIRC-7: To the extent feasible, the trail system will be designed and constructed to provide universal access.

CIRC-8: Recognize the Bay Trail as the park project's primary non-vehicular transportation corridor and an important means of unifying public use areas within the non-contiguous portions of the park project.

CIRC-9: In order to improve access to and through the park project, support neighboring jurisdictions in their efforts to expedite the completion of the Bay Trail as set forth in ABAG's Bay Trail Master Plan.

CIRC-10: Improve access to the park project from the Bay Trail by adding spurs, laterals, and loops from the main trail corridor into the park project.

CIRC-11: Work with local jurisdictions to enhance bicycle and pedestrian trail connections from the adjacent communities into the park project, with particular emphasis on providing safe, efficient, and attractive connections across (i.e., over or under) the I-80/580 corridor.

Transit

CIRC-12: Coordinate with transit providers to provide more frequent transit service to the park, including weekends and holidays when visitation to the park project will be highest. Explore the possibility of having a north-south route along the Frontage Road in addition to the existing east-west routes.

CIRC-13: Encourage public transit use by incorporating transit-friendly design features (e.g., bus pullouts, transit shelters, bus schedules) into the park project.

CIRC-14: Explore, with AC Transit, adjoining jurisdictions, and local businesses, the feasibility of instituting an Eastshore shuttle service that would link key activity centers within the park project, and provide connections to key activity centers in the project vicinity. This would allow visitors to park in one area and then use the shuttle, instead of driving.

CIRC-15: Support a shuttle or more frequent transit service between the park project and the BART and Amtrak stations in the area.

CIRC-16: Explore options for accommodating water-based transit service such as water taxi or ferry service to the park project.

Parking

CIRC-17: Ensure that adequate parking is provided to accommodate public access to the park project and serve park uses and facilities.

CIRC-18: Distribute parking areas strategically throughout Eastshore Park to support proposed activities and facilities.

CIRC-19: Given the limited amount of upland area within the park project, parking strategies that minimize the use of upland habitat for the development of parking lots should be explored, including the following:

- Pursue shared parking arrangements with adjoining municipalities and landowners;
- Work with local municipalities to explore the feasibility of increasing on-street parking in public rights-of-way on both a permanent and special event basis;
- Design and implement parking improvements in phases in order to be responsive to actual use and demand and to avoid development of too much parking;
- Base parking demand projections on typical use patterns, rather than worst case or special event scenarios;
- Explore alternatives for accommodating special event parking conditions, such as the use of unpaved overflow parking areas, satellite parking areas, special event shuttle service, etc.

i. Parkwide Goals and Guidelines for Aesthetics

Signage/Identity

AESTH-1: Design an identity and wayfinding program for the Eastshore park project that will establish design guidelines and standards for park signage, and provide guidelines for the location and distribution of signs throughout the park project.

AESTH -2: Establish primary and secondary entry points to the park project, and develop design standards for these "gateway" areas that will create a sense of arrival and establish an initial identity and sense of place for the park project. Design standards and guidelines for entry points should distinguish primary and secondary gateways.

Architectural Style

AESTH-3: Given the lack of a consistent character or identity for the park project, create architectural design guidelines that establish an architectural vocabulary that can be used for facilities throughout the park project. The intent is not to design all facilities so that they look the same, but that they share enough similarities in style and/or materials to have perceivable association.

Landscape Character

AESTH-4: To the degree practicable, all landscape plantings in improved areas, not including turf areas, (e.g., around buildings, picnic areas, paths, etc.) should use California native species that are endemic to the East Bay shoreline in order to introduce the public to the area's biotic heritage and to enhance habitat values for native wildlife species. All landscaping should also emphasize plant species with low water requirements in order to minimize requirements

Lighting

AESTH-5: In order to minimize disturbance to wildlife, lighting shall not be permitted in areas designated as preservation areas or in areas with sensitive habitat values. Night lighting should generally be restricted to the more developed areas of the park project (i.e., buildings, paths, parking lots, etc.) consistent with security and safety needs. Lighting plans shall be reviewed for compatibility with habitat values prior to construction.

AESTH-6: Night-lighting of recreational fields shall not be permitted.

AESTH-7: Lighting levels (i.e., intensity/foot-candles) should generally be kept as low as possible, consistent with public safety standards. Luminaires should focus the light downward and prevent the splay of ambient light to other areas. Whenever possible use path-level or bollard type fixtures that keep the light source closer to the ground. Color-tinted and lower wattage lamps should be used to help reduce lighting-related disturbance.

Public Art

AESTH-8: Explore the feasibility of establishing a formal program of public art consistent with the mission of State Parks and the interpretive themes of the Eastshore park project.

AESTH-9: If it is determined that a public art program is feasible, work with appropriate arts organizations, artists, and interested public to identify how a public art program could be managed and by whom, and prepare a Public Art Management Plan that will guide the use of public art in the park project.

AESTH-10: The mission of the Public Art Management Plan should be to:

- Provide a forum for exploring the relationship between the arts, preservation of the natural environment, historic preservation, and recreation;
- Promote public understanding and appreciation of the environmental, historical, cultural, and sociological context of the park through the use of art;
- Foster expressions of art and design which will reflect the unique environmental and cultural resources of the eastshore;
- Foster work that is diverse, high quality, and reflects the ethnic, geographic, and cultural diversity of the Bay Area's population.

Viewshed Protection

AESTH-11: Buildings, structures, and landscaping should be sited to be sensitive to scenic views from and through the park project. Given the general openness of the site, facilities should be sited to minimize the impact on views from key viewpoints (e.g., from southbound University Avenue overpass).

AESTH-12: The maximum height for buildings and structures generally shall be one story. Two-story structures may be permitted in limited instances (e.g., hostel, boathouse, etc.) consistent with the protection of significant scenic views.

j. Parkwide Goals and Guidelines for Community Relations

Given the location within five different cities, the number of municipal facilities that are interspersed with the park project, and the proximity to the local communities, maintaining strong community relations is essential for ensuring the best possible experience for park visitors. Formal and informal partnerships and the ongoing exchange of information will provide park management and local community leaders the best opportunities to meet the environmental, recreational, and social needs of the local public and park visitors.

Goal

- Ongoing liaison and communication between the operators of the park project and local, County, State, and Federal agencies should be encouraged in order to maximize the potential benefits and opportunities each might bring to the other, and minimize potential conflicts.

Guidelines

COMM-1: Conduct marketing surveys to determine additional services that could be supported by park visitors. Based on survey analysis and trend identification, and if appropriate and economically feasible, encourage concessions and work with nearby communities to provide visitor services that might include, but not be limited to:

- Café/Market/Deli;
- Bicycle and in-line skate rentals;
- Aquatic recreation equipment rentals (e.g., canoe, kayak, wind-surfing, etc.);
- Interpretive center/facilities for natural and cultural resources;
- A hostel;
- New facility for dog washing and coffee bar.

COMM-2: Work with local municipalities to provide a unified delivery of services in response to structural and public safety emergencies, utilizing the training and expertise of all personnel.

COMM-3: Coordinate with local municipalities on the scheduling, operation and management of seasonal festivals and special events that may have implications for park project operations and facilities.

k. Parkwide Goals and Guidelines for Operations

OPER-1: Specific Project Plans will be prepared for each management zone or sub-zone prior to any major development or enhancement projects. These plans will include project area resource surveys and monitoring as necessary. They will also take into account potential impacts of facilities and visitation increases on the resource base, the relationship of the new facilities to those already existing, traffic and access, views, etc. Specific Project Plans will specify where and how utilities (e.g., sewer, water, and drainage) will be provided, and local service providers will be coordinated with to ensure a unified delevery of services.

OPER-2: The need for new public facilities will be balanced with their potential negative impacts to plant and wildlife species, scenic resources, and the spirit of the place. In particular, avoid adverse impacts to critical resource areas.

OPER-3: Acquisition of new Eastshore parklands should be considered if such acquisition would contribute to improving the quality, character or function of the park project. Given the specific character of the project site, areas that meet any of the following criteria should be given strong consideration:

- Areas that would contribute to a more complete and functional ecological unit or protect unique features or habitat;
- Areas that would contribute to improving the contiguity of park project lands and creating a more logical management unit;

- Areas that would improve the visitor services by providing upland areas that would allow for more efficient circulation, enhanced facilities, less disturbance to habitat areas, etc.

OPER-4: A maintenance plan, consistent with guidelines and protocols of the operating agency, should be developed as soon as possible after park operation begins to guide the maintenance and operations procedures and practices for the Eastshore park project. The maintenance plan should address operational topics such as:

- Procedures, techniques, and timing of maintenance and cleanup activities in tidal marshes and other wetland habitat areas;
- Procedures, techniques, and timing of maintenance and cleanup activities in upland habitat areas;
- Procedures, techniques, and timing of fuel modification and fire prevention activities in upland habitat areas;
- Procedures, techniques, and timing of integrated pest management activities;
- Procedures, techniques, and timing of irrigation and water use to conserve water wherever possible and reduce the amount of excess surface runoff;
- Information on the known locations of wetlands, special-status plant and animal species, and sensitive wildlife habitat areas;
- Training for park staff regarding the park project's biological resources, and the staff's responsibilities for protecting those resources. Park staff should help educate park visitors about the wildlife protection measures that need to be observed.

Dogs

OPER-5: Dog use and activity in the park project will be managed according to State Park guidelines in order to protect habitat values and enhance public safety. As such, dogs will not under any circumstances be permitted in Management Sub-Zones designated as preservation areas or on any beach. Elsewhere in the park project, dogs will be allowed consistent with the managing agency's laws, rules and polices. The Pt. Isabel/North Pt. Isabel area is the only alrea of the park project in which off-leash dog use will be permitted (see Area-specific guidelines for more detailed guidelines affecting the Pt. Isabel/North Point Isabel area).

Hazardous Materials Evaluation Guidelines

OPER-6: Design, improvement, and/or development plans should consider the potential presence of Chemicals of Potential Concern (COPC's), methane gas, and remediation areas in the subject area. Site-specific data should be reviewed to determine whether additional chemical data and site characterization is required. Design plans should include consideration for potential methane gas build-up, particularly for improvements such as vault boxes or other enclosed structures that could collect methane gas from subsurface soils and fill materials.

OPER-7: If design, improvement, and/or development plans involve intrusive activities, available chemical data should be reviewed for those specific locations. Depending on the scope and extent of intrusive activities, additional testing in those areas may be warranted to evaluate soil, groundwater, and soil-gas conditions that may be encountered. Furthermore, available data should be provided to the contractors to assist with worker health and safety considerations during actual soil and groundwater handling activities.

OPER-8: If design, improvement, and/or development plans involve onsite reuse and/or offsite disposal of soil, available chemical data should be reviewed for those specific locations. Additional testing in those areas may be warranted to evaluate the suitability of that soil for onsite reuse and/or offsite disposal. Evaluation of the data should include consideration of the existing Regional Park Preliminary Remediation Goals (PRG's) developed for the project site, as well as the planned future use of that soil.

OPER-9: If design, improvement, and/or development plans involve wetlands creation or restoration, available chemical data should be reviewed for those specific locations. Additional testing in those areas may be warranted to evaluate the suitability of that soil for onsite reuse and/or offsite disposal. Chemical data should be compared with sediment screening and beneficial reuse criteria established by the Regional Water

Quality Control Board (RWQCB) and such plans should be approved by the appropriate regulatory agencies.

OPER-10: If design, improvement, and/or development plans involve work in the risk and remediation areas described in the Resource Inventory, the RWQCB should be notified of those plans and RWQCB concurrence to disturb those areas should be obtained in advance.

Geotechnical Evaluation Guidelines

OPER-11: Consider surface conditions at each of the sites during the conceptual design phase to evaluate the potential for soil loss by erosion and to develop means (by grading, structural measures and/or other improvements) to control site erosion.

OPER-12: Perform site-specific geotechnical investigations at the conceptual design phase of individual projects including:

- Review and update geologic hazard data such as seismic site response, liquefaction potential, hazard from flood and inundation, and potential for earthquake-induced ground failure (lurching);
- Evaluate potential settlements as a result of loads imposed by new buildings and structures, placement of new fills including landscape berms, mounds, levees, trails, roadways, bulkheads, ramps and slope protection measures;
- Evaluate the impact improvements may have on static and seismic slope stability of existing fill slopes, and wetland slopes;
- Prepare specific geotechnical recommendations for: seismic hazard mitigation including effects of liquefaction, placement of new fills, reworking of existing fills, placement of slope protection measures, provide geotechnical parameters for foundation design including estimates of differential settlements of underlying fills and soft clays, and effects of potentially liquefiable soils, and seismic lateral loads;
- Prepare recommendations for construction-related issues including de-watering and temporary excavation support as required for construction of the proposed improvements and remediation activities.

OPER-13: Prepare a comprehensive, detailed geotechnical design including slope geometries that provide adequate stability during short and long term static conditions and seismic ground shaking, slope stabilization/shoreline protection measures, grading of new habitat enhancements areas, bulkheads, ramps, and structures such as viewing platforms and interpretive centers.

OPER-14: Perform a geotechnical review of final design documents to check conformance with recommendations of the detailed geotechnical investigations.

OPER-15: Provide geotechnical engineer oversight for any construction that involves significant re-configuring or grading of the site, including projects such as creek day-lighting and shoreline stabilization or re-configuration.

Sustainability Guidelines

Although habitat protection and aesthetic guidelines will be important criteria for future enhancement and management actions, other design principles and criteria such as sustainable design will also be a part of the planning, enhancement, and operation of the Eastshore park project. A widely-used definition of sustainable development is a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". With regard to design, project implementation, and management, Governor Gray Davis' Executive Order on sustainable design offers a more specific definition of sustainability: "…to site, design, deconstruct, construct, renovate, operate, and maintain buildings that are models of energy, water, and materials efficiency; while providing healthy, productive, indoor environments and long-term benefits…". For state park projects such as the Eastshore park project, this definition will be expanded to include site development and outdoor environments. When preparing implementation projects, sustainable design can be incorporated into future Eastshore projects by addressing the following key principles and practices:

OPER-16: Sustainable Sites: Minimize the negative environmental impacts of site enhancement, development, maintenance, and operations by considering the following guidelines when implementing the Plan:

- Reuse or rehabilitate existing disturbed or developed sites, and avoid developing sites that contain sensitive species, habitats, or wetlands;

- Facilitate access to public transportation to provide an alternative to the private automobile;
- Minimize impacts during construction. Use site sedimentation and erosion control plans. Limit heavy equipment access;
- Preserve existing vegetation, especially native plants, and protect such vegetation during construction;
- Limit the area of parking, paving, and lawns to the minimum that will actually be used;
- Design new plantings as diverse communities of species well-adapted to the site. Use primarily native species that require less maintenance and less water than exotics. Reserve exotics for accents. Avoid use of any plant that is invasive. Use plants that attract desirable wildlife;
- Employ integrated pest management (IPM) against weeds, insects and other pests, with biological controls (e.g., parasitic insects, pheromone traps, natural pesticides, and companion-planting) as the first line of defense;
- Use mulching, alternative mowing, and composting to maintain plant health. Organic mulch around plantings conserves water and maintains favorable soil temperatures.

OPER-17: Safeguarding Water: Conserve water and protect water quality by considering the following guidelines when implementing the Plan:

- Use municipal sewer systems instead of on-site septic sewer systems, to the degree practical;
- Minimize the area of impervious surface, including building footprints and paving;
- Implement measures to minimize the increase in either the rate or volume of stormwater runoff, and improve the quality of runoff;
- Use pervious surfaces in site development, and incorporate features such as vegetated filter strips and bioswales to slow and filter runoff;
- Plant indigenous vegetation and species that are suited to the local environment;

- Where feasible, use reclaimed water or recycled water for uses such as landscape irrigation, fire protection, toilet flushing, wetlands recharge, and outdoor water features;

- Use water-efficient irrigation design and systems for landscaping;

- Use low-flow water fixtures within buildings.

OPER-18: Energy and Atmosphere: Design the project to enhance energy efficiency and expand the use of renewable resources by considering the following guidelines when implementing the Plan:

- Light the minimum area for the minimum time. Limit illumination to areas with actual night use or extreme security concerns;

- Clearly identify the actual purpose of lighting to determine minimum acceptable levels;

- Use simple timers, motion-sensors, or photocells to turn lights on and off at seasonally appropriate times;

- Use occupancy sensors within buildings to turn lights on and off;

- Use cut-off fixtures, shades, or highly focused low-voltage lamps to avoid spillover. Linear "tube lights" and fiber-optics can be used to light the way for pedestrians without illuminating a large area;

- Use energy-efficient lamps and ballasts, including low-voltage lighting to decrease power and energy usage;

- Use renewable energy sources for lighting and other outdoor power. Photovoltaic (PV) power is generally cost-effective, and can be used for applications such as solar path-lights, streetlights, security lights, pumps, and irrigation systems;

- Integrate PV panels into the architectural design of buildings and structures;

- Use energy efficient equipment and fixtures;

- Integrate facilities for car, bus, train, bicycle, and pedestrian modes of transport, thus reducing dependence on private cars to access the park project;

- Design site circulation patterns to encourage pedestrian and bicycle movement and reduce the need for automobile use once in the park project.

OPER-19: Materials and Resources: Minimize the life-cycle impact of materials by considering the following guidelines when implementing the Plan:

- Reduce material use whenever possible, and reuse and recycle materials whenever possible;
- Reduce material requirements through effective site layout;
- Design and site structures with careful regard to site-specific conditions in order to avoid structural, maintenance, and ecological problems;
- Specify reused materials where possible;
- Specify recycled-content materials (e.g., wood substitutes, concrete, asphalt, etc.) for site use, based on life-cycle performance requirements;
- Consider factors such as renewability (can the material be grown or naturally replenished?), sustainable production (will resources be used up too fast?), and recyclability when selecting materials;
- Practice effective waste management (recycling);
- Limit paved areas to the strict minimum required for their intended purpose;
- Avoid over-designing paved areas by distinguishing the structural requirements for light-vehicular, heavy-vehicular, and pedestrian paving. For light-duty roads and paths, stabilize without pavement.

OPER-20: Indoor environmental quality: Enhance the health and comfort of building occupants by considering the following guidelines when implementing the Plan:

- Provide for occupant control of lighting, airflow, or operable windows;
- Maximize the use of daylight and maintain access to the outdoors;

- Use materials with low emissions.

Incorporation of these principals and practices into the Eastshore parkproject's design, improvements, operations, and maintenance will also enhance environmental education and interpretive programs at Eastshore park project by demonstrating what sustainable design is and how it can be incorporated into an urban open space setting.

The benefits of these sustainable design concepts and practices include:

- increasing environmental benefits (conservation of natural resources and reduced waste);
- reducing operating costs through less energy consumption;
- promoting better health for park project visitors (fewer toxic materials, low-emitting materials, interior climate conditions);
- increasing operations and maintenance efficiency (more durable products, less maintenance with toxic substances, lower maintenance costs from resource and energy conservation).

Accessibility Guidelines
State Parks is committed to providing access to its units for all visitors. The site concept for the Eastshore park project centralizes the majority of the visitor-serving programs and activities (interpretation, education, and concessions) in the Brickyard and North Basin Strip areas where some of the most level terrain in the park project exists. Since there are few improvements in the park project at this time, all new buildings and site improvements can be designed to State and Federal accessibility standards. Parking designed and designated for the disabled will be provided in all park project parking areas. Drop-off areas at building entrance turnarounds will also be available for disabled visitors travelling with others. The proposed hostel will, if constructed, include a proportion of the overnight accommodations that are accessible for those with disabilities.

Access will be provided to natural resource areas such as the Meadow and Bulb, as well as to more developed areas.

Authorized vehicle access for visitors with disabilities to areas such as the Brickyard Cove and Albany Beach and Bulb areas will be considered on a case by case basis. Given the rugged condition of the shoreline, provision of universal access to the area's shoreline and water will require the greatest consideration.

OPER-21: All programs in the Eastshore park project will compliant with the Americans with Disabilities Act (ADA). All proposed structures and landscape features will be evaluated during their design for their compliance with ADA standards.

OPER-22: The development and enhancement of the Eastshore park project for public use will mandate compliance with certain requirements regulating construction. These requirements include:

- Title 24, CCR, Part 2, California Building Code for building construction standards;
- Title 24, CCR, California Building Code together with the Federal Americans with Disabilities Act (ADA) to cover access compliance;
- Title 24, CCR, California Building Code, Part 9 the California Fire Code.

4. Visitor Capacity

In both state and national park units, increases in the rates of certain recreation activities have resulted in a concern that use levels could cause environmental damage or reduce the satisfaction of unit users. As a result, the concept of "carrying capacity" is used in recreation planning as an indication of a limit in allowable levels of use. The Public Resources Code states that "Attendance at state park system units shall be held within limit established by carrying capacity determined in accordance with Section 5019.5" (PRC § 5001.96). While the Code does not define "carrying capacity," it is understood here to mean a land's inherent ability to sustain both the integrity of its natural systems and the land uses dependent upon them over time. It implies that there is a point in any system after which the ability to regenerate is exceeded by demands on the system and a cumulative net loss in resource quality results.

Potential impacts associated with overuse of the Eastshore park project can be reduced or avoided by implementing management actions and initiating proper mitigation measures. Visitor capacity limits, use regulations and enforcement, education and interpretation, site investigations and monitoring, planning and proper design, and staff presence all contribute to minimizing the potential impacts visitors may have on park values.

The first step in guiding future public access and use of the park project is to determine the location and significance of the park project's resources. The second step is making an assessment of the level of sensitivity of the existing resources and their compatibility with human (and canine) activity. At the General Plan level, these two steps have been incorporated into the process of assigning the three General Plan land use designations (Preservation Area, Conservation Area, and Recreation Area) to each area within the park project (see section B.2 of this chapter). The designation of these categories is based upon a comprehensive inventory of the park project's physical and natural resources (refer to the Eastshore park project Resource Inventory, April 2002).

The three land use categories signify the types and intensities of use that are deemed appropriate for each area in order to ensure that a balance can be achieved between recreation and conservation without diminishing resource values. Areas in the park project that have the most unique or fragile habitats are designated as Preservation Areas. To ensure the protection and preservation of these habitats, access to such areas is restricted to safety, scientific, interpretive, and educational activities. Areas with positive resource values, but not of the highest quality or sensitivity, are designated as Conservation Areas. Public access is permitted but the types of uses allowed in these areas are generally more passive in character and dependent on the resources. Programs to improve resource values through increased protection and enhancements are recommended for these areas. Those areas that are highly disturbed, have limited habitat value, and are relatively level are designated as Recreation Areas. These areas may be used to accommodate more intense uses and activities, such as visitor-serving and operations facilities, sports fields, recreation-oriented concessions, etc.

Given that the Eastshore park project is a new entity that lacks a history of use as a public park, there is little available data on which to base conclusions regarding the area's carrying capacity. Also, given the status of the upland area as a "reclaimed" landscape (i.e., reclaimed from the garbage of past generations), the criteria for assessing the area's carrying capacity are yet to be defined. The sustainability of resources and high quality visitor experiences can be assured if overuse is prevented. Establishing carrying capacities, quantified in terms of visitor attendance levels, will be addressed through inventorying and monitoring for subsequent planning efforts. However, as a park unit in an urban setting with multiple entry points and unrestricted access, implementing a visitor limit will be a management challenge.

When site-specific proposals for land uses or facilities are to be prepared, additional review of resource constraints and sensitivities of the proposed project location will be required during the project's preliminary planning phases, and site specific field investigations may also be necessary. Section 5019.5 of the Public Resources Code requires that:

> *"Before any park or recreational area developmental plan is made, the Department shall cause to be made a land carrying capacity survey of the proposed park or recreational area, including in such survey such factors as soil, moisture, and natural cover."*

Goal

- Ensure that the level and character of use within the Eastshore park project are managed in such a way so as not to exceed the carrying capacity of park project resources.

Guidelines

CAPACITY-1: Establish a visitor capacity management program that will monitor the carrying capacity of each management zone and establish appropriate use limits for the protection of park project resources. The capacity management program must include an ongoing monitoring and assessment program to ensure that established use limits are responsive to changing conditions.

CAPACITY-2: Prior to site-specific development or development of management plans, survey and review areas of potential impacts, employing appropriate personnel and responsible agencies, in accordance with the California Environmental Quality Act (CEQA).

CAPACITY-3: Use the Eastshore State park project General Plan management zones established in this Plan as the guide for allowing and managing appropriate types and levels of public use of park resources. Periodically assess resource conditions and design and implement appropriate actions to manage public and Department operational impacts while assuring maintenance of acceptable resource conditions.

D. SPECIFIC AREA GOALS AND GUIDELINES

Management areas are designed around geographically or operationally related areas within the Park. These areas are based on analysis of the natural conditions and current human use impacts on the natural resource sensitivities. All Specific Area management will adhere to appropriate parkwide Goals and Guidelines in addition to the following more specific guidelines.

1. Emeryville Crescent Management Zone

Statement of Management Intent

This zone includes some of the richest avian habitat in the North Bay and is therefore designated as a preservation area. The management intent is to protect and enhance the habitat value of this area, while also facilitating compatible public access. Access will be confined to the upland area along Powell Street. Facilities and improvements to the upland area will focus on providing day use opportunities such as bird watching and picnicking and enhancing the upland habitat and the public's ability to view and appreciate the vistas and the wildlife that use the Crescent.

Guidelines

a. Tidal Marsh and Open Water Area/Preservation Area

EC-1: Preserve the tidal marsh, tidal mudflat, subtidal, and associated habitats. Minimize impacts from human disturbance on adjacent uplands.

EC-2: Consistent with local ordinances and State and federal regulations, restrict use of motorized and non-motorized vessels (e.g., kayaks, sailboats, rowboats, dragon boats, and sailboards) in the Emeryville Crescent estuarine preserve area to protect waterfowl habitat.

EC-3: Consider the creation of high-tide roost-sites (e.g., structures, islands) for shorebirds in areas that are protected from disturbance by park visitors, dogs, and predators.

EC-4: Introduce signs and/or fencing as needed to restrict public access to the preserve area.

b. Open Water/Conservation Area

EC-5: Non-motorized boating is permitted in the open water portion of the Crescent that is identified as a conservation area.

c. Powell Street Frontage/Upland Area

EC-6: Enhance coastal scrub habitat in this area by removing noxious weeds and planting locally native species.

EC-7: Enhance public access to the shoreline along Powell Street in a way that provides opportunities for passive recreation and viewing the natural habitats. A non-paved trail should be provided along the bluff with appropriate connections back to Powell Street and a connection to the existing shoreline trail that runs behind the Fire Station and out to the end of the Emeryville Peninsula.

EC-8: Explore the feasibility of removing the concrete and construction debris/slag that currently lines the shoreline, and replace with engineered rock and/or tide pool revetments, and gravel beaches.

EC-9: Install a vista point/observation deck in the upland area overlooking the tidal marsh. The precise location should be determined with site specific planning. Views of the marsh and of more distant elements such as the Bay Bridge should be primary criteria in determining the location. Work with BCDC to revise Caltrans' permit requirement that calls for the location to be in the area just east of the fire station.

EC-10: Consider installing a bird blind on the remediation site overlooking the tidal marsh (i.e., near the Powell Str./Frontage Road intersections). The blind should be designed to visually screen bird-watchers from the marsh, but not accommodate vagrants or illicit activities. The blind should be designed so that views into the blind are permitted from Powell Street. The blind can also be incorporated into a bermed landform so that it does not create a visual barrier/sheltered area on the south side of the blind.

EC-11: The vista point and bird blind should include interpretive exhibits that address appropriate site-specific topics such as bird species that frequent the Crescent, history of the Crescent including its restoration, the influence of transportation infrastructure such as the freeways and Bay Bridge, etc.

EC-12: Provide dedicated park project parking for up to 20 vehicles in order to accommodate public access to this area. Given the limited amount of upland area, parking strategies have been proposed by the local community that avoid using upland habitat for the development of parking lots. The City of Emeryville has suggested designating 12 on-street spaces along Powell Street near the Fire Station for State Park use, and securing parking in adjacent lots north of Powell Street. In the event that adequate off-site parking cannot be provided by the city of Emeryville or the local community, 15 to 20 parking spaces should be provided on site. In order to minimize the land area used for on-site parking, parking bays with parallel or diagonal parking should be explored as preferred solutions. Parking improvements can be phased to monitor actual use and demand.

2. South Berkeley/North Emeryville Shoreline Area

Statement of Management Intent

This zone includes a diverse range of shoreline conditions. The open waters of the South Sailing Basin and the dramatic views of San Francisco and the Bay Bridge dominate this zone. The management intent focuses on providing a range of recreational opportunities from passive to active that respond to the zone's diverse features, including open waters, sandy beaches, protected cove and mudflats, upland habitat, and developed areas. The strategic location and disturbed condition of the majority of the upland area of the Brickyard makes it an appropriate area for locating the operations center for the park, various visitor-serving facilities, and enhanced urban recreation.

Guidelines

a. Emeryville/Berkeley Beach Shoreline

SB/NE-1: Provide enhanced pedestrian access to the Berkeley Beach in the vicinity of City of Berkeley's new Bay Trail.

SB/NE-2: Encourage continued use of this area for surf fishing. Explore the desirability of adding facilities (e.g., water, restrooms, etc.) to support recreational use of this area.

SB/NE-3: Investigate possibilities for protecting/enhancing the amount of sandy beach along the Berkeley/Emeryville shoreline.

SB/NE-4: Introduce interpretive panels along the shoreline that address issues such as the demise of the Berkeley Beach, and the history of the shoreline and how it was modified by humans.

SB/NE-5: Minimize disturbance to the large rafts of wintering ducks in the South Sailing Basin.

b. Brickyard Cove/Conservation Area

SB/NE-6: Minimize disturbance to the large numbers of water birds in Brickyard Cove (mainly shorebirds foraging at low tides and ducks foraging or rafting at high tide). Prior to constructing proposed water access improvements to Brickyard Cove, consult with appropriate resource agencies to establish appropriate management guidelines for boating. The guidelines may include measures such as partial or full closures of the Cove to boating during the rafting season (i.e., October through April), restrictions on the types or numbers of watercraft that will be permitted, restrictions on the areas open to boating, etc.

SB/NE-7: Protect and enhance upland habitat in the southern part of the Brickyard. Enhance coastal scrub habitat in the Conservation Areas at the Brickyard and on the south side of University Avenue by removing noxious weeds and planting locally native species. Such habitat enhancements should also be included within the Recreation Area at the Brickyard, where compatible with the proposed facilities.

SB/NE-8: Introduce interpretive signs that explain seasonal limitations and sensitivities associated with the Cove and mudflats.

SB/NE-9: Implement a program for removing surface construction debris from Brickyard Cove Beach and the upland areas.

SB/NE-10: Implement a program for removal of invasive exotic species and re-vegetation with native species (refer to Parkwide Management Goals and Guidelines for Natural Resources for more detail).

SB/NE-11: Delineate and protect seasonal wetlands above the beach area, and improve wetlands via exotic plant removal and re-vegetation programs.

SB/NE-12: Enhance the marsh and riparian habitat along the east side of the Brickyard by planting willows and other locally native species and enhancing freshwater flows, if feasible.

c. Brickyard Upland

SB/NE-13: Remove concrete/debris revetment and surface hazards along west face of Brickyard spit, and replace with engineered rock revetment (as necessary) and/or tide pool protection alternative.

SB/NE-14: Explore the feasibility of re-contouring the shoreline opposite (i.e., south of) the Strawberry Creek outfall in order to improve flushing of area and restoring tidal marsh and wetland habitat at the outlet of Strawberry Creek.

SB/NE-15: Consider installing a bird blind near the outlet of Strawberry Creek to provide wildlife viewing opportunities, while minimizing visitor impacts. Incorporate interpretive panels into the blind that address birds and marine life found at the confluence of the creek and Bay.

SB/NE-16: Prepare a facilities concept Plan for the Brickyard area that supports recreational use through the introduction of a number of recreation and visitor-serving facilities. Until facility concept plans are prepared for the Brickyard and North Basin Strip, the precise facilities and their distribution will remain flexible. Preliminarily, facilities that are recommended for the Brickyard include, but are not restricted to:

- A Park operations facility/visitors center;
- Café/restaurant/market/deli;
- Restroom facilities;
- Recreation Concessions, such as equipment rentals;
- Turf areas for informal recreation;
- Picnic facilities;
- Benches and seating areas;

- A waterfront promenade that extends along the west side of the Brickyard spit for its entire length with stairs/ramps down to the water and a vista point at the southern terminus;

- An internal multi-use trail system that links facilities within the Brickyard area and provides convenient connections to the Bay Trail (on West Frontage Road and University Avenue) and the Berkeley Bike/Pedestrian Overpass approximately 2,800 linear feet (l.f.);

- Parking for up to 200 cars and an appropriate number of buses. Parking can be phased in order to monitor use and demand. Parking should generally be located in the eastern portion of the site to provide a buffer between the I/80 and West Frontage Road corridors and the public use areas;

- A non-motorized boat launch facility at Brickyard Cove Beach. Locate restrooms and some parking in this area specifically to serve the beach area;

- The maximum building area projected for the Brickyard will be approximately 25,000 square feet of useable area. Maximum coverage related to parking will be approximately 87,120 square feet (2.0 acres).

d. University Avenue Shoreline

SB/NE-17: Remove concrete and construction debris/slag that currently lines the shoreline south of University Avenue and replace it with engineered rock and/or tide pool revetments, and gravel beaches.

SB/NE-18: Coordinate with the City of Berkeley to ensure implementation of the Bay Trail spur along the south side of University Avenue from West Frontage Road to Marina Boulevard. Due to limited right-of-way, a pedestrian/bicycle bridge should be considered over the Strawberry Creek outfall.

SB/NE-19: Implement a program for removal of invasive exotic species and revegetation with native species (refer to Parkwide Management Goals and Guidelines for Natural Resources for more detail).

SB/NE-20: Provide a non-paved trail along the bluff from Strawberry Creek to Marina Boulevard with benches/seating areas and picnic facilities along the trail overlooking the South Sailing Basin.

e. South Sailing Basin

SB/NE-21: Indications are that the South Sailing Basin is gradually filling with sediment. Although this area is an important recreation area for windsurfing, sailing, and other personal watercraft, it is not currently the intention of State Parks to artificially maintain this use through on-going dredging operations.

3. Berkeley Meadow/North Basin Area

Statement of Management Intent

This zone, which includes the Berkeley Meadow, the North Basin, and the North Basin Strip, serves as a transitional area between the urban areas of Berkeley and the open space areas of the Berkeley Marina. The Meadow, which is the largest upland open space area along the shoreline, will be protected as a unique vestige of natural upland habitat along the Bay shoreline, providing dramatic contrast with the more urban open space of the North Basin Strip, Cesar Chavez Park, and the Berkeley Marina. Environmental enhancements such as daylighting of Schoolhouse Creek and naturalizing the Meadow shoreline will establish this area as a unique demonstration of multi-habitat environmental restoration on the Bay. Water access to the North Basin will be enhanced to open this area to greater aquatic recreation. Similar to the upland area of the Brickyard, the location and disturbed condition of the North Basin Strip makes it an appropriate area for locating visitor-serving and recreational facilities.

Guidelines

a. Meadow

BM/NB-1: Protect and enhance the upland habitat in the Meadow for raptors and other birds and wildlife. A large 'no-access' area should be provided in the central portion of the Meadow that is suitable to accommodate foraging by raptors and establish an undisturbed nesting area for raptors such as the northern harrier, which recently nested in the Meadow. Access to this area should be restricted to emergency and maintenance activities only. To the degree possible, maintenance activities should be limited to the non-nesting season (generally, October through March). The perimeter of this no-access area should be posted to restrict access, and fencing should be installed as necessary to prevent off-trail access by visitors and dogs and to minimize disturbance to wildlife using the seasonal wetlands.

BM/NB-2: Enhance the coastal scrub habitat by removing noxious weeds and planting locally native species. Restrict visitor access to designated trails. Dog use will be governed by the managing agencies' laws, rules and policies.

BM/NB-3: Protect seasonal wetlands at Berkeley Meadow, and enhance them where feasible. Refer to Parkwide Management Goals and Guidelines for Natural Resources for additional direction relating to wetlands protection and enhancement.

BM/NB-4: Schoolhouse Creek and the existing outfall structure lie within the Virginia Street right-of-way that is owned by the City of Berkeley. Work with the City of Berkeley to explore the feasibility of 'daylighting' Schoolhouse Creek west of Frontage Road and creating a freshwater marsh adjacent to the creek. Remove the current underground infrastructure, create a naturalistic open channel, and restore native marsh and riparian vegetation along the banks of the new creek channel. All stream improvement recommendations must consider flood control issues and storm water quality and conveyance.

BM/NB-5: Explore the feasibility (e.g., wildlife benefits, construction requirements, and costs) of naturalizing the shoreline along north side of the Berkeley Meadow (i.e., removing construction rubble and re-grading shoreline to more natural contours) and creating new tidal marsh/mudflats along the south shore of the North Basin.

BM/NB-6: Establish a trail system in the Meadow that completes key linkages to other areas of the park and provides opportunities for interpretation of the natural resources associated with this designated conservation area. Specifically, the trail system should include:

- Trails through the interior of the Meadow that are consistent with the creation of a ‘no-access’ habitat area in the central portion of the Meadow;
- East-west trail and parkway along north side of University Avenue from West Frontage Road to Marina Boulevard;
- East-west trail along the northern edge of the Meadow (i.e., adjacent to the North Basin) from West Frontage Road to Marina Boulevard;
- North-south trail through Meadow from University Avenue/West Frontage Road intersection to pedestrian bridge over Schoolhouse Creek;
- North-south trail along the west edge of the Meadow from University Avenue/Marina Boulevard intersection to Cesar Chavez Park;
- Interpretive panels and displays that discuss the coastal scrub habitat and seasonal wetlands that comprise the Meadow, and the wildlife that they support;
- Bird blinds that accommodate bird watching in the Meadow with minimal disturbance to the foraging and nesting habitats of resident birds;
- Fencing and signs as necessary to prevent off-trail access by visitors and dogs, and to minimize disturbance to wildlife.

b. North Basin Strip

BM/NB-7: Prepare a facilities concept Plan for the North Basin Strip area that supports recreational use through the introduction of a number of recreation and visitor-serving facilities. Until facility concept plans are prepared for the Brickyard and North Basin Strip, the precise facilities and their distribution will remain flexible. Preliminarily, facilities that are recommended for the North Basin Strip include, but are not restricted to:

- Interpretative Center;
- Hostel with 20-40 beds;
- Boathouse;
- Recreation Concessions;

- Turf areas for informal recreation;
- Picnic facilities;
- Restroom facilities;
- Benches and seating areas;
- A waterfront promenade that extends along the North Basin shoreline from Schoolhouse Creek to Golden Gate Fields with stairs/ramps down to the water;
- Water access facility (e.g., ramp, dock, etc.) to the North Basin. Ideally, restrooms and other boating support facilities, such as the boathouse and aquatic recreation concessions would be located near this shoreline access point;
- An internal multi-use trail system that links facilities within the North Basin Strip area and provides convenient connections to the Bay Trail (on West Frontage Road);
- Pedestrian Bridge linking North Basin Strip and Berkeley Meadow (i.e., across newly daylighted Schoolhouse Creek);
- Parking for approximately 350 cars and an appropriate number of buses. Parking can be phased in order to monitor use and demand. Parking should generally be located in the eastern portion of the site to provide a buffer between the I/80 and West Frontage Road corridors and the public use areas;
- The maximum building area projected for the Brickyard will be approximately 25,000 square feet of useable area. Maximum coverage related to parking will be approximately 130,680 square feet (3.0 acres).

BM/NB-8: Clean up shoreline using engineered rock revetment and pocket beaches for water access, aesthetic and habitat improvement objectives.

BM/NB-9: Enhance coastal scrub habitat in the North Basin Strip, where compatible with the proposed facilities.

c. North Basin

BM/NB-10: Enhance use of the North Basin for non-motorized watercraft by providing safe and convenient access to the water from the North Basin Strip.

BM/NB-11: Minimize disturbance to the large rafts of wintering ducks and other water birds in the North Basin. Prior to constructing proposed water access improvements on the North Basin Strip, consult with appropriate resource agencies to establish management guidelines for boating. The guidelines may include measures such as partial or full closures of the North Basin to boating during the rafting season (generally October through April), restrictions on the types or numbers of watercraft that will be permitted, restrictions on the areas open to boating, etc.

4. Albany Area

Statement of Management Intent

The configuration of the Albany Area Management Zone creates a unique character for the area that distinguishes it from the other management zones. Because it extends out from the main shoreline as a narrow peninsula, the Neck and Bulb possess a sense of distance and separation from the urban mainland. This sense of distance is further enhanced by the "wild" character of the landscape expressed both through the topography and the vegetation. The designation of the Neck, Bulb, and Beach as conservation areas is intended to preserve this sense of naturalness and isolation. The Albany Mudflats is a significant avian habitat area and is therefore designated as a preservation area. The management intent is to protect and enhance the habitat value of this area, while also enhancing the public's ability to appreciate this resource from the adjacent shoreline areas. The Albany Plateau, due to its generally level terrain, is designated for active recreation, including both formal sports fields and informal recreation areas. Since State Parks is not in the practice of developing or operating formal sports facilities, the sports fields component would be developed and operated under a separate agreement with an independent agency or joint powers authority.

Guidelines

a. Albany Beach

A-1: Protect the dune habitat at the Albany Beach by introducing boardwalks and/or fencing. Boardwalks should be designed to provide for wheelchair access.

A-2: Restore the dune vegetation by removing noxious weeds (e.g., iceplant and Kikuyu grass) and planting locally native species that are adapted to this habitat, and explore the feasibility of re-introducing rare or endangered species that are native to the Bay area, such as California seablite, San Francisco spineflower, and robust spineflower, to the dune area.

A-3: Explore the feasibility of expanding the dune areas behind the beach.

A-4: Protect and enhance eelgrass beds that exist off Albany Beach. Explore the possibility of these eelgrass beds being a possible mitigation site (i.e., a receiver site for mitigation from projects outside of the park project).

A-5: Enhance beach/Bay access for non-motorized watercraft by creating a vehicle drop-off and parking at the south end of the beach. Locate restroom facilities near the beach water access.

b. Albany Plateau

A-6: Prepare a facilities concept plan for the Albany Plateau that supports recreational use through the introduction of a number of recreation and visitor-serving facilities. In terms of use characteristics, the Plateau has two distinct subareas. The easternmost portion (i.e., the area east of the Buchanan Street roundabout) is designated for active recreational uses including the possibility of developed fields for organized sports. The area due north of the Albany Beach and immediately west of the sports fields area is designated for informal recreation. Preliminarily, facilities that are recommended for the Albany Plateau include, but are not restricted to:

- Concessions/maintenance services/restrooms building to support sports fields needs for equipment storage, snack bar, restrooms, etc.;
- Turf area for informal recreation immediately west of sports fields area;
- Picnic facilities immediately west of sports fields area;
- A vista point/bird blind with appropriate interpretive exhibits at the east end of the Plateau overlooking the Albany Mudflats;

- A system of trails that connects the various recreation areas and provides access around the perimeter of the Plateau;
- Approximately 60 new parking spaces to serve the recreation areas.

A-7: It is generally not the mission of State Parks to build and operate sports fields. In fact, the Public Resources Code states that State Recreation Areas should not undertake improvements to provide for "urban or indoor formalized recreational activities" (PRC §5019.56 a). However, the provision for sports fields on the Plateau is in response to the Eastshore park project's unique circumstances regarding its origins and urban setting, including statutory direction (PRC 5003.03) for the planning and development of the Eastshore park project to be consistent with the general plan policies of the local jurisdictions to the degree feasible. In recognition of the exceptional nature of this use, sports fields will only be permitted on the Albany Plateau if the following conditions are met:

- State Parks will not develop or operate the sports fields;
- A formal agreement will be reached with an appropriate operator, e.g., a local jurisdiction or a joint powers agency;
- The operator will be responsible for developing and operating the fields at no cost to State Parks, and will assume liability and be accountable to State Parks;
- The operator will be responsible for ensuring adequate parking to support field sport activities, and no more than 60 parking spaces can be provided on site (i.e., necessary additional parking must be provided off site);
- The operator will provide a Facilities Operations and Management Plan that ensures adequate protection for adjacent habitat areas (i.e., Albany Mudflats and riparian area on the southeast side of the Plateau);
- The operator will provide for broad public use of the sports facilities and will not allow the facilities to be dominated by a single use or group;
- The sports fields will not include lighting for night-time sports activities.

In the event that an appropriate operator is not found or these conditions cannot be met, the Plateau will be maintained and improved for informal recreation and/or conservation purposes.

A-8: Enhance the riparian habitat along the south side of the Plateau (just north of Buchanan Street) by removing invasive, non-native plant species and planting willows and other locally native plants. Provide fencing and buffers as necessary to restrict access to the riparian area by people and dogs.

A-9: Maintain an enhanced vegetative buffer between the sports fields area and the north and east edges of the Plateau in order to protect wildlife habitat in the adjacent Albany Mudflats. The vegetation buffer should be at least 100 feet wide, measured from the top of the slope.

A-10: Design trails along the north and east side of the Albany Plateau, and the north side of the Albany Neck, to minimize disturbance of ducks, shorebirds, and other water birds on the Albany Mudflats, and to restrict visitor access to the riparian drainage along the southeast side of the Plateau. Trails should generally be set back from the top of slope, but should include periodic viewpoints over the mudflats.

A-11: Protect and enhance upland habitat for raptors and other birds and wildlife along the northern and eastern perimeter of Albany Plateau (the Conservation Areas). Enhance ruderal scrub habitat by removing noxious weeds and planting locally native species.

c. Albany Neck/Bulb

A-12: Protect and enhance upland habitat for wildlife at the Albany Bulb, Albany Neck, and the northern and eastern perimeter of Albany Plateau (the Conservation Areas). Enhance the upland scrub habitat by removing noxious weeds and planting locally native species.

A-13: Develop and implement a program for the removal of safety hazards associated with construction debris on the surface of the Neck and Bulb (e.g., unstable rubble piles, unsafe structures and protruding rebar). The clean-up program should be designed to minimize disturbance to upland wildlife habitat. Approaches that involve mass grading and the wholesale removal of vegetation are not appropriate. Given the magnitude of the task, priorities for clean-up, areas for potential closure to public access, and appropriate phasing should be identified.

A-14: Provide fencing and/or buffers to protect the tidal marsh on the northeast shoreline of the Bulb (in the small lagoon) from disturbance.

A-15: Explore options for enhancing the safety, aesthetic, structural and habitat conditions along the south shoreline of the Albany Neck, including the following:

- Address transition from Albany Beach into armored shoreline areas including the potential for extending sand beach condition further west;
- Break up large concrete and construction debris to improve appearance, reduce safety hazards, etc.;
- Consider placement of fill (sand, gravel, cobbles or soil) over the rubble in some select locations to improve habitat, planting, access, safety, etc.;
- In some locations, align trail and access routes against the hill slope to create more potential space for shoreline grading;
- Consider and balance necessary structural function and potential habitat enhancements;
- Consider creation of small pocket beaches (shallower profile shoreline) within this straight section to increase sand and gravel beach habitat as well as recreational access;
- Consider re-grading northwest corner (intersection of neck and bulb) to shallow slope condition to create sand or gravel beach.

A-16: Provide shoreline stairs and/or ramp at the south side of the Albany Neck in order to enhance water access for windsurfers and other human powered watercraft. Work with windsurfers and other user groups to explore options for conveying equipment from the drop-off to the access point.

A-17: Generally prohibit, or enforce prohibition of vehicle access, other than for safety or maintenance personnel, beyond the roundabout on Buchanan Street.

A-18: Maintain a comprehensive and integrated multi-use trail system that provides access throughout the Albany area. As specific improvements are planned for the Albany area, evaluate existing trails and identify trails that need to be closed, improved, or created.

A-19: Create a vista point/seating area on the bluff at the west end of the Bulb. The vista point/seating area could contain interpretive exhibits that describe key features of the landscape visible from this setting, as well as the history of the Bulb and its formation.

A-20: Coordinate with the City of Albany to ensure that the remediation plans for the west and northeast lagoons are implemented as approved by the Regional Water Quality Control Board, including the breaching of the west lagoon and the creation of the pedestrian trail around the west end of the Bulb. Review remediation plan to:

- Verify dimensions (depth and width) of levee breaks at the west lagoon for desired objectives: habitat isolation, tidal interaction and lagoon evolution (via sediment deposition);
- Increase tidal action and potential sediment supply to the west lagoon in effort to encourage sediment deposition and fringe marsh establishment.

A-21: Consistent with the Eastshore park project's cultural resource guidelines, the practice and products associated with unauthorized artistic expression (e.g., installations, structures, paintings, etc.) on the Albany Bulb will be reviewed in accordance with DPR's systemwide cultural resource procedures prior to their removal.

c. Albany Mudflats

A-22: Preserve the tidal marsh, tidal mudflat, subtidal, and adjacent upland habitats, and minimize impacts from human disturbance.

A-23: Continue to prohibit all motorized and non-motorized watercraft in the Albany Mudflats estuarine preserve area to protect waterfowl habitat.

A-24: Coordinate with owners of the upland areas south of Central Avenue and the northern portion of the Albany Mudflats to ensure adequate protection to this preservation area.

A-25: Introduce signs and/or fencing as needed to restrict public access to the preservation area

A-26: Expand the number of interpretive panels along the Bay Trail that discuss the function of the Mudflats in the Bay ecosystem and the Pacific Flyway, in addition to identifying birds and marine life that frequent the area.

d. Open Water/Conservation Area

A-27: Continuation of non-motorized boating is permitted in the open water area (i.e., non-preservation area) off the Albany shoreline.

5. Pt. Isabel/South Richmond Shoreline

Statement of Management Intent

The Pt. Isabel/South Richmond Shoreline Management Zone includes the greatest amount of existing improvements of any of the management zones due to East Bay Regional Park District's operation of the Pt. Isabel Regional Shoreline and the existing Bay Trail. The Pt. Isabel/North Pt. Isabel area is also the most intensely used due to its designation as an off-leash dog facility. The management intent for the Pt. Isabel/North Pt. Isabel sub-zone is to continue to allow off-leash dog use under an agreement with an independent operator, but also to encourage more diverse use by providing additional facilities. The Hoffman Marsh and South Richmond Shoreline areas are designated as preservation areas due to their high habitat value.

Guidelines

a. Pt. Isabel/North Pt. Isabel

PI/SR-1: Prepare a Facilities Concept Plan for the Pt. Isabel/North Pt. Isabel area that supports recreational use through the introduction of a number of recreation and visitor-serving facilities. The area will continue to be designated as a facility approved for off-leash dog use. Recommended improvements to the area are intended to support a more diverse use of the area, taking advantage of the area's dramatic views and suitability for windsurfing. Preliminarily, facilities that are recommended for the Pt. Isabel/North Pt. Isabel area include, but are not restricted to:

- A waterfront promenade that extends along the west-facing shoreline of Pt. Isabel from the EBMUD facility to northwestern-most point of North Pt. Isabel. The promenade should include stairs/ramps to improve access down to the water and a pedestrian bridge across the Hoffman Channel, linking Point Isabel and North Point Isabel;

- Improvements to the area west of the Pt. Isabel entry road and north of EBMUD facility to expand and enhance access for aquatic recreation, particularly windsurfing. Improvements should include an enhanced launch facility (e.g., ramp, steps, dock, etc.) that facilitates visitors getting their equipment into the Bay. The area should also include restrooms, an equipment lay-down area and turf area with picnic facilities;

- New 30-space parking area on the west side of Isabel Road near the new water access area (just north of EBMUD);

- Add 30 new parking spaces to East Parking Area off Rydin Road;

- New facility for dog-washing concession and coffee bar to replace existing temporary structure (already planned and funded by EBRPD);

- Complete the connection of Bay Trail Spur on Central Avenue west and around the Bay side of EBMUD facility.

PI/SR-2: Improve shoreline protection conditions in Point Isabel, specifically, south bank of the channel entering Hoffman marsh and south around point towards EBMUD treatment facility.

PI/SR-3: Enhance ruderal scrub habitat along the Bay Trail, and along the north shore of North Point Isabel, by removing noxious weeds and planting locally native species.

PI/SR-4: Provide protective fencing and vegetative buffers along north shore of North Pt. Isabel, from Bay Trail to promenade, to protect the mudflat and subtidal habitats north of North Point Isabel from disturbance by visitors and dogs. Provide fencing along the Bay Trail where necessary to protect tidal marshes tidal mudflats, and water birds from disturbance.

PI/SR-5: Introduce interpretive exhibits to the area that discuss the history of the area, including the modification of the original Pt. Isabel and the role of the railroad in the creation of North Pt. Isabel.

b. Hoffman Marsh/South Richmond Shoreline

PI/SR-6: Explore opportunities for additional wetlands/marsh restoration in Hoffman Marsh.

PI/SR-7: Removal of invasive exotic plant species and re-vegetation with native plant species in Hoffman Marsh and along South Richmond shoreline.

PI/SR-8: Coordinate with the owners of the adjacent tidal marsh, mudflat, subtidal, and upland habitat areas to ensure adequate protection of this valuable natural area.

PI/SR-9: Explore the possibility of adding one or two new vista points/seating areas along the Bay Trail north of Pt. Isabel.

PI/SR-10: Incorporate interpretive panels into the vista points and other key points along the Bay Trail that explore the natural, cultural and social history of this portion of the park project.

PI/SR-11: Provide fencing along the Bay Trail where necessary to protect tidal marshes, tidal mudflats, and water birds from disturbance.

APPENDIX C

AIR QUALITY INFORMATION WORKSHEETS

C-1 AIR QUALITY REGIONAL EMISSIONS - URBEMIS7G MODEL PRINTOUTS

C-2 AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR EXISTING BASELINE CONDITIONS

C-3 AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR EXISTING WITH PROJECT CONDITIONS

C-4 AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR YEAR 2025 BASELINE CONDITIONS

C-5 AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR YEAR 2025 WITH PROJECT CONDITIONS

APPENDIX C-1

AIR QUALITY REGIONAL EMISSIONS - URBEMIS7G MODEL PRINTOUTS

EASTSHORE STATE PARK

AIR QUALITY REGIONAL EMISSIONS

URBEMIS7G MODEL PRINTOUTS

URBEMIS 7G: Version 3.2

File Name:	eastshor.URB
Project Name:	Eastshore State Park
Project Location:	San Francisco Bay Area

SUMMARY REPORT
(Pounds/Day - Winter)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	70.90	72.89	503.81	22.05
TOTALS (ppd, mitigated)	70.90	72.89	503.81	22.05

URBEMIS 7G: Version 3.2

File Name: eastshor.URB
Project Name: Eastshore State Park
Project Location: San Francisco Bay Area

DETAILED REPORT
(Pounds/Day - Winter)

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2002 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Parks & Recreation	5.00 trips / parking space	750.00	3,750.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	75.00	1.16	98.58	0.26
Light Duty Trucks	10.00	0.13	99.54	0.33
Medium Duty Trucks	3.00	1.44	98.56	
Lite-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Med.-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Heavy-Heavy Trucks	5.00			100.00
Urban Buses	2.00			100.00
Motorcycles	3.00	100.00 % all fuels		

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.8	4.6	6.1	11.8	5.0	5.0
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	30	30	30	30	30	30
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Parks & Recreation				2.0	1.0	97.0

UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Parks & Recreation	70.90	72.89	503.81	22.05

	ROG	NOX	CO	PM10
TOTAL EMISSIONS (lbs/day)	70.90	72.89	503.81	22.05

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Parks & Recreation	70.90	72.89	503.81	22.05

	ROG	NOX	CO	PM10
TOTAL EMISSIONS (lbs/day)	70.90	72.89	503.81	22.05

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

0	Side Walks/Paths: No Sidewalks
0	Street Trees Provide Shade: No Coverage
0	Pedestrian Circulation Access: No Destinations
0	Visually Interesting Uses: No Uses Within Walking Distance
0	Street System Enhances Safety: No Streets
0	Pedestrian Safety from Crime: No Degree of Safety
0	Visually Interesting Walking Routes: No Visual Interest

0.0 <- Pedestrian Environmental Credit
0.0 /19 = 0.00 <- Pedestrian Effectiveness Factor

Transit Service

0	Transit Service: Dial-A-Ride or No Transit Service

0.0 <- Transit Effectiveness
0.0 <- Pedestrian Factor
0.0 <-Total
0.0 /110 = 0.00 <-Transit Effectiveness Factor

Bicycle Environment

0	Interconnected Bikeways: No Bikeway Coverage
0	Bike Routes Provide Paved Shoulders: No Routes
0.0	Safe Vehicle Speed Limits: No Routes Provided
0	Safe School Routes: No Schools
0	Uses w/in Cycling Distance: No Uses w/in Cycling Distance
0	Bike Parking Ordinance: No Ordinance or Unenforceable

0.0 <- Bike Environmental Credit
0.0 /20 = 0.00 <- Bike Effectiveness Factor

MITIGATION MEASURES SELECTED FOR THIS PROJECT
(All mitigation measures are printed, even if
the selected land uses do not constitute a mixed use.)

