

**Appendix A**

**Notice of Preparation/Initial Study**



## Notice of Preparation

---

To: \_\_\_\_\_  
(Agency)  
\_\_\_\_\_  
(Address)  
\_\_\_\_\_

**Subject: Notice of Preparation of a Draft Environmental Impact Report for Marchbrook/Sunset Ranchos Project**

**Lead Agency**

City of Rocklin  
Community Development Department  
3970 Rocklin Road.  
Rocklin, CA 95677

Contact: George Djan, (916) 632-4020

**Consulting Firm**

Harding Lawson Associates  
10265 Rockingham Drive  
Suite 150  
Sacramento CA 95827

Contact: Robert Languell

The City of Rocklin will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study is attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to George Djan at the address shown above. We will need the name for a contact person in your agency.

**Project Title:** Marchbrook-Sunset Ranchos Project – General Plan Amendment, Rezoning, General Development Plan and Annexation.

**Project Location:** Immediately south of Twelve Bridges plan area, east of Highway 65, northwest of Stanford Ranch plan area, and north and south of Sunset Boulevard.

**Project Description:** General Plan Amendment, Rezoning, General Development Plan and Annexation.

Date: October 1, 1999      Signature George Djan

Title: Senior Planner

Telephone: (916) 632-4020

Reference: California Administrative Code, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



Initial Study and Environmental Checklist for the  
North West Rocklin General Development Plan  
Marchbrook / Sunset Ranchos

Prepared For  
City of Rocklin

Prepared By  
Harding Lawson Associates

September 29, 1999



## INITIAL STUDY

### North West Rocklin General Development Plan Marchbrook / Sunset Ranchos

#### I. INTRODUCTION

The City of Rocklin has been presented with a proposal for annexation and development of the area generally bounded by the City of Lincoln to the north, State Route 65 to the west and the adopted Sunset West and Stanford Ranch Community Plan areas to the south and east. This project site is referred to as the North West Rocklin General Development Plan Area. The proposed project includes annexation of the plan area. Development will require amendment of the City of Rocklin General Plan and adoption of the North West Rocklin General Development Plan. The plan area will be initially zoned as Planning Reserve. Subsequent zoning will be commensurate with the proposed general development plan.

The City has determined that an environmental impact report (EIR) will be required. This Initial Study has been prepared to generally describe the proposed project and solicit input from agencies and the public regarding the scope of the forthcoming environmental review. The project description presented in this document is summarized from the *North West Rocklin General Development Plan*, prepared by Terrance E. Lowell & Associates, Inc. (June 16, 1999).

#### II. PROJECT PROPONENT

City of Rocklin  
3970 Rocklin Road  
P.O. Box 1380  
Rocklin, California 956677

Telephone: 916-632-4020

Contact: Mr. George Djan, AICP.  
City of Rocklin Planning Department

#### III. LOCATION

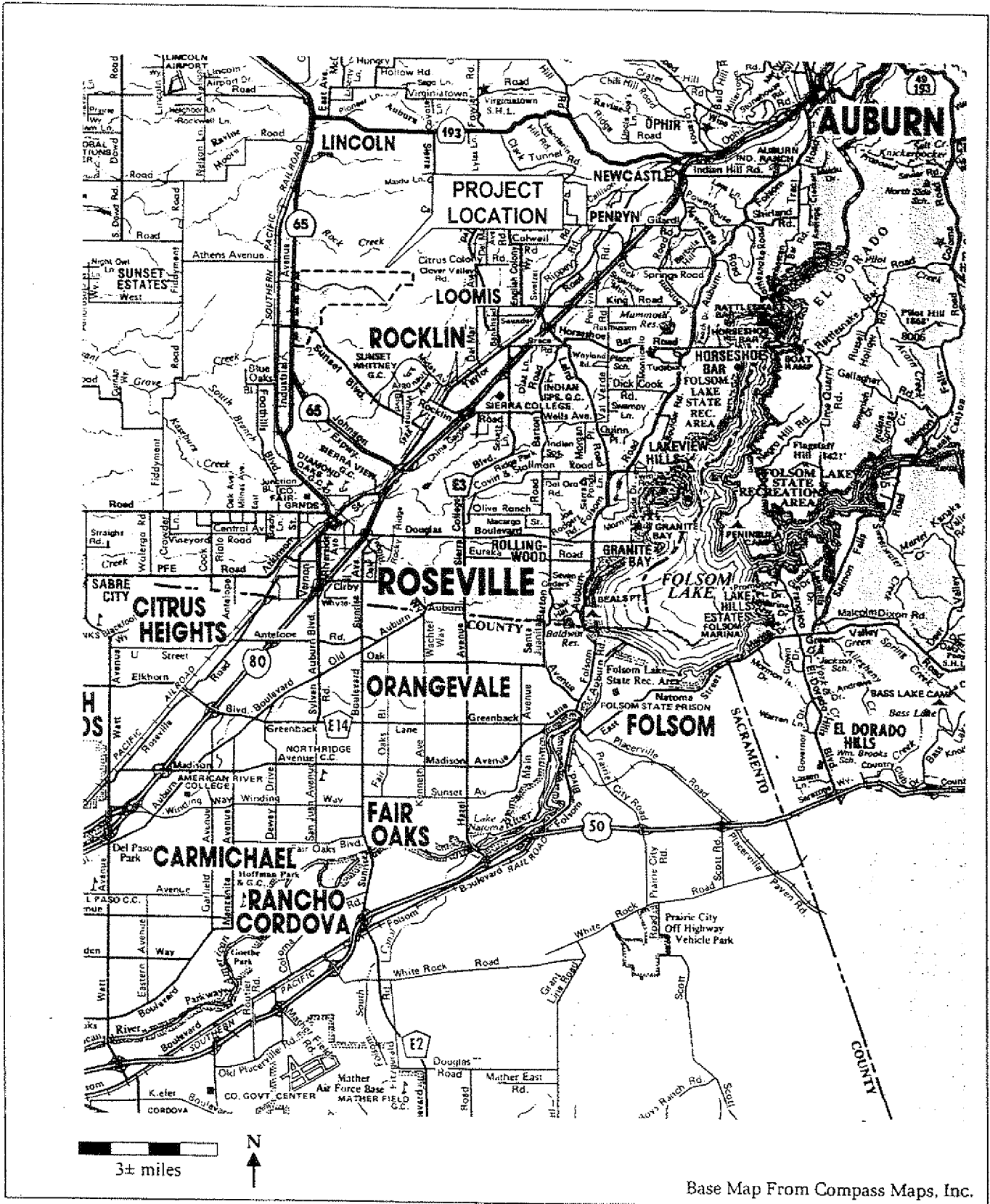
As shown in Figure 1, Location Map, the North West Rocklin General Development Plan area is located in the unincorporated portion of Placer County that is within the sphere of influence (SOI) of the City of Rocklin. The site is contiguous with the Twelve Bridges plan area in the City of Lincoln on the north, State Route 65 on the west, Sunset West and Stanford Ranch in the City of Rocklin to the south, and Whitney Oaks in the City of Rocklin to the east. The project site, which encompasses approximately 1,800 acres, represents the last large undeveloped tract within the City of Rocklin SOI.

#### IV. PLAN AREA DESCRIPTION

##### Geology

The predominant geologic material occurring beneath the plan area is Mehrten Formation. Mehrten is a relatively impermeable, weather-resistant geologic material of volcanic origin. Over the course of geologic time, less resistant geologic materials have eroded, leaving the areas underlain by Mehrten formation as ridges overlooking the surrounding terrain. The Mehrten that occurs beneath the plan area is predominantly conglomerate, and not the breccia or mudcap that poses a more significant obstacle to construction. Conglomerate is composed of loosely cemented aggregate and decomposed granite materials. Ripping with a bulldozer is normally sufficient to fracture this material allowing development and emplacement of utilities.

0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U  
V  
W  
X  
Y  
Z



**Harding Lawson Associates**  
 Engineering and Environmental Services  
 10265 Rockingham Dr., Suite 150  
 Sacramento, CA 95827

**FIGURE 1**  
**PROJECT LOCATION MAP**



No significant known faults occur in the immediate vicinity of the plan area. The Cleveland Hills fault (located approximately 40 miles of Lincoln) and the Spenceville fault (approximately 30 minutes northeast of the project location) are considered to be active components of the Foothills Fault Complex. Known inactive faults in the locale include an unnamed fault that extends between Folsom Lake and Rocklin, the Volcano Hill and Linda Creek Faults in the City of Roseville. Unmapped extensions of the Bear Mountain Fault system may extend beneath Folsom Lake to the east. Faults in the vicinity of the plan area have not been identified as requiring evaluation under the provisions of the Alquist-Priolo Earthquake Fault Zoning Act of 1994. As such, the plan area is not subject to any special development standards associated with Alquist-Priolo requirements.

Soils occurring on top of Mehrten tend to be thin and poorly developed, evolving from decomposition of the Mehrten conglomerate. Soils are deeper along drainages where alluvial materials have accumulated.

### **Topography**

The topography of the plan area ranges from steep slopes with well-defined canyons to gently rolling terrain. The most dramatic topography occurs in the northeast portion of the plan area where steep slopes create small valleys and canyons. Conversely, the topography in the western portion of the plan area consists of a strikingly barren landscape created by the relatively gentle slopes of the underlying Mehrten materials. Elevations in the plan area range from approximately 385 feet MSL in the east-northeast, to 140 feet mean sea level (MSL) in the west. Slopes vary from 0% to 30% gradient. About 70% of the plan area supports slopes of 8% or less.

### **Drainage**

The slopes within the plan area define the drainage of the property. Intermittent drainages transect the property. The north and west portions of the plan area generally drain northwest across Highway 65 ultimately discharging to Orchard Creek. Orchard Creek is a tributary to Auburn Ravine. The central portion of the plan area is drained by a seasonal channel that flows west beneath Highway 65 to Orchard Creek. The primary drainage in this area supports a significant wetland area near the western boundary. The southern portion of the plan area discharges across Sunset Boulevard to Pleasant Grove Creek south of Stanford Ranch. These drainages are seasonal and intermittent.

### **Biological Resources**

The biological setting of the plan area is dominated by annual grassland interspersed with concentrations of oak savannah and woodland. Oak trees exist on the periphery of the underlying Mehrten, and in locations where the Mehrten has decomposed to a condition that has allowed the establishment of perennial vegetation. Improved soils and the availability of moisture within the drainages support scattered islands of oaks and willows. The most notable oak woodlands occur in the east and northeast portions of the plan area. Several stock ponds exist in the plan area. These features are filled during the winter season. Some of the ponds are reportedly maintained by ephemeral springs and thus remain wet throughout the summer. The character of these ponds is dominated by riparian vegetation including willows, cattails and sedges.

## **V. PROJECT DESCRIPTION**

### **1. Land Use**

The proposed land uses are presented in the General Plan Land Use Diagram (Figure 2) and in the General Development Plan Zoning Diagram (Figure 3). The North West Rocklin General Development Plan consists of three project areas: Marchbrook-Sunset Ranchos, Highway 65 Corridor, and Parcel K. Marchbrook Sunset Ranchos project is the largest of the projects, encompassing approximately 1,300 ± acres. The Marchbrook Sunset Ranchos project is a planned community that would include 3,423 single-family lots, 1,066 multi-family units, three 10-acre elementary schools sites, 64 acres of park sites, 190 acres of open space, and 24 acres of neighborhood commercial and community commercial uses.

The Highway 65 Corridor consists of 500± acres of existing and vacant property zoned for business professional/commercial/industrial uses such as Herman Miller and the Atherton Technical Center. Consistent with the neighboring Sunset Industrial Area (SIA), the western portion of the plan area will remain designated for commercial, light industrial, and/or business-professional land uses.

Parcel K includes 47± acres proposed for the development of 113 single-family residential detached dwellings. Planning for development of this parcel has been ongoing for some time, and it is possible that annexation and development of Parcel K could occur as a separate action prior to consideration of the North West Rocklin General Development Plan as a whole.

### **2. Circulation**

The circulation system is proposed to provide internal circulation and will complete an essential connection between the City of Rocklin and Highway 65. This connection will be needed to relieve traffic pressures on Sunset Boulevard that currently provides the only major connection between the western portion of the City and Highway 65. The proposed roadway system includes connections to the neighboring Stanford Ranch and Twelve Bridges communities.

### **3. Infrastructure & Utilities**

Water and sewer connections are available at various locations on the perimeter of the plan area. The plan area is within the service area of PCWA. Sanitary sewer services are provided to the vicinity by South Placer Municipal Utility District. Police service is currently provided by the Placer County Sheriff's Department and the California Highway Patrol (CHP). Following annexation, the Rocklin Police Department will provide law enforcement services. Similarly, the Consolidated Fire District (CFD) currently provides fire protection services. The Rocklin Fire Department will provide fire protection services following annexation. The Auburn Placer Disposal Service, under contract to the City of Rocklin, will provide solid waste disposal to the plan area. Refuse is disposed of at the Western Regional Sanitary Landfill located on Fiddymont Road approximately three miles west of the City of Rocklin. Pacific Gas and Electric Company (PG&E) provides natural gas and electric service to the vicinity.



**VI. PROJECT ENTITLEMENTS AND PERMITS**

The EIR will serve as the principal disclosure document for the environmental effects associated with proposed annexation and development of the lands within the North West Rocklin General Development Plan. This document will assist government agencies in their decision to issue the following approvals and/or permits as may be required to implement the project. Although the following list is intended to be complete, it is possible that additional requirements may be identified during environmental review process.

- Certification of the Environmental Impact Report ..... City of Rocklin
- Reorganization (Annexation/Detachment) ..... Placer County Local Agency Formation Commission (LAFCO)
- Approval of General Plan Land Use Designations and Rezoning ..... City of Rocklin
- Approval of Large Lot Tentative Map(s) ..... City of Rocklin
- Approval of Tentative Subdivision Map(s) for Marchbrook Sunset Ranchos ..... City of Rocklin
- Approval of Final Subdivision Map(s) for Marchbrook Sunset Ranchos ..... City of Rocklin
- Improvement Plans ..... City of Rocklin
- Encroachment Permits ..... City of Rocklin and Caltrans
- Oak Tree Preservation Plan ..... City of Rocklin
- National Pollutant Discharge Elimination System Stormwater Discharge Permit ..... California Regional Water Quality Board
- Section 404 of the Clean Water Act ..... U.S. Army Corps of Engineers
- Streambed Alteration Agreement ..... California Department of Fish and Game
- Endangered / Threatened Species (potential) ..... California Department of Fish and Game and U.S. Fish and Wildlife Service
- Annexation as may be required into the various utility districts serving the vicinity..... Utility Districts (to be determined)



## ENVIRONMENTAL CHECKLIST

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**CEQA GUIDELINES APPENDIX G  
ENVIRONMENTAL CHECKLIST FORM**

1. Project Title: North West Rocklin General Development Plan / Marchbrook Sunset Ranchos
2. Lead Agency Name and Address: City of Rocklin
3. Contact Person and Phone Number: George Djan, AICP, Rocklin Community Development Department
4. Project Location: The North West Rocklin General Development Plan area is located in the unincorporated area of Placer County that is within the sphere of influence (SOI) of the City of Rocklin. The site is contiguous with the Twelve Bridges Specific Plan area in the City of Lincoln on the north, State Route 65 on the west, Sunset West and Stanford Ranch in the City of Rocklin to the south, and Whitney Oaks in the City of Rocklin to the east. The project site, which encompasses approximately 1,800 acres, represents the last large undeveloped tract within the City of Rocklin SOI.
5. Project Sponsor's Name and Address: Steve Spain  
Terrance E. Lowell & Associates  
1628 Eureka Road  
Roseville, CA 95677
6. General Plan Designation: Planning Reserve
7. Zoning: Planning Reserve
8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary)  
  
Please refer to the attached Initial Study. The North West Rocklin General Development Plan includes annexation of 1,800± acres into the City of Rocklin. Established land uses include Herman Miller, Atherton Tech Center, and two residences. The Marchbrook-Sunset Ranchos (MSR) project encompasses approximately 1,300 +/- acres within the North West Rocklin General Development Plan area. Proposed development of the MSR project includes 3,423 single-family lots, 1,066 multi-family units, three 10-acre elementary schools sites, 64 acres of park sites, 190 acres of open space, and 24 acres of neighborhood commercial.
9. Surrounding Land Uses and Setting: Briefly describe the project's surroundings:  
  
Stanford Ranch and Whitney Oaks are communities within the City of Rocklin. The predominant land use is residential supported by community amenities such as schools, parks, and neighborhood business-professional and commercial uses. The area to the south is within the City of Rocklin, but notable uses along Sunset Boulevard include business professional and light industrial use. The Sunset West Community Plan has been adopted in the area between Sunset Boulevard and the City of Rocklin. Highway 65 is the western boundary of the proposed annexation. Atherton Tech Center and the Herman Miller furniture manufacturing plant are located east of Highway 65 within the area to be annexed. The Placer County Sunset Industrial Area (SIA) extends along the west side of Highway 65. The Roseville North Industrial area is located south and west of the Placer County SIA. The area north of the project is within the City of Lincoln and has been approved for development as the Twelve Bridges community. The majority of the Twelve Bridges community is residentially oriented, but nonresidential land uses are included, notably along Highway 65.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

The City of Rocklin will be the CEQA Lead Agency responsible for the annexation, assignment of land use designations and zoning, and ultimate development of the plan area. The Placer County Local Area Formation Commission (LAFCO) will be responsible for approving the proposed annexation, including the change in service areas for various service providers. A Section 404 wetland permit will be required from the US Army Corps of Engineers and a Section 401 Water Quality Certification will be required from the Regional Water Quality Control Board. Issuance of a Stream Alteration Agreement may be required from the California Department of Fish and Game (DFG). A permit will be required from the US Fish and Wildlife Service (USFWS) for mitigation of potential impacts to elderberry shrubs that exist within the plan area. Formal consultation with the USFWS would be accomplished by the USACE as a component of the Section 404 process. Additional agencies with jurisdiction over the project may be identified during the environmental review process.