Transit Infrastructure Measures

% Trips Reduced Measure
15 Credit for Existing or Planned Community Transit Service
15 <- Totals

Pedestrian Enhancing Infrastructure Measures (Residential)

% Trips Reduced Measure
2 Credit for Surrounding Pedestrian Environment
2 <- Totals

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced Measure
2 Credit for Surrounding Pedestrian Environment
2 <- Totals

Bicycle Enhancing Infratructure Measures (Residential)

% Trips Reduced Measure
7 Credit for Surrounding Bicycle Environment
7 <- Totals

Bike Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced Measure
5 Credit for Surrounding Area Bike Environment
5 <- Totals

Operational Measures (Applying to Commute Trips)

% Trips Reduced Measure
0 <- Totals

Operational Measures (Applying to Employee Non-Commute Trips)

% Trips Reduced Measure
0 <- Totals

Operational Measures (Applying to Customer Trips)

% Trips Reduced Measure
0 <- Totals

Measures Reducing VMT (Non-Residential)

VMT Reduced Measure
0 <- Totals

Measures Reducing VMT (Residential)

VMT Reduced Measure
0 <- Totals

Total Percentage Trip Reduction

with Environmental Factors and Mitigation Measures

Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips
Pedestrian	0.00	0.00	0.00
Transit	0.00	0.00	0.00
Bicycle	0.00	0.00	0.00
Totals	0.00	0.00	0.00

Travel Mode	Work Trips	Employee Trips	Customer Trips
Pedestrian	0.00	0.00	0.00
Transit	0.00	0.00	0.00
Bicycle	0.00	0.00	0.00
Other	0.00	0.00	0.00
Totals	0.00	0.00	0.00

URBEMIS 7G: Version 3.2

File Name: eastshor.URB
Project Name: Eastshore State Park
Project Location: San Francisco Bay Area

SUMMARY REPORT
(Pounds/Day - Summer)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	51.57	64.50	278.01	22.05
TOTALS (ppd, mitigated)	51.57	64.50	278.01	22.05

URBEMIS 7G: Version 3.2

File Name:	eastshor.URB
Project Name:	Eastshore State Park
Project Location:	San Francisco Bay Area

DETAILED REPORT
(Pounds/Day - Summer)

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2002 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Parks & Recreation	5.00 trips / parking space	750.00	3,750.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	75.00	1.16	98.58	0.26
Light Duty Trucks	10.00	0.13	99.54	0.33
Medium Duty Trucks	3.00	1.44	98.56	
Lite-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Med.-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Heavy-Heavy Trucks	5.00			100.00
Urban Buses	2.00			100.00
Motorcycles	3.00		100.00 % all fuels	

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.8	4.6	6.1	11.8	5.0	5.0
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	30	30	30	30	30	30
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Parks & Recreation				2.0	1.0	97.0

UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Parks & Recreation	51.57	64.50	278.01	22.05

	ROG	NOx	CO	PM10
TOTAL EMISSIONS (lbs/day)	51.57	64.50	278.01	22.05

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Parks & Recreation	51.57	64.50	278.01	22.05

	ROG	NOx	CO	PM10
TOTAL EMISSIONS (lbs/day)	51.57	64.50	278.01	22.05

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

0	Side Walks/Paths: No Sidewalks
0	Street Trees Provide Shade: No Coverage
0	Pedestrian Circulation Access: No Destinations
0	Visually Interesting Uses: No Uses Within Walking Distance
0	Street System Enhances Safety: No Streets
0	Pedestrian Safety from Crime: No Degree of Safety
0	Visually Interesting Walking Routes: No Visual Interest

0.0 <- Pedestrian Environmental Credit
0.0 /19 = 0.00 <- Pedestrian Effectiveness Factor

Transit Service

0	Transit Service: Dial-A-Ride or No Transit Service

0.0 <- Transit Effectiveness
0.0 <- Pedestrian Factor
0.0 <-Total
0.0 /110 = 0.00 <-Transit Effectiveness Factor

Bicycle Environment

0	Interconnected Bikeways: No Bikeway Coverage
0	Bike Routes Provide Paved Shoulders: No Routes
0.0	Safe Vehicle Speed Limits: No Routes Provided
0	Safe School Routes: No Schools
0	Uses w/in Cycling Distance: No Uses w/in Cycling Distance
0	Bike Parking Ordinance: No Ordinance or Unenforceable

0.0 <- Bike Environmental Credit
0.0 /20 = 0.00 <- Bike Effectiveness Factor

```
MITIGATION MEASURES SELECTED FOR THIS PROJECT
(All mitigation measures are printed, even if
 the selected land uses do not constitute a mixed use.)

Transit Infrastructure Measures

% Trips Reduced              Measure
15            Credit for Existing or Planned Community Transit Service
 15            <- Totals

Pedestrian Enhancing Infrastructure Measures (Residential)

% Trips Reduced              Measure
2             Credit for Surrounding Pedestrian Environment
 2             <- Totals

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced              Measure
2             Credit for Surrounding Pedestrian Environment
 2             <- Totals

Bicycle Enhancing Infratructure Measures (Residential)

% Trips Reduced              Measure
7             Credit for Surrounding Bicycle Environment
 7             <- Totals

Bike Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced              Measure
5             Credit for Surrounding Area Bike Environment
 5             <- Totals

Operational Measures (Applying to Commute Trips)

% Trips Reduced              Measure
 0             <- Totals

Operational Measures (Applying to Employee Non-Commute Trips)

% Trips Reduced              Measure
 0             <- Totals

Operational Measures (Applying to Customer Trips)

% Trips Reduced              Measure
 0             <- Totals

Measures Reducing VMT (Non-Residential)

VMT Reduced   Measure
 0             <- Totals

Measures Reducing VMT (Residential)

VMT Reduced   Measure
 0             <- Totals

                  Total Percentage Trip Reduction
```

with Environmental Factors and Mitigation Measures

Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips
Pedestrian	0.00	0.00	0.00
Transit	0.00	0.00	0.00
Bicycle	0.00	0.00	0.00
Totals	0.00	0.00	0.00

Travel Mode	Work Trips	Employee Trips	Customer Trips
Pedestrian	0.00	0.00	0.00
Transit	0.00	0.00	0.00
Bicycle	0.00	0.00	0.00
Other	0.00	0.00	0.00
Totals	0.00	0.00	0.00

APPENDIX C-2

AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR EXISTING BASELINE CONDITIONS

EASTSHORE STATE PARK

AIR QUALITY CO HOT SPOT ANALYSIS

CALINE4 MODEL PRINTOUTS

EXISTING BASELINE

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	489	7.9	.0	10.0
B. WFront NBD	2	0	2	150	AG	25	7.9	.0	10.0
C. WFront NBL	2	-150	0	0	AG	8	7.9	.0	10.0
D. WFront SBA	-2	150	-2	0	AG	5	7.9	.0	10.0
E. WFront SBD	-2	0	-2	-150	AG	170	7.9	.0	10.0
F. WFront SBL	-2	150	0	0	AG	17	7.9	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	98	7.9	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	592	7.9	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	3	7.9	.0	10.0
J. Gilman WBA	150	2	0	2	AG	31	7.9	.0	10.0
K. Gilman WBD	0	2	-150	2	AG	22	7.9	.0	10.0
L. Gilman WBL	150	2	0	0	AG	158	7.9	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	497	7.9	.0	10.0
N. WFront NBDX	2	150	2	750	AG	25	7.9	.0	10.0
O. WFront SBAX	-2	750	-2	150	AG	22	7.9	.0	10.0
P. WFront SBDX	-2	-150	-2	-750	AG	170	7.9	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	101	7.9	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	592	7.9	.0	10.0
S. Gilman WBAX	*	750	2	150	2	*	AG	189	7.9	.0	10.0
T. Gilman WBDX	*	-150	2	-750	2	*	AG	22	7.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	X (COORDINATES (M))	Y	Z
1. SE	*	8	-10	1.8
2. NW	*	-8	8	1.8
3. SW	*	-8	-10	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	84.	1.0	.0	.0	.0	.0	.0	.0	.0	.6
2. NW	174.	.8	.3	.0	.0	.0	.2	.0	.0	.0
3. SW	84.	1.3	.2	.0	.0	.0	.0	.0	.0	.6
4. NE	186.	1.2	.5	.0	.0	.0	.1	.0	.0	.2
5. ES mdblk	84.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	93.	.5	.0	.0	.0	.0	.0	.0	.0	.1
7. WS mdblk	88.	.5	.0	.0	.0	.0	.0	.0	.1	.1
8. EN mdblk	260.	.8	.0	.0	.0	.0	.0	.0	.0	.4
9. SE mdblk	186.	.9	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	177.	.4	.1	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	11.	.7	.4	.0	.0	.0	.2	.0	.0	.0
12. NE mdblk	182.	.4	.1	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.9	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	177.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	181.	.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

CONC/LINK (PPM)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.1	.0	.0	.0	.0	.0	.2	.0	.0
2. NW	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.1	.0	.0	.0	.0	.0	.2	.0	.0
4. NE	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.8	.2	.0
6. WN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
7. WS mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
8. EN mdblk	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.7	.0	.0	.2	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.8	.2	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.5	.3	.0
17. SE blk	.0	.0	.0	.0	.7	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.5	.0	.0	.3	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
    U=    .5 M/S            Z0= 100. CM          ALT=    15. (M)
  BRG= WORST CASE           VD=   .0 CM/S
 CLAS=     7 (G)            VS=   .0 CM/S
 MIXH= 1000. M             AMB=   .0 PPM
SIGTH=   10. DEGREES      TEMP= 10.0 DEGREE (C)
```

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. wb ramp NBA	0	-150	0	0	AG	0	12.9	.0	10.0
B. wb ramp NBD	0	0	0	150	AG	0	12.9	.0	10.0
C. wb ramp NBL	2	-150	0	0	AG	0	12.9	.0	10.0
D. wb ramp SBA	-7	150	-7	0	AG	106	12.9	.0	10.0
E. wb ramp SBD	-7	0	-7	-150	AG	322	12.9	.0	10.0
F. wb ramp SBL	-5	150	0	0	AG	382	12.9	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	608	12.9	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	958	12.9	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	0	12.9	.0	10.0
J. Gilman WBA	150	4	0	4	AG	86	12.9	.0	10.0
K. Gilman WBD	0	4	-150	4	AG	187	12.9	.0	10.0
L. Gilman WBL	150	2	0	0	AG	285	12.9	.0	10.0
M. wb ramp NBAX	0	-750	0	-150	AG	0	12.9	.0	10.0
N. wb ramp NBDX	0	150	0	750	AG	0	12.9	.0	10.0
O. wb ramp SBAX	-7	750	-7	150	AG	488	12.9	.0	10.0
P. wb ramp SBDX	-7	-150	-7	-750	AG	322	12.9	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	608	12.9	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	958	12.9	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	371	12.9	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	187	12.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	7	-10	1.8
2. NW	*	-14	10	1.8
3. SW	*	-14	-10	1.8
4. NE	*	7	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	7	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	7	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	7	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	7	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	83.	2.6	.0	.0	.0	.0	.0	.0	.0	1.7
2. NW	97.	2.2	.0	.0	.0	.0	.0	.2	.0	.7
3. SW	84.	2.8	.0	.0	.0	.0	.3	.0	.2	1.4
4. NE	97.	1.9	.0	.0	.0	.0	.0	.0	.0	.7
5. ES mdblk	278.	2.5	.0	.0	.0	.0	.0	.0	.1	1.7
6. WN mdblk	95.	1.6	.0	.0	.0	.0	.0	.0	.4	.3
7. WS mdblk	85.	2.0	.0	.0	.0	.0	.0	.0	1.0	.2
8. EN mdblk	97.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	356.	.8	.0	.0	.0	.0	.2	.1	.0	.0
10. NW mdblk	170.	1.1	.0	.0	.0	.2	.0	.6	.0	.1
11. SW mdblk	6.	1.1	.0	.0	.0	.0	.6	.1	.0	.0
12. NE mdblk	186.	.9	.0	.0	.0	.1	.1	.4	.0	.0
13. ES blk	276.	2.6	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.8	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.3	.0	.0	.0	.0	.0	.3	.2	.0
2. NW	.0	.2	.0	.4	.0	.0	.0	.0	.0	.4	.1	.0
3. SW	.0	.0	.0	.3	.0	.0	.0	.0	.0	.4	.2	.0
4. NE	.0	.2	.0	.4	.0	.0	.0	.0	.0	.4	.2	.0
5. ES mdblk	.0	.1	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.4	.1	.0	.0	.0	.0	.0	.2	.1	.0
7. WS mdblk	.0	.0	.1	.1	.0	.0	.0	.0	.0	.2	.1	.0
8. EN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.1	.9	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.9	.5	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.5
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.3	.0	.0	.3
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.8	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	1.1	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S
BRG= WORST CASE
CLAS= 7 (G)
MIXH= 1000. M
SIGTH= 10. DEGREES

Z0= 100. CM
VD= .0 CM/S
VS= .0 CM/S
AMB= .0 PPM
TEMP= 10.0 DEGREE (C)

ALT= 15. (M)

II. LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	*	5	-150	5	0	*	AG	106	12.9	.0	10.0
B. eb ramp NBD	*	5	0	5	150	*	AG	1633	12.9	.0	10.0
C. eb ramp NBL	*	5	-150	0	0	*	AG	17	12.9	.0	10.0
D. eb ramp SBA	*	0	150	0	0	*	AG	0	12.9	.0	10.0
E. eb ramp SBD	*	0	0	0	-150	*	AG	0	12.9	.0	10.0
F. eb ramp SBL	*	-2	150	0	0	*	AG	0	12.9	.0	10.0
G. Gilman EBA	*	-150	-4	0	-4	*	AG	443	12.9	.0	10.0
H. Gilman EBD	*	0	-4	150	-4	*	AG	535	12.9	.0	10.0
I. Gilman EBL	*	-150	-2	0	0	*	AG	556	12.9	.0	10.0
J. Gilman WBA	*	150	4	0	4	*	AG	1085	12.9	.0	10.0
K. Gilman WBD	*	0	4	-150	4	*	AG	39	12.9	.0	10.0
L. Gilman WBL	*	150	2	0	0	*	AG	0	12.9	.0	10.0
M. eb ramp NBAX	*	5	-750	5	-150	*	AG	123	12.9	.0	10.0
N. eb ramp NBDX	*	5	150	5	750	*	AG	1633	12.9	.0	10.0
O. eb ramp SBAX	*	0	750	0	150	*	AG	0	12.9	.0	10.0
P. eb ramp SBDX	*	0	-150	0	-750	*	AG	0	12.9	.0	10.0
Q. Gilman EBAX	*	-750	-4	-150	-4	*	AG	999	12.9	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	535	12.9	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	1085	12.9	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	39	12.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	12	-10	1.8
2. NW	*	-7	10	1.8
3. SW	*	-7	-10	1.8
4. NE	*	12	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	12	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	12	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	12	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	12	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	3.9	.0	2.3	.0	.0	.0	.0	.0	.4
2. NW	96.	3.8	.0	1.0	.0	.0	.0	.0	.0	.4
3. SW	8.	2.6	.0	1.4	.0	.0	.0	.0	.4	.0
4. NE	260.	3.2	.0	1.3	.0	.0	.0	.0	.5	.0
5. ES mdblk	278.	2.4	.0	.2	.0	.0	.0	.0	.0	1.0
6. WN mdblk	95.	1.8	.0	.1	.0	.0	.0	.0	.3	.2
7. WS mdblk	84.	2.6	.0	.2	.0	.0	.0	.0	.8	.1
8. EN mdblk	263.	2.9	.0	.0	.0	.0	.0	.0	.1	.4
9. SE mdblk	358.	1.3	.2	.4	.0	.0	.0	.0	.0	.0
10. NW mdblk	166.	1.9	.0	1.6	.0	.0	.0	.0	.0	.1
11. SW mdblk	3.	1.2	.0	.4	.0	.0	.0	.0	.0	.0
12. NE mdblk	189.	3.0	.0	2.7	.0	.0	.0	.0	.0	.0
13. ES blk	277.	2.6	.0	.1	.0	.0	.0	.0	.0	.0
14. WN blk	96.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	2.5	.0	.1	.0	.0	.0	.0	.0	.0
16. EN blk	264.	3.0	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	358.	.7	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	172.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	3.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	3.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.6	.0	.0	.0	.5	.0	.0	.0	.0	.0	.0
2. NW	.0	1.7	.0	.0	.0	.0	.0	.0	.0	.3	.4	.0
3. SW	.4	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
4. NE	.7	.4	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
5. ES mdblk	.1	.8	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
6. WN mdblk	.5	.3	.0	.0	.0	.0	.0	.0	.0	.2	.2	.0
7. WS mdblk	.7	.3	.0	.0	.0	.0	.0	.0	.0	.1	.2	.0
8. EN mdblk	.1	1.9	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
9. SE mdblk	.0	.1	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.1	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.1	1.2	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	1.1	.0	.0	.1
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	2.0	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	2.1	.0
17. SE blk	.0	.0	.0	.0	.3	.1	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	1.8	.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	*	2	-150	2	0	*	AG	554	12.9	.0	10.0
B. WFront NBD	*	2	0	2	150	*	AG	597	12.9	.0	10.0
C. WFront NBL	*	2	-150	0	0	*	AG	28	12.9	.0	10.0
D. WFront SBA	*	-2	150	-2	0	*	AG	301	12.9	.0	10.0
E. WFront SBD	*	-2	0	-2	-150	*	AG	522	12.9	.0	10.0
F. WFront SBL	*	-2	150	0	0	*	AG	16	12.9	.0	10.0
G. Univrsty EBA	*	-150	-2	0	-2	*	AG	221	12.9	.0	10.0
H. Univrsty EBD	*	0	-2	150	-2	*	AG	246	12.9	.0	10.0
I. Univrsty EBL	*	-150	-2	0	0	*	AG	108	12.9	.0	10.0
J. Univrsty WBA	*	150	7	0	7	*	AG	191	12.9	.0	10.0
K. Univrsty WBD	*	0	7	-150	7	*	AG	236	12.9	.0	10.0
L. Univrsty WBL	*	150	5	0	0	*	AG	182	12.9	.0	10.0
M. WFront NBAX	*	2	-750	2	-150	*	AG	582	12.9	.0	10.0
N. WFront NBDX	*	2	150	2	750	*	AG	597	12.9	.0	10.0
O. WFront SBAX	*	-2	750	-2	150	*	AG	317	12.9	.0	10.0
P. WFront SBDX	*	-2	-150	-2	-750	*	AG	522	12.9	.0	10.0
Q. Univrs EBAX	*	-750	-2	-150	-2	*	AG	329	12.9	.0	10.0

R. Univrs EBDX	*	150	-2	750	-2	*	AG	246	12.9	.0	10.0
S. Univrs WBAX	*	750	7	150	7	*	AG	373	12.9	.0	10.0
T. Univrs WBDX	*	-150	7	-750	7	*	AG	236	12.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-8	14	1.8
3. SW	*	-8	-8	1.8
4. NE	*	8	14	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	14	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	14	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	14	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	14	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	2.3	.0	1.0	.0	.4	.0	.0	.0	.2
2. NW	174.	2.4	.6	.0	.0	.0	.8	.0	.1	.0
3. SW	6.	2.1	.0	.6	.0	.5	.0	.0	.2	.0
4. NE	186.	2.6	.9	.2	.0	.0	.6	.0	.0	.1
5. ES mdblk	276.	1.4	.0	.0	.0	.0	.0	.0	.0	.5
6. WN mdblk	96.	1.3	.0	.0	.0	.0	.0	.0	.2	.0
7. WS mdblk	84.	1.4	.0	.0	.0	.0	.0	.0	.4	.0
8. EN mdblk	263.	1.4	.0	.0	.0	.0	.0	.0	.0	.2
9. SE mdblk	354.	2.2	1.0	.2	.0	.1	.6	.0	.0	.0
10. NW mdblk	174.	2.0	.2	.6	.0	.6	.1	.0	.0	.0
11. SW mdblk	6.	2.2	.6	.2	.0	.0	.9	.0	.0	.0
12. NE mdblk	186.	2.1	.1	1.0	.0	.3	.2	.0	.0	.0
13. ES blk	276.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	2.3	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	2.3	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	2.1	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
		CONC/LINK (PPM)											
1. SE	*	.0	.1	.0	.1	.0	.3	.2	.0	.0	.0	.0	.0
2. NW	*	.0	.0	.2	.0	.3	.0	.0	.2	.0	.0	.0	.0
3. SW	*	.0	.0	.1	.0	.0	.3	.2	.0	.0	.0	.0	.0
4. NE	*	.0	.2	.0	.1	.2	.0	.0	.2	.0	.0	.0	.0
5. ES mdblk	*	.0	.1	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	*	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	*	.2	.0	.2	.0	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	*	.0	.4	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	*	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.4	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.6
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.8	.0	.0	.3
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.8	.0
17. SE blk	*	.0	.0	.0	.0	1.2	.0	.0	.8	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.9	.7	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.8	.0	.0	1.1	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	1.3	.5	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 6th NBA	7	-150	7	0	AG	498	9.8	.0	10.0
B. 6th NBD	7	0	7	150	AG	581	9.8	.0	10.0
C. 6th NBL	5	-150	0	0	AG	398	9.8	.0	10.0
D. 6th SBA	-7	150	-7	0	AG	749	9.8	.0	10.0
E. 6th SBD	-7	0	-7	-150	AG	495	9.8	.0	10.0
F. 6th SBL	-5	150	0	0	AG	80	9.8	.0	10.0
G. Univrsty EBA	-150	-9	0	-9	AG	1197	9.8	.0	13.5
H. Univrsty EBD	0	-9	150	-9	AG	1116	9.8	.0	10.0
I. Univrsty EBL	-150	-5	0	0	AG	126	9.8	.0	10.0
J. Univrsty WBA	150	9	0	9	AG	1149	9.8	.0	13.5
K. Univrsty WBD	0	9	-150	9	AG	2032	9.8	.0	10.0
L. Univrsty WBL	150	5	0	0	AG	27	9.8	.0	10.0
M. 6th NBAX	7	-750	7	-150	AG	896	9.8	.0	10.0
N. 6th NBDX	7	150	7	750	AG	581	9.8	.0	10.0
O. 6th SBAX	-7	750	-7	150	AG	829	9.8	.0	10.0
P. 6th SBDX	-7	-150	-7	-750	AG	495	9.8	.0	10.0
Q. Univrs EBAX	-750	-9	-150	-9	AG	1323	9.8	.0	13.5

R. Univrs EBDX	*	150	-9	750	-9	*	AG	1116	9.8	.0	10.0
S. Univrs WBAX	*	750	9	150	9	*	AG	1176	9.8	.0	13.5
T. Univrs WBDX	*	-150	9	-750	9	*	AG	2032	9.8	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-15	1.8
2. NW	*	-14	15	1.8
3. SW	*	-14	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-15	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-15	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	3.6	.3	.0	.2	.0	.2	.0	1.3	.2
2. NW	262.	3.6	.0	.0	.0	.0	.0	.0	.3	.0
3. SW	82.	3.0	.2	.0	.2	.0	.3	.0	.2	1.1
4. NE	262.	3.8	.0	.4	.0	.3	.0	.0	.3	.0
5. ES mdblk	277.	3.0	.0	.0	.0	.0	.0	.0	.2	1.4
6. WN mdblk	98.	3.7	.0	.0	.0	.0	.0	.0	.3	.3
7. WS mdblk	82.	2.9	.0	.0	.0	.0	.0	.0	1.5	.1
8. EN mdblk	263.	2.8	.0	.0	.0	.0	.0	.0	.3	.2
9. SE mdblk	352.	2.2	.7	.0	.4	.2	.2	.0	.1	.0
10. NW mdblk	173.	2.2	.1	.2	.0	1.0	.0	.1	.0	.0
11. SW mdblk	6.	1.9	.1	.2	.2	.1	.7	.0	.0	.0
12. NE mdblk	187.	2.0	.0	.8	.0	.2	.1	.0	.1	.0
13. ES blk	277.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	3.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	3.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	2.7	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	2.2	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.9	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

CONC/LINK (PPM)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.1	.0	.4	.0	.0	.0	.0	.0	.3	.0	.0	.6
2. NW	.0	.0	2.4	.0	.0	.0	.0	.0	.5	.0	.0	.4
3. SW	.0	.3	.0	.0	.0	.0	.0	.0	.0	.2	.4	.0
4. NE	.0	.2	1.8	.0	.0	.0	.0	.0	.5	.0	.0	.3
5. ES mdblk	.0	.2	.4	.0	.0	.0	.0	.0	.2	.0	.0	.3
6. WN mdblk	.0	.1	2.5	.0	.0	.0	.0	.0	.0	.2	.1	.0
7. WS mdblk	.1	.3	.3	.0	.0	.0	.0	.0	.0	.1	.2	.0
8. EN mdblk	.0	1.4	.3	.0	.0	.0	.0	.0	.2	.0	.0	.2
9. SE mdblk	.0	.0	.2	.0	.0	.0	.1	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.1	.0	.1	.0	.0	.1	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.7	.6	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	2.7
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.8	.0	.0	.9
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.5	1.7	.0
17. SE blk	.0	.0	.1	.0	1.4	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.4	1.3	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.6	.0	.0	.8	.0	.0	.0	.0
20. NE blk	.0	.0	.1	.0	.0	.9	.5	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	598	7.9	.0	10.0
B. WFront NBD	2	0	2	150	AG	638	7.9	.0	10.0
C. WFront NBL	2	-150	0	0	AG	3	7.9	.0	10.0
D. WFront SBA	-5	150	-5	0	AG	194	7.9	.0	10.0
E. WFront SBD	-5	0	-5	-150	AG	225	7.9	.0	10.0
F. WFront SBL	-5	150	0	0	AG	90	7.9	.0	10.0
G. wbramp EBA	-150	-2	0	-2	AG	2	7.9	.0	10.0
H. wbramp EBD	0	-2	150	-2	AG	93	7.9	.0	10.0
I. wbramp EBL	-150	-2	0	0	AG	6	7.9	.0	10.0
J. wbramp WBA	150	2	0	2	AG	41	7.9	.0	10.0
K. wbramp WBD	0	2	-150	2	AG	12	7.9	.0	10.0
L. wbramp WBL	150	2	0	0	AG	34	7.9	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	601	7.9	.0	10.0
N. WFront NBDX	2	150	2	750	AG	638	7.9	.0	10.0
O. WFront SBAX	-5	750	-5	150	AG	284	7.9	.0	10.0
P. WFront SBDX	-5	-150	-5	-750	AG	225	7.9	.0	10.0
Q. wbramp EBAX	-750	-2	-150	-2	AG	8	7.9	.0	10.0

R. wbramp EBDX	*	150	-2	750	-2	*	AG	93	7.9	.0	10.0
S. wbramp WBAX	*	750	2	150	2	*	AG	75	7.9	.0	10.0
T. wbramp WBDX	*	-150	2	-750	2	*	AG	12	7.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-12	8	1.8
3. SW	*	-12	-8	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-12	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-12	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	1.2	.0	.6	.0	.1	.0	.0	.0	.0
2. NW	7.	.9	.0	.3	.0	.2	.0	.0	.0	.0
3. SW	6.	.9	.0	.3	.0	.2	.0	.0	.0	.0
4. NE	354.	1.1	.0	.7	.0	.0	.0	.0	.0	.0
5. ES mdblk	278.	.3	.0	.0	.0	.0	.0	.0	.0	.1
6. WN mdblk	92.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	262.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	354.	1.1	.6	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	173.	.9	.1	.3	.0	.2	.0	.1	.0	.0
11. SW mdblk	6.	.9	.3	.1	.0	.0	.3	.0	.0	.0
12. NE mdblk	186.	1.1	.0	.7	.0	.1	.0	.0	.0	.0
13. ES blk	275.	.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	92.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	265.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	1.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0
17. SE blk	.0	.0	.0	.0	.8	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.4	.4	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.4	.0	.0	.3	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.8	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S
BRG= WORST CASE
CLAS= 7 (G)
MIXH= 1000. M
SIGTH= 10. DEGREES

Z0= 100. CM
VD= .0 CM/S
VS= .0 CM/S
AMB= .0 PPM
TEMP= 10.0 DEGREE (C)

ALT= 15. (M)

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	7	-150	7	0	AG	1099	7.9	.0	10.0
B. eb ramp NBD	7	0	7	150	AG	844	7.9	.0	10.0
C. eb ramp NBL	5	-150	0	0	AG	541	7.9	.0	10.0
D. eb ramp SBA	0	150	0	0	AG	0	7.9	.0	10.0
E. eb ramp SBD	0	0	0	-150	AG	0	7.9	.0	10.0
F. eb ramp SBL	-2	150	0	0	AG	0	7.9	.0	10.0
G. Powell EBA	-150	-9	0	-9	AG	718	7.9	.0	13.5
H. Powell EBD	0	-9	150	-9	AG	1569	7.9	.0	13.5
I. Powell EBL	-150	-5	0	0	AG	138	7.9	.0	10.0
J. Powell WBA	150	7	0	7	AG	1805	7.9	.0	17.0
K. Powell WBD	0	7	-150	7	AG	1888	7.9	.0	13.5
L. Powell WBL	150	2	0	0	AG	0	7.9	.0	10.0
M. eb ramp NBAX	7	-750	7	-150	AG	1640	7.9	.0	10.0
N. eb ramp NBDX	7	150	7	750	AG	844	7.9	.0	10.0
O. eb ramp SBAX	0	750	0	150	AG	0	7.9	.0	10.0
P. eb ramp SBDX	0	-150	0	-750	AG	0	7.9	.0	10.0
Q. Powell EBAX	-750	-9	-150	-9	AG	856	7.9	.0	13.5

R. Powell EBDX	*	150	-9	750	-9	*	AG	1569	7.9	.0	13.5
S. Powell WBAX	*	750	7	150	7	*	AG	1805	7.9	.0	17.0
T. Powell WBDX	*	-150	7	-750	7	*	AG	1888	7.9	.0	13.5

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-17	1.8
2. NW	*	-7	15	1.8
3. SW	*	-7	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-17	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-17	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	279.	2.7	.6	.0	.2	.0	.0	.0	.6	.3
2. NW	97.	3.1	.0	.3	.0	.0	.0	.0	.0	.3
3. SW	83.	3.2	.4	.0	.3	.0	.0	.0	.0	1.4
4. NE	186.	2.9	.9	.2	.3	.0	.0	.0	.0	.4
5. ES mdblk	278.	2.7	.0	.0	.0	.0	.0	.0	.0	1.5
6. WN mdblk	97.	2.9	.0	.0	.0	.0	.0	.0	.1	.3
7. WS mdblk	83.	2.2	.0	.0	.0	.0	.0	.0	.7	.2
8. EN mdblk	262.	2.6	.0	.0	.0	.0	.0	.0	.2	.3
9. SE mdblk	352.	2.1	1.2	.0	.4	.0	.0	.0	.0	.0
10. NW mdblk	174.	1.2	.2	.4	.0	.0	.0	.0	.0	.1
11. SW mdblk	9.	1.4	.6	.1	.4	.0	.0	.0	.0	.1
12. NE mdblk	185.	1.6	.2	.8	.1	.0	.0	.0	.0	.0
13. ES blk	277.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	83.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.9	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	1.4	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
		CONC/LINK (PPM)											
1. SE	*	.0	.0	.5	.0	.0	.0	.0	.0	.1	.0	.0	.4
2. NW	*	.0	1.7	.0	.0	.0	.0	.0	.0	.0	.5	.4	.0
3. SW	*	.0	.3	.0	.0	.0	.0	.0	.0	.0	.3	.5	.0
4. NE	*	.0	.8	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	*	.0	.4	.3	.0	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	*	.0	.2	1.7	.0	.0	.0	.0	.0	.0	.2	.2	.0
7. WS mdblk	*	.0	.3	.3	.0	.0	.0	.0	.0	.0	.1	.3	.0
8. EN mdblk	*	.0	1.5	.2	.0	.0	.0	.0	.0	.1	.0	.0	.1
9. SE mdblk	*	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.1	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.1	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.7	.8	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	2.0
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.0	.0	.7
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	1.8	.0
17. SE blk	*	.0	.0	.0	.0	1.8	.0	.0	.0	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	1.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	1.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Christie NBA	7	-150	7	0	AG	189	7.9	.0	10.0
B. Christie NBD	7	0	7	150	AG	550	7.9	.0	10.0
C. Christie NBL	5	-150	0	0	AG	402	7.9	.0	10.0
D. Christie SBA	-5	150	-5	0	AG	680	7.9	.0	11.8
E. Christie SBD	-5	0	-5	-150	AG	787	7.9	.0	10.0
F. Christie SBL	-2	150	0	0	AG	127	7.9	.0	10.0
G. Powell EBA	-150	-12	0	-12	AG	1237	7.9	.0	13.5
H. Powell EBD	0	-12	150	-12	AG	941	7.9	.0	10.0
I. Powell EBL	-150	-9	0	0	AG	383	7.9	.0	10.0
J. Powell WBA	150	9	0	9	AG	1123	7.9	.0	13.5
K. Powell WBD	0	9	-150	9	AG	2013	7.9	.0	10.0
L. Powell WBL	150	5	0	0	AG	150	7.9	.0	10.0
M. Chrstie NBAX	7	-750	7	-150	AG	591	7.9	.0	10.0
N. Chrstie NBDX	7	150	7	750	AG	550	7.9	.0	10.0
O. Chrstie SBAX	-5	750	-5	150	AG	807	7.9	.0	11.8
P. Chrstie SBDX	-5	-150	-5	-750	AG	787	7.9	.0	10.0
Q. Powell EBAX	-750	-12	-150	-12	AG	1620	7.9	.0	13.5

R. Powell EBDX	*	150	-12	750	-12	*	AG	941	7.9	.0	10.0
S. Powell WBAX	*	750	9	150	9	*	AG	1273	7.9	.0	13.5
T. Powell WBDX	*	-150	9	-750	9	*	AG	2013	7.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-19	1.8
2. NW	*	-13	15	1.8
3. SW	*	-12	-21	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-19	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-21	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-13	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-19	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-21	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-13	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	2.9	.0	.0	.2	.0	.2	.0	1.1	.2
2. NW	262.	3.0	.0	.0	.0	.0	.0	.0	.1	.0
3. SW	7.	2.5	.0	.2	.0	.6	.2	.1	.6	.0
4. NE	261.	3.2	.0	.3	.0	.2	.0	.0	.2	.0
5. ES mdblk	277.	2.3	.0	.0	.0	.0	.0	.0	.1	1.0
6. WN mdblk	99.	3.0	.0	.0	.0	.0	.0	.0	.2	.2
7. WS mdblk	81.	2.4	.0	.0	.0	.0	.0	.0	1.2	.0
8. EN mdblk	263.	2.3	.0	.0	.0	.0	.0	.0	.2	.0
9. SE mdblk	352.	1.5	.2	.0	.3	.1	.3	.0	.0	.0
10. NW mdblk	174.	1.7	.0	.1	.0	.7	.1	.0	.0	.0
11. SW mdblk	6.	1.8	.0	.1	.2	.1	.8	.0	.0	.0
12. NE mdblk	187.	1.7	.0	.6	.0	.2	.2	.0	.0	.0
13. ES blk	277.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	98.	3.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	2.7	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	2.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.5	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.2	.0	.2	.0	.0	.0	.0	.0	.3	.0	.0	.5
2. NW	.1	.0	1.9	.0	.0	.0	.0	.0	.5	.0	.0	.3
3. SW	.1	.0	.4	.0	.0	.2	.2	.0	.0	.0	.0	.0
4. NE	.1	.2	1.4	.0	.0	.0	.0	.0	.4	.0	.0	.2
5. ES mdblk	.0	.1	.3	.0	.0	.0	.0	.0	.1	.0	.0	.2
6. WN mdblk	.1	.0	2.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
7. WS mdblk	.2	.2	.2	.0	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	.0	1.1	.2	.0	.0	.0	.0	.0	.2	.0	.0	.2
9. SE mdblk	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.5	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0	2.2
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.8	.0	.0	.6
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	1.4	.0
17. SE blk	.0	.0	.0	.0	.8	.0	.0	.4	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.3	1.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	1.0	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.7	.5	.0	.0	.0	.0	.0

APPENDIX C-3

AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR EXISTING WITH PROJECT CONDITIONS

EASTSHORE STATE PARK

AIR QUALITY CO HOT SPOT ANALYSIS

CALINE4 MODEL PRINTOUTS

EXISTING WITH PROJECT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	491	7.9	.0	10.0
B. WFront NBD	2	0	2	150	AG	25	7.9	.0	10.0
C. WFront NBL	2	-150	0	0	AG	8	7.9	.0	10.0
D. WFront SBA	-2	150	-2	0	AG	5	7.9	.0	10.0
E. WFront SBD	-2	0	-2	-150	AG	172	7.9	.0	10.0
F. WFront SBL	-2	150	0	0	AG	17	7.9	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	98	7.9	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	594	7.9	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	3	7.9	.0	10.0
J. Gilman WBA	150	2	0	2	AG	31	7.9	.0	10.0
K. Gilman WBD	0	2	-150	2	AG	22	7.9	.0	10.0
L. Gilman WBL	150	2	0	0	AG	160	7.9	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	499	7.9	.0	10.0
N. WFront NBDX	2	150	2	750	AG	25	7.9	.0	10.0
O. WFront SBAX	-2	750	-2	150	AG	22	7.9	.0	10.0
P. WFront SBDX	-2	-150	-2	-750	AG	172	7.9	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	101	7.9	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	594	7.9	.0	10.0
S. Gilman WBAX	*	750	2	150	2	*	AG	191	7.9	.0	10.0
T. Gilman WBDX	*	-150	2	-750	2	*	AG	22	7.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-10	1.8
2. NW	*	-8	8	1.8
3. SW	*	-8	-10	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	84.	1.0	.0	.0	.0	.0	.0	.0	.0	.6
2. NW	174.	.8	.3	.0	.0	.0	.2	.0	.0	.0
3. SW	84.	1.3	.2	.0	.0	.0	.0	.0	.0	.6
4. NE	186.	1.2	.5	.0	.0	.0	.1	.0	.0	.2
5. ES mdblk	84.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	93.	.5	.0	.0	.0	.0	.0	.0	.0	.1
7. WS mdblk	88.	.5	.0	.0	.0	.0	.0	.0	.1	.1
8. EN mdblk	260.	.8	.0	.0	.0	.0	.0	.0	.0	.4
9. SE mdblk	186.	.9	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	177.	.4	.1	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	11.	.7	.4	.0	.0	.0	.2	.0	.0	.0
12. NE mdblk	182.	.4	.1	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.9	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	177.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	181.	.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.1	.0	.0	.0	.0	.0	.2	.0	.0
2. NW	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.1	.0	.0	.0	.0	.0	.2	.0	.0
4. NE	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.8	.2	.0
6. WN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
7. WS mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
8. EN mdblk	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.7	.0	.0	.2	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.8	.2	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.5	.3	.0
17. SE blk	.0	.0	.0	.0	.7	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.5	.0	.0	.3	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S
BRG= WORST CASE
CLAS= 7 (G)
MIXH= 1000. M
SIGTH= 10. DEGREES

Z0= 100. CM
VD= .0 CM/S
VS= .0 CM/S
AMB= .0 PPM
TEMP= 10.0 DEGREE (C)

ALT= 15. (M)

II. LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. wb ramp NBA	*	0	-150	0	0	*	AG	0	12.9	.0	10.0
B. wb ramp NBD	*	0	0	0	150	*	AG	0	12.9	.0	10.0
C. wb ramp NBL	*	2	-150	0	0	*	AG	0	12.9	.0	10.0
D. wb ramp SBA	*	-7	150	-7	0	*	AG	106	12.9	.0	10.0
E. wb ramp SBD	*	-7	0	-7	-150	*	AG	322	12.9	.0	10.0
F. wb ramp SBL	*	-5	150	0	0	*	AG	382	12.9	.0	10.0
G. Gilman EBA	*	-150	-4	0	-4	*	AG	610	12.9	.0	10.0
H. Gilman EBD	*	0	-4	150	-4	*	AG	960	12.9	.0	10.0
I. Gilman EBL	*	-150	-2	0	0	*	AG	0	12.9	.0	10.0
J. Gilman WBA	*	150	4	0	4	*	AG	88	12.9	.0	10.0
K. Gilman WBD	*	0	4	-150	4	*	AG	189	12.9	.0	10.0
L. Gilman WBL	*	150	2	0	0	*	AG	285	12.9	.0	10.0
M. wb ramp NBAX	*	0	-750	0	-150	*	AG	0	12.9	.0	10.0
N. wb ramp NBDX	*	0	150	0	750	*	AG	0	12.9	.0	10.0
O. wb ramp SBAX	*	-7	750	-7	150	*	AG	488	12.9	.0	10.0
P. wb ramp SBDX	*	-7	-150	-7	-750	*	AG	322	12.9	.0	10.0
Q. Gilman EBAX	*	-750	-4	-150	-4	*	AG	610	12.9	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	960	12.9	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	373	12.9	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	189	12.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	7	-10	1.8
2. NW	*	-14	10	1.8
3. SW	*	-14	-10	1.8
4. NE	*	7	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	7	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	7	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	7	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	7	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	83.	2.6	.0	.0	.0	.0	.0	.0	.0	1.7
2. NW	97.	2.2	.0	.0	.0	.0	.0	.2	.0	.8
3. SW	84.	2.8	.0	.0	.0	.0	.3	.0	.2	1.4
4. NE	97.	1.9	.0	.0	.0	.0	.0	.0	.0	.7
5. ES mdblk	278.	2.5	.0	.0	.0	.0	.0	.0	.1	1.7
6. WN mdblk	95.	1.6	.0	.0	.0	.0	.0	.0	.4	.3
7. WS mdblk	85.	2.0	.0	.0	.0	.0	.0	.0	1.0	.2
8. EN mdblk	97.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	356.	.8	.0	.0	.0	.0	.2	.1	.0	.0
10. NW mdblk	170.	1.1	.0	.0	.0	.2	.0	.6	.0	.1
11. SW mdblk	6.	1.1	.0	.0	.0	.0	.6	.1	.0	.0
12. NE mdblk	186.	.9	.0	.0	.0	.1	.1	.4	.0	.0
13. ES blk	276.	2.6	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.8	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.3	.0	.0	.0	.0	.0	.3	.2	.0
2. NW	.0	.2	.0	.4	.0	.0	.0	.0	.0	.4	.1	.0
3. SW	.0	.0	.0	.3	.0	.0	.0	.0	.0	.4	.2	.0
4. NE	.0	.2	.0	.4	.0	.0	.0	.0	.0	.4	.2	.0
5. ES mdblk	.0	.1	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.4	.1	.0	.0	.0	.0	.0	.2	.1	.0
7. WS mdblk	.0	.0	.1	.1	.0	.0	.0	.0	.0	.2	.1	.0
8. EN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.1	.9	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.9	.5	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.5
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.3	.0	.0	.3
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.8	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	1.1	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S
BRG= WORST CASE
CLAS= 7 (G)
MIXH= 1000. M
SIGTH= 10. DEGREES

Z0= 100. CM
VD= .0 CM/S
VS= .0 CM/S
AMB= .0 PPM
TEMP= 10.0 DEGREE (C)

ALT= 15. (M)

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	5	-150	5	0	AG	106	12.9	.0	10.0
B. eb ramp NBD	5	0	5	150	AG	1633	12.9	.0	10.0
C. eb ramp NBL	5	-150	0	0	AG	17	12.9	.0	10.0
D. eb ramp SBA	0	150	0	0	AG	0	12.9	.0	10.0
E. eb ramp SBD	0	0	0	-150	AG	0	12.9	.0	10.0
F. eb ramp SBL	-2	150	0	0	AG	0	12.9	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	445	12.9	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	537	12.9	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	556	12.9	.0	10.0
J. Gilman WBA	150	4	0	4	AG	1087	12.9	.0	10.0
K. Gilman WBD	0	4	-150	4	AG	41	12.9	.0	10.0
L. Gilman WBL	150	2	0	0	AG	0	12.9	.0	10.0
M. eb ramp NBAX	5	-750	5	-150	AG	123	12.9	.0	10.0
N. eb ramp NBDX	5	150	5	750	AG	1633	12.9	.0	10.0
O. eb ramp SBAX	0	750	0	150	AG	0	12.9	.0	10.0
P. eb ramp SBDX	0	-150	0	-750	AG	0	12.9	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	1001	12.9	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	537	12.9	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	1087	12.9	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	41	12.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	12	-10	1.8
2. NW	*	-7	10	1.8
3. SW	*	-7	-10	1.8
4. NE	*	12	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	12	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	12	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	12	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	12	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	3.9	.0	2.3	.0	.0	.0	.0	.0	.4
2. NW	96.	3.8	.0	1.0	.0	.0	.0	.0	.0	.4
3. SW	8.	2.6	.0	1.4	.0	.0	.0	.0	.4	.0
4. NE	260.	3.2	.0	1.3	.0	.0	.0	.0	.5	.0
5. ES mdblk	278.	2.4	.0	.2	.0	.0	.0	.0	.0	1.0
6. WN mdblk	95.	1.8	.0	.1	.0	.0	.0	.0	.3	.2
7. WS mdblk	84.	2.6	.0	.2	.0	.0	.0	.0	.8	.1
8. EN mdblk	263.	2.9	.0	.0	.0	.0	.0	.0	.1	.4
9. SE mdblk	358.	1.3	.2	.4	.0	.0	.0	.0	.0	.0
10. NW mdblk	166.	1.9	.0	1.6	.0	.0	.0	.0	.0	.1
11. SW mdblk	3.	1.2	.0	.4	.0	.0	.0	.0	.0	.0
12. NE mdblk	189.	3.0	.0	2.7	.0	.0	.0	.0	.0	.0
13. ES blk	277.	2.6	.0	.1	.0	.0	.0	.0	.0	.0
14. WN blk	96.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	2.5	.0	.1	.0	.0	.0	.0	.0	.0
16. EN blk	264.	3.0	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	358.	.7	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	172.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	3.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	3.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	*	.0	.6	.0	.0	.0	.5	.0	.0	.0	.0	.0	.0
2. NW	*	.0	1.7	.0	.0	.0	.0	.0	.0	.0	.3	.4	.0
3. SW	*	.4	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
4. NE	*	.7	.4	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
5. ES mdblk	*	.1	.8	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
6. WN mdblk	*	.5	.3	.1	.0	.0	.0	.0	.0	.0	.2	.2	.0
7. WS mdblk	*	.7	.3	.0	.0	.0	.0	.0	.0	.0	.1	.2	.0
8. EN mdblk	*	.1	1.9	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
9. SE mdblk	*	.0	.1	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.1	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.1	1.2	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	1.1	.0	.0	.1
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	2.0	.0	.0	.0
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	2.1	.0
17. SE blk	*	.0	.0	.0	.0	.3	.1	.0	.0	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	1.8	.0	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	561	12.9	.0	10.0
B. WFront NBD	2	0	2	150	AG	607	12.9	.0	10.0
C. WFront NBL	2	-150	0	0	AG	28	12.9	.0	10.0
D. WFront SBA	-2	150	-2	0	AG	303	12.9	.0	10.0
E. WFront SBD	-2	0	-2	-150	AG	529	12.9	.0	10.0
F. WFront SBL	-2	150	0	0	AG	24	12.9	.0	10.0
G. Univrsty EBA	-150	-2	0	-2	AG	221	12.9	.0	10.0
H. Univrsty EBD	0	-2	150	-2	AG	259	12.9	.0	10.0
I. Univrsty EBL	-150	-2	0	0	AG	108	12.9	.0	10.0
J. Univrsty WBA	150	7	0	7	AG	199	12.9	.0	10.0
K. Univrsty WBD	0	7	-150	7	AG	236	12.9	.0	10.0
L. Univrsty WBL	150	5	0	0	AG	187	12.9	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	589	12.9	.0	10.0
N. WFront NBDX	2	150	2	750	AG	607	12.9	.0	10.0
O. WFront SBAX	-2	750	-2	150	AG	327	12.9	.0	10.0
P. WFront SBDX	-2	-150	-2	-750	AG	529	12.9	.0	10.0
Q. Univrs EBAX	-750	-2	-150	-2	AG	329	12.9	.0	10.0

R. Univrs EBDX	*	150	-2	750	-2 *	AG	259	12.9	.0	10.0
S. Univrs WBAX	*	750	7	150	7 *	AG	286	12.9	.0	10.0
T. Univrs WBDX	*	-150	7	-750	7 *	AG	236	12.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-8	14	1.8
3. SW	*	-8	-8	1.8
4. NE	*	8	14	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	14	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	14	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	14	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	14	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	2.4	.0	1.0	.0	.4	.0	.0	.0	.2
2. NW	174.	2.5	.6	.0	.0	.0	.8	.0	.1	.0
3. SW	6.	2.2	.0	.7	.0	.5	.0	.0	.2	.0
4. NE	186.	2.6	.9	.2	.0	.0	.6	.0	.0	.1
5. ES mdblk	276.	1.4	.0	.0	.0	.0	.0	.0	.0	.5
6. WN mdblk	96.	1.3	.0	.0	.0	.0	.0	.0	.2	.1
7. WS mdblk	84.	1.4	.0	.0	.0	.0	.0	.0	.4	.0
8. EN mdblk	263.	1.4	.0	.0	.0	.0	.0	.0	.0	.2
9. SE mdblk	354.	2.3	1.0	.2	.0	.1	.6	.0	.0	.0
10. NW mdblk	174.	2.0	.2	.6	.0	.6	.1	.0	.0	.0
11. SW mdblk	6.	2.2	.6	.2	.0	.0	.9	.0	.0	.0
12. NE mdblk	186.	2.2	.1	1.1	.0	.4	.2	.0	.0	.0
13. ES blk	276.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	2.3	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	2.3	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	2.1	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
	CONC/LINK (PPM)											
1. SE	.0	.1	.0	.1	.0	.3	.2	.0	.0	.0	.0	.0
2. NW	.0	.0	.2	.0	.3	.0	.0	.2	.0	.0	.0	.0
3. SW	.0	.0	.1	.0	.0	.3	.2	.0	.0	.0	.0	.0
4. NE	.0	.2	.0	.1	.2	.0	.0	.3	.0	.0	.0	.0
5. ES mdblk	.0	.1	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.2	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.4	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.6
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.8	.0	.0	.3
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.7	.0
17. SE blk	.0	.0	.0	.0	1.2	.0	.0	.8	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.9	.7	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.9	.0	.0	1.1	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	1.3	.5	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
		LINK COORDINATES (M)									
A. 6th NBA	*	7	-150	7	0	*	AG	498	9.8	.0	10.0
B. 6th NBD	*	7	0	7	150	*	AG	581	9.8	.0	10.0
C. 6th NBL	*	5	-150	0	0	*	AG	398	9.8	.0	10.0
D. 6th SBA	*	-7	150	-7	0	*	AG	749	9.8	.0	10.0
E. 6th SBD	*	-7	0	-7	-150	*	AG	495	9.8	.0	10.0
F. 6th SBL	*	-5	150	0	0	*	AG	80	9.8	.0	10.0
G. Univrsty EBA	*	-150	-9	0	-9	*	AG	1201	9.8	.0	13.5
H. Univrsty EBD	*	0	-9	150	-9	*	AG	1120	9.8	.0	10.0
I. Univrsty EBL	*	-150	-5	0	0	*	AG	126	9.8	.0	10.0
J. Univrsty WBA	*	150	9	0	9	*	AG	1153	9.8	.0	13.5
K. Univrsty WBD	*	0	9	-150	9	*	AG	2036	9.8	.0	10.0
L. Univrsty WBL	*	150	5	0	0	*	AG	27	9.8	.0	10.0
M. 6th NBAX	*	7	-750	7	-150	*	AG	896	9.8	.0	10.0
N. 6th NBDX	*	7	150	7	750	*	AG	581	9.8	.0	10.0
O. 6th SBAX	*	-7	750	-7	150	*	AG	829	9.8	.0	10.0
P. 6th SBDX	*	-7	-150	-7	-750	*	AG	495	9.8	.0	10.0
Q. Univrs EBAX	*	-750	-9	-150	-9	*	AG	1327	9.8	.0	13.5

R. Univrs EBDX	*	150	-9	750	-9	*	AG	1120	9.8	.0	10.0
S. Univrs WBAX	*	750	9	150	9	*	AG	1180	9.8	.0	13.5
T. Univrs WBDX	*	-150	9	-750	9	*	AG	2036	9.8	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-15	1.8
2. NW	*	-14	15	1.8
3. SW	*	-14	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-15	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-15	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	3.6	.3	.0	.2	.0	.2	.0	1.3	.2
2. NW	262.	3.6	.0	.0	.0	.0	.0	.0	.3	.0
3. SW	82.	3.0	.2	.0	.2	.0	.3	.0	.2	1.1
4. NE	262.	3.8	.0	.4	.0	.3	.0	.0	.3	.0
5. ES mdblk	277.	3.0	.0	.0	.0	.0	.0	.0	.2	1.5
6. WN mdblk	98.	3.8	.0	.0	.0	.0	.0	.0	.3	.3
7. WS mdblk	82.	2.9	.0	.0	.0	.0	.0	.0	1.5	.1
8. EN mdblk	263.	2.8	.0	.0	.0	.0	.0	.0	.3	.2
9. SE mdblk	352.	2.2	.7	.0	.4	.2	.2	.0	.1	.0
10. NW mdblk	173.	2.2	.1	.2	.0	1.0	.0	.1	.0	.0
11. SW mdblk	6.	1.9	.1	.2	.2	.1	.7	.0	.0	.0
12. NE mdblk	187.	2.0	.0	.8	.0	.2	.1	.0	.1	.0
13. ES blk	277.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	3.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	3.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	2.7	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	2.2	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.9	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.1	.0	.4	.0	.0	.0	.0	.0	.3	.0	.0	.6
2. NW	.0	.0	2.4	.0	.0	.0	.0	.0	.5	.0	.0	.4
3. SW	.0	.3	.0	.0	.0	.0	.0	.0	.0	.2	.4	.0
4. NE	.0	.2	1.8	.0	.0	.0	.0	.0	.5	.0	.0	.3
5. ES mdblk	.0	.3	.4	.0	.0	.0	.0	.0	.2	.0	.0	.3
6. WN mdblk	.0	.1	2.5	.0	.0	.0	.0	.0	.0	.2	.1	.0
7. WS mdblk	.1	.3	.3	.0	.0	.0	.0	.0	.0	.1	.2	.0
8. EN mdblk	.0	1.4	.3	.0	.0	.0	.0	.0	.2	.0	.0	.2
9. SE mdblk	.0	.0	.2	.0	.0	.0	.1	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.1	.0	.1	.0	.0	.1	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.7	.6	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	2.7
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.8	.0	.0	.9
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.5	1.7	.0
17. SE blk	.0	.0	.1	.0	1.4	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.4	1.3	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.6	.0	.0	.8	.0	.0	.0	.0
20. NE blk	.0	.0	.1	.0	.0	.9	.5	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 15. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 10. DEGREES TEMP= 10.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	601	7.9	.0	10.0
B. WFront NBD	2	0	2	150	AG	641	7.9	.0	10.0
C. WFront NBL	2	-150	0	0	AG	3	7.9	.0	10.0
D. WFront SBA	-5	150	-5	0	AG	197	7.9	.0	10.0
E. WFront SBD	-5	0	-5	-150	AG	229	7.9	.0	10.0
F. WFront SBL	-5	150	0	0	AG	90	7.9	.0	10.0
G. wbramp EBA	-150	-2	0	-2	AG	2	7.9	.0	10.0
H. wbramp EBD	0	-2	150	-2	AG	93	7.9	.0	10.0
I. wbramp EBL	-150	-2	0	0	AG	6	7.9	.0	10.0
J. wbramp WBA	150	2	0	2	AG	41	7.9	.0	10.0
K. wbramp WBD	0	2	-150	2	AG	12	7.9	.0	10.0
L. wbramp WBL	150	2	0	0	AG	35	7.9	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	604	7.9	.0	10.0
N. WFront NBDX	2	150	2	750	AG	641	7.9	.0	10.0
O. WFront SBAX	-5	750	-5	150	AG	287	7.9	.0	10.0
P. WFront SBDX	-5	-150	-5	-750	AG	229	7.9	.0	10.0
Q. wbramp EBAX	-750	-2	-150	-2	AG	8	7.9	.0	10.0

R. wbramp EBDX	*	150	-2	750	-2	*	AG	93	7.9	.0	10.0
S. wbramp WBAX	*	750	2	150	2	*	AG	76	7.9	.0	10.0
T. wbramp WBDX	*	-150	2	-750	2	*	AG	12	7.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

	*	COORDINATES (M)		
RECEPTOR	*	X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-12	8	1.8
3. SW	*	-12	-8	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-12	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-12	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	1.2	.0	.7	.0	.1	.0	.0	.0	.0
2. NW	7.	.9	.0	.3	.0	.2	.0	.0	.0	.0
3. SW	6.	.9	.0	.3	.0	.2	.0	.0	.0	.0
4. NE	353.	1.2	.0	.7	.0	.1	.0	.0	.0	.0
5. ES mdblk	278.	.3	.0	.0	.0	.0	.0	.0	.0	.1
6. WN mdblk	92.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	262.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	354.	1.1	.6	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	173.	1.0	.1	.3	.0	.2	.0	.1	.0	.0
11. SW mdblk	6.	.9	.3	.1	.0	.0	.3	.0	.0	.0
12. NE mdblk	186.	1.1	.0	.7	.0	.1	.0	.0	.0	.0
13. ES blk	275.	.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	92.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	265.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	1.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

CONC/LINK (PPM)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0
17. SE blk	.0	.0	.0	.0	.8	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.4	.4	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.4	.0	.0	.3	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.8	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	7	-150	7	0	AG	1099	7.9	.0	10.0
B. eb ramp NBD	7	0	7	150	AG	844	7.9	.0	10.0
C. eb ramp NBL	5	-150	0	0	AG	541	7.9	.0	10.0
D. eb ramp SBA	0	150	0	0	AG	0	7.9	.0	10.0
E. eb ramp SBD	0	0	0	-150	AG	0	7.9	.0	10.0
F. eb ramp SBL	-2	150	0	0	AG	0	7.9	.0	10.0
G. Powell EBA	-150	-9	0	-9	AG	721	7.9	.0	13.5
H. Powell EBD	0	-9	150	-9	AG	1572	7.9	.0	13.5
I. Powell EBL	-150	-5	0	0	AG	138	7.9	.0	10.0
J. Powell WBA	150	7	0	7	AG	1808	7.9	.0	17.0
K. Powell WBD	0	7	-150	7	AG	1891	7.9	.0	13.5
L. Powell WBL	150	2	0	0	AG	0	7.9	.0	10.0
M. eb ramp NBAX	7	-750	7	-150	AG	1640	7.9	.0	10.0
N. eb ramp NBDX	7	150	7	750	AG	844	7.9	.0	10.0
O. eb ramp SBAX	0	750	0	150	AG	0	7.9	.0	10.0
P. eb ramp SBDX	0	-150	0	-750	AG	0	7.9	.0	10.0
Q. Powell EBAX	-750	-9	-150	-9	AG	859	7.9	.0	13.5

R. Powell EBDX	*	150	-9	750	-9	*	AG	1572	7.9	.0	13.5
S. Powell WBAX	*	750	7	150	7	*	AG	1808	7.9	.0	17.0
T. Powell WBDX	*	-150	7	-750	7	*	AG	1891	7.9	.0	13.5

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-17	1.8
2. NW	*	-7	15	1.8
3. SW	*	-7	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-17	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-17	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	279.	2.7	.6	.0	.2	.0	.0	.0	.6	.3
2. NW	97.	3.1	.0	.3	.0	.0	.0	.0	.0	.3
3. SW	83.	3.2	.4	.0	.3	.0	.0	.0	.0	1.4
4. NE	186.	2.9	.9	.2	.3	.0	.0	.0	.0	.4
5. ES mdblk	278.	2.7	.0	.0	.0	.0	.0	.0	.0	1.5
6. WN mdblk	97.	2.9	.0	.0	.0	.0	.0	.0	.1	.3
7. WS mdblk	83.	2.2	.0	.0	.0	.0	.0	.0	.7	.2
8. EN mdblk	262.	2.6	.0	.0	.0	.0	.0	.0	.2	.3
9. SE mdblk	352.	2.1	1.2	.0	.4	.0	.0	.0	.0	.0
10. NW mdblk	174.	1.2	.2	.4	.0	.0	.0	.0	.0	.1
11. SW mdblk	9.	1.4	.6	.1	.4	.0	.0	.0	.0	.2
12. NE mdblk	185.	1.6	.2	.8	.1	.0	.0	.0	.0	.0
13. ES blk	277.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	83.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	2.8	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.9	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	1.4	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
	*						CONC/LINK (PPM)						
1. SE	*	.0	.0	.5	.0	.0	.0	.0	.0	.1	.0	.0	.4
2. NW	*	.0	1.7	.0	.0	.0	.0	.0	.0	.0	.5	.4	.0
3. SW	*	.0	.3	.0	.0	.0	.0	.0	.0	.0	.3	.5	.0
4. NE	*	.0	.8	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	*	.0	.4	.3	.0	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	*	.0	.2	1.7	.0	.0	.0	.0	.0	.0	.2	.2	.0
7. WS mdblk	*	.0	.3	.3	.0	.0	.0	.0	.0	.0	.1	.3	.0
8. EN mdblk	*	.0	1.5	.2	.0	.0	.0	.0	.0	.1	.0	.0	.1
9. SE mdblk	*	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.1	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.1	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.7	.8	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	2.0
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.0	.0	.7
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	1.8	.0
17. SE blk	*	.0	.0	.0	.0	1.8	.0	.0	.0	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	1.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	1.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Christie NBA	*	7	-150	7	0	*	AG	189	7.9	.0	10.0
B. Christie NBD	*	7	0	7	150	*	AG	550	7.9	.0	10.0
C. Christie NBL	*	5	-150	0	0	*	AG	402	7.9	.0	10.0
D. Christie SBA	*	-5	150	-5	0	*	AG	680	7.9	.0	11.8
E. Christie SBD	*	-5	0	-5	-150	*	AG	787	7.9	.0	10.0
F. Christie SBL	*	-2	150	0	0	*	AG	127	7.9	.0	10.0
G. Powell EBA	*	-150	-12	0	-12	*	AG	1240	7.9	.0	13.5
H. Powell EBD	*	0	-12	150	-12	*	AG	944	7.9	.0	10.0
I. Powell EBL	*	-150	-9	0	0	*	AG	383	7.9	.0	10.0
J. Powell WBA	*	150	9	0	9	*	AG	1126	7.9	.0	13.5
K. Powell WBD	*	0	9	-150	9	*	AG	2016	7.9	.0	10.0
L. Powell WBL	*	150	5	0	0	*	AG	150	7.9	.0	10.0
M. Chrstie NBAX	*	7	-750	7	-150	*	AG	591	7.9	.0	10.0
N. Chrstie NBDX	*	7	150	7	750	*	AG	550	7.9	.0	10.0
O. Chrstie SBAX	*	-5	750	-5	150	*	AG	807	7.9	.0	11.8
P. Chrstie SBDX	*	-5	-150	-5	-750	*	AG	787	7.9	.0	10.0
Q. Powell EBAX	*	-750	-12	-150	-12	*	AG	1623	7.9	.0	13.5

R. Powell EBDX	*	150	-12	750	-12 *	AG	944	7.9	.0	10.0
S. Powell WBAX	*	750	9	150	9 *	AG	1276	7.9	.0	13.5
T. Powell WBDX	*	-150	9	-750	9 *	AG	2016	7.9	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-19	1.8
2. NW	*	-13	15	1.8
3. SW	*	-12	-21	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-19	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-21	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-13	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-19	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-21	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-13	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	2.9	.0	.0	.2	.0	.2	.0	1.1	.2
2. NW	262.	3.0	.0	.0	.0	.0	.0	.0	.1	.0
3. SW	7.	2.5	.0	.2	.0	.6	.2	.1	.6	.0
4. NE	261.	3.2	.0	.3	.0	.2	.0	.0	.2	.0
5. ES mdblk	277.	2.3	.0	.0	.0	.0	.0	.0	.1	1.0
6. WN mdblk	99.	3.0	.0	.0	.0	.0	.0	.0	.2	.2
7. WS mdblk	81.	2.4	.0	.0	.0	.0	.0	.0	1.2	.0
8. EN mdblk	263.	2.4	.0	.0	.0	.0	.0	.0	.2	.0
9. SE mdblk	352.	1.5	.2	.0	.3	.1	.3	.0	.0	.0
10. NW mdblk	174.	1.7	.0	.1	.0	.7	.1	.0	.0	.0
11. SW mdblk	6.	1.8	.0	.1	.2	.1	.8	.0	.0	.0
12. NE mdblk	187.	1.7	.0	.6	.0	.2	.2	.0	.0	.0
13. ES blk	277.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	98.	3.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	2.7	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	2.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.5	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2002 Existing w/ Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
	*						CONC/LINK (PPM)						
1. SE	*	.2	.0	.2	.0	.0	.0	.0	.0	.3	.0	.0	.5
2. NW	*	.1	.0	1.9	.0	.0	.0	.0	.0	.5	.0	.0	.3
3. SW	*	.1	.0	.4	.0	.0	.2	.2	.0	.0	.0	.0	.0
4. NE	*	.1	.2	1.4	.0	.0	.0	.0	.0	.4	.0	.0	.2
5. ES mdblk	*	.0	.1	.3	.0	.0	.0	.0	.0	.1	.0	.0	.2
6. WN mdblk	*	.1	.0	2.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
7. WS mdblk	*	.2	.2	.2	.0	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	*	.0	1.1	.2	.0	.0	.0	.0	.0	.2	.0	.0	.2
9. SE mdblk	*	.0	.0	.1	.0	.0	.0	.1	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.5	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0	2.2
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	1.8	.0	.0	.6
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	1.4	.0
17. SE blk	*	.0	.0	.0	.0	.8	.0	.0	.4	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.3	1.0	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.3	.0	.0	1.0	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	.7	.5	.0	.0	.0	.0	.0

APPENDIX C-4

AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR YEAR 2025 BASELINE CONDITIONS

EASTSHORE STATE PARK

AIR QUALITY CO HOT SPOT ANALYSIS

CALINE4 MODEL PRINTOUTS

YEAR 2025 BASELINE

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	571	4.7	.0	10.0
B. WFront NBD	2	0	2	150	AG	32	4.7	.0	10.0
C. WFront NBL	2	-150	0	0	AG	54	4.7	.0	10.0
D. WFront SBA	-2	150	-2	0	AG	13	4.7	.0	10.0
E. WFront SBD	-2	0	-2	-150	AG	277	4.7	.0	10.0
F. WFront SBL	-2	150	0	0	AG	17	4.7	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	251	4.7	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	766	4.7	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	10	4.7	.0	10.0
J. Gilman WBA	150	2	0	2	AG	45	4.7	.0	10.0
K. Gilman WBD	0	2	-150	2	AG	90	4.7	.0	10.0
L. Gilman WBL	150	2	0	0	AG	204	4.7	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	625	4.7	.0	10.0
N. WFront NBDX	2	150	2	750	AG	32	4.7	.0	10.0
O. WFront SBAX	-2	750	-2	150	AG	30	4.7	.0	10.0
P. WFront SBDX	-2	-150	-2	-750	AG	277	4.7	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	261	4.7	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	766	4.7	.0	10.0
S. Gilman WBAX	*	750	2	150	2	*	AG	249	4.7	.0	10.0
T. Gilman WBDX	*	-150	2	-750	2	*	AG	90	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-10	1.8
2. NW	*	-8	8	1.8
3. SW	*	-8	-10	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	84.	.8	.0	.0	.0	.0	.0	.0	.0	.5
2. NW	174.	.7	.2	.0	.0	.0	.2	.0	.0	.0
3. SW	84.	1.0	.1	.0	.0	.0	.0	.0	.0	.5
4. NE	186.	.9	.3	.0	.0	.0	.1	.0	.0	.2
5. ES mdblk	84.	.7	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	95.	.4	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.5	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	261.	.6	.0	.0	.0	.0	.0	.0	.0	.3
9. SE mdblk	351.	.6	.4	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	177.	.3	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	10.	.6	.3	.0	.0	.0	.2	.0	.0	.0
12. NE mdblk	182.	.3	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.8	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.6	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.7	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	177.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	182.	.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

	*	CONC/LINK (PPM)											
RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
2. NW	*	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
3. SW	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
4. NE	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.1	.0
6. WN mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	*	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.1	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.2	.0
17. SE blk	*	.0	.0	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. wb ramp NBA	0	-150	0	0	AG	0	6.2	.0	10.0
B. wb ramp NBD	0	0	0	150	AG	0	6.2	.0	10.0
C. wb ramp NBL	2	-150	0	0	AG	0	6.2	.0	10.0
D. wb ramp SBA	-7	150	-7	0	AG	131	6.2	.0	10.0
E. wb ramp SBD	-7	0	-7	-150	AG	387	6.2	.0	10.0
F. wb ramp SBL	-5	150	0	0	AG	382	6.2	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	773	6.2	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	1110	6.2	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	0	6.2	.0	10.0
J. Gilman WBA	150	4	0	4	AG	112	6.2	.0	10.0
K. Gilman WBD	0	4	-150	4	AG	238	6.2	.0	10.0
L. Gilman WBL	150	2	0	0	AG	337	6.2	.0	10.0
M. wb ramp NBAX	0	-750	0	-150	AG	0	6.2	.0	10.0
N. wb ramp NBDX	0	150	0	750	AG	0	6.2	.0	10.0
O. wb ramp SBAX	-7	750	-7	150	AG	513	6.2	.0	10.0
P. wb ramp SBDX	-7	-150	-7	-750	AG	387	6.2	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	773	6.2	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	1110	6.2	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	449	6.2	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	238	6.2	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	7	-10	1.8
2. NW	*	-14	10	1.8
3. SW	*	-14	-10	1.8
4. NE	*	7	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	7	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	7	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	7	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	7	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	A	B	C	D	E	F	G	H
						CONC/LINK (PPM)				
1. SE	83.	1.4	.0	.0	.0	.0	.0	.0	.0	.9
2. NW	97.	1.2	.0	.0	.0	.0	.0	.1	.0	.4
3. SW	84.	1.6	.0	.0	.0	.0	.2	.0	.0	.8
4. NE	97.	1.0	.0	.0	.0	.0	.0	.0	.0	.4
5. ES mdblk	277.	1.4	.0	.0	.0	.0	.0	.0	.0	.9
6. WN mdblk	96.	.9	.0	.0	.0	.0	.0	.0	.3	.1
7. WS mdblk	85.	1.1	.0	.0	.0	.0	.0	.0	.6	.1
8. EN mdblk	97.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	355.	.4	.0	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	171.	.6	.0	.0	.0	.1	.0	.3	.0	.0
11. SW mdblk	6.	.6	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	186.	.5	.0	.0	.0	.0	.0	.2	.0	.0
13. ES blk	276.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.7	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.5	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.4	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.2	.0	.0	.0	.0	.0	.2	.1	.0
2. NW	.0	.1	.0	.2	.0	.0	.0	.0	.0	.2	.0	.0
3. SW	.0	.0	.0	.2	.0	.0	.0	.0	.0	.2	.1	.0
4. NE	.0	.1	.0	.2	.0	.0	.0	.0	.0	.2	.0	.0
5. ES mdblk	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.2	.0	.0	.0	.0	.0	.0	.1	.0	.0
7. WS mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
8. EN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.5	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.3
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.8	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.5	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	5	-150	5	0	AG	174	6.2	.0	10.0
B. eb ramp NBD	5	0	5	150	AG	1866	6.2	.0	10.0
C. eb ramp NBL	5	-150	0	0	AG	64	6.2	.0	10.0
D. eb ramp SBA	0	150	0	0	AG	0	6.2	.0	10.0
E. eb ramp SBD	0	0	0	-150	AG	0	6.2	.0	10.0
F. eb ramp SBL	-2	150	0	0	AG	0	6.2	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	487	6.2	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	636	6.2	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	659	6.2	.0	10.0
J. Gilman WBA	150	4	0	4	AG	1234	6.2	.0	10.0
K. Gilman WBD	0	4	-150	4	AG	116	6.2	.0	10.0
L. Gilman WBL	150	2	0	0	AG	0	6.2	.0	10.0
M. eb ramp NBAX	5	-750	5	-150	AG	238	6.2	.0	10.0
N. eb ramp NBDX	5	150	5	750	AG	1866	6.2	.0	10.0
O. eb ramp SBAX	0	750	0	150	AG	0	6.2	.0	10.0
P. eb ramp SBDX	0	-150	0	-750	AG	0	6.2	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	1146	6.2	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	636	6.2	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	1234	6.2	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	116	6.2	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	12	-10	1.8
2. NW	*	-7	10	1.8
3. SW	*	-7	-10	1.8
4. NE	*	12	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	12	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	12	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	12	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	12	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	2.1	.0	1.2	.0	.0	.0	.0	.0	.3
2. NW	96.	2.1	.0	.5	.0	.0	.0	.0	.0	.2
3. SW	8.	1.4	.0	.7	.0	.0	.0	.0	.2	.0
4. NE	261.	1.8	.0	.7	.0	.0	.0	.0	.2	.0
5. ES mdblk	278.	1.3	.0	.1	.0	.0	.0	.0	.0	.6
6. WN mdblk	95.	1.1	.0	.0	.0	.0	.0	.0	.2	.1
7. WS mdblk	84.	1.4	.0	.0	.0	.0	.0	.0	.4	.0
8. EN mdblk	263.	1.6	.0	.0	.0	.0	.0	.0	.0	.2
9. SE mdblk	358.	.7	.1	.2	.0	.0	.0	.0	.0	.0
10. NW mdblk	166.	1.0	.0	.8	.0	.0	.0	.0	.0	.0
11. SW mdblk	3.	.7	.0	.2	.0	.0	.0	.0	.0	.0
12. NE mdblk	189.	1.6	.0	1.5	.0	.0	.0	.0	.0	.0
13. ES blk	277.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.9	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	357.	.5	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	172.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	5.	.4	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.7	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
	*						CONC/LINK (PPM)						
1. SE	*	.0	.3	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0
2. NW	*	.0	.9	.0	.0	.0	.0	.0	.0	.0	.2	.2	.0
3. SW	*	.2	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NE	*	.4	.2	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0
5. ES mdblk	*	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	*	.3	.1	.1	.0	.0	.0	.0	.0	.0	.0	.1	.0
7. WS mdblk	*	.4	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	*	.0	1.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
9. SE mdblk	*	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.6	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0	.1
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	1.1	.0	.0	.0
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.4	1.1	.0
17. SE blk	*	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.9	.0	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	1.6	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	770	6.2	.0	10.0
B. WFront NBD	2	0	2	150	AG	787	6.2	.0	10.0
C. WFront NBL	2	-150	0	0	AG	38	6.2	.0	10.0
D. WFront SBA	-2	150	-2	0	AG	414	6.2	.0	10.0
E. WFront SBD	-2	0	-2	-150	AG	642	6.2	.0	10.0
F. WFront SBL	-2	150	0	0	AG	21	6.2	.0	10.0
G. Univrsty EBA	-150	-2	0	-2	AG	221	6.2	.0	10.0
H. Univrsty EBD	0	-2	150	-2	AG	278	6.2	.0	10.0
I. Univrsty EBL	-150	-2	0	0	AG	108	6.2	.0	10.0
J. Univrsty WBA	150	7	0	7	AG	196	6.2	.0	10.0
K. Univrsty WBD	0	7	-150	7	AG	261	6.2	.0	10.0
L. Univrsty WBL	150	5	0	0	AG	200	6.2	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	808	6.2	.0	10.0
N. WFront NBDX	2	150	2	750	AG	787	6.2	.0	10.0
O. WFront SBAX	-2	750	-2	150	AG	435	6.2	.0	10.0
P. WFront SBDX	-2	-150	-2	-750	AG	642	6.2	.0	10.0
Q. Univrs EBAX	-750	-2	-150	-2	AG	329	6.2	.0	10.0

R. Univrs EBDX	*	150	-2	750	-2	*	AG	278	6.2	.0	10.0
S. Univrs WBAX	*	750	7	150	7	*	AG	396	6.2	.0	10.0
T. Univrs WBDX	*	-150	7	-750	7	*	AG	261	6.2	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-8	14	1.8
3. SW	*	-8	-8	1.8
4. NE	*	8	14	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	14	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	14	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	14	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	14	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	1.4	.0	.6	.0	.2	.0	.0	.0	.1
2. NW	174.	1.4	.4	.0	.0	.0	.5	.0	.0	.0
3. SW	6.	1.3	.0	.4	.0	.3	.0	.0	.0	.0
4. NE	186.	1.5	.6	.0	.0	.0	.3	.0	.0	.0
5. ES mdblk	276.	.7	.0	.0	.0	.0	.0	.0	.0	.3
6. WN mdblk	96.	.7	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	84.	.7	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	263.	.7	.0	.0	.0	.0	.0	.0	.0	.1
9. SE mdblk	354.	1.4	.6	.0	.0	.0	.3	.0	.0	.0
10. NW mdblk	174.	1.2	.1	.4	.0	.4	.0	.0	.0	.0
11. SW mdblk	6.	1.3	.4	.1	.0	.0	.5	.0	.0	.0
12. NE mdblk	186.	1.3	.0	.6	.0	.2	.0	.0	.0	.0
13. ES blk	276.	.7	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.6	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.7	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.7	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	1.3	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

CONC/LINK (PPM)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
2. NW	.0	.0	.1	.0	.2	.0	.0	.1	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.2	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.2	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.3
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.4	.0
17. SE blk	.0	.0	.0	.0	.8	.0	.0	.4	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.5	.5	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.5	.0	.0	.6	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.8	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 6th NBA	7	-150	7	0	AG	578	4.7	.0	10.0
B. 6th NBD	7	0	7	150	AG	632	4.7	.0	10.0
C. 6th NBL	5	-150	0	0	AG	430	4.7	.0	10.0
D. 6th SBA	-7	150	-7	0	AG	914	4.7	.0	10.0
E. 6th SBD	-7	0	-7	-150	AG	565	4.7	.0	10.0
F. 6th SBL	-5	150	0	0	AG	118	4.7	.0	10.0
G. Univrsty EBA	-150	-9	0	-9	AG	1208	4.7	.0	13.5
H. Univrsty EBD	0	-9	150	-9	AG	1196	4.7	.0	10.0
I. Univrsty EBL	-150	-5	0	0	AG	126	4.7	.0	10.0
J. Univrsty WBA	150	9	0	9	AG	1163	4.7	.0	13.5
K. Univrsty WBD	0	9	-150	9	AG	2173	4.7	.0	10.0
L. Univrsty WBL	150	5	0	0	AG	29	4.7	.0	10.0
M. 6th NBAX	7	-750	7	-150	AG	1008	4.7	.0	10.0
N. 6th NBDX	7	150	7	750	AG	632	4.7	.0	10.0
O. 6th SBAX	-7	750	-7	150	AG	1032	4.7	.0	10.0
P. 6th SBDX	-7	-150	-7	-750	AG	565	4.7	.0	10.0
Q. Univrs EBAX	-750	-9	-150	-9	AG	1334	4.7	.0	13.5

R. Univrs EBDX	*	150	-9	750	-9	*	AG	1196	4.7	.0	10.0
S. Univrs WBAX	*	750	9	150	9	*	AG	1192	4.7	.0	13.5
T. Univrs WBDX	*	-150	9	-750	9	*	AG	2173	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-15	1.8
2. NW	*	-14	15	1.8
3. SW	*	-14	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-15	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-15	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	1.8	.2	.0	.0	.0	.0	.0	.6	.1
2. NW	262.	1.8	.0	.0	.0	.0	.0	.0	.1	.0
3. SW	7.	1.6	.0	.1	.0	.5	.0	.0	.3	.0
4. NE	262.	1.9	.0	.2	.0	.2	.0	.0	.1	.0
5. ES mdblk	277.	1.5	.0	.0	.0	.0	.0	.0	.0	.7
6. WN mdblk	98.	1.9	.0	.0	.0	.0	.0	.0	.1	.1
7. WS mdblk	82.	1.4	.0	.0	.0	.0	.0	.0	.7	.0
8. EN mdblk	263.	1.4	.0	.0	.0	.0	.0	.0	.1	.0
9. SE mdblk	352.	1.2	.4	.0	.2	.0	.0	.0	.0	.0
10. NW mdblk	173.	1.2	.0	.0	.0	.6	.0	.0	.0	.0
11. SW mdblk	6.	1.0	.0	.0	.0	.0	.4	.0	.0	.0
12. NE mdblk	187.	1.0	.0	.4	.0	.1	.0	.0	.0	.0
13. ES blk	277.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	98.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
						CONC/LINK (PPM)							
1. SE	*	.0	.0	.2	.0	.0	.0	.0	.0	.1	.0	.0	.3
2. NW	*	.0	.0	1.2	.0	.0	.0	.0	.0	.3	.0	.0	.2
3. SW	*	.0	.0	.3	.0	.0	.1	.1	.0	.0	.0	.0	.0
4. NE	*	.0	.1	.9	.0	.0	.0	.0	.0	.2	.0	.0	.2
5. ES mdblk	*	.0	.1	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
6. WN mdblk	*	.0	.0	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	*	.0	.1	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	*	.0	.7	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0
9. SE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.8	.3	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	1.4
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.9	.0	.0	.4
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.8	.0
17. SE blk	*	.0	.0	.0	.0	.7	.0	.0	.2	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.2	.7	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.3	.0	.0	.4	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	.5	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
		LINK COORDINATES (M)									
A. WFront NBA	*	2	-150	2	0	*	AG	660	4.7	.0	10.0
B. WFront NBD	*	2	0	2	150	*	AG	857	4.7	.0	10.0
C. WFront NBL	*	2	-150	0	0	*	AG	3	4.7	.0	10.0
D. WFront SBA	*	-5	150	-5	0	*	AG	381	4.7	.0	10.0
E. WFront SBD	*	-5	0	-5	-150	*	AG	412	4.7	.0	10.0
F. WFront SBL	*	-5	150	0	0	*	AG	90	4.7	.0	10.0
G. wbramp EBA	*	-150	-2	0	-2	*	AG	2	4.7	.0	10.0
H. wbramp EBD	*	0	-2	150	-2	*	AG	93	4.7	.0	10.0
I. wbramp EBL	*	-150	-2	0	0	*	AG	6	4.7	.0	10.0
J. wbramp WBA	*	150	2	0	2	*	AG	198	4.7	.0	10.0
K. wbramp WBD	*	0	2	-150	2	*	AG	13	4.7	.0	10.0
L. wbramp WBL	*	150	2	0	0	*	AG	35	4.7	.0	10.0
M. WFront NBAX	*	2	-750	2	-150	*	AG	663	4.7	.0	10.0
N. WFront NBDX	*	2	150	2	750	*	AG	857	4.7	.0	10.0
O. WFront SBAX	*	-5	750	-5	150	*	AG	471	4.7	.0	10.0
P. WFront SBDX	*	-5	-150	-5	-750	*	AG	412	4.7	.0	10.0
Q. wbramp EBAX	*	-750	-2	-150	-2	*	AG	8	4.7	.0	10.0

R. wbramp EBDX	*	150	-2	750	-2	*	AG	93	4.7	.0	10.0
S. wbramp WBAX	*	750	2	150	2	*	AG	233	4.7	.0	10.0
T. wbramp WBDX	*	-150	2	-750	2	*	AG	12	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-12	8	1.8
3. SW	*	-12	-8	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-12	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-12	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	1.0	.0	.5	.0	.1	.0	.0	.0	.0
2. NW	7.	.8	.0	.2	.0	.3	.0	.0	.0	.0
3. SW	7.	.8	.0	.2	.0	.3	.0	.0	.0	.0
4. NE	353.	.9	.0	.5	.0	.1	.0	.0	.0	.0
5. ES mdblk	280.	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	92.	.2	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.2	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	261.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	354.	.8	.4	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	173.	.8	.0	.2	.0	.3	.0	.0	.0	.0
11. SW mdblk	6.	.7	.2	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	187.	.9	.0	.5	.0	.1	.0	.0	.0	.0
13. ES blk	276.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	91.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.8	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.8	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.7	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.9	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
17. SE blk	.0	.0	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.3	.4	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.6	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	7	-150	7	0	AG	1242	4.7	.0	10.0
B. eb ramp NBD	7	0	7	150	AG	978	4.7	.0	10.0
C. eb ramp NBL	5	-150	0	0	AG	563	4.7	.0	10.0
D. eb ramp SBA	0	150	0	0	AG	0	4.7	.0	10.0
E. eb ramp SBD	0	0	0	-150	AG	0	4.7	.0	10.0
F. eb ramp SBL	-2	150	0	0	AG	0	4.7	.0	10.0
G. Powell EBA	-150	-9	0	-9	AG	778	4.7	.0	13.5
H. Powell EBD	0	-9	150	-9	AG	1821	4.7	.0	13.5
I. Powell EBL	-150	-5	0	0	AG	174	4.7	.0	10.0
J. Powell WBA	150	7	0	7	AG	2209	4.7	.0	17.0
K. Powell WBD	0	7	-150	7	AG	2167	4.7	.0	13.5
L. Powell WBL	150	2	0	0	AG	0	4.7	.0	10.0
M. eb ramp NBAX	7	-750	7	-150	AG	1805	4.7	.0	10.0
N. eb ramp NBDX	7	150	7	750	AG	978	4.7	.0	10.0
O. eb ramp SBAX	0	750	0	150	AG	0	4.7	.0	10.0
P. eb ramp SBDX	0	-150	0	-750	AG	0	4.7	.0	10.0
Q. Powell EBAX	-750	-9	-150	-9	AG	952	4.7	.0	13.5

R. Powell EBDX	*	150	-9	750	-9	*	AG	1821	4.7	.0	13.5
S. Powell WBAX	*	750	7	150	7	*	AG	2209	4.7	.0	17.0
T. Powell WBDX	*	-150	7	-750	7	*	AG	2167	4.7	.0	13.5

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-17	1.8
2. NW	*	-7	15	1.8
3. SW	*	-7	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-17	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-17	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	279.	1.8	.4	.0	.1	.0	.0	.0	.4	.2
2. NW	97.	2.1	.0	.2	.0	.0	.0	.0	.0	.2
3. SW	82.	2.2	.3	.0	.2	.0	.0	.0	.0	1.0
4. NE	187.	1.9	.6	.1	.2	.0	.0	.0	.0	.3
5. ES mdblk	278.	1.8	.0	.0	.0	.0	.0	.0	.0	1.0
6. WN mdblk	97.	2.0	.0	.0	.0	.0	.0	.0	.0	.2
7. WS mdblk	83.	1.4	.0	.0	.0	.0	.0	.0	.5	.1
8. EN mdblk	262.	1.8	.0	.0	.0	.0	.0	.0	.0	.2
9. SE mdblk	352.	1.4	.8	.0	.3	.0	.0	.0	.0	.0
10. NW mdblk	174.	.8	.1	.2	.0	.0	.0	.0	.0	.0
11. SW mdblk	9.	.9	.4	.0	.2	.0	.0	.0	.0	.1
12. NE mdblk	185.	1.1	.1	.6	.0	.0	.0	.0	.0	.0
13. ES blk	277.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	83.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	262.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.6	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.9	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0	.3
2. NW	.0	1.2	.0	.0	.0	.0	.0	.0	.0	.3	.2	.0
3. SW	.0	.3	.0	.0	.0	.0	.0	.0	.0	.2	.3	.0
4. NE	.0	.6	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
6. WN mdblk	.0	.2	1.1	.0	.0	.0	.0	.0	.0	.1	.1	.0
7. WS mdblk	.0	.2	.2	.0	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	.0	1.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.5	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0	1.3
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.5
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.4	1.3	.0
17. SE blk	.0	.0	.0	.0	1.2	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0	.0

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CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
         JUNE 1989 VERSION
         PAGE   1

     JOB: Eastshore 2025 No Project
     RUN: Hour 1            (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
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I. SITE VARIABLES

```
    U=     .5 M/S             Z0= 100. CM          ALT=     15. (M)
  BRG= WORST CASE             VD=    .0 CM/S
 CLAS=      7 (G)             VS=    .0 CM/S
 MIXH= 1000. M               AMB=    .0 PPM
SIGTH=    10. DEGREES       TEMP= 10.0 DEGREE (C)
```

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Christie NBA	*	7	-150	7	0	*	AG	325	4.7	.0	10.0
B. Christie NBD	*	7	0	7	150	*	AG	590	4.7	.0	10.0
C. Christie NBL	*	5	-150	0	0	*	AG	461	4.7	.0	10.0
D. Christie SBA	*	-5	150	-5	0	*	AG	695	4.7	.0	11.8
E. Christie SBD	*	-5	0	-5	-150	*	AG	1004	4.7	.0	10.0
F. Christie SBL	*	-2	150	0	0	*	AG	162	4.7	.0	10.0
G. Powell EBA	*	-150	-12	0	-12	*	AG	1496	4.7	.0	13.5
H. Powell EBD	*	0	-12	150	-12	*	AG	1255	4.7	.0	10.0
I. Powell EBL	*	-150	-9	0	0	*	AG	383	4.7	.0	10.0
J. Powell WBA	*	150	9	0	9	*	AG	1228	4.7	.0	13.5
K. Powell WBD	*	0	9	-150	9	*	AG	2149	4.7	.0	10.0
L. Powell WBL	*	150	5	0	0	*	AG	248	4.7	.0	10.0
M. Chrstie NBAX	*	7	-750	7	-150	*	AG	786	4.7	.0	10.0
N. Chrstie NBDX	*	7	150	7	750	*	AG	590	4.7	.0	10.0
O. Chrstie SBAX	*	-5	750	-5	150	*	AG	857	4.7	.0	11.8
P. Chrstie SBDX	*	-5	-150	-5	-750	*	AG	1004	4.7	.0	10.0
Q. Powell EBAX	*	-750	-12	-150	-12	*	AG	1879	4.7	.0	13.5

R. Powell EBDX	*	150	-12	750	-12	*	AG	1255	4.7	.0	10.0
S. Powell WBAX	*	750	9	150	9	*	AG	1476	4.7	.0	13.5
T. Powell WBDX	*	-150	9	-750	9	*	AG	2149	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	X	Y	Z
	*	COORDINATES (M)		
1. SE	*	14	-19	1.8
2. NW	*	-13	15	1.8
3. SW	*	-12	-21	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-19	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-21	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-13	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-19	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-21	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-13	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	2.0	.0	.0	.1	.0	.2	.0	.8	.1
2. NW	172.	2.0	.0	.0	.2	.0	.5	.0	.2	.0
3. SW	81.	1.7	.0	.0	.1	.0	.3	.0	.1	.6
4. NE	261.	2.0	.0	.2	.0	.1	.0	.0	.1	.0
5. ES mdblk	277.	1.6	.0	.0	.0	.0	.0	.0	.0	.8
6. WN mdblk	99.	2.0	.0	.0	.0	.0	.0	.0	.1	.1
7. WS mdblk	81.	1.6	.0	.0	.0	.0	.0	.0	.9	.0
8. EN mdblk	263.	1.6	.0	.0	.0	.0	.0	.0	.2	.0
9. SE mdblk	352.	1.1	.2	.0	.2	.0	.2	.0	.0	.0
10. NW mdblk	174.	1.1	.0	.0	.0	.4	.0	.0	.0	.0
11. SW mdblk	7.	1.3	.0	.0	.1	.0	.6	.0	.0	.0
12. NE mdblk	187.	1.1	.0	.4	.0	.1	.1	.0	.0	.0
13. ES blk	277.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	98.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 No Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.1	.0	.1	.0	.0	.0	.0	.0	.2	.0	.0	.3
2. NW	.0	.0	.6	.0	.1	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
4. NE	.0	.1	.9	.0	.0	.0	.0	.0	.3	.0	.0	.1
5. ES mdblk	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	.0	.0	1.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	.0	.7	.1	.0	.0	.0	.0	.0	.2	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.9	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	1.4
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.0	.0	.4
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	1.0	.0
17. SE blk	.0	.0	.0	.0	.6	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.6	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.7	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.3	.0	.0	.0	.0	.0

CONC/LINK (PPM)

APPENDIX C-5

AIR QUALITY CO HOT SPOT ANALYSIS - CALINE4 MODEL PRINTOUTS FOR YEAR 2025 WITH PROJECT CONDITIONS

EASTSHORE STATE PARK

AIR QUALITY CO HOT SPOT ANALYSIS

CALINE4 MODEL PRINTOUTS

YEAR 2025 WITH PROJECT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	573	4.7	.0	10.0
B. WFront NBD	2	0	2	150	AG	32	4.7	.0	10.0
C. WFront NBL	2	-150	0	0	AG	54	4.7	.0	10.0
D. WFront SBA	-2	150	-2	0	AG	13	4.7	.0	10.0
E. WFront SBD	-2	0	-2	-150	AG	279	4.7	.0	10.0
F. WFront SBL	-2	150	0	0	AG	17	4.7	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	251	4.7	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	768	4.7	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	10	4.7	.0	10.0
J. Gilman WBA	150	2	0	2	AG	45	4.7	.0	10.0
K. Gilman WBD	0	2	-150	2	AG	90	4.7	.0	10.0
L. Gilman WBL	150	2	0	0	AG	206	4.7	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	627	4.7	.0	10.0
N. WFront NBDX	2	150	2	750	AG	32	4.7	.0	10.0
O. WFront SBAX	-2	750	-2	150	AG	30	4.7	.0	10.0
P. WFront SBDX	-2	-150	-2	-750	AG	279	4.7	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	261	4.7	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	768	4.7	.0	10.0
S. Gilman WBAX	*	750	2	150	2	*	AG	251	4.7	.0	10.0
T. Gilman WBDX	*	-150	2	-750	2	*	AG	90	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-10	1.8
2. NW	*	-8	8	1.8
3. SW	*	-8	-10	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	A	B	C	D	E	F	G	H
			CONC/LINK (PPM)							
1. SE	84.	.8	.0	.0	.0	.0	.0	.0	.0	.5
2. NW	174.	.7	.2	.0	.0	.0	.2	.0	.0	.0
3. SW	84.	1.0	.1	.0	.0	.0	.0	.0	.0	.5
4. NE	186.	.9	.3	.0	.0	.0	.1	.0	.0	.2
5. ES mdblk	84.	.7	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	95.	.4	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.5	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	261.	.6	.0	.0	.0	.0	.0	.0	.0	.3
9. SE mdblk	351.	.6	.4	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	177.	.3	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	10.	.6	.3	.0	.0	.0	.2	.0	.0	.0
12. NE mdblk	182.	.3	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.8	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.6	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.7	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	177.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	182.	.2	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
2. NW	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
4. NE	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.1	.0
6. WN mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.1	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.2	.0
17. SE blk	.0	.0	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
     U=    .5 M/S              Z0= 100. CM          ALT=    15. (M)
   BRG= WORST CASE             VD=    .0 CM/S
  CLAS=     7 (G)              VS=    .0 CM/S
  MIXH= 1000. M               AMB=    .0 PPM
 SIGTH=   10. DEGREES        TEMP= 10.0 DEGREE (C)
```

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. wb ramp NBA	0	-150	0	0	AG	0	6.2	.0	10.0
B. wb ramp NBD	0	0	0	150	AG	0	6.2	.0	10.0
C. wb ramp NBL	2	-150	0	0	AG	0	6.2	.0	10.0
D. wb ramp SBA	-7	150	-7	0	AG	131	6.2	.0	10.0
E. wb ramp SBD	-7	0	-7	-150	AG	387	6.2	.0	10.0
F. wb ramp SBL	-5	150	0	0	AG	382	6.2	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	775	6.2	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	1112	6.2	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	0	6.2	.0	10.0
J. Gilman WBA	150	4	0	4	AG	114	6.2	.0	10.0
K. Gilman WBD	0	4	-150	4	AG	240	6.2	.0	10.0
L. Gilman WBL	150	2	0	0	AG	337	6.2	.0	10.0
M. wb ramp NBAX	0	-750	0	-150	AG	0	6.2	.0	10.0
N. wb ramp NBDX	0	150	0	750	AG	0	6.2	.0	10.0
O. wb ramp SBAX	-7	750	-7	150	AG	513	6.2	.0	10.0
P. wb ramp SBDX	-7	-150	-7	-750	AG	387	6.2	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	775	6.2	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	1112	6.2	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	451	6.2	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	240	6.2	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	7	-10	1.8
2. NW	*	-14	10	1.8
3. SW	*	-14	-10	1.8
4. NE	*	7	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	7	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	7	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	7	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	7	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	83.	1.4	.0	.0	.0	.0	.0	.0	.0	.9
2. NW	97.	1.2	.0	.0	.0	.0	.0	.1	.0	.4
3. SW	84.	1.6	.0	.0	.0	.0	.2	.0	.0	.8
4. NE	97.	1.0	.0	.0	.0	.0	.0	.0	.0	.4
5. ES mdblk	277.	1.4	.0	.0	.0	.0	.0	.0	.0	.9
6. WN mdblk	96.	.9	.0	.0	.0	.0	.0	.0	.3	.1
7. WS mdblk	85.	1.1	.0	.0	.0	.0	.0	.0	.6	.1
8. EN mdblk	97.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	355.	.4	.0	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	171.	.6	.0	.0	.0	.1	.0	.3	.0	.0
11. SW mdblk	6.	.6	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	186.	.5	.0	.0	.0	.0	.0	.2	.0	.0
13. ES blk	276.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.7	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.5	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.4	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
	*	CONC/LINK (PPM)											
1. SE	*	.0	.0	.0	.2	.0	.0	.0	.0	.0	.2	.1	.0
2. NW	*	.0	.1	.0	.2	.0	.0	.0	.0	.0	.2	.0	.0
3. SW	*	.0	.0	.0	.2	.0	.0	.0	.0	.0	.2	.1	.0
4. NE	*	.0	.1	.0	.2	.0	.0	.0	.0	.0	.2	.0	.0
5. ES mdblk	*	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	*	.0	.0	.2	.0	.0	.0	.0	.0	.0	.1	.0	.0
7. WS mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
8. EN mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.5	.0
9. SE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.3	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.3
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.8	.0	.0	.2
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.5	.0
17. SE blk	*	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 15. (M)
BRG= WORST CASE	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= .0 PPM	
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	5	-150	5	0	AG	174	6.2	.0	10.0
B. eb ramp NBD	5	0	5	150	AG	1866	6.2	.0	10.0
C. eb ramp NBL	5	-150	0	0	AG	64	6.2	.0	10.0
D. eb ramp SBA	0	150	0	0	AG	0	6.2	.0	10.0
E. eb ramp SBD	0	0	0	-150	AG	0	6.2	.0	10.0
F. eb ramp SBL	-2	150	0	0	AG	0	6.2	.0	10.0
G. Gilman EBA	-150	-4	0	-4	AG	489	6.2	.0	10.0
H. Gilman EBD	0	-4	150	-4	AG	638	6.2	.0	10.0
I. Gilman EBL	-150	-2	0	0	AG	659	6.2	.0	10.0
J. Gilman WBA	150	4	0	4	AG	1236	6.2	.0	10.0
K. Gilman WBD	0	4	-150	4	AG	118	6.2	.0	10.0
L. Gilman WBL	150	2	0	0	AG	0	6.2	.0	10.0
M. eb ramp NBAX	5	-750	5	-150	AG	238	6.2	.0	10.0
N. eb ramp NBDX	5	150	5	750	AG	1866	6.2	.0	10.0
O. eb ramp SBAX	0	750	0	150	AG	0	6.2	.0	10.0
P. eb ramp SBDX	0	-150	0	-750	AG	0	6.2	.0	10.0
Q. Gilman EBAX	-750	-4	-150	-4	AG	1148	6.2	.0	10.0

R. Gilman EBDX	*	150	-4	750	-4	*	AG	638	6.2	.0	10.0
S. Gilman WBAX	*	750	4	150	4	*	AG	1236	6.2	.0	10.0
T. Gilman WBDX	*	-150	4	-750	4	*	AG	118	6.2	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	12	-10	1.8
2. NW	*	-7	10	1.8
3. SW	*	-7	-10	1.8
4. NE	*	12	10	1.8
5. ES mdblk	*	150	-10	1.8
6. WN mdblk	*	-150	10	1.8
7. WS mdblk	*	-150	-10	1.8
8. EN mdblk	*	150	10	1.8
9. SE mdblk	*	12	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	12	150	1.8
13. ES blk	*	600	-10	1.8
14. WN blk	*	-600	10	1.8
15. WS blk	*	-600	-10	1.8
16. EN blk	*	600	10	1.8
17. SE blk	*	12	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	12	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	2.1	.0	1.2	.0	.0	.0	.0	.0	.3
2. NW	96.	2.1	.0	.5	.0	.0	.0	.0	.0	.2
3. SW	8.	1.4	.0	.7	.0	.0	.0	.0	.2	.0
4. NE	261.	1.8	.0	.7	.0	.0	.0	.0	.2	.0
5. ES mdblk	278.	1.4	.0	.1	.0	.0	.0	.0	.0	.6
6. WN mdblk	95.	1.1	.0	.0	.0	.0	.0	.0	.2	.1
7. WS mdblk	84.	1.4	.0	.0	.0	.0	.0	.0	.4	.0
8. EN mdblk	263.	1.6	.0	.0	.0	.0	.0	.0	.0	.2
9. SE mdblk	358.	.7	.1	.2	.0	.0	.0	.0	.0	.0
10. NW mdblk	166.	1.0	.0	.8	.0	.0	.0	.0	.0	.0
11. SW mdblk	3.	.7	.0	.2	.0	.0	.0	.0	.0	.0
12. NE mdblk	189.	1.6	.0	1.5	.0	.0	.0	.0	.0	.0
13. ES blk	277.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.9	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	357.	.5	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	172.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	5.	.4	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.7	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
	CONC/LINK (PPM)											
1. SE	.0	.3	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0
2. NW	.0	.9	.0	.0	.0	.0	.0	.0	.0	.2	.2	.0
3. SW	.2	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NE	.4	.2	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0
5. ES mdblk	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.3	.1	.1	.0	.0	.0	.0	.0	.0	.0	.1	.0
7. WS mdblk	.4	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	.0	1.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.6	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0	.2
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.1	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.4	1.1	.0
17. SE blk	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.9	.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	1.6	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	777	6.2	.0	10.0
B. WFront NBD	2	0	2	150	AG	797	6.2	.0	10.0
C. WFront NBL	2	-150	0	0	AG	38	6.2	.0	10.0
D. WFront SBA	-2	150	-2	0	AG	416	6.2	.0	10.0
E. WFront SBD	-2	0	-2	-150	AG	649	6.2	.0	10.0
F. WFront SBL	-2	150	0	0	AG	29	6.2	.0	10.0
G. Univrsty EBA	-150	-2	0	-2	AG	221	6.2	.0	10.0
H. Univrsty EBD	0	-2	150	-2	AG	291	6.2	.0	10.0
I. Univrsty EBL	-150	-2	0	0	AG	108	6.2	.0	10.0
J. Univrsty WBA	150	7	0	7	AG	204	6.2	.0	10.0
K. Univrsty WBD	0	7	-150	7	AG	261	6.2	.0	10.0
L. Univrsty WBL	150	5	0	0	AG	205	6.2	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	815	6.2	.0	10.0
N. WFront NBDX	2	150	2	750	AG	797	6.2	.0	10.0
O. WFront SBAX	-2	750	-2	150	AG	445	6.2	.0	10.0
P. WFront SBDX	-2	-150	-2	-750	AG	649	6.2	.0	10.0
Q. Univrs EBAX	-750	-2	-150	-2	AG	329	6.2	.0	10.0

R. Univrs EBDX	*	150	-2	750	-2	*	AG	291	6.2	.0	10.0
S. Univrs WBAX	*	750	7	150	7	*	AG	409	6.2	.0	10.0
T. Univrs WBDX	*	-150	7	-750	7	*	AG	261	6.2	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-8	14	1.8
3. SW	*	-8	-8	1.8
4. NE	*	8	14	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	14	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	14	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-8	150	1.8
11. SW mdblk	*	-8	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	14	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	14	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-8	600	1.8
19. SW blk	*	-8	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	1.4	.0	.6	.0	.2	.0	.0	.0	.1
2. NW	174.	1.5	.4	.0	.0	.0	.5	.0	.0	.0
3. SW	6.	1.3	.0	.4	.0	.3	.0	.0	.0	.0
4. NE	186.	1.5	.6	.0	.0	.0	.3	.0	.0	.0
5. ES mdblk	276.	.7	.0	.0	.0	.0	.0	.0	.0	.3
6. WN mdblk	96.	.7	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	84.	.7	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	263.	.7	.0	.0	.0	.0	.0	.0	.0	.1
9. SE mdblk	354.	1.4	.6	.0	.0	.0	.3	.0	.0	.0
10. NW mdblk	174.	1.2	.1	.4	.0	.4	.0	.0	.0	.0
11. SW mdblk	6.	1.3	.4	.1	.0	.0	.5	.0	.0	.0
12. NE mdblk	186.	1.3	.0	.7	.0	.2	.0	.0	.0	.0
13. ES blk	276.	.7	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.6	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.7	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.8	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	1.3	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

CONC/LINK (PPM)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	*	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
2. NW	*	.0	.0	.1	.0	.2	.0	.0	.1	.0	.0	.0	.0
3. SW	*	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NE	*	.0	.0	.0	.0	.2	.0	.0	.1	.0	.0	.0	.0
5. ES mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	*	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	*	.0	.2	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.2	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.3
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.2
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.4	.0
17. SE blk	*	.0	.0	.0	.0	.8	.0	.0	.4	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.5	.5	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.5	.0	.0	.7	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	.8	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 6th NBA	7	-150	7	0	AG	578	4.7	.0	10.0
B. 6th NBD	7	0	7	150	AG	632	4.7	.0	10.0
C. 6th NBL	5	-150	0	0	AG	430	4.7	.0	10.0
D. 6th SBA	-7	150	-7	0	AG	914	4.7	.0	10.0
E. 6th SBD	-7	0	-7	-150	AG	565	4.7	.0	10.0
F. 6th SBL	-5	150	0	0	AG	118	4.7	.0	10.0
G. Univrsty EBA	-150	-9	0	-9	AG	1212	4.7	.0	13.5
H. Univrsty EBD	0	-9	150	-9	AG	1200	4.7	.0	10.0
I. Univrsty EBL	-150	-5	0	0	AG	126	4.7	.0	10.0
J. Univrsty WBA	150	9	0	9	AG	1167	4.7	.0	13.5
K. Univrsty WBD	0	9	-150	9	AG	2177	4.7	.0	10.0
L. Univrsty WBL	150	5	0	0	AG	29	4.7	.0	10.0
M. 6th NBAX	7	-750	7	-150	AG	1008	4.7	.0	10.0
N. 6th NBDX	7	150	7	750	AG	632	4.7	.0	10.0
O. 6th SBAX	-7	750	-7	150	AG	1032	4.7	.0	10.0
P. 6th SBDX	-7	-150	-7	-750	AG	565	4.7	.0	10.0
Q. Univrs EBAX	-750	-9	-150	-9	AG	1338	4.7	.0	13.5

R. Univrs EBDX	*	150	-9	750	-9	*	AG	1200	4.7	.0	10.0
S. Univrs WBAX	*	750	9	150	9	*	AG	1196	4.7	.0	13.5
T. Univrs WBDX	*	-150	9	-750	9	*	AG	2177	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-15	1.8
2. NW	*	-14	15	1.8
3. SW	*	-14	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-15	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-14	150	1.8
11. SW mdblk	*	-14	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-15	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-14	600	1.8
19. SW blk	*	-14	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	1.8	.2	.0	.0	.0	.0	.0	.6	.1
2. NW	262.	1.8	.0	.0	.0	.0	.0	.0	.1	.0
3. SW	7.	1.6	.0	.1	.0	.5	.0	.0	.3	.0
4. NE	262.	1.9	.0	.2	.0	.2	.0	.0	.1	.0
5. ES mdblk	277.	1.5	.0	.0	.0	.0	.0	.0	.0	.7
6. WN mdblk	98.	1.9	.0	.0	.0	.0	.0	.0	.1	.1
7. WS mdblk	82.	1.4	.0	.0	.0	.0	.0	.0	.7	.0
8. EN mdblk	263.	1.4	.0	.0	.0	.0	.0	.0	.1	.0
9. SE mdblk	352.	1.2	.4	.0	.2	.0	.0	.0	.0	.0
10. NW mdblk	173.	1.2	.0	.0	.0	.6	.0	.0	.0	.0
11. SW mdblk	6.	1.0	.0	.0	.0	.0	.4	.0	.0	.0
12. NE mdblk	187.	1.0	.0	.4	.0	.1	.0	.0	.0	.0
13. ES blk	277.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	98.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.2	.0	.0	.0	.0	.0	.1	.0	.0	.3
2. NW	.0	.0	1.2	.0	.0	.0	.0	.0	.3	.0	.0	.2
3. SW	.0	.0	.3	.0	.0	.1	.1	.0	.0	.0	.0	.0
4. NE	.0	.1	.9	.0	.0	.0	.0	.0	.2	.0	.0	.2
5. ES mdblk	.0	.1	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
6. WN mdblk	.0	.0	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.1	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.7	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.8	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	1.4
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.9	.0	.0	.4
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.8	.0
17. SE blk	.0	.0	.0	.0	.7	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.7	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.4	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT=	15. (M)
BRG= WORST CASE	VD= .0 CM/S		
CLAS= 7 (G)	VS= .0 CM/S		
MIXH= 1000. M	AMB= .0 PPM		
SIGTH= 10. DEGREES	TEMP= 10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. WFront NBA	2	-150	2	0	AG	663	4.7	.0	10.0
B. WFront NBD	2	0	2	150	AG	860	4.7	.0	10.0
C. WFront NBL	2	-150	0	0	AG	3	4.7	.0	10.0
D. WFront SBA	-5	150	-5	0	AG	384	4.7	.0	10.0
E. WFront SBD	-5	0	-5	-150	AG	416	4.7	.0	10.0
F. WFront SBL	-5	150	0	0	AG	90	4.7	.0	10.0
G. wbramp EBA	-150	-2	0	-2	AG	2	4.7	.0	10.0
H. wbramp EBD	0	-2	150	-2	AG	93	4.7	.0	10.0
I. wbramp EBL	-150	-2	0	0	AG	6	4.7	.0	10.0
J. wbramp WBA	150	2	0	2	AG	198	4.7	.0	10.0
K. wbramp WBD	0	2	-150	2	AG	13	4.7	.0	10.0
L. wbramp WBL	150	2	0	0	AG	36	4.7	.0	10.0
M. WFront NBAX	2	-750	2	-150	AG	666	4.7	.0	10.0
N. WFront NBDX	2	150	2	750	AG	860	4.7	.0	10.0
O. WFront SBAX	-5	750	-5	150	AG	474	4.7	.0	10.0
P. WFront SBDX	-5	-150	-5	-750	AG	416	4.7	.0	10.0
Q. wbramp EBAX	-750	-2	-150	-2	AG	8	4.7	.0	10.0

R. wbramp EBDX	*	150	-2	750	-2	*	AG	93	4.7	.0	10.0
S. wbramp WBAX	*	750	2	150	2	*	AG	234	4.7	.0	10.0
T. wbramp WBDX	*	-150	2	-750	2	*	AG	13	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	8	-8	1.8
2. NW	*	-12	8	1.8
3. SW	*	-12	-8	1.8
4. NE	*	8	8	1.8
5. ES mdblk	*	150	-8	1.8
6. WN mdblk	*	-150	8	1.8
7. WS mdblk	*	-150	-8	1.8
8. EN mdblk	*	150	8	1.8
9. SE mdblk	*	8	-150	1.8
10. NW mdblk	*	-12	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	8	150	1.8
13. ES blk	*	600	-8	1.8
14. WN blk	*	-600	8	1.8
15. WS blk	*	-600	-8	1.8
16. EN blk	*	600	8	1.8
17. SE blk	*	8	-600	1.8
18. NW blk	*	-12	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	8	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	354.	1.0	.0	.5	.0	.1	.0	.0	.0	.0
2. NW	7.	.8	.0	.2	.0	.3	.0	.0	.0	.0
3. SW	7.	.8	.0	.2	.0	.3	.0	.0	.0	.0
4. NE	353.	.9	.0	.5	.0	.1	.0	.0	.0	.0
5. ES mdblk	280.	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	92.	.2	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.2	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	262.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	354.	.8	.4	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	173.	.8	.0	.2	.0	.3	.0	.0	.0	.0
11. SW mdblk	6.	.7	.2	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	187.	.9	.0	.6	.0	.1	.0	.0	.0	.0
13. ES blk	276.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	92.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.8	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.8	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.7	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.9	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	I	J	K	L	M	N	O	P	Q	R	S	T
		CONC/LINK (PPM)											
1. SE	*	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
2. NW	*	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0
3. SW	*	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
4. NE	*	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
5. ES mdblk	*	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	*	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
14. WN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
17. SE blk	*	.0	.0	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	*	.0	.0	.0	.0	.0	.3	.4	.0	.0	.0	.0	.0
19. SW blk	*	.0	.0	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0
20. NE blk	*	.0	.0	.0	.0	.0	.6	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	15. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	10. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. eb ramp NBA	7	-150	7	0	AG	1242	4.7	.0	10.0
B. eb ramp NBD	7	0	7	150	AG	978	4.7	.0	10.0
C. eb ramp NBL	5	-150	0	0	AG	563	4.7	.0	10.0
D. eb ramp SBA	0	150	0	0	AG	0	4.7	.0	10.0
E. eb ramp SBD	0	0	0	-150	AG	0	4.7	.0	10.0
F. eb ramp SBL	-2	150	0	0	AG	0	4.7	.0	10.0
G. Powell EBA	-150	-9	0	-9	AG	781	4.7	.0	13.5
H. Powell EBD	0	-9	150	-9	AG	1824	4.7	.0	13.5
I. Powell EBL	-150	-5	0	0	AG	174	4.7	.0	10.0
J. Powell WBA	150	7	0	7	AG	2212	4.7	.0	17.0
K. Powell WBD	0	7	-150	7	AG	2170	4.7	.0	13.5
L. Powell WBL	150	2	0	0	AG	0	4.7	.0	10.0
M. eb ramp NBAX	7	-750	7	-150	AG	1805	4.7	.0	10.0
N. eb ramp NBDX	7	150	7	750	AG	978	4.7	.0	10.0
O. eb ramp SBAX	0	750	0	150	AG	0	4.7	.0	10.0
P. eb ramp SBDX	0	-150	0	-750	AG	0	4.7	.0	10.0
Q. Powell EBAX	-750	-9	-150	-9	AG	955	4.7	.0	13.5

R. Powell EBDX	*	150	-9	750	-9	*	AG	1824	4.7	.0	13.5
S. Powell WBAX	*	750	7	150	7	*	AG	2212	4.7	.0	17.0
T. Powell WBDX	*	-150	7	-750	7	*	AG	2170	4.7	.0	13.5

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-17	1.8
2. NW	*	-7	15	1.8
3. SW	*	-7	-17	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-17	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-17	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-7	150	1.8
11. SW mdblk	*	-7	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-17	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-17	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-7	600	1.8
19. SW blk	*	-7	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	279.	1.8	.4	.0	.1	.0	.0	.0	.4	.2
2. NW	97.	2.1	.0	.2	.0	.0	.0	.0	.0	.2
3. SW	82.	2.2	.3	.0	.2	.0	.0	.0	.0	1.0
4. NE	187.	1.9	.6	.1	.2	.0	.0	.0	.0	.3
5. ES mdblk	278.	1.8	.0	.0	.0	.0	.0	.0	.0	1.0
6. WN mdblk	97.	2.0	.0	.0	.0	.0	.0	.0	.0	.2
7. WS mdblk	83.	1.4	.0	.0	.0	.0	.0	.0	.5	.1
8. EN mdblk	262.	1.8	.0	.0	.0	.0	.0	.0	.0	.2
9. SE mdblk	352.	1.4	.8	.0	.3	.0	.0	.0	.0	.0
10. NW mdblk	174.	.8	.1	.2	.0	.0	.0	.0	.0	.0
11. SW mdblk	9.	.9	.4	.0	.2	.0	.0	.0	.0	.1
12. NE mdblk	185.	1.1	.1	.6	.0	.0	.0	.0	.0	.0
13. ES blk	277.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	83.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	262.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.6	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.9	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0	.3
2. NW	.0	1.2	.0	.0	.0	.0	.0	.0	.0	.3	.2	.0
3. SW	.0	.3	.0	.0	.0	.0	.0	.0	.0	.2	.3	.0
4. NE	.0	.6	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.3	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
6. WN mdblk	.0	.2	1.1	.0	.0	.0	.0	.0	.0	.1	.1	.0
7. WS mdblk	.0	.2	.2	.0	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	.0	1.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.5	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0	1.3
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.5
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.4	1.3	.0
17. SE blk	.0	.0	.0	.0	1.2	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.6	.0	.0	.0	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.7	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
     U=    .5 M/S            Z0= 100. CM          ALT=    15. (M)
   BRG= WORST CASE           VD=    .0 CM/S
  CLAS=     7 (G)            VS=    .0 CM/S
  MIXH= 1000. M             AMB=    .0 PPM
 SIGTH=   10. DEGREES      TEMP= 10.0 DEGREE (C)
```

II. LINK VARIABLES

LINK DESCRIPTION	*	X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Christie NBA	*	7	-150	7	0	*	AG	325	4.7	.0	10.0
B. Christie NBD	*	7	0	7	150	*	AG	590	4.7	.0	10.0
C. Christie NBL	*	5	-150	0	0	*	AG	461	4.7	.0	10.0
D. Christie SBA	*	-5	150	-5	0	*	AG	695	4.7	.0	11.8
E. Christie SBD	*	-5	0	-5	-150	*	AG	1004	4.7	.0	10.0
F. Christie SBL	*	-2	150	0	0	*	AG	162	4.7	.0	10.0
G. Powell EBA	*	-150	-12	0	-12	*	AG	1499	4.7	.0	13.5
H. Powell EBD	*	0	-12	150	-12	*	AG	1258	4.7	.0	10.0
I. Powell EBL	*	-150	-9	0	0	*	AG	383	4.7	.0	10.0
J. Powell WBA	*	150	9	0	9	*	AG	1231	4.7	.0	13.5
K. Powell WBD	*	0	9	-150	9	*	AG	2152	4.7	.0	10.0
L. Powell WBL	*	150	5	0	0	*	AG	248	4.7	.0	10.0
M. Chrstie NBAX	*	7	-750	7	-150	*	AG	786	4.7	.0	10.0
N. Chrstie NBDX	*	7	150	7	750	*	AG	590	4.7	.0	10.0
O. Chrstie SBAX	*	-5	750	-5	150	*	AG	857	4.7	.0	11.8
P. Chrstie SBDX	*	-5	-150	-5	-750	*	AG	1004	4.7	.0	10.0
Q. Powell EBAX	*	-750	-12	-150	-12	*	AG	1882	4.7	.0	13.5

R. Powell EBDX	*	150	-12	750	-12	*	AG	1258	4.7	.0	10.0
S. Powell WBAX	*	750	9	150	9	*	AG	1479	4.7	.0	13.5
T. Powell WBDX	*	-150	9	-750	9	*	AG	2152	4.7	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. SE	*	14	-19	1.8
2. NW	*	-13	15	1.8
3. SW	*	-12	-21	1.8
4. NE	*	14	17	1.8
5. ES mdblk	*	150	-19	1.8
6. WN mdblk	*	-150	15	1.8
7. WS mdblk	*	-150	-21	1.8
8. EN mdblk	*	150	17	1.8
9. SE mdblk	*	14	-150	1.8
10. NW mdblk	*	-13	150	1.8
11. SW mdblk	*	-12	-150	1.8
12. NE mdblk	*	14	150	1.8
13. ES blk	*	600	-19	1.8
14. WN blk	*	-600	15	1.8
15. WS blk	*	-600	-21	1.8
16. EN blk	*	600	17	1.8
17. SE blk	*	14	-600	1.8
18. NW blk	*	-13	600	1.8
19. SW blk	*	-12	-600	1.8
20. NE blk	*	14	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. SE	277.	2.0	.0	.0	.1	.0	.2	.0	.8	.1
2. NW	172.	2.0	.0	.0	.2	.0	.5	.0	.2	.0
3. SW	81.	1.7	.0	.0	.1	.0	.3	.0	.1	.6
4. NE	261.	2.0	.0	.2	.0	.1	.0	.0	.1	.0
5. ES mdblk	277.	1.6	.0	.0	.0	.0	.0	.0	.0	.8
6. WN mdblk	99.	2.0	.0	.0	.0	.0	.0	.0	.1	.1
7. WS mdblk	81.	1.6	.0	.0	.0	.0	.0	.0	.9	.0
8. EN mdblk	263.	1.6	.0	.0	.0	.0	.0	.0	.2	.0
9. SE mdblk	352.	1.1	.2	.0	.2	.0	.2	.0	.0	.0
10. NW mdblk	174.	1.1	.0	.0	.0	.4	.0	.0	.0	.0
11. SW mdblk	7.	1.3	.0	.0	.1	.0	.6	.0	.0	.0
12. NE mdblk	187.	1.1	.0	.4	.0	.1	.1	.0	.0	.0
13. ES blk	277.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	98.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	82.	1.8	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Eastshore 2025 with Project
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.1	.0	.1	.0	.0	.0	.0	.0	.2	.0	.0	.3
2. NW	.0	.0	.6	.0	.1	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0
4. NE	.0	.1	.9	.0	.0	.0	.0	.0	.3	.0	.0	.1
5. ES mdblk	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	.0	.0	1.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	.0	.7	.1	.0	.0	.0	.0	.0	.2	.0	.0	.0
9. SE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.9	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	1.4
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	1.2	.0	.0	.4
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	1.0	.0
17. SE blk	.0	.0	.0	.0	.6	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.6	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.7	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.3	.0	.0	.0	.0	.0

APPENDIX D

DRAFT GENERAL PLAN GUIDELINES

D-1 TYPICAL NOISE CHARACTERISTICS

D-2 FHWA TRAFFIC NOISE MODEL PRINTOUTS - EXISTING BASELINE CONDITIONS

D-3 FHWA TRAFFIC NOISE MODEL PRINTOUTS - EXISTING WITH PROJECT CONDITIONS

D-4 FHWA TRAFFIC NOISE MODEL PRINTOUTS - YEAR 2025 BASELINE CONDITIONS

D-5 FHWA TRAFFIC NOISE MODEL PRINTOUTS - YEAR 2025 WITH PROJECT CONDITIONS

APPENDIX D-1

TYPICAL NOISE CHARACTERISTICS

MEASUREMENT OF SOUND

Sound intensity is quantified through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve.

For example, 10 decibels are 10 times more intense than one decibel, 20 decibels are 100 times more intense and 30 decibels are 1,000 times more intense. A measurement of 30 decibels represent 1,000 times as much acoustic energy as 1 decibel. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 decibel. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10-decibel increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 decibels for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source such as highway traffic or railroad operations, the sound decreases 3 decibels for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases 4½ decibels for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The predominant rating scales for human communities in the State of California are the Equivalent-Continuous Sound Level (L_{eq}) and the Day-Night Average Sound (L_{dn}) based on A-weighted decibels (dBA). L_{eq} is the total sound energy of time-varying noise over a sample period. L_{dn} is the time-varying noise over a 24-hour period, with a weighting factor applied to the hourly L_{eq} for noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours) with a weighting factor of 10 dBA. The noise adjustments are added to the noise events occurring during the more sensitive nighttime hours. The Community Noise Equivalent Level (CNEL) is similar to the L_{dn} scale, but with additional adjustments for the evening hours between 7:00 p.m. and 10:00 p.m. (defined as relaxation hours) with a weighting factor of 5 dBA. CNEL and L_{dn} are typically within 1 dBA of each other and are interchangeable.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level, L_{max}, which is the highest exponential-time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by (L_{max}) for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Yet another, noise metric also widely used is a noise standard in terms of percentile noise levels. The City of Vallejo uses this system for examining noise. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the lowest noise level experienced during a monitoring period. It is normally referred to as the background noise level.

PSYCHOLOGICAL AND PHYSIOLOGICAL EFFECTS OF NOISE

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system. With prolonged noise exposure in excess of 75 dBA increases in body tensions can be experienced; thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 decibels would result in permanent cell damage. When the noise level reaches 120 decibels, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 decibels, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 190 decibels will rupture the eardrum and permanently damage the inner ear.

APPENDIX D-2

FHWA TRAFFIC NOISE MODEL PRINTOUTS - EXISTING BASELINE CONDITIONS

EASTSHORE STATE PARK

FHWA TRAFFIC NOISE MODEL PRINTOUTS

EXISTING BASELINE CONDITIONS

TABLE WRT1EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O SAN PABLO
NOTES: EXISTING TRAFFIC

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25000 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
66.0	137.9	295.0	634.6

TABLE WRT2EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE W/O SAN PABLO
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25000   SPEED (MPH): 45   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
66.0	137.9	295.0	634.6

TABLE WRT3EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O I-80
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 35000   SPEED (MPH): 45   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
81.4	172.0	369.0	794.0

TABLE WRT12EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE S/O STANFORD
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23700 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
76.9	159.1	339.7	730.3

TABLE WRT13EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO BTWN STANFORD AND ASHBY
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26500   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.3	171.2	365.9	786.7

TABLE WRT14EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN ASHBY AND UNIVERSITY
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23500 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
76.5	158.3	337.8	726.2

TABLE WRT15EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN UNIVERSITY AND GILMAN
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26500 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.3	171.2	365.9	786.7

TABLE WRT16EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN GILMAN AND MARIN
NOTES: EXISTING BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25000 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
79.4	164.8	352.0	756.8

TABLE WRT17EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN MARIN AND CENTRAL
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24000   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.5	160.5	342.6	736.5

TABLE WRT18EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE N/O CENTRAL
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26500 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.3	171.2	365.9	786.7

TABLE WRT4EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 S/O POWELL
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 282000   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
732.7	1574.8	3390.6	7302.5

TABLE WRT5EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN POWELL AND ASHBY
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 255000   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
685.4	1472.7	3170.6	6828.7

TABLE WRT6EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN ASHBY AND UNIVERSITY
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 253000   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS			
	73.71	12.27	9.12
M-TRUCKS			
	1.57	0.09	0.19
H-TRUCKS			
	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
681.8	1465.0	3154.0	6792.9

TABLE WRT7EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN UNIVERSITY AND GILMAN
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 251000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
678.2	1457.3	3137.4	6757.1

TABLE WRT8EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN GILMAN AND BUCHANAN
NOTES: EXISTING BASELINE

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 259000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
692.5	1488.1	3203.7	6899.9

TABLE WRT9EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN BUCHANAN AND CENTRAL
NOTES: EXISTING BASELINE

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 178000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 81.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
540.4	1159.4	2495.2	5373.6

TABLE WRT10EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 N/O CENTRAL
NOTES: EXISTING BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 182000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
547.6	1178.1	2536.9	5464.2

TABLE WRT11EX
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-580 N/O CENTRAL
NOTES: EXISTING BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80000 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
317.5	681.5	1466.8	3159.1

APPENDIX D-3

FHWA TRAFFIC NOISE MODEL PRINTOUTS - EXISTING WITH PROJECT CONDITIONS

EASTSHORE STATE PARK

FHWA TRAFFIC NOISE MODEL PRINTOUTS

EXISTING WITH PROJECT CONDITIONS

TABLE WRT1EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O SAN PABLO
NOTES: EXISTING PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25042 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
66.0	138.0	295.4	635.3

TABLE WRT2EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE W/O SAN PABLO
NOTES: EXISTING PLUS PROJECT

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25052 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.80

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
66.1	138.1	295.4	635.4

TABLE WRT3EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O I-80
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 35052 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
81.5	172.2	369.3	794.8

TABLE WRT12EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE S/O STANFORD
NOTES: EXISTING PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23927 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.3	160.1	341.9	735.0

TABLE WRT13EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO BTWN STANFORD AND ASHBY
NOTES: EXISTING PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26775   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.8	172.3	368.4	792.1

TABLE WRT14EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN ASHBY AND UNIVERSITY
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23675 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
76.8	159.0	339.5	729.8

TABLE WRT15EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN UNIVERSITY AND GILMAN
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26670 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.79

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.6	171.9	367.4	790.1

TABLE WRT16EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN GILMAN AND MARIN
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25170 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS			
	75.51	12.57	9.34
M-TRUCKS			
	1.56	0.09	0.19
H-TRUCKS			
	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
79.7	165.5	353.6	760.2

TABLE WRT17EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN MARIN AND CENTRAL
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24158 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
77.8	161.1	344.1	739.7

TABLE WRT18EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE N/O CENTRAL
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26628   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.5	171.7	367.0	789.2

TABLE WRT4EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 S/O POWELL
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 282191   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
733.0	1575.5	3392.1	7305.8

TABLE WRT5EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN POWELL AND ASHBY
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 255191   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
685.7	1473.5	3172.2	6832.1

TABLE WRT6EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN ASHBY AND UNIVERSITY
NOTES: EXISTING PLUS PROJECT

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 253191   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
682.2	1465.8	3155.6	6796.4

TABLE WRT7EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN UNIVERSITY AND GILMAN
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 251147 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
678.5	1457.9	3138.6	6759.7

TABLE WRT8EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN GILMAN AND BUCHANAN
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 259191 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
692.8	1488.8	3205.2	6903.3

TABLE WRT9EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN BUCHANAN AND CENTRAL
NOTES: EXISTING PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 178106 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 81.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
540.6	1159.8	2496.2	5375.8

TABLE WRT10EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 N/O CENTRAL
NOTES: EXISTING PLUS PROJECT

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 182106   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30   SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
547.8	1178.5	2537.9	5466.3

TABLE WRT11EP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-580 N/O CENTRAL
NOTES: EXISTING PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 80085 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
317.7	682.0	1467.9	3161.3

APPENDIX D-4

FHWA TRAFFIC NOISE MODEL PRINTOUTS - YEAR 2025 BASELINE CONDITIONS

EASTSHORE STATE PARK

FHWA TRAFFIC NOISE MODEL PRINTOUTS

YEAR 2025 BASELINE CONDITIONS

TABLE WRT1FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O SAN PABLO
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27959   SPEED (MPH): 45   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.7	148.4	317.8	683.7

TABLE WRT2FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE W/O SAN PABLO
NOTES: 2025 BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26929   SPEED (MPH): 45   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.1	144.8	310.0	666.8

TABLE WRT3FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O I-80
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36782   SPEED (MPH): 45   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.1	177.8	381.4	820.7

TABLE WRT12FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE S/O STANFORD
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27873 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.8	176.9	378.3	813.6

TABLE WRT13FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO BTWN STANFORD AND ASHBY
NOTES: 2025 BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30931   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.5	189.4	405.4	872.1

TABLE WRT14FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN ASHBY AND UNIVERSITY
NOTES: 2025 BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27772 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.97

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.7	176.5	377.4	811.7

TABLE WRT15FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN UNIVERSITY AND GILMAN
NOTES: 2025 BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28971 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.9	181.5	388.2	834.8

TABLE WRT16FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN GILMAN AND MARIN
NOTES: 2025 BASELINE

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26997   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.2	173.3	370.4	796.5

TABLE WRT17FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN MARIN AND CENTRAL
NOTES: 2025 BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29256   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.19

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
87.4	182.6	390.7	840.3

TABLE WRT18FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE N/O CENTRAL
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30583   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
89.8	188.0	402.4	865.5

TABLE WRT4FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 S/O POWELL
NOTES: 2025 BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 297989   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
760.0	1633.7	3517.5	7576.0

TABLE WRT5FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN POWELL AND ASHBY
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 268462   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
709.2	1524.1	3281.2	7066.9

TABLE WRT6FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN ASHBY AND UNIVERSITY
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 263540 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
700.5	1505.4	3241.0	6980.3

TABLE WRT7FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN UNIVERSITY AND GILMAN
NOTES: 2025 BASELINE

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 268265 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
708.8	1523.3	3279.6	7063.5

TABLE WRT8FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN GILMAN AND BUCHANAN
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 276520 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
723.2	1554.4	3346.5	7207.6

TABLE WRT9FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN BUCHANAN AND CENTRAL
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 187027 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 81.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
558.3	1198.2	2578.8	5553.8

TABLE WRT10FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 N/O CENTRAL
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 194551 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
572.4	1231.6	2652.2	5712.6

TABLE WRT11FB
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-580 N/O CENTRAL
NOTES: 2025 BASELINE

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 88919 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
340.5	731.2	1573.9	3389.7

APPENDIX D-5

FHWA TRAFFIC NOISE MODEL PRINTOUTS - YEAR 2025 WITH PROJECT CONDITIONS

EASTSHORE STATE PARK

FHWA TRAFFIC NOISE MODEL PRINTOUTS

YEAR 2025 WITH PROJECT CONDITIONS

TABLE WRT1FP

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O SAN PABLO
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28001 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
70.8	148.5	318.1	684.3

TABLE WRT2FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE W/O SAN PABLO
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26981 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
69.2	145.0	310.4	667.6

TABLE WRT3FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: ASHBY AVE E/O I-80
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36834   SPEED (MPH): 45   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.1	177.9	381.7	821.5

TABLE WRT12FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE S/O STANFORD
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28100   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.3	177.9	380.4	818.0

TABLE WRT13FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO BTWN STANFORD AND ASHBY
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31156   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.9	190.3	407.4	876.3

TABLE WRT14FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN ASHBY AND UNIVERSITY
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27963 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.0	177.3	379.1	815.4

TABLE WRT15FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN UNIVERSITY AND GILMAN
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29118   SPEED (MPH): 50   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
87.2	182.1	389.5	837.7

TABLE WRT16FP

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN GILMAN AND MARIN
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27164 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.87

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.5	174.0	371.9	799.8

TABLE WRT17FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE BTWN MARIN AND CENTRAL
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29414 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
87.7	183.3	392.1	843.3

TABLE WRT18FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: SAN PABLO AVE N/O CENTRAL
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30711 SPEED (MPH): 50 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
90.1	188.5	403.5	867.9

TABLE WRT4FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 S/O POWELL
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 298180 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.97

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
760.3	1634.4	3519.0	7579.2

TABLE WRT5FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN POWELL AND ASHBY
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 268653   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
709.5	1524.8	3282.7	7070.3

TABLE WRT6FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN ASHBY AND UNIVERSITY
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 263731 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
700.9	1506.1	3242.5	6983.7

TABLE WRT7FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN UNIVERSITY AND GILMAN
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 268412   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
709.1	1523.9	3280.8	7066.1

TABLE WRT8FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN GILMAN AND BUCHANAN
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 276711   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
723.5	1555.1	3348.0	7210.9

TABLE WRT9FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 BTWN BUCHANAN AND CENTRAL
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 187133   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 54   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 81.94

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
558.5	1198.6	2579.8	5555.9

TABLE WRT10FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-80 N/O CENTRAL
NOTES: 2025 PLUS PROJECT

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 194657   SPEED (MPH): 65   GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30   SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 83.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
572.6	1232.0	2653.2	5714.6

TABLE WRT11FP
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 4/18/02
ROADWAY SEGMENT: I-580 N/O CENTRAL
NOTES: 2025 PLUS PROJECT

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 89004 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	73.71	12.27	9.12
M-TRUCKS	1.57	0.09	0.19
H-TRUCKS	2.64	0.08	0.33

ACTIVE HALF-WIDTH (FT): 30 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
340.7	731.6	1574.9	3391.8

APPENDIX E

TRAFFIC MODELING WORKSHEETS

E-1 EXISTING AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

E-2 EXISTING PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

E-3 EXISTING PLUS PROJECT AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

E-4 EXISTING PLUS PROJECT PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

E-5 YEAR 2025 BASELINE AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

E-6 YEAR 2025 BASELINE PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

E-7 YEAR 2025 PLUS PROJECT AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

E-8 YEAR 2025 PLUS PROJECT PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

APPENDIX E-1

EXISTING AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	Existing AM
Command:	Default Command
Volume:	Existing AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	None
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Base Volume Alternative)
********************************************************************************
Intersection #1 Rydin Rd/Central Ave
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap. (X):        0.512
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):      11.6
Optimal Cycle:          0              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        0  1  0  0  1    1  0  1  0  1    0  1  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 08:00 - 09:00 AM
Base Vol:      58    12   323    37    18     7     5    97    80   174   193    47
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:   58    12   323    37    18     7     5    97    80   174   193    47
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:    58    12   323    37    18     7     5    97    80   174   193    47
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   58    12   323    37    18     7     5    97    80   174   193    47
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
Final Vol.:    58    12   323    37    18     7     5    97    80   174   193    47
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.83  0.17  1.00  1.00  1.00  1.00  0.05  1.07  0.88  1.00  1.61  0.39
Final Sat.:   434    90   631   437   466   511    29   573   516   510   894   224
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13  0.13  0.51  0.08  0.04  0.01  0.17  0.17  0.16  0.34  0.22  0.21
Crit Moves:              ****  ****              ****              ****
Delay/Veh:   10.3  10.3  13.4  11.0  10.1   9.2  10.3  10.2   9.4  12.8  10.5  10.2
Delay Adj:   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:  10.3  10.3  13.4  11.0  10.1   9.2  10.3  10.2   9.4  12.8  10.5  10.2
LOS by Move:    B     B     B     B     B     A     B     B     A     B     B     B
ApproachDel:       12.8              10.5               9.9              11.4
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        12.8              10.5               9.9              11.4
LOS by Appr:          B                 B                 A                 B
********************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
           2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #2 I-80 WB Ramps/Central Ave
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap. (X):        0.505
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        23.3
Optimal Cycle:        46                Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0   0  1  0  0  1    0  0  1  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 08:00 - 09:00 AM
Base Vol:      0     0     0  266     4   302    0   409    58  336   352     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:   0     0     0  266     4   302    0   409    58  336   352     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:    0     0     0  266     4   302    0   409    58  336   352     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0  266     4   302    0   409    58  336   352     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
Final Vol.:    0     0     0  266     4   302    0   409    58  336   352     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900  1900
Adjustment:  1.00  1.00  1.00 0.85  0.85  0.85 1.00  0.93  0.93 0.95  0.95  1.00
Lanes:       0.00  0.00  0.00 0.99  0.01  1.00 0.00  1.75  0.25 1.00  2.00  0.00
Final Sat.:    0     0     0 1591    24  1615    0  3102   440 1805  3610     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00 0.17  0.17  0.19 0.00  0.13  0.13 0.19  0.10  0.00
Crit Moves:                               ****       ****       ****
Green/Cycle: 0.00  0.00  0.00 0.37  0.37  0.37 0.00  0.26  0.26 0.37  0.63  0.00
Volume/Cap:  0.00  0.00  0.00 0.45  0.45  0.51 0.00  0.51  0.51 0.51  0.15  0.00
Uniform Del:  0.0   0.0   0.0 23.8  23.8  24.4  0.0  31.4  31.4 24.5   7.6   0.0
IncremntDel:  0.0   0.0   0.0  0.5   0.5   0.7  0.0   0.5   0.5  0.6   0.0   0.0
Delay Adj:   0.00  0.00  0.00 1.00  1.00  1.00 0.00  1.00  1.00 1.00  1.00  0.00
Delay/Veh:    0.0   0.0   0.0 24.4  24.4  25.1  0.0  31.9  31.9 25.1   7.6   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:   0.0   0.0   0.0 24.4  24.4  25.1  0.0  31.9  31.9 25.1   7.6   0.0
DesignQueue:   0     0     0   10     0    11    0    17     2   12     7     0
********************************************************************************
```