**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.

- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> Aesthetics                | <input type="checkbox"/> Agriculture Resources                         | <input checked="" type="checkbox"/> Air Quality             |
| <input checked="" type="checkbox"/> Biological Resources      | <input checked="" type="checkbox"/> Cultural Resources                 | <input checked="" type="checkbox"/> Geology/Soils           |
| <input type="checkbox"/> Hazards Hazardous Materials          | <input checked="" type="checkbox"/> Hydrology/Water Quality            | <input checked="" type="checkbox"/> Land Use/Planning       |
| <input type="checkbox"/> Mineral Resources                    | <input checked="" type="checkbox"/> Noise                              | <input checked="" type="checkbox"/> Population/Housing      |
| <input checked="" type="checkbox"/> Public Services           | <input checked="" type="checkbox"/> Recreation                         | <input checked="" type="checkbox"/> Transportation/Planning |
| <input checked="" type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |   |

**DETERMINATION** (To be completed by the Lead Agency.)

On the basis of this initial evaluation:

- I find 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 on this case because the mitigation measures described on the attached pages have been added to the project. A **NEGATIVE DECLARATION** will be prepared.
- I find the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that although the proposed project could have a significant effect on the environment, there **WIL NOT** be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.

_____	_____
Signature	Date
_____	_____
Printed Name	For

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

**I. AESTHETICS.** Would the project:

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

x			
---	--	--	--

*Implementation of the proposed General Development Plan will significantly alter the visual characteristics of the area, transforming the plan area from undeveloped to that of an urban setting.*

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

			x
--	--	--	---

*The plan area does not lie within the viewshed of a designated State Scenic Highway.*

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

x			
---	--	--	--

*See Response I.a) above.*

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

x			
---	--	--	--

*See Response I.a) above.*

**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 non-agricultural use?

			x
--	--	--	---

*The plan area does not support prime farmland.*

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

		x	
--	--	---	--

*Portions of the plan area would be rezoned from Planning Reserve (Agricultural) to urban uses. However, significant farming activities are not practiced within the plan area and none of the parcels are under Williamson Act contract.*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*See response II.b) above.*

**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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project represents a significant level of urban development that could exacerbate an existing nonattainment status or result in local violation of adopted air quality standards</i>				

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------	--------------------------

*See response to III.a) above.*

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------	--------------------------

*See response to III.a) above.*

d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------	--------------------------

*Review of proposed land uses and sensitive receptors in proximity to significant new intersections may be warranted.*

e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------	--------------------------

*None of the land uses envisioned by the Plan are anticipated to generate objectionable odors. Evaluation of future Light Industrial uses can only be evaluated on a project-by-project basis.*



Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

**VII. 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 US Fish and Wildlife Service?
- |                                     |                          |                          |                          |
|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|-------------------------------------|--------------------------|--------------------------|--------------------------|

*Development of the plan area would transform undeveloped area into an urban setting, resulting in a reduction in habitat and displacement of wildlife. The EIR will evaluate potential impacts to biological resources.*

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.
- |                                     |                          |                          |                          |
|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|-------------------------------------|--------------------------|--------------------------|--------------------------|

*See response to VII.a) above.*

- 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, march, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- |                                     |                          |                          |                          |
|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|-------------------------------------|--------------------------|--------------------------|--------------------------|

*A wetland delineation has been performed and submitted to the Corps of Engineers. The EIR will evaluate potential impacts to wetland resources.*

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species on with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- |                          |                                     |                          |                          |
|--------------------------|-------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|-------------------------------------|--------------------------|--------------------------|

*The proposed land use plan maintains the natural drainages within the plan area. No significant migratory routes have been identified through the plan area. The EIR will address this issue.*

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- |                          |                                     |                          |                          |
|--------------------------|-------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|-------------------------------------|--------------------------|--------------------------|

*The proposed project will comply with adopted policies and ordinances. No conflict is envisioned. The EIR will address this issue.*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*The plan area is not within an adopted HCP or other adopted conservation plan. The plan area is identified in the Placer Legacy Open Space project currently being implemented by Placer County.*

**V. CULTURAL RESOURCES.** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------	--------------------------

*The EIR will evaluate potential impacts to cultural resources within the plan area.*

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	-------------------------------------	--------------------------	--------------------------	--------------------------

*See response to V.a) above.*

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------	--------------------------

*The plan area is underlain by granite and decomposed Mehrten conglomerate. These materials are not known to yield significant fossilized materials. Years of development in adjoining Stanford Ranch has not yielded any significant fossils. The potential for fossils to exist in this area is considered highly unlikely.*

d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	-------------------------------------

*No human remains or interments are known to exist in the plan area.*

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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 issues by the State Geologist for the area of based on other substantial evidence of a known fault? Refer to Div. of Mines and Geology Special Publication 42.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

*The plan area is not within a designated fault zone. However, groundshaking is likely to occur as a consequence of regional seismic activity. Implementation of UBC standards is proposed. This issue will be addressed in the EIR.*

ii. Strong seismic ground shaking?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

*See response VI.a)i. above.*

iii. Seismic-related ground failure, including liquefaction?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

*Development is not proposed on severe slopes. Soil and geologic materials in the plan area are not particularly prone to instability, liquefaction or landsliding. Geotechnical evaluation will be required prior to adoption of tentative maps and/or prior to issuance of building permits. This issue will be addressed in the EIR*

iv. Landslides?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

*See response VI.a)iii. Above*

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

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------

*Construction activities, including grading and trenching, will produce elevated risk of erosion and consequent sedimentation. Erosion control practices and BMP's will be implemented to minimize this impact. This issue will be addressed in the EIR.*

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

*See response VI.a)iii. Above*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*Mehrten materials that underlie the plan area are not recognized as highly expansive. Expansive clays do occur in the vicinity, but are predominantly confined to locations beyond the Mehrten and along drainages.*

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	-------------------------------------

*The proposed project would rely on municipal wastewater collection and treatment.*

**VII. HAZARDS AND HAZARDOUS MATERIALS.** Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	-------------------------------------	--------------------------	--------------------------

*Adoption of the General development Plan would not pose any significant hazard to the public or the environment. Construction would involve the short-term use of hazardous materials such as diesel fuel, grease, etc. The use of hazardous materials by future land uses would be subject to review and/or permitting by the City of Rocklin Fire Department on a case-by-case basis. The EIR will address this issue as it pertains to adoption of the 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------	--------------------------

*The proposed project is not envisioned to create an elevated risk of upset producing a significant hazard to the public or environment. Transport of hazardous materials through the City is subject to regulation.*

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	-------------------------------------	--------------------------

*The land use plan provides adequate separation between the light industrial areas and existing/proposed new schools.*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The plan area is not a hazardous materials site.</i>				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The plan area is not within two miles of an airport.</i>				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>See response to VII.e) above.</i>				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Implementation of the project would not impair or interfere with an adopted emergency response or evacuation plan.</i>				
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>The plan area is surrounded by development and/or areas approved for urban land use. The site does not support any significant forested area. Consequently, the project would not expose people or structures to elevated risk of wildland fire.</i>				

**VIII. HYDROLOGY AND WATER QUALITY.** Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>The proposed project includes construction that will increase the short-term risk of contamination and sedimentation. Urban land uses will become long-term potential sources of pollution.</i>				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
<p>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)?</p> <p><i>Plan area would rely on municipal water sources.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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?</p> <p><i>The land use plan protects the principal drainages within the plan area. Runoff will continue to be discharged to the same watersheds as pre-project conditions.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>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?</p> <p><i>See response VIII.c) above. The project proposes detention within the plan area sufficient to maintain pre-project peak hour discharge levels.</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>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?</p> <p><i>See responses VIII.a) and VIII.c) above.</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>f) Otherwise substantially degrade water quality?</p> <p><i>See response VIII.a) above. Aside from the inherent change in runoff associated with urban development, no other notable long-term potential sources of pollution have been identified.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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?</p> <p><i>The project does not propose the construction of housing within a 100-year floodplain.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?  <i>The project includes onsite channel crossings and detention facilities as warranted. These facilities will be designed to maintain pre-project peak discharge conditions and will not cause flooding.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  <i>See response VIII.i) above. There are no levees or dams that protect the plan area. Onsite dams are limited to a couple small features associated with small stock ponds.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?  <i>The plan area is not susceptible to seiche, or tsunami. Soils on the site are not known to be susceptible to mudflow.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IX. LAND USE AND PLANNING.** Would the project:

a) Physically divide an established community?  <i>The plan area is the last significant undeveloped area within the City of Rocklin. The plan area does not divide a community.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?  <i>The project includes annexation, amendment of the Rocklin General Plan and adoption of zoning.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?  <i>The project is consistent with the Open space zoning requirements of the City of Rocklin. The plan area is identified in the Placer Legacy Open Space project currently being implemented by Placer County. The City of Rocklin is not required to participate in that program, but may choose to do so during review of the project.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

*No. The project site does not support significant mineral resources. Mehrten can be a source of aggregate, but the site does not contain any significant amount of high quality material. Based on observations from the Stanford Ranch project, the decomposed Mehrten may be a source for marginal quality gravel. However, the proximity of urban development likely precludes extraction of that material.*

- 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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

*See response X.a) above.*

**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?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------

*The proposed community will be a source of urban noises and the location of new receptors. Traffic is anticipated to be the most significant noise issue. The proximity of light industrial uses could pose additional noise concerns. Noise will be evaluated in the Draft EIR.*

- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

*With the exception of regulated short-term construction activities, the project will not produce significant groundborne vibration or noise.*

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

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------

*The project proposes transformation of an undeveloped area to an urban setting. Noise impacts will be evaluated in the Draft EIR.*



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?  <i>See XI.c) above.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two 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?  <i>The plan area is not within two miles of an airport.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?  <i>There are no known private airstrips within two miles of the plan area.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**XII. POPULATION AND HOUSING.** Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?  <i>The project is a proposal to annex undeveloped area into the City of Rocklin, including assignment of General Plan and zoning designations to allow future development. This issue will be examined in the EIR.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?  <i>The Plan area is essentially undeveloped. There are two existing homes within the Plan Area. They are not proposed to be removed.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?  <i>See response XII.b) above.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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? <i>The EIR will evaluate the availability of fire protection to serve proposed development.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection? <i>The EIR will evaluate the availability of law enforcement to serve proposed development.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools? <i>The proposed project designates new school sites. The EIR will evaluate the availability of school services to serve proposed development.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parks? <i>The proposed project designates new park sites. The EIR will evaluate the availability of parks to serve proposed development.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other public facilities? <i>Under the direction of the City of Rocklin, the EIR will examine the major public services and utilities normally associated with a community plan of the scale contemplated by the project.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

*The project includes the new parks to accommodate new residents. This issue will be discussed in the EIR.*

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------

*The land use plan includes development of parks. This issue will be evaluated in the EIR.*

**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)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------

*The plan area will contribute to regional traffic volumes. 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?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------

*See response XV.a) above.*

- 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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

*The proposed project will not impact 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)?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

*The proposed roadway network will be designed consistent with City of Rocklin roadway design criteria.*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
e) Result in inadequate emergency access? <i>The proposed roadway network will be designed consistent with City of Rocklin roadway design criteria.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity? <i>The proposed roadway network will be designed consistent with City of Rocklin roadway design criteria.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? <i>The proposed roadway network will be designed consistent with City of Rocklin roadway design criteria.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**XVI. UTILITIES AND SERVICE SYSTEMS.** Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? <i>The proposed project will obtain wastewater treatment service from a municipal source. The availability of wastewater treatment service will be evaluated in the EIR.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? <i>The proposed project will require extension of wastewater infrastructure. This issue will be evaluated in the EIR.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? <i>The project includes the installation of stormwater drainage facilities, including onsite detention to maintain pre-project peak discharge conditions. This issue will be evaluated in the EIR.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? <i>The proposed project will obtain water from a municipal source. The availability of water service will be evaluated in the EIR.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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?  <i>The proposed project will obtain wastewater treatment service from a municipal source. The availability of wastewater treatment service will be evaluated in the EIR.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  <i>The proposed project will dispose of solid waste at an established municipal landfill. The availability of landfill capacity will be evaluated in the EIR.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?  <i>The project is proposed consistent with solid waste regulations of the City of Rocklin. This issue will be evaluated in the EIR.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Appendix B**

**Comments on Notice of Preparation**





**NOP CHRONOLOGY**  
**for**  
**NORTH WEST ROCKLIN ANNEXATION**  
**and**  
**SUNSET RANCHOS**  
(rev10-9-00)


<u>Date</u>	<u>Agency Comments</u>
10-1-99	City distributes NOP, 30 pgs
10-4-99	OPR distributes NOP, 3 pgs
10-5-99	Rocklin's Fire Chief, 1 pg
10-12-99	Loomis, 1 pg
10-21-99	PGE, 1 pg
10-21-99	PCWA, 1 pg
10-26-99	South Placer Municipal Utility District, 2 pgs
10-27-99	Roseville, 2 pgs
10-28-99	Placer County Public Works, 1 pg
11-1-99	LAFCO, 12 pgs
11-3-99	Caltrans, 2 pgs
11-3-99	Roseville (revised), 2 pgs
11-5-99	Placer County Flood Control, 1 pg
11-18-99	CA Fish & Game, 4 pgs
12-4-99	Caltrans, 2 pgs
12-14-99	Rocklin Unified School District, 4 pgs
1-13-00	Placer County Planning Dept, 3 pgs
3-6-00	Rocklin Unified School District, 1 pg
3-22-00	Caltrans, 1 pg





# CITY OF ROCKLIN

## MEMORANDUM

DATE: October 5, 1999  
TO: George Djan, Senior Planner  
FROM: James W. Pennington, Fire Chief   
RE: Draft EIR for Marchbrook/Sunset Ranchos

---

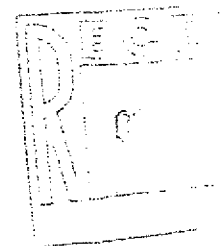
The following comment is in response to the initial study for the above-referenced project.

**Reference page 18, Item h:**

There is a potential increased exposure to wildland fire threats due to the amount of open space and/or hillside areas within the plans' area.

Said threats can be less than significant with mitigation incorporation.

JWP:nc





# TOWN OF LOOMIS

October 12, 1999

George Djan  
City of Rocklin Community Development Department  
3970 Rocklin Road  
Rocklin, CA 95677

Re: Notice of Preparation of DEIR for Marchbrook/Sunset

Dear George:

Thank you for the opportunity to comment on the Notice of Preparation of a DEIR for Marchbrook/Sunset Ranchos.

The Town of Loomis continues to be concerned with any traffic impacts that may occur on Sierra College Boulevard and that these impacts are fully mitigated.

Specifically, the traffic volumes analyzed for this project should assess trip distribution and turning movements onto Sierra College Blvd. (through Whitney Oaks) and at intersections within Loomis that might be affected. These impacts should receive mitigation, at a minimum through a fair share concept including maintenance costs.

Previously Rocklin has included a fair share mitigation in projects on Sierra College Blvd. Would you please inform us, in writing, of the progress you have made in developing these "fair share" amounts to be used in Rocklin and on what improvements they are based.

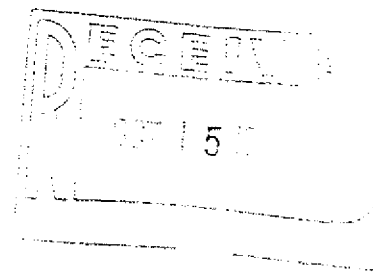
Thank you for your consideration of these comments and for continuing to send us any referrals that may have impact on Sierra College and other roadways within Loomis.

Sincerely,



Kathy Kerdus  
Planning Director

cc: Town Council/Planning Commission  
Placer County Air Pollution Control Officer  
Placer County Transportation Planning Agency







**Pacific Gas and  
Electric Company**

Service Planning Department

333 Sacramento Street  
Auburn, CA 95603

October 21, 1999

Mr. George Djan  
City of Rocklin  
3970 Rocklin Rd.  
Rocklin, CA. 95677

Re: Marchbrook/Sunset Ranhos  
Rocklin

Please be advised that PG&E will serve this project under our Gas and Electric Rules 15 & 16.

- ⇒ Any relocation or rearrangement of the existing facilities due to this development will be at the expense of the developer.
- ⇒ It is the developers responsibility to notify PG&E of any work that is required. The location and design of the service(s) and meter(s) shall be determined by PG&E
- ⇒ Design for the service for this project shall not begin until PG&E has received a full set of improvement plans for this project which have been approved by the City.
- ⇒ All existing easements and public rights of way shall be maintained.
- ⇒ Any physical barriers that may be required by PG&E to protect their equipment will be furnished by the develop  
Call Underground Service Alert at 1-800-227-2600 and verify gas and electric facilities and plot on improvement plans.
- ⇒ All grading must maintain 12" minimum clearance over gas facilities and 24" minimum cover from finish grade. Please pothole if necessary to verify cover. Please call us at (530) 889-3271 to request an inspector to stand by while potholing facilities. Please give us 48 hours notice to schedule an inspector, there is no charge for this service.