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

Intersection #3 I-80 EB Ramps/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.478
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	17.2
Optimal Cycle:	44	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0 0	1	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module: >> Count Date: 20 Mar 2002 << 07:45 - 08:45 AM												
Base Vol:	36	0	298	0	0	0	109	580	0	0	604	205
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	0	298	0	0	0	109	580	0	0	604	205
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:	36	0	298	0	0	0	109	580	0	0	604	205
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	0	298	0	0	0	109	580	0	0	604	205
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
Final Vol.:	36	0	298	0	0	0	109	580	0	0	604	205
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	0.91
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.49	0.51
Final Sat.:	3618	0	1615	0	0	0	1805	3610	0	0	2593	880
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.18	0.00	0.00	0.00	0.06	0.16	0.00	0.00	0.23	0.23
Crit Moves:			****				****				****	
Green/Cycle:	0.39	0.00	0.39	0.00	0.00	0.00	0.13	0.61	0.00	0.00	0.49	0.49
Volume/Cap:	0.03	0.00	0.48	0.00	0.00	0.00	0.48	0.26	0.00	0.00	0.48	0.48
Uniform Del:	19.0	0.0	23.1	0.0	0.0	0.0	40.6	8.9	0.0	0.0	17.1	17.1
IncremntDel:	0.0	0.0	0.6	0.0	0.0	0.0	1.6	0.1	0.0	0.0	0.2	0.2
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	19.0	0.0	23.7	0.0	0.0	0.0	42.2	8.9	0.0	0.0	17.3	17.3
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:	19.0	0.0	23.7	0.0	0.0	0.0	42.2	8.9	0.0	0.0	17.3	17.3
DesignQueue:	1	0	11	0	0	0	5	13	0	0	18	6

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                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 San Pablo Avenue/Central Avenue
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):         0.577
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):         25.6
Optimal Cycle:         54                Level Of Service:                   C
********************************************************************************
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       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  1  1  0   1  0  1  1  0   1  1  0  0  1   0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 31 Mar 1999 << 07:45-08:45 AM
Base Vol:       67  387    36     71  972    99    205  225   104     95  212    97
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:    67  387    36     71  972    99    205  225   104     95  212    97
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:     67  387    36     71  972    99    205  225   104     95  212    97
Reduct Vol:      0    0     0      0    0     0      0    0     0      0    0     0
Reduced Vol:    67  387    36     71  972    99    205  225   104     95  212    97
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
Final Vol.:     67  387    36     71  972    99    205  225   104     95  212    97
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94   0.98 0.98  0.85   0.90 0.90  0.90
Lanes:        1.00 1.83  0.17   1.00 1.82  0.18   1.00 1.00  1.00   0.47 1.05  0.48
Final Sat.:   1805 3260   303   1805 3230   329   1856 1856  1615    809 1804   826
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.04 0.12  0.12   0.04 0.30  0.30   0.11 0.12  0.06   0.12 0.12  0.12
Crit Moves:   ****                   ****              ****         ****
Green/Cycle:  0.06 0.44  0.44   0.15 0.52  0.52   0.21 0.21  0.21   0.20 0.20  0.20
Volume/Cap:   0.58 0.27  0.27   0.27 0.58  0.58   0.53 0.58  0.31   0.58 0.58  0.58
Uniform Del:  45.5 17.8  17.8   38.0 16.4  16.4   35.1 35.5  33.3   35.9 35.9  35.9
IncremntDel:   7.0  0.1   0.1    0.6  0.5   0.5    0.6  1.1   0.5    1.2  1.2   1.2
Delay Adj:    1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Delay/Veh:    52.4 17.9  17.9   38.5 16.8  16.8   35.7 36.6  33.9   37.1 37.1  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:   52.4 17.9  17.9   38.5 16.8  16.8   35.7 36.6  33.9   37.1 37.1  37.1
DesignQueue:     4   12     1      3   28     3      9   10     5      4   10     4
********************************************************************************
```

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                   Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #5 San Pablo Avenue/Marin Ave
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):         0.580
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):         25.8
Optimal Cycle:         54                Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 6 May 1999 << 07:45 - 08:45 AM
Base Vol:     109   478   163   156   976     8     4   460    92   163   488    84
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:  109   478   163   156   976     8     4   460    92   163   488    84
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:   109   478   163   156   976     8     4   460    92   163   488    84
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  109   478   163   156   976     8     4   460    92   163   488    84
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
Final Vol.:   109   478   163   156   976     8     4   460    92   163   488    84
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.95  0.91  0.91  0.95  0.95  0.95  0.95  0.93  0.93  0.95  0.93  0.93
Lanes:       1.00  1.49  0.51  1.00  1.98  0.02  1.00  1.67  0.33  1.00  1.71  0.29
Final Sat.:  1805  2590   883  1805  3577    29  1805  2933   587  1805  3012   518
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06  0.18  0.18  0.09  0.27  0.27  0.00  0.16  0.16  0.09  0.16  0.16
Crit Moves:  ****                    ****              ****        ****
Green/Cycle: 0.10  0.39  0.39  0.18  0.47  0.47  0.01  0.27  0.27  0.16  0.42  0.42
Volume/Cap:  0.58  0.47  0.47  0.47  0.58  0.58  0.39  0.58  0.58  0.58  0.39  0.39
Uniform Del: 42.7  22.7  22.7  36.5  19.3  19.3  49.5  31.6  31.6  39.2  20.1  20.1
IncremntDel:  4.5   0.3   0.3   1.1   0.5   0.5  22.2   0.9   0.9   3.0   0.2   0.2
Delay Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Delay/Veh:   47.2  23.0  23.0  37.6  19.8  19.8  71.7  32.5  32.5  42.2  20.2  20.2
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:  47.2  23.0  23.0  37.6  19.8  19.8  71.7  32.5  32.5  42.2  20.2  20.2
DesignQueue:    6    17     6     7    31     0     0    19     4     8    16     3
********************************************************************************
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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
******************************************************************************
Intersection #6 W. Frontage Rd/Gilman St
******************************************************************************
Average Delay (sec/veh):     25.0         Worst Case Level Of Service:       C
******************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  1  0  0  1   0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 1997 <<
Base Vol:       1    0    46    5    0     3    5   24     6  501    7     4
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:    1    0    46    5    0     3    5   24     6  501    7     4
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:     1    0    46    5    0     3    5   24     6  501    7     4
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Final Vol.:     1    0    46    5    0     3    5   24     6  501    7     4
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.1 xxxx   6.2  7.1 xxxx   6.2  4.1 xxxx xxxxx  4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3  3.5 xxxx   3.3  2.2 xxxx xxxxx  2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1040 xxxx    24 1071 xxxx     6   11 xxxx xxxxx   30 xxxx xxxxx
Potent Cap.:  210 xxxx  1058  200 xxxx  1083 1621 xxxx xxxxx 1596 xxxx xxxxx
Move Cap.:    138 xxxx  1058  126 xxxx  1083 1621 xxxx xxxxx 1596 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  7.2 xxxx xxxxx  7.3 xxxx xxxxx
LOS by Move:    *    *     *    *    *     *    A    *     *    A    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx  927 xxxxx xxxx  188 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Shrd StpDel:xxxxx  9.1 xxxxx xxxxx 25.0 xxxxx  7.2 xxxx xxxxx  8.3 xxxx xxxxx
Shared LOS:     *    A     *    *    C     *    A    *     *    A    *     *
ApproachDel:         9.1             25.0           xxxxxx           xxxxxx
ApproachLOS:          A                C              *                *
```

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                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #7 I-80 WB Ramps/Gilman St
********************************************************************************
Average Delay (sec/veh):     34.5          Worst Case Level Of Service:       D
********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include          Include          Include           Include
Lanes:        0  0  0  0  0   1  1  0  0  1    0  0  1  1  0    0  1  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 1997 <<
Base Vol:        0    0     0   463  253   425     0   72     5   142   79     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:     0    0     0   463  253   425     0   72     5   142   79     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:      0    0     0   463  253   425     0   72     5   142   79     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:      0    0     0   463  253   425     0   72     5   142   79     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   399  440    40  xxxx xxxx xxxxx    77 xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   584  514  1030  xxxx xxxx xxxxx  1535 xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   539  462  1030  xxxx xxxx xxxxx  1535 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  16.6 xxxx  10.9 xxxxx xxxx xxxxx   7.3 xxxx xxxxx
LOS by Move:     *    *     *     C    *     B     *    *     *     A    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   496 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx  63.7 xxxx xxxxx xxxxx xxxx xxxxx   7.6 xxxx xxxxx
Shared LOS:      *    *     *     F    *     *     *    *     *     A    *     *
ApproachDel:     xxxxxx            34.5            xxxxxx            xxxxxx
ApproachLOS:        *                D                *                 *
```

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #8 I-80 EB Ramps/Gilman Street
********************************************************************************
Average Delay (sec/veh):     14.1          Worst Case Level Of Service:        B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        1  0  0  1  0    0  0  0  0  0    0  1  1  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 1997 <<
Base Vol:      23    0   321     0    0     0    50  565     0     0  216   296
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:   23    0   321     0    0     0    50  565     0     0  216   296
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:    23    0   321     0    0     0    50  565     0     0  216   296
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    23    0   321     0    0     0    50  565     0     0  216   296
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  773 xxxx   283  xxxx xxxx xxxxx   512 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:  340 xxxx   721  xxxx xxxx xxxxx  1064 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:    327 xxxx   721  xxxx xxxx xxxxx  1064 xxxx xxxxx  xxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del: 16.8 xxxx xxxxx xxxxx xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    C    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx   721  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx  13.9 xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     B     *    *     *     A    *     *     *    *     *
ApproachDel:       14.1            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         B                *                *                *
```

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--------------------------------------------------------------------------------
                     Level Of Service Computation Report
           2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #9 San Pablo Avenue/Gilman Street
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.789
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        27.6
Optimal Cycle:       88                Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0    0  1  0  1  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Feb 1999 << 07:45 - 08:45 AM
Base Vol:      158  379    34    87  998   174   119  331   143    81  472    45
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:   158  379    34    87  998   174   119  331   143    81  472    45
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:    158  379    34    87  998   174   119  331   143    81  472    45
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   158  379    34    87  998   174   119  331   143    81  472    45
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
Final Vol.:    158  379    34    87  998   174   119  331   143    81  472    45
------------|---------------||---------------||---------------||---------------|
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  0.62 0.62  0.62  0.85 0.85  0.85
Lanes:        1.00 1.84  0.16  1.00 1.70  0.30  0.40 1.12  0.48  0.14 0.79  0.07
Final Sat.:   1805 3273   294  1805 3006   524   476 1325   572   219 1278   122
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.09 0.12  0.12  0.05 0.33  0.33  0.25 0.25  0.25  0.37 0.37  0.37
Crit Moves:   ****                   ****                              ****
Green/Cycle:  0.11 0.38  0.38  0.16 0.42  0.42  0.47 0.47  0.47  0.47 0.47  0.47
Volume/Cap:   0.79 0.31  0.31  0.31 0.79  0.79  0.53 0.53  0.53  0.79 0.79  0.79
Uniform Del:  43.3 22.1  22.1  37.4 25.1  25.1  18.9 18.9  18.9  22.4 22.4  22.4
IncremntDel:  18.6  0.1   0.1   0.6  2.9   2.9   0.5  0.5   0.5   5.6  5.6   5.6
Delay Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:    61.9 22.2  22.2  38.0 28.0  28.0  19.4 19.4  19.4  28.0 28.0  28.0
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:   61.9 22.2  22.2  38.0 28.0  28.0  19.4 19.4  19.4  28.0 28.0  28.0
DesignQueue:     8   14     1     4   35     6     4   10     4     3   15     1
********************************************************************************
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 W. Frontage Rd/University Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.309
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	10.5
Optimal Cycle:	0	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	1 0	0 1	0	1 0	1 0	1	1 0
Volume Module: >> Count Date: 19 Jan 2001 <<												
Base Vol:	34	19	15	15	294	61	36	70	40	162	108	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:	34	19	15	15	294	61	36	70	40	162	108	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:	34	19	15	15	294	61	36	70	40	162	108	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	19	15	15	294	61	36	70	40	162	108	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
Final Vol.:	34	19	15	15	294	61	36	70	40	162	108	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.50	0.28	0.22	0.08	1.59	0.33	0.49	0.96	0.55	1.00	2.00	0.00
Final Sat.:	276	155	122	48	970	207	267	545	328	524	1124	0
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.31	0.30	0.30	0.13	0.13	0.12	0.31	0.10	xxxx
Crit Moves:			****	****			****			****		
Delay/Veh:	9.9	9.9	9.9	11.0	10.7	10.4	9.9	9.5	9.1	12.1	9.4	0.0
Delay Adj:	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:	9.9	9.9	9.9	11.0	10.7	10.4	9.9	9.5	9.1	12.1	9.4	0.0
LOS by Move:	A	A	A	B	B	B	A	A	A	B	A	*
ApproachDel:		9.9			10.7			9.5			11.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.9			10.7			9.5			11.0	
LOS by Appr:		A			B			A			B	

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                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #11 6th Street/University Ave
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):        0.610
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        26.6
Optimal Cycle:         59                Level Of Service:                  C
********************************************************************************
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
Lanes:       1  0  1  0  1    1  0  1  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 6 Mar 2001 <<
Base Vol:     225  172    29    82  328   302    94  996   413    41  910    38
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:  225  172    29    82  328   302    94  996   413    41  910    38
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:   225  172    29    82  328   302    94  996   413    41  910    38
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  225  172    29    82  328   302    94  996   413    41  910    38
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
Final Vol.:   225  172    29    82  328   302    94  996   413    41  910    38
------------|---------------||---------------||---------------||---------------|
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  0.85  0.95 0.95  0.85  0.95 0.95  0.85
Lanes:       1.00 1.00  1.00  1.00 1.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1805 1900  1615  1805 1900  1615  1805 3610  1615  1805 3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.09  0.02  0.05 0.17  0.19  0.05 0.28  0.26  0.02 0.25  0.02
Crit Moves:  ****                        ****       ****        ****
Green/Cycle: 0.20 0.34  0.34  0.17 0.31  0.31  0.08 0.45  0.45  0.04 0.41  0.41
Volume/Cap:  0.61 0.27  0.05  0.27 0.56  0.61  0.62 0.61  0.57  0.61 0.62  0.06
Uniform Del: 36.2 23.9  22.2  36.0 29.1  29.6  44.3 20.7  20.2  47.4 23.6  18.1
IncremntDel:  3.0  0.2   0.0   0.5  1.3   2.2   7.8  0.7   1.0  15.3  0.8   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   39.1 24.2  22.2  36.5 30.3  31.8  52.0 21.4  21.2  62.7 24.5  18.1
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:  39.1 24.2  22.2  36.5 30.3  31.8  52.0 21.4  21.2  62.7 24.5  18.1
DesignQueue:   10    6     1     4   13    12     5   33    13     2   32     1
********************************************************************************
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-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
*****************************************************************************
Intersection #12 San Pablo Ave/University Ave
*****************************************************************************
Cycle (sec):         100              Critical Vol./Cap. (X):        0.650
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):      27.0
Optimal Cycle:        65              Level Of Service:                  C
*****************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Feb 1999 << 07:45 - 08:45 AM
Base Vol:      89  387    66    76  883    89   159  932    67    86  366    69
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:   89  387    66    76  883    89   159  932    67    86  366    69
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:    89  387    66    76  883    89   159  932    67    86  366    69
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   89  387    66    76  883    89   159  932    67    86  366    69
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
Final Vol.:    89  387    66    76  883    89   159  932    67    86  366    69
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94  0.95 0.94  0.94  0.95 0.93  0.93
Lanes:       1.00 1.71  0.29  1.00 1.82  0.18  1.00 1.87  0.13  1.00 1.68  0.32
Final Sat.:  1805 3016   514  1805 3234   326  1805 3334   240  1805 2964   559
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.13  0.13  0.04 0.27  0.27  0.09 0.28  0.28  0.05 0.12  0.12
Crit Moves:  ****                   ****             ****        ****
Green/Cycle: 0.08 0.37  0.37  0.12 0.42  0.42  0.21 0.43  0.43  0.07 0.29  0.29
Volume/Cap:  0.65 0.34  0.34  0.34 0.65  0.65  0.42 0.65  0.65  0.65 0.42  0.42
Uniform Del: 44.9 22.5  22.5  40.2 23.1  23.1  34.2 22.5  22.5  45.1 28.4  28.4
IncremntDel: 10.5  0.2   0.2   0.9  1.0   1.0   0.8  1.0   1.0  10.8  0.3   0.3
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   55.4 22.7  22.7  41.1 24.1  24.1  35.0 23.5  23.5  55.9 28.7  28.7
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:  55.4 22.7  22.7  41.1 24.1  24.1  35.0 23.5  23.5  55.9 28.7  28.7
DesignQueue:    5   14     2     4   30     3     7   32     2     4   15     3
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                      Level Of Service Computation Report
             2000 HCM Unsignalized Method (Base Volume Alternative)
*******************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
*******************************************************************************
Average Delay (sec/veh):      16.0        Worst Case Level Of Service:        C
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  1  0   0  1  1  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:        0   66     9   126  869     0     0    0     0    32    0     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:     0   66     9   126  869     0     0    0     0    32    0     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  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:      0   66     9   126  869     0     0    0     0    32    0     1
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:      0   66     9   126  869     0     0    0     0    32    0     1
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    75 xxxx xxxxx  xxxx xxxx xxxxx   757 xxxx    71
Potent Cap.: xxxx xxxx xxxxx  1537 xxxx xxxxx  xxxx xxxx xxxxx   378 xxxx   998
Move Cap.:   xxxx xxxx xxxxx  1537 xxxx xxxxx  xxxx xxxx xxxxx   353 xxxx   998
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   7.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  360 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 16.0 xxxxx
Shared LOS:      *    *     *     A    *     *     *    *     *     *    C     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx            16.0
ApproachLOS:         *                *                *                C
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                    Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Base Volume Alternative)
********************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):        0.563
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       12.4
Optimal Cycle:        0              Level Of Service:                 B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  1! 0  0   1  0  0  1  0   0  0  1! 0  0   0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:      1    47     2   345   442     2     0     0     0     0     0    15
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:   1    47     2   345   442     2     0     0     0     0     0    15
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:    1    47     2   345   442     2     0     0     0     0     0    15
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   1    47     2   345   442     2     0     0     0     0     0    15
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
Final Vol.:    1    47     2   345   442     2     0     0     0     0     0    15
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.02 0.94  0.04  1.00 0.99  0.01  0.00 1.00  0.00  0.00 0.00  1.00
Final Sat.:   15   722    31   710   785     4     0     0     0     0     0   702
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.07  0.07  0.49 0.56  0.56  xxxx xxxx  xxxx  xxxx xxxx  0.02
Crit Moves:       ****              ****                                     ****
Delay/Veh:    8.0  8.0   8.0  12.5 13.0  13.0   0.0  0.0   0.0   0.0  0.0   7.9
Delay Adj:   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:   8.0  8.0   8.0  12.5 13.0  13.0   0.0  0.0   0.0   0.0  0.0   7.9
LOS by Move:   A    A     A     B    B     B     *    *     *     *    *     A
ApproachDel:        8.0              12.8            xxxxxx             7.9
Delay Adj:          1.00             1.00             xxxxx            1.00
ApprAdjDel:         8.0              12.8            xxxxxx             7.9
LOS by Appr:         A                B                 *                A
********************************************************************************
```

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

Intersection #15 San Pablo Ave./Alcatraz Ave.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.605
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	21.6
Optimal Cycle:	58	Level Of Service:	C

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1 1 0			1 0 2 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module: >> Count Date: 18 Feb 1999 << 08:00 - 09:00 AM												
Base Vol:	0	770	31	124	1122	0	0	0	0	146	0	353
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:	0	770	31	124	1122	0	0	0	0	146	0	353
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:	0	770	31	124	1122	0	0	0	0	146	0	353
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	770	31	124	1122	0	0	0	0	146	0	353
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
Final Vol.:	0	770	31	124	1122	0	0	0	0	146	0	353
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	1.92	0.08	1.00	2.00	0.00	0.00	0.00	0.00	0.29	0.00	0.71
Final Sat.:	0	3449	139	1805	3610	0	0	0	0	496	0	1199
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.22	0.07	0.31	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.39	0.39	0.12	0.51	0.00	0.00	0.00	0.00	0.49	0.00	0.49
Volume/Cap:	0.00	0.57	0.57	0.57	0.61	0.00	0.00	0.00	0.00	0.61	0.00	0.61
Uniform Del:	0.0	23.7	23.7	41.5	17.2	0.0	0.0	0.0	0.0	18.7	0.0	18.7
IncremntDel:	0.0	0.6	0.6	3.5	0.6	0.0	0.0	0.0	0.0	1.3	0.0	1.3
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	24.3	24.3	45.0	17.7	0.0	0.0	0.0	0.0	20.0	0.0	20.0
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:	0.0	24.3	24.3	45.0	17.7	0.0	0.0	0.0	0.0	20.0	0.0	20.0
DesignQueue:	0	28	1	6	33	0	0	0	0	4	0	11

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

Intersection #16 W. Frontage Road/Powell Street

Cycle (sec):	100	Critical Vol./Cap. (X):	0.539
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	17.7
Optimal Cycle:	49	Level Of Service:	B

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
Lanes:	0 0 0 0 0			2 0 0 0 1			1 0 1 1 0			0 0 1 1 1		
Volume Module:												
Base Vol:	0	0	0	685	0	288	87	260	345	0	910	593
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:	0	0	0	685	0	288	87	260	345	0	910	593
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:	0	0	0	685	0	288	87	260	345	0	910	593
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	685	0	288	87	260	345	0	910	593
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
Final Vol.:	0	0	0	685	0	288	87	260	345	0	910	593
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	0.81	1.00	0.89	0.89
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	1.00	1.00	0.00	1.82	1.18
Final Sat.:	0	0	0	3502	0	1615	1805	1805	1534	0	3085	2010
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.18	0.05	0.14	0.22	0.00	0.29	0.29
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.09	0.64	0.64	0.00	0.55	0.55
Volume/Cap:	0.00	0.00	0.00	0.54	0.00	0.49	0.54	0.23	0.35	0.00	0.54	0.54
Uniform Del:	0.0	0.0	0.0	25.2	0.0	24.7	43.6	7.7	8.5	0.0	14.5	14.5
IncremntDel:	0.0	0.0	0.0	0.5	0.0	0.7	3.6	0.0	0.1	0.0	0.2	0.2
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	25.7	0.0	25.3	47.2	7.7	8.6	0.0	14.7	14.7
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:	0.0	0.0	0.0	25.7	0.0	25.3	47.2	7.7	8.6	0.0	14.7	14.7
DesignQueue:	0	0	0	25	0	11	4	5	7	0	25	16

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                   Level Of Service Computation Report
         2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #17 I-80 EB Ramps/Powell St.
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap. (X):         0.550
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        19.2
Optimal Cycle:       51               Level Of Service:                  B
********************************************************************************
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
Lanes:         1  0  1! 0  1   0  0  0  0  0   1  0  3  0  0   0  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 08:00 - 09:00 AM
Base Vol:      568     0   802     0     0     0    82   644     0     0   786   334
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:   568     0   802     0     0     0    82   644     0     0   786   334
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:    568     0   802     0     0     0    82   644     0     0   786   334
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   568     0   802     0     0     0    82   644     0     0   786   334
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
Final Vol.:    568     0   802     0     0     0    82   644     0     0   786   334
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:   0.89  1.00  0.89  1.00  1.00  1.00  0.95  0.91  1.00  1.00  0.91  0.85
Lanes:        1.41  0.00  1.59  0.00  0.00  0.00  1.00  3.00  0.00  0.00  3.00  1.00
Final Sat.:   2402     0  2692     0     0     0  1805  5187     0     0  5187  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.24  0.00  0.30  0.00  0.00  0.00  0.05  0.12  0.00  0.00  0.15  0.21
Crit Moves:               ****                    ****                          ****
Green/Cycle:  0.54  0.00  0.54  0.00  0.00  0.00  0.08  0.46  0.00  0.00  0.38  0.38
Volume/Cap:   0.44  0.00  0.55  0.00  0.00  0.00  0.55  0.27  0.00  0.00  0.40  0.55
Uniform Del:  13.8   0.0  15.0   0.0   0.0   0.0  44.1  16.7   0.0   0.0  23.0  24.6
IncremntDel:   0.1   0.0   0.3   0.0   0.0   0.0   4.3   0.1   0.0   0.0   0.1   1.1
Delay Adj:    1.00  0.00  1.00  0.00  0.00  0.00  1.00  1.00  0.00  0.00  1.00  1.00
Delay/Veh:    13.9   0.0  15.2   0.0   0.0   0.0  48.4  16.8   0.0   0.0  23.1  25.6
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:   13.9   0.0  15.2   0.0   0.0   0.0  48.4  16.8   0.0   0.0  23.1  25.6
DesignQueue:    15     0    22     0     0     0     4    20     0     0    28    12
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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Christie Ave./Powell St.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.453
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 25.1
Optimal Cycle: 42 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0 0	1	0 1	0 0	2	2 0	1 1	1	1 0	2 0	1
Volume Module:												
Base Vol:	287	30	79	72	40	272	335	795	385	71	541	80
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:	287	30	79	72	40	272	335	795	385	71	541	80
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:	287	30	79	72	40	272	335	795	385	71	541	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	287	30	79	72	40	272	335	795	385	71	541	80
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
Final Vol.:	287	30	79	72	40	272	335	795	385	71	541	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.97	0.97	0.75	0.92	0.95	0.81	0.95	0.95	0.85
Lanes:	1.81	0.19	1.00	0.64	0.36	2.00	2.00	1.91	1.09	1.00	2.00	1.00
Final Sat.:	3292	344	1615	1184	658	2842	3502	3450	1671	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.05	0.06	0.06	0.10	0.10	0.23	0.23	0.04	0.15	0.05
Crit Moves:		****				****		****		****		
Green/Cycle:	0.19	0.19	0.19	0.21	0.21	0.21	0.23	0.51	0.51	0.09	0.36	0.36
Volume/Cap:	0.45	0.45	0.25	0.29	0.29	0.45	0.41	0.45	0.45	0.45	0.41	0.14
Uniform Del:	35.7	35.7	34.3	33.1	33.1	34.4	32.6	15.7	15.7	43.4	23.8	21.3
IncremntDel:	0.5	0.5	0.4	0.4	0.4	0.5	0.3	0.1	0.1	2.1	0.2	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	36.2	36.2	34.7	33.5	33.5	34.9	32.9	15.8	15.8	45.5	24.0	21.4
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:	36.2	36.2	34.7	33.5	33.5	34.9	32.9	15.8	15.8	45.5	24.0	21.4
DesignQueue:	13	1	4	3	2	12	15	23	11	4	20	3

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

Intersection #19 San Pablo Ave./Stanford Ave.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.645
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	25.3
Optimal Cycle:	64	Level Of Service:	C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module: >> Count Date: 18 Feb 1999 << 08:00 - 09:00 AM												
Base Vol:	190	871	63	61	1077	39	61	177	157	153	670	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:	190	871	63	61	1077	39	61	177	157	153	670	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:	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:	190	871	63	61	1077	39	61	177	157	153	670	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	871	63	61	1077	39	61	177	157	153	670	29
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
Final Vol.:	190	871	63	61	1077	39	61	177	157	153	670	29
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	0.95	0.95	0.88	0.88	0.95	0.94	0.94
Lanes:	1.00	1.87	0.13	1.00	1.93	0.07	1.00	1.06	0.94	1.00	1.92	0.08
Final Sat.:	1805	3333	241	1805	3466	126	1805	1779	1578	1805	3439	149
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.26	0.03	0.31	0.31	0.03	0.10	0.10	0.08	0.19	0.19
Crit Moves:	****				****		****				****	
Green/Cycle:	0.16	0.57	0.57	0.07	0.48	0.48	0.05	0.19	0.19	0.16	0.30	0.30
Volume/Cap:	0.64	0.46	0.46	0.46	0.64	0.64	0.64	0.52	0.52	0.52	0.64	0.64
Uniform Del:	39.1	12.4	12.4	44.4	19.5	19.5	46.5	36.3	36.3	38.3	30.2	30.2
IncremntDel:	4.8	0.2	0.2	2.5	0.8	0.8	14.3	0.8	0.8	1.6	1.3	1.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.0	12.6	12.6	46.9	20.3	20.3	60.8	37.1	37.1	39.9	31.6	31.6
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:	44.0	12.6	12.6	46.9	20.3	20.3	60.8	37.1	37.1	39.9	31.6	31.6
DesignQueue:	9	22	2	3	34	1	3	8	7	7	27	1

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                    Level Of Service Computation Report
           2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #20 San Pablo Ave./40th Street
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap. (X):         0.645
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         25.4
Optimal Cycle:        64                Level Of Service:                   C
********************************************************************************
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
Lanes:         2  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Feb 1999 << 08:00 - 09:00 AM
Base Vol:      365 1036    15    73 1060    37    85  344   106    44  511   145
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:   365 1036    15    73 1060    37    85  344   106    44  511   145
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:    365 1036    15    73 1060    37    85  344   106    44  511   145
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   365 1036    15    73 1060    37    85  344   106    44  511   145
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
Final Vol.:    365 1036    15    73 1060    37    85  344   106    44  511   145
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   0.92 0.95  0.95  0.95 0.95  0.95  0.95 0.92  0.92  0.95 0.92  0.92
Lanes:        2.00 1.97  0.03  1.00 1.93  0.07  1.00 1.53  0.47  1.00 1.56  0.44
Final Sat.:   3502 3551    51  1805 3471   121  1805 2663   821  1805 2719   772
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.10 0.29  0.29  0.04 0.31  0.31  0.05 0.13  0.13  0.02 0.19  0.19
Crit Moves:   ****                   ****       ****                   ****
Green/Cycle:  0.16 0.56  0.56  0.08 0.47  0.47  0.07 0.31  0.31  0.06 0.29  0.29
Volume/Cap:   0.64 0.52  0.52  0.52 0.64  0.64  0.64 0.42  0.42  0.42 0.64  0.64
Uniform Del:  39.2 13.8  13.8  44.4 19.9  19.9  45.1 27.6  27.6  45.5 30.9  30.9
IncremntDel:   2.6  0.3   0.3   3.6  0.9   0.9  10.5  0.3   0.3   2.7  1.4   1.4
Delay Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:    41.8 14.0  14.0  47.9 20.8  20.8  55.6 27.9  27.9  48.2 32.3  32.3
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:   41.8 14.0  14.0  47.9 20.8  20.8  55.6 27.9  27.9  48.2 32.3  32.3
DesignQueue:    17   27     0     4   34     1     4   14     4     2   21     6
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                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #21 Adeline St./40th St.
******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.356
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         28.2
Optimal Cycle:       35                Level Of Service:                   C
******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0   0     0     0   0     0     0   0     0     0
Lanes:        1  0  1  0  1   1  0  2  0  1   1  0  1  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 07:45 - 08:45 AM
Base Vol:      14  101    18    51  132    49    40  219    25     6  375    36
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:   14  101    18    51  132    49    40  219    25     6  375    36
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:    14  101    18    51  132    49    40  219    25     6  375    36
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   14  101    18    51  132    49    40  219    25     6  375    36
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
Final Vol.:    14  101    18    51  132    49    40  219    25     6  375    36
------------|---------------||---------------||---------------||---------------|
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  0.95 0.94  0.94  0.95 1.00  0.85
Lanes:       1.00 1.00  1.00  1.00 2.00  1.00  1.00 1.80  0.20  1.00 1.00  1.00
Final Sat.:  1805 1900  1615  1805 3610  1615  1805 3192   364  1805 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.05  0.01  0.03 0.04  0.03  0.02 0.07  0.07  0.00 0.20  0.02
Crit Moves:       ****             ****                    ****        ****
Green/Cycle: 0.15 0.15  0.15  0.10 0.10  0.10  0.19 0.19  0.19  0.55 0.55  0.55
Volume/Cap:  0.05 0.36  0.07  0.27 0.36  0.30  0.11 0.36  0.36  0.01 0.36  0.04
Uniform Del: 36.5 38.2  36.6  41.4 41.8  41.5  33.3 35.0  35.0   9.9 12.3  10.1
IncremntDel:  0.1  0.8   0.1   0.8  0.6   1.0   0.1  0.3   0.3   0.0  0.2   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   36.5 39.0  36.7  42.2 42.4  42.5  33.5 35.3  35.3   9.9 12.6  10.2
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:  36.5 39.0  36.7  42.2 42.4  42.5  33.5 35.3  35.3   9.9 12.6  10.2
DesignQueue:    1    5     1     3    7     2     2   10     1     0   10     1
******************************************************************************
```

APPENDIX E-2

EXISTING PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	Existing PM
Command:	Default Command
Volume:	Existing PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	None
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #1 Rydin Rd/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.488
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	13.9
Optimal Cycle:	0	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Stop Sign			Stop Sign			Stop Sign			Stop Sign	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		0 1 0 0 1			1 0 1 0 1			0 1 0 1 0			1 0 1 1 0	
Volume Module: >> Count Date: 20 Mar 2002 << 04:15 - 05:15 PM												
Base Vol:	90	6	219	57	26	6	1	312	132	37	430	66
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:	90	6	219	57	26	6	1	312	132	37	430	66
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:	90	6	219	57	26	6	1	312	132	37	430	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	6	219	57	26	6	1	312	132	37	430	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
Final Vol.:	90	6	219	57	26	6	1	312	132	37	430	66
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.94	0.06	1.00	1.00	1.00	1.00	0.01	1.40	0.59	1.00	1.73	0.27
Final Sat.:	423	28	531	382	402	435	2	749	331	464	882	137
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.41	0.15	0.06	0.01	0.42	0.42	0.40	0.08	0.49	0.48
Crit Moves:			****	****			****				****	
Delay/Veh:	12.2	12.2	13.2	12.7	11.4	10.2	13.9	13.5	12.7	10.8	15.7	15.3
Delay Adj:	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:	12.2	12.2	13.2	12.7	11.4	10.2	13.9	13.5	12.7	10.8	15.7	15.3
LOS by Move:	B	B	B	B	B	B	B	B	B	B	C	C
ApproachDel:		12.9			12.2			13.3			15.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.9			12.2			13.3			15.3	
LOS by Appr:		B			B			B			C	

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

Intersection #2 I-80 WB Ramps/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.584
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	23.9
Optimal Cycle:	55	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			0 1 0 0 1			0 0 1 1 0			1 0 2 0 0		
Volume Module: >> Count Date: 20 Mar 2002 << 04:45 - 05:45 PM												
Base Vol:	0	0	0	330	2	223	0	682	56	310	377	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:	0	0	0	330	2	223	0	682	56	310	377	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:	0	0	0	330	2	223	0	682	56	310	377	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	330	2	223	0	682	56	310	377	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
Final Vol.:	0	0	0	330	2	223	0	682	56	310	377	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.94	0.94	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	1.85	0.15	1.00	2.00	0.00
Final Sat.:	0	0	0	1605	10	1615	0	3299	271	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.21	0.14	0.00	0.21	0.21	0.17	0.10	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.35	0.35	0.35	0.00	0.35	0.35	0.29	0.65	0.00
Volume/Cap:	0.00	0.00	0.00	0.58	0.58	0.39	0.00	0.58	0.58	0.58	0.16	0.00
Uniform Del:	0.0	0.0	0.0	26.4	26.4	24.4	0.0	26.3	26.3	30.1	6.9	0.0
IncremntDel:	0.0	0.0	0.0	1.6	1.6	0.4	0.0	0.7	0.7	1.7	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	28.0	28.0	24.8	0.0	27.0	27.0	31.8	6.9	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:	0.0	0.0	0.0	28.0	28.0	24.8	0.0	27.0	27.0	31.8	6.9	0.0
DesignQueue:	0	0	0	12	0	8	0	26	2	13	8	0

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

Intersection #3 I-80 EB Ramps/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.643
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	21.8
Optimal Cycle:	64	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Split Phase			Split Phase			Protected			Protected	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		1 1 0 0 1			0 0 0 0 0			1 0 2 0 0			0 0 1 1 0	
Volume Module: >> Count Date: 20 Mar 2002 << 04:45 - 05:45 PM												
Base Vol:	61	3	414	0	0	0	228	762	0	0	622	273
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:	61	3	414	0	0	0	228	762	0	0	622	273
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:	61	3	414	0	0	0	228	762	0	0	622	273
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	3	414	0	0	0	228	762	0	0	622	273
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
Final Vol.:	61	3	414	0	0	0	228	762	0	0	622	273
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.85	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	0.91
Lanes:	1.91	0.09	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.39	0.61
Final Sat.:	3079	151	1615	0	0	0	1805	3610	0	0	2393	1050
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.26	0.00	0.00	0.00	0.13	0.21	0.00	0.00	0.26	0.26
Crit Moves:			****				****				****	
Green/Cycle:	0.40	0.40	0.40	0.00	0.00	0.00	0.20	0.60	0.00	0.00	0.40	0.40
Volume/Cap:	0.05	0.05	0.64	0.00	0.00	0.00	0.64	0.35	0.00	0.00	0.64	0.64
Uniform Del:	18.4	18.4	24.3	0.0	0.0	0.0	36.9	10.1	0.0	0.0	24.0	24.0
IncremntDel:	0.0	0.0	2.2	0.0	0.0	0.0	4.0	0.1	0.0	0.0	1.0	1.0
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	18.4	18.4	26.5	0.0	0.0	0.0	40.9	10.2	0.0	0.0	25.0	25.0
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:	18.4	18.4	26.5	0.0	0.0	0.0	40.9	10.2	0.0	0.0	25.0	25.0
DesignQueue:	2	0	15	0	0	0	11	18	0	0	22	10

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

Intersection #4 San Pablo Avenue/Central Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.619
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	29.8
Optimal Cycle:	60	Level Of Service:	C

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 1	0 0	1	0 1	0 1	0
Volume Module: >> Count Date: 30 Mar 1999 << 04:30 - 05:30 PM												
Base Vol:	248	1008	44	114	666	98	283	261	46	44	288	82
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:	248	1008	44	114	666	98	283	261	46	44	288	82
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:	248	1008	44	114	666	98	283	261	46	44	288	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	1008	44	114	666	98	283	261	46	44	288	82
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
Final Vol.:	248	1008	44	114	666	98	283	261	46	44	288	82
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	0.98	0.98	0.85	0.92	0.92	0.92
Lanes:	1.00	1.92	0.08	1.00	1.74	0.26	1.04	0.96	1.00	0.21	1.39	0.40
Final Sat.:	1805	3438	150	1805	3087	454	1927	1778	1615	370	2424	690
Capacity Analysis Module:												
Vol/Sat:	0.14	0.29	0.29	0.06	0.22	0.22	0.15	0.15	0.03	0.12	0.12	0.12
Crit Moves:	****				****			****			****	
Green/Cycle:	0.22	0.47	0.47	0.10	0.35	0.35	0.24	0.24	0.24	0.19	0.19	0.19
Volume/Cap:	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.12	0.62	0.62	0.62
Uniform Del:	35.1	19.9	19.9	43.1	27.0	27.0	34.1	34.1	29.9	37.0	37.0	37.0
IncremntDel:	2.9	0.7	0.7	6.6	1.0	1.0	1.4	1.4	0.1	1.8	1.8	1.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.0	20.6	20.6	49.7	28.0	28.0	35.4	35.4	30.1	38.8	38.8	38.8
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:	38.0	20.6	20.6	49.7	28.0	28.0	35.4	35.4	30.1	38.8	38.8	38.8
DesignQueue:	11	32	1	6	25	4	12	11	2	2	13	4

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                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #5 San Pablo Avenue/Marin Ave
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap. (X):         0.695
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         27.0
Optimal Cycle:        75                Level Of Service:                   C
********************************************************************************
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
Lanes:         1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 6 May 1999 << 04:45 - 05:45 PM
Base Vol:      162 1135   165   126  836    23    26  592    84   121  564   226
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:   162 1135   165   126  836    23    26  592    84   121  564   226
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:    162 1135   165   126  836    23    26  592    84   121  564   226
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   162 1135   165   126  836    23    26  592    84   121  564   226
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
Final Vol.:    162 1135   165   126  836    23    26  592    84   121  564   226
------------|---------------||---------------||---------------||---------------|
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  0.95  0.95 0.93  0.93  0.95 0.91  0.91
Lanes:        1.00 1.75  0.25  1.00 1.95  0.05  1.00 1.75  0.25  1.00 1.43  0.57
Final Sat.:   1805 3092   449  1805 3499    96  1805 3101   440  1805 2466   988
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.09 0.37  0.37  0.07 0.24  0.24  0.01 0.19  0.19  0.07 0.23  0.23
Crit Moves:        ****        ****                  ****        ****
Green/Cycle:  0.17 0.53  0.53  0.10 0.46  0.46  0.02 0.27  0.27  0.10 0.35  0.35
Volume/Cap:   0.52 0.69  0.69  0.69 0.52  0.52  0.65 0.69  0.69  0.69 0.65  0.65
Uniform Del:  37.7 17.6  17.6  43.5 19.4  19.4  48.5 32.5  32.5  43.8 27.5  27.5
IncremntDel:   1.6  1.2   1.2  11.1  0.3   0.3  33.1  2.2   2.2  11.5  1.3   1.3
Delay Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:    39.3 18.7  18.7  54.6 19.7  19.7  81.7 34.7  34.7  55.3 28.8  28.8
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:   39.3 18.7  18.7  54.6 19.7  19.7  81.7 34.7  34.7  55.3 28.8  28.8
DesignQueue:     8   33     5     6   27     1     1   25     4     6   22     9
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 W. Frontage Rd/Gilman St
********************************************************************************
Average Delay (sec/veh):      24.7          Worst Case Level Of Service:        C
********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include          Include          Include           Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  1    0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 1997 <<
Base Vol:       8    1   488    17    1     4     3   87    11   158   10    21
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:    8    1   488    17    1     4     3   87    11   158   10    21
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:     8    1   488    17    1     4     3   87    11   158   10    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     8    1   488    17    1     4     3   87    11   158   10    21
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.1  6.5   6.2   7.1  6.5   6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  414  440    87   680  441    16    31 xxxx xxxxx    98 xxxx xxxxx
Potent Cap.:  552  514   977   368  514  1070  1595 xxxx xxxxx  1508 xxxx xxxxx
Move Cap.:    499  453   977   167  453  1070  1595 xxxx xxxxx  1508 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx   7.4 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  960 xxxxx  xxxx  204 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx 12.7 xxxxx xxxxx 24.7 xxxxx   7.3 xxxx xxxxx   7.7 xxxx xxxxx
Shared LOS:     *    B     *     *    C     *     A    *     *     A    *     *
ApproachDel:        12.7              24.7            xxxxxx            xxxxxx
ApproachLOS:          B                 C                *                 *
```

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #7 I-80 WB Ramps/Gilman St
********************************************************************************
Average Delay (sec/veh):      96.0          Worst Case Level Of Service:       F
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:         0  0  0  0  0   1  1  0  0  1   0  0  1  1  0   0  1  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 2097 <<
Base Vol:        0    0     0   382    5   101     0  576    32   285   86     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:     0    0     0   382    5   101     0  576    32   285   86     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:      0    0     0   382    5   101     0  576    32   285   86     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:      0    0     0   382    5   101     0  576    32   285   86     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   944 1264    43  xxxx xxxx xxxxx   608 xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   264  171  1025  xxxx xxxx xxxxx   980 xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   193  112  1025  xxxx xxxx xxxxx   980 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx 111.9 xxxx   8.9 xxxxx xxxx xxxxx   8.7 xxxx xxxxx
LOS by Move:     *    *     *     F    *     A     *    *     *     A    *     *
Movement:      LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   190 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx 125.4 xxxx xxxxx xxxxx xxxx xxxxx  10.2 xxxx xxxxx
Shared LOS:      *    *     *     F    *     *     *    *     *     B    *     *
ApproachDel:      xxxxxx             96.0            xxxxxx           xxxxxx
ApproachLOS:         *                 F                *                *
```

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #8 I-80 EB Ramps/Gilman Street
********************************************************************************
Average Delay (sec/veh): OVERFLOW           Worst Case Level Of Service:       F
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        1  0  0  1  0   0  0  0  0  0   0  1  1  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 1997 <<
Base Vol:       17   14    92     0    0     0   556  443     0     0   22  1063
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   14    92     0    0     0   556  443     0     0   22  1063
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:     17   14    92     0    0     0   556  443     0     0   22  1063
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     17   14    92     0    0     0   556  443     0     0   22  1063
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:   6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:   3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1566 2640   222  xxxx xxxx xxxxx  1085 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:  104   24   788  xxxx xxxx xxxxx   651 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:      0    0   788  xxxx xxxx xxxxx   651 xxxx xxxxx  xxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:   0.0 xxxx xxxxx xxxxx xxxx xxxxx  10.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     B    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx     0  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  34.4 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     D    *     *     *    *     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         F                *                *                *
```

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 San Pablo Avenue/Gilman Street

Cycle (sec): 100 Critical Vol./Cap. (X): 0.727

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 25.5

Optimal Cycle: 68 Level Of Service: C

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
Lanes:	1 0 1 1 0			1 0 1 1 0			0 1 0 1 0			0 0 1! 0 0		
Volume Module: >> Count Date: 17 Mar 1999 << 04:45 - 05:45 PM												
Base Vol:	133	1049	89	93	680	123	122	261	119	94	353	115
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:	133	1049	89	93	680	123	122	261	119	94	353	115
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:	133	1049	89	93	680	123	122	261	119	94	353	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	1049	89	93	680	123	122	261	119	94	353	115
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
Final Vol.:	133	1049	89	93	680	123	122	261	119	94	353	115
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	0.63	0.63	0.63	0.83	0.83	0.83
Lanes:	1.00	1.84	0.16	1.00	1.69	0.31	0.49	1.04	0.47	0.17	0.63	0.20
Final Sat.:	1805	3288	279	1805	2987	540	578	1236	563	263	989	322
Capacity Analysis Module:												
Vol/Sat:	0.07	0.32	0.32	0.05	0.23	0.23	0.21	0.21	0.21	0.36	0.36	0.36
Crit Moves:		****		****							****	
Green/Cycle:	0.12	0.44	0.44	0.07	0.38	0.38	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.59	0.73	0.73	0.73	0.59	0.59	0.43	0.43	0.43	0.73	0.73	0.73
Uniform Del:	41.4	23.1	23.1	45.5	24.5	24.5	16.5	16.5	16.5	20.2	20.2	20.2
IncremntDel:	4.2	1.7	1.7	18.8	0.7	0.7	0.3	0.3	0.3	3.5	3.5	3.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.5	24.9	24.9	64.3	25.2	25.2	16.7	16.7	16.7	23.7	23.7	23.7
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:	45.5	24.9	24.9	64.3	25.2	25.2	16.7	16.7	16.7	23.7	23.7	23.7
DesignQueue:	7	36	3	5	25	4	4	8	3	3	11	4

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 W. Frontage Rd/University Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 1.188
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 56.4
Optimal Cycle: 0 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	1 0	0 1	0	1 0	1 0	1	1 0
Volume Module: >> Count Date: 19 Jan 2001 <<												
Base Vol:	28	474	80	16	269	32	108	150	71	182	176	15
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:	28	474	80	16	269	32	108	150	71	182	176	15
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:	28	474	80	16	269	32	108	150	71	182	176	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	474	80	16	269	32	108	150	71	182	176	15
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
Final Vol.:	28	474	80	16	269	32	108	150	71	182	176	15
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.05	0.81	0.14	0.10	1.70	0.20	0.66	0.91	0.43	1.00	1.84	0.16
Final Sat.:	24	399	67	45	758	91	277	404	197	395	773	66
Capacity Analysis Module:												
Vol/Sat:	1.19	1.19	1.19	0.36	0.35	0.35	0.39	0.37	0.36	0.46	0.23	0.23
Crit Moves:		****		****			****			****		
Delay/Veh:	128.2	128	128.2	14.9	14.6	14.4	16.1	15.2	14.6	18.8	13.5	13.4
Delay Adj:	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:	128.2	128	128.2	14.9	14.6	14.4	16.1	15.2	14.6	18.8	13.5	13.4
LOS by Move:	F	F	F	B	B	B	C	C	B	C	B	B
ApproachDel:		128.2			14.6			15.4			16.1	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		128.2			14.6			15.4			16.1	
LOS by Appr:		F			B			C			C	

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

Intersection #11 6th Street/University Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.923
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	39.1
Optimal Cycle:	180	Level Of Service:	D

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
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module: >> Count Date: 6 Mar 2001 <<												
Base Vol:	398	413	85	80	222	527	126	951	246	27	1107	42
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:	398	413	85	80	222	527	126	951	246	27	1107	42
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:	398	413	85	80	222	527	126	951	246	27	1107	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	398	413	85	80	222	527	126	951	246	27	1107	42
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
Final Vol.:	398	413	85	80	222	527	126	951	246	27	1107	42
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	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.05	0.04	0.12	0.33	0.07	0.26	0.15	0.01	0.31	0.03
Crit Moves:	****					****	****				****	
Green/Cycle:	0.24	0.49	0.49	0.10	0.35	0.35	0.08	0.39	0.39	0.02	0.33	0.33
Volume/Cap:	0.92	0.44	0.11	0.44	0.33	0.92	0.92	0.68	0.39	0.68	0.92	0.08
Uniform Del:	37.2	16.5	13.6	42.3	23.7	31.0	45.9	25.6	22.2	48.6	32.2	22.9
IncremntDel:	25.4	0.3	0.1	1.7	0.3	20.8	54.2	1.4	0.4	39.4	11.8	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	62.6	16.8	13.7	44.1	24.0	51.8	100.1	27.0	22.7	87.9	44.0	23.0
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:	62.6	16.8	13.7	44.1	24.0	51.8	100.1	27.0	22.7	87.9	44.0	23.0
DesignQueue:	18	12	2	4	8	20	7	35	9	1	44	2

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

Intersection #12 San Pablo Ave/University Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.733
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	28.5
Optimal Cycle:	86	Level Of Service:	C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0

Volume Module: >> Count Date: 17 Feb 1999 << 05:15 - 06:15 PM

Base Vol:	111	854	65	151	598	81	107	854	54	92	1048	134
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:	111	854	65	151	598	81	107	854	54	92	1048	134
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:	111	854	65	151	598	81	107	854	54	92	1048	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	854	65	151	598	81	107	854	54	92	1048	134
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
Final Vol.:	111	854	65	151	598	81	107	854	54	92	1048	134

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	0.94	0.94	0.95	0.93	0.93
Lanes:	1.00	1.86	0.14	1.00	1.76	0.24	1.00	1.88	0.12	1.00	1.77	0.23
Final Sat.:	1805	3318	253	1805	3122	423	1805	3365	213	1805	3146	402

Capacity Analysis Module:

Vol/Sat:	0.06	0.26	0.26	0.08	0.19	0.19	0.06	0.25	0.25	0.05	0.33	0.33
Crit Moves:		****		****			****				****	
Green/Cycle:	0.11	0.35	0.35	0.11	0.35	0.35	0.08	0.45	0.45	0.09	0.45	0.45
Volume/Cap:	0.54	0.73	0.73	0.73	0.54	0.54	0.73	0.57	0.57	0.57	0.73	0.73
Uniform Del:	41.9	28.4	28.4	42.8	26.0	26.0	44.9	20.6	20.6	43.7	22.3	22.3
IncremntDel:	3.0	2.3	2.3	12.8	0.5	0.5	17.4	0.5	0.5	4.8	1.8	1.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.9	30.6	30.6	55.6	26.5	26.5	62.3	21.1	21.1	48.5	24.1	24.1
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:	44.9	30.6	30.6	55.6	26.5	26.5	62.3	21.1	21.1	48.5	24.1	24.1
DesignQueue:	6	33	3	8	23	3	6	28	2	5	35	4

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-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                  Level Of Service Computation Report
         2000 HCM Unsignalized Method (Base Volume Alternative)
*******************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
*******************************************************************************
Average Delay (sec/veh):     17.8          Worst Case Level Of Service:       C
*******************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  1  0    0  1  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:        0  724   41    34  295    0     0    0    0    18    0    7
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:     0  724   41    34  295    0     0    0    0    18    0    7
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:      0  724   41    34  295    0     0    0    0    18    0    7
Reduct Vol:      0    0    0     0    0    0     0    0    0     0    0    0
Final Vol.:      0  724   41    34  295    0     0    0    0    18    0    7
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx  3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   765 xxxx xxxxx  xxxx xxxx xxxxx   960 xxxx  745
Potent Cap.: xxxx xxxx xxxxx   857 xxxx xxxxx  xxxx xxxx xxxxx   287 xxxx  418
Move Cap.:   xxxx xxxx xxxxx   857 xxxx xxxxx  xxxx xxxx xxxxx   278 xxxx  418
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   9.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *    *     A    *    *     *    *    *     *    *    *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  307 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx   9.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 17.8 xxxxx
Shared LOS:     *    *    *     A    *    *     *    *    *     *    C    *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            17.8
ApproachLOS:        *                *                *                C
```

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                      Level Of Service Computation Report
             2000 HCM 4-Way Stop Method (Base Volume Alternative)
********************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap. (X):        0.765
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        16.3
Optimal Cycle:          0               Level Of Service:                  C
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:         0  0  1! 0  0    1  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:      3   595     3   90   189     5    6     0     2   34     4    37
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:   3   595     3   90   189     5    6     0     2   34     4    37
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:    3   595     3   90   189     5    6     0     2   34     4    37
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   3   595     3   90   189     5    6     0     2   34     4    37
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
Final Vol.:    3   595     3   90   189     5    6     0     2   34     4    37
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.99  0.01 1.00 0.97  0.03 0.75 0.00  0.25 0.45 0.05  0.50
Final Sat.:    4   778     4  623   667    18  408     0   136  265    31   289
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.76 0.76  0.76 0.14 0.28  0.28 0.01 xxxx  0.01 0.13 0.13  0.13
Crit Moves:       ****            ****       ****            ****
Delay/Veh:   20.5 20.5  20.5  9.3  9.8   9.8  9.0  0.0   9.0  9.3  9.3   9.3
Delay Adj:   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:  20.5 20.5  20.5  9.3  9.8   9.8  9.0  0.0   9.0  9.3  9.3   9.3
LOS by Move:   C    C     C    A    A     A    A    *     A    A    A     A
ApproachDel:      20.5              9.7              9.0              9.3
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       20.5              9.7              9.0              9.3
LOS by Appr:        C                A                A                A
********************************************************************************
```

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------------------------------------------------------------------------------
------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #15 San Pablo Ave./Alcatraz Ave.
******************************************************************************
Cycle (sec):        100               Critical Vol./Cap. (X):        0.629
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       19.2
Optimal Cycle:       62               Level Of Service:                  B
******************************************************************************
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       Split Phase      Split Phase
Rights:          Include          Include         Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  1  1  0   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 1 Mar 2001 <<
Base Vol:      0   915    91   285   924     0     0     0     0   107     0   215
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:   0   915    91   285   924     0     0     0     0   107     0   215
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:    0   915    91   285   924     0     0     0     0   107     0   215
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   0   915    91   285   924     0     0     0     0   107     0   215
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
Final Vol.:    0   915    91   285   924     0     0     0     0   107     0   215
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 0.94  0.94  0.95 0.95  1.00  1.00 1.00  1.00  0.90 1.00  0.90
Lanes:       0.00 1.82  0.18  1.00 2.00  0.00  0.00 0.00  0.00  0.33 0.00  0.67
Final Sat.:     0 3241   322  1805 3610     0     0     0     0   565     0  1136
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.28  0.28  0.16 0.26  0.00  0.00 0.00  0.00  0.19 0.00  0.19
Crit Moves:       ****        ****                               ****
Green/Cycle: 0.00 0.45  0.45  0.25 0.70  0.00  0.00 0.00  0.00  0.30 0.00  0.30
Volume/Cap:  0.00 0.63  0.63  0.63 0.37  0.00  0.00 0.00  0.00  0.63 0.00  0.63
Uniform Del:  0.0 21.2  21.2  33.3  6.1   0.0   0.0  0.0   0.0  30.2  0.0  30.2
IncremntDel:  0.0  0.8   0.8   2.8  0.1   0.0   0.0  0.0   0.0   2.5  0.0   2.5
Delay Adj:   0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Delay/Veh:    0.0 22.0  22.0  36.2  6.2   0.0   0.0  0.0   0.0  32.7  0.0  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:   0.0 22.0  22.0  36.2  6.2   0.0   0.0  0.0   0.0  32.7  0.0  32.7
DesignQueue:    0   30     3    12   16     0     0    0     0     4    0     9
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                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #16 W. Frontage Road/Powell Street
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):         0.820
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       20.4
Optimal Cycle:      126              Level Of Service:                   C
********************************************************************************
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
Lanes:       0  0  0  0  0    2  0  0  0  1    1  0  1  1  0    0  0  1  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 1 Mar 2001 <<
Base Vol:        0    0     0   553    0   271   242  408   592     0  613  1589
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:     0    0     0   553    0   271   242  408   592     0  613  1589
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:      0    0     0   553    0   271   242  408   592     0  613  1589
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:     0    0     0   553    0   271   242  408   592     0  613  1589
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
Final Vol.:      0    0     0   553    0   271   242  408   592     0  613  1589
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   1.00 1.00  1.00  0.92 1.00  0.85  0.95 0.95  0.81  1.00 0.95  0.81
Lanes:        0.00 0.00  0.00  2.00 0.00  1.00  1.00 1.00  1.00  0.00 1.00  2.00
Final Sat.:      0    0     0  3502    0  1615  1805 1805  1534     0 1805  3069
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.00  0.00  0.16 0.00  0.17  0.13 0.23  0.39  0.00 0.34  0.52
Crit Moves:                               ****  ****                        ****
Green/Cycle:  0.00 0.00  0.00  0.20 0.00  0.20  0.16 0.80  0.80  0.00 0.63  0.63
Volume/Cap:   0.00 0.00  0.00  0.77 0.00  0.82  0.82 0.28  0.49  0.00 0.54  0.82
Uniform Del:   0.0  0.0   0.0  37.6  0.0  38.0  40.4  2.7   3.4   0.0 10.3  14.1
IncremntDel:   0.0  0.0   0.0   5.2  0.0  14.9  16.4  0.0   0.2   0.0  0.1   2.1
Delay Adj:    0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00
Delay/Veh:     0.0  0.0   0.0  42.7  0.0  52.9  56.8  2.8   3.6   0.0 10.4  16.2
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:    0.0  0.0   0.0  42.7  0.0  52.9  56.8  2.8   3.6   0.0 10.4  16.2
DesignQueue:     0    0     0    25    0    12    12    5     7     0   14    37
********************************************************************************
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                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #17 I-80 EB Ramps/Powell St.
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap. (X):         0.945
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         30.9
Optimal Cycle:       180                Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1! 0  1   0  0  0  0  0   1  0  3  0  0   0  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 1 Mar 2001 <<
Base Vol:     541  248   851    0     0     0  138   718     0     0 1347   458
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:  541  248   851    0     0     0  138   718     0     0 1347   458
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:   541  248   851    0     0     0  138   718     0     0 1347   458
Reduct Vol:     0    0     0    0     0     0    0     0     0     0    0     0
Reduced Vol:  541  248   851    0     0     0  138   718     0     0 1347   458
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
Final Vol.:   541  248   851    0     0     0  138   718     0     0 1347   458
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900  1900 1900  1900
Adjustment:  0.85 0.85  0.85 1.00 1.00  1.00 0.95 0.91  1.00  1.00 0.91  0.85
Lanes:       1.29 0.26  1.45 0.00 0.00  0.00 1.00 3.00  0.00  0.00 3.00  1.00
Final Sat.:  2078  424  2343    0     0     0 1805 5187     0     0 5187  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.26 0.58  0.36 0.00 0.00  0.00 0.08 0.14  0.00  0.00 0.26  0.28
Crit Moves:       ****                       ****                          ****
Green/Cycle: 0.62 0.62  0.62 0.00 0.00  0.00 0.08 0.38  0.00  0.00 0.30  0.30
Volume/Cap:  0.42 0.94  0.59 0.00 0.00  0.00 0.94 0.36  0.00  0.00 0.86  0.94
Uniform Del:  9.8 17.5  11.4  0.0  0.0   0.0 45.7 22.2   0.0   0.0 33.1  34.2
IncremntDel:  0.1 11.1   0.3  0.0  0.0   0.0 57.7  0.1   0.0   0.0  5.3  27.4
Delay Adj:   1.00 1.00  1.00 0.00 0.00  0.00 1.00 1.00  0.00  0.00 1.00  1.00
Delay/Veh:    9.9 28.6  11.7  0.0  0.0   0.0 103.4 22.3  0.0   0.0 38.4  61.6
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:   9.9 28.6  11.7  0.0  0.0   0.0 103.4 22.3  0.0   0.0 38.4  61.6
DesignQueue:   12    6    20    0     0     0    7   26     0     0   56    19
********************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Christie Ave./Powell St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.724
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	32.0
Optimal Cycle:	82	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0 0	1	0 1	0 0	2	2 0	1 1	1	1 0	2 0	1
Volume Module: >> Count Date: 1 Mar 2001 <<												
Base Vol:	402	42	147	127	67	613	383	667	570	150	998	125
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:	402	42	147	127	67	613	383	667	570	150	998	125
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:	402	42	147	127	67	613	383	667	570	150	998	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	402	42	147	127	67	613	383	667	570	150	998	125
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
Final Vol.:	402	42	147	127	67	613	383	667	570	150	998	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.97	0.97	0.75	0.92	0.88	0.88	0.95	0.95	0.85
Lanes:	1.81	0.19	1.00	0.65	0.35	2.00	2.00	1.62	1.38	1.00	2.00	1.00
Final Sat.:	3293	344	1615	1204	635	2842	3502	2718	2323	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.09	0.11	0.11	0.22	0.11	0.25	0.25	0.08	0.28	0.08
Crit Moves:	****					****	****				****	
Green/Cycle:	0.17	0.17	0.17	0.30	0.30	0.30	0.15	0.40	0.40	0.13	0.38	0.38
Volume/Cap:	0.72	0.72	0.54	0.35	0.35	0.72	0.72	0.62	0.62	0.62	0.72	0.20
Uniform Del:	39.4	39.4	38.0	27.5	27.5	31.4	40.5	24.0	24.0	40.8	26.4	20.7
IncremntDel:	4.3	4.3	2.2	0.4	0.4	3.1	4.9	0.6	0.6	4.7	1.9	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	43.6	43.6	40.2	27.9	27.9	34.5	45.4	24.6	24.6	45.5	28.3	20.9
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:	43.6	43.6	40.2	27.9	27.9	34.5	45.4	24.6	24.6	45.5	28.3	20.9
DesignQueue:	19	2	7	5	3	25	19	24	20	7	37	4

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                   Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #19 San Pablo Ave./Stanford Ave.
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):        0.625
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      28.9
Optimal Cycle:       61              Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date:  1 Mar 2001 <<
Base Vol:     158  802   107   168  810    75   164  618   152   100  315    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:  158  802   107   168  810    75   164  618   152   100  315    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:     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:   158  802   107   168  810    75   164  618   152   100  315    44
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  158  802   107   168  810    75   164  618   152   100  315    44
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
Final Vol.:   158  802   107   168  810    75   164  618   152   100  315    44
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94  0.95 0.92  0.92  0.95 0.93  0.93
Lanes:       1.00 1.76  0.24  1.00 1.83  0.17  1.00 1.61  0.39  1.00 1.75  0.25
Final Sat.:  1805 3128   417  1805 3261   302  1805 2810   691  1805 3111   434
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.26  0.26  0.09 0.25  0.25  0.09 0.22  0.22  0.06 0.10  0.10
Crit Moves:       ****        ****                   ****        ****
Green/Cycle: 0.15 0.41  0.41  0.15 0.41  0.41  0.21 0.35  0.35  0.09 0.23  0.23
Volume/Cap:  0.60 0.62  0.62  0.62 0.60  0.60  0.44 0.62  0.62  0.62 0.44  0.44
Uniform Del: 40.0 23.4  23.4  39.9 22.9  22.9  34.5 26.9  26.9  44.0 32.8  32.8
IncremntDel:  3.8  0.9   0.9   4.6  0.7   0.7   0.8  1.0   1.0   7.5  0.4   0.4
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   43.8 24.2  24.2  44.5 23.6  23.6  35.3 27.9  27.9  51.5 33.2  33.2
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:  43.8 24.2  24.2  44.5 23.6  23.6  35.3 27.9  27.9  51.5 33.2  33.2
DesignQueue:    8   28     4     8   28     3     7   24     6     5   14     2
********************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #20 San Pablo Ave./40th Street
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.554
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         27.4
Optimal Cycle:       51                Level Of Service:                   C
********************************************************************************
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
Lanes:        2  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 1 Mar 2001 <<
Base Vol:     247  768   26   171  745  155   183  522  191    39  332   80
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:  247  768   26   171  745  155   183  522  191    39  332   80
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:   247  768   26   171  745  155   183  522  191    39  332   80
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  247  768   26   171  745  155   183  522  191    39  332   80
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
Final Vol.:   247  768   26   171  745  155   183  522  191    39  332   80
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:  0.92 0.95 0.95  0.95 0.93 0.93  0.95 0.91 0.91  0.95 0.92 0.92
Lanes:       2.00 1.93 0.07  1.00 1.66 0.34  1.00 1.46 0.54  1.00 1.61 0.39
Final Sat.:  3502 3474  118  1805 2911  606  1805 2537  928  1805 2825  681
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.22 0.22  0.09 0.26 0.26  0.10 0.21 0.21  0.02 0.12 0.12
Crit Moves:  ****                 ****             ****        ****
Green/Cycle: 0.13 0.41 0.41  0.18 0.46 0.46  0.19 0.37 0.37  0.04 0.22 0.22
Volume/Cap:  0.55 0.54 0.54  0.54 0.55 0.55  0.53 0.55 0.55  0.55 0.53 0.53
Uniform Del: 41.0 22.1 22.1  37.4 19.4 19.4  36.5 24.9 24.9  47.2 34.4 34.4
IncremntDel:  1.5  0.4  0.4   1.8  0.4  0.4   1.6  0.5  0.5   9.3  0.7  0.7
Delay Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Delay/Veh:   42.5 22.5 22.5  39.2 19.9 19.9  38.1 25.4 25.4  56.5 35.2 35.2
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:  42.5 22.5 22.5  39.2 19.9 19.9  38.1 25.4 25.4  56.5 35.2 35.2
DesignQueue:   12   27    1     8   24    5     8   19    7     2   15    4
********************************************************************************
```

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

***

Intersection #21 Adeline St./40th St.

***

Cycle (sec):	100		Critical Vol./Cap. (X):	0.551
Loss Time (sec):	0	(Y+R = 4 sec)	Average Delay (sec/veh):	31.6
Optimal Cycle:	51		Level Of Service:	C

***

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 1 0 1			1 0 2 0 1			1 0 1 1 0			1 0 1 0 1		
Volume Module: >> Count Date: 20 Mar 2002 << 05:00 - 06:00 PM												
Base Vol:	21	225	23	84	171	78	124	635	21	7	383	59
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:	21	225	23	84	171	78	124	635	21	7	383	59
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	225	23	84	171	78	124	635	21	7	383	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	225	23	84	171	78	124	635	21	7	383	59
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
Final Vol.:	21	225	23	84	171	78	124	635	21	7	383	59
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	0.95	0.95	0.95	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.94	0.06	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1805	3477	115	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.12	0.01	0.05	0.05	0.05	0.07	0.18	0.18	0.00	0.20	0.04
Crit Moves:		****				****			****		****	
Green/Cycle:	0.21	0.21	0.21	0.09	0.09	0.09	0.33	0.33	0.33	0.37	0.37	0.37
Volume/Cap:	0.05	0.55	0.07	0.53	0.54	0.55	0.21	0.55	0.55	0.01	0.55	0.10
Uniform Del:	31.2	35.0	31.3	43.6	43.7	43.7	24.0	27.3	27.3	20.2	25.2	20.9
IncremntDel:	0.1	1.6	0.1	3.4	1.9	4.6	0.2	0.6	0.6	0.0	1.0	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	31.2	36.6	31.3	47.1	45.6	48.3	24.2	27.9	27.9	20.2	26.1	20.9
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:	31.2	36.6	31.3	47.1	45.6	48.3	24.2	27.9	27.9	20.2	26.1	20.9
DesignQueue:	1	10	1	4	9	4	5	25	1	0	14	2

***

APPENDIX E-3

EXISTING PLUS PROJECT AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	Existing+Proj AM
Command:	Default Command
Volume:	Existing AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Project AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Rydin Rd/Central Ave
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):          0.513
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):          11.7
Optimal Cycle:          0                Level Of Service:                    B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  1  0  0  1   1  0  1  0  1   0  1  0  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 08:00 - 09:00 AM
Base Vol:      58   12   323   37   18     7    5   97    80  174  193    47
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:   58   12   323   37   18     7    5   97    80  174  193    47
Added Vol:      0    0     0    0    0     0    0    1     1    0    2     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   58   12   323   37   18     7    5   98    81  174  195    47
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:    58   12   323   37   18     7    5   98    81  174  195    47
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   58   12   323   37   18     7    5   98    81  174  195    47
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
Final Vol.:    58   12   323   37   18     7    5   98    81  174  195    47
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.83 0.17  1.00 1.00 1.00  1.00 0.05 1.07  0.88 1.00 1.61  0.39
Final Sat.:   433   90   630  437  465   510   29  572   516  510  895   221
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.13  0.51 0.08 0.04  0.01 0.17 0.17  0.16 0.34 0.22  0.21
Crit Moves:             ****  ****            ****            ****
Delay/Veh:   10.3 10.3  13.4 11.0 10.1   9.2 10.3 10.2   9.4 12.8 10.5  10.3
Delay Adj:   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:  10.3 10.3  13.4 11.0 10.1   9.2 10.3 10.2   9.4 12.8 10.5  10.3
LOS by Move:    B    B     B    B    B     A    B    B     A    B    B     B
ApproachDel:      12.9             10.5              9.9             11.5
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       12.9             10.5              9.9             11.5
LOS by Appr:         B                B                A                B
********************************************************************************
```

```
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 I-80 WB Ramps/Central Ave
*******************************************************************************
Cycle (sec):        100               Critical Vol./Cap. (X):        0.506
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        23.3
Optimal Cycle:       46               Level Of Service:                  C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0    0  1  0  0  1    0  0  1  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 08:00 - 09:00 AM
Base Vol:       0     0     0  266     4   302     0   409    58   336   352     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:    0     0     0  266     4   302     0   409    58   336   352     0
Added Vol:      0     0     0    0     0     1     0     1     0     0     2     0
PasserByVol:    0     0     0    0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0  266     4   303     0   410    58   336   354     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:     0     0     0  266     4   303     0   410    58   336   354     0
Reduct Vol:     0     0     0    0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0  266     4   303     0   410    58   336   354     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
Final Vol.:     0     0     0  266     4   303     0   410    58   336   354     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900 1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00 0.85  0.85  0.85  1.00  0.93  0.93  0.95  0.95  1.00
Lanes:       0.00  0.00  0.00 0.99  0.01  1.00  0.00  1.75  0.25  1.00  2.00  0.00
Final Sat.:     0     0     0 1591    24  1615     0  3103   439  1805  3610     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00 0.17  0.17  0.19  0.00  0.13  0.13  0.19  0.10  0.00
Crit Moves:                               ****        ****        ****
Green/Cycle: 0.00  0.00  0.00 0.37  0.37  0.37  0.00  0.26  0.26  0.37  0.63  0.00
Volume/Cap:  0.00  0.00  0.00 0.45  0.45  0.51  0.00  0.51  0.51  0.51  0.16  0.00
Uniform Del:  0.0   0.0   0.0 23.8  23.8  24.4   0.0  31.4  31.4  24.5   7.6   0.0
IncremntDel:  0.0   0.0   0.0  0.5   0.5   0.7   0.0   0.5   0.5   0.6   0.0   0.0
Delay Adj:   0.00  0.00  0.00 1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  0.00
Delay/Veh:    0.0   0.0   0.0 24.3  24.3  25.1   0.0  31.9  31.9  25.2   7.7   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:   0.0   0.0   0.0 24.3  24.3  25.1   0.0  31.9  31.9  25.2   7.7   0.0
DesignQueue:    0     0     0   10     0    11     0    17     2    12     7     0
*******************************************************************************
```

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

Intersection #3 I-80 EB Ramps/Central Ave

Cycle (sec): 100 | Critical Vol./Cap. (X): 0.479
Loss Time (sec): 0 (Y+R = 4 sec) | Average Delay (sec/veh): 17.2
Optimal Cycle: 44 | Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1 0 0 1			0 0 0 0 0			1 0 2 0 0			0 0 1 1 0		
Volume Module: >> Count Date: 20 Mar 2002 << 07:45 - 08:45 AM												
Base Vol:	36	0	298	0	0	0	109	580	0	0	604	205
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	0	298	0	0	0	109	580	0	0	604	205
Added Vol:	1	0	0	0	0	0	1	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	0	298	0	0	0	110	581	0	0	605	205
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:	37	0	298	0	0	0	110	581	0	0	605	205
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	0	298	0	0	0	110	581	0	0	605	205
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
Final Vol.:	37	0	298	0	0	0	110	581	0	0	605	205
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	0.91
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.49	0.51
Final Sat.:	3618	0	1615	0	0	0	1805	3610	0	0	2594	879
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.18	0.00	0.00	0.00	0.06	0.16	0.00	0.00	0.23	0.23
Crit Moves:			****				****				****	
Green/Cycle:	0.39	0.00	0.39	0.00	0.00	0.00	0.13	0.61	0.00	0.00	0.49	0.49
Volume/Cap:	0.03	0.00	0.48	0.00	0.00	0.00	0.48	0.26	0.00	0.00	0.48	0.48
Uniform Del:	19.1	0.0	23.2	0.0	0.0	0.0	40.6	8.9	0.0	0.0	17.1	17.1
IncremntDel:	0.0	0.0	0.6	0.0	0.0	0.0	1.6	0.1	0.0	0.0	0.2	0.2
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	19.1	0.0	23.7	0.0	0.0	0.0	42.1	8.9	0.0	0.0	17.4	17.4
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:	19.1	0.0	23.7	0.0	0.0	0.0	42.1	8.9	0.0	0.0	17.4	17.4
DesignQueue:	1	0	11	0	0	0	5	13	0	0	18	6

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

Intersection #4 San Pablo Avenue/Central Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.578
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	25.6
Optimal Cycle:	54	Level Of Service:	C

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 1	0 0	1	0 1	0 1	0
Volume Module: >> Count Date: 31 Mar 1999 << 07:45-08:45 AM												
Base Vol:	67	387	36	71	972	99	205	225	104	95	212	97
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:	67	387	36	71	972	99	205	225	104	95	212	97
Added Vol:	0	3	0	0	3	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	390	36	71	975	99	205	225	104	95	212	97
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:	67	390	36	71	975	99	205	225	104	95	212	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	390	36	71	975	99	205	225	104	95	212	97
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
Final Vol.:	67	390	36	71	975	99	205	225	104	95	212	97
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	0.94	0.94	0.98	0.98	0.85	0.90	0.90	0.90
Lanes:	1.00	1.83	0.17	1.00	1.82	0.18	1.00	1.00	1.00	0.47	1.05	0.48
Final Sat.:	1805	3262	301	1805	3231	328	1856	1856	1615	809	1804	826
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.12	0.04	0.30	0.30	0.11	0.12	0.06	0.12	0.12	0.12
Crit Moves:	****				****			****		****		
Green/Cycle:	0.06	0.44	0.44	0.15	0.52	0.52	0.21	0.21	0.21	0.20	0.20	0.20
Volume/Cap:	0.58	0.27	0.27	0.27	0.58	0.58	0.53	0.58	0.31	0.58	0.58	0.58
Uniform Del:	45.5	17.7	17.7	38.0	16.3	16.3	35.1	35.5	33.4	35.9	35.9	35.9
IncremntDel:	7.0	0.1	0.1	0.6	0.5	0.5	0.6	1.1	0.5	1.2	1.2	1.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	52.5	17.8	17.8	38.6	16.8	16.8	35.7	36.7	33.9	37.2	37.2	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:	52.5	17.8	17.8	38.6	16.8	16.8	35.7	36.7	33.9	37.2	37.2	37.2
DesignQueue:	4	12	1	3	28	3	9	10	5	4	10	4

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

Intersection #5 San Pablo Avenue/Marin Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.582
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	25.8
Optimal Cycle:	55	Level Of Service:	C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module: >> Count Date: 6 May 1999 << 07:45 - 08:45 AM												
Base Vol:	109	478	163	156	976	8	4	460	92	163	488	84
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:	109	478	163	156	976	8	4	460	92	163	488	84
Added Vol:	1	3	0	0	3	1	1	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	110	481	163	156	979	9	5	460	93	163	488	84
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:	110	481	163	156	979	9	5	460	93	163	488	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	481	163	156	979	9	5	460	93	163	488	84
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
Final Vol.:	110	481	163	156	979	9	5	460	93	163	488	84
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.93	0.93
Lanes:	1.00	1.49	0.51	1.00	1.98	0.02	1.00	1.66	0.34	1.00	1.71	0.29
Final Sat.:	1805	2594	879	1805	3574	33	1805	2928	592	1805	3012	518
Capacity Analysis Module:												
Vol/Sat:	0.06	0.19	0.19	0.09	0.27	0.27	0.00	0.16	0.16	0.09	0.16	0.16
Crit Moves:	****				****			****		****		
Green/Cycle:	0.10	0.39	0.39	0.18	0.47	0.47	0.01	0.27	0.27	0.16	0.42	0.42
Volume/Cap:	0.58	0.47	0.47	0.47	0.58	0.58	0.39	0.58	0.58	0.58	0.39	0.39
Uniform Del:	42.7	22.7	22.7	36.5	19.3	19.3	49.4	31.6	31.6	39.2	20.2	20.2
IncremntDel:	4.6	0.3	0.3	1.1	0.5	0.5	18.3	0.9	0.9	3.1	0.2	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	47.2	22.9	22.9	37.6	19.8	19.8	67.7	32.6	32.6	42.3	20.4	20.4
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:	47.2	22.9	22.9	37.6	19.8	19.8	67.7	32.6	32.6	42.3	20.4	20.4
DesignQueue:	6	17	6	7	31	0	0	19	4	8	16	3

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

Intersection #6 W. Frontage Rd/Gilman St

Average Delay (sec/veh): 25.1 Worst Case Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 1 0 0 1			0 1 0 1 0		
Volume Module: >> Count Date: 27 Sep 1997 <<												
Base Vol:	1	0	46	5	0	3	5	24	6	501	7	4
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:	1	0	46	5	0	3	5	24	6	501	7	4
Added Vol:	0	0	1	0	0	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	47	5	0	3	5	24	6	502	7	4
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:	1	0	47	5	0	3	5	24	6	502	7	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	0	47	5	0	3	5	24	6	502	7	4
Critical Gap Module:												
Critical Gp:	7.1	xxxx	6.2	7.1	xxxx	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	3.5	xxxx	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1042	xxxx	24	1073	xxxx	6	11	xxxx	xxxxx	30	xxxx	xxxxx
Potent Cap.:	210	xxxx	1058	199	xxxx	1083	1621	xxxx	xxxxx	1596	xxxx	xxxxx
Move Cap.:	137	xxxx	1058	125	xxxx	1083	1621	xxxx	xxxxx	1596	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	928	xxxxx	xxxx	187	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	9.1	xxxxx	xxxxx	25.1	xxxxx	7.2	xxxx	xxxxx	8.3	xxxx	xxxxx
Shared LOS:	*	A	*	*	D	*	A	*	*	A	*	*
ApproachDel:		9.1			25.1			xxxxxx			xxxxxx	
ApproachLOS:		A			D			*			*	

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

Intersection #7 I-80 WB Ramps/Gilman St

Average Delay (sec/veh): 34.8 Worst Case Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			1 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module: >> Count Date: 27 Sep 1997 <<												
Base Vol:	0	0	0	463	253	425	0	72	5	142	79	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:	0	0	0	463	253	425	0	72	5	142	79	0
Added Vol:	0	0	0	0	0	0	0	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	463	253	425	0	73	5	142	80	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:	0	0	0	463	253	425	0	73	5	142	80	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	463	253	425	0	73	5	142	80	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	401	442	40	xxxx	xxxx	xxxxx	78	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	583	513	1029	xxxx	xxxx	xxxxx	1533	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	538	461	1029	xxxx	xxxx	xxxxx	1533	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	16.7	xxxx	10.9	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	C	*	B	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	495	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	64.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			34.8			xxxxxx			xxxxxx		
ApproachLOS:	*			D			*			*		

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

Intersection #8 I-80 EB Ramps/Gilman Street

Average Delay (sec/veh): 14.2 Worst Case Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 1 0			0 0 0 0 0			0 1 1 0 0			0 0 1 1 0		
Volume Module: >> Count Date: 27 Sep 1997 <<												
Base Vol:	23	0	321	0	0	0	50	565	0	0	216	296
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:	23	0	321	0	0	0	50	565	0	0	216	296
Added Vol:	0	0	0	0	0	0	0	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	0	321	0	0	0	50	566	0	0	217	296
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:	23	0	321	0	0	0	50	566	0	0	217	296
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	23	0	321	0	0	0	50	566	0	0	217	296
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	775	xxxx	283	xxxx	xxxx	xxxxx	513	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	339	xxxx	720	xxxx	xxxx	xxxxx	1063	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	326	xxxx	720	xxxx	xxxx	xxxxx	1063	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	16.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	C	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	720	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	14.0	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	B	*	*	*	A	*	*	*	*	*
ApproachDel:		14.2			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

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                     Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #9 San Pablo Avenue/Gilman Street
********************************************************************************
Cycle (sec):          100             Critical Vol./Cap. (X):        0.790
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):      27.6
Optimal Cycle:         89             Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  1  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Feb 1999 << 07:45 - 08:45 AM
Base Vol:     158  379    34    87  998   174   119  331   143    81  472    45
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:  158  379    34    87  998   174   119  331   143    81  472    45
Added Vol:      0    3     0     0    3     1     1    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  158  382    34    87 1001   175   120  331   143    81  472    45
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:   158  382    34    87 1001   175   120  331   143    81  472    45
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  158  382    34    87 1001   175   120  331   143    81  472    45
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
Final Vol.:   158  382    34    87 1001   175   120  331   143    81  472    45
------------|---------------||---------------||---------------||---------------|
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  0.62 0.62  0.62  0.85 0.85  0.85
Lanes:       1.00 1.84  0.16  1.00 1.70  0.30  0.40 1.12  0.48  0.14 0.79  0.07
Final Sat.:  1805 3275   292  1805 3005   525   479 1321   571   219 1277   122
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.12  0.12  0.05 0.33  0.33  0.25 0.25  0.25  0.37 0.37  0.37
Crit Moves:  ****                   ****                              ****
Green/Cycle: 0.11 0.38  0.38  0.16 0.42  0.42  0.47 0.47  0.47  0.47 0.47  0.47
Volume/Cap:  0.79 0.31  0.31  0.31 0.79  0.79  0.54 0.54  0.54  0.79 0.79  0.79
Uniform Del: 43.3 22.0  22.0  37.5 25.1  25.1  18.9 18.9  18.9  22.5 22.5  22.5
IncremntDel: 18.8  0.1   0.1   0.6  2.9   2.9   0.5  0.5   0.5   5.6  5.6   5.6
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   62.2 22.1  22.1  38.1 28.0  28.0  19.4 19.4  19.4  28.1 28.1  28.1
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:  62.2 22.1  22.1  38.1 28.0  28.0  19.4 19.4  19.4  28.1 28.1  28.1
DesignQueue:    8   14     1     4   35     6     4   10     4     3   15     1
********************************************************************************
```

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------------------------------------------------------------------------------
------------------------------------------------------------------------------
                     Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
******************************************************************************
Intersection #10 W. Frontage Rd/University Ave
******************************************************************************
Cycle (sec):         100               Critical Vol./Cap. (X):         0.319
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        10.7
Optimal Cycle:         0               Level Of Service:                  B
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0   0  1  0  1  0   0  1  0  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 19 Jan 2001 <<
Base Vol:      34    19    15    15   294    61    36    70    40   162   108     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:   34    19    15    15   294    61    36    70    40   162   108     0
Added Vol:      0     2     4     6     2     0     0     0     0     4     0     6
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   34    21    19    21   296    61    36    70    40   166   108     6
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:    34    21    19    21   296    61    36    70    40   166   108     6
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   34    21    19    21   296    61    36    70    40   166   108     6
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
Final Vol.:    34    21    19    21   296    61    36    70    40   166   108     6
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.46  0.28  0.26  0.11  1.57  0.32  0.49  0.96  0.55  1.00  1.89  0.11
Final Sat.:   253   156   141    66   948   201   265   539   324   520  1062    59
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13  0.13  0.13  0.32  0.31  0.30  0.14  0.13  0.12  0.32  0.10  0.10
Crit Moves:        ****        ****              ****              ****
Delay/Veh:   10.0  10.0  10.0  11.1  10.9  10.6  10.0   9.6   9.2  12.3   9.5   9.4
Delay Adj:   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:  10.0  10.0  10.0  11.1  10.9  10.6  10.0   9.6   9.2  12.3   9.5   9.4
LOS by Move:    B     B     B     B     B     B     A     A     A     B     A     A
ApproachDel:       10.0              10.9               9.6              11.1
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        10.0              10.9               9.6              11.1
LOS by Appr:          B                 B                 A                 B
******************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #11 6th Street/University Ave

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Cycle (sec): 100 Critical Vol./Cap. (X): 0.611
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 59 Level Of Service: C

***

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
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module: >> Count Date: 6 Mar 2001 <<												
Base Vol:	225	172	29	82	328	302	94	996	413	41	910	38
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:	225	172	29	82	328	302	94	996	413	41	910	38
Added Vol:	0	0	0	0	0	0	0	3	0	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	225	172	29	82	328	302	94	999	413	41	913	38
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:	225	172	29	82	328	302	94	999	413	41	913	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	172	29	82	328	302	94	999	413	41	913	38
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
Final Vol.:	225	172	29	82	328	302	94	999	413	41	913	38
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	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.09	0.02	0.05	0.17	0.19	0.05	0.28	0.26	0.02	0.25	0.02
Crit Moves:	****					****		****		****		
Green/Cycle:	0.20	0.34	0.34	0.17	0.31	0.31	0.08	0.45	0.45	0.04	0.41	0.41
Volume/Cap:	0.61	0.27	0.05	0.27	0.56	0.61	0.62	0.61	0.56	0.61	0.62	0.06
Uniform Del:	36.2	24.0	22.2	36.0	29.1	29.6	44.3	20.7	20.1	47.4	23.6	18.0
IncremntDel:	3.0	0.2	0.0	0.5	1.3	2.2	7.8	0.7	1.0	15.4	0.8	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	39.2	24.2	22.2	36.5	30.4	31.9	52.1	21.4	21.1	62.8	24.4	18.1
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:	39.2	24.2	22.2	36.5	30.4	31.9	52.1	21.4	21.1	62.8	24.4	18.1
DesignQueue:	10	6	1	4	13	12	5	33	13	2	32	1

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                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #12 San Pablo Ave/University Ave
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap. (X):         0.652
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        27.0
Optimal Cycle:         65              Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Feb 1999 << 07:45 - 08:45 AM
Base Vol:      89  387    66   76  883    89  159  932    67   86  366    69
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:   89  387    66   76  883    89  159  932    67   86  366    69
Added Vol:      2    1     0    0    1     1    1    0     2    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   91  388    66   76  884    90  160  932    69   86  366    69
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:    91  388    66   76  884    90  160  932    69   86  366    69
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   91  388    66   76  884    90  160  932    69   86  366    69
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
Final Vol.:    91  388    66   76  884    90  160  932    69   86  366    69
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94 0.95 0.94  0.94 0.95 0.93  0.93
Lanes:       1.00 1.71  0.29 1.00 1.82  0.18 1.00 1.86  0.14 1.00 1.68  0.32
Final Sat.:  1805 3017   513 1805 3231   329 1805 3328   246 1805 2964   559
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.13  0.13 0.04 0.27  0.27 0.09 0.28  0.28 0.05 0.12  0.12
Crit Moves:  ****                 ****              ****        ****
Green/Cycle: 0.08 0.37  0.37 0.12 0.42  0.42 0.21 0.43  0.43 0.07 0.29  0.29
Volume/Cap:  0.65 0.34  0.34 0.34 0.65  0.65 0.42 0.65  0.65 0.65 0.42  0.42
Uniform Del: 44.8 22.4  22.4 40.2 23.2  23.2 34.2 22.6  22.6 45.1 28.5  28.5
IncremntDel: 10.5  0.2   0.2  0.9  1.0   1.0  0.8  1.0   1.0 11.0  0.3   0.3
Delay Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Delay/Veh:   55.3 22.6  22.6 41.1 24.2  24.2 35.0 23.6  23.6 56.1 28.8  28.8
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:  55.3 22.6  22.6 41.1 24.2  24.2 35.0 23.6  23.6 56.1 28.8  28.8
DesignQueue:    5   14     2    4   31     3    7   32     2    4   15     3
********************************************************************************
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--------------------------------------------------------------------------------
                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
********************************************************************************
Average Delay (sec/veh):     16.1           Worst Case Level Of Service:      C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  1  0   0  1  1  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:        0   66     9   126  869     0     0    0     0    32    0     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:     0   66     9   126  869     0     0    0     0    32    0     1
Added Vol:       0    2     0     0    2     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0   68     9   126  871     0     0    0     0    32    0     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  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:      0   68     9   126  871     0     0    0     0    32    0     1
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:      0   68     9   126  871     0     0    0     0    32    0     1
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx    77 xxxx xxxxx  xxxx xxxx xxxxx   760 xxxx    73
Potent Cap.: xxxx xxxx xxxxx  1535 xxxx xxxxx  xxxx xxxx xxxxx   377 xxxx   995
Move Cap.:   xxxx xxxx xxxxx  1535 xxxx xxxxx  xxxx xxxx xxxxx   351 xxxx   995
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   7.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  358 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 16.1 xxxxx
Shared LOS:      *    *     *     A    *     *     *    *     *     *    C     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx            16.1
ApproachLOS:         *                *                *                C
```

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                      Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.567
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         12.4
Optimal Cycle:        0                Level Of Service:                   B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  1! 0  0   1  0  0  1  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:      1   47     2  345  442     2    0    0     0    0    0    15
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:   1   47     2  345  442     2    0    0     0    0    0    15
Added Vol:     0    2     0    0    2     0    0    0     0    1    0     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   1   49     2  345  444     2    0    0     0    1    0    15
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:    1   49     2  345  444     2    0    0     0    1    0    15
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   1   49     2  345  444     2    0    0     0    1    0    15
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
Final Vol.:    1   49     2  345  444     2    0    0     0    1    0    15
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.02 0.94  0.04 1.00 0.99  0.01 0.00 1.00  0.00 0.06 0.00  0.94
Final Sat.:   15  723    30  710  783     4    0    0     0   43    0   650
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.07  0.07 0.49 0.57  0.57 xxxx xxxx  xxxx 0.02 xxxx  0.02
Crit Moves:       ****            ****                       ****
Delay/Veh:    8.0  8.0   8.0 12.5 13.1  13.1  0.0  0.0   0.0  8.0  0.0   8.0
Delay Adj:   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:   8.0  8.0   8.0 12.5 13.1  13.1  0.0  0.0   0.0  8.0  0.0   8.0
LOS by Move:   A    A     A    B    B     B    *    *     *    A    *     A
ApproachDel:       8.0             12.8           xxxxxx            8.0
Delay Adj:        1.00             1.00            xxxxx           1.00
ApprAdjDel:        8.0             12.8           xxxxxx            8.0
LOS by Appr:        A                B               *               A
********************************************************************************
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-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #15 San Pablo Ave./Alcatraz Ave.
*******************************************************************************
Cycle (sec):         100               Critical Vol./Cap. (X):        0.606
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        21.6
Optimal Cycle:        58               Level Of Service:                  C
*******************************************************************************
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       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  1  1  0   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 18 Feb 1999 << 08:00 - 09:00 AM
Base Vol:      0   770    31   124  1122    0    0     0     0   146    0   353
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:   0   770    31   124  1122    0    0     0     0   146    0   353
Added Vol:     0     3     0     0     3    0    0     0     0     0    0     0
PasserByVol:   0     0     0     0     0    0    0     0     0     0    0     0
Initial Fut:   0   773    31   124  1125    0    0     0     0   146    0   353
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:    0   773    31   124  1125    0    0     0     0   146    0   353
Reduct Vol:    0     0     0     0     0    0    0     0     0     0    0     0
Reduced Vol:   0   773    31   124  1125    0    0     0     0   146    0   353
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
Final Vol.:    0   773    31   124  1125    0    0     0     0   146    0   353
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 0.94  0.94  0.95 0.95  1.00  1.00 1.00  1.00  0.89 1.00  0.89
Lanes:       0.00 1.92  0.08  1.00 2.00  0.00  0.00 0.00  0.00  0.29 0.00  0.71
Final Sat.:    0  3450   138  1805 3610    0    0     0     0   496    0  1199
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.22  0.22  0.07 0.31  0.00  0.00 0.00  0.00  0.29 0.00  0.29
Crit Moves:  ****                  ****                          ****
Green/Cycle: 0.00 0.39  0.39  0.12 0.51  0.00  0.00 0.00  0.00  0.49 0.00  0.49
Volume/Cap:  0.00 0.57  0.57  0.57 0.61  0.00  0.00 0.00  0.00  0.61 0.00  0.61
Uniform Del:  0.0 23.7  23.7  41.5 17.1   0.0   0.0  0.0   0.0  18.7  0.0  18.7
IncremntDel:  0.0  0.6   0.6   3.5  0.6   0.0   0.0  0.0   0.0   1.3  0.0   1.3
Delay Adj:   0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Delay/Veh:    0.0 24.3  24.3  45.1 17.7   0.0   0.0  0.0   0.0  20.0  0.0  20.0
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:   0.0 24.3  24.3  45.1 17.7   0.0   0.0  0.0   0.0  20.0  0.0  20.0
DesignQueue:    0   28     1     6   33     0     0    0     0     4    0    11
*******************************************************************************
```

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

Intersection #16 W. Frontage Road/Powell Street

Cycle (sec):	100	Critical Vol./Cap. (X):	0.540
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	17.7
Optimal Cycle:	50	Level Of Service:	B

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
Lanes:	0 0 0 0 0			2 0 0 0 1			1 0 1 1 0			0 0 1 1 1		
Volume Module:												
Base Vol:	0	0	0	685	0	288	87	260	345	0	910	593
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:	0	0	0	685	0	288	87	260	345	0	910	593
Added Vol:	0	0	0	2	0	0	0	1	0	0	1	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	687	0	288	87	261	345	0	911	595
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:	0	0	0	687	0	288	87	261	345	0	911	595
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	687	0	288	87	261	345	0	911	595
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
Final Vol.:	0	0	0	687	0	288	87	261	345	0	911	595
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	0.81	1.00	0.89	0.89
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	1.00	1.00	0.00	1.81	1.19
Final Sat.:	0	0	0	3502	0	1615	1805	1805	1534	0	3082	2013
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.18	0.05	0.14	0.22	0.00	0.30	0.30
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.09	0.64	0.64	0.00	0.55	0.55
Volume/Cap:	0.00	0.00	0.00	0.54	0.00	0.49	0.54	0.23	0.35	0.00	0.54	0.54
Uniform Del:	0.0	0.0	0.0	25.2	0.0	24.7	43.6	7.7	8.5	0.0	14.5	14.5
IncremntDel:	0.0	0.0	0.0	0.5	0.0	0.6	3.7	0.0	0.1	0.0	0.2	0.2
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	25.7	0.0	25.3	47.2	7.8	8.6	0.0	14.8	14.8
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:	0.0	0.0	0.0	25.7	0.0	25.3	47.2	7.8	8.6	0.0	14.8	14.8
DesignQueue:	0	0	0	26	0	11	4	5	7	0	25	16

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                     Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #17 I-80 EB Ramps/Powell St.
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.550
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        19.2
Optimal Cycle:       51                Level Of Service:                  B
********************************************************************************
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
Lanes:        1  0  1! 0  1   0  0  0  0  0   1  0  3  0  0   0  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 08:00 - 09:00 AM
Base Vol:     568     0   802     0     0     0    82   644     0     0   786   334
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:  568     0   802     0     0     0    82   644     0     0   786   334
Added Vol:      0     0     0     0     0     0     0     3     0     0     2     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  568     0   802     0     0     0    82   647     0     0   788   334
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:   568     0   802     0     0     0    82   647     0     0   788   334
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  568     0   802     0     0     0    82   647     0     0   788   334
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
Final Vol.:   568     0   802     0     0     0    82   647     0     0   788   334
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.89  1.00  0.89  1.00  1.00  1.00  0.95  0.91  1.00  1.00  0.91  0.85
Lanes:       1.41  0.00  1.59  0.00  0.00  0.00  1.00  3.00  0.00  0.00  3.00  1.00
Final Sat.:  2402     0  2692     0     0     0  1805  5187     0     0  5187  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.24  0.00  0.30  0.00  0.00  0.00  0.05  0.12  0.00  0.00  0.15  0.21
Crit Moves:              ****                    ****                          ****
Green/Cycle: 0.54  0.00  0.54  0.00  0.00  0.00  0.08  0.46  0.00  0.00  0.38  0.38
Volume/Cap:  0.44  0.00  0.55  0.00  0.00  0.00  0.55  0.27  0.00  0.00  0.40  0.55
Uniform Del: 13.8   0.0  15.0   0.0   0.0   0.0  44.1  16.8   0.0   0.0  23.0  24.6
IncremntDel:  0.1   0.0   0.3   0.0   0.0   0.0   4.3   0.1   0.0   0.0   0.1   1.1
Delay Adj:   1.00  0.00  1.00  0.00  0.00  0.00  1.00  1.00  0.00  0.00  1.00  1.00
Delay/Veh:   13.9   0.0  15.2   0.0   0.0   0.0  48.4  16.8   0.0   0.0  23.1  25.6
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:  13.9   0.0  15.2   0.0   0.0   0.0  48.4  16.8   0.0   0.0  23.1  25.6
DesignQueue:   15     0    22     0     0     0     4    20     0     0    28    12
********************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Christie Ave./Powell St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.453
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	25.1
Optimal Cycle:	42	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0 0	1	0 1	0 0	2	2 0	1 1	1	1 0	2 0	1
Volume Module:												
Base Vol:	287	30	79	72	40	272	335	795	385	71	541	80
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:	287	30	79	72	40	272	335	795	385	71	541	80
Added Vol:	0	0	0	0	0	0	0	3	0	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	287	30	79	72	40	272	335	798	385	71	544	80
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:	287	30	79	72	40	272	335	798	385	71	544	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	287	30	79	72	40	272	335	798	385	71	544	80
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
Final Vol.:	287	30	79	72	40	272	335	798	385	71	544	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.97	0.97	0.75	0.92	0.95	0.81	0.95	0.95	0.85
Lanes:	1.81	0.19	1.00	0.64	0.36	2.00	2.00	1.91	1.09	1.00	2.00	1.00
Final Sat.:	3292	344	1615	1184	658	2842	3502	3454	1667	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.05	0.06	0.06	0.10	0.10	0.23	0.23	0.04	0.15	0.05
Crit Moves:		****				****		****		****		
Green/Cycle:	0.19	0.19	0.19	0.21	0.21	0.21	0.23	0.51	0.51	0.09	0.36	0.36
Volume/Cap:	0.45	0.45	0.25	0.29	0.29	0.45	0.41	0.45	0.45	0.45	0.41	0.14
Uniform Del:	35.7	35.7	34.3	33.1	33.1	34.4	32.6	15.6	15.6	43.4	23.7	21.2
IncremntDel:	0.5	0.5	0.4	0.4	0.4	0.5	0.3	0.1	0.1	2.1	0.2	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	36.2	36.2	34.7	33.5	33.5	35.0	33.0	15.8	15.8	45.5	24.0	21.3
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:	36.2	36.2	34.7	33.5	33.5	35.0	33.0	15.8	15.8	45.5	24.0	21.3
DesignQueue:	13	1	4	3	2	12	15	23	11	4	20	3

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                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #19 San Pablo Ave./Stanford Ave.
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):        0.647
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       25.4
Optimal Cycle:       65              Level Of Service:                 C
********************************************************************************
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
Lanes:       1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 18 Feb 1999 << 08:00 - 09:00 AM
Base Vol:     190  871    63    61 1077    39    61  177   157   153  670    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:  190  871    63    61 1077    39    61  177   157   153  670    29
Added Vol:      3    3     0     0    3     0     0    0     3     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  193  874    63    61 1080    39    61  177   160   153  670    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:     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:   193  874    63    61 1080    39    61  177   160   153  670    29
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  193  874    63    61 1080    39    61  177   160   153  670    29
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
Final Vol.:   193  874    63    61 1080    39    61  177   160   153  670    29
------------|---------------||---------------||---------------||---------------|
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  0.95  0.95 0.88  0.88  0.95 0.94  0.94
Lanes:       1.00 1.87  0.13  1.00 1.93  0.07  1.00 1.05  0.95  1.00 1.92  0.08
Final Sat.:  1805 3334   240  1805 3467   125  1805 1761  1592  1805 3439   149
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.26  0.26  0.03 0.31  0.31  0.03 0.10  0.10  0.08 0.19  0.19
Crit Moves:  ****                  ****        ****                   ****
Green/Cycle: 0.17 0.57  0.57  0.07 0.48  0.48  0.05 0.19  0.19  0.16 0.30  0.30
Volume/Cap:  0.65 0.46  0.46  0.46 0.65  0.65  0.65 0.52  0.52  0.52 0.65  0.65
Uniform Del: 39.0 12.4  12.4  44.4 19.5  19.5  46.5 36.3  36.3  38.4 30.3  30.3
IncremntDel:  4.9  0.2   0.2   2.5  0.9   0.9  14.6  0.8   0.8   1.7  1.4   1.4
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   43.9 12.5  12.5  46.9 20.4  20.4  61.1 37.1  37.1  40.1 31.7  31.7
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:  43.9 12.5  12.5  46.9 20.4  20.4  61.1 37.1  37.1  40.1 31.7  31.7
DesignQueue:    9   22     2     3   34     1     3    8     7     7   27     1
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                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #20 San Pablo Ave./40th Street
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):        0.646
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        25.4
Optimal Cycle:         64                Level Of Service:                  C
********************************************************************************
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
Lanes:        2  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Feb 1999 << 08:00 - 09:00 AM
Base Vol:     365 1036   15    73 1060   37    85  344  106    44  511  145
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:  365 1036   15    73 1060   37    85  344  106    44  511  145
Added Vol:      0    4    0     2    4    0     0    0    0     0    0    2
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  365 1040   15    75 1064   37    85  344  106    44  511  147
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:   365 1040   15    75 1064   37    85  344  106    44  511  147
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  365 1040   15    75 1064   37    85  344  106    44  511  147
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
Final Vol.:   365 1040   15    75 1064   37    85  344  106    44  511  147
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:  0.92 0.95 0.95  0.95 0.95 0.95  0.95 0.92 0.92  0.95 0.92 0.92
Lanes:       2.00 1.97 0.03  1.00 1.93 0.07  1.00 1.53 0.47  1.00 1.55 0.45
Final Sat.:  3502 3552   51  1805 3471  121  1805 2663  821  1805 2711  780
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.29 0.29  0.04 0.31 0.31  0.05 0.13 0.13  0.02 0.19 0.19
Crit Moves:  ****                 ****       ****                    ****
Green/Cycle: 0.16 0.56 0.56  0.08 0.47 0.47  0.07 0.31 0.31  0.06 0.29 0.29
Volume/Cap:  0.65 0.53 0.53  0.53 0.65 0.65  0.65 0.42 0.42  0.42 0.65 0.65
Uniform Del: 39.3 13.9 13.9  44.3 19.9 19.9  45.1 27.6 27.6  45.5 30.9 30.9
IncremntDel:  2.6  0.3  0.3   3.6  0.9  0.9  10.6  0.3  0.3   2.7  1.5  1.5
Delay Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Delay/Veh:   41.9 14.2 14.2  47.9 20.8 20.8  55.8 27.9 27.9  48.2 32.4 32.4
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:  41.9 14.2 14.2  47.9 20.8 20.8  55.8 27.9 27.9  48.2 32.4 32.4
DesignQueue:   17   28    0     4   34    1     4   14    4     2   21    6
********************************************************************************
```

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

Intersection #21 Adeline St./40th St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.357
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	28.1
Optimal Cycle:	35	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module: >> Count Date: 20 Mar 2002 << 07:45 - 08:45 AM												
Base Vol:	14	101	18	51	132	49	40	219	25	6	375	36
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:	14	101	18	51	132	49	40	219	25	6	375	36
Added Vol:	0	0	0	0	0	0	0	2	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	101	18	51	132	49	40	221	25	6	377	36
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:	14	101	18	51	132	49	40	221	25	6	377	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	101	18	51	132	49	40	221	25	6	377	36
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
Final Vol.:	14	101	18	51	132	49	40	221	25	6	377	36
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	0.95	0.94	0.94	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.80	0.20	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1805	3194	361	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.05	0.01	0.03	0.04	0.03	0.02	0.07	0.07	0.00	0.20	0.02
Crit Moves:		****			****			****			****	
Green/Cycle:	0.15	0.15	0.15	0.10	0.10	0.10	0.19	0.19	0.19	0.56	0.56	0.56
Volume/Cap:	0.05	0.36	0.07	0.28	0.36	0.30	0.11	0.36	0.36	0.01	0.36	0.04
Uniform Del:	36.5	38.3	36.6	41.5	41.8	41.6	33.3	34.9	34.9	9.9	12.3	10.1
IncremntDel:	0.1	0.8	0.1	0.8	0.6	1.0	0.1	0.3	0.3	0.0	0.2	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	36.6	39.0	36.8	42.3	42.4	42.6	33.4	35.2	35.2	9.9	12.5	10.1
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:	36.6	39.0	36.8	42.3	42.4	42.6	33.4	35.2	35.2	9.9	12.5	10.1
DesignQueue:	1	5	1	3	7	2	2	10	1	0	10	1

APPENDIX E-4

EXISTING PLUS PROJECT PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	Existing+Proj PM
Command:	Default Command
Volume:	Existing PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Project PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
             2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Rydin Rd/Central Ave
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap. (X):         0.490
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):       14.0
Optimal Cycle:          0              Level Of Service:                  B
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:         0  1  0  0  1   1  0  1  0  1   0  1  0  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 04:15 - 05:15 PM
Base Vol:       90    6   219    57   26     6     1  312   132    37  430    66
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:    90    6   219    57   26     6     1  312   132    37  430    66
Added Vol:       0    0     0     0    0     0     0    1     1     0    2     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    90    6   219    57   26     6     1  313   133    37  432    66
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:     90    6   219    57   26     6     1  313   133    37  432    66
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    90    6   219    57   26     6     1  313   133    37  432    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
Final Vol.:     90    6   219    57   26     6     1  313   133    37  432    66
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:        0.94 0.06  1.00  1.00 1.00  1.00  0.01 1.40  0.59  1.00 1.73  0.27
Final Sat.:    422   28   531   381  401   434     2  748   332   464  882   137
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.21 0.21  0.41  0.15 0.06  0.01  0.43 0.42  0.40  0.08 0.49  0.48
Crit Moves:              ****  ****             ****                   ****
Delay/Veh:    12.3 12.3  13.3  12.7 11.4  10.3  13.9 13.6  12.8  10.8 15.7  15.4
Delay Adj:    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:   12.3 12.3  13.3  12.7 11.4  10.3  13.9 13.6  12.8  10.8 15.7  15.4
LOS by Move:     B    B     B     B    B     B     B    B     B     B    C     C
ApproachDel:       13.0             12.2             13.3             15.4
Delay Adj:         1.00             1.00             1.00             1.00
ApprAdjDel:        13.0             12.2             13.3             15.4
LOS by Appr:         B                B                B                C
********************************************************************************
```

```
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 I-80 WB Ramps/Central Ave
*******************************************************************************
Cycle (sec):        100               Critical Vol./Cap. (X):         0.584
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        23.8
Optimal Cycle:       55               Level Of Service:                   C
*******************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase       Protected        Protected
Rights:         Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  0  0  0   0  1  0  0  1   0  0  1  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 04:45 - 05:45 PM
Base Vol:      0     0     0  330     2   223    0   682    56  310   377     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:   0     0     0  330     2   223    0   682    56  310   377     0
Added Vol:     0     0     0    0     0     1    0     1     0    0     2     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0     0     0  330     2   224    0   683    56  310   379     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:    0     0     0  330     2   224    0   683    56  310   379     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0  330     2   224    0   683    56  310   379     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
Final Vol.:    0     0     0  330     2   224    0   683    56  310   379     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  1.00 1.00  1.00 0.85 0.85  0.85 1.00 0.94  0.94 0.95 0.95  1.00
Lanes:       0.00 0.00  0.00 0.99 0.01  1.00 0.00 1.85  0.15 1.00 2.00  0.00
Final Sat.:    0     0     0 1605    10  1615    0 3300   271 1805 3610     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.21 0.21  0.14 0.00 0.21  0.21 0.17 0.10  0.00
Crit Moves:                       ****             ****       ****
Green/Cycle: 0.00 0.00  0.00 0.35 0.35  0.35 0.00 0.35  0.35 0.29 0.65  0.00
Volume/Cap:  0.00 0.00  0.00 0.58 0.58  0.39 0.00 0.58  0.58 0.58 0.16  0.00
Uniform Del:  0.0  0.0   0.0 26.4 26.4  24.4  0.0 26.3  26.3 30.1  6.9   0.0
IncremntDel:  0.0  0.0   0.0  1.6  1.6   0.5  0.0  0.7   0.7  1.7  0.0   0.0
Delay Adj:   0.00 0.00  0.00 1.00 1.00  1.00 0.00 1.00  1.00 1.00 1.00  0.00
Delay/Veh:    0.0  0.0   0.0 28.0 28.0  24.8  0.0 27.0  27.0 31.8  6.9   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:   0.0  0.0   0.0 28.0 28.0  24.8  0.0 27.0  27.0 31.8  6.9   0.0
DesignQueue:   0     0     0   12     0     8    0    26     2   13     8     0
*******************************************************************************
```

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #3 I-80 EB Ramps/Central Ave
********************************************************************************
Cycle (sec):           100              Critical Vol./Cap. (X):          0.643
Loss Time (sec):         0 (Y+R =  4 sec) Average Delay (sec/veh):         21.9
Optimal Cycle:          64              Level Of Service:                    C
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:         1  1  0  0  1   0  0  0  0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 04:45 - 05:45 PM
Base Vol:      61    3   414    0    0     0  228  762     0    0  622   273
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:   61    3   414    0    0     0  228  762     0    0  622   273
Added Vol:      1    0     0    0    0     0    1    1     0    0    1     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   62    3   414    0    0     0  229  763     0    0  623   273
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:    62    3   414    0    0     0  229  763     0    0  623   273
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   62    3   414    0    0     0  229  763     0    0  623   273
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
Final Vol.:    62    3   414    0    0     0  229  763     0    0  623   273
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.85 0.85  0.85 1.00 1.00  1.00 0.95 0.95  1.00 1.00 0.91  0.91
Lanes:       1.91 0.09  1.00 0.00 0.00  0.00 1.00 2.00  0.00 0.00 1.39  0.61
Final Sat.:  3081  149  1615    0    0     0 1805 3610     0    0 2395  1049
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.02  0.26 0.00 0.00  0.00 0.13 0.21  0.00 0.00 0.26  0.26
Crit Moves:             ****                  ****                  ****
Green/Cycle: 0.40 0.40  0.40 0.00 0.00  0.00 0.20 0.60  0.00 0.00 0.40  0.40
Volume/Cap:  0.05 0.05  0.64 0.00 0.00  0.00 0.64 0.35  0.00 0.00 0.64  0.64
Uniform Del: 18.5 18.5  24.3  0.0  0.0   0.0 36.9 10.1   0.0  0.0 24.0  24.0
IncremntDel:  0.0  0.0   2.2  0.0  0.0   0.0  4.0  0.1   0.0  0.0  1.0   1.0
Delay Adj:   1.00 1.00  1.00 0.00 0.00  0.00 1.00 1.00  0.00 0.00 1.00  1.00
Delay/Veh:   18.5 18.5  26.6  0.0  0.0   0.0 40.9 10.2   0.0  0.0 25.0  25.0
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:  18.5 18.5  26.6  0.0  0.0   0.0 40.9 10.2   0.0  0.0 25.0  25.0
DesignQueue:    2    0    15    0    0     0   11   18     0    0   22    10
********************************************************************************
```

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-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
        2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #4 San Pablo Avenue/Central Avenue
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.620
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        29.8
Optimal Cycle:       60                Level Of Service:                  C
*******************************************************************************
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       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  1  1  0   1  0  1  1  0   1  1  0  0  1   0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 30 Mar 1999 << 04:30 - 05:30 PM
Base Vol:     248 1008    44   114  666    98   283  261    46    44  288    82
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:  248 1008    44   114  666    98   283  261    46    44  288    82
Added Vol:      0    4     0     0    4     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  248 1012    44   114  670    98   283  261    46    44  288    82
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:   248 1012    44   114  670    98   283  261    46    44  288    82
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  248 1012    44   114  670    98   283  261    46    44  288    82
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
Final Vol.:   248 1012    44   114  670    98   283  261    46    44  288    82
------------|---------------||---------------||---------------||---------------|
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  0.98 0.98  0.85  0.92 0.92  0.92
Lanes:       1.00 1.92  0.08  1.00 1.74  0.26  1.04 0.96  1.00  0.21 1.39  0.40
Final Sat.:  1805 3439   150  1805 3090   452  1927 1778  1615   370 2424   690
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.29  0.29  0.06 0.22  0.22  0.15 0.15  0.03  0.12 0.12  0.12
Crit Moves:  ****                  ****             ****              ****
Green/Cycle: 0.22 0.47  0.47  0.10 0.35  0.35  0.24 0.24  0.24  0.19 0.19  0.19
Volume/Cap:  0.62 0.63  0.63  0.63 0.62  0.62  0.62 0.62  0.12  0.62 0.62  0.62
Uniform Del: 35.1 19.9  19.9  43.1 27.0  27.0  34.1 34.1  30.0  37.1 37.1  37.1
IncremntDel:  3.0  0.7   0.7   6.7  1.0   1.0   1.4  1.4   0.1   1.8  1.8   1.8
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   38.1 20.6  20.6  49.8 28.0  28.0  35.5 35.5  30.1  38.9 38.9  38.9
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:  38.1 20.6  20.6  49.8 28.0  28.0  35.5 35.5  30.1  38.9 38.9  38.9
DesignQueue:   11   32     1     6   26     4    12   11     2     2   13     4
*******************************************************************************
```