If you have any questions, please contact me at (530) 889-3134.

Sincerely,

  
Mary Westfall  
Project Manager

RECEIVED

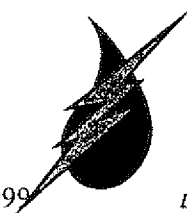
OCT 27

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100



# Placer County Water Agency

Business Center: 144 Ferguson Rd. • Mail: P.O. Box 6570 • Auburn, California 95604  
(530) 823-4850 800-464-0030 TDD (530) 823-4966



A Public Agency

**BOARD OF DIRECTORS**

Pauline Roccucci • Alex Ferreira  
Otis Wollan • Lowell Jarvis  
W. Bruce Lee  
David A. Breninger, General Manager  
Ed Tiedemann, General Counsel

October 21, 1999  
File No. WA/Rocklin

George Djan, Senior Planner  
Community Development Department  
City of Rocklin  
P.O. Box 1380  
Rocklin, CA 95677

**SUBJECT:** Marchbrook/Sunset Ranchos, NOP of Draft EIR - Approximately 3,536 Single Family Lots  
1,066 Multi-Family Units, Three Schools, Parks, Commercial, Light Industrial/or Business-  
Professional Land Uses

Dear Mr. Djan:

In response to your notice of preparation received by the Agency October 6, 1999, pursuant to subdivision (d) of Water Code Section 10910, the projected water demand for the Marchbrook/Sunset Ranchos project, Highway 65 Corridor and Parcel K (the "Project") was not included as part of this Agency's most recently adopted Urban Water Management Plan for the Agency's Zone No. 1 water system.

At the present time, the Agency can not assure the City of Rocklin that the projected water supplies available for Zone No. 1 during normal, single-dry, and multi-dry water years included in the 20 year projection contained in the Urban Water Management Plan and subsequent Agency master plan studies will meet the projected water demand for the proposed project, in addition to the Zone No. 1 system's existing and planned future uses.

Additional study will be required to determine an adequate water supply and delivery infrastructure.

The purpose of this letter is to comply with the requirements of Section 10910 and apprise you of the current status of treated water availability for the Project. This letter in no way confers any right or entitlement to receive water service in the future. The Agency makes commitments for service only upon the execution of a pipeline extension or service order agreement and the payment of all fees and charges required by the Agency, including the Plant Expansion and Replacement Charges.

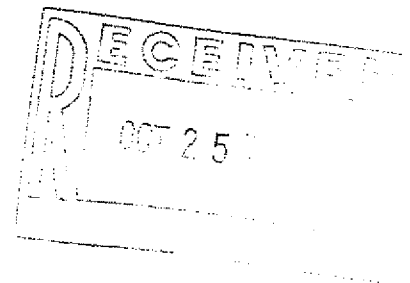
If you have any questions, please call me at the Engineering Department at (530) 823-4886.

Sincerely,

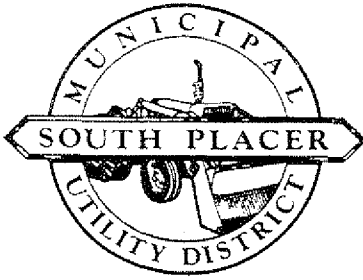
Dave Campbell  
Engineering Technician

DPC:bb

c:\oct99.wa







## South Placer Municipal Utility District

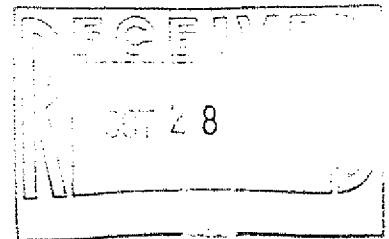
P.O. Box 45 — 3671 Taylor Road

LOOMIS, CALIFORNIA 95650

Phone (916) 652-5877

October 26, 1999

City of Rocklin  
Community Development Department  
3970 Rocklin Road  
Rocklin, CA 95677



Attention: Mr. George Djan

Subject: Marchbrook-Sunset Ranchos Project  
General Plan Amendment, Pre-Zoning, General Development Plan, and  
Annexation - Notice of Preparation

Dear Mr. Djan:

With the exception of the Atherton Tech Center and Herman Miller Properties (currently within SPMUD), the Marchbrook-Sunset Ranchos Project lies outside the boundaries of the South Placer Municipal Utility District. Annexation to SPMUD is required in order for the project to be eligible for District sewer service.

As with past annexations into the City of Rocklin, concurrent annexation to SPMUD can occur automatically provided that the District is included in the action. Upon approval by LAFCO, and submittal to SPMUD of a certified copy of Rocklin's resolution ordering/approving the annexation, a 90 day period commences in which, if no objection is made by the District, the property is annexed to SPMUD. The project proponent will be responsible for the payment of annexation fees to SPMUD.

In the event the property is successfully annexed, all sewer service which the District may thereafter, provide to said lands or any portion thereof will be subject to all ordinances, resolutions, rules and regulations, taxes, charges, fees, and assessments of the SPMUD which may now or hereafter be in effect.

The design and construction of all on-site and off-site facilities, which may be required as a result of this project, will be the responsibility of the developer/owner. All work shall conform to the

City of Rocklin  
Mr. George Djan  
October 26, 1999  
Page -2-

Standard Specifications of SPMUD. Improvement plans shall be submitted to SPMUD for review and approval. It should be noted that substantial sewer construction may be required in order to serve the project.

A preliminary analysis of the District's existing sewers (within the Stanford Ranch area) has been made and indicates that a certain amount of excess capacity may be available to serve the project. However, the excess capacity is not sufficient to serve the proposed buildout of the project. The developer will be responsible for conducting, in consultation with his engineer, additional sewer studies as may be required to identify new sewers needed to serve the project and/or reconstruction/upsizing of existing sewers.

This letter does not constitute a reservation of capacity in the District's sewage treatment or collection facilities, nor does it constitute the assumption of a utility obligation to said lands or any portion thereof by the District.

The District may be rendered unable to provide sewer service to said lands due to prohibitions or restrictions which may be imposed upon it by federal, state, county or local regulatory agencies having jurisdiction or due to conditions caused by an Act of God. Prohibitions and/or restrictions may be imposed at the Roseville Regional Wastewater Treatment Plant on the plant's capacity; this may also impact the District's ability to accept new applications for sewer service for the project.

This letter shall be of no force or effect after the expiration of 365 calendar days from the date hereof, but may at the discretion of the District, be renewed or extended upon application of the developer/owner of the land referred to herein or their agent.

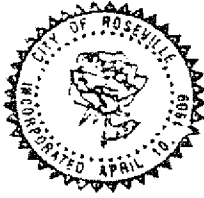
All non-residential development within SPMUD is subject to the requirements of the City of Roseville Industrial Waste Pretreatment Program in accordance with Ordinance 14.26 of the Roseville Municipal Code.

Sincerely,



Richard R. Stein  
Project Administrator

RRS:cjb



COMMUNITY DEVELOPMENT  
**CITY OF ROSEVILLE**  
TRADITION • PRIDE • PROGRESS

316 Vernon Street #102 • Roseville, CA 95678  
(916) 774-5334 • Fax (916) 774-5195 • Tdd (916) 774-5220

October 27, 1999

George Djan  
City of Rocklin  
Community Development Department  
3970 Rocklin Road  
Rocklin, CA 95677

Via: Fax and Regular Mail

Regarding: **Notice of Preparation Comments for the Marchbrook/Sunset Ranchos Draft EIR**

Dear Mr. Djan:

The City of Roseville Community Development Department appreciates the opportunity to comment on the Notice of Preparation (NOP) for the Marchbrook/Sunset Ranchos Draft EIR.

**Project Description**

The project is located immediately south of the Twelve Bridges plan area, east of Highway 65, northwest of the Stanford Ranch Plan Area, and north and south of Sunset Boulevard. The project site encompasses approximately 1,800 acres, and is referred to as the North West Rocklin Development Plan Area (Plan Area). The project includes annexation of the Plan Area, and development of a planned community that would include 3,423 single-family lots, 1,066 multi-family units, three 10-acre elementary school sites, 64 acres of park sites 190 acres of open space, and 24 acres of neighborhood commercial and community commercial uses.

**Comments**

Traffic

- 1) The EIR should evaluate the traffic impacts of the proposed projects within Roseville. Ideally, this would be done using the City of Roseville's traffic model.
- 2) The proposed project area is large enough to warrant payments to update the Highway 65 Joint Powers Agreement fees to reflect the increase in traffic due to the revised land use.

Marchbrook/Sunset Ranchos DEIR, Page 2

Public Utilities

1) Identify the source of sewer service for the project site. Specifically, identify the impacts to existing or new treatment facilities.

Thank you for the opportunity to provide comments on this project. Please forward any future Marchbrook/Sunset Ranchos project related CEQA documentation to:

Mark Morse, Environmental Coordinator  
City of Roseville  
Community Development Department  
316 Vernon Street  
Roseville, California 95678

If you have questions, please feel free to call me at 774-5334.

Sincerely,



Terri Shirhall  
Assistant Environmental Specialist



**PLACER COUNTY  
DEPARTMENT OF PUBLIC WORKS**

Jan Witter, Director  
Tim Hackworth, Asst. Director  
Wes Zicker, Deputy Director

October 28, 1999

City of Rocklin  
Community Development Department  
Attn: George Djan, Senior Planner  
3970 Rocklin Road  
Rocklin, CA 95677

**SUBJECT: MARCHBROOK-SUNSET RANCHOS PROJECT  
NOTICE OF PREPARATION**

The above project consists of a proposal for annexation and development of the area generally bounded by the City of Lincoln to the north, SR 65 to the west and the adopted Sunset West and Stanford Ranch Community Plan areas to the south and east.

The Placer County Department of Public Works has reviewed the Notice of Preparation and offer the following comments for your consideration:

1. The location of the western boundary of the annexation is unclear. It is described as "Highway 65." The annexation should be the western right-of-way limit of SR 65 and not the eastern right-of-way line. We would further recommend that this annexation should consider including the SR 65 right-of-way south to the Blue Oaks interchange.
2. The EIR must address the regional impacts of the proposed project, especially impacts to SR 65, all interchanges on SR 65, and Sierra College Boulevard from SR 193 to I-80.
3. The EIR should discuss the SR 65/Whitney interchange with respect to need, timing, and financing.
4. Impacts of the project on the Sunset Industrial Area Community Plan, especially with respect to the Transportation Capital Improvement Program and associated traffic mitigation fee, need to be discussed.
5. The impacts of the project on the SR 65 Joint Powers Authority, and the infrastructure financing associated with it, need to be discussed.

Thank you for the opportunity to review this application. If you have any questions or comments, please call me at (916) 889-7554.

COUNTY OF PLACER  
DEPARTMENT OF PUBLIC WORKS  
JAN WITTER, DIRECTOR

  
\_\_\_\_\_  
DAVE BINGEN, P.E.  
SR. CIVIL ENGINEER

kbr-c:\deb\NOP\101-72.doc

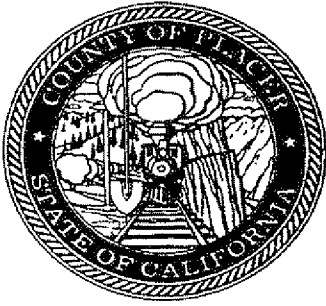
cc: Thomas F. Brinkman

**Auburn:** 11444 B Avenue / DeWitt Center / Auburn, California 95603-2603 / (530) 889-7500 / Fax (530) 889-7544  
**Tahoe:** 565 West Lake Blvd. / P.O. Box 1909 / Tahoe City, California 96145-1909 / (530) 581-6227 / Fax (530) 581-6228  
Internet Address: <http://www.placer.ca.gov>

NOV - 4 1999

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100





**Placer County  
LOCAL AGENCY FORMATION  
COMMISSION**

175 Fulweiler Avenue, Auburn, California, 95603  
530.889.4097 FAX: 530.889.4099

Date: November 1, 1999

To: George Djan, AICP  
City of Rocklin Planning Department

From: Deborah Cubberley, Executive Officer  
Placer County Local Agency Formation Commission

Subject: NOP for a DEIR for the Marchbrook/Sunset Ranchos Project

---

Thank you for the opportunity to comment on the NOP for this project. The following comments address specific environmental concerns and reference the LAFCO policies related to these issues. The City and proponents should be aware of these policies and be prepared to respond to them as required.

The DEIR should address the following items:

1. Loss of agricultural land, significant open space areas, and riparian areas. (LAFCO policy 2[1])
2. Alternative project analyses, including (a) the placement of the proposed development at a site(s) within the existing City boundaries and (b) phased annexation associated with proposed development phases and market demand. (LAFCO policies 2[2], 2[3], 3c[1], 3c[2], 3c[3])
3. An environmental analysis that includes and excludes roadways that delineate proposed boundaries, in this case Highway 65. (LAFCO policy 1d[3]).
4. Any environmental impacts associated with special district boundary and/or sphere of influence adjustments that may be required or desired as a part of City annexation. This would include such special districts as South Placer Municipal Utility District.

Please note, a copy of the recently amended LAFCO policy document is attached for your convenience.



## PART III

### COMMISSION GUIDELINES

The Local Agency formation Commission is created by and operates under the Cortese/Knox Local Government Reorganization Act of 1985 (Government Code, Section 56000 et seq. -the "Cortese/Knox Act"). LAFCO actions are also subject to a number of other state laws such as special district principal acts and the California Environmental Quality Act. Together these mandates provide the basis for LAFCO activities.

While the Cortese/Knox Act provides clear direction in its intent and in many cases provides specific procedural guidelines, it recognizes that unique local situations and issues require some flexibility in the law. Through the adoption of policies each LAFCO's interpretation and implementation of the law will reflect an area's unique priorities, problems, and attributes.

#### A. LEGISLATIVE MANDATES AND POLICY STATEMENTS

The Cortese/Knox Act provides the following basic guidelines and objectives:

1. To encourage the orderly formation of local governmental agencies. This includes discouraging a duplication of services, controlling the proliferation of local governments, and encouraging multipurpose government agencies over single or limited purpose agencies.
2. To preserve agricultural land and open space resources.
3. To encourage logical patterns of growth and discourage urban sprawl.

#### B. LAFCO AUTHORITY

As a means of implementing the legislative goals, LAFCO's were given the authority to approve or deny the extension of services through the creation and amendment of local government boundaries. LAFCO's were also given the authority to establish spheres of influence for the purpose of facilitating planning by local agencies.

1. *The legislature directs LAFCO to include in their consideration of jurisdictional changes the following factors:*
  - a. population and population density
  - b. land area, land use, topography, and geographic features
  - c. need for services and adequacy of services in the area
  - d. the effect of the proposed change on adjacent areas and agencies
  - e. the conformity of the proposal with mandates and local policies
  - f. the effect of the proposal on agricultural lands
  - g. consistency with adopted spheres of influence
  - h. the distinction and certainty of the boundaries
  - i. comments of any affected local agency
2. *The consideration of the following four factors when making determinations involving spheres of influence:*
  - a. the present and planned land uses in the area
  - b. the present and probable need for public facilities and services in the area
  - c. the present capacity of public facilities and adequacy of public services
  - d. the existence of any social or economic communities of interest in the area

## **C. COMMISSION POLICIES**

The Placer County LAFCO (the Commission) has adopted the following policies as a means of implementing the Cortese/Knox Local Government Reorganization Act. They are categorized under four headings, three reflect the legislature's policy guidelines and a fourth addresses miscellaneous administrative and procedural issues.

### **1. ENCOURAGE THE ORDERLY FORMATION OF LOCAL GOVERNMENTAL AGENCIES**

#### **a. SERVICE PROVISION**

Recognizing that the general purpose of government is to serve its citizens and that the purpose of LAFCO is to promote orderly and efficient forms of government, the consideration of service questions related to jurisdictional changes is paramount. Reflected in the following policies is the Commission's concern that (1) thorough service information be made available, (2) that each affected agency be made aware of the impacts of a jurisdictional change, and (3) that as development occurs a complete range of necessary services is accessible.

*(1) POLICY: Requests for information from an applicant or the representative of an applicant, or from any affected agency or department thereof, shall provide complete and full disclosure of information deemed relevant to the subject proposal.*

*(2) POLICY: Every LAFCO Proposal Application and Justification form shall be signed by a responsible party, stating that the information provided is in compliance with the Commission's disclosure policy.*

*(3) POLICY: The plan for service provision submitted as part of an application for jurisdictional change shall include the following information: (1) an enumeration and description of the services to be extended to the affected territory; (2) the level and range of those services; (3) an indication of when those services can feasibly be extended to the affected territory; (4) an indication of any improvement or upgrading of structures, roads, sewer or water facilities, or other conditions the local agency would impose or require within the affected territory if the change of organization or reorganization is completed; and (5) information with respect to how those services will be financed.*

*In addition to the foregoing information, the following information will be required as part of each plan for service:*

*(a) a list of the existing services available to the affected area, and the agencies providing those services*

*(b) a list of services available through the affected agency or agencies*

*(c) a comparison of the existing and proposed service levels and the effects of the proposed change on service in adjacent areas*

*(d) a description of all special local taxes, assessments, fees, and outstanding bonds that will potentially affect the proposal area*

*(e) identification of any resource shortages or facility inadequacies presently experienced or anticipated by the affected agency*

**(4) POLICY:** All proposals involving jurisdictional change will include a plan for services. Those proposals initiated by resolution of the affected agency shall include the plan for service with the application. When proposals are initiated by petition, the Commission's staff shall notify the affected agency and request a plan for service. In cases where the proposed jurisdictional change involves a reorganization, the plan for service shall address all of the affected agencies.