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #5 San Pablo Avenue/Marin Ave
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap. (X):         0.696
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         27.0
Optimal Cycle:        75                 Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 6 May 1999 << 04:45 - 05:45 PM
Base Vol:     162 1135   165   126  836    23    26  592    84   121  564   226
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:  162 1135   165   126  836    23    26  592    84   121  564   226
Added Vol:      1    4     0     0    4     1     1    0     1     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  163 1139   165   126  840    24    27  592    85   121  564   226
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:   163 1139   165   126  840    24    27  592    85   121  564   226
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  163 1139   165   126  840    24    27  592    85   121  564   226
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
Final Vol.:   163 1139   165   126  840    24    27  592    85   121  564   226
------------|---------------||---------------||---------------||---------------|
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  0.95  0.95 0.93  0.93  0.95 0.91  0.91
Lanes:       1.00 1.75  0.25  1.00 1.94  0.06  1.00 1.75  0.25  1.00 1.43  0.57
Final Sat.:  1805 3093   448  1805 3496   100  1805 3097   445  1805 2466   988
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.37  0.37  0.07 0.24  0.24  0.01 0.19  0.19  0.07 0.23  0.23
Crit Moves:       ****        ****                   ****       ****
Green/Cycle: 0.17 0.53  0.53  0.10 0.46  0.46  0.02 0.27  0.27  0.10 0.35  0.35
Volume/Cap:  0.53 0.70  0.70  0.70 0.53  0.53  0.66 0.70  0.70  0.70 0.66  0.66
Uniform Del: 37.7 17.6  17.6  43.5 19.4  19.4  48.5 32.5  32.5  43.8 27.5  27.5
IncremntDel:  1.7  1.2   1.2  11.2  0.3   0.3  32.6  2.2   2.2  11.7  1.3   1.3
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   39.4 18.7  18.7  54.8 19.7  19.7  81.1 34.8  34.8  55.4 28.9  28.9
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:  39.4 18.7  18.7  54.8 19.7  19.7  81.1 34.8  34.8  55.4 28.9  28.9
DesignQueue:    8   33     5     6   27     1     1   25     4     6   22     9
********************************************************************************
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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #6 W. Frontage Rd/Gilman St
********************************************************************************
Average Delay (sec/veh):     25.0         Worst Case Level Of Service:         C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  1    0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 1997 <<
Base Vol:       8    1   488    17    1     4     3   87    11   158   10    21
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:    8    1   488    17    1     4     3   87    11   158   10    21
Added Vol:      0    0     2     0    0     0     0    0     0     2    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    8    1   490    17    1     4     3   87    11   160   10    21
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:     8    1   490    17    1     4     3   87    11   160   10    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     8    1   490    17    1     4     3   87    11   160   10    21
Critical Gap Module:
Critical Gp:  7.1  6.5   6.2   7.1  6.5   6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  418  444    87   685  445    16    31 xxxx xxxxx    98 xxxx xxxxx
Potent Cap.:  548  511   977   365  511  1070  1595 xxxx xxxxx  1508 xxxx xxxxx
Move Cap.:    495  450   977   165  450  1070  1595 xxxx xxxxx  1508 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx   7.4 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  960 xxxxx  xxxx  202 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx 12.7 xxxxx xxxxx 25.0 xxxxx   7.3 xxxx xxxxx   7.7 xxxx xxxxx
Shared LOS:     *    B     *     *    C     *     A    *     *     A    *     *
ApproachDel:       12.7             25.0           xxxxxx           xxxxxx
ApproachLOS:          B                C                *                *
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #7 I-80 WB Ramps/Gilman St
********************************************************************************
Average Delay (sec/veh):     97.4          Worst Case Level Of Service:        F
********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled      Uncontrolled
Rights:           Include          Include          Include           Include
Lanes:        0  0  0  0  0   1  1  0  0  1    0  0  1  1  0    0  1  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 2097 <<
Base Vol:       0    0     0   382    5   101      0  576    32   285   86     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:    0    0     0   382    5   101      0  576    32   285   86     0
Added Vol:      0    0     0     0    0     0      0    2     0     0    2     0
PasserByVol:    0    0     0     0    0     0      0    0     0     0    0     0
Initial Fut:    0    0     0   382    5   101      0  578    32   285   88     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:     0    0     0   382    5   101      0  578    32   285   88     0
Reduct Vol:     0    0     0     0    0     0      0    0     0     0    0     0
Final Vol.:     0    0     0   382    5   101      0  578    32   285   88     0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   947 1268    44  xxxx xxxx xxxxx   610 xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   263  170  1023  xxxx xxxx xxxxx   979 xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   192  111  1023  xxxx xxxx xxxxx   979 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx 113.5 xxxx   8.9 xxxxx xxxx xxxxx   8.7 xxxx xxxxx
LOS by Move:    *    *     *     F    *     A     *     *    *     A    *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   189 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx 127.3 xxxx xxxxx xxxxx xxxx xxxxx  10.2 xxxx xxxxx
Shared LOS:     *    *     *     F    *     *     *     *    *     B    *     *
ApproachDel:     xxxxxx            97.4            xxxxxx            xxxxxx
ApproachLOS:        *                F                *                 *
```

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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #8 I-80 EB Ramps/Gilman Street
********************************************************************************
Average Delay (sec/veh): OVERFLOW          Worst Case Level Of Service:        F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        1  0  0  1  0    0  0  0  0  0    0  1  1  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Sep 1997 <<
Base Vol:      17   14    92     0    0     0   556  443     0     0   22  1063
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   14    92     0    0     0   556  443     0     0   22  1063
Added Vol:      0    0     0     0    0     0     0    2     0     0    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   17   14    92     0    0     0   556  445     0     0   24  1063
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:    17   14    92     0    0     0   556  445     0     0   24  1063
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    17   14    92     0    0     0   556  445     0     0   24  1063
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1569 2644   223  xxxx xxxx xxxxx  1087 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:  104   24   787  xxxx xxxx xxxxx   649 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:      0    0   787  xxxx xxxx xxxxx   649 xxxx xxxxx  xxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:  0.0 xxxx xxxxx xxxxx xxxx xxxxx  10.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx     0  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  34.6 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     D    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        F                *                *                *
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                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #9 San Pablo Avenue/Gilman Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap. (X):        0.728
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):       25.5
Optimal Cycle:         68               Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  1  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Mar 1999 << 04:45 - 05:45 PM
Base Vol:      133 1049    89    93  680   123   122  261   119    94  353   115
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:   133 1049    89    93  680   123   122  261   119    94  353   115
Added Vol:       0    3     0     0    3     2     2    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   133 1052    89    93  683   125   124  261   119    94  353   115
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:    133 1052    89    93  683   125   124  261   119    94  353   115
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   133 1052    89    93  683   125   124  261   119    94  353   115
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
Final Vol.:    133 1052    89    93  683   125   124  261   119    94  353   115
------------|---------------||---------------||---------------||---------------|
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  0.62 0.62  0.62  0.83 0.83  0.83
Lanes:        1.00 1.84  0.16  1.00 1.69  0.31  0.49 1.04  0.47  0.17 0.63  0.20
Final Sat.:   1805 3288   278  1805 2981   546   584 1229   560   263  989   322
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.07 0.32  0.32  0.05 0.23  0.23  0.21 0.21  0.21  0.36 0.36  0.36
Crit Moves:        ****        ****                                    ****
Green/Cycle:  0.12 0.44  0.44  0.07 0.39  0.39  0.49 0.49  0.49  0.49 0.49  0.49
Volume/Cap:   0.59 0.73  0.73  0.73 0.59  0.59  0.43 0.43  0.43  0.73 0.73  0.73
Uniform Del:  41.4 23.1  23.1  45.5 24.5  24.5  16.5 16.5  16.5  20.2 20.2  20.2
IncremntDel:   4.2  1.8   1.8  18.9  0.7   0.7   0.3  0.3   0.3   3.5  3.5   3.5
Delay Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:    45.6 24.9  24.9  64.5 25.2  25.2  16.8 16.8  16.8  23.7 23.7  23.7
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:   45.6 24.9  24.9  64.5 25.2  25.2  16.8 16.8  16.8  23.7 23.7  23.7
DesignQueue:     7   36     3     5   25     5     4    8     3     3   11     4
********************************************************************************
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---------------------------------------------------------------------------
---------------------------------------------------------------------------
                    Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
***************************************************************************
Intersection #10 W. Frontage Rd/University Ave
***************************************************************************
Cycle (sec):          100                 Critical Vol./Cap. (X):        1.212
Loss Time (sec):        0 (Y+R =  4 sec)  Average Delay (sec/veh):        59.7
Optimal Cycle:          0                 Level Of Service:                  F
***************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0    0  1  0  1  0    0  1  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 19 Jan 2001 <<
Base Vol:     28   474    80   16   269    32  108   150    71  182   176    15
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:  28   474    80   16   269    32  108   150    71  182   176    15
Added Vol:     0     2     5    8     2     0    0     0     0    5     0     8
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  28   476    85   24   271    32  108   150    71  187   176    23
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:   28   476    85   24   271    32  108   150    71  187   176    23
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  28   476    85   24   271    32  108   150    71  187   176    23
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
Final Vol.:   28   476    85   24   271    32  108   150    71  187   176    23
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.05  0.81  0.14 0.15  1.66  0.19 0.66  0.91  0.43 1.00  1.77  0.23
Final Sat.:   23   393    70   64   736    88  275   401   195  394   740    98
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     1.21  1.21  1.21 0.37  0.37  0.36 0.39  0.37  0.36 0.47  0.24  0.24
Crit Moves:        ****       ****             ****             ****
Delay/Veh:  137.6   138 137.6 15.2  15.0  14.7 16.3  15.3  14.7 19.3  13.7  13.5
Delay Adj:   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: 137.6   138 137.6 15.2  15.0  14.7 16.3  15.3  14.7 19.3  13.7  13.5
LOS by Move:   F     F     F    C     B     B    C     C     B    C     B     B
ApproachDel:     137.6             15.0             15.5             16.4
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:      137.6             15.0             15.5             16.4
LOS by Appr:        F                B                C                C
***************************************************************************
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--------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #11 6th Street/University Ave
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap. (X):        0.924
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        39.2
Optimal Cycle:       180                Level Of Service:                  D
********************************************************************************
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
Lanes:        1  0  1  0  1   1  0  1  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 6 Mar 2001 <<
Base Vol:     398  413    85    80  222   527   126  951   246    27 1107    42
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:  398  413    85    80  222   527   126  951   246    27 1107    42
Added Vol:      0    0     0     0    0     0     0    4     0     0    4     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  398  413    85    80  222   527   126  955   246    27 1111    42
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:   398  413    85    80  222   527   126  955   246    27 1111    42
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  398  413    85    80  222   527   126  955   246    27 1111    42
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
Final Vol.:   398  413    85    80  222   527   126  955   246    27 1111    42
------------|---------------||---------------||---------------||---------------|
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  0.85  0.95 0.95  0.85  0.95 0.95  0.85
Lanes:       1.00 1.00  1.00  1.00 1.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1805 1900  1615  1805 1900  1615  1805 3610  1615  1805 3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.22 0.22  0.05  0.04 0.12  0.33  0.07 0.26  0.15  0.01 0.31  0.03
Crit Moves:  ****                        ****  ****                   ****
Green/Cycle: 0.24 0.49  0.49  0.10 0.35  0.35  0.08 0.39  0.39  0.02 0.33  0.33
Volume/Cap:  0.92 0.44  0.11  0.44 0.33  0.92  0.92 0.68  0.39  0.68 0.92  0.08
Uniform Del: 37.2 16.5  13.7  42.4 23.7  31.1  45.9 25.6  22.2  48.6 32.1  22.8
IncremntDel: 25.6  0.3   0.1   1.7  0.3  21.0  54.5  1.4   0.4  39.8 11.9   0.1
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   62.8 16.9  13.7  44.1 24.0  52.1 100.5 27.0  22.6  88.3 44.1  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:  62.8 16.9  13.7  44.1 24.0  52.1 100.5 27.0  22.6  88.3 44.1  22.9
DesignQueue:   18   12     2     4    8    20     7   35     9     1   45     2
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #12 San Pablo Ave/University Ave
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.735
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         28.6
Optimal Cycle:       86                Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 17 Feb 1999 << 05:15 - 06:15 PM
Base Vol:     111  854    65   151  598    81   107  854    54    92 1048   134
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:  111  854    65   151  598    81   107  854    54    92 1048   134
Added Vol:      3    2     0     0    2     2     2    0     3     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  114  856    65   151  600    83   109  854    57    92 1048   134
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:   114  856    65   151  600    83   109  854    57    92 1048   134
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  114  856    65   151  600    83   109  854    57    92 1048   134
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
Final Vol.:   114  856    65   151  600    83   109  854    57    92 1048   134
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94  0.95 0.93  0.93
Lanes:       1.00 1.86  0.14  1.00 1.76  0.24  1.00 1.87  0.13  1.00 1.77  0.23
Final Sat.:  1805 3318   252  1805 3114   431  1805 3354   224  1805 3146   402
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.26  0.26  0.08 0.19  0.19  0.06 0.25  0.25  0.05 0.33  0.33
Crit Moves:       ****        ****             ****                  ****
Green/Cycle: 0.11 0.35  0.35  0.11 0.35  0.35  0.08 0.45  0.45  0.09 0.45  0.45
Volume/Cap:  0.55 0.74  0.74  0.74 0.55  0.55  0.74 0.57  0.57  0.57 0.74  0.74
Uniform Del: 41.8 28.4  28.4  42.9 26.2  26.2  44.8 20.6  20.6  43.7 22.4  22.4
IncremntDel:  3.2  2.3   2.3  12.9  0.5   0.5  17.3  0.5   0.5   4.8  1.8   1.8
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   45.0 30.7  30.7  55.8 26.7  26.7  62.2 21.1  21.1  48.5 24.2  24.2
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:  45.0 30.7  30.7  55.8 26.7  26.7  62.2 21.1  21.1  48.5 24.2  24.2
DesignQueue:    6   33     3     8   23     3     6   28     2     5   35     4
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                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
********************************************************************************
Average Delay (sec/veh):     17.8         Worst Case Level Of Service:          C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0   0  1  1  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:        0  724    41    34  295     0     0    0     0    18    0     7
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:     0  724    41    34  295     0     0    0     0    18    0     7
Added Vol:       0    3     0     0    3     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  727    41    34  298     0     0    0     0    18    0     7
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:      0  727    41    34  298     0     0    0     0    18    0     7
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:      0  727    41    34  298     0     0    0     0    18    0     7
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   768 xxxx xxxxx  xxxx xxxx xxxxx   965 xxxx   748
Potent Cap.: xxxx xxxx xxxxx   855 xxxx xxxxx  xxxx xxxx xxxxx   285 xxxx   416
Move Cap.:   xxxx xxxx xxxxx   855 xxxx xxxxx  xxxx xxxx xxxxx   277 xxxx   416
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   9.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  305 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx   9.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 17.8 xxxxx
Shared LOS:      *    *     *     A    *     *     *    *     *     *    C     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            17.8
ApproachLOS:        *                *                *                C
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                      Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap. (X):         0.770
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        16.5
Optimal Cycle:          0              Level Of Service:                   C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        0  0  1! 0  0   1  0  0  1  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 16 Jan 2001 <<
Base Vol:       3   595     3    90   189     5     6     0     2    34     4    37
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:    3   595     3    90   189     5     6     0     2    34     4    37
Added Vol:      0     3     0     0     3     0     0     0     0     1     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    3   598     3    90   192     5     6     0     2    35     4    37
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:     3   598     3    90   192     5     6     0     2    35     4    37
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    3   598     3    90   192     5     6     0     2    35     4    37
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
Final Vol.:     3   598     3    90   192     5     6     0     2    35     4    37
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.00  0.99  0.01  1.00  0.97  0.03  0.75  0.00  0.25  0.46  0.05  0.49
Final Sat.:     4   777     4   622   666    17   407     0   136   269    31   285
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.77  0.77  0.77  0.14  0.29  0.29  0.01  xxxx  0.01  0.13  0.13  0.13
Crit Moves:        ****              ****        ****                    ****
Delay/Veh:   20.8  20.8  20.8   9.3   9.9   9.9   9.1   0.0   9.1   9.4   9.4   9.4
Delay Adj:   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:  20.8  20.8  20.8   9.3   9.9   9.9   9.1   0.0   9.1   9.4   9.4   9.4
LOS by Move:    C     C     C     A     A     A     A     *     A     A     A     A
ApproachDel:       20.8               9.7               9.1               9.4
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        20.8               9.7               9.1               9.4
LOS by Appr:          C                 A                 A                 A
********************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 San Pablo Ave./Alcatraz Ave.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.631
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	19.2
Optimal Cycle:	62	Level Of Service:	B

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1	1 0	1 0	2	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module: >> Count Date: 1 Mar 2001 <<												
Base Vol:	0	915	91	285	924	0	0	0	0	107	0	215
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:	0	915	91	285	924	0	0	0	0	107	0	215
Added Vol:	0	4	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	919	91	285	928	0	0	0	0	107	0	215
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:	0	919	91	285	928	0	0	0	0	107	0	215
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	919	91	285	928	0	0	0	0	107	0	215
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
Final Vol.:	0	919	91	285	928	0	0	0	0	107	0	215
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.90	1.00	0.90
Lanes:	0.00	1.82	0.18	1.00	2.00	0.00	0.00	0.00	0.00	0.33	0.00	0.67
Final Sat.:	0	3242	321	1805	3610	0	0	0	0	565	0	1136
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.16	0.26	0.00	0.00	0.00	0.00	0.19	0.00	0.19
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.45	0.45	0.25	0.70	0.00	0.00	0.00	0.00	0.30	0.00	0.30
Volume/Cap:	0.00	0.63	0.63	0.63	0.37	0.00	0.00	0.00	0.00	0.63	0.00	0.63
Uniform Del:	0.0	21.1	21.1	33.4	6.1	0.0	0.0	0.0	0.0	30.2	0.0	30.2
IncremntDel:	0.0	0.8	0.8	2.9	0.1	0.0	0.0	0.0	0.0	2.5	0.0	2.5
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	22.0	22.0	36.2	6.2	0.0	0.0	0.0	0.0	32.8	0.0	32.8
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:	0.0	22.0	22.0	36.2	6.2	0.0	0.0	0.0	0.0	32.8	0.0	32.8
DesignQueue:	0	30	3	12	17	0	0	0	0	4	0	9

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                      Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #16 W. Frontage Road/Powell Street
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):          0.821
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        20.5
Optimal Cycle:      127              Level Of Service:                   C
*******************************************************************************
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
Lanes:        0  0  0  0  0   2  0  0  0  1   1  0  1  1  0   0  0  1  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 1 Mar 2001 <<
Base Vol:       0    0     0   553    0   271   242  408   592     0  613  1589
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:    0    0     0   553    0   271   242  408   592     0  613  1589
Added Vol:      0    0     0     3    0     0     0    1     0     0    1     3
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0   556    0   271   242  409   592     0  614  1592
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:     0    0     0   556    0   271   242  409   592     0  614  1592
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0   556    0   271   242  409   592     0  614  1592
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
Final Vol.:     0    0     0   556    0   271   242  409   592     0  614  1592
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.92 1.00  0.85  0.95 0.95  0.81  1.00 0.95  0.81
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  1.00 1.00  1.00  0.00 1.00  2.00
Final Sat.:     0    0     0  3502    0  1615  1805 1805  1534     0 1805  3069
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.16 0.00  0.17  0.13 0.23  0.39  0.00 0.34  0.52
Crit Moves:                              ****  ****                        ****
Green/Cycle: 0.00 0.00  0.00  0.20 0.00  0.20  0.16 0.80  0.80  0.00 0.63  0.63
Volume/Cap:  0.00 0.00  0.00  0.78 0.00  0.82  0.82 0.28  0.49  0.00 0.54  0.82
Uniform Del:  0.0  0.0   0.0  37.6  0.0  38.0  40.4  2.7   3.4   0.0 10.3  14.1
IncremntDel:  0.0  0.0   0.0   5.4  0.0  15.0  16.5  0.0   0.2   0.0  0.1   2.1
Delay Adj:   0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00
Delay/Veh:    0.0  0.0   0.0  43.0  0.0  53.0  57.0  2.7   3.6   0.0 10.4  16.2
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:   0.0  0.0   0.0  43.0  0.0  53.0  57.0  2.7   3.6   0.0 10.4  16.2
DesignQueue:    0    0     0    26    0    12    12    5     7     0   14    37
*******************************************************************************
```

```
-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*****************************************************************************
Intersection #17 I-80 EB Ramps/Powell St.
*****************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.945
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         30.9
Optimal Cycle:      180                 Level Of Service:                  C
*****************************************************************************
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
Lanes:       1  0  1! 0  1   0  0  0  0  0    1  0  3  0  0    0  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 1 Mar 2001 <<
Base Vol:     541  248   851    0     0     0   138   718     0     0 1347   458
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:  541  248   851    0     0     0   138   718     0     0 1347   458
Added Vol:      0    0     0    0     0     0     0     3     0     0    3     0
PasserByVol:    0    0     0    0     0     0     0     0     0     0    0     0
Initial Fut:  541  248   851    0     0     0   138   721     0     0 1350   458
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:   541  248   851    0     0     0   138   721     0     0 1350   458
Reduct Vol:     0    0     0    0     0     0     0     0     0     0    0     0
Reduced Vol:  541  248   851    0     0     0   138   721     0     0 1350   458
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
Final Vol.:   541  248   851    0     0     0   138   721     0     0 1350   458
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900  1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.85 0.85  0.85 1.00  1.00  1.00  0.95 0.91  1.00  1.00 0.91  0.85
Lanes:       1.29 0.26  1.45 0.00  0.00  0.00  1.00 3.00  0.00  0.00 3.00  1.00
Final Sat.:  2078  424  2343    0     0     0  1805 5187     0     0 5187  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.26 0.58  0.36 0.00  0.00  0.00  0.08 0.14  0.00  0.00 0.26  0.28
Crit Moves:       ****                         ****                        ****
Green/Cycle: 0.62 0.62  0.62 0.00  0.00  0.00  0.08 0.38  0.00  0.00 0.30  0.30
Volume/Cap:  0.42 0.94  0.59 0.00  0.00  0.00  0.94 0.36  0.00  0.00 0.87  0.94
Uniform Del:  9.8 17.5  11.4  0.0   0.0   0.0  45.7 22.2   0.0   0.0 33.1  34.2
IncremntDel:  0.1 11.1   0.3  0.0   0.0   0.0  57.7  0.1   0.0   0.0  5.4  27.4
Delay Adj:   1.00 1.00  1.00 0.00  0.00  0.00  1.00 1.00  0.00  0.00 1.00  1.00
Delay/Veh:    9.9 28.6  11.7  0.0   0.0   0.0 103.4 22.4   0.0   0.0 38.5  61.6
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:   9.9 28.6  11.7  0.0   0.0   0.0 103.4 22.4   0.0   0.0 38.5  61.6
DesignQueue:   12    6    20    0     0     0     7   26     0     0   56    19
*****************************************************************************
```

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

Intersection #18 Christie Ave./Powell St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.724
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	32.0
Optimal Cycle:	83	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1 0 0 1			0 1 0 0 2			2 0 1 1 1			1 0 2 0 1		
Volume Module: >> Count Date: 1 Mar 2001 <<												
Base Vol:	402	42	147	127	67	613	383	667	570	150	998	125
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:	402	42	147	127	67	613	383	667	570	150	998	125
Added Vol:	0	0	0	0	0	0	0	3	0	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	402	42	147	127	67	613	383	670	570	150	1001	125
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:	402	42	147	127	67	613	383	670	570	150	1001	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	402	42	147	127	67	613	383	670	570	150	1001	125
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
Final Vol.:	402	42	147	127	67	613	383	670	570	150	1001	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.97	0.97	0.75	0.92	0.88	0.88	0.95	0.95	0.85
Lanes:	1.81	0.19	1.00	0.65	0.35	2.00	2.00	1.62	1.38	1.00	2.00	1.00
Final Sat.:	3293	344	1615	1204	635	2842	3502	2724	2317	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.09	0.11	0.11	0.22	0.11	0.25	0.25	0.08	0.28	0.08
Crit Moves:	****					****	****				****	
Green/Cycle:	0.17	0.17	0.17	0.30	0.30	0.30	0.15	0.40	0.40	0.13	0.38	0.38
Volume/Cap:	0.72	0.72	0.54	0.35	0.35	0.72	0.72	0.62	0.62	0.62	0.72	0.20
Uniform Del:	39.4	39.4	38.0	27.6	27.6	31.4	40.5	24.0	24.0	40.8	26.4	20.6
IncremntDel:	4.3	4.3	2.2	0.4	0.4	3.1	4.9	0.6	0.6	4.7	1.9	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	43.7	43.7	40.2	28.0	28.0	34.6	45.4	24.5	24.5	45.5	28.3	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:	43.7	43.7	40.2	28.0	28.0	34.6	45.4	24.5	24.5	45.5	28.3	20.8
DesignQueue:	19	2	7	5	3	25	19	24	20	7	37	4

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #19 San Pablo Ave./Stanford Ave.
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.627
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         29.0
Optimal Cycle:       61                Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 1 Mar 2001 <<
Base Vol:     158  802   107  168  810    75  164  618   152  100  315    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:  158  802   107  168  810    75  164  618   152  100  315    44
Added Vol:      3    4     0    0    4     0    0    0     3    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  161  806   107  168  814    75  164  618   155  100  315    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:     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:   161  806   107  168  814    75  164  618   155  100  315    44
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  161  806   107  168  814    75  164  618   155  100  315    44
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
Final Vol.:   161  806   107  168  814    75  164  618   155  100  315    44
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94 0.95 0.92  0.92 0.95 0.93  0.93
Lanes:       1.00 1.77  0.23 1.00 1.83  0.17 1.00 1.60  0.40 1.00 1.75  0.25
Final Sat.:  1805 3130   415 1805 3262   301 1805 2800   702 1805 3111   434
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.26  0.26 0.09 0.25  0.25 0.09 0.22  0.22 0.06 0.10  0.10
Crit Moves:       ****       ****                  ****       ****
Green/Cycle: 0.15 0.41  0.41 0.15 0.41  0.41 0.21 0.35  0.35 0.09 0.23  0.23
Volume/Cap:  0.61 0.63  0.63 0.63 0.61  0.61 0.44 0.63  0.63 0.63 0.44  0.44
Uniform Del: 39.9 23.4  23.4 40.0 23.0  23.0 34.5 26.9  26.9 44.0 32.8  32.8
IncremntDel:  4.0  0.9   0.9  4.6  0.7   0.7  0.8  1.0   1.0  7.7  0.4   0.4
Delay Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Delay/Veh:   43.9 24.2  24.2 44.6 23.8  23.8 35.3 28.0  28.0 51.6 33.2  33.2
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:  43.9 24.2  24.2 44.6 23.8  23.8 35.3 28.0  28.0 51.6 33.2  33.2
DesignQueue:    8   28     4    8   28     3    7   24     6    5   14     2
********************************************************************************
```

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 San Pablo Ave./40th Street

Cycle (sec): 100 Critical Vol./Cap. (X): 0.555

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 27.4

Optimal Cycle: 51 Level Of Service: C

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
Lanes:	2 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module: >> Count Date: 1 Mar 2001 <<												
Base Vol:	247	768	26	171	745	155	183	522	191	39	332	80
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:	247	768	26	171	745	155	183	522	191	39	332	80
Added Vol:	0	5	0	2	5	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	247	773	26	173	750	155	183	522	191	39	332	82
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:	247	773	26	173	750	155	183	522	191	39	332	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	247	773	26	173	750	155	183	522	191	39	332	82
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
Final Vol.:	247	773	26	173	750	155	183	522	191	39	332	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.93	0.93	0.95	0.91	0.91	0.95	0.92	0.92
Lanes:	2.00	1.93	0.07	1.00	1.66	0.34	1.00	1.46	0.54	1.00	1.60	0.40
Final Sat.:	3502	3475	117	1805	2914	602	1805	2537	928	1805	2808	694
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.22	0.10	0.26	0.26	0.10	0.21	0.21	0.02	0.12	0.12
Crit Moves:	****				****			****		****		
Green/Cycle:	0.13	0.41	0.41	0.18	0.46	0.46	0.19	0.37	0.37	0.04	0.22	0.22
Volume/Cap:	0.56	0.54	0.54	0.54	0.56	0.56	0.54	0.56	0.56	0.56	0.54	0.54
Uniform Del:	41.0	22.2	22.2	37.4	19.4	19.4	36.6	24.9	24.9	47.2	34.5	34.5
IncremntDel:	1.5	0.4	0.4	1.8	0.4	0.4	1.7	0.5	0.5	9.4	0.7	0.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	42.5	22.6	22.6	39.2	19.8	19.8	38.3	25.5	25.5	56.6	35.2	35.2
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:	42.5	22.6	22.6	39.2	19.8	19.8	38.3	25.5	25.5	56.6	35.2	35.2
DesignQueue:	12	27	1	8	24	5	8	19	7	2	15	4

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #21 Adeline St./40th St.
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap. (X):        0.553
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        31.6
Optimal Cycle:        51               Level Of Service:                  C
********************************************************************************
Approach:      North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase       Split Phase       Split Phase       Split Phase
Rights:           Include           Include           Include           Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        1  0  1  0  1    1  0  2  0  1    1  0  1  1  0    1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 20 Mar 2002 << 05:00 - 06:00 PM
Base Vol:      21  225    23    84  171    78   124  635    21     7  383    59
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:   21  225    23    84  171    78   124  635    21     7  383    59
Added Vol:      0    0     0     0    0     0     0    2     0     0    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   21  225    23    84  171    78   124  637    21     7  385    59
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  225    23    84  171    78   124  637    21     7  385    59
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   21  225    23    84  171    78   124  637    21     7  385    59
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
Final Vol.:    21  225    23    84  171    78   124  637    21     7  385    59
------------|---------------||---------------||---------------||---------------|
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  0.95 0.95  0.95  0.95 1.00  0.85
Lanes:       1.00 1.00  1.00  1.00 2.00  1.00  1.00 1.94  0.06  1.00 1.00  1.00
Final Sat.:  1805 1900  1615  1805 3610  1615  1805 3477   115  1805 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.12  0.01  0.05 0.05  0.05  0.07 0.18  0.18  0.00 0.20  0.04
Crit Moves:       ****                   ****              ****       ****
Green/Cycle: 0.21 0.21  0.21  0.09 0.09  0.09  0.33 0.33  0.33  0.37 0.37  0.37
Volume/Cap:  0.05 0.55  0.07  0.53 0.54  0.55  0.21 0.55  0.55  0.01 0.55  0.10
Uniform Del: 31.2 35.0  31.3  43.7 43.7  43.8  24.0 27.4  27.4  20.1 25.1  20.8
IncremntDel:  0.1  1.6   0.1   3.5  1.9   4.7   0.2  0.6   0.6   0.0  1.0   0.1
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   31.3 36.7  31.4  47.1 45.6  48.4  24.2 27.9  27.9  20.1 26.1  20.9
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:  31.3 36.7  31.4  47.1 45.6  48.4  24.2 27.9  27.9  20.1 26.1  20.9
DesignQueue:    1   10     1     4    9     4     5   25     1     0   14     2
********************************************************************************
```

APPENDIX E-5

YEAR 2025 BASELINE AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	2025 Base AM
Command:	Default Command
Volume:	2025 Base AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	None
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #1 Rydin Rd/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.533
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Stop Sign			Stop Sign			Stop Sign			Stop Sign	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		0 1 0 0 1			1 0 1 0 1			0 1 0 1 0			1 0 1 1 0	
Volume Module:												
Base Vol:	58	18	323	52	27	9	8	97	84	200	193	80
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:	58	18	323	52	27	9	8	97	84	200	193	80
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:	58	18	323	52	27	9	8	97	84	200	193	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	18	323	52	27	9	8	97	84	200	193	80
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
Final Vol.:	58	18	323	52	27	9	8	97	84	200	193	80
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.76	0.24	1.00	1.00	1.00	1.00	0.08	1.03	0.89	1.00	1.41	0.59
Final Sat.:	388	120	606	424	450	492	43	529	500	498	768	332
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.53	0.12	0.06	0.02	0.19	0.18	0.17	0.40	0.25	0.24
Crit Moves:			****	****			****			****		
Delay/Veh:	10.6	10.6	14.3	11.6	10.5	9.5	10.7	10.6	9.8	14.1	11.1	10.6
Delay Adj:	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:	10.6	10.6	14.3	11.6	10.5	9.5	10.7	10.6	9.8	14.1	11.1	10.6
LOS by Move:	B	B	B	B	B	A	B	B	A	B	B	B
ApproachDel:		13.6			11.0			10.3			12.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		13.6			11.0			10.3			12.3	
LOS by Appr:		B			B			B			B	

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                      Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #2 I-80 WB Ramps/Central Ave
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap. (X):          0.536
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         22.9
Optimal Cycle:        49               Level Of Service:                   C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        0  0  0  0  0   0  1  0  0  1    0  0  1  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   266     4   347     0   409    58   341   459     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:    0     0     0   266     4   347     0   409    58   341   459     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:     0     0     0   266     4   347     0   409    58   341   459     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   266     4   347     0   409    58   341   459     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
Final Vol.:     0     0     0   266     4   347     0   409    58   341   459     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.85  0.85  0.85  1.00  0.93  0.93  0.95  0.95  1.00
Lanes:       0.00  0.00  0.00  0.99  0.01  1.00  0.00  1.75  0.25  1.00  2.00  0.00
Final Sat.:     0     0     0  1591    24  1615     0  3102   440  1805  3610     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.17  0.17  0.21  0.00  0.13  0.13  0.19  0.13  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00  0.00  0.00  0.40  0.40  0.40  0.00  0.25  0.25  0.35  0.60  0.00
Volume/Cap:  0.00  0.00  0.00  0.42  0.42  0.54  0.00  0.54  0.54  0.54  0.21  0.00
Uniform Del:  0.0   0.0   0.0  21.5  21.5  22.8   0.0  32.7  32.7  25.8   9.2   0.0
IncremntDel:  0.0   0.0   0.0   0.4   0.4   0.9   0.0   0.7   0.7   0.9   0.0   0.0
Delay Adj:   0.00  0.00  0.00  1.00  1.00  1.00  0.00  1.00  1.00  1.00  1.00  0.00
Delay/Veh:    0.0   0.0   0.0  22.0  22.0  23.7   0.0  33.4  33.4  26.7   9.3   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:   0.0   0.0   0.0  22.0  22.0  23.7   0.0  33.4  33.4  26.7   9.3   0.0
DesignQueue:    0     0     0     9     0    12     0    18     3    13    11     0
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                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #3 I-80 EB Ramps/Central Ave
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap. (X):         0.497
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        17.6
Optimal Cycle:        45               Level Of Service:                   B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       1  1  0  0  1   0  0  0  0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     45     0   298    0     0     0  128   580     0    0   606   229
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:  45     0   298    0     0     0  128   580     0    0   606   229
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     0   298    0     0     0  128   580     0    0   606   229
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  45     0   298    0     0     0  128   580     0    0   606   229
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
Final Vol.:   45     0   298    0     0     0  128   580     0    0   606   229
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.95 1.00  0.85 1.00 1.00  1.00 0.95 0.95  1.00 1.00 0.91  0.91
Lanes:       2.00 0.00  1.00 0.00 0.00  0.00 1.00 2.00  0.00 0.00 1.45  0.55
Final Sat.:  3618    0  1615    0     0     0 1805 3610     0    0 2513   949
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.18 0.00 0.00  0.00 0.07 0.16  0.00 0.00 0.24  0.24
Crit Moves:             ****                 ****                  ****
Green/Cycle: 0.37 0.00  0.37 0.00 0.00  0.00 0.14 0.63  0.00 0.00 0.49  0.49
Volume/Cap:  0.03 0.00  0.50 0.00 0.00  0.00 0.50 0.26  0.00 0.00 0.50  0.50
Uniform Del: 20.0  0.0  24.2  0.0  0.0   0.0 39.5  8.2   0.0  0.0 17.4  17.4
IncremntDel:  0.0  0.0   0.6  0.0  0.0   0.0  1.5  0.1   0.0  0.0  0.2   0.2
Delay Adj:   1.00 0.00  1.00 0.00 0.00  0.00 1.00 1.00  0.00 0.00 1.00  1.00
Delay/Veh:   20.0  0.0  24.9  0.0  0.0   0.0 41.1  8.3   0.0  0.0 17.7  17.7
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:  20.0  0.0  24.9  0.0  0.0   0.0 41.1  8.3   0.0  0.0 17.7  17.7
DesignQueue:    2    0    11    0    0     0    6   12     0    0   18     7
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                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 San Pablo Avenue/Central Avenue
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap. (X):          0.601
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):         26.3
Optimal Cycle:         57               Level Of Service:                    C
********************************************************************************
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        Split Phase      Split Phase
Rights:            Include           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  1  1  0    1  1  0  0  1    0  1  0  1  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      75  406    40    78  991   108   205  235   104    97  231    98
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:   75  406    40    78  991   108   205  235   104    97  231    98
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:    75  406    40    78  991   108   205  235   104    97  231    98
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   75  406    40    78  991   108   205  235   104    97  231    98
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
Final Vol.:    75  406    40    78  991   108   205  235   104    97  231    98
------------|----------------||----------------||----------------||----------------|
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 0.94  0.94  0.98 0.98  0.85  0.91 0.91  0.91
Lanes:       1.00 1.82  0.18  1.00 1.80  0.20  1.00 1.00  1.00  0.46 1.08  0.46
Final Sat.:  1805 3244   320  1805 3206   349  1856 1856  1615   785 1870   793
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.13  0.13  0.04 0.31  0.31  0.11 0.13  0.06  0.12 0.12  0.12
Crit Moves:  ****                   ****              ****                    ****
Green/Cycle: 0.07 0.43  0.43  0.15 0.51  0.51  0.21 0.21  0.21  0.21 0.21  0.21
Volume/Cap:  0.60 0.29  0.29  0.29 0.60  0.60  0.52 0.60  0.31  0.60 0.60  0.60
Uniform Del: 45.2 18.3  18.3  37.8 17.1  17.1  35.0 35.7  33.3  36.0 36.0  36.0
IncremntDel:  7.9  0.1   0.1   0.6  0.6   0.6   0.6  1.4   0.5   1.4  1.4   1.4
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   53.1 18.4  18.4  38.4 17.6  17.6  35.6 37.1  33.8  37.4 37.4  37.4
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:  53.1 18.4  18.4  38.4 17.6  17.6  35.6 37.1  33.8  37.4 37.4  37.4
DesignQueue:    4   13     1     4   29     3     9   11     5     4   11     4
********************************************************************************
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Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 San Pablo Avenue/Marin Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.606
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	28.2
Optimal Cycle:	58	Level Of Service:	C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	170	518	260	239	976	10	4	460	92	163	752	89
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:	170	518	260	239	976	10	4	460	92	163	752	89
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:	170	518	260	239	976	10	4	460	92	163	752	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	170	518	260	239	976	10	4	460	92	163	752	89
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
Final Vol.:	170	518	260	239	976	10	4	460	92	163	752	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.93	0.93
Lanes:	1.00	1.33	0.67	1.00	1.98	0.02	1.00	1.67	0.33	1.00	1.79	0.21
Final Sat.:	1805	2283	1146	1805	3570	37	1805	2933	587	1805	3176	376
Capacity Analysis Module:												
Vol/Sat:	0.09	0.23	0.23	0.13	0.27	0.27	0.00	0.16	0.16	0.09	0.24	0.24
Crit Moves:		****		****				****		****		
Green/Cycle:	0.15	0.37	0.37	0.22	0.44	0.44	0.00	0.26	0.26	0.15	0.40	0.40
Volume/Cap:	0.62	0.61	0.61	0.61	0.62	0.62	0.59	0.61	0.61	0.61	0.59	0.59
Uniform Del:	39.7	25.3	25.3	35.2	21.5	21.5	49.7	32.6	32.6	39.8	23.3	23.3
IncremntDel:	4.3	0.8	0.8	2.7	0.8	0.8	90.2	1.2	1.2	3.9	0.6	0.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.0	26.2	26.2	37.9	22.3	22.3	140.0	33.8	33.8	43.8	23.9	23.9
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:	44.0	26.2	26.2	37.9	22.3	22.3	140.0	33.8	33.8	43.8	23.9	23.9
DesignQueue:	8	19	10	11	33	0	0	20	4	8	26	3

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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 W. Frontage Rd/Gilman St
********************************************************************************
Average Delay (sec/veh):     48.4          Worst Case Level Of Service:        E
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  1    0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      79    0   156     5    0     7     7   28    24   507   54     4
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:   79    0   156     5    0     7     7   28    24   507   54     4
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:    79    0   156     5    0     7     7   28    24   507   54     4
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    79    0   156     5    0     7     7   28    24   507   54     4
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.1 xxxx   6.2   7.1 xxxx   6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3   3.5 xxxx   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1083 xxxx    28  1202 xxxx    29    58 xxxx xxxxx    52 xxxx xxxxx
Potent Cap.:  197 xxxx  1053   163 xxxx  1052  1559 xxxx xxxxx  1567 xxxx xxxxx
Move Cap.:    126 xxxx  1053    89 xxxx  1052  1559 xxxx xxxxx  1567 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx   7.3 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  303 xxxxx  xxxx  192 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx 48.4 xxxxx xxxxx 25.0 xxxxx   7.3 xxxx xxxxx   8.4 xxxx xxxxx
Shared LOS:     *    E     *     *    D     *     A    *     *     A    *     *
ApproachDel:       48.4             25.0            xxxxxx           xxxxxx
ApproachLOS:         E                D               *                *
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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #7 I-80 WB Ramps/Gilman St
********************************************************************************
Average Delay (sec/veh):     84.8           Worst Case Level Of Service:       F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  1  0  0  1    0  0  1  1  0    0  1  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   479  261   456     0  173    12   171   99     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:    0    0     0   479  261   456     0  173    12   171   99     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:     0    0     0   479  261   456     0  173    12   171   99     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     0    0     0   479  261   456     0  173    12   171   99     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   528  626    50  xxxx xxxx xxxxx   185 xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   485  403  1015  xxxx xxxx xxxxx  1402 xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   435  349  1015  xxxx xxxx xxxxx  1402 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  22.9 xxxx  11.4 xxxxx xxxx xxxxx   7.6 xxxx xxxxx
LOS by Move:    *    *     *     C    *     B     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   386 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx 181.2 xxxx xxxxx xxxxx xxxx xxxxx   7.9 xxxx xxxxx
Shared LOS:     *    *     *     F    *     *     *    *     *     A    *     *
ApproachDel:     xxxxxx             84.8            xxxxxx           xxxxxx
ApproachLOS:        *                 F                *                *
```

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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
*******************************************************************************
Intersection #8 I-80 EB Ramps/Gilman Street
*******************************************************************************
Average Delay (sec/veh):     16.2          Worst Case Level Of Service:      C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include          Include          Include           Include
Lanes:        1  0  0  1  0   0  0  0  0  0   0  1  1  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      57    0   321     0    0     0   110  619     0     0  230   296
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:   57    0   321     0    0     0   110  619     0     0  230   296
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:    57    0   321     0    0     0   110  619     0     0  230   296
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    57    0   321     0    0     0   110  619     0     0  230   296
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  954 xxxx   310  xxxx xxxx xxxxx   526 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:  260 xxxx   692  xxxx xxxx xxxxx  1051 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:    238 xxxx   692  xxxx xxxx xxxxx  1051 xxxx xxxxx  xxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del: 24.8 xxxx xxxxx xxxxx xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    C    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx   692  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx  14.6 xxxxx xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     B     *    *     *     A    *     *     *    *     *
ApproachDel:        16.2             xxxxxx           xxxxxx            xxxxxx
ApproachLOS:          C                *                *                 *
```

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                    Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #9 San Pablo Avenue/Gilman Street
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.826
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         29.3
Optimal Cycle:      107                Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  1  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      203  582    46    95  998   174   119  331   143    81  485    53
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:   203  582    46    95  998   174   119  331   143    81  485    53
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:    203  582    46    95  998   174   119  331   143    81  485    53
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   203  582    46    95  998   174   119  331   143    81  485    53
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
Final Vol.:    203  582    46    95  998   174   119  331   143    81  485    53
------------|---------------||---------------||---------------||---------------|
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  0.62 0.62  0.62  0.85 0.85  0.85
Lanes:        1.00 1.85  0.15  1.00 1.70  0.30  0.40 1.12  0.48  0.13 0.78  0.09
Final Sat.:   1805 3309   262  1805 3006   524   470 1307   565   212 1271   139
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.11 0.18  0.18  0.05 0.33  0.33  0.25 0.25  0.25  0.38 0.38  0.38
Crit Moves:   ****                  ****                             ****
Green/Cycle:  0.14 0.41  0.41  0.12 0.40  0.40  0.46 0.46  0.46  0.46 0.46  0.46
Volume/Cap:   0.83 0.42  0.42  0.42 0.83  0.83  0.55 0.55  0.55  0.83 0.83  0.83
Uniform Del:  42.0 20.8  20.8  40.5 26.8  26.8  19.4 19.4  19.4  23.4 23.4  23.4
IncremntDel:  20.0  0.2   0.2   1.3  4.1   4.1   0.6  0.6   0.6   7.5  7.5   7.5
Delay Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:    62.0 21.0  21.0  41.8 30.9  30.9  20.0 20.0  20.0  30.9 30.9  30.9
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:   62.0 21.0  21.0  41.8 30.9  30.9  20.0 20.0  20.0  30.9 30.9  30.9
DesignQueue:    10   20     2     5   36     6     4   10     4     3   16     2
********************************************************************************
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                     Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Base Volume Alternative)
*******************************************************************************
Intersection #10 W. Frontage Rd/University Ave
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap. (X):         0.464
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):       13.1
Optimal Cycle:          0              Level Of Service:                  B
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0    0  1  0  1  0    0  1  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      34   111    21    32   345    61   109    70    40   215   108     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:   34   111    21    32   345    61   109    70    40   215   108     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:     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:    34   111    21    32   345    61   109    70    40   215   108     8
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   34   111    21    32   345    61   109    70    40   215   108     8
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
Final Vol.:    34   111    21    32   345    61   109    70    40   215   108     8
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.20  0.67  0.13  0.15  1.57  0.28  1.00  0.64  0.36  1.00  1.86  0.14
Final Sat.:   102   333    63    78   853   154   463   330   189   463   921    69
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.33  0.33  0.33  0.41  0.40  0.40  0.24  0.21  0.21  0.46  0.12  0.12
Crit Moves:  ****              ****              ****              ****
Delay/Veh:   13.0  13.0  13.0  13.5  13.2  12.8  12.1  10.9  10.9  16.1  10.5  10.4
Delay Adj:   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:  13.0  13.0  13.0  13.5  13.2  12.8  12.1  10.9  10.9  16.1  10.5  10.4
LOS by Move:    B     B     B     B     B     B     B     B     B     C     B     B
ApproachDel:       13.0              13.2              11.5              14.1
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        13.0              13.2              11.5              14.1
LOS by Appr:          B                 B                 B                 B
*******************************************************************************
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                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
*********************************************************************************
Intersection #11 6th Street/University Ave
*********************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):        0.736
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        28.4
Optimal Cycle:         86                Level Of Service:                  C
*********************************************************************************
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
Lanes:        1  0  1  0  1    1  0  1  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     295  288    36    82  356   302   102  996   413    60 1188    63
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:  295  288    36    82  356   302   102  996   413    60 1188    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:     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:   295  288    36    82  356   302   102  996   413    60 1188    63
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  295  288    36    82  356   302   102  996   413    60 1188    63
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
Final Vol.:   295  288    36    82  356   302   102  996   413    60 1188    63
------------|---------------||---------------||---------------||---------------|
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  0.85  0.95 0.95  0.85  0.95 0.95  0.85
Lanes:       1.00 1.00  1.00  1.00 1.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1805 1900  1615  1805 1900  1615  1805 3610  1615  1805 3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.16 0.15  0.02  0.05 0.19  0.19  0.06 0.28  0.26  0.03 0.33  0.04
Crit Moves:  ****                  ****        ****                   ****
Green/Cycle: 0.22 0.37  0.37  0.11 0.25  0.25  0.08 0.47  0.47  0.06 0.45  0.45
Volume/Cap:  0.74 0.41  0.06  0.41 0.74  0.73  0.74 0.59  0.55  0.59 0.74  0.09
Uniform Del: 36.2 23.6  20.5  41.5 34.2  34.2  45.2 19.6  19.1  46.1 22.8  15.9
IncremntDel:  7.0  0.4   0.0   1.4  5.9   6.8  18.6  0.6   0.8   8.9  1.8   0.1
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   43.2 24.0  20.6  42.9 40.1  41.0  63.7 20.2  19.9  54.9 24.6  16.0
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:  43.2 24.0  20.6  42.9 40.1  41.0  63.7 20.2  19.9  54.9 24.6  16.0
DesignQueue:   13   11     1     4   16    13     5   32    13     3   40     2
*********************************************************************************
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                       Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #12 San Pablo Ave/University Ave
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap. (X):         0.746
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         31.0
Optimal Cycle:        90                Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     188  620    66    76  883    89   193  932   105   139  608    87
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:  188  620    66    76  883    89   193  932   105   139  608    87
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:   188  620    66    76  883    89   193  932   105   139  608    87
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  188  620    66    76  883    89   193  932   105   139  608    87
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
Final Vol.:   188  620    66    76  883    89   193  932   105   139  608    87
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94  0.95 0.94  0.94  0.95 0.93  0.93
Lanes:       1.00 1.81  0.19  1.00 1.82  0.18  1.00 1.80  0.20  1.00 1.75  0.25
Final Sat.:  1805 3217   342  1805 3234   326  1805 3196   360  1805 3098   443
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.19  0.19  0.04 0.27  0.27  0.11 0.29  0.29  0.08 0.20  0.20
Crit Moves:  ****                  ****              ****        ****
Green/Cycle: 0.14 0.42  0.42  0.09 0.37  0.37  0.17 0.39  0.39  0.10 0.32  0.32
Volume/Cap:  0.75 0.46  0.46  0.46 0.75  0.75  0.61 0.75  0.75  0.75 0.61  0.61
Uniform Del: 41.3 21.2  21.2  43.2 27.6  27.6  38.2 26.2  26.2  43.6 28.8  28.8
IncremntDel: 11.5  0.2   0.2   2.1  2.4   2.4   3.6  2.3   2.3  15.1  1.0   1.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   52.8 21.4  21.4  45.2 30.0  30.0  41.7 28.4  28.4  58.7 29.8  29.8
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:  52.8 21.4  21.4  45.2 30.0  30.0  41.7 28.4  28.4  58.7 29.8  29.8
DesignQueue:    9   21     2     4   33     3     9   34     4     7   24     3
********************************************************************************
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                      Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
********************************************************************************
Average Delay (sec/veh):     22.4          Worst Case Level Of Service:        C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  1  0    0  1  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  146   14   211  869     0     0    0     0    32    0     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:     0  146   14   211  869     0     0    0     0    32    0     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  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:      0  146   14   211  869     0     0    0     0    32    0     1
Reduct Vol:      0    0    0     0    0     0     0    0     0     0    0     0
Final Vol.:      0  146   14   211  869     0     0    0     0    32    0     1
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   160 xxxx xxxxx  xxxx xxxx xxxxx  1010 xxxx   153
Potent Cap.: xxxx xxxx xxxxx  1432 xxxx xxxxx  xxxx xxxx xxxxx   268 xxxx   898
Move Cap.:   xxxx xxxx xxxxx  1432 xxxx xxxxx  xxxx xxxx xxxxx   234 xxxx   898
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  239 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx   7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 22.4 xxxxx
Shared LOS:     *    *     *     A    *     *     *    *     *     *    C     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            22.4
ApproachLOS:        *                *                *                C
```

```
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Base Volume Alternative)
*******************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
*******************************************************************************
Cycle (sec):          100               Critical Vol./Cap. (X):         0.676
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        14.0
Optimal Cycle:          0               Level Of Service:                  B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  1! 0  0   1  0  0  1  0   0  0  1! 0  0   0  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       1  141     2  345  523     2    0    0     0    0    0    15
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:    1  141     2  345  523     2    0    0     0    0    0    15
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:     1  141     2  345  523     2    0    0     0    0    0    15
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    1  141     2  345  523     2    0    0     0    0    0    15
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
Final Vol.:     1  141     2  345  523     2    0    0     0    0    0    15
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.01 0.98  0.01 1.00 0.99  0.01 0.00 1.00  0.00 0.00 0.00  1.00
Final Sat.:     5  743    11  701  773     3    0    0     0    0    0   662
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.19 0.19  0.19 0.49 0.68  0.68 xxxx xxxx  xxxx xxxx xxxx  0.02
Crit Moves:       ****              ****                                  ****
Delay/Veh:    8.8  8.8   8.8 12.7 16.4  16.4  0.0  0.0   0.0  0.0  0.0   8.2
Delay Adj:   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:   8.8  8.8   8.8 12.7 16.4  16.4  0.0  0.0   0.0  0.0  0.0   8.2
LOS by Move:    A    A     A    B    C     C    *    *     *    *    *     A
ApproachDel:        8.8             14.9           xxxxxx             8.2
Delay Adj:         1.00             1.00            xxxxx            1.00
ApprAdjDel:         8.8             14.9           xxxxxx             8.2
LOS by Appr:         A                B               *                 A
*******************************************************************************
```

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

Intersection #15 San Pablo Ave./Alcatraz Ave.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.744
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	23.8
Optimal Cycle:	89	Level Of Service:	C

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	Split Phase	Split Phase
Rights:	Include	Include	Include	Include
Lanes:	0 0 1 1 0	1 0 2 0 0	0 0 0 0 0	0 0 1! 0 0

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	1087	54	150	1122	0	0	0	0	156	0	423
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:	0	1087	54	150	1122	0	0	0	0	156	0	423
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:	0	1087	54	150	1122	0	0	0	0	156	0	423
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1087	54	150	1122	0	0	0	0	156	0	423
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
Final Vol.:	0	1087	54	150	1122	0	0	0	0	156	0	423
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	1.91	0.09	1.00	2.00	0.00	0.00	0.00	0.00	0.27	0.00	0.73
Final Sat.:	0	3415	170	1805	3610	0	0	0	0	455	0	1234
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.32	0.08	0.31	0.00	0.00	0.00	0.00	0.34	0.00	0.34
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.43	0.43	0.11	0.54	0.00	0.00	0.00	0.00	0.46	0.00	0.46
Volume/Cap:	0.00	0.74	0.74	0.74	0.58	0.00	0.00	0.00	0.00	0.74	0.00	0.74
Uniform Del:	0.0	24.0	24.0	43.0	15.4	0.0	0.0	0.0	0.0	22.1	0.0	22.1
IncremntDel:	0.0	2.0	2.0	13.9	0.4	0.0	0.0	0.0	0.0	3.9	0.0	3.9
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	26.0	26.0	57.0	15.8	0.0	0.0	0.0	0.0	26.1	0.0	26.1
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:	0.0	26.0	26.0	57.0	15.8	0.0	0.0	0.0	0.0	26.1	0.0	26.1
DesignQueue:	0	38	2	8	31	0	0	0	0	5	0	14

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                      Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #16 W. Frontage Road/Powell Street
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap. (X):         0.555
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         17.6
Optimal Cycle:        51                 Level Of Service:                   B
********************************************************************************
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
Lanes:        0  0  0  0  0   2  0  0  0  1   1  0  1  1  0   0  0  1  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  685     0   288   87   260   345    0   910   667
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:   0     0     0  685     0   288   87   260   345    0   910   667
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:    0     0     0  685     0   288   87   260   345    0   910   667
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0  685     0   288   87   260   345    0   910   667
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
Final Vol.:    0     0     0  685     0   288   87   260   345    0   910   667
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.92  1.00  0.85  0.95  0.95  0.81  1.00  0.89  0.89
Lanes:       0.00  0.00  0.00  2.00  0.00  1.00  1.00  1.00  1.00  0.00  1.73  1.27
Final Sat.:    0     0     0  3502     0  1615  1805  1805  1534     0  2928  2146
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.20  0.00  0.18  0.05  0.14  0.22  0.00  0.31  0.31
Crit Moves:                    ****              ****                    ****
Green/Cycle: 0.00  0.00  0.00  0.35  0.00  0.35  0.09  0.65  0.65  0.00  0.56  0.56
Volume/Cap:  0.00  0.00  0.00  0.55  0.00  0.51  0.55  0.22  0.35  0.00  0.55  0.55
Uniform Del:  0.0   0.0   0.0  26.0   0.0  25.5  43.8   7.3   8.0   0.0  14.0  14.0
IncremntDel:  0.0   0.0   0.0   0.6   0.0   0.7   4.3   0.0   0.1   0.0   0.2   0.2
Delay Adj:   0.00  0.00  0.00  1.00  0.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00
Delay/Veh:    0.0   0.0   0.0  26.6   0.0  26.2  48.1   7.3   8.1   0.0  14.3  14.3
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:   0.0   0.0   0.0  26.6   0.0  26.2  48.1   7.3   8.1   0.0  14.3  14.3
DesignQueue:    0     0     0    26     0    11     4     5     7     0    24    18
********************************************************************************
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                     Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #17 I-80 EB Ramps/Powell St.
******************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):         0.788
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        22.0
Optimal Cycle:      108              Level Of Service:                  C
******************************************************************************
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
Lanes:        1  0  1! 0  1    0  0  0  0  0    1  0  3  0  0    0  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     568     1   915     0     0     0    82   644     0     0   907   432
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:  568     1   915     0     0     0    82   644     0     0   907   432
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:   568     1   915     0     0     0    82   644     0     0   907   432
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  568     1   915     0     0     0    82   644     0     0   907   432
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
Final Vol.:   568     1   915     0     0     0    82   644     0     0   907   432
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.82  0.82  0.82  1.00  1.00  1.00  0.95  0.91  1.00  1.00  0.91  0.85
Lanes:       1.38  0.01  1.61  0.00  0.00  0.00  1.00  3.00  0.00  0.00  3.00  1.00
Final Sat.:  2161     2  2526     0     0     0  1805  5187     0     0  5187  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.26  0.48  0.36  0.00  0.00  0.00  0.05  0.12  0.00  0.00  0.17  0.27
Crit Moves:        ****                          ****                          ****
Green/Cycle: 0.60  0.60  0.60  0.00  0.00  0.00  0.06  0.40  0.00  0.00  0.34  0.34
Volume/Cap:  0.44  0.79  0.60  0.00  0.00  0.00  0.79  0.31  0.00  0.00  0.52  0.79
Uniform Del: 10.7  15.0  12.4   0.0   0.0   0.0  46.5  20.7   0.0   0.0  26.4  29.8
IncremntDel:  0.1   2.3   0.4   0.0   0.0   0.0  31.9   0.1   0.0   0.0   0.3   7.5
Delay Adj:   1.00  1.00  1.00  0.00  0.00  0.00  1.00  1.00  0.00  0.00  1.00  1.00
Delay/Veh:   10.8  17.3  12.8   0.0   0.0   0.0  78.4  20.8   0.0   0.0  26.7  37.3
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:  10.8  17.3  12.8   0.0   0.0   0.0  78.4  20.8   0.0   0.0  26.7  37.3
DesignQueue:   13     0    22     0     0     0     4    22     0     0    35    17
******************************************************************************
```

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

Intersection #18 Christie Ave./Powell St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.530
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	26.6
Optimal Cycle:	49	Level Of Service:	C

Approach:	North Bound	South Bound	East Bound	West Bound
Control:	Split Phase	Split Phase	Protected	Protected
Rights:	Include	Include	Include	Include
Lanes:	1 1 0 0 1	0 1 0 0 2	2 0 1 1 1	1 0 2 0 1

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	357	33	133	89	50	272	335	865	433	135	722	97
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:	357	33	133	89	50	272	335	865	433	135	722	97
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:	357	33	133	89	50	272	335	865	433	135	722	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	357	33	133	89	50	272	335	865	433	135	722	97
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
Final Vol.:	357	33	133	89	50	272	335	865	433	135	722	97
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.97	0.97	0.75	0.92	0.90	0.90	0.95	0.95	0.85
Lanes:	1.83	0.17	1.00	0.64	0.36	2.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3325	307	1615	1179	662	2842	3502	3428	1716	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.08	0.08	0.08	0.10	0.10	0.25	0.25	0.07	0.20	0.06
Crit Moves:		****				****		****		****		
Green/Cycle:	0.20	0.20	0.20	0.18	0.18	0.18	0.20	0.48	0.48	0.14	0.42	0.42
Volume/Cap:	0.53	0.53	0.41	0.42	0.42	0.53	0.48	0.53	0.53	0.53	0.48	0.14
Uniform Del:	35.6	35.6	34.7	36.3	36.3	37.1	35.4	18.4	18.4	39.9	21.2	18.1
IncremntDel:	0.7	0.7	0.8	0.9	0.9	1.1	0.5	0.2	0.2	2.1	0.2	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	36.4	36.4	35.5	37.2	37.2	38.2	35.9	18.6	18.6	42.0	21.5	18.2
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:	36.4	36.4	35.5	37.2	37.2	38.2	35.9	18.6	18.6	42.0	21.5	18.2
DesignQueue:	16	2	6	4	2	13	15	27	13	7	25	3

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

Intersection #19 San Pablo Ave./Stanford Ave.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.745
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	28.5
Optimal Cycle:	89	Level Of Service:	C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	238	1115	75	71	1111	48	87	230	182	159	830	37
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:	238	1115	75	71	1111	48	87	230	182	159	830	37
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:	238	1115	75	71	1111	48	87	230	182	159	830	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	238	1115	75	71	1111	48	87	230	182	159	830	37
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
Final Vol.:	238	1115	75	71	1111	48	87	230	182	159	830	37
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	0.94	0.94	0.95	0.89	0.89	0.95	0.94	0.94
Lanes:	1.00	1.87	0.13	1.00	1.92	0.08	1.00	1.12	0.88	1.00	1.91	0.09
Final Sat.:	1805	3352	225	1805	3440	149	1805	1882	1489	1805	3435	153
Capacity Analysis Module:												
Vol/Sat:	0.13	0.33	0.33	0.04	0.32	0.32	0.05	0.12	0.12	0.09	0.24	0.24
Crit Moves:	****				****		****				****	
Green/Cycle:	0.18	0.55	0.55	0.06	0.43	0.43	0.06	0.23	0.23	0.16	0.32	0.32
Volume/Cap:	0.74	0.61	0.61	0.61	0.74	0.74	0.74	0.54	0.54	0.54	0.74	0.74
Uniform Del:	39.0	15.4	15.4	45.5	23.7	23.7	46.0	34.1	34.1	38.4	30.1	30.1
IncremntDel:	9.2	0.6	0.6	9.0	2.0	2.0	22.6	0.8	0.8	2.0	2.7	2.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.2	16.0	16.0	54.6	25.7	25.7	68.6	34.9	34.9	40.4	32.7	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:	48.2	16.0	16.0	54.6	25.7	25.7	68.6	34.9	34.9	40.4	32.7	32.7
DesignQueue:	11	31	2	4	38	2	5	10	8	8	33	1

```
--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #20 San Pablo Ave./40th Street
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap. (X):        0.827
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        31.7
Optimal Cycle:      132               Level Of Service:                 C
********************************************************************************
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
Lanes:        2  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     421 1311    16     73 1213    41    134  390   151     65  752   235
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:  421 1311    16     73 1213    41    134  390   151     65  752   235
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:   421 1311    16     73 1213    41    134  390   151     65  752   235
Reduct Vol:     0    0     0      0    0     0      0    0     0      0    0     0
Reduced Vol:  421 1311    16     73 1213    41    134  390   151     65  752   235
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
Final Vol.:   421 1311    16     73 1213    41    134  390   151     65  752   235
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900   1900 1900  1900   1900 1900  1900   1900 1900  1900
Adjustment:  0.92 0.95  0.95   0.95 0.95  0.95   0.95 0.91  0.91   0.95 0.92  0.92
Lanes:       2.00 1.98  0.02   1.00 1.93  0.07   1.00 1.44  0.56   1.00 1.52  0.48
Final Sat.:  3502 3559    43   1805 3475   117   1805 2493   965   1805 2651   829
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.37  0.37   0.04 0.35  0.35   0.07 0.16  0.16   0.04 0.28  0.28
Crit Moves:  ****                   ****         ****                   ****
Green/Cycle: 0.15 0.51  0.51   0.06 0.42  0.42   0.09 0.35  0.35   0.08 0.34  0.34
Volume/Cap:  0.83 0.72  0.72   0.72 0.83  0.83   0.83 0.44  0.44   0.44 0.83  0.83
Uniform Del: 41.5 18.9  18.9   46.4 25.7  25.7   44.8 24.9  24.9   43.8 30.1  30.1
IncremntDel: 10.8  1.4   1.4   22.1  3.9   3.9   28.2  0.3   0.3    2.2  4.9   4.9
Delay Adj:   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Delay/Veh:   52.3 20.3  20.3   68.6 29.6  29.6   73.0 25.2  25.2   46.0 35.1  35.1
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:  52.3 20.3  20.3   68.6 29.6  29.6   73.0 25.2  25.2   46.0 35.1  35.1
DesignQueue:   21   39     0      4   43     1      7   15     6      3   29     9
********************************************************************************
```

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

Intersection #21 Adeline St./40th St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.558
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	28.8
Optimal Cycle:	52	Level Of Service:	C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Split Phase	Split Phase
Rights:	Include	Include	Include	Include
Lanes:	1 0 1 0 1	1 0 2 0 1	1 0 1 1 0	1 0 1 0 1

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	51	151	35	51	189	83	40	241	44	10	656	36
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:	51	151	35	51	189	83	40	241	44	10	656	36
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:	51	151	35	51	189	83	40	241	44	10	656	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	151	35	51	189	83	40	241	44	10	656	36
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
Final Vol.:	51	151	35	51	189	83	40	241	44	10	656	36
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	0.95	0.93	0.93	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.69	0.31	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1805	2982	545	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.02	0.03	0.05	0.05	0.02	0.08	0.08	0.01	0.35	0.02
Crit Moves:		****			****			****			****	
Green/Cycle:	0.14	0.14	0.14	0.09	0.09	0.09	0.14	0.14	0.14	0.62	0.62	0.62
Volume/Cap:	0.20	0.56	0.15	0.30	0.56	0.55	0.15	0.56	0.56	0.01	0.56	0.04
Uniform Del:	37.8	39.9	37.6	42.2	43.3	43.3	37.4	39.8	39.8	7.3	11.1	7.4
IncremntDel:	0.4	2.6	0.3	1.0	2.1	4.2	0.3	1.4	1.4	0.0	0.6	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.2	42.5	37.9	43.3	45.4	47.5	37.7	41.2	41.2	7.3	11.7	7.4
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:	38.2	42.5	37.9	43.3	45.4	47.5	37.7	41.2	41.2	7.3	11.7	7.4
DesignQueue:	2	7	2	3	10	4	2	12	2	0	15	1

APPENDIX E-6

YEAR 2025 BASELINE PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	2025 Base PM
Command:	Default Command
Volume:	2025 Base PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	None
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

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--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM 4-Way Stop Method (Base Volume Alternative)
********************************************************************************
Intersection #1 Rydin Rd/Central Ave
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.553
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        16.3
Optimal Cycle:        0                Level Of Service:                  C
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  1  0  0  1    1  0  1  0  1    0  1  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     102    9   281    95   38     9     1  322   132    37  430    88
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:  102    9   281    95   38     9     1  322   132    37  430    88
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:   102    9   281    95   38     9     1  322   132    37  430    88
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  102    9   281    95   38     9     1  322   132    37  430    88
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
Final Vol.:   102    9   281    95   38     9     1  322   132    37  430    88
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.92 0.08  1.00  1.00 1.00  1.00  0.01 1.41  0.58  1.00 1.66  0.34
Final Sat.:   398   35   508   364  381   410     2  693   295   427  777   162
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.26 0.26  0.55  0.26 0.10  0.02  0.47 0.46  0.45  0.09 0.55  0.54
Crit Moves:             ****  ****             ****                   ****
Delay/Veh:   13.3 13.3  17.0  14.8 12.3  10.8  15.9 15.5  14.6  11.5 18.7  18.0
Delay Adj:   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 13.3  17.0  14.8 12.3  10.8  15.9 15.5  14.6  11.5 18.7  18.0
LOS by Move:    B    B     C     B    B     B     C    C     B     B    C     C
ApproachDel:      16.0             13.9             15.3             18.1
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:       16.0             13.9             15.3             18.1
LOS by Appr:        C                B                C                C
********************************************************************************
```

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-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #2 I-80 WB Ramps/Central Ave
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.611
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         24.1
Optimal Cycle:       59                Level Of Service:                   C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected         Protected
Rights:           Include          Include          Include           Include
Min. Green:    0     0     0    0     0     0    0     0     0     0     0     0
Lanes:        0  0  0  0  0   0  1  0  0  1   0  0  1  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  330     2   241    0   765    69   310   377     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:   0     0     0  330     2   241    0   765    69   310   377     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:    0     0     0  330     2   241    0   765    69   310   377     0
Reduct Vol:    0     0     0    0     0     0    0     0     0     0     0     0
Reduced Vol:   0     0     0  330     2   241    0   765    69   310   377     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
Final Vol.:    0     0     0  330     2   241    0   765    69   310   377     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.85 0.85  0.85  1.00 0.94  0.94  0.95 0.95  1.00
Lanes:       0.00 0.00  0.00  0.99 0.01  1.00  0.00 1.83  0.17  1.00 2.00  0.00
Final Sat.:    0     0     0  1605   10  1615     0 3272   295  1805 3610     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.21 0.21  0.15  0.00 0.23  0.23  0.17 0.10  0.00
Crit Moves:                        ****              ****         ****
Green/Cycle: 0.00 0.00  0.00  0.34 0.34  0.34  0.00 0.38  0.38  0.28 0.66  0.00
Volume/Cap:  0.00 0.00  0.00  0.61 0.61  0.44  0.00 0.61  0.61  0.61 0.16  0.00
Uniform Del:  0.0  0.0   0.0  27.7 27.7  25.9   0.0 24.9  24.9  31.2  6.3   0.0
IncremntDel:  0.0  0.0   0.0   2.0  2.0   0.6   0.0  0.8   0.8   2.2  0.0   0.0
Delay Adj:   0.00 0.00  0.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  0.00
Delay/Veh:    0.0  0.0   0.0  29.8 29.8  26.5   0.0 25.7  25.7  33.4  6.3   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:   0.0  0.0   0.0  29.8 29.8  26.5   0.0 25.7  25.7  33.4  6.3   0.0
DesignQueue:   0     0     0   13     0     9     0   28     3    13     7     0
*******************************************************************************
```

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

Intersection #3 I-80 EB Ramps/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.717
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	24.0
Optimal Cycle:	81	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0 0	1	0 0	0 0	0	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	63	4	450	0	0	0	287	783	0	0	622	334
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:	63	4	450	0	0	0	287	783	0	0	622	334
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:	63	4	450	0	0	0	287	783	0	0	622	334
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	63	4	450	0	0	0	287	783	0	0	622	334
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
Final Vol.:	63	4	450	0	0	0	287	783	0	0	622	334
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.85	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.90	0.90
Lanes:	1.88	0.12	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.30	0.70
Final Sat.:	3037	193	1615	0	0	0	1805	3610	0	0	2227	1196
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.28	0.00	0.00	0.00	0.16	0.22	0.00	0.00	0.28	0.28
Crit Moves:			****				****				****	
Green/Cycle:	0.39	0.39	0.39	0.00	0.00	0.00	0.22	0.61	0.00	0.00	0.39	0.39
Volume/Cap:	0.05	0.05	0.72	0.00	0.00	0.00	0.72	0.35	0.00	0.00	0.72	0.72
Uniform Del:	19.1	19.1	25.9	0.0	0.0	0.0	36.0	9.6	0.0	0.0	25.8	25.8
IncremntDel:	0.0	0.0	4.0	0.0	0.0	0.0	6.1	0.1	0.0	0.0	1.9	1.9
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	19.1	19.1	29.9	0.0	0.0	0.0	42.1	9.7	0.0	0.0	27.7	27.7
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:	19.1	19.1	29.9	0.0	0.0	0.0	42.1	9.7	0.0	0.0	27.7	27.7
DesignQueue:	2	0	16	0	0	0	13	18	0	0	23	12

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

Intersection #4 San Pablo Avenue/Central Avenue

Cycle (sec): 100 Critical Vol./Cap. (X): 0.732
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 29.7
Optimal Cycle: 85 Level Of Service: C

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 1	0 0	1	0 1	0 1	0
Volume Module:												
Base Vol:	263	1344	55	116	666	98	305	261	47	48	288	97
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:	263	1344	55	116	666	98	305	261	47	48	288	97
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:	263	1344	55	116	666	98	305	261	47	48	288	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	263	1344	55	116	666	98	305	261	47	48	288	97
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
Final Vol.:	263	1344	55	116	666	98	305	261	47	48	288	97
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	0.97	0.97	0.85	0.91	0.91	0.91
Lanes:	1.00	1.92	0.08	1.00	1.74	0.26	1.08	0.92	1.00	0.22	1.33	0.45
Final Sat.:	1805	3447	141	1805	3087	454	1994	1707	1615	384	2306	777
Capacity Analysis Module:												
Vol/Sat:	0.15	0.39	0.39	0.06	0.22	0.22	0.15	0.15	0.03	0.12	0.12	0.12
Crit Moves:		****		****				****				****
Green/Cycle:	0.25	0.53	0.53	0.09	0.37	0.37	0.21	0.21	0.21	0.17	0.17	0.17
Volume/Cap:	0.58	0.73	0.73	0.73	0.58	0.58	0.73	0.73	0.14	0.73	0.73	0.73
Uniform Del:	32.9	17.9	17.9	44.5	25.3	25.3	36.9	36.9	32.2	39.3	39.3	39.3
IncremntDel:	1.9	1.5	1.5	16.0	0.7	0.7	3.6	3.6	0.2	4.7	4.7	4.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	34.9	19.4	19.4	60.5	26.0	26.0	40.5	40.5	32.4	44.0	44.0	44.0
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:	34.9	19.4	19.4	60.5	26.0	26.0	40.5	40.5	32.4	44.0	44.0	44.0
DesignQueue:	11	39	2	6	25	4	14	12	2	2	14	5

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

Intersection #5 San Pablo Avenue/Marin Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.862
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 32.4
Optimal Cycle: 165 Level Of Service: C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	162	1423	165	126	871	28	60	697	120	122	702	366
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:	162	1423	165	126	871	28	60	697	120	122	702	366
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:	162	1423	165	126	871	28	60	697	120	122	702	366
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	1423	165	126	871	28	60	697	120	122	702	366
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
Final Vol.:	162	1423	165	126	871	28	60	697	120	122	702	366
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	0.95	0.95	0.93	0.93	0.95	0.90	0.90
Lanes:	1.00	1.79	0.21	1.00	1.94	0.06	1.00	1.71	0.29	1.00	1.31	0.69
Final Sat.:	1805	3183	369	1805	3480	112	1805	3012	519	1805	2252	1174
Capacity Analysis Module:												
Vol/Sat:	0.09	0.45	0.45	0.07	0.25	0.25	0.03	0.23	0.23	0.07	0.31	0.31
Crit Moves:		****		****			****				****	
Green/Cycle:	0.16	0.52	0.52	0.08	0.44	0.44	0.04	0.31	0.31	0.09	0.36	0.36
Volume/Cap:	0.57	0.86	0.86	0.86	0.57	0.57	0.86	0.75	0.75	0.75	0.86	0.86
Uniform Del:	38.9	20.9	20.9	45.4	20.8	20.8	47.8	31.0	31.0	44.4	29.6	29.6
IncremntDel:	2.7	4.4	4.4	37.4	0.5	0.5	62.6	2.9	2.9	17.1	6.4	6.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.6	25.4	25.4	82.8	21.3	21.3	110.4	33.9	33.9	61.5	36.0	36.0
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:	41.6	25.4	25.4	82.8	21.3	21.3	110.4	33.9	33.9	61.5	36.0	36.0
DesignQueue:	8	43	5	7	29	1	3	28	5	6	27	14

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                     Level Of Service Computation Report
          2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 W. Frontage Rd/Gilman St
********************************************************************************
Average Delay (sec/veh):     46.3          Worst Case Level Of Service:        E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:          Include          Include          Include          Include
Lanes:        0  0  1! 0  0   0  0  1! 0  0   0  1  0  0  1   0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54     1   570   17     1    12   10   179    72  204    24    21
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:   54     1   570   17     1    12   10   179    72  204    24    21
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:    54     1   570   17     1    12   10   179    72  204    24    21
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Final Vol.:    54     1   570   17     1    12   10   179    72  204    24    21
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.1  6.5   6.2   7.1  6.5   6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  620  652   179   963  714    23    45 xxxx xxxxx   251 xxxx xxxxx
Potent Cap.:  404  390   869   237  359  1060  1576 xxxx xxxxx  1326 xxxx xxxxx
Move Cap.:    343  319   869    70  294  1060  1576 xxxx xxxxx  1326 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx   7.7 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx  765 xxxxx  xxxx  117 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx 27.0 xxxxx xxxxx 46.3 xxxxx   7.3 xxxx xxxxx   8.2 xxxx xxxxx
Shared LOS:     *    D     *     *    E     *     A    *     *     A    *     *
ApproachDel:      27.0             46.3            xxxxxx           xxxxxx
ApproachLOS:        D                E                *                *
```

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                      Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #7 I-80 WB Ramps/Gilman St
********************************************************************************
Average Delay (sec/veh):     292.3         Worst Case Level Of Service:        F
********************************************************************************
Approach:      North Bound       South Bound        East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign         Stop Sign         Uncontrolled      Uncontrolled
Rights:          Include           Include           Include           Include
Lanes:        0  0  0  0  0    1  1  0  0  1    0  0  1  1  0    0  1  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   382    5   126     0  728    45   337  112     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:    0    0     0   382    5   126     0  728    45   337  112     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:     0    0     0   382    5   126     0  728    45   337  112     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     0    0     0   382    5   126     0  728    45   337  112     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  1150 1559    56  xxxx xxxx xxxxx   773 xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   195  113  1005  xxxx xxxx xxxxx   851 xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   120   58  1005  xxxx xxxx xxxxx   851 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx 365.4 xxxx   9.1 xxxxx xxxx xxxxx   9.2 xxxx xxxxx
LOS by Move:    *    *     *     F    *     A     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx   117 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx 403.2 xxxx xxxxx xxxxx xxxx xxxxx  12.0 xxxx xxxxx
Shared LOS:     *    *     *     F    *     *     *    *     *     B    *     *
ApproachDel:     xxxxxx            292.3            xxxxxx            xxxxxx
ApproachLOS:        *                F                 *                 *
```

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                     Level Of Service Computation Report
            2000 HCM Unsignalized Method (Base Volume Alternative)
******************************************************************************
Intersection #8 I-80 EB Ramps/Gilman Street
******************************************************************************
Average Delay (sec/veh): OVERFLOW          Worst Case Level Of Service:       F
******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:            Include          Include          Include          Include
Lanes:         1  0  0  1  0   0  0  0  0  0   0  1  1  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       64   25   149     0    0     0   659  487     0     0   52  1182
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:    64   25   149     0    0     0   659  487     0     0   52  1182
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:     64   25   149     0    0     0   659  487     0     0   52  1182
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     64   25   149     0    0     0   659  487     0     0   52  1182
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:   6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:   3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1831 3039   244  xxxx xxxx xxxxx  1234 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:   69   13   763  xxxx xxxx xxxxx   572 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:      0    0   763  xxxx xxxx xxxxx   572 xxxx xxxxx  xxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:   0.0 xxxx xxxxx xxxxx xxxx xxxxx  11.3 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     *    *     *     B    *     *     *    *     *
Movement:      LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx     0  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 112.5 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:      *    *     *     *    *     *     F    *     *     *    *     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        F                *                *                *
```

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--------------------------------------------------------------------------------
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                    Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #9 San Pablo Avenue/Gilman Street
********************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.797
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         28.3
Optimal Cycle:       92                 Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  1  0   0  0  1!  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     199 1228    89    93  754   152   154  277   173    94  353   115
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:  199 1228    89    93  754   152   154  277   173    94  353   115
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:   199 1228    89    93  754   152   154  277   173    94  353   115
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  199 1228    89    93  754   152   154  277   173    94  353   115
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
Final Vol.:   199 1228    89    93  754   152   154  277   173    94  353   115
------------|---------------||---------------||---------------||---------------|
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  0.59 0.59  0.59  0.78 0.78  0.78
Lanes:       1.00 1.86  0.14  1.00 1.66  0.34  0.51 0.92  0.57  0.17 0.63  0.20
Final Sat.:  1805 3332   242  1805 2929   591   574 1033   645   249  936   305
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.37  0.37  0.05 0.26  0.26  0.27 0.27  0.27  0.38 0.38  0.38
Crit Moves:       ****        ****                                   ****
Green/Cycle: 0.16 0.46  0.46  0.06 0.37  0.37  0.47 0.47  0.47  0.47 0.47  0.47
Volume/Cap:  0.70 0.80  0.80  0.80 0.70  0.70  0.57 0.57  0.57  0.80 0.80  0.80
Uniform Del: 39.8 22.9  22.9  46.1 26.8  26.8  19.0 19.0  19.0  22.3 22.3  22.3
IncremntDel:  7.4  2.8   2.8  30.7  1.7   1.7   0.7  0.7   0.7   6.3  6.3   6.3
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   47.2 25.7  25.7  76.8 28.5  28.5  19.7 19.7  19.7  28.6 28.6  28.6
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:  47.2 25.7  25.7  76.8 28.5  28.5  19.7 19.7  19.7  28.6 28.6  28.6
DesignQueue:   10   40     3     5   28     6     5    8     5     3   11     4
********************************************************************************
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 W. Frontage Rd/University Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	1.738
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	158.2
Optimal Cycle:	0	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	1 0	0 1	0	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	38	663	107	21	371	43	108	150	71	200	180	16
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:	38	663	107	21	371	43	108	150	71	200	180	16
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:	38	663	107	21	371	43	108	150	71	200	180	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	663	107	21	371	43	108	150	71	200	180	16
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
Final Vol.:	38	663	107	21	371	43	108	150	71	200	180	16
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.05	0.82	0.13	0.10	1.70	0.20	0.66	0.91	0.43	1.00	1.84	0.16
Final Sat.:	22	381	62	42	754	88	266	386	188	379	737	66
Capacity Analysis Module:												
Vol/Sat:	1.74	1.74	1.74	0.50	0.49	0.49	0.41	0.39	0.38	0.53	0.24	0.24
Crit Moves:		****		****			****			****		
Delay/Veh:	360.2	360	360.2	18.3	18.0	17.6	17.1	16.1	15.5	21.7	14.2	14.1
Delay Adj:	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:	360.2	360	360.2	18.3	18.0	17.6	17.1	16.1	15.5	21.7	14.2	14.1
LOS by Move:	F	F	F	C	C	C	C	C	C	C	B	B
ApproachDel:		360.2			18.0			16.3			18.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		360.2			18.0			16.3			18.0	
LOS by Appr:		F			C			C			C	

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 6th Street/University Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 1.004

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 49.3

Optimal Cycle: 180 Level Of Service: D

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
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	430	462	116	118	290	624	126	962	246	29	1119	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:	430	462	116	118	290	624	126	962	246	29	1119	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:	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:	430	462	116	118	290	624	126	962	246	29	1119	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	430	462	116	118	290	624	126	962	246	29	1119	44
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
Final Vol.:	430	462	116	118	290	624	126	962	246	29	1119	44
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	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.07	0.07	0.15	0.39	0.07	0.27	0.15	0.02	0.31	0.03
Crit Moves:	****					****	****				****	
Green/Cycle:	0.24	0.49	0.49	0.13	0.38	0.38	0.07	0.36	0.36	0.02	0.31	0.31
Volume/Cap:	1.00	0.50	0.15	0.50	0.40	1.00	1.00	0.75	0.43	0.75	1.00	0.09
Uniform Del:	38.1	17.2	14.0	40.3	22.3	30.8	46.5	28.2	24.4	48.7	34.6	24.6
IncremntDel:	44.6	0.4	0.1	1.6	0.4	37.2	81.5	2.5	0.5	55.8	28.0	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	82.7	17.6	14.1	42.0	22.7	68.0	128.0	30.7	24.9	104.4	62.6	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:	82.7	17.6	14.1	42.0	22.7	68.0	128.0	30.7	24.9	104.4	62.6	24.6
DesignQueue:	19	14	3	6	10	23	7	37	9	2	47	2

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                     Level Of Service Computation Report
           2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #12 San Pablo Ave/University Ave
********************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.863
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        34.0
Optimal Cycle:      166                 Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     119 1157    96   188  702    81   107  934    55   122 1057   173
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:  119 1157    96   188  702    81   107  934    55   122 1057   173
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:   119 1157    96   188  702    81   107  934    55   122 1057   173
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  119 1157    96   188  702    81   107  934    55   122 1057   173
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
Final Vol.:   119 1157    96   188  702    81   107  934    55   122 1057   173
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94  0.95 0.94  0.94  0.95 0.93  0.93
Lanes:       1.00 1.85  0.15  1.00 1.79  0.21  1.00 1.89  0.11  1.00 1.72  0.28
Final Sat.:  1805 3293   273  1805 3188   368  1805 3382   199  1805 3037   497
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.35  0.35  0.10 0.22  0.22  0.06 0.28  0.28  0.07 0.35  0.35
Crit Moves:       ****        ****              ****                   ****
Green/Cycle: 0.12 0.41  0.41  0.12 0.41  0.41  0.07 0.38  0.38  0.09 0.40  0.40
Volume/Cap:  0.54 0.86  0.86  0.86 0.54  0.54  0.86 0.73  0.73  0.73 0.86  0.86
Uniform Del: 41.3 27.1  27.1  43.2 22.6  22.6  46.1 26.6  26.6  44.1 27.3  27.3
IncremntDel:  2.7  5.6   5.6  27.9  0.4   0.4  42.3  2.0   2.0  14.9  5.7   5.7
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   44.0 32.7  32.7  71.1 23.0  23.0  88.4 28.6  28.6  59.0 33.0  33.0
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:  44.0 32.7  32.7  71.1 23.0  23.0  88.4 28.6  28.6  59.0 33.0  33.0
DesignQueue:    6   42     3     9   24     3     6   35     2     6   38     6
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                   Level Of Service Computation Report
         2000 HCM Unsignalized Method (Base Volume Alternative)
*****************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
*****************************************************************************
Average Delay (sec/veh):      24.2          Worst Case Level Of Service:     C
*****************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  1  0   0  1  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  945    41    34  405     0     0     0     0    18     0     7
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:     0  945    41    34  405     0     0     0     0    18     0     7
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:      0  945    41    34  405     0     0     0     0    18     0     7
Reduct Vol:      0    0     0     0    0     0     0     0     0     0     0     0
Final Vol.:      0  945    41    34  405     0     0     0     0    18     0     7
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   986 xxxx xxxxx  xxxx xxxx xxxxx  1236 xxxx   966
Potent Cap.: xxxx xxxx xxxxx   709 xxxx xxxxx  xxxx xxxx xxxxx   196 xxxx   312
Move Cap.:   xxxx xxxx xxxxx   709 xxxx xxxxx  xxxx xxxx xxxxx   189 xxxx   312
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:     *    *     *     B    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  212 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx  10.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 24.2 xxxxx
Shared LOS:      *    *     *     B    *     *     *    *     *     *    C     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx            24.2
ApproachLOS:         *                *                *                C
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                   Level Of Service Computation Report
             2000 HCM 4-Way Stop Method (Base Volume Alternative)
********************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):        0.992
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       34.8
Optimal Cycle:        0              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1!  0  0   1  0  0  1  0   0  0  1!  0  0   0  0  1!  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       3   657     3    90   375     6     6     0     2    35     4   194
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:    3   657     3    90   375     6     6     0     2    35     4   194
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:     3   657     3    90   375     6     6     0     2    35     4   194
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    3   657     3    90   375     6     6     0     2    35     4   194
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
Final Vol.:     3   657     3    90   375     6     6     0     2    35     4   194
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.00  0.99  0.01  1.00  0.98  0.02  0.75  0.00  0.25  0.15  0.02  0.83
Final Sat.:     3   662     3   550   586     9   340     0   113    87    10   481
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.99  0.99  0.99  0.16  0.64  0.64  0.02  xxxx  0.02  0.40  0.40  0.40
Crit Moves:        ****                    ****  ****                          ****
Delay/Veh:   55.6  55.6  55.6  10.4  18.4  18.4  10.4   0.0  10.4  12.9  12.9  12.9
Delay Adj:   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:  55.6  55.6  55.6  10.4  18.4  18.4  10.4   0.0  10.4  12.9  12.9  12.9
LOS by Move:    F     F     F     B     C     C     B     *     B     B     B     B
ApproachDel:       55.6              16.8              10.4              12.9
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        55.6              16.8              10.4              12.9
LOS by Appr:          F                 C                 B                 B
********************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 San Pablo Ave./Alcatraz Ave.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.731
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 18.5
Optimal Cycle: 85 Level Of Service: B

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1 1 0			1 0 2 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	1273	99	285	1172	0	0	0	0	107	0	215
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:	0	1273	99	285	1172	0	0	0	0	107	0	215
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:	0	1273	99	285	1172	0	0	0	0	107	0	215
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1273	99	285	1172	0	0	0	0	107	0	215
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
Final Vol.:	0	1273	99	285	1172	0	0	0	0	107	0	215
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.90	1.00	0.90
Lanes:	0.00	1.86	0.14	1.00	2.00	0.00	0.00	0.00	0.00	0.33	0.00	0.67
Final Sat.:	0	3313	258	1805	3610	0	0	0	0	565	0	1136
Capacity Analysis Module:												
Vol/Sat:	0.00	0.38	0.38	0.16	0.32	0.00	0.00	0.00	0.00	0.19	0.00	0.19
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.53	0.53	0.22	0.74	0.00	0.00	0.00	0.00	0.26	0.00	0.26
Volume/Cap:	0.00	0.73	0.73	0.73	0.44	0.00	0.00	0.00	0.00	0.73	0.00	0.73
Uniform Del:	0.0	18.3	18.3	36.5	5.0	0.0	0.0	0.0	0.0	33.9	0.0	33.9
IncremntDel:	0.0	1.5	1.5	6.9	0.1	0.0	0.0	0.0	0.0	6.2	0.0	6.2
Delay Adj:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	19.8	19.8	43.5	5.1	0.0	0.0	0.0	0.0	40.1	0.0	40.1
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:	0.0	19.8	19.8	43.5	5.1	0.0	0.0	0.0	0.0	40.1	0.0	40.1
DesignQueue:	0	37	3	13	18	0	0	0	0	5	0	9

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                     Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #16 W. Frontage Road/Powell Street
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap. (X):         0.820
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):         20.4
Optimal Cycle:       126                 Level Of Service:                  C
********************************************************************************
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
Lanes:        0  0  0  0  0    2  0  0  0  1    1  0  1  1  0    0  0  1  1  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0  553     0   271  242   411   592    0   613  1589
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:    0     0     0  553     0   271  242   411   592    0   613  1589
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:     0     0     0  553     0   271  242   411   592    0   613  1589
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    0     0     0  553     0   271  242   411   592    0   613  1589
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
Final Vol.:     0     0     0  553     0   271  242   411   592    0   613  1589
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.92 1.00  0.85  0.95 0.95  0.81  1.00 0.95  0.81
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  1.00 1.00  1.00  0.00 1.00  2.00
Final Sat.:     0     0     0  3502     0  1615  1805 1805  1534     0 1805  3069
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.16 0.00  0.17  0.13 0.23  0.39  0.00 0.34  0.52
Crit Moves:                              ****  ****                        ****
Green/Cycle: 0.00 0.00  0.00  0.20 0.00  0.20  0.16 0.80  0.80  0.00 0.63  0.63
Volume/Cap:  0.00 0.00  0.00  0.77 0.00  0.82  0.82 0.29  0.49  0.00 0.54  0.82
Uniform Del:  0.0  0.0   0.0  37.6  0.0  38.0  40.4  2.7   3.4   0.0 10.3  14.1
IncremntDel:  0.0  0.0   0.0   5.2  0.0  14.9  16.4  0.0   0.2   0.0  0.1   2.1
Delay Adj:   0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00
Delay/Veh:    0.0  0.0   0.0  42.7  0.0  52.9  56.8  2.8   3.6   0.0 10.4  16.2
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:   0.0  0.0   0.0  42.7  0.0  52.9  56.8  2.8   3.6   0.0 10.4  16.2
DesignQueue:    0     0     0    25     0    12    12    5     7     0   14    37
********************************************************************************
```

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

Intersection #17 I-80 EB Ramps/Powell St.

Cycle (sec):	100	Critical Vol./Cap. (X):	1.104
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	41.6
Optimal Cycle:	180	Level Of Service:	D

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
Lanes:		1 0 1! 0 1			0 0 0 0 0			1 0 3 0 0			0 0 3 0 1	
Volume Module:												
Base Vol:	563	199	1043	0	0	0	174	778	0	0	1604	605
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:	563	199	1043	0	0	0	174	778	0	0	1604	605
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:	563	199	1043	0	0	0	174	778	0	0	1604	605
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	563	199	1043	0	0	0	174	778	0	0	1604	605
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
Final Vol.:	563	199	1043	0	0	0	174	778	0	0	1604	605
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.83	0.83	1.00	1.00	1.00	0.95	0.91	1.00	1.00	0.91	0.85
Lanes:	1.28	0.20	1.52	0.00	0.00	0.00	1.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	2029	315	2408	0	0	0	1805	5187	0	0	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.28	0.63	0.43	0.00	0.00	0.00	0.10	0.15	0.00	0.00	0.31	0.37
Crit Moves:		****					****					****
Green/Cycle:	0.57	0.57	0.57	0.00	0.00	0.00	0.09	0.43	0.00	0.00	0.34	0.34
Volume/Cap:	0.48	1.10	0.76	0.00	0.00	0.00	1.10	0.35	0.00	0.00	0.91	1.10
Uniform Del:	12.6	21.3	16.1	0.0	0.0	0.0	45.6	19.3	0.0	0.0	31.6	33.0
IncremntDel:	0.1	56.4	1.4	0.0	0.0	0.0	102.2	0.1	0.0	0.0	7.6	70.0
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	12.7	77.7	17.5	0.0	0.0	0.0	147.8	19.4	0.0	0.0	39.1	103.0
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:	12.7	77.7	17.5	0.0	0.0	0.0	147.8	19.4	0.0	0.0	39.1	103.0
DesignQueue:	14	5	27	0	0	0	9	26	0	0	64	24

```
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--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #18 Christie Ave./Powell St.
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):        0.817
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        36.5
Optimal Cycle:        125                Level Of Service:                  D
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:         1  1  0  0  1   0  1  0  0  2   2  0  1  1  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     461    54   271   162    82   613   383   822   674   248  1075   153
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    54   271   162    82   613   383   822   674   248  1075   153
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:   461    54   271   162    82   613   383   822   674   248  1075   153
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  461    54   271   162    82   613   383   822   674   248  1075   153
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
Final Vol.:   461    54   271   162    82   613   383   822   674   248  1075   153
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.96  0.96  0.85  0.97  0.97  0.75  0.92  0.89  0.89  0.95  0.95  0.85
Lanes:       1.79  0.21  1.00  0.66  0.34  2.00  2.00  1.65  1.35  1.00  2.00  1.00
Final Sat.:  3255   381  1615  1221   618  2842  3502  2773  2274  1805  3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14  0.14  0.17  0.13  0.13  0.22  0.11  0.30  0.30  0.14  0.30  0.09
Crit Moves:              ****              ****        ****        ****
Green/Cycle: 0.21  0.21  0.21  0.26  0.26  0.26  0.14  0.36  0.36  0.17  0.39  0.39
Volume/Cap:  0.69  0.69  0.82  0.50  0.50  0.82  0.77  0.82  0.82  0.82  0.77  0.24
Uniform Del: 36.8  36.8  37.9  31.2  31.2  34.5  41.3  28.9  28.9  40.1  26.6  20.7
IncremntDel:  2.8   2.8  14.6   0.8   0.8   7.0   7.1   3.0   3.0  15.8   2.6   0.2
Delay Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Delay/Veh:   39.5  39.5  52.5  32.1  32.1  41.5  48.3  31.9  31.9  55.9  29.3  20.9
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:  39.5  39.5  52.5  32.1  32.1  41.5  48.3  31.9  31.9  55.9  29.3  20.9
DesignQueue:   21     2    12     7     3    26    19    31    26    12    39     5
********************************************************************************
```

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

Intersection #19 San Pablo Ave./Stanford Ave.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.785
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	32.0
Optimal Cycle:	106	Level Of Service:	C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	171	1140	126	204	905	86	234	724	165	113	355	63
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:	171	1140	126	204	905	86	234	724	165	113	355	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:	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:	171	1140	126	204	905	86	234	724	165	113	355	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	1140	126	204	905	86	234	724	165	113	355	63
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
Final Vol.:	171	1140	126	204	905	86	234	724	165	113	355	63
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	0.94	0.94	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	1.80	0.20	1.00	1.83	0.17	1.00	1.63	0.37	1.00	1.70	0.30
Final Sat.:	1805	3202	354	1805	3254	309	1805	2858	651	1805	2995	532
Capacity Analysis Module:												
Vol/Sat:	0.09	0.36	0.36	0.11	0.28	0.28	0.13	0.25	0.25	0.06	0.12	0.12
Crit Moves:		****		****				****		****		
Green/Cycle:	0.15	0.45	0.45	0.14	0.45	0.45	0.21	0.32	0.32	0.08	0.19	0.19
Volume/Cap:	0.62	0.79	0.79	0.79	0.62	0.62	0.62	0.79	0.79	0.79	0.62	0.62
Uniform Del:	39.7	23.2	23.2	41.3	21.3	21.3	35.8	30.7	30.7	45.2	37.0	37.0
IncremntDel:	4.4	2.6	2.6	14.5	0.8	0.8	3.0	3.7	3.7	24.1	1.7	1.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.2	25.8	25.8	55.8	22.1	22.1	38.9	34.4	34.4	69.3	38.7	38.7
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:	44.2	25.8	25.8	55.8	22.1	22.1	38.9	34.4	34.4	69.3	38.7	38.7
DesignQueue:	8	38	4	10	30	3	11	29	7	6	16	3

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

Intersection #20 San Pablo Ave./40th Street

Cycle (sec): 100 Critical Vol./Cap. (X): 0.794
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 33.1
Optimal Cycle: 110 Level Of Service: C

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
Lanes:	2 0 1 1 0			1 0 1 1 0			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	382	1132	41	198	842	174	269	844	302	48	410	93
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:	382	1132	41	198	842	174	269	844	302	48	410	93
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:	382	1132	41	198	842	174	269	844	302	48	410	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	382	1132	41	198	842	174	269	844	302	48	410	93
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
Final Vol.:	382	1132	41	198	842	174	269	844	302	48	410	93
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.93	0.93	0.95	0.91	0.91	0.95	0.92	0.92
Lanes:	2.00	1.93	0.07	1.00	1.66	0.34	1.00	1.47	0.53	1.00	1.63	0.37
Final Sat.:	3502	3466	126	1805	2914	602	1805	2552	913	1805	2860	649
Capacity Analysis Module:												
Vol/Sat:	0.11	0.33	0.33	0.11	0.29	0.29	0.15	0.33	0.33	0.03	0.14	0.14
Crit Moves:		****		****				****		****		
Green/Cycle:	0.15	0.41	0.41	0.14	0.40	0.40	0.23	0.42	0.42	0.03	0.22	0.22
Volume/Cap:	0.72	0.79	0.79	0.79	0.72	0.72	0.65	0.79	0.79	0.79	0.65	0.65
Uniform Del:	40.5	25.7	25.7	41.7	25.4	25.4	34.9	25.4	25.4	48.0	35.4	35.4
IncremntDel:	4.9	3.0	3.0	15.9	1.9	1.9	3.6	3.1	3.1	49.9	2.0	2.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.4	28.8	28.8	57.6	27.3	27.3	38.5	28.5	28.5	97.9	37.4	37.4
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:	45.4	28.8	28.8	57.6	27.3	27.3	38.5	28.5	28.5	97.9	37.4	37.4
DesignQueue:	19	40	1	10	30	6	12	30	11	3	18	4

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                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #21 Adeline St./40th St.
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap. (X):        0.730
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       34.9
Optimal Cycle:       85               Level Of Service:                  C
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Split Phase      Split Phase      Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:       1  0  1  0  1   1  0  2  0  1   1  0  1  1  0   1  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      32  311    33   108  171   113   180  941    23     7  434    59
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:   32  311    33   108  171   113   180  941    23     7  434    59
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:    32  311    33   108  171   113   180  941    23     7  434    59
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   32  311    33   108  171   113   180  941    23     7  434    59
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
Final Vol.:    32  311    33   108  171   113   180  941    23     7  434    59
------------|---------------||---------------||---------------||---------------|
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  0.95 0.95  0.95  0.95 1.00  0.85
Lanes:       1.00 1.00  1.00  1.00 2.00  1.00  1.00 1.95  0.05  1.00 1.00  1.00
Final Sat.:  1805 1900  1615  1805 3610  1615  1805 3510    86  1805 1900  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.16  0.02  0.06 0.05  0.07  0.10 0.27  0.27  0.00 0.23  0.04
Crit Moves:       ****                   ****       ****             ****
Green/Cycle: 0.22 0.22  0.22  0.10 0.10  0.10  0.37 0.37  0.37  0.31 0.31  0.31
Volume/Cap:  0.08 0.73  0.09  0.62 0.49  0.73  0.27 0.73  0.73  0.01 0.73  0.12
Uniform Del: 30.6 36.0  30.7  43.5 42.9  44.0  22.2 27.4  27.4  23.7 30.6  24.5
IncremntDel:  0.1  6.3   0.1   7.0  1.1  16.2   0.2  2.1   2.1   0.0  4.6   0.1
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   30.7 42.3  30.8  50.4 44.0  60.1  22.5 29.5  29.5  23.7 35.2  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 42.3  30.8  50.4 44.0  60.1  22.5 29.5  29.5  23.7 35.2  24.6
DesignQueue:    1   14     1     6    9     6     6   35     1     0   18     2
********************************************************************************
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APPENDIX E-7

YEAR 2025 PLUS PROJECT AM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	2025+Proj AM
Command:	Default Command
Volume:	2025 Base AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Project AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Rydin Rd/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.534
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0	0 1	1 0	1	0 1	0 1	0	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	58	18	323	52	27	9	8	97	84	200	193	80
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:	58	18	323	52	27	9	8	97	84	200	193	80
Added Vol:	0	0	0	0	0	0	0	1	1	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	58	18	323	52	27	9	8	98	85	200	195	80
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:	58	18	323	52	27	9	8	98	85	200	195	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	18	323	52	27	9	8	98	85	200	195	80
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
Final Vol.:	58	18	323	52	27	9	8	98	85	200	195	80
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.76	0.24	1.00	1.00	1.00	1.00	0.08	1.03	0.89	1.00	1.42	0.58
Final Sat.:	387	120	605	423	449	491	43	529	501	498	770	330
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.53	0.12	0.06	0.02	0.19	0.19	0.17	0.40	0.25	0.24
Crit Moves:			****	****			****			****		
Delay/Veh:	10.7	10.7	14.3	11.6	10.5	9.5	10.8	10.7	9.8	14.1	11.1	10.6
Delay Adj:	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:	10.7	10.7	14.3	11.6	10.5	9.5	10.8	10.7	9.8	14.1	11.1	10.6
LOS by Move:	B	B	B	B	B	A	B	B	A	B	B	B
ApproachDel:		13.6			11.0			10.3			12.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		13.6			11.0			10.3			12.3	
LOS by Appr:		B			B			B			B	

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

Intersection #2 I-80 WB Ramps/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.537
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	22.9
Optimal Cycle:	49	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 1	0	0 1	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	0	266	4	347	0	409	58	341	459	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:	0	0	0	266	4	347	0	409	58	341	459	0
Added Vol:	0	0	0	0	0	1	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	266	4	348	0	410	58	341	461	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:	0	0	0	266	4	348	0	410	58	341	461	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	266	4	348	0	410	58	341	461	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
Final Vol.:	0	0	0	266	4	348	0	410	58	341	461	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.93	0.93	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	1.75	0.25	1.00	2.00	0.00
Final Sat.:	0	0	0	1591	24	1615	0	3103	439	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.17	0.22	0.00	0.13	0.13	0.19	0.13	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.40	0.40	0.40	0.00	0.25	0.25	0.35	0.60	0.00
Volume/Cap:	0.00	0.00	0.00	0.42	0.42	0.54	0.00	0.54	0.54	0.54	0.21	0.00
Uniform Del:	0.0	0.0	0.0	21.5	21.5	22.8	0.0	32.7	32.7	25.9	9.2	0.0
IncremntDel:	0.0	0.0	0.0	0.4	0.4	0.9	0.0	0.7	0.7	0.9	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	21.9	21.9	23.7	0.0	33.4	33.4	26.8	9.3	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:	0.0	0.0	0.0	21.9	21.9	23.7	0.0	33.4	33.4	26.8	9.3	0.0
DesignQueue:	0	0	0	9	0	12	0	18	3	13	11	0

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

Intersection #3 I-80 EB Ramps/Central Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.497
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	17.6
Optimal Cycle:	45	Level Of Service:	B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Protected	Protected
Rights:	Include	Include	Include	Include
Lanes:	1 1 0 0 1	0 0 0 0 0	1 0 2 0 0	0 0 1 1 0

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	45	0	298	0	0	0	128	580	0	0	606	229
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:	45	0	298	0	0	0	128	580	0	0	606	229
Added Vol:	1	0	0	0	0	0	1	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	0	298	0	0	0	129	581	0	0	607	229
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:	46	0	298	0	0	0	129	581	0	0	607	229
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	0	298	0	0	0	129	581	0	0	607	229
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
Final Vol.:	46	0	298	0	0	0	129	581	0	0	607	229
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	0.91
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	1.45	0.55
Final Sat.:	3618	0	1615	0	0	0	1805	3610	0	0	2514	948
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.18	0.00	0.00	0.00	0.07	0.16	0.00	0.00	0.24	0.24
Crit Moves:			****				****				****	
Green/Cycle:	0.37	0.00	0.37	0.00	0.00	0.00	0.14	0.63	0.00	0.00	0.49	0.49
Volume/Cap:	0.03	0.00	0.50	0.00	0.00	0.00	0.50	0.26	0.00	0.00	0.50	0.50
Uniform Del:	20.0	0.0	24.3	0.0	0.0	0.0	39.5	8.2	0.0	0.0	17.5	17.5
IncremntDel:	0.0	0.0	0.7	0.0	0.0	0.0	1.5	0.1	0.0	0.0	0.2	0.2
Delay Adj:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	20.1	0.0	24.9	0.0	0.0	0.0	41.0	8.3	0.0	0.0	17.7	17.7
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:	20.1	0.0	24.9	0.0	0.0	0.0	41.0	8.3	0.0	0.0	17.7	17.7
DesignQueue:	2	0	11	0	0	0	6	12	0	0	18	7

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

Intersection #4 San Pablo Avenue/Central Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.602
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	26.2
Optimal Cycle:	57	Level Of Service:	C

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 1	0 0	1	0 1	0 1	0
Volume Module:												
Base Vol:	75	406	40	78	991	108	205	235	104	97	231	98
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:	75	406	40	78	991	108	205	235	104	97	231	98
Added Vol:	0	3	0	0	3	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	75	409	40	78	994	108	205	235	104	97	231	98
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:	75	409	40	78	994	108	205	235	104	97	231	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	409	40	78	994	108	205	235	104	97	231	98
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
Final Vol.:	75	409	40	78	994	108	205	235	104	97	231	98
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	0.94	0.94	0.98	0.98	0.85	0.91	0.91	0.91
Lanes:	1.00	1.82	0.18	1.00	1.80	0.20	1.00	1.00	1.00	0.46	1.08	0.46
Final Sat.:	1805	3246	317	1805	3207	348	1856	1856	1615	785	1870	793
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.13	0.04	0.31	0.31	0.11	0.13	0.06	0.12	0.12	0.12
Crit Moves:	****				****			****				****
Green/Cycle:	0.07	0.44	0.44	0.15	0.52	0.52	0.21	0.21	0.21	0.21	0.21	0.21
Volume/Cap:	0.60	0.29	0.29	0.29	0.60	0.60	0.52	0.60	0.31	0.60	0.60	0.60
Uniform Del:	45.2	18.3	18.3	37.8	17.0	17.0	35.0	35.7	33.3	36.0	36.0	36.0
IncremntDel:	8.0	0.1	0.1	0.6	0.6	0.6	0.6	1.4	0.5	1.5	1.5	1.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	53.2	18.4	18.4	38.4	17.6	17.6	35.7	37.1	33.8	37.5	37.5	37.5
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:	53.2	18.4	18.4	38.4	17.6	17.6	35.7	37.1	33.8	37.5	37.5	37.5
DesignQueue:	4	13	1	4	29	3	9	11	5	4	11	4

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

Intersection #5 San Pablo Avenue/Marin Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.608
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.3
Optimal Cycle: 58 Level Of Service: C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	170	518	260	239	976	10	4	460	92	163	752	89
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:	170	518	260	239	976	10	4	460	92	163	752	89
Added Vol:	1	3	0	0	3	1	1	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	171	521	260	239	979	11	5	460	93	163	752	89
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:	171	521	260	239	979	11	5	460	93	163	752	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	521	260	239	979	11	5	460	93	163	752	89
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
Final Vol.:	171	521	260	239	979	11	5	460	93	163	752	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.93	0.93
Lanes:	1.00	1.33	0.67	1.00	1.98	0.02	1.00	1.66	0.34	1.00	1.79	0.21
Final Sat.:	1805	2288	1142	1805	3563	40	1805	2928	592	1805	3176	376
Capacity Analysis Module:												
Vol/Sat:	0.09	0.23	0.23	0.13	0.27	0.27	0.00	0.16	0.16	0.09	0.24	0.24
Crit Moves:		****		****				****		****		
Green/Cycle:	0.15	0.37	0.37	0.22	0.44	0.44	0.00	0.26	0.26	0.15	0.40	0.40
Volume/Cap:	0.62	0.61	0.61	0.61	0.62	0.62	0.59	0.61	0.61	0.61	0.59	0.59
Uniform Del:	39.7	25.3	25.3	35.2	21.6	21.6	49.7	32.6	32.6	39.8	23.4	23.4
IncremntDel:	4.4	0.8	0.8	2.7	0.8	0.8	77.1	1.2	1.2	4.0	0.6	0.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.1	26.2	26.2	38.0	22.3	22.3	126.8	33.8	33.8	43.8	24.0	24.0
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:	44.1	26.2	26.2	38.0	22.3	22.3	126.8	33.8	33.8	43.8	24.0	24.0
DesignQueue:	8	19	10	11	33	0	0	20	4	8	27	3

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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #6 W. Frontage Rd/Gilman St
********************************************************************************
Average Delay (sec/veh):      48.9          Worst Case Level Of Service:        E
********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Uncontrolled      Uncontrolled
Rights:          Include          Include          Include           Include
Lanes:        0  0  1! 0  0   0  0  1! 0  0    0  1  0  0  1    0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      79    0   156    5    0     7     7   28    24   507   54     4
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:   79    0   156    5    0     7     7   28    24   507   54     4
Added Vol:      0    0     1    0    0     0     0    0     0     1    0     0
PasserByVol:    0    0     0    0    0     0     0    0     0     0    0     0
Initial Fut:   79    0   157    5    0     7     7   28    24   508   54     4
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:    79    0   157    5    0     7     7   28    24   508   54     4
Reduct Vol:     0    0     0    0    0     0     0    0     0     0    0     0
Final Vol.:    79    0   157    5    0     7     7   28    24   508   54     4
Critical Gap Module:
Critical Gp:  7.1 xxxx   6.2  7.1 xxxx   6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3  3.5 xxxx   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1085 xxxx    28 1204 xxxx    29    58 xxxx xxxxx    52 xxxx xxxxx
Potent Cap.:  196 xxxx  1053  162 xxxx  1052  1559 xxxx xxxxx  1567 xxxx xxxxx
Move Cap.:    125 xxxx  1053   89 xxxx  1052  1559 xxxx xxxxx  1567 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx   7.3 xxxx xxxxx
LOS by Move:    *    *     *    *    *     *     A    *     *     A    *     *
Movement:      LT - LTR - RT   LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  302 xxxxx xxxx  191 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx 48.9 xxxxx xxxxx 25.2 xxxxx   7.3 xxxx xxxxx   8.4 xxxx xxxxx
Shared LOS:     *    E     *    *    D     *     A    *     *     A    *     *
ApproachDel:       48.9             25.2            xxxxxx            xxxxxx
ApproachLOS:         E                D                *                 *
```

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

Intersection #7 I-80 WB Ramps/Gilman St

Average Delay (sec/veh): 85.4 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			1 1 0 0 1			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	0	0	0	479	261	456	0	173	12	171	99	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:	0	0	0	479	261	456	0	173	12	171	99	0
Added Vol:	0	0	0	0	0	0	0	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	479	261	456	0	174	12	171	100	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:	0	0	0	479	261	456	0	174	12	171	100	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	479	261	456	0	174	12	171	100	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	529	628	50	xxxx	xxxx	xxxxx	186	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	484	402	1014	xxxx	xxxx	xxxxx	1401	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	434	348	1014	xxxx	xxxx	xxxxx	1401	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	23.0	xxxx	11.4	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	C	*	B	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	385	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	182.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx
Shared LOS:	*	*	*	F	*	*	*	*	*	A	*	*
ApproachDel:		xxxxxx			85.4			xxxxxx			xxxxxx	
ApproachLOS:		*			F			*			*	

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                     Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #8 I-80 EB Ramps/Gilman Street
********************************************************************************
Average Delay (sec/veh):     16.2          Worst Case Level Of Service:        C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        1  0  0  1  0   0  0  0  0  0   0  1  1  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      57    0   321     0    0     0   110  619     0     0  230   296
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:   57    0   321     0    0     0   110  619     0     0  230   296
Added Vol:      0    0     0     0    0     0     0    1     0     0    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   57    0   321     0    0     0   110  620     0     0  231   296
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:    57    0   321     0    0     0   110  620     0     0  231   296
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    57    0   321     0    0     0   110  620     0     0  231   296
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  956 xxxx   310  xxxx xxxx xxxxx   527 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:  260 xxxx   692  xxxx xxxx xxxxx  1050 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:    238 xxxx   692  xxxx xxxx xxxxx  1050 xxxx xxxxx  xxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del: 24.9 xxxx xxxxx xxxxx xxxx xxxxx   8.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    C    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx   692  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx  14.6 xxxxx xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     B     *    *     *     A    *     *     *    *     *
ApproachDel:        16.2            xxxxxx           xxxxxx           xxxxxx
ApproachLOS:          C                *                *                *
```

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-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
                   Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 San Pablo Avenue/Gilman Street
*******************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.828
Loss Time (sec):      0 (Y+R =  4 sec)  Average Delay (sec/veh):        29.4
Optimal Cycle:      108                 Level Of Service:                  C
*******************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  1  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     203  582    46    95  998   174   119  331   143    81  485    53
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:  203  582    46    95  998   174   119  331   143    81  485    53
Added Vol:      0    3     0     0    3     1     1    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  203  585    46    95 1001   175   120  331   143    81  485    53
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:   203  585    46    95 1001   175   120  331   143    81  485    53
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  203  585    46    95 1001   175   120  331   143    81  485    53
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
Final Vol.:   203  585    46    95 1001   175   120  331   143    81  485    53
------------|---------------||---------------||---------------||---------------|
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  0.61 0.61  0.61  0.85 0.85  0.85
Lanes:       1.00 1.85  0.15  1.00 1.70  0.30  0.40 1.12  0.48  0.13 0.78  0.09
Final Sat.:  1805 3310   260  1805 3005   525   472 1301   562   212 1269   139
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.18  0.18  0.05 0.33  0.33  0.25 0.25  0.25  0.38 0.38  0.38
Crit Moves:  ****                   ****                              ****
Green/Cycle: 0.14 0.41  0.41  0.12 0.40  0.40  0.46 0.46  0.46  0.46 0.46  0.46
Volume/Cap:  0.83 0.43  0.43  0.43 0.83  0.83  0.55 0.55  0.55  0.83 0.83  0.83
Uniform Del: 42.1 20.8  20.8  40.5 26.8  26.8  19.4 19.4  19.4  23.5 23.5  23.5
IncremntDel: 20.2  0.2   0.2   1.3  4.2   4.2   0.6  0.6   0.6   7.6  7.6   7.6
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   62.3 21.0  21.0  41.9 31.0  31.0  20.1 20.1  20.1  31.1 31.1  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:  62.3 21.0  21.0  41.9 31.0  31.0  20.1 20.1  20.1  31.1 31.1  31.1
DesignQueue:   10   20     2     5   36     6     4   10     4     3   16     2
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                    Level Of Service Computation Report
          2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #10 W. Frontage Rd/University Ave
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap. (X):          0.476
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        13.3
Optimal Cycle:        0              Level Of Service:                    B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:         Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  1! 0  0    0  1  0  1  0    0  1  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      34   111    21    32   345    61   109    70    40   215   108     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:   34   111    21    32   345    61   109    70    40   215   108     8
Added Vol:      0     2     4     6     2     0     0     0     0     4     0     6
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   34   113    25    38   347    61   109    70    40   219   108    14
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:    34   113    25    38   347    61   109    70    40   219   108    14
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   34   113    25    38   347    61   109    70    40   219   108    14
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
Final Vol.:    34   113    25    38   347    61   109    70    40   219   108    14
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.20  0.66  0.14  0.17  1.56  0.27  1.00  0.64  0.36  1.00  1.77  0.23
Final Sat.:    98   325    72    90   836   150   459   326   186   460   872   115
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.35  0.35  0.35  0.42  0.42  0.41  0.24  0.21  0.21  0.48  0.12  0.12
Crit Moves:  ****              ****              ****              ****
Delay/Veh:   13.2  13.2  13.2  13.8  13.5  13.1  12.2  11.0  11.0  16.5  10.6  10.5
Delay Adj:   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:  13.2  13.2  13.2  13.8  13.5  13.1  12.2  11.0  11.0  16.5  10.6  10.5
LOS by Move:    B     B     B     B     B     B     B     B     B     C     B     B
ApproachDel:       13.2              13.4              11.6              14.4
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        13.2              13.4              11.6              14.4
LOS by Appr:          B                 B                 B                 B
********************************************************************************
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                      Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #11 6th Street/University Ave
********************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):          0.737
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):          28.4
Optimal Cycle:       87                 Level Of Service:                    C
********************************************************************************
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
Lanes:        1  0  1  0  1    1  0  1  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     295  288    36    82  356   302   102  996   413    60 1188    63
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:  295  288    36    82  356   302   102  996   413    60 1188    63
Added Vol:      0    0     0     0    0     0     0    3     0     0    3     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  295  288    36    82  356   302   102  999   413    60 1191    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:     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:   295  288    36    82  356   302   102  999   413    60 1191    63
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  295  288    36    82  356   302   102  999   413    60 1191    63
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
Final Vol.:   295  288    36    82  356   302   102  999   413    60 1191    63
------------|---------------||---------------||---------------||---------------|
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  0.85  0.95 0.95  0.85  0.95 0.95  0.85
Lanes:       1.00 1.00  1.00  1.00 1.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1805 1900  1615  1805 1900  1615  1805 3610  1615  1805 3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.16 0.15  0.02  0.05 0.19  0.19  0.06 0.28  0.26  0.03 0.33  0.04
Crit Moves:  ****                  ****        ****                  ****
Green/Cycle: 0.22 0.37  0.37  0.11 0.25  0.25  0.08 0.47  0.47  0.06 0.45  0.45
Volume/Cap:  0.74 0.41  0.06  0.41 0.74  0.74  0.74 0.59  0.55  0.59 0.74  0.09
Uniform Del: 36.2 23.7  20.5  41.5 34.2  34.2  45.2 19.6  19.0  46.1 22.8  15.9
IncremntDel:  7.1  0.4   0.0   1.4  5.9   6.8  18.7  0.6   0.8   9.0  1.8   0.1
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   43.3 24.1  20.6  42.9 40.1  41.0  63.8 20.1  19.9  55.0 24.6  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:  43.3 24.1  20.6  42.9 40.1  41.0  63.8 20.1  19.9  55.0 24.6  15.9
DesignQueue:   13   11     1     4   16    13     5   32    13     3   40     2
********************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 San Pablo Ave/University Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.748
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.1
Optimal Cycle: 91 Level Of Service: C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	188	620	66	76	883	89	193	932	105	139	608	87
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:	188	620	66	76	883	89	193	932	105	139	608	87
Added Vol:	2	1	0	0	1	1	1	0	2	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	190	621	66	76	884	90	194	932	107	139	608	87
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:	190	621	66	76	884	90	194	932	107	139	608	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	621	66	76	884	90	194	932	107	139	608	87
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
Final Vol.:	190	621	66	76	884	90	194	932	107	139	608	87
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	0.94	0.94	0.95	0.94	0.94	0.95	0.93	0.93
Lanes:	1.00	1.81	0.19	1.00	1.82	0.18	1.00	1.79	0.21	1.00	1.75	0.25
Final Sat.:	1805	3218	342	1805	3231	329	1805	3190	366	1805	3098	443
Capacity Analysis Module:												
Vol/Sat:	0.11	0.19	0.19	0.04	0.27	0.27	0.11	0.29	0.29	0.08	0.20	0.20
Crit Moves:	****				****			****		****		
Green/Cycle:	0.14	0.42	0.42	0.09	0.37	0.37	0.17	0.39	0.39	0.10	0.32	0.32
Volume/Cap:	0.75	0.46	0.46	0.46	0.75	0.75	0.62	0.75	0.75	0.75	0.62	0.62
Uniform Del:	41.3	21.1	21.1	43.2	27.7	27.7	38.2	26.2	26.2	43.6	28.9	28.9
IncremntDel:	11.6	0.2	0.2	2.1	2.4	2.4	3.6	2.3	2.3	15.4	1.0	1.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	52.9	21.4	21.4	45.2	30.1	30.1	41.8	28.5	28.5	59.0	29.9	29.9
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:	52.9	21.4	21.4	45.2	30.1	30.1	41.8	28.5	28.5	59.0	29.9	29.9
DesignQueue:	9	21	2	4	33	3	9	34	4	7	24	3

```
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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
*********************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
*********************************************************************************
Average Delay (sec/veh):     22.5          Worst Case Level Of Service:         C
*********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled       Stop Sign         Stop Sign
Rights:           Include          Include          Include           Include
Lanes:        0  0  0  1  0   0  1  1  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  146    14   211  869     0     0    0     0    32    0     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:     0  146    14   211  869     0     0    0     0    32    0     1
Added Vol:       0    2     0     0    2     0     0    0     0     0    0     0
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:     0  148    14   211  871     0     0    0     0    32    0     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  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:      0  148    14   211  871     0     0    0     0    32    0     1
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:      0  148    14   211  871     0     0    0     0    32    0     1
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   162 xxxx xxxxx  xxxx xxxx xxxxx  1013 xxxx   155
Potent Cap.: xxxx xxxx xxxxx  1429 xxxx xxxxx  xxxx xxxx xxxxx   267 xxxx   896
Move Cap.:   xxxx xxxx xxxxx  1429 xxxx xxxxx  xxxx xxxx xxxxx   233 xxxx   896
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *     *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  238 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx   8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 22.5 xxxxx
Shared LOS:     *     *     *     A    *     *     *    *     *     *    C     *
ApproachDel:      xxxxxx           xxxxxx           xxxxxx            22.5
ApproachLOS:        *                *                *                C
```