**(5) POLICY:** The following standards shall apply to the evaluation of plans for service:

**(a)** Each plan for service must be signed and dated by an official representative of the agency, certifying completeness and accuracy. In cases where the proposal includes annexation to more than one agency, the plan for service must be signed by a representative of each annexing agency or each agency may submit its own separate plan for services.

**(b)** The plans for service shall be made part of the file and shall be circulated to affected agencies and County departments for comment. The subject agency shall respond to any requests for additional or clarifying information.

**(6) POLICY:** The Commission shall approve the extension of services by contract only when the agency in question can show it is not reasonable or possible to annex the site at the time the request is submitted.

#### **b. COMMUNITY APPROACH**

The Commission finds that a community approach to service provision is beneficial in that it facilitates the eventual consolidation of local agencies, it clarifies and simplifies service delivery, it assures the most complete ranges of services available to a developing area, and it helps define and empower a community. The Commission shall encourage a community approach to service provision by encouraging the coterminous development of local agency boundaries within the area.

**(1) POLICY:** Spheres of influence for all local agencies serving a particular community shall be coterminous whenever possible.

**(2) POLICY:** Service provision shall be viewed on a community basis. Annexation to a city shall generally be accompanied by simultaneous annexation to the special districts that serve that community. Likewise, when possible, annexation to a special district that serves a city shall include annexation to that adjacent city.

#### **c. AGENCY PROLIFERATION**

The Commission finds that great numbers of special districts add to various departmental workloads and increase the cost of government. It recognizes that layer upon layer of governmental agencies produce confusion and lead to duplication of services. It recognizes that in most cases the most efficient and effective agencies to provide needed levels of service are multipurpose local agencies, and that those local agencies most qualified to provide a full range of urban-type services are cities.

**(1) POLICY:** The Commission may undertake studies of special districts for the purpose of examining the potential for efficiencies through reorganization. Districts most likely to be the subject of such studies include those that fall into one or more of the following categories:

**(a)** overlaying districts that provide the potential for service duplication

**(b)** inactive districts

**(c)** overlaying limited purpose districts that could be consolidated into a single multipurpose district

- (d) districts that include significant areas where no services are provided*
- (e) districts which appear to provide an inadequate level of service*
- (f) districts which are overlain by a city and may be merged into the city*

*(2) POLICY: If the special district studies determine that some type of governmental reorganization is appropriate, the Commission may initiate a consolidation, a dissolution, a merger, or the formation of a subsidiary district.*

*(3) POLICY: The Commission may identify possible opportunities to reduce the number of special districts through the establishment of coterminous spheres of influence and sphere of influence determinations that recommend ultimately dissolving, merging, or consolidating districts (zero spheres of influence). Such opportunities shall consist of those special districts that fall into the categories listed in Policy c(1).*

*(4) POLICY: The initiation of consolidations, mergers, dissolutions, and the formation of subsidiary districts by the affected governing bodies and/or the affected landowners and voters shall be encouraged.*

*(5) POLICY: The Commission shall utilize its authority to condition proposals in a manner that will discourage agency proliferation and encourage special district consolidation or dissolution where appropriate.*

*(6) POLICY: The Commission encourages special districts and other affected agencies to identify and evaluate possible opportunities to consolidate, merge, or dissolve local agencies.*

*(7) POLICY: When considering the extensions of service to an area the Commission shall favor the provision of services by multipurpose agencies over limited or single purpose agencies. Generally, priority shall be given as follows:*

- (a) annexation to an existing city*
- (b) annexation to an existing county service area*
- (c) annexation to an existing independent multipurpose district*
- (d) annexation to an existing independent single purpose district*
- (e) formation of an independent multipurpose district*
- (f) formation of an independent single purpose district*

*(8) POLICY: Every proposed new district formation, district consolidation, merger, or formation of a subsidiary district shall be accompanied by a feasibility study that contains, at a minimum, the following elements.*

- (a) an explanation of the reasons for the proposed formation and a brief description of the characteristics of the study area*
- (b) a description of the local agencies presently serving the area, and their range and level of service, and a discussion of the potential impacts that the proposed formation would have on these districts*
- (c) a description of and rationale for the proposed boundaries*

- (d) a description of the proposed district services and service financing plan*
- (e) a five year budget projecting all expected revenues and expenditures*
- (f) an analysis of other governmental options for service*
- (g) a list of the pros and cons of the proposed formation*

**(9) POLICY:** *An application to the Commission for district consolidation, district merger, or the formation of a subsidiary district shall include proof of at least one public hearing on the subject held within each district applying for consolidation or merger. Notice for the hearing shall be published in a newspaper of general circulation within each district affected. The notice shall be published at least fourteen days but no more than thirty days before the scheduled hearing and shall be no less than 1/8 of a page in size.*

#### **d. BOUNDARIES**

The Cortese/Knox Act encourages the logical formation and determination of local agency boundaries and requires LAFCOs to consider "the nonconformance of proposed boundaries with lines of assessment..." when reviewing a proposal for jurisdictional change.

The Commission finds that boundaries that follow lines of assessment are clearer, more understandable, and more readily identifiable. They facilitate service provision, assist in the determination of permissible land uses, simplify the assessment and property tax process, and encourage consistent mapping of jurisdictions. The Commission recognizes that there are times when the strict use of assessor parcels will result in an awkward proposal boundary. In such cases, it may be necessary to consider minor adjustments to the proposal boundaries or a change in the parcel lines.

One of the Commission's most powerful tools is the ability to amend the boundaries of a proposal in order to create a boundary that the Commission feels is more equitable or effects better service provision. Related to this power is the ability of the Commission to expand a proposal to include additional jurisdictional changes. For example, a proposal to annex to a full service city may need to be expanded to include a detachment from a local fire district to prevent a duplication of service.

**(1) POLICY:** *Sphere of influence revisions and jurisdictional changes involving assessor parcel splits shall be avoided whenever possible. Exceptions may be made where the applicant is able to prove that the split cannot reasonably be avoided without incurring undue hardship.*

**(2) POLICY:** *The Commission will generally honor an agreement between a city and the County, or a city and a city with respect to the inclusion or exclusion of roads adjacent to one or more of the boundaries of a proposed annexation. If no such agreement is in place, the entire width of any roadway which is adjacent to the property to be annexed should be included within the annexation when one or more of the following conditions apply:*

- (a) the roadway will include significant new facilities (such as sewer lines, water lines, storm drains, or notable traffic control measures) that will be maintained by the annexing jurisdiction;*
- (b) based upon existing and future potential land uses in the area, the primary users of that portion of the road would most likely be generated by the annexing entity; or*
- (c) whenever the Commission, after considering the overall impacts, adjacent land uses, historic and perceptual boundary concerns, and other factors relevant to LAFCO policy, determines that annexation of the roadway would be appropriate.*

*(3) The environmental documentation prepared for each project which proposes annexation of property to a city in which one or more of the boundaries between the city and the County or the city and another city are delineated by a road, shall include analyses which place the road within each of the jurisdictions. The environmental document or a supplemental document prepared by the applicant shall address the long-term maintenance costs associated with each of these potential scenarios.*

*(4) POLICY: Special districts shall be detached from an area when a city annexes that area and assumes the role of service provider in place of the special district.*

## **2. PRESERVE AGRICULTURAL LAND AND OPEN SPACE RESOURCES**

While the Commission is prohibited from imposing any conditions "which would directly regulate land use density or intensity, property development, or subdivision requirements," the Commission is required to consider land use and related data in their review. Without specifying how a particular area should be zoned or developed, the Commission may adopt policies that require rezoning and/or development plans to accompany a proposal.

The premature conversion of farmland and open space to other uses is discouraged by the Cortese/Knox Act. In the pursuit of this goal, the Commission has authority to modify the proposal's boundaries or to deny an untimely proposal. Information regarding land use designations and existing and proposed land uses assists the Commission in its determinations as to the appropriateness of a proposal's timing and boundaries.

*(1) POLICY: The Commission encourages all agencies within the County to adopt and exercise development policies that promote orderly development and logical boundaries and protect productive agricultural lands and significant open space areas, including riparian areas.*

*(2) POLICY: Unless the subject area is substantially developed to its ultimate use, annexation to a city or special district will be linked to a proposal to develop and not be speculative in nature. Development plans, including a timetable, will be required as part of the LAFCO application for annexation.*

*(3) POLICY: Generally annexation of farmlands shall not be permitted when significant areas of non-productive farmland are already available. Development of vacant land within a city or district should be developed prior to fringe areas.*

*(4) POLICY: The Commission may set spheres of influence for unincorporated preserves for specified reasons such as to preserve the agricultural and open space areas or areas of possible future incorporation. Annexation of these areas by adjacent cities shall be discouraged. Annexation of these areas to special districts shall be approved only when the district's purposes are consistent with the sphere in question.*

## **3. ENCOURAGE LOGICAL PATTERNS OF GROWTH AND DISCOURAGE URBAN SPRAWL**

One of the primary mandates of LAFCO is to encourage orderly growth and development, yet LAFCO is prohibited from directly regulating land use. With varying effect LAFCO can fulfill its mandate through the determination of jurisdictional boundaries and the extension of local agency services. The Commission recognizes that under existing circumstances, such goals will only be completely successful when they are embraced by all the area's local governments.



While the statutes encourage orderly growth and discourage urban sprawl, they do not define or set standards to quantify these concepts. At this juncture, these determinations must be made at the local level. These are difficult concepts to define since one person's orderly growth is another's urban sprawl.

Spheres of influence play an important role in the process of encouraging orderly growth. Under law each local agency is required to have a sphere of influence. These spheres provide direction and growth for the planning of the affected local agency and all adjacent agencies. Spheres can be critically important tools in the goal to establish logical boundaries, yet their value is often underestimated. As a result they are not used as effectively as they might be. Spheres define the future boundaries of the entity. Once spheres of influence are established, the question of annexation within the sphere is primarily one of timing.

#### **a. ORDERLY GROWTH**

**(1) POLICY:** *The Commission encourages the urbanization of certain lands over others and hereby establishes a priority list for urbanization:*

- (a) vacant or underdeveloped land within the existing boundaries of a city*
- (b) vacant or underdeveloped land within the adopted sphere of influence of a city*
- (c) vacant or underdeveloped land outside the adopted sphere of influence of a city*

**(2) POLICY:** *The commission will consider the following factors in determining logical growth patterns in reviewing proposals for annexation to a city or expansion of a city's sphere of influence:*

- (a) adjacency with existing and planned growth pattern of the city*
- (b) projected growth demand and relationship to remaining lands to be developed within the city and its existing sphere*
- (c) ability of the city to provide and fund needed services (utilities, transportation, public safety, recreation, libraries) to the levels defined by the city's general plan*
- (d) pending or anticipated development applications to the County for areas within a city's existing sphere*

**(3) POLICY:** *The Commission discourages urban level development in unincorporated areas adjacent to city boundaries*

#### **b. SPHERES OF INFLUENCE**

**(1) POLICY:** *To allow for the evaluation of projected growth demand and its relationship to remaining lands to be developed within the city and the city's sphere, proposals for sphere of influence revisions (other than minor adjustments) shall require certain data for the consideration of the Commission. It is recognized that sphere reviews associated with periodic updates of the general plan will be more conceptual than those associated with specific projects. In any case, the data provided shall be as accurate, thorough, and pragmatic as possible. The data provided shall include the following:*

*(a) A market absorption study analyzing proposed uses in relation to similar uses within the city and the city's sphere. The study shall:*

- I. Cover a 15 to 20 year planning horizon,*

*II. include all major land use categories proposed within sphere revision (residential, commercial, office and industrial),*

*III. identify project and citywide buildout capacities for the proposed land uses,*

*IV. provide an analysis of the competitive strength of the affected city land uses within the regional market, and the proposed project land uses within the anticipated city capture of that regional market,*

*V. contain a breakdown of projected absorption and supply margins over time by both land use and by geographic planning area within the city. At a minimum, the analysis should distinguish projected absorption between the proposed sphere area and the existing (infill) portion of the city and the city's sphere area, and*

*VI. include a summary of key assumptions and methodologies used in generating the absorption projections.*

*(b) Analysis of alternative project sites located elsewhere within the city or its existing sphere. This analysis shall be included as an alternative in the environmental document prepared for the proposed sphere expansion. If such alternative sites are determined not to be feasible as defined by CEQA, the environmental document shall include a discussion of the reasons and relevant data used to make such determinations. LAFCO staff shall be afforded the opportunity to comment on the adequacy of the alternatives analysis prior to certification of the environmental document.*

*(2) POLICY: Expansions of city spheres of influence shall be discouraged if there is feasible land appropriate for the proposed uses already within the sphere of influence.*

*(3) POLICY: City Spheres of influence shall be reviewed when the general plan is updated or when there is a general plan amendment that would affect the city boundaries. In addition at LAFCO's request cities shall review their spheres no more frequently than every five years, advising LAFCO of their findings and submitting sphere amendment requests to LAFCO if circumstances warrant.*

*(4) POLICY: If the Commission determines that a request for expansion of a city's sphere of influence would have the effect of exceeding the market demand for a particular use within the planning horizon, the Commission may approve the requested sphere expansion conditional upon detachment of other areas from the sphere.*

*(5) POLICY: Special district spheres of influence will include only those areas that may benefit from the services provided by that district. This determination will be made based upon the relevant general and/or community plan for the area.*

### **c. ANNEXATIONS**

*(1) POLICY: To allow for the evaluation of projected growth demand and its relationship to remaining lands to be developed within the city, proposals for annexations to a city or reorganizations including annexation to a city (except unincorporated islands and minor adjustments) shall be accompanied by the following:*

(a) *A market absorption study analyzing proposed uses in relation to similar uses within the city. The study shall:*

*I. Cover a 15 to 20 year planning horizon,*

*II. include all major land use categories proposed within annexation (residential, commercial, office and industrial),*

*III. identify project and citywide buildout capacities for the proposed land uses,*

*IV. provide an analysis of the competitive strength of the affected city land uses within the regional market, and the proposed project land uses within the anticipated city capture of that regional market,*

*V. contain a breakdown of projected absorption and supply margins over time by both land use and by geographic planning area within the city. At a minimum, the analysis should distinguish projected absorption between the proposed annexation area and the existing (infill) portion of the city, and*

*VI. include a summary of key assumptions and methodologies used in generating the absorption projections.*

*(b) Analysis of alternative project sites located elsewhere within the city or its existing sphere. This analysis shall be included as an alternative in the environmental document prepared for the proposed annexation or reorganization including annexation. If such alternative sites are determined not to be feasible as defined by CEQA, the environmental document shall include a discussion of the reasons and relevant data used to make determinations. LAFCO staff shall be afforded the opportunity to comment on the adequacy of the alternatives analysis prior to certification of the environmental document.*

*(2) POLICY: Unless special circumstances can be demonstrated, city annexations or reorganizations including city annexations shall be discouraged if there are feasible alternative sites for the annexation proposal already within the city.*

*(3) POLICY: Large development proposals that are proposed to be developed in phases may be annexed in phases, ensuring that growth occurs in a logical pattern.*

*(4) POLICY: All city annexation proposals shall be rezoned unless the city or landowner is able to prove to the satisfaction of the Commission that it would be detrimental to do so.*

#### **d. UNINCORPORATED ISLANDS**

The creation and continued existence of unincorporated islands is expressly discouraged and/or prohibited. Unincorporated islands must continue to be serviced by the County and other local agencies serving unincorporated areas, but because these service areas are isolated for other areas of service, they are difficult and expensive to serve.

Unincorporated islands, therefore, are not consistent with logical and efficient government.

*(1) POLICY: The Commission shall discourage the creation of islands or areas not in a city but substantially surrounded by a city or cities, or by a city or cities and a county boundary or a major body of water.*

**(2) POLICY:** *The Commission shall deny city annexations or reorganizations that include city annexations that create areas that are substantially or totally surrounded by a city. The Commission shall consider an area to be "substantially surrounded" when it is surrounded by a city or cities, or by a city or cities and a county boundary or a major body of water on at least 75% of its boundaries, unless one of the following conditions have been met:*

*(a) The Commission determines that denial of the proposal would be detrimental to the orderly development of the community and that the area that would be enclosed by the annexation cannot be reasonably annexed to another city or incorporated as a new city.*

*(b) In the case of areas which are substantially surrounded, the applicant provides written results of a landowner (uninhabited or inhabited) or registered voter (inhabited) survey that shows that inclusion of the unincorporated area would successfully subvert the proposal.*

**(3) POLICY:** *The Commission shall discourage the annexation of a portion of an existing island to a city unless the applicant provides written proof through a survey that the proposed annexation is the largest possible portion of that island that may be successfully annexed.*

#### 4. ADMINISTRATIVE POLICIES

##### **a. GENERAL**

The following list of policies is generally administrative in nature and has been adopted for the purpose of refining and defining the Commission's process.

**(1) POLICY:** *If a proposed jurisdictional change between one or more agencies involves fiscal considerations beyond the adopted or standard arrangements, each affected agency*

*shall study the effects of the proposal. If any affected agency feels that potential inequities exist, the agencies shall work together to reach and adopt a compromise.*

**(2) POLICY:** *Unless otherwise specified by Commission action, the effective date of a change of organization or reorganization shall be the date that the Certificate of Completion is issued.*

**(3) POLICY:** *All requests made pursuant to Government Code Section 56833.3 for State Controller review of an applicant's incorporation fiscal analysis must be submitted within thirty days of the Commission's first published notice of the proposal. The costs associated for all such requests will be borne by the party making the request.*

##### **b. ENVIRONMENTAL**

Most LAFCO actions are subject to environmental review under the California Environmental Quality Act (CEQA). The Commission has an established environmental procedure which follows the mandates found in CEQA. This procedure is outlined in the procedure section of this manual.

The State CEQA Guidelines encourage the review of a project in its entirety and at the earliest possible point in the planning process in order to assess the cumulative impacts of the proposal.

The Commission recognizes that an organization or reorganization most often represents only a step in a series required in a larger project. This project may include rezoning, the approval of land development plans, and possibly a general plan amendment. Ideally there should be a single environmental review that addresses all aspects of the project. In these cases the primary agency (usually a city) is in the position to review land use designation changes, service extension plans, land development plans, and organization or reorganization. In these cases, the Commission shall generally act as responsible agency.

**(1) POLICY:** *Whenever an agency is considering a project (such as rezoning, a general plan amendment, site development, or the installation of infrastructure) that requires annexation or some other jurisdictional reorganization, the environmental review for that project shall include consideration of the environmental impacts of annexation or jurisdictional reorganization, and LAFCO shall be treated as a responsible agency.*

#### **c. RECONSIDERATION**

Any party may file a written statement requesting amendments to or reconsideration of any resolution adopted by the Commission. The following policies shall govern reconsideration by the Commission:

**(1) POLICY:** *Requests for amendment to or reconsideration of a resolution of the Commission making determinations will be granted only when the petitioner can present some compelling new evidence or show that significant factors relevant to the proposal were overlooked through no fault of the party or the Commission. The requests shall state the specific modification to the resolution being requested.*

**(2) POLICY:** *Any request shall be submitted within thirty days of the Commission's decision and prior to the completion of the proceedings of the conducting authority. Any rehearing is subject to full public notice.*

**(3) POLICY:** *No request shall be deemed filed unless appropriate filing fees are submitted.*

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 3, SACRAMENTO AREA OFFICE - MS 41  
P.O. BOX 942874  
SACRAMENTO, CA 94274-0001  
TDD Telephone (916) 741-4509  
FAX (916) 323-7669  
Telephone (916) 327-3859



November 3, 1999

KPLA466  
03-PLA65 PM 9.569  
Marchbrook Sunset Ranchos Project  
Notice of Preparation of a Draft Environmental  
Impact Report

Mr. George Dijan  
Community Development Department  
3970 Rocklin Road  
Rocklin, CA 95677

Dear Mr. Dijan:

Thank you for the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for Marchbrook Sunset Ranchos Project. Our comments are as follows:

- A traffic study should be prepared to assess the project's impacts to State Route (SR) 65 and Interstate 80. The traffic study should incorporate the following scenarios:

- Existing conditions without the project
- Existing conditions plus the project
- Cumulative conditions (without the project)
- Cumulative conditions (with project build-out)

- The traffic analysis should provide a Level of Service (LOS) analysis for freeway, ramps, and ramp terminal intersections. A merge/diverge analysis should be performed for freeway and ramp junctions and all analysis should be based on AM and PM peak hour volumes. The procedures contained in the 1997 Update to the Highway Capacity Manual should be used as a guide for the traffic study.
- Mitigation measures should be identified where the project would have a significant impact. Caltrans considers the following to be significant impacts:
  - Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway.
  - Vehicle queues at intersections that exceed existing lane storage.
  - Project traffic impacts that cause any ramp's merge/diverge Level of Service (LOS) to be worse than the freeway's LOS.
  - Project impacts that cause the freeway or intersection LOS to deteriorate beyond LOS E for freeway and LOS D for highway and intersections. (If the LOS is already "E" or "F", then a quantitative measure of increase queue lengths and delay should be used to determine appropriate mitigation measure)

RECEIVED

Mr. George Dijan  
November 3, 1999  
Page 2

Possible mitigation measures to consider include:

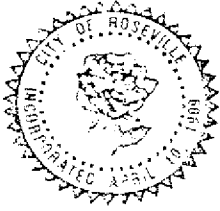
- Adding mainline capacity
  - Widening interchange ramps to increase capacity
  - Modifying ramp terminal intersections
  - Increasing the ramp acceleration or deceleration lane length to improve merge/diverge operations
- The analysis of future traffic impacts should be based on a 20 year planning horizon.
  - Future transportation systems assumed for cumulative conditions should only include those improvements which are included in the Placer County Transportation Planning Agency's most current Regional Transportation Plan.

Please provide our office with a copy of the Draft EIR and traffic study regarding this project. If you have any questions, please contact Cathy Felkins at (916) 323-5108.

Sincerely,

  
JEFFREY PULVERMAN, Chief  
Office of Regional Planning





COMMUNITY DEVELOPMENT  
**CITY OF ROSEVILLE**  
TRADITION • PRIDE • PROGRESS

316 Vernon Street #102 • Roseville, CA 95678  
(916) 774-5334 • Fax (916) 774-5195 • Tdd (916) 774-5220

3 November, 1999

George Djan  
City of Rocklin  
Community Development Department  
3970 Rocklin Road  
Rocklin, CA 95677

REVISED

Via: Fax and Regular Mail

Regarding: **Notice of Preparation Comments for the Marchbrook/Sunset Ranchos Draft EIR**

Dear Mr. Djan:

The City of Roseville Community Development Department appreciates the opportunity to comment on the Notice of Preparation (NOP) for the Marchbrook/Sunset Ranchos Draft EIR.

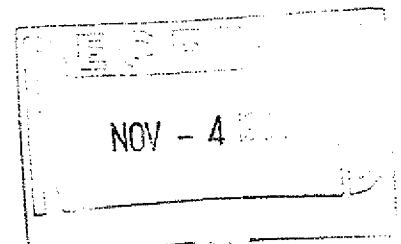
**Project Description**

The project is located immediately south of the Twelve Bridges plan area, east of Highway 65, northwest of the Stanford Ranch Plan Area, and north and south of Sunset Boulevard. The project site encompasses approximately 1,800 acres, and is referred to as the North West Rocklin Development Plan Area (Plan Area). The project includes annexation of the Plan Area, and development of a planned community that would include 3,423 single-family lots, 1,066 multi-family units, three 10-acre elementary school sites, 64 acres of park sites 190 acres of open space, and 24 acres of neighborhood commercial and community commercial uses.

**Comments**

Traffic

- 1) The EIR should evaluate the traffic impacts of the proposed projects within Roseville. Ideally, this would be done using the City of Roseville's traffic model.
- 2) The proposed project area is large enough to warrant payments to update the Highway 65 Joint Powers Agreement fees to reflect the increase in traffic due to the revised land use.



Public Utilities

1) Identify the sources of water and sewer service for the project site. Specifically, identify the impacts to existing or new treatment facilities.

Drainage

1) Please elaborate on the extent of plan area discharges across Sunset Boulevard to Pleasant Grove Creek, and the potential for impacts.

Thank you for the opportunity to provide comments on this project. Please forward any future Marchbrook/Sunset Ranchos project related CEQA documentation to:

Mark Morse, Environmental Coordinator  
City of Roseville  
Community Development Department  
316 Vernon Street  
Roseville, California 95678

If you have questions, please feel free to call me at 774-5334.

Sincerely,



Terri Shirhall  
Assistant Environmental Specialist

**PLACER COUNTY  
FLOOD CONTROL AND WATER CONSERVATION DISTRICT**

JAN WITTER, Executive Director  
LESLIE GAULT, District Engineer  
ANDREW DARROW, Development Coordinator  
KAREN STILLIAN, Secretary

November 5, 1999

George Djan, Senior Planner  
Community Development Department  
City of Rocklin  
P.O. Box 1380  
Rocklin, CA 95677

**RE: Notice of Preparation of a Draft EIR for Marchbrook/Sunset Ranchos Project**

Dear George:

This project is located in both the Auburn Ravine and Pleasant Grove Creek watersheds. General assessment of flooding in these watersheds is indicated in the "Auburn Ravine, Coon, and Pleasant Grove Creek Flood Mitigation" report by CH2M Hill, July 1993.

We request the applicant submit an appropriate hydrology and hydraulic analysis in accordance with the Placer County Stormwater Management Manual along with the Environmental Impact Report for our review. This analysis should include the following items:

1. An evaluation of the ability of onsite detention facilities to reduce post-development flows to 90% of pre-development peak flows.
2. An assessment of whether project development will aggravate flooding downstream of the proposed subject project.
3. A discussion and analysis of the need for mitigation of increase in runoff volume.
4. A detailed map showing all proposed improvements, including onsite detention ponds, and their location relative to the 100-year floodplain.

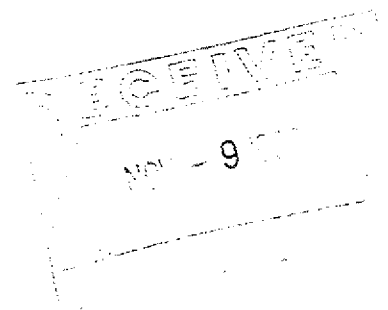
Please call me at (530) 889-7303 if you have any questions regarding these comments.



Andrew Darrow, P.E.  
Development Coordinator

LG:AD:KS

d:\data\letters\cn99-352.doc





## DEPARTMENT OF FISH AND GAME

SACRAMENTO VALLEY AND CENTRAL SIERRA  
1701 NIMBUS ROAD, SUITE A  
RANCHO CORDOVA, CALIFORNIA 95670  
Telephone (916) 358-2900



November 18, 1999

Mr. George Djan, Senior Planner  
City of Rocklin  
Community Development Department  
3970 Rocklin Road  
Rocklin, California 95377

Dear Mr. Djan:

The Department of Fish and Game (DFG) has reviewed the Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the Marchbrook/Sunset Rancho Project (SCH# 99102012). The project proposes to rezone approximately 1,850 acres, located in an unincorporated area of Placer County (within the sphere of influence of the City of Rocklin) to allow commercial and residential development between the cities of Rocklin and Lincoln.

Significant resources of the project area include riparian and stream habitats, wetlands including vernal pools, and oak woodlands. Adjacent land uses include residential and commercial activities.

The DFG is providing these comments as a Responsible Agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California (California Environmental Quality Act Guidelines Section 15386 et seq.). The DFG recommends the following be included within the project DEIR:

1. The project will directly and cumulatively impact stream and wetland habitats through fragmentation, significant reduction of adjacent upland buffer areas and disruption of movement patterns in riparian and wetland-dependent species. The open space plan should provide open space areas adequate to support these species, and provide movement between on-site and off-site open space preserves. Buffers between wetland habitat and proposed development should be of sufficient width and should be designed to eliminate potential disturbance of fish and wildlife resources from noise, human activity, feral animal intrusion, and any other potential source of disturbance (Fish and Game Commission Policy, as amended 8/4/94).
2. The project's impact on State- or Federally-listed rare, threatened, or endangered species. The DFG recommends that surveys be conducted at the time of year when endangered or threatened species are both evident and identifiable. Field surveys should be scheduled to coincide with the appropriate

- breeding or other life history stage of animals, when they are likely to be evident, or with peak flowering periods and/or during periods of phenological development that are necessary to identify a plant species of concern. Full biotic lists should be included in the Appendices of the EIR.
3. A red-tailed hawk was observed nesting on the project site during the 1999 breeding season ( Per Clean Water Act Nationwide Permit #26, application Regulatory No. 199800668). Raptors and their nests are fully protected (Fish and Game Code Section 3503.5). Preproject surveys for nesting raptors must occur to avoid the potential "take" of raptor species. Nesting raptors must be provided a minimum 500-foot non-disturbance buffer.
  4. The potential for alterations in the surface water hydrology, water quality and impacts to the aquatic resources, permanent streams, intermittent drainages and wetlands within the watershed of the subject project should be evaluated and mitigated in the Draft EIR. The DFG is particularly concerned with the cumulative impacts of runoff from the increase in impervious surface area resulting from the project. It is important that the hydrologic regime allow for the continued viability of the aquatic resource, while maintaining adequate floodflows from increased runoff without excessive maintenance of existing or enhanced riparian vegetation.
  5. The DFG recommends that the project be designed so that the loss of oak trees is avoided. If the loss of oak trees is unavoidable, then a mitigation plan should be developed which results in the retention of the maximum number of mature oak trees in patches of no less than five acres. The mitigation should include the following:
    - A. Individual trees or groups of trees that are retained as a function of project design should be fully protected both during and after construction. During the construction of the project, a temporary protective fence should be established a minimum of 10 feet beyond the drip line of the retained oaks. Within this protective buffer, no grading, trenching, fill, or vegetation alteration should be allowed.
    - B. After project construction, a fact sheet describing the value and care of native oaks should be prepared and distributed to all residents. At a minimum, this fact sheet should encourage homeowners to avoid unnecessary pruning and encourage, except where a safety hazard occurs, the retention of snags. This fact sheet should be prepared by a qualified biologist.
    - C. Individual trees that are unavoidably lost due to project implementation should be fully mitigated through the planting of oak seedlings that are obtained from local genetic stock. We recommend a replacement rate of

5:1 for trees that are two inches or greater in diameter measured at breast height (dbh). We recommend a replacement rate of 1:1 for all trees less than two inches dbh. Every effort should be made to retain "heritage" oaks, that is, oaks in excess of 24 inches dbh.

- D. A five-year monitoring plan should be completed for all oak mitigation plantings. The monitoring plan should include appropriate irrigation schedules, as well as criteria for success and reestablishment during the five-year period. A success rate of no less than 80 percent at the end of the five-year monitoring period is recommended.
6. In order to comply with Public Resources Code Section 21081.6, a detailed monitoring program must be developed for all mitigation conditions. The monitoring program should include the following:
- A. Specific criteria to measure the effectiveness of mitigation.
  - B. Annual monitoring for a minimum of five years. Annual written reports submitted to the lead agency and the DFG.
  - C. Annual monitoring reports, each of which include corrective recommendations that shall be implemented in order to ensure that mitigation efforts are successful.
7. The project applicant should be advised that work consisting of, but not limited to, diversion or obstruction of the natural flow or changes in the channel, bed or bank of any river, stream, or lake will require a DFG Streambed Alteration Agreement (Fish and Game Code Section 1600 et sec.).

The resource protection conditions which are made a part of the Streambed Alteration Agreement are subject to CEQA review and should be included in the environmental document for this project. Mitigation for the project MOU include, but may not be limited to, provisions for the following:

- A. Protect and maintain the riparian, wetland, stream or lake systems and to ensure a "no net loss" of riparian, wetland, stream, or lake habitat value or acreage. Vegetation removal should not exceed the minimum necessary to complete operations.
- B. Provisions for the protection of fish and wildlife resources at risk including various life stages of fish, the need for unimpeded migration past the project area, and protection of critical spawning and rearing habitats, as well as holding areas.
- C. Treatment of construction materials, spoils or fill, so that they cannot be washed into a stream or lake, or where it could cover aquatic or riparian vegetation.

Mr. George Djan  
November 18, 1999  
Page Four

- D. Streams and wetlands must be provided buffers adequate to protect the aquatic resource during construction. No grading or construction activities should be allowed within these buffers.
- E. The potential for alterations in the surface water hydrology, water quality, and impacts to aquatic resources within the watershed. Mitigation may include but not be limited to oil/grit separators, detention ponds, buffering filter strips, silt barriers, etc., to prevent downstream sedimentation and pollution, while maintaining the area's historic hydrologic regime.
- F. Restoration of the area should include revegetation with trees, shrubs, and grasses native to the area. Plantings shall have a minimum 80% survival after the first year, and 100% survival thereafter; or shall have attained a 75% cover after three years, and 90% cover after five years. Plantings should be monitored each year and maintained as necessary until the success criteria have been met.

Early notification to the Department is recommended in order to determine the need for a Streambed Alteration Agreement. Specific conditions in the Agreement may include site-specific conditions for construction activities and timing. Any work subject to the Agreement may not be initiated until certification of the CEQA document and payment of the appropriate fees. The project proponent should contact the Sacramento Valley-Central Sierra Region for an application packet and fee schedule for this permit.

Thank you for the opportunity to review this project. If the DFG can be of further assistance, please contact Mr. Jeff Finn, Associate Wildlife Biologist, at (530) 477-0308.

Sincerely,



Larry L. Eng  
Assistant Regional Manager,  
Wildlife, Fisheries & Environmental Programs

cc: Mr. Jeff Finn  
Department of Fish and Game  
1701 Nimbus Road  
Rancho Cordova, California 95670



## DEPARTMENT OF TRANSPORTATION

DISTRICT 3, SACRAMENTO AREA OFFICE - MS 41

P.O. BOX 942874

SACRAMENTO, CA 94274-0001

TDD Telephone (916) 741-4509

FAX (916) 323-7669

Telephone (916) 322-1970



December 4, 1998

Ms. Sherri Abbas  
City of Rocklin  
3970 Rocklin Road  
Rocklin, CA 95677

JPLA 201  
03-PLA-65 PM 9.569  
Marchbrook Sunset Ranchos Annexation Request

Dear Ms. Abbas:

Thank you for the opportunity to comment on the Marchbrook Sunset Ranchos Annexation Request. Our comments are as follows:

- ◆ A traffic study needs to be completed to evaluate the impact on State Route 65 and any nearby interchange and intersections. The traffic study should address peak hour impacts and analyze the following conditions:
  - Existing conditions (without project)
  - Existing conditions with project
  - Cumulative conditions
  - Cumulative conditions plus project
  - Future (forecast five years in future with project)
- ◆ Mitigation measures should be identified where the project would have a significant impact. Caltrans considers the following to be significant impacts:
  - Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway
  - Vehicle queues at intersections that exceed existing lane storage.
  - Project traffic impacts that cause the ramp's merge/diverge Level of Service (LOS) to be worse than the freeway's LOS
  - Project traffic impacts that cause the freeway or intersection LOS to deteriorate beyond LOS E for the freeway and LOS D for highways and intersections. (If the LOS is already "E" or "F", then a quantitative measure of increased queue lengths and delay should be used to determine appropriate mitigation measures.