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.680
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        14.0
Optimal Cycle:        0                Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  1! 0  0   1  0  0  1  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       1  141     2  345  523     2    0    0     0    0    0    15
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:    1  141     2  345  523     2    0    0     0    0    0    15
Added Vol:      0    2     0    0    2     0    0    0     0    1    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    1  143     2  345  525     2    0    0     0    1    0    15
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:     1  143     2  345  525     2    0    0     0    1    0    15
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    1  143     2  345  525     2    0    0     0    1    0    15
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
Final Vol.:     1  143     2  345  525     2    0    0     0    1    0    15
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.01 0.98  0.01 1.00 0.99  0.01 0.00 1.00  0.00 0.06 0.00  0.94
Final Sat.:     5  742    10  699  773     3    0    0     0   41    0   614
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.19 0.19  0.19 0.49 0.68  0.68 xxxx xxxx  xxxx 0.02 xxxx  0.02
Crit Moves:       ****                  ****                  ****
Delay/Veh:    8.8  8.8   8.8 12.7 16.5  16.5  0.0  0.0   0.0  8.3  0.0   8.3
Delay Adj:   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:   8.8  8.8   8.8 12.7 16.5  16.5  0.0  0.0   0.0  8.3  0.0   8.3
LOS by Move:    A    A     A    B    C     C    *    *     *    A    *     A
ApproachDel:       8.8             15.0           xxxxxx             8.3
Delay Adj:        1.00             1.00            xxxxx            1.00
ApprAdjDel:        8.8             15.0           xxxxxx             8.3
LOS by Appr:         A                C                *                A
********************************************************************************
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                  Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
***************************************************************************
Intersection #15 San Pablo Ave./Alcatraz Ave.
***************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):       0.745
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       23.8
Optimal Cycle:       89                Level Of Service:                 C
***************************************************************************
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       Split Phase      Split Phase
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1  1  0   1  0  2  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0 1087    54   150 1122     0     0     0     0   156     0   423
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:   0 1087    54   150 1122     0     0     0     0   156     0   423
Added Vol:     0     3     0     0     3     0     0     0     0     0     0     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   0 1090    54   150 1125     0     0     0     0   156     0   423
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:    0 1090    54   150 1125     0     0     0     0   156     0   423
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   0 1090    54   150 1125     0     0     0     0   156     0   423
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
Final Vol.:    0 1090    54   150 1125     0     0     0     0   156     0   423
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 0.94  0.94  0.95 0.95  1.00  1.00 1.00  1.00  0.89 1.00  0.89
Lanes:       0.00 1.91  0.09  1.00 2.00  0.00  0.00 0.00  0.00  0.27 0.00  0.73
Final Sat.:    0 3416   169  1805 3610     0     0     0     0   455     0  1234
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.32  0.32  0.08 0.31  0.00  0.00 0.00  0.00  0.34 0.00  0.34
Crit Moves:       ****        ****                               ****
Green/Cycle: 0.00 0.43  0.43  0.11 0.54  0.00  0.00 0.00  0.00  0.46 0.00  0.46
Volume/Cap:  0.00 0.74  0.74  0.74 0.58  0.00  0.00 0.00  0.00  0.74 0.00  0.74
Uniform Del:  0.0 24.0  24.0  43.0 15.4   0.0   0.0  0.0   0.0  22.2  0.0  22.2
IncremntDel:  0.0  2.0   2.0  14.0  0.4   0.0   0.0  0.0   0.0   3.9  0.0   3.9
Delay Adj:   0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Delay/Veh:    0.0 26.0  26.0  57.1 15.8   0.0   0.0  0.0   0.0  26.1  0.0  26.1
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:   0.0 26.0  26.0  57.1 15.8   0.0   0.0  0.0   0.0  26.1  0.0  26.1
DesignQueue:    0   38     2     8   31     0     0    0     0     5    0    14
***************************************************************************
```

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

Intersection #16 W. Frontage Road/Powell Street

Cycle (sec):	100	Critical Vol./Cap. (X):	0.556
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	17.6
Optimal Cycle:	51	Level Of Service:	B

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
Lanes:	0 0 0 0 0			2 0 0 0 1			1 0 1 1 0			0 0 1 1 1		
Volume Module:												
Base Vol:	0	0	0	685	0	288	87	260	345	0	910	667
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:	0	0	0	685	0	288	87	260	345	0	910	667
Added Vol:	0	0	0	2	0	0	0	1	0	0	1	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	687	0	288	87	261	345	0	911	669
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:	0	0	0	687	0	288	87	261	345	0	911	669
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	687	0	288	87	261	345	0	911	669
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
Final Vol.:	0	0	0	687	0	288	87	261	345	0	911	669
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	0.81	1.00	0.89	0.89
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	1.00	1.00	0.00	1.73	1.27
Final Sat.:	0	0	0	3502	0	1615	1805	1805	1534	0	2925	2148
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.18	0.05	0.14	0.22	0.00	0.31	0.31
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.35	0.09	0.65	0.65	0.00	0.56	0.56
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	0.51	0.56	0.22	0.35	0.00	0.56	0.56
Uniform Del:	0.0	0.0	0.0	26.0	0.0	25.5	43.8	7.3	8.0	0.0	14.0	14.0
IncremntDel:	0.0	0.0	0.0	0.6	0.0	0.7	4.4	0.0	0.1	0.0	0.2	0.2
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	26.6	0.0	26.2	48.2	7.3	8.2	0.0	14.3	14.3
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:	0.0	0.0	0.0	26.6	0.0	26.2	48.2	7.3	8.2	0.0	14.3	14.3
DesignQueue:	0	0	0	26	0	11	4	5	7	0	24	18

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                     Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #17 I-80 EB Ramps/Powell St.
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap. (X):         0.788
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        22.0
Optimal Cycle:      108               Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1! 0  1   0  0  0  0  0   1  0  3  0  0   0  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     568     1   915     0     0     0    82   644     0     0   907   432
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:  568     1   915     0     0     0    82   644     0     0   907   432
Added Vol:      0     0     0     0     0     0     0     3     0     0     2     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  568     1   915     0     0     0    82   647     0     0   909   432
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:   568     1   915     0     0     0    82   647     0     0   909   432
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  568     1   915     0     0     0    82   647     0     0   909   432
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
Final Vol.:   568     1   915     0     0     0    82   647     0     0   909   432
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.82  0.82  0.82  1.00  1.00  1.00  0.95  0.91  1.00  1.00  0.91  0.85
Lanes:       1.38  0.01  1.61  0.00  0.00  0.00  1.00  3.00  0.00  0.00  3.00  1.00
Final Sat.:  2161     2  2526     0     0     0  1805  5187     0     0  5187  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.26  0.48  0.36  0.00  0.00  0.00  0.05  0.12  0.00  0.00  0.18  0.27
Crit Moves:        ****                          ****                          ****
Green/Cycle: 0.60  0.60  0.60  0.00  0.00  0.00  0.06  0.40  0.00  0.00  0.34  0.34
Volume/Cap:  0.44  0.79  0.60  0.00  0.00  0.00  0.79  0.31  0.00  0.00  0.52  0.79
Uniform Del: 10.7  15.0  12.4   0.0   0.0   0.0  46.5  20.8   0.0   0.0  26.4  29.8
IncremntDel:  0.1   2.3   0.4   0.0   0.0   0.0  31.9   0.1   0.0   0.0   0.3   7.5
Delay Adj:   1.00  1.00  1.00  0.00  0.00  0.00  1.00  1.00  0.00  0.00  1.00  1.00
Delay/Veh:   10.8  17.3  12.8   0.0   0.0   0.0  78.4  20.9   0.0   0.0  26.7  37.3
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:  10.8  17.3  12.8   0.0   0.0   0.0  78.4  20.9   0.0   0.0  26.7  37.3
DesignQueue:   13     0    22     0     0     0     4    22     0     0    35    17
********************************************************************************
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                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #18 Christie Ave./Powell St.
********************************************************************************
Cycle (sec):        100             Critical Vol./Cap. (X):        0.532
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):     26.5
Optimal Cycle:       49             Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0   0     0     0   0     0     0   0     0     0
Lanes:        1  1  0  0  1   0  1  0  0  2   2  0  1  1  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     357    33   133   89    50   272  335   865   433  135   722    97
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:  357    33   133   89    50   272  335   865   433  135   722    97
Added Vol:      0     0     0    0     0     0    0     3     0    0     3     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  357    33   133   89    50   272  335   868   433  135   725    97
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:   357    33   133   89    50   272  335   868   433  135   725    97
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  357    33   133   89    50   272  335   868   433  135   725    97
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
Final Vol.:   357    33   133   89    50   272  335   868   433  135   725    97
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900  1900
Adjustment:  0.96  0.96  0.85 0.97  0.97  0.75 0.92  0.95  0.81 0.95  0.95  0.85
Lanes:       1.83  0.17  1.00 0.64  0.36  2.00 2.00  1.89  1.11 1.00  2.00  1.00
Final Sat.:  3325   307  1615 1179   662  2842 3502  3412  1702 1805  3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11  0.11  0.08 0.08  0.08  0.10 0.10  0.25  0.25 0.07  0.20  0.06
Crit Moves:        ****                   ****       ****        ****
Green/Cycle: 0.20  0.20  0.20 0.18  0.18  0.18 0.20  0.48  0.48 0.14  0.42  0.42
Volume/Cap:  0.53  0.53  0.41 0.42  0.42  0.53 0.48  0.53  0.53 0.53  0.48  0.14
Uniform Del: 35.7  35.7  34.7 36.4  36.4  37.2 35.4  18.3  18.3 39.9  21.1  18.0
IncremntDel:  0.8   0.8   0.8  0.9   0.9   1.1  0.5   0.2   0.2  2.2   0.2   0.1
Delay Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Delay/Veh:   36.5  36.5  35.6 37.2  37.2  38.3 35.9  18.5  18.5 42.1  21.4  18.1
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:  36.5  36.5  35.6 37.2  37.2  38.3 35.9  18.5  18.5 42.1  21.4  18.1
DesignQueue:   16     2     6    4     2    13   15    27    13    7    25     3
********************************************************************************
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--------------------------------------------------------------------------------
                     Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #19 San Pablo Ave./Stanford Ave.
********************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.747
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        28.6
Optimal Cycle:       90                Level Of Service:                  C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   1  0  1  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     238 1115    75    71 1111    48    87  230   182   159  830    37
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:  238 1115    75    71 1111    48    87  230   182   159  830    37
Added Vol:      3    3     0     0    3     0     0    0     3     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  241 1118    75    71 1114    48    87  230   185   159  830    37
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:   241 1118    75    71 1114    48    87  230   185   159  830    37
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  241 1118    75    71 1114    48    87  230   185   159  830    37
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
Final Vol.:   241 1118    75    71 1114    48    87  230   185   159  830    37
------------|---------------||---------------||---------------||---------------|
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 0.94  0.94  0.95 0.89  0.89  0.95 0.94  0.94
Lanes:       1.00 1.87  0.13  1.00 1.92  0.08  1.00 1.11  0.89  1.00 1.91  0.09
Final Sat.:  1805 3353   225  1805 3440   148  1805 1867  1501  1805 3435   153
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.33  0.33  0.04 0.32  0.32  0.05 0.12  0.12  0.09 0.24  0.24
Crit Moves:  ****                  ****        ****                   ****
Green/Cycle: 0.18 0.55  0.55  0.06 0.43  0.43  0.06 0.23  0.23  0.16 0.32  0.32
Volume/Cap:  0.75 0.61  0.61  0.61 0.75  0.75  0.75 0.54  0.54  0.54 0.75  0.75
Uniform Del: 38.9 15.4  15.4  45.5 23.7  23.7  46.0 34.1  34.1  38.5 30.2  30.2
IncremntDel:  9.2  0.6   0.6   9.0  2.0   2.0  23.0  0.8   0.8   2.1  2.7   2.7
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   48.2 15.9  15.9  54.6 25.8  25.8  69.0 35.0  35.0  40.7 32.9  32.9
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:  48.2 15.9  15.9  54.6 25.8  25.8  69.0 35.0  35.0  40.7 32.9  32.9
DesignQueue:   11   31     2     4   38     2     5   10     8     8   33     1
********************************************************************************
```

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

Intersection #20 San Pablo Ave./40th Street

Cycle (sec): 100 Critical Vol./Cap. (X): 0.829
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.8
Optimal Cycle: 133 Level Of Service: C

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
Lanes:	2 0 1 1 0			1 0 1 1 0			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	421	1311	16	73	1213	41	134	390	151	65	752	235
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:	421	1311	16	73	1213	41	134	390	151	65	752	235
Added Vol:	0	4	0	2	4	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	421	1315	16	75	1217	41	134	390	151	65	752	237
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:	421	1315	16	75	1217	41	134	390	151	65	752	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	421	1315	16	75	1217	41	134	390	151	65	752	237
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
Final Vol.:	421	1315	16	75	1217	41	134	390	151	65	752	237
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.95	0.92	0.92
Lanes:	2.00	1.98	0.02	1.00	1.93	0.07	1.00	1.44	0.56	1.00	1.52	0.48
Final Sat.:	3502	3559	43	1805	3475	117	1805	2493	965	1805	2646	834
Capacity Analysis Module:												
Vol/Sat:	0.12	0.37	0.37	0.04	0.35	0.35	0.07	0.16	0.16	0.04	0.28	0.28
Crit Moves:	****				****		****				****	
Green/Cycle:	0.15	0.51	0.51	0.06	0.42	0.42	0.09	0.35	0.35	0.08	0.34	0.34
Volume/Cap:	0.83	0.72	0.72	0.72	0.83	0.83	0.83	0.45	0.45	0.45	0.83	0.83
Uniform Del:	41.5	19.0	19.0	46.4	25.7	25.7	44.8	24.9	24.9	43.8	30.2	30.2
IncremntDel:	10.9	1.5	1.5	22.2	4.0	4.0	28.6	0.3	0.3	2.2	5.0	5.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	52.5	20.5	20.5	68.6	29.6	29.6	73.3	25.2	25.2	46.0	35.1	35.1
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:	52.5	20.5	20.5	68.6	29.6	29.6	73.3	25.2	25.2	46.0	35.1	35.1
DesignQueue:	21	39	0	4	43	1	7	15	6	3	29	9

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

Intersection #21 Adeline St./40th St.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.560
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.8
Optimal Cycle: 52 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	51	151	35	51	189	83	40	241	44	10	656	36
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:	51	151	35	51	189	83	40	241	44	10	656	36
Added Vol:	0	0	0	0	0	0	0	2	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	51	151	35	51	189	83	40	243	44	10	658	36
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:	51	151	35	51	189	83	40	243	44	10	658	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	151	35	51	189	83	40	243	44	10	658	36
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
Final Vol.:	51	151	35	51	189	83	40	243	44	10	658	36
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	0.95	0.93	0.93	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.69	0.31	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1805	2986	541	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.02	0.03	0.05	0.05	0.02	0.08	0.08	0.01	0.35	0.02
Crit Moves:		****			****				****		****	
Green/Cycle:	0.14	0.14	0.14	0.09	0.09	0.09	0.15	0.15	0.15	0.62	0.62	0.62
Volume/Cap:	0.20	0.56	0.15	0.30	0.56	0.55	0.15	0.56	0.56	0.01	0.56	0.04
Uniform Del:	37.9	40.0	37.6	42.3	43.4	43.3	37.3	39.7	39.7	7.3	11.1	7.4
IncremntDel:	0.4	2.6	0.3	1.0	2.1	4.2	0.3	1.4	1.4	0.0	0.6	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	38.3	42.6	37.9	43.3	45.5	47.6	37.6	41.1	41.1	7.3	11.7	7.4
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:	38.3	42.6	37.9	43.3	45.5	47.6	37.6	41.1	41.1	7.3	11.7	7.4
DesignQueue:	2	7	2	3	10	4	2	12	2	0	15	1

APPENDIX E-8

YEAR 2025 PLUS PROJECT PM PEAK HOUR LEVEL OF SERVICE WORKSHEETS

Scenario Report

Scenario:	2025+Proj PM
Command:	Default Command
Volume:	2025 Base PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Project PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

```
------------------------------------------------------------------------------
------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Rydin Rd/Central Ave
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap. (X):         0.556
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        16.4
Optimal Cycle:          0               Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  1  0  0  1   1  0  1  0  1   0  1  0  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     102     9   281    95    38     9     1   322   132    37   430    88
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:  102     9   281    95    38     9     1   322   132    37   430    88
Added Vol:      0     0     0     0     0     0     0     1     1     0     2     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  102     9   281    95    38     9     1   323   133    37   432    88
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:   102     9   281    95    38     9     1   323   133    37   432    88
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  102     9   281    95    38     9     1   323   133    37   432    88
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
Final Vol.:   102     9   281    95    38     9     1   323   133    37   432    88
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.92  0.08  1.00  1.00  1.00  1.00  0.01  1.41  0.58  1.00  1.66  0.34
Final Sat.:   398    35   508   363   380   409     2   692   296   427   777   161
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.26  0.26  0.55  0.26  0.10  0.02  0.47  0.47  0.45  0.09  0.56  0.55
Crit Moves:              ****  ****              ****                    ****
Delay/Veh:   13.3  13.3  17.1  14.8  12.3  10.9  16.0  15.6  14.7  11.5  18.8  18.1
Delay Adj:   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  13.3  17.1  14.8  12.3  10.9  16.0  15.6  14.7  11.5  18.8  18.1
LOS by Move:    B     B     C     B     B     B     C     C     B     B     C     C
ApproachDel:       16.0              13.9              15.3              18.2
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        16.0              13.9              15.3              18.2
LOS by Appr:          C                 B                 C                 C
********************************************************************************
```

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

Intersection #2 I-80 WB Ramps/Central Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.611
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 24.1
Optimal Cycle: 59 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	0	0	0	330	2	241	0	765	69	310	377	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:	0	0	0	330	2	241	0	765	69	310	377	0
Added Vol:	0	0	0	0	0	1	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	330	2	242	0	766	69	310	379	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:	0	0	0	330	2	242	0	766	69	310	379	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	330	2	242	0	766	69	310	379	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
Final Vol.:	0	0	0	330	2	242	0	766	69	310	379	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.94	0.94	0.95	0.95	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	1.83	0.17	1.00	2.00	0.00
Final Sat.:	0	0	0	1605	10	1615	0	3272	295	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.21	0.15	0.00	0.23	0.23	0.17	0.10	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.34	0.34	0.34	0.00	0.38	0.38	0.28	0.66	0.00
Volume/Cap:	0.00	0.00	0.00	0.61	0.61	0.45	0.00	0.61	0.61	0.61	0.16	0.00
Uniform Del:	0.0	0.0	0.0	27.7	27.7	25.9	0.0	24.9	24.9	31.2	6.3	0.0
IncremntDel:	0.0	0.0	0.0	2.1	2.1	0.6	0.0	0.8	0.8	2.2	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	29.8	29.8	26.5	0.0	25.7	25.7	33.4	6.3	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:	0.0	0.0	0.0	29.8	29.8	26.5	0.0	25.7	25.7	33.4	6.3	0.0
DesignQueue:	0	0	0	13	0	9	0	28	3	13	7	0

```
------------------------------------------------------------------------------
------------------------------------------------------------------------------
                   Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
******************************************************************************
Intersection #3 I-80 EB Ramps/Central Ave
******************************************************************************
Cycle (sec):       100              Critical Vol./Cap. (X):        0.718
Loss Time (sec):     0 (Y+R =  4 sec) Average Delay (sec/veh):      24.0
Optimal Cycle:      81              Level Of Service:                  C
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  1  0  0  1   0  0  0  0  0   1  0  2  0  0   0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     63    4   450    0    0     0  287  783     0    0  622   334
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:  63    4   450    0    0     0  287  783     0    0  622   334
Added Vol:     1    0     0    0    0     0    1    1     0    0    1     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  64    4   450    0    0     0  288  784     0    0  623   334
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:   64    4   450    0    0     0  288  784     0    0  623   334
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  64    4   450    0    0     0  288  784     0    0  623   334
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
Final Vol.:   64    4   450    0    0     0  288  784     0    0  623   334
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment: 0.85 0.85  0.85 1.00 1.00  1.00 0.95 0.95  1.00 1.00 0.90  0.90
Lanes:      1.88 0.12  1.00 0.00 0.00  0.00 1.00 2.00  0.00 0.00 1.30  0.70
Final Sat.: 3040  190  1615    0    0     0 1805 3610     0    0 2228  1194
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.02 0.02  0.28 0.00 0.00  0.00 0.16 0.22  0.00 0.00 0.28  0.28
Crit Moves:            ****                 ****                  ****
Green/Cycle: 0.39 0.39  0.39 0.00 0.00  0.00 0.22 0.61  0.00 0.00 0.39  0.39
Volume/Cap: 0.05 0.05  0.72 0.00 0.00  0.00 0.72 0.35  0.00 0.00 0.72  0.72
Uniform Del: 19.1 19.1  25.9  0.0  0.0   0.0 36.0  9.6   0.0  0.0 25.9  25.9
IncremntDel:  0.0  0.0   4.0  0.0  0.0   0.0  6.2  0.1   0.0  0.0  1.9   1.9
Delay Adj:  1.00 1.00  1.00 0.00 0.00  0.00 1.00 1.00  0.00 0.00 1.00  1.00
Delay/Veh:  19.1 19.1  29.9  0.0  0.0   0.0 42.1  9.7   0.0  0.0 27.8  27.8
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: 19.1 19.1  29.9  0.0  0.0   0.0 42.1  9.7   0.0  0.0 27.8  27.8
DesignQueue:   2    0    16    0    0     0   13   18     0    0   23    12
******************************************************************************
```

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

Intersection #4 San Pablo Avenue/Central Avenue

Cycle (sec):	100	Critical Vol./Cap. (X):	0.733
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	29.7
Optimal Cycle:	85	Level Of Service:	C

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 1	0 0	1	0 1	0 1	0
Volume Module:												
Base Vol:	263	1344	55	116	666	98	305	261	47	48	288	97
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:	263	1344	55	116	666	98	305	261	47	48	288	97
Added Vol:	0	4	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	263	1348	55	116	670	98	305	261	47	48	288	97
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:	263	1348	55	116	670	98	305	261	47	48	288	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	263	1348	55	116	670	98	305	261	47	48	288	97
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
Final Vol.:	263	1348	55	116	670	98	305	261	47	48	288	97
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	0.97	0.97	0.85	0.91	0.91	0.91
Lanes:	1.00	1.92	0.08	1.00	1.74	0.26	1.08	0.92	1.00	0.22	1.33	0.45
Final Sat.:	1805	3448	141	1805	3090	452	1994	1707	1615	384	2306	777
Capacity Analysis Module:												
Vol/Sat:	0.15	0.39	0.39	0.06	0.22	0.22	0.15	0.15	0.03	0.12	0.12	0.12
Crit Moves:		****		****				****				****
Green/Cycle:	0.25	0.53	0.53	0.09	0.37	0.37	0.21	0.21	0.21	0.17	0.17	0.17
Volume/Cap:	0.58	0.73	0.73	0.73	0.58	0.58	0.73	0.73	0.14	0.73	0.73	0.73
Uniform Del:	33.0	17.9	17.9	44.5	25.2	25.2	37.0	37.0	32.3	39.3	39.3	39.3
IncremntDel:	2.0	1.5	1.5	16.1	0.7	0.7	3.6	3.6	0.2	4.7	4.7	4.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	34.9	19.4	19.4	60.6	25.9	25.9	40.6	40.6	32.4	44.0	44.0	44.0
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:	34.9	19.4	19.4	60.6	25.9	25.9	40.6	40.6	32.4	44.0	44.0	44.0
DesignQueue:	11	39	2	6	25	4	14	12	2	2	14	5

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

Intersection #5 San Pablo Avenue/Marin Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.864
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	32.5
Optimal Cycle:	167	Level Of Service:	C

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
Lanes:	1 0 1 1 0			1 0 1 1 0			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	162	1423	165	126	871	28	60	697	120	122	702	366
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:	162	1423	165	126	871	28	60	697	120	122	702	366
Added Vol:	1	4	0	0	4	1	1	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	163	1427	165	126	875	29	61	697	121	122	702	366
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:	163	1427	165	126	875	29	61	697	121	122	702	366
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	1427	165	126	875	29	61	697	121	122	702	366
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
Final Vol.:	163	1427	165	126	875	29	61	697	121	122	702	366
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	0.95	0.95	0.93	0.93	0.95	0.90	0.90
Lanes:	1.00	1.79	0.21	1.00	1.94	0.06	1.00	1.70	0.30	1.00	1.31	0.69
Final Sat.:	1805	3184	368	1805	3477	115	1805	3008	522	1805	2252	1174
Capacity Analysis Module:												
Vol/Sat:	0.09	0.45	0.45	0.07	0.25	0.25	0.03	0.23	0.23	0.07	0.31	0.31
Crit Moves:		****		****			****				****	
Green/Cycle:	0.16	0.52	0.52	0.08	0.44	0.44	0.04	0.31	0.31	0.09	0.36	0.36
Volume/Cap:	0.57	0.86	0.86	0.86	0.57	0.57	0.86	0.75	0.75	0.75	0.86	0.86
Uniform Del:	38.9	21.0	21.0	45.4	20.8	20.8	47.8	31.0	31.0	44.4	29.7	29.7
IncremntDel:	2.7	4.5	4.5	37.8	0.5	0.5	62.5	2.9	2.9	17.3	6.5	6.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.7	25.5	25.5	83.2	21.3	21.3	110.2	33.9	33.9	61.6	36.2	36.2
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:	41.7	25.5	25.5	83.2	21.3	21.3	110.2	33.9	33.9	61.6	36.2	36.2
DesignQueue:	8	43	5	7	29	1	3	28	5	6	27	14

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                      Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #6 W. Frontage Rd/Gilman St
********************************************************************************
Average Delay (sec/veh):     47.1          Worst Case Level Of Service:        E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  1    0  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54    1   570    17    1    12    10  179    72   204   24    21
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:   54    1   570    17    1    12    10  179    72   204   24    21
Added Vol:      0    0     2     0    0     0     0    0     0     2    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54    1   572    17    1    12    10  179    72   206   24    21
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:    54    1   572    17    1    12    10  179    72   206   24    21
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    54    1   572    17    1    12    10  179    72   206   24    21
Critical Gap Module:
Critical Gp:  7.1  6.5   6.2   7.1  6.5   6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3   3.5  4.0   3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  624  656   179   968  718    23    45 xxxx xxxxx   251 xxxx xxxxx
Potent Cap.:  401  388   869   235  358  1060  1576 xxxx xxxxx  1326 xxxx xxxxx
Move Cap.:    340  317   869    69  292  1060  1576 xxxx xxxxx  1326 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx   7.7 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     A    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  764 xxxxx  xxxx  115 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx 27.3 xxxxx xxxxx 47.1 xxxxx   7.3 xxxx xxxxx   8.2 xxxx xxxxx
Shared LOS:     *    D     *     *    E     *     A    *     *     A    *     *
ApproachDel:       27.3             47.1            xxxxxx           xxxxxx
ApproachLOS:         D                E                *                *
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                       Level Of Service Computation Report
           2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #7 I-80 WB Ramps/Gilman St
********************************************************************************
Average Delay (sec/veh):    295.6          Worst Case Level Of Service:        F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        0  0  0  0  0    1  1  0  0  1    0  0  1  1  0    0  1  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   382     5   126     0   728    45   337   112     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:    0     0     0   382     5   126     0   728    45   337   112     0
Added Vol:      0     0     0     0     0     0     0     2     0     0     2     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0   382     5   126     0   730    45   337   114     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:     0     0     0   382     5   126     0   730    45   337   114     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0   382     5   126     0   730    45   337   114     0
Critical Gap Module:
Critical Gp:xxxxx  xxxx xxxxx   6.8   6.5   6.9 xxxxx  xxxx xxxxx   4.1  xxxx xxxxx
FollowUpTim:xxxxx  xxxx xxxxx   3.5   4.0   3.3 xxxxx  xxxx xxxxx   2.2  xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx  xxxx xxxxx  1153  1563    57  xxxx  xxxx xxxxx   775  xxxx xxxxx
Potent Cap.: xxxx  xxxx xxxxx   194   113  1004  xxxx  xxxx xxxxx   850  xxxx xxxxx
Move Cap.:   xxxx  xxxx xxxxx   119    58  1004  xxxx  xxxx xxxxx   850  xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx  xxxx xxxxx 369.5  xxxx   9.1 xxxxx  xxxx xxxxx   9.2  xxxx xxxxx
LOS by Move:    *     *     *     F     *     A     *     *     *     A     *     *
Movement:     LT  - LTR  - RT    LT  - LTR  - RT    LT  - LTR  - RT    LT  - LTR  - RT
Shared Cap.: xxxx  xxxx xxxxx   116  xxxx xxxxx  xxxx  xxxx xxxxx  xxxx  xxxx xxxxx
Shrd StpDel:xxxxx  xxxx xxxxx 407.6  xxxx xxxxx xxxxx  xxxx xxxxx  12.0  xxxx xxxxx
Shared LOS:     *     *     *     F     *     *     *     *     *     B     *     *
ApproachDel:      xxxxxx            295.6            xxxxxx            xxxxxx
ApproachLOS:        *                 F                 *                 *
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                    Level Of Service Computation Report
          2000 HCM Unsignalized Method (Future Volume Alternative)
********************************************************************************
Intersection #8 I-80 EB Ramps/Gilman Street
********************************************************************************
Average Delay (sec/veh): OVERFLOW          Worst Case Level Of Service:        F
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:        1  0  0  1  0    0  0  0  0  0    0  1  1  0  0    0  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      64   25   149     0    0     0   659  487     0     0   52  1182
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:   64   25   149     0    0     0   659  487     0     0   52  1182
Added Vol:      0    0     0     0    0     0     0    2     0     0    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   64   25   149     0    0     0   659  489     0     0   54  1182
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:    64   25   149     0    0     0   659  489     0     0   54  1182
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    64   25   149     0    0     0   659  489     0     0   54  1182
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1834 3043   245  xxxx xxxx xxxxx  1236 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:   69   13   762  xxxx xxxx xxxxx   571 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:      0    0   762  xxxx xxxx xxxxx   571 xxxx xxxxx  xxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:  0.0 xxxx xxxxx xxxxx xxxx xxxxx  11.3 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     B    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx     0  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 113.3 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     F    *     *     *    *     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        F                *                *                *
```

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--------------------------------------------------------------------------------
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #9 San Pablo Avenue/Gilman Street
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap. (X):         0.799
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        28.4
Optimal Cycle:         92               Level Of Service:                   C
********************************************************************************
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
Lanes:        1  0  1  1  0   1  0  1  1  0   0  1  0  1  0   0  0  1!  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     199 1228    89    93  754   152   154  277   173    94  353   115
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:  199 1228    89    93  754   152   154  277   173    94  353   115
Added Vol:      0    3     0     0    3     2     2    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  199 1231    89    93  757   154   156  277   173    94  353   115
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:   199 1231    89    93  757   154   156  277   173    94  353   115
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  199 1231    89    93  757   154   156  277   173    94  353   115
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
Final Vol.:   199 1231    89    93  757   154   156  277   173    94  353   115
------------|---------------||---------------||---------------||---------------|
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  0.59 0.59  0.59  0.78 0.78  0.78
Lanes:       1.00 1.87  0.13  1.00 1.66  0.34  0.51 0.92  0.57  0.17 0.63  0.20
Final Sat.:  1805 3333   241  1805 2925   595   578 1026   641   249  934   304
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.37  0.37  0.05 0.26  0.26  0.27 0.27  0.27  0.38 0.38  0.38
Crit Moves:       ****        ****                                    ****
Green/Cycle: 0.16 0.46  0.46  0.06 0.37  0.37  0.47 0.47  0.47  0.47 0.47  0.47
Volume/Cap:  0.70 0.80  0.80  0.80 0.70  0.70  0.57 0.57  0.57  0.80 0.80  0.80
Uniform Del: 39.9 22.9  22.9  46.1 26.8  26.8  19.0 19.0  19.0  22.3 22.3  22.3
IncremntDel:  7.6  2.8   2.8  31.0  1.7   1.7   0.7  0.7   0.7   6.4  6.4   6.4
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Delay/Veh:   47.5 25.8  25.8  77.2 28.6  28.6  19.8 19.8  19.8  28.7 28.7  28.7
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:  47.5 25.8  25.8  77.2 28.6  28.6  19.8 19.8  19.8  28.7 28.7  28.7
DesignQueue:   10   40     3     5   28     6     5    8     5     3   11     4
********************************************************************************
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                      Level Of Service Computation Report
           2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #10 W. Frontage Rd/University Ave
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap. (X):         1.767
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        162.7
Optimal Cycle:         0                Level Of Service:                   F
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0   0  1  0  1  0   0  1  0  1  0   1  0  1  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      38   663   107    21   371    43   108   150    71   200   180    16
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:   38   663   107    21   371    43   108   150    71   200   180    16
Added Vol:      0     2     5     8     2     0     0     0     0     5     0     8
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   38   665   112    29   373    43   108   150    71   205   180    24
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:    38   665   112    29   373    43   108   150    71   205   180    24
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   38   665   112    29   373    43   108   150    71   205   180    24
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
Final Vol.:    38   665   112    29   373    43   108   150    71   205   180    24
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.05  0.81  0.14  0.13  1.68  0.19  0.66  0.91  0.43  1.00  1.76  0.24
Final Sat.:    22   376    63    57   737    86   264   383   186   377   706    95
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     1.77  1.77  1.77  0.51  0.51  0.50  0.41  0.39  0.38  0.54  0.25  0.25
Crit Moves:        ****        ****              ****              ****
Delay/Veh:  372.9   373 372.9  18.9  18.5  18.1  17.2  16.2  15.6  22.3  14.4  14.3
Delay Adj:   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: 372.9   373 372.9  18.9  18.5  18.1  17.2  16.2  15.6  22.3  14.4  14.3
LOS by Move:    F     F     F     C     C     C     C     C     C     C     B     B
ApproachDel:      372.9             18.5              16.4              18.4
Delay Adj:         1.00             1.00              1.00              1.00
ApprAdjDel:       372.9             18.5              16.4              18.4
LOS by Appr:          F                C                 C                 C
********************************************************************************
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                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #11 6th Street/University Ave
*******************************************************************************
Cycle (sec):         100             Critical Vol./Cap. (X):        1.005
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):      49.5
Optimal Cycle:       180             Level Of Service:                  D
*******************************************************************************
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
Lanes:        1  0  1  0  1    1  0  1  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     430  462  116   118  290  624   126  962  246    29 1119   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:  430  462  116   118  290  624   126  962  246    29 1119   44
Added Vol:      0    0    0     0    0    0     0    4    0     0    4    0
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  430  462  116   118  290  624   126  966  246    29 1123   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:     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:   430  462  116   118  290  624   126  966  246    29 1123   44
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  430  462  116   118  290  624   126  966  246    29 1123   44
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
Final Vol.:   430  462  116   118  290  624   126  966  246    29 1123   44
------------|---------------||---------------||---------------||---------------|
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 0.85  0.95 0.95 0.85  0.95 0.95 0.85
Lanes:       1.00 1.00 1.00  1.00 1.00 1.00  1.00 2.00 1.00  1.00 2.00 1.00
Final Sat.:  1805 1900 1615  1805 1900 1615  1805 3610 1615  1805 3610 1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.24 0.24 0.07  0.07 0.15 0.39  0.07 0.27 0.15  0.02 0.31 0.03
Crit Moves:  ****                      ****  ****                  ****
Green/Cycle: 0.24 0.49 0.49  0.13 0.38 0.38  0.07 0.36 0.36  0.02 0.31 0.31
Volume/Cap:  1.01 0.50 0.15  0.50 0.40 1.01  1.01 0.75 0.43  0.75 1.01 0.09
Uniform Del: 38.2 17.2 14.0  40.3 22.4 30.8  46.5 28.2 24.4  48.7 34.5 24.5
IncremntDel: 44.9  0.4  0.1   1.6  0.4 37.5  81.9  2.5  0.5  56.3 28.3  0.1
Delay Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Delay/Veh:   83.0 17.6 14.1  42.0 22.7 68.3 128.4 30.7 24.9 104.9 62.8 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:  83.0 17.6 14.1  42.0 22.7 68.3 128.4 30.7 24.9 104.9 62.8 24.6
DesignQueue:   19   14    3     6   10   23     7   37    9     2   47    2
*******************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 San Pablo Ave/University Ave

Cycle (sec):	100	Critical Vol./Cap. (X):	0.864
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	34.2
Optimal Cycle:	168	Level Of Service:	C

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
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	119	1157	96	188	702	81	107	934	55	122	1057	173
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:	119	1157	96	188	702	81	107	934	55	122	1057	173
Added Vol:	3	2	0	0	2	2	2	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	122	1159	96	188	704	83	109	934	58	122	1057	173
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:	122	1159	96	188	704	83	109	934	58	122	1057	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	1159	96	188	704	83	109	934	58	122	1057	173
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
Final Vol.:	122	1159	96	188	704	83	109	934	58	122	1057	173
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	0.94	0.94	0.95	0.93	0.93
Lanes:	1.00	1.85	0.15	1.00	1.79	0.21	1.00	1.88	0.12	1.00	1.72	0.28
Final Sat.:	1805	3297	273	1805	3178	375	1805	3368	209	1805	3037	497
Capacity Analysis Module:												
Vol/Sat:	0.07	0.35	0.35	0.10	0.22	0.22	0.06	0.28	0.28	0.07	0.35	0.35
Crit Moves:		****		****			****				****	
Green/Cycle:	0.12	0.41	0.41	0.12	0.40	0.40	0.07	0.38	0.38	0.09	0.40	0.40
Volume/Cap:	0.55	0.86	0.86	0.86	0.55	0.55	0.86	0.73	0.73	0.73	0.86	0.86
Uniform Del:	41.2	27.1	27.1	43.2	22.8	22.8	46.0	26.6	26.6	44.1	27.4	27.4
IncremntDel:	2.9	5.6	5.6	28.2	0.5	0.5	42.1	2.0	2.0	15.0	5.8	5.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.1	32.8	32.8	71.3	23.3	23.3	88.1	28.6	28.6	59.2	33.1	33.1
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:	44.1	32.8	32.8	71.3	23.3	23.3	88.1	28.6	28.6	59.2	33.1	33.1
DesignQueue:	6	42	3	9	25	3	6	35	2	6	38	6

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                  Level Of Service Computation Report
         2000 HCM Unsignalized Method (Future Volume Alternative)
*****************************************************************************
Intersection #13 W. Frontage Rd/Ashby Ramp
*****************************************************************************
Average Delay (sec/veh):     24.3          Worst Case Level Of Service:     C
*****************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  0  1  0   0  1  1  0  0   0  0  0  0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  945    41    34  405     0     0    0     0    18    0     7
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:    0  945    41    34  405     0     0    0     0    18    0     7
Added Vol:      0    3     0     0    3     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  948    41    34  408     0     0    0     0    18    0     7
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:     0  948    41    34  408     0     0    0     0    18    0     7
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     0  948    41    34  408     0     0    0     0    18    0     7
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   989 xxxx xxxxx  xxxx xxxx xxxxx  1241 xxxx   969
Potent Cap.: xxxx xxxx xxxxx   707 xxxx xxxxx  xxxx xxxx xxxxx   195 xxxx   310
Move Cap.:   xxxx xxxx xxxxx   707 xxxx xxxxx  xxxx xxxx xxxxx   188 xxxx   310
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     B    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  211 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx  10.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 24.3 xxxxx
Shared LOS:     *    *     *     B    *     *     *    *     *     *    C     *
ApproachDel:     xxxxxx           xxxxxx           xxxxxx            24.3
ApproachLOS:        *                *                *                C
```

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                      Level Of Service Computation Report
            2000 HCM 4-Way Stop Method (Future Volume Alternative)
********************************************************************************
Intersection #14 W. Frontage Rd/I-80 WB Ramp
********************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.998
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        35.7
Optimal Cycle:        0                 Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign         Stop Sign        Stop Sign
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0   1  0  0  1  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        3  657     3     90  375     6      6    0     2     35    4   194
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:     3  657     3     90  375     6      6    0     2     35    4   194
Added Vol:       0    3     0      0    3     0      0    0     0      1    0     0
PasserByVol:     0    0     0      0    0     0      0    0     0      0    0     0
Initial Fut:     3  660     3     90  378     6      6    0     2     36    4   194
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:      3  660     3     90  378     6      6    0     2     36    4   194
Reduct Vol:      0    0     0      0    0     0      0    0     0      0    0     0
Reduced Vol:     3  660     3     90  378     6      6    0     2     36    4   194
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
Final Vol.:      3  660     3     90  378     6      6    0     2     36    4   194
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00   1.00 1.00  1.00
Lanes:        0.00 0.99  0.01   1.00 0.98  0.02   0.75 0.00  0.25   0.15 0.02  0.83
Final Sat.:      3  661     3    549  586     9    339    0   113     89   10   478
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      1.00 1.00  1.00   0.16 0.64  0.64   0.02 xxxx  0.02   0.41 0.41  0.41
Crit Moves:        ****              ****         ****                    ****
Delay/Veh:    57.3 57.3  57.3   10.4 18.6  18.6   10.4  0.0  10.4   13.0 13.0  13.0
Delay Adj:    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:   57.3 57.3  57.3   10.4 18.6  18.6   10.4  0.0  10.4   13.0 13.0  13.0
LOS by Move:     F    F     F      B    C     C      B    *     B      B    B     B
ApproachDel:       57.3             17.1              10.4             13.0
Delay Adj:         1.00             1.00              1.00             1.00
ApprAdjDel:        57.3             17.1              10.4             13.0
LOS by Appr:         F                C                 B                B
********************************************************************************
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                     Level Of Service Computation Report
         2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #15 San Pablo Ave./Alcatraz Ave.
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap. (X):         0.733
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):        18.5
Optimal Cycle:        85               Level Of Service:                  B
********************************************************************************
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        Split Phase       Split Phase
Rights:           Include           Include           Include           Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        0  0  1  1  0    1  0  2  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0 1273    99   285 1172     0     0     0     0   107     0   215
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:    0 1273    99   285 1172     0     0     0     0   107     0   215
Added Vol:      0    4     0     0    4     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:    0 1277    99   285 1176     0     0     0     0   107     0   215
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:     0 1277    99   285 1176     0     0     0     0   107     0   215
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:    0 1277    99   285 1176     0     0     0     0   107     0   215
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
Final Vol.:     0 1277    99   285 1176     0     0     0     0   107     0   215
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 0.94  0.94  0.95 0.95  1.00  1.00 1.00  1.00  0.90 1.00  0.90
Lanes:       0.00 1.86  0.14  1.00 2.00  0.00  0.00 0.00  0.00  0.33 0.00  0.67
Final Sat.:     0 3313   257  1805 3610     0     0     0     0   565     0  1136
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.39  0.39  0.16 0.33  0.00  0.00 0.00  0.00  0.19 0.00  0.19
Crit Moves:       ****        ****                                ****
Green/Cycle: 0.00 0.53  0.53  0.22 0.74  0.00  0.00 0.00  0.00  0.26 0.00  0.26
Volume/Cap:  0.00 0.73  0.73  0.73 0.44  0.00  0.00 0.00  0.00  0.73 0.00  0.73
Uniform Del:  0.0 18.3  18.3  36.5  4.9   0.0   0.0  0.0   0.0  33.9  0.0  33.9
IncremntDel:  0.0  1.5   1.5   7.0  0.1   0.0   0.0  0.0   0.0   6.2  0.0   6.2
Delay Adj:   0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Delay/Veh:    0.0 19.8  19.8  43.6  5.1   0.0   0.0  0.0   0.0  40.2  0.0  40.2
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:   0.0 19.8  19.8  43.6  5.1   0.0   0.0  0.0   0.0  40.2  0.0  40.2
DesignQueue:    0   37     3    13   18     0     0     0     0     5     0     9
********************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 W. Frontage Road/Powell Street

Cycle (sec): 100 Critical Vol./Cap. (X): 0.821
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 20.4
Optimal Cycle: 127 Level Of Service: C

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
Lanes:	0 0	0	0 0	2 0	0	0 1	1 0	1	1 0	0 0	1	1 1
Volume Module:												
Base Vol:	0	0	0	553	0	271	242	411	592	0	613	1589
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:	0	0	0	553	0	271	242	411	592	0	613	1589
Added Vol:	0	0	0	3	0	0	0	1	0	0	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	556	0	271	242	412	592	0	614	1592
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:	0	0	0	556	0	271	242	412	592	0	614	1592
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	556	0	271	242	412	592	0	614	1592
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
Final Vol.:	0	0	0	556	0	271	242	412	592	0	614	1592
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.95	0.95	0.81	1.00	0.95	0.81
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	2.00
Final Sat.:	0	0	0	3502	0	1615	1805	1805	1534	0	1805	3069
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.16	0.00	0.17	0.13	0.23	0.39	0.00	0.34	0.52
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.20	0.00	0.20	0.16	0.80	0.80	0.00	0.63	0.63
Volume/Cap:	0.00	0.00	0.00	0.78	0.00	0.82	0.82	0.29	0.49	0.00	0.54	0.82
Uniform Del:	0.0	0.0	0.0	37.6	0.0	38.0	40.4	2.7	3.4	0.0	10.3	14.1
IncremntDel:	0.0	0.0	0.0	5.4	0.0	15.0	16.5	0.0	0.2	0.0	0.1	2.1
Delay Adj:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Delay/Veh:	0.0	0.0	0.0	43.0	0.0	53.0	57.0	2.8	3.6	0.0	10.4	16.2
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:	0.0	0.0	0.0	43.0	0.0	53.0	57.0	2.8	3.6	0.0	10.4	16.2
DesignQueue:	0	0	0	26	0	12	12	5	7	0	14	37

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                     Level Of Service Computation Report
           2000 HCM Operations Method (Future Volume Alternative)
*****************************************************************************
Intersection #17 I-80 EB Ramps/Powell St.
*****************************************************************************
Cycle (sec):         100             Critical Vol./Cap. (X):         1.104
Loss Time (sec):       0 (Y+R =  4 sec) Average Delay (sec/veh):       41.7
Optimal Cycle:       180             Level Of Service:                  D
*****************************************************************************
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
Lanes:        1  0  1! 0  1   0  0  0  0  0   1  0  3  0  0   0  0  3  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     563  199  1043    0    0     0  174  778     0    0 1604   605
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:  563  199  1043    0    0     0  174  778     0    0 1604   605
Added Vol:      0    0     0    0    0     0    0    3     0    0    3     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  563  199  1043    0    0     0  174  781     0    0 1607   605
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:   563  199  1043    0    0     0  174  781     0    0 1607   605
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  563  199  1043    0    0     0  174  781     0    0 1607   605
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
Final Vol.:   563  199  1043    0    0     0  174  781     0    0 1607   605
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.83 0.83  0.83 1.00 1.00  1.00 0.95 0.91  1.00 1.00 0.91  0.85
Lanes:       1.28 0.20  1.52 0.00 0.00  0.00 1.00 3.00  0.00 0.00 3.00  1.00
Final Sat.:  2029  315  2408    0    0     0 1805 5187     0    0 5187  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.28 0.63  0.43 0.00 0.00  0.00 0.10 0.15  0.00 0.00 0.31  0.37
Crit Moves:       ****                       ****                         ****
Green/Cycle: 0.57 0.57  0.57 0.00 0.00  0.00 0.09 0.43  0.00 0.00 0.34  0.34
Volume/Cap:  0.48 1.10  0.76 0.00 0.00  0.00 1.10 0.35  0.00 0.00 0.91  1.10
Uniform Del: 12.6 21.3  16.1  0.0  0.0   0.0 45.6 19.3   0.0  0.0 31.6  33.0
IncremntDel:  0.1 56.4   1.4  0.0  0.0   0.0 102.2  0.1  0.0  0.0  7.7  70.0
Delay Adj:   1.00 1.00  1.00 0.00 0.00  0.00 1.00 1.00  0.00 0.00 1.00  1.00
Delay/Veh:   12.7 77.7  17.5  0.0  0.0   0.0 147.8 19.4  0.0  0.0 39.3 103.0
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:  12.7 77.7  17.5  0.0  0.0   0.0 147.8 19.4  0.0  0.0 39.3 103.0
DesignQueue:   14    5    27    0    0     0    9   26     0    0   64    24
*****************************************************************************
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Christie Ave./Powell St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.818
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	36.5
Optimal Cycle:	125	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 1	0 0	1	0 1	0 0	2	2 0	1 1	1	1 0	2 0	1
Volume Module:												
Base Vol:	461	54	271	162	82	613	383	822	674	248	1075	153
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	54	271	162	82	613	383	822	674	248	1075	153
Added Vol:	0	0	0	0	0	0	0	3	0	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	461	54	271	162	82	613	383	825	674	248	1078	153
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:	461	54	271	162	82	613	383	825	674	248	1078	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	461	54	271	162	82	613	383	825	674	248	1078	153
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
Final Vol.:	461	54	271	162	82	613	383	825	674	248	1078	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.97	0.97	0.75	0.92	0.89	0.89	0.95	0.95	0.85
Lanes:	1.79	0.21	1.00	0.66	0.34	2.00	2.00	1.65	1.35	1.00	2.00	1.00
Final Sat.:	3255	381	1615	1221	618	2842	3502	2781	2272	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.17	0.13	0.13	0.22	0.11	0.30	0.30	0.14	0.30	0.09
Crit Moves:			****			****		****		****		
Green/Cycle:	0.21	0.21	0.21	0.26	0.26	0.26	0.14	0.36	0.36	0.17	0.39	0.39
Volume/Cap:	0.69	0.69	0.82	0.50	0.50	0.82	0.77	0.82	0.82	0.82	0.77	0.24
Uniform Del:	36.8	36.8	37.9	31.2	31.2	34.6	41.3	28.9	28.9	40.1	26.6	20.6
IncremntDel:	2.8	2.8	14.6	0.8	0.8	7.0	7.1	3.0	3.0	15.8	2.6	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	39.5	39.5	52.6	32.1	32.1	41.6	48.4	31.9	31.9	55.9	29.3	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:	39.5	39.5	52.6	32.1	32.1	41.6	48.4	31.9	31.9	55.9	29.3	20.8
DesignQueue:	21	2	12	7	3	26	19	31	26	12	40	5

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

Intersection #19 San Pablo Ave./Stanford Ave.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.787
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	32.1
Optimal Cycle:	107	Level Of Service:	C

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
Lanes:	1 0 1 1 0			1 0 1 1 0			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	171	1140	126	204	905	86	234	724	165	113	355	63
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:	171	1140	126	204	905	86	234	724	165	113	355	63
Added Vol:	3	4	0	0	4	0	0	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	174	1144	126	204	909	86	234	724	168	113	355	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:	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:	174	1144	126	204	909	86	234	724	168	113	355	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	1144	126	204	909	86	234	724	168	113	355	63
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
Final Vol.:	174	1144	126	204	909	86	234	724	168	113	355	63
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	0.94	0.94	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	1.80	0.20	1.00	1.83	0.17	1.00	1.62	0.38	1.00	1.70	0.30
Final Sat.:	1805	3203	353	1805	3255	308	1805	2848	661	1805	2995	532
Capacity Analysis Module:												
Vol/Sat:	0.10	0.36	0.36	0.11	0.28	0.28	0.13	0.25	0.25	0.06	0.12	0.12
Crit Moves:		****		****				****		****		
Green/Cycle:	0.15	0.45	0.45	0.14	0.44	0.44	0.21	0.32	0.32	0.08	0.19	0.19
Volume/Cap:	0.63	0.79	0.79	0.79	0.63	0.63	0.62	0.79	0.79	0.79	0.62	0.62
Uniform Del:	39.7	23.2	23.2	41.3	21.4	21.4	35.8	30.7	30.7	45.2	37.0	37.0
IncremntDel:	4.6	2.7	2.7	14.7	0.8	0.8	3.0	3.7	3.7	24.4	1.7	1.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.2	25.9	25.9	56.1	22.3	22.3	38.9	34.5	34.5	69.6	38.7	38.7
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:	44.2	25.9	25.9	56.1	22.3	22.3	38.9	34.5	34.5	69.6	38.7	38.7
DesignQueue:	8	38	4	10	30	3	11	29	7	6	16	3

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

Intersection #20 San Pablo Ave./40th Street

Cycle (sec):	100	Critical Vol./Cap. (X):	0.796
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	33.2
Optimal Cycle:	112	Level Of Service:	C

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
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	382	1132	41	198	842	174	269	844	302	48	410	93
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:	382	1132	41	198	842	174	269	844	302	48	410	93
Added Vol:	0	5	0	2	5	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	382	1137	41	200	847	174	269	844	302	48	410	95
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:	382	1137	41	200	847	174	269	844	302	48	410	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	382	1137	41	200	847	174	269	844	302	48	410	95
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
Final Vol.:	382	1137	41	200	847	174	269	844	302	48	410	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.93	0.93	0.95	0.91	0.91	0.95	0.92	0.92
Lanes:	2.00	1.93	0.07	1.00	1.66	0.34	1.00	1.47	0.53	1.00	1.62	0.38
Final Sat.:	3502	3467	125	1805	2920	600	1805	2552	913	1805	2849	660
Capacity Analysis Module:												
Vol/Sat:	0.11	0.33	0.33	0.11	0.29	0.29	0.15	0.33	0.33	0.03	0.14	0.14
Crit Moves:		****		****				****		****		
Green/Cycle:	0.15	0.41	0.41	0.14	0.40	0.40	0.23	0.42	0.42	0.03	0.22	0.22
Volume/Cap:	0.72	0.80	0.80	0.80	0.72	0.72	0.65	0.80	0.80	0.80	0.65	0.65
Uniform Del:	40.5	25.7	25.7	41.7	25.3	25.3	35.0	25.5	25.5	48.0	35.5	35.5
IncremntDel:	4.9	3.1	3.1	16.1	1.9	1.9	3.7	3.2	3.2	50.6	2.0	2.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.4	28.8	28.8	57.7	27.2	27.2	38.7	28.7	28.7	98.6	37.5	37.5
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:	45.4	28.8	28.8	57.7	27.2	27.2	38.7	28.7	28.7	98.6	37.5	37.5
DesignQueue:	19	40	1	10	30	6	12	30	11	3	18	4

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

Intersection #21 Adeline St./40th St.

Cycle (sec):	100	Critical Vol./Cap. (X):	0.732
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	35.0
Optimal Cycle:	85	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Split Phase			Split Phase			Split Phase			Split Phase	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 1 0 1			1 0 2 0 1			1 0 1 1 0			1 0 1 0 1		
Volume Module:												
Base Vol:	32	311	33	108	171	113	180	941	23	7	434	59
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:	32	311	33	108	171	113	180	941	23	7	434	59
Added Vol:	0	0	0	0	0	0	0	2	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	311	33	108	171	113	180	943	23	7	436	59
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:	32	311	33	108	171	113	180	943	23	7	436	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	311	33	108	171	113	180	943	23	7	436	59
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
Final Vol.:	32	311	33	108	171	113	180	943	23	7	436	59
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	0.95	0.95	0.95	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.95	0.05	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	3610	1615	1805	3510	86	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.16	0.02	0.06	0.05	0.07	0.10	0.27	0.27	0.00	0.23	0.04
Crit Moves:		****				****		****			****	
Green/Cycle:	0.22	0.22	0.22	0.10	0.10	0.10	0.37	0.37	0.37	0.31	0.31	0.31
Volume/Cap:	0.08	0.73	0.09	0.63	0.50	0.73	0.27	0.73	0.73	0.01	0.73	0.12
Uniform Del:	30.7	36.0	30.8	43.5	42.9	44.0	22.2	27.4	27.4	23.7	30.6	24.5
IncremntDel:	0.1	6.4	0.1	7.1	1.1	16.4	0.2	2.1	2.1	0.0	4.6	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	30.8	42.4	30.9	50.6	44.1	60.3	22.5	29.5	29.5	23.7	35.2	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	42.4	30.9	50.6	44.1	60.3	22.5	29.5	29.5	23.7	35.2	24.6
DesignQueue:	1	14	1	6	9	6	6	36	1	0	18	2

APPENDIX F

PROJECTS CONSIDERED IN THE CUMULATIVE ANALYSIS

Table F-1: Projects Considered in the Cumulative Analysis

Project	Proposed Land Use	Number Of Units/ Floor Area
Oakland		
Bay Bridge East Span	Highway	
Fletco 46th Street Lofts	Residential Retail/Commercial	79 units 3,000 square feet
Green City Lofts	Residential	62 units
MacArthur BART Transit Village	Residential Parking Retail Medical/Surgery Center	500-800 units 1,200 parking spaces 50,000 square feet
Best Buy Retail Store	Retail	45,000 square feet
IKEA Parking Structure	Parking	800 parking spaces
Emeryville		
Hollis Business Center	Office Parking	92,000 square feet 630 parking spaces
Emeryville Farms – Phase I and II	Office	51,777 square feet
Chiron Parking Garage	Parking	960 parking spaces
Chiron Lab Buildings	Office	310,000 square feet
Electro Crossing	Residential Café Multi-Purpose Room Parking	72 units 2,100 square feet 1,900 square feet 107 parking spaces
5885 Hollis Street	Office Parking	95,549 square feet 361 parking spaces
Wareham Emerystation Project	Office Residential Parking	412,000 square feet 100 units
Emerybay Lofts	Residential Parking	62 units 81 parking spaces
Andante Mixed Use Development	Residential Commercial Parking	115 units 15,000 square feet 240 parking spaces
Bay Street	Residential Hotel Retail/entertainment	350 units 250 rooms 325,000 square feet
The Promenade/Emery Village Center	Retail Residential	11,500 square feet 102 units
Liquid Sugars Housing	Residential	54 units
Fletco 46th Street Lofts	Residential Retail/commercial	79 units 3,000 square feet
Green City Lofts	Residential	62 units
The Avalon	Senior Residential Retail Community	68 units
Remar Bakery Lofts	Residential	57 units
The Key Route Lofts	Residential	17 units
Doyle Street Townhouses	Residential	26 units
Oliver Lofts II	Residential	26 units
1300-1350 Powell Street	Residential	72 units
Ocean Avenue Apartments	Residential	12 units

Table F-1 *continued*

Project	Proposed Land Use	Number Of Units/ Floor Area
Hollis and 65th Street Project	Residential Retail	325 units 4,300 square feet
Berkeley		
Berkeley Marina Pedestrian/ Bicycle Pathway	Recreational	
Berkeley Waterfront Plan		
2500-08-14 Benvenue Avenue	Office Residential Educational	41,000 square feet TOTAL
2451-71 Shattuck Avenue	Residential Parking Retail/restaurant Cultural	100 units 64 parking spaces 85,000 square feet TOTAL
1797 Shattuck Avenue	Retail Residential Parking	8,200 square feet 88 units 42 parking spaces
2006 University Avenue	Residential Retail	32 units 1,630 square feet
3075 Adeline Street – Ed Roberts Campus	Office Educational Restaurant	75,000 square feet TOTAL
2076 Ashby Avenue	Residential	12 units
2120 Bancroft Way	Residential Retail Parking	26 units 1,843 square feet 10 parking spaces
2526 Durant Avenue	Residential Commercial	44 units 31,626 square feet TOTAL
2310 Fulton Street	Residential Commercial	74 units
2575 San Pablo Avenue	Senior Residential Retail	28 units
2831 Seventh Street	Residential Commercial	6,300 square feet of residential units 4,300 square feet
Albany		
Rancho San Antonio	Retail/Restaurant/Hotel Commercial Conference/Entertainment	318,000 square feet of commercial, retail, entertainment uses 100,000 square feet of racetrack facilities 332,000 square feet of event/conference facilities 700 hotel rooms
1055 Eastshore Highway	Retail Parking	120,000 square feet 600 parking spaces
Richmond		
Brickyard Cove Commercial Site	Retail Office	1000,000 total square feet in 3 buildings
Brickyard Landing Phase V	Residential	69 condominium units
Seacliff Villas/Estates	Residential	150 units
Jelani Park Subdivision	Residential	8 units
Harbor Gate Center	Retail/Restaurant	33,100 square feet total
BayView Busniess Park		
Shoreline Technology Park	R&D/Light Industrial Restaurant	2 20,655 square foot buildings

Table F-1 *continued*

Project	Proposed Land Use	Number Of Units/ Floor Area
	Service station/convenience mart	
Rhodia Site	Office/Industrial	
Witco Property	Distribution Warehouse	70,000 square feet
Point Pinole Business Park Subdivision		
Point Pinole Business Park (lots 2 and 3)	Warehouse Light Industrial	144,000 square feet 131,000+ square feet

Sources: City of Oakland Community and Economic Development Agency website: www.ci.oakland.ca.us/government/ceda/.
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