Possible mitigation measures to consider include:

- Widening interchange ramps to increase capacity
  - Modifying ramp terminal intersections
  - Increasing the ramp acceleration or deceleration lane length to improve merge/diverge operations.
- ◆ Future transportation systems assumed for cumulative conditions should only include those improvements which are included in the Placer County Transportation Planning Agency's most current Regional Transportation Plan.

Please provide our office with the additional information mentioned in the above comments. If you have any questions, please contact Cathy Felkins at (916) 323-5108.

Sincerely,

*original s/b*

JEFFREY PULVERMAN, Chief  
Office of Regional Planning

# Rocklin Unified School District

5035 Meyers Street • Rocklin, CA 95677  
Phone • (916) 624-2428 Fax • (916) 624-7246

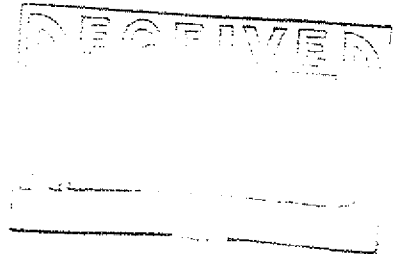


Kevin Brown, Superintendent  
Paul J. Carras, Assistant Superintendent  
Teresa R. Ryland, Assistant Superintendent

December 14, 1999

George Djan  
City of Rocklin  
P.O. Box 1380  
Rocklin, CA 95677

RE: Northwest Rocklin General Development Plan Area  
Marchbrook – Sunset Ranchos Project  
General Plan Amendment, Rezoning  
General Development Plan and Annexation



Dear Mr. Djan,

The Rocklin Unified School District (the "District") wishes to provide the following comments to the City in anticipation of the preparation of the draft environmental report ("DEIR") for the Marchbrook – Sunset Ranchos Project and related area projects (the "Project") within the boundaries of the Northwest Rocklin General Development Area (the "Development Area").

Based upon preliminary information provided to the District, it is the District's understanding that the overall development as a part of the project, includes Sunset Ranchos along with the potential development of the Highway 65 corridor and Parcel K. As proposed, Sunset Ranchos along with the proposed development of Parcel K will generate 3,423 single family lots and 113 single family lots respectfully. The Project also proposes an additional 1,066 multiple family units within its boundaries. Based upon current student generation rates in effect within the District from new construction, these proposed single family and multi-family units will generate 1,628 students at grades kindergarten through 6<sup>th</sup>, 407 students at grades 7 through 8 and 610 students at grades 9 through 12.

## Identification and Location of School Sites

The location of public school sites within the boundaries of any large development project are of critical importance to both the success of the project and the ability of the District to provide educational services in an effective and safe manner. The Draft

George Djan  
December 14, 1999  
Pg. 2

General Development Plan Zoning Diagram (the "Zoning Diagram") and the Draft General Plan Land Use Diagram (the "Land Use Diagram") both identify three elementary school sites that will presumably be located adjacent to or within residential zones. The proposed 10 acre elementary school sites are all three located along identified arterials serving the overall Project.

Currently, it is a goal established by the District to work cooperatively with the City to locate new elementary school sites adjacent to parks to maximize the public benefit associated with the development of the property and to make effective use of the joint resources of the District and the City. Presently, two of the proposed three elementary school sites set forth in the Zoning Diagram and the Land Use Diagram appear to be located adjacent to proposed City parks.

Additionally, in order to facilitate the design of an elementary school and to accommodate the traffic generated by elementary school use, two sides of each elementary school site should have public street frontage. Presently, not enough detail is contained within the Zoning Diagram or the Land Use Diagram to ascertain whether this is the case.

In regard to the issue of high school sites, the number of students to be generated from both Sunset Ranchos and Parcel K justify the identification of a high school site within the boundaries of the Development Plan area. Currently, enrollment at the high school level in the District is near or at capacity and the construction of any development of the scale of that proposed in the Development Plan Area will require the acquisition and construction of secondary school facilities to serve residential development. Locating the high school site adjacent to two public streets is an important design criteria for the same reasons described above pertaining to elementary school sites. In addition, the high school site should be in the range of 40 to 50 acres depending upon site configuration and condition of property.

At the District's earliest opportunity, the District looks forward to meeting with representatives from the City and the proposed developers to discuss in more specific detail, the siting, configuration and process for acquisition of the respective school sites identified and to be identified in the boundaries of the Development Plan Area.

#### School Construction Funding Issues

Separate from the location of actual school sites, the manner in which the development of new schools is funded is of critical importance to the community. Presently, the District funds new school site acquisition and new school construction through a combination of

George Djan  
December 14, 1999  
Pg. 3

revenue sources. These sources include local revenues derived from developer fees, Mello-Roos special taxes and general obligation bonds along with State revenues obtained from the State school building construction program.

In regard to the developer fee component of this funding program, the State of California presently authorizes two, independent developer fee programs. The first program, known as "Stirling Fees" has a maximum fee cap of \$1.93 per square foot. A second program, implemented under the provisions of 1998 legislation known commonly as Senate Bill 50 ("SB 50") authorizes school districts to implement fees in an amount adequate to fund up to approximately 50% of the total cost of land acquisition and new school construction.

Presently, the District has a Stirling Fee in effect in an amount less than the \$1.93 per square foot cap. The District has not implemented fees yet under the authority of SB 50. Fee revenue obtained from the Stirling Fee is used by the District to fund a portion of its middle school land acquisition and construction costs.

The District has established Mello-Roos Community Facilities Districts No. 1 and 2. Special tax proceeds from these districts is utilized in combination with State revenue to fund the cost of elementary school site acquisition and elementary school construction.

Finally, local general obligation bonds have been used along with other sources to fund acquisition and expansion of current Rocklin High School facilities.

In the event development is allowed to proceed in the Development Plan Area, the District's Mello-Roos special tax funding authority would not apply to the Development Plan Area unless affirmative steps were taken by the District, the City and the proposed developers. This could include the annexation of all or a portion of the Development Plan Area into the District's existing Community Facilities District No. 2 or it could include the establishment of a new Mello-Roos Community Facilities District structured in a manner suitable to the needs of the overall development project.

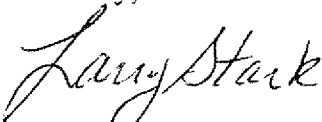
Without assurance that the Mello-Roos funding component will be available within the boundaries of the Development Plan Area, the District will not be able to ensure that adequate elementary school facilities will be constructed when needed to serve the area. Likewise, depending upon the availability for State revenues for middle school facilities and high school facilities, comparable, alternative funding arrangements may be desirable to serve the area.

George Djan  
December 14, 1999  
Pg. 4

The District is pleased that the City has determined that annexation and development of the Development Plan Area will require the preparation of an environmental impact report and requests that these issues be included and evaluated in the context of the EIR. In addition, however, to the extent the City will be providing entitlements to one or more developers within the Development Plan Area, the District requests that such entitlements be tied, whenever feasible, to adequate assurance and specific arrangements to ensure the provision of new school sites and school facilities in a timely fashion. Further, to the extent one or more development agreements are proposed to be entered into for projects in the Development Plan Area, the District requests to be kept informed of such process and would look forward to the opportunity to participate in the negotiations leading to the drafting and ultimate signing of any such development agreements.

In the meantime, please forward these comments as you deem necessary to those firms and individuals participating in the evaluation of the proposed Development Plan Area and its annexation to the City. In addition, do not hesitate to contact me with any follow-up comments, questions or suggestions you may have.

Sincerely,



Larry Stark  
Director of Facilities



## PLACER COUNTY PLANNING DEPARTMENT

11414 B Avenue/Auburn, California 95603/Telephone (530) 889-7470/FAX (530) 889-7499  
Web Page: <http://placer.ca.gov/planning> E-Mail: [pkthomps@placer.ca.gov](mailto:pkthomps@placer.ca.gov)

January 13, 2000

George Djan, Senior Planner  
City of Rocklin Community Development Department  
3970 Rocklin Road  
Rocklin, CA 95677

Subject: **Notice of Preparation of a Draft Environmental Impact Report for Marchbrook/Sunset Ranchos Project**

Dear Mr. Djan:

This is in response to the City of Rocklin's request for comments on the Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Marchbrook/Sunset Ranchos Project. The Placer County Planning Department appreciates the opportunity to respond to this proposal given that the project is currently within the unincorporated area of Placer County.

### ENVIRONMENTAL ISSUES:

The Draft Environmental Impact Report for this project should address and provide appropriate mitigations for the following issues:

- 1. Land Use** - The EIR should discuss the compatibility of the proposed land uses in the plan area with the surrounding land uses within Placer County to the west and the City of Lincoln to the North. In order to reduce impacts on adjacent land uses, buffer areas should be developed adjacent to portions of the plan areas that coincide with open space areas to the north in the City of Lincoln. Buffers may also be necessary to separate commercial/industrial from adjoining residential properties within and outside the plan area.
- 2. Flooding** - The project area is encumbered by floodplains associated with Orchard Creek. The EIR should address the flood hazard potential for the project site as well as the project's contribution to downstream flooding.
- 3. Resource-Based Land Use Limitations** - There is a potential for sensitive habitat areas to exist within the plan area, particularly vernal wetland resources. Where such resources are to be preserved on site, suitable buffers need to be established between impervious surfaces and the habitat resource portion of Orchard Creek which passes east to west through the plan area. In order to reduce impacts to riparian habitat and water quality this creek corridor should be preserved from development (including all impervious surfaces) with a minimum setback of 100 feet from the centerline of the creek or the standard structural setback should be measured from the edge of the 100-year floodplain, whichever is greater. A setback of 50 feet from centerline of the stream channel should be required for all branches of Orchard Creek which intersect the main east-west trunk of the stream.

4. **County Services and Facilities** - The subject project will generate a demand for County services and facilities in excess of revenues derived from the property for these services and facilities. The cumulative loss of services over time, due to insufficient revenues, could result in detrimental environmental impacts. The EIR should evaluate the potential environmental impacts associated with a degradation of County services and how such impacts can be mitigated. In order to mitigate this impact, this project should be conditioned to contribute to Placer County's Capital Facilities Impact Fee Program.

#### **DEVELOPMENT STANDARDS:**

The following development standards are suggested to the City in order to provide assistance in the conditioning of the project:

1. The Sunset Industrial Area Plan indicates that the purpose of the Highway 65 Business Park planning area (identified as Business Professional / Commercial / Light Industrial [BP/COMM/LI] in the project proposal) is to specifically identify an area for a mix of light industrial and office uses in a high quality campus-like setting. Preferred land uses include high-technology manufacturing and assembly, warehousing, professional offices, research and development, and commercial uses that are primarily for the support of the employees of other businesses in the Sunset Industrial Area. Prohibited land uses include outdoor manufacturing or storage, or uses which emit appreciable amounts of visible gasses, particulate, steam, heat, odor, vibration, glare, dust or excessive noise. Heavy industrial uses could be permitted provided that all industrial activities are confined to the interior space of the building(s) and none of the above listed prohibited uses exist or are apparent on the property.
2. Two of the areas designated for BP/COMM/LI uses have specific restrictions affecting the timing of development in the Sunset Industrial Area Plan. The areas are located on the east side of S.R. 65 on the north and south sides of the North Whitney Boulevard interchange right-of-way. These parcels should not be developed for uses other than agriculture or open space until such time that a state highway interchange is constructed at North Whitney Boulevard and S.R. 65 or construction of an arterial roadway connection to existing arterials in Lincoln or Rocklin. This restriction should be placed as a land development standard and as a policy in the proposed plan area because the North Whitney Boulevard interchange is considered to be a long term project, (i.e., post 2015), and because no funding is currently provided in the Sunset Industrial Area Plan Capital Improvement Program nor in the S.R. 65 Joint Powers Authority Capital Improvement Program. An at-grade intersection on S.R. 65 at North Whitney Boulevard is not a viable component of the area's circulation improvements.
3. The following minimum setbacks should be established in the BP/COMM/LI plan area to be provide consistency with projects in Placer County and help reduce the visual impact of future projects.
  - a. **Primary Frontage Setback** - 125 feet. The primary frontage is adjacent to S.R. 65 or major arterial with four or more traffic lanes, or adjacent to any other roadway determined to be visually sensitive.
4. In order to avoid the risk of flooding within this area, the City should carefully consider development near these drainages. A flood hazard zone should be applied to property in the plan area in order to ensure that an adequate review is conducted in order to analyze the effect of development on the creek and conversely the effect of the creek on development. Floodplain delineations and drainage reports should be required and reviewed during project review.



5. The architectural standards for the BP/COMM/LI plan area should be developed to the highest standard for the Sunset Industrial Area (SIA). The reasons for this standard are two-fold: 1) the location of the this district is along Highway 65 and as such these properties have the greatest amount of visibility in the SIA, and 2) a higher architectural standard will enhance and improve the character of the SIA and make the area more attractive and competitive with other areas when seeking to encourage primary wage-earner employers to locate in the area.

Thank you again for your consideration of our comments. If you have any questions regarding these comments, please do not hesitate to contact me directly.

Sincerely,



PAUL THOMPSON  
Senior Planner

cc: Fred Yeager, Director of Planning  
Supervisor Weygandt  
CEO  
Chron file

PT:pt

ref: t:\cmd\cmdp\paul\erc\nrspnop



# Rocklin Unified School District

5035 Meyers Street • Rocklin, CA 95677  
Phone • (916) 624-2428 Fax • (916) 624-7246



Kevin Brown, Superintendent  
Paul J. Carras, Assistant Superintendent  
Teresa R. Ryland, Assistant Superintendent

March 6, 2000

Mr. Steve Spain  
Terrance E. Lowell & Associates  
1528 Eureka Rd, Suite 100  
Roseville, CA 95661

Dear Steve,

RE: Marchbrook Sunset Ranchos  
Proposed School Sites

Thank you for the subject map showing the locations for the proposed school sites. As you proceed with the design of this project, remember that the school sites should be located in residential areas with street frontage on at least two sides. Co-location with a park is desirable for the elementary sites.

Adjacency to commercial property, including separation by a street, should be avoided. If you have any questions or concerns or have a particular issue you would like us to review, please call.

Sincerely,

Larry Stark  
Director of Facilities

**RECEIVED**

MAR - 8 2000

cc: K. Brown, Superintendent

RAINFORTH•GRAU•ARCHITECTS

Board Members: Mark Forbes • Camille Maben • Michelle Nunn • Brett Storey • Ginny Weitzel

P. 02/02

FAX NO. 916 786 0529

MAR-16-00 THU 11:59 AM LOWELL AND ASSOC.



## DEPARTMENT OF TRANSPORTATION

DISTRICT 3, SACRAMENTO AREA OFFICE – MS 41

P. O. BOX 942874

SACRAMENTO, CA 94274-0001

TDD (530) 741-4509

FAX (916) 323-7669

Telephone (916) 327-3859



March 22, 2000

LPLA041

Marchbrook Sunset Ranchos Annex

03PLA65 PM 9.569 SCH 99102012

George Dijan  
City of Rocklin  
P.O. Box 1380  
Rocklin, CA 95677

Dear Mr. Dijan:

Thank you for the opportunity to comment on the Marchbrook Sunset Ranchos Annex . Our comments in our letters of November 3, 1999 and December 4, 1998 (copies enclosed) are still applicable. We have the following additional comments:

- A circulation phasing analysis should be provided. A right-turn only connection from Whitney Blvd. to Hwy 65 is currently under consideration.
- What level of development will be allowed before the Whitney Interchange is constructed?

Please provide our office with a copy of any future actions, conditions, and mitigation regarding this project. If you have any questions concerning these comments, please contact Rebecca Sanchez at (916) 324-6634.

Sincerely,

  
JEFFREY PULVERMAN, Chief  
Office of Regional Planning

Enclosures (2)

MAR 28 2000



## **Appendix C**

### **Distribution List for the EIR**





DISTRIBUTION LIST FOR MAILINGS  
UPDATED 10/3/2001

G:\labels\sunset ranchos deir.doc

RALPH COLEMAN  
3425 CIMMERON CT.  
ROCKLIN, CA 95677

KEN YORDE  
4335 MIDAS AVENUE  
ROCKLIN, CA 95677

GEORGE MAGNUSON  
3842 RAWHIDE  
ROCKLIN, CA 95677

CITY OF ROCKLIN  
CARLOS URRUTIA  
CITY MANAGER

LAFCO  
DEBORAH CUBBERLY  
175 FULWEILER  
AUBURN, CA 95603

CITY OF ROCKLIN  
TERRY RICHARDSON  
DIRECTOR OF COMMUNITY  
DEVELOPMENT

PATTY DUNN  
CITY OF ROSEVILLE  
PLANNING DEPARTMENT  
316 VERNON STREET #104  
ROSEVILLE, CA 95678

KATHY KERDUS  
TOWN OF LOOMIS  
PLANNING DEPARTMENT  
P.O. BOX 1372  
LOOMIS, CA 95650

PLACER COUNTY  
TRANSPORTATION COMMISSION  
853 LINCOLN WAY  
AUBURN CA 95603

LYNNE SULLY  
5317 HOMBOLDT DRIVE  
ROCKLIN, CA 95765

KEN O BRIEN  
55602 COLEMAN CT  
ROCKLIN, CA 95677

PETER HILL  
4069 SILVER ST.  
ROCKLIN, CA 95677

KATHY LUND  
3840 CLOVER VALLEY ROAD  
ROCKLIN, CA 95677

CITY OF ROCKLIN  
SABINA GILBERT  
CITY ATTORNEY

CITY OF ROCKLIN  
MARK SIEMENS  
POLICE CHIEF

CITY OF ROCKLIN  
REX MILLER  
DIRECTOR OF ADMINSTRATIVE  
SERVICES

ROB JENSEN  
CITY OF ROSEVILLE  
PUBLIC WORKS DEPARTMENT  
316 VERNON STREET  
ROSEVILLE, CA 95678

CITY OF LINCOLN  
PLANNING DEPARTMENT  
1390 FIRST STREET  
LINCOLN, CA 95648

GINA LANGFORD OR  
LOREN CLARK  
PLACER COUNTY PLANNING  
11414 B AVENUE  
AUBURN, CA 95603

LARRY MENTH  
5825 PEBBLE CREEK DR  
ROCKLIN CA 95765

SCOTT BARBER  
2555 BUCKEYE DR.  
ROCKLIN, CA 95677

BRET STOREY  
2728 FIELD CT  
ROCKLIN CA 95765

CITY OF ROCKLIN  
RUSSELL HILDEBRAND  
DEPUTY CITY ATTORNEY

CITY OF ROCKLIN  
LARRY WING  
ENGINEERING SERVICES MANAGER

CITY OF ROCKLIN  
MARK RIEMER  
DIRECTOR OF COMMUNITY  
SERVICES

CITY OF ROCKLIN  
KENT FOSTER  
DIRECTOR OF PUBLIC WORKS

CITY OF ROSEVILLE  
CITY MANAGER  
311 VERNON STREET  
ROSEVILLE, CA 95678

MARK MORSE  
CITY OF ROSEVILLE  
EIR COORDINATOR  
316 VERNON STREET #102  
ROSEVILLE, CA 95678

SUPERINTENDENT/MANAGER  
NEWCASTLE, ROCKLIN, GOLD HILL  
CEMETARY DISTRICT  
850 TAYLOR ROAD  
NEWCASTLE, CA 95658-9780

DAVE BINGEN  
SENIOR CIVIL ENGINEER  
PLACER COUNTY PUBLIC WORKS  
11444 B AVENUE  
AUBURN, CA 95603

TODD NISHIKAWA  
PLACER COUNTY  
AIR POLLUTION CONTROL BOARD  
11464 B AVENUE  
AUBURN, CA 95603

DAVID BOYER  
SACOG  
3000 S STREET #300  
SACRAMENTO, CA 95816

LESLIE GAULT  
P.C. FLOOD CONTROL AND WATER  
CONSERVATION DISTRICT  
11444 B AVENUE  
AUBURN, CA 95603

JEFF PULVERMAN  
CALTRANS DISTRICT 3  
OFFICE OF TRANS PLANNING-METRO  
P.O. BOX 942874, MS-41  
SACRAMENTO, CA 94274-0001

REBECCA SANCHEZ  
CALTRANS DISTRICT 3, SAC  
P.O. BOX 942874, MS-41  
SACRAMENTO, CA 94274-0001

PROJECT COORDINATOR  
STATE CLEARINGHOUSE  
1400 TENTH STREET  
SACRAMENTO, CA 95814

JAMES B. MAUGHAN  
ASSOCIATE WATER RESOURCE  
CONTROL ENGINEER - EPA  
3433 ROUTIER RD. SUITE A  
SACRAMENTO, CA 95827-3098

ENVIRONMENTAL SERVICES  
DEPT. OF FISH AND GAME  
REGION 2  
1701 NIMBUS ROAD, #A  
RANCHO CORDOVA, CA 95670

PLACER GROUP SIERRA CLUB  
PO BOX 7167  
AUBURN, CA 95604

SOUTH PLACER WASTE WATER  
MANAGEMENT AUTHORITY  
2005 HILLTOP CIRCLE  
ROSEVILLE, CA 95747

REGIONAL WATER QUALITY  
CONTROL BOARD  
GARY CARLTON, DIRECTOR  
3443 ROUTIER RD., STE. A  
SACRAMENTO CA 95027

RICHARD STEIN  
ENGINEERING ADMIN/ASSISTANT  
SOUTH PLACER MUD  
P.O. BOX 45  
LOOMIS, CA 95650

CA NATIVE PLANT SOCIETY  
STATE OFFICE  
1722 J ST., SUITE 17  
SACRAMENTO, CA 95814

JIM MOOSE  
REMY, THOMAS & MOOSE  
455 CAPITOL MALL, SUITE 210  
SACRAMENTO, CA 95814

LARRY STARK,  
DIRECTOR OF FACILITIES  
ROCKLIN UNIFIED SCHOOL DIST.  
5035 MEYERS STREET  
ROCKLIN, CA 95677

CA NATIVE PLANT SOCIETY  
REGIONAL OFFICE  
CHRIS LEWIS  
4900 KENNETH AVE  
CARMICHAEL, CA 95608

DAVE CAMPBELL  
ENGINEERING  
P.C.W.A.  
P.O. BOX 6570  
AUBURN, CA 95604

U.S. ARMY CORPS OF ENGINEERS  
ATTN: PLANNING DIVISION  
1325 J STREET, ROOM 1320  
SACRAMENTO, CA 95814-2922

ENVIRONMENTAL PROTECTION  
AGENCY  
75 HAWTHORNE STREET  
SAN FRANCISCO, CA 94105

SIERRA COLLEGE LIBRARY  
ATTN: ROBERT SMITH  
5000 ROCKLIN ROAD  
ROCKLIN, CA 95677

USFWS  
ATTN: CAY GOUDE  
ECOLOGICAL SERV. FED. BLDG.  
2800 COTTAGE WAY, RM. 3-1803  
SACRAMENTO, CA 95825

ROCKLIN BRANCH  
PLACER COUNTY LIBRARY  
5460 FIFTH STREET  
ROCKLIN, CA 95677

CITY OF ROCKLIN  
TIM MROZINSKI  
FIRE CHIEF

CITY OF ROCKLIN  
SHERRI ABBAS  
PLANNING SERVICES MANAGER

CITY OF ROCKLIN  
LAURA WEBSTER  
SENIOR PLANNER

THE GRUPE COMPANY  
3255 W. MARCH LANE, 4<sup>TH</sup> FLOOR  
P.O. BOX 7576  
STOCKTON, CA 95267-0576

ATTN: GEORGE DJAN  
TLA  
1528 EUREKA RD., SUITE 100  
ROSEVILLE, CA 95661

CITY OF ROCKLIN  
CINDY SCHAER  
ECONOMIC DEVELOPMENT MGR.

SUTTER COUNTY CDD  
ATTN: TOM LAST  
1160 CIVIC CENTER BLVD.  
SUITE E  
YUBA CITY, CA 95993

**SUNSET RANCHOS  
LIST FOR NOTICE AND SECTION OF  
EIR  
UPDATED 10/1/01**

AUBURN LAND RIGHTS OFFICE  
P.G. & E.  
333 SACRAMENTO STREET  
AUBURN, CA 95603

JIM JOHNSON  
PACIFIC BELL  
12920 EARHART AVENUE  
AUBURN, CA 95602-9538

ROSEVILLE TELEPHONE CO.  
OUTSIDE PLANT ENGINEERING  
P.O. BOX 969  
ROSEVILLE, CA 95678

DEAN HENDERSON  
STARSTREAM COMMUNICATION  
CABLE T.V.  
P.O. BOX 637  
ROCKLIN, CA 95677

EILEEN DOMINGUEZ  
AUBURN PLACER DISPOSAL  
P.O. BOX 6566  
AUBURN, CA 95604

## **Appendix D**

### **Traffic Level of Service Calculations**



**INTERSECTION LEVEL OF SERVICE CALCULATIONS –  
EXISTING CONDITIONS**





Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1338 Galleria Blvd./SB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.762  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 78 Level Of Service: C  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	1	2	0	2	0	0	1

Volume Module:												
Base Vol:	0	1337	422	760	1031	0	0	0	136	0	0	299
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	0	1337	422	760	1031	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	1337	422	760	1031	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1337	422	760	1031	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	0	1337	422	836	1031	0	0	0	0	0	0	0

Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	2.00	1.00	2.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00
Final Sat.:	0	2850	1425	2850	2850	0	0	0	1425	0	0	1425

Capacity Analysis Module:												
Vol/Sat:	0.00	0.47	0.30	0.29	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:		669		418			0			0		
Crit Moves:		****		****								

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #1340 Stanford Ranch Rd./NB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.535

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 31 Level Of Service: A

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	2	0	0	0	0	0	0

Volume Module:

Base Vol:	214	1418	0	0	1589	177	0	0	202	0	0	1057
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	214	1418	0	0	1589	177	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	214	1418	0	0	1589	177	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	214	1418	0	0	1589	177	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	214	1418	0	0	1589	177	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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:	1.00	2.00	0.00	0.00	2.70	0.30	0.00	0.00	1.00	0.00	0.00	1.00
Final Sat.:	1500	3000	0	0	4049	451	0	0	1500	0	0	1500

Capacity Analysis Module:

Vol/Sat:	0.14	0.47	0.00	0.00	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:	214			589			0			0		
Crit Moves:	****			****								

\*\*\*\*\*

Sunset Ranchos
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1517 Blue Oaks Blvd./Washington Blvd./SB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.534
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Vol, and Crit Moves.

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1969 Blue Oaks Blvd./NB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.175  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 23 Level Of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	1	0	2

Volume Module:

Base Vol:	66	0	108	0	0	0	0	265	203	9	143	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	66	0	108	0	0	0	0	265	0	9	143	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	66	0	108	0	0	0	0	265	0	9	143	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	0	108	0	0	0	0	265	0	9	143	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	66	0	108	0	0	0	0	265	0	9	143	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	1425	0	1425	0	0	0	0	2850	1425	1425	2850	0

Capacity Analysis Module:

Vol/Sat:	0.05	0.00	0.08	0.00	0.00	0.00	0.00	0.09	0.00	0.01	0.05	0.00
Crit Vol:			108	0				133		9		
Crit Moves:			****					****		****		

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2977 SR 65/Sunset Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.755  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 93 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:	Ovl			Ovl			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	0	1	0	1	0	1	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	66	1250	82	143	893	15	33	64	180	493	56	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	66	1250	82	143	893	15	33	64	0	493	56	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	66	1250	82	143	893	15	33	64	0	493	56	171
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	1250	82	143	893	15	33	64	0	493	56	171
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00
Final Vol.:	73	1250	82	157	893	15	33	64	0	542	56	171

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
Final Sat.:	2750	2750	1375	2750	2750	1375	1375	1375	1375	2750	1375	1375

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.03	0.45	0.06	0.06	0.32	0.01	0.02	0.05	0.00	0.20	0.04	0.12
Crit Vol:	625			79			64			271		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
 Existing Conditions  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3020 Sunset Blvd./West Stanford Ranch Rd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.152  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 22 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	0	1	0	3	1	0	3

Volume Module:

Base Vol:	0	0	0	59	0	41	111	331	0	0	220	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:	0	0	0	59	0	41	111	331	0	0	220	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:	0	0	0	59	0	41	111	331	0	0	220	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	59	0	41	111	331	0	0	220	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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	65	0	41	111	331	0	0	220	47

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	2.00	0.00	1.00	1.00	3.00	0.00	1.00	3.00	1.00
Final Sat.:	0	0	0	2850	0	1425	1425	4275	0	1425	4275	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.03	0.08	0.08	0.00	0.00	0.05	0.03
Crit Vol:	0			33			111			73		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3022 Sunset Blvd./Atherton Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.254  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 31 Level Of Service: A  
\*\*\*\*\*

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:	Ignore			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	0	1	1	0	3	0	2	1

Volume Module:

Base Vol:	390	2	166	8	0	29	20	235	39	23	312	1
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	390	2	0	8	0	29	20	235	39	23	312	1
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	390	2	0	8	0	29	20	235	39	23	312	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	390	2	0	8	0	29	20	235	39	23	312	1
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	429	2	0	8	0	29	20	235	39	23	312	1

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.99	0.01	1.00	1.00	0.00	1.00	1.00	3.00	1.00	1.00	2.99	0.01
Final Sat.:	2737	13	1375	1375	0	1375	1375	4125	1375	1375	4112	13

Capacity Analysis Module:

Vol/Sat:	0.16	0.16	0.00	0.01	0.00	0.02	0.01	0.06	0.03	0.02	0.08	0.08
Crit Vol:		216				29		0			104	
Crit Moves:		****				****	****				****	

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #3027 West Stanford Ranch Rd./West Oaks Blvd.

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.134  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 26 Level Of Service: A  
\*\*\*\*\*

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:	Ovl					Ovl					Ovl					Ovl				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	3	0	1	1	0	3	0	1

Volume Module:

Base Vol:	5	108	111	46	53	1	13	83	10	37	39	49
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:	5	108	111	46	53	1	13	83	10	37	39	49
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:	5	108	111	46	53	1	13	83	10	37	39	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	108	111	46	53	1	13	83	10	37	39	49
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.:	5	108	111	46	53	1	13	83	10	37	39	49

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.00	0.04	0.08	0.03	0.02	0.00	0.01	0.02	0.01	0.03	0.01	0.04
Crit Vol:			111	46				28		0		
Crit Moves:			****	****				****		****		

\*\*\*\*\*



Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3028 West Stanford Ranch Rd./Sioux Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.063  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 20 Level Of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	3	1	0	3

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	8	0	39	71	101	0	0	33	11
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	8	0	39	71	101	0	0	33	11
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	8	0	39	71	101	0	0	33	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	8	0	39	71	101	0	0	33	11
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	1.10	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	8	0	43	71	101	0	0	33	11

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	1.00	0.00	2.00	1.00	3.00	0.00	1.00	3.00	1.00
Final Sat.:	0	0	0	1425	0	2850	1425	4275	0	1425	4275	1425

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.02	0.05	0.02	0.00	0.00	0.01	0.01
Crit Vol:	0			8			71			11		
Crit Moves:				****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3031 Sunset Blvd./Park Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.483  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 44 Level Of Service: A  
\*\*\*\*\*

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:	Ovl				Ignore				Ignore				Ignore							
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0					
Lanes:	1	0	3	0	1	2	0	2	0	1	2	0	3	0	1	2	0	3	0	1

Volume Module:

Base Vol:	126	458	409	55	506	43	75	429	78	258	196	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	126	458	409	55	506	0	75	429	0	258	196	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	126	458	409	55	506	0	75	429	0	258	196	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	458	409	55	506	0	75	429	0	258	196	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	0.00	1.10	1.00	0.00	1.10	1.00	0.00
Final Vol.:	126	458	409	61	506	0	83	429	0	284	196	0

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1375	4125	1375	2750	2750	1375	2750	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.09	0.11	0.30	0.02	0.18	0.00	0.03	0.10	0.00	0.10	0.05	0.00
Crit Vol:	126			253			143			142		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3034 Stanford Ranch Rd./Sunset Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.619  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 60 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:	Ovl			Ignore			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	2	0	2	0	1	1

Volume Module:

Base Vol:	439	628	45	225	366	63	55	311	295	59	397	236
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	439	628	45	225	366	0	55	311	0	59	397	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	439	628	45	225	366	0	55	311	0	59	397	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	439	628	45	225	366	0	55	311	0	59	397	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.10	1.00	0.00	1.00	1.00	0.00
Final Vol.:	439	628	45	225	366	0	61	311	0	59	397	0

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	2750	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.32	0.23	0.03	0.16	0.13	0.00	0.02	0.11	0.00	0.04	0.14	0.00
Crit Vol:	439			183			31			199		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #3043 Sunset Blvd./West Oaks Blvd.

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.255  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 31 Level Of Service: A

\*\*\*\*\*

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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	3	0	1	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	15	149	160	75	49	9	32	345	16	86	245	105
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:	15	149	160	75	49	9	32	345	16	86	245	105
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:	15	149	160	75	49	9	32	345	16	86	245	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	149	160	75	49	9	32	345	16	86	245	105
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.:	15	149	160	75	49	9	32	345	16	86	245	105

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	4125	1375	1375	4125	1375

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.01	0.05	0.12	0.05	0.02	0.01	0.02	0.08	0.01	0.06	0.06	0.08
Crit Vol:	75			75			115			86		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3048 Stanford Ranch Rd./Park Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.383  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 37 Level Of Service: A  
\*\*\*\*\*

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:	Ov1			Ov1			Ov1			Ov1		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	2	0	1	1

Volume Module:

Base Vol:	131	330	86	160	262	40	85	134	87	94	170	267
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:	131	330	86	160	262	40	85	134	87	94	170	267
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:	131	330	86	160	262	40	85	134	87	94	170	267
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	330	86	160	262	40	85	134	87	94	170	267
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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	131	330	86	176	262	40	85	134	87	94	170	267

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	2750	2750	1375	1375	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.10	0.12	0.06	0.06	0.10	0.03	0.06	0.05	0.06	0.07	0.06	0.19
Crit Vol:	131			131			85					267
Crit Moves:	****			****			****					****

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3593 Stanford Ranch Rd./Five Star Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.749  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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	L	T	R					
Control:	Protected					Protected					Split Phase			Split Phase						
Rights:	Ovl					Ovl					Ovl			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	2	0	3	0	1	2	0	3	0	1	1	1	0	0	1	1	1	0	1	0

Volume Module:

Base Vol:	416	1191	745	109	916	64	102	99	310	709	128	103
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:	416	1191	745	109	916	64	102	99	310	709	128	103
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:	416	1191	745	109	916	64	102	99	310	709	128	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	416	1191	745	109	916	64	102	99	310	709	128	103
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	458	1191	745	120	916	64	112	99	310	780	128	103

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	1.06	0.94	1.00	2.00	0.55	0.45
Final Sat.:	2750	4125	1375	2750	4125	1375	1460	1290	1375	2750	762	613

Capacity Analysis Module:

Vol/Sat:	0.17	0.29	0.54	0.04	0.22	0.05	0.08	0.08	0.23	0.28	0.17	0.17
Crit Vol:	229			305			106			390		
Crit Moves:	****			****			****			****		

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3594 Stanford Ranch Rd./Fairway Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.580  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 54 Level Of Service: A  
\*\*\*\*\*

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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	1	1	0	2	0	1	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	56	1063	310	59	647	31	81	104	95	276	40	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	1063	310	59	647	31	81	104	95	276	40	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	1063	310	59	647	31	81	104	95	276	40	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	1063	310	59	647	31	81	104	95	276	40	25
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
Final Vol.:	62	1063	310	65	647	31	81	104	95	304	40	25

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	2.00	0.62	0.38
Final Sat.:	2750	2750	1375	2750	4125	1375	1375	2750	1375	2750	846	529

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.39	0.23	0.02	0.16	0.02	0.06	0.04	0.07	0.11	0.05	0.05
Crit Vol:	532			33			81			152		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5034 Pleasant Grove Blvd./Fairway Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.339  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 34 Level Of Service: A  
\*\*\*\*\*

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	2	0	1	1	1	0	1	1	0	1

Volume Module:

Base Vol:	0	573	144	37	283	0	0	0	0	142	0	61
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	573	144	37	283	0	0	0	0	142	0	61
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	573	144	37	283	0	0	0	0	142	0	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	573	144	37	283	0	0	0	0	142	0	61
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	573	144	37	283	0	0	0	0	142	0	61

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	1375	1375	1375	1375	1375

Capacity Analysis Module:

Vol/Sat:	0.00	0.21	0.10	0.03	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.04
Crit Vol:	287			37			0			142		
Crit Moves:	****			****						****		

\*\*\*\*\*



Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #5035 Pleasant Grove Blvd./NB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.376

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 30 Level Of Service: A

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Permitted			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
-------------	---	---	---	---	---	---	---	---	---	---	---	---

Lanes:	0	0	2	0	1	1	0	2	0	0	0	0	0	0	0	2	0	0	0	1
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Volume Module:

Base Vol:	0	431	51	35	390	0	0	0	0	347	0	286
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	431	51	35	390	0	0	0	0	347	0	286
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	431	51	35	390	0	0	0	0	347	0	286
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	431	51	35	390	0	0	0	0	347	0	286
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	1.10	1.00	1.00
Final Vol.:	0	431	51	35	390	0	0	0	0	382	0	286

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	2850	1425	1425	2850	0	0	0	0	2850	0	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.15	0.04	0.02	0.14	0.00	0.00	0.00	0.00	0.13	0.00	0.20
Crit Vol:		216		35			0					286
Crit Moves:	****			****								****

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #5036 Pleasant Grove Blvd./SB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.292  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 26 Level Of Service: A

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	0	0	1	0	0	0	0

Volume Module:

Base Vol:	0	397	314	132	605	0	85	0	78	0	0	0
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	397	0	132	605	0	85	0	78	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	397	0	132	605	0	85	0	78	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	397	0	132	605	0	85	0	78	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	397	0	132	605	0	85	0	78	0	0	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	2.00	1.00	1.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	2850	1425	1425	2850	0	1425	0	1425	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.14	0.00	0.09	0.21	0.00	0.06	0.00	0.05	0.00	0.00	0.00
Crit Vol:		199		132			85				0	
Crit Moves:		****		****			****					

\*\*\*\*\*

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5050 Sunset Blvd./Pacific Street  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.591  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 56 Level Of Service: A  
\*\*\*\*\*

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			Ignore			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	1	1	0	2	1	1	1	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	543	539	24	70	330	400	441	119	284	58	147	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	543	539	24	70	330	0	441	119	0	58	147	67
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	543	539	24	70	330	0	441	119	0	58	147	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	543	539	24	70	330	0	441	119	0	58	147	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	0.00	1.00	1.00	1.00
Final Vol.:	597	539	24	70	330	0	485	119	0	58	147	67

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	1.91	0.09	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.37	0.63
Final Sat.:	2750	2633	117	1375	2750	1375	2750	1375	1375	1375	1889	861

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.22	0.20	0.20	0.05	0.12	0.00	0.18	0.09	0.00	0.04	0.08	0.08
Crit Vol:	299			165			243					107
Crit Moves:	****			****			****					****

Sunset Ranchos  
Existing Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5054 Park Dr./Wyckford Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.232  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 24 Level Of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	2	0	0	0	0	1

Volume Module:

Base Vol:	0	0	0	27	0	152	254	241	0	0	214	17
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	27	0	152	254	241	0	0	214	17
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	27	0	152	254	241	0	0	214	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	27	0	152	254	241	0	0	214	17
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	1.10	1.00	1.10	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	30	0	167	279	241	0	0	214	17

Saturation Flow Module:

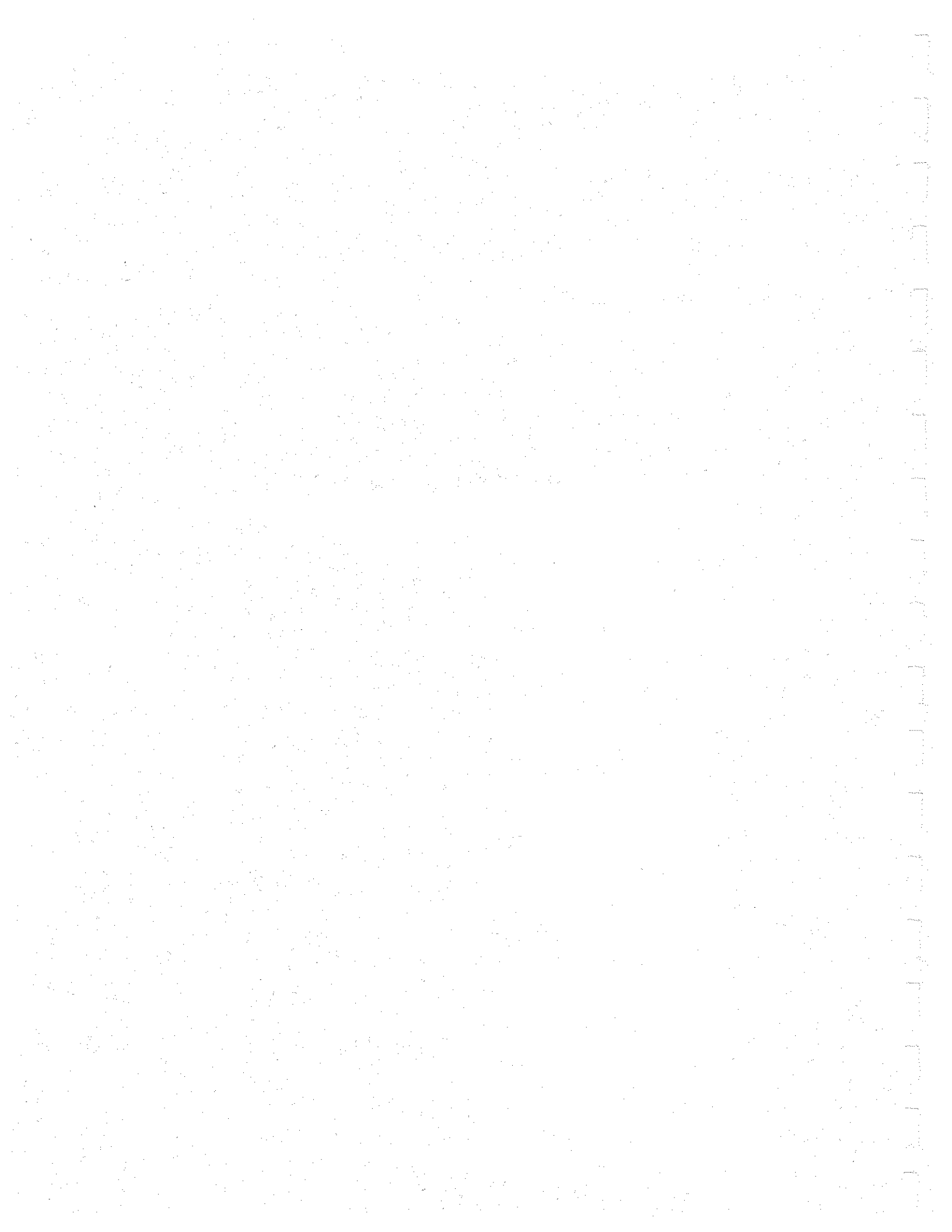
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1425	0	2850	2850	2850	0	0	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.06	0.10	0.08	0.00	0.00	0.08	0.01
Crit Vol:	0					84	140				107	
Crit Moves:						****	****				****	

\*\*\*\*\*

**INTERSECTION LEVEL OF SERVICE CALCULATIONS –  
EXISTING PLUS PROJECT CONDITIONS**



Sunset Ranchos  
 Existing Plus Project Conditions  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #1338 Galleria Blvd./SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.771  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 81 Level Of Service: C  
 \*\*\*\*\*

Approach:	North Bound				South Bound				East Bound				West Bound							
	L - T		R		L - T		R		L - T		R		L - T		R					
Movement:	Permitted		Protected		Permitted		Protected		Permitted		Protected		Permitted		Protected					
Control:	Include				Include				Ignore				Ignore							
Rights:	Include				Include				Ignore				Ignore							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	0	0	2	0	1	2	0	2	0	0	0	0	0	0	1	0	0	0	0	1

Volume Module:

Base Vol:	0	1340	420	780	1090	0	0	0	140	0	0	690
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	0	1340	420	780	1090	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	1340	420	780	1090	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1340	420	780	1090	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	0	1340	420	858	1090	0	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	2.00	1.00	2.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00
Final Sat.:	0	2850	1425	2850	2850	0	0	0	1425	0	0	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.47	0.29	0.30	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:		670		429			0			0		
Crit Moves:	****			****								

\*\*\*\*\*

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #1340 Stanford Ranch Rd./NB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.644  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 40 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	2	0	0	0	0	0	1

Volume Module:

Base Vol:	350	1420	0	0	1670	180	0	0	200	0	0	1090
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	350	1420	0	0	1670	180	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	350	1420	0	0	1670	180	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	350	1420	0	0	1670	180	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	350	1420	0	0	1670	180	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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:	1.00	2.00	0.00	0.00	2.71	0.29	0.00	0.00	1.00	0.00	0.00	1.00
Final Sat.:	1500	3000	0	0	4062	438	0	0	1500	0	0	1500

Capacity Analysis Module:

Vol/Sat:	0.23	0.47	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:	350			617			0			0		
Crit Moves:	****			****								

\*\*\*\*\*



Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1517 Blue Oaks Blvd./Washington Blvd./SB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.560  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 52 Level Of Service: A  
\*\*\*\*\*

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:	Ovl			Ignore			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	2	0	2	0	0	3	2	0	2

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	10	0	330	0	160	140	0	1600	80	60	140	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	10	0	330	0	160	0	0	1600	80	60	140	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.42	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	10	0	330	0	160	0	0	2272	80	60	140	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	0	330	0	160	0	0	2272	80	60	140	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.10	1.10	1.00	0.00	1.00	1.00	1.00	1.10	1.00	0.00
Final Vol.:	10	0	363	0	160	0	0	2272	80	66	140	0

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	0.00	2.00	2.00	2.00	1.00	0.00	3.86	0.14	2.00	2.00	1.00
Final Sat.:	1375	0	2750	2750	2750	1375	0	5313	187	2750	2750	1375

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.01	0.00	0.13	0.00	0.06	0.00	0.00	0.43	0.43	0.02	0.05	0.00
Crit Vol:			182		0			588			0	
Crit Moves:			****		****			****			****	

\*\*\*\*\*

Sunset Ranchos  
 Existing Plus Project Conditions  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #1969 Blue Oaks Blvd./NB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.196  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 Optimal Cycle: 23 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	1	0	2

Volume Module:

Base Vol:	70	0	110	0	0	0	0	320	230	10	190	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	70	0	110	0	0	0	0	320	0	10	190	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	70	0	110	0	0	0	0	320	0	10	190	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	0	110	0	0	0	0	320	0	10	190	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	70	0	110	0	0	0	0	320	0	10	190	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	1425	0	1425	0	0	0	0	2850	1425	1425	2850	0

Capacity Analysis Module:

Vol/Sat:	0.05	0.00	0.08	0.00	0.00	0.00	0.00	0.11	0.00	0.01	0.07	0.00
Crit Vol:			110	0				160		10		
Crit Moves:			****					****		****		

\*\*\*\*\*

Sunset Ranchos
Existing Plus Project Conditions
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2971 Whitney Blvd./SE SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.088
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 5 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2977 SR 65/Sunset Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.364  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 180 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:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	2	0	1	0	1	0	1	0

Volume Module:

Base Vol:	70	1790	250	150	1850	40	90	100	180	1450	80	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	70	1790	250	150	1850	40	90	100	0	1450	80	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	70	1790	250	150	1850	40	90	100	0	1450	80	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	1790	250	150	1850	40	90	100	0	1450	80	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00
Final Vol.:	77	1790	250	165	1850	40	90	100	0	1595	80	210

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
Final Sat.:	2750	2750	1375	2750	2750	1375	1375	1375	1375	2750	1375	1375

Capacity Analysis Module:

Vol/Sat:	0.03	0.65	0.18	0.06	0.67	0.03	0.07	0.07	0.00	0.58	0.06	0.15
Crit Vol:	895			83			100			798		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos
Existing Plus Project Conditions
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2996 Whitney Blvd./NB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.777
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different volume adjustments and 10 rows of data.

Saturation Flow Module table with 12 columns and 4 rows of data.

Capacity Analysis Module table with 12 columns and 4 rows of data.

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3002 Whitney Blvd./Sioux Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.415  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 39 Level Of Service: A  
\*\*\*\*\*

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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	2	0	3	0	1	1

Volume Module:

Base Vol:	100	190	150	50	270	10	210	400	370	120	210	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	100	190	150	50	270	10	210	400	370	120	210	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	100	190	150	50	270	10	210	400	370	120	210	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	190	150	50	270	10	210	400	370	120	210	20
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	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	100	190	150	50	270	10	231	400	370	132	210	20

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	2750	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.07	0.07	0.11	0.04	0.10	0.01	0.08	0.10	0.27	0.05	0.05	0.01
Crit Vol:	0				135			370		66		
Crit Moves:	****				****			****		****		

\*\*\*\*\*

Sunset Ranches  
Existing Plus Project Conditions  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3020 Sunset Blvd./West Stanford Ranch Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.340  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 28 Level of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	0	1	0	3	1	0	3

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	300	0	60	170	700	0	0	270	150
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	300	0	60	170	700	0	0	270	150
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	300	0	60	170	700	0	0	270	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	300	0	60	170	700	0	0	270	150
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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	330	0	60	170	700	0	0	270	150

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	2.00	0.00	1.00	1.00	3.00	0.00	1.00	3.00	1.00
Final Sat.:	0	0	0	2850	0	1425	1425	4275	0	1425	4275	1425

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.00	0.00	0.12	0.00	0.04	0.12	0.16	0.00	0.00	0.06	0.11
Crit Vol:	0			165			170			150		
Crit Moves:				****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3022 Sunset Blvd./Atherton Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.951  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 180 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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ignore			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	0	1	1	0	3	0	2	1

Volume Module:

Base Vol:	420	20	250	410	10	750	180	240	120	50	310	70
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	420	20	0	410	10	750	180	240	120	50	310	70
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	420	20	0	410	10	750	180	240	120	50	310	70
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	420	20	0	410	10	750	180	240	120	50	310	70
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	462	20	0	410	10	750	180	240	120	50	310	70

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.92	0.08	1.00	1.00	0.01	0.99	1.00	3.00	1.00	1.00	2.45	0.55
Final Sat.:	2636	114	1375	1375	18	1357	1375	4125	1375	1375	3365	760

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.00	0.30	0.55	0.55	0.13	0.06	0.09	0.04	0.09	0.09
Crit Vol:	241			760			180			127		
Crit Moves:	****			****			****			****		

\*\*\*\*\*



Sunset Ranchos
Existing Plus Project Conditions
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3027 West Stanford Ranch Rd./West Oaks Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.421
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing traffic volumes for each approach and movement. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Sunset Ranchos
Existing Plus Project Conditions
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3028 West Stanford Ranch Rd./Sioux Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.547
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module table with 13 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 13 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3031 Sunset Blvd./Park Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.658  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 67 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:	Ovl			Ignore			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	1	1	2	0	3	0	1	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	170	460	410	60	510	40	80	1010	80	260	360	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	170	460	410	60	510	0	80	1010	0	260	360	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	170	460	410	60	510	0	80	1010	0	260	360	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	170	460	410	60	510	0	80	1010	0	260	360	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	0.00	1.10	1.00	0.00	1.10	1.00	0.00
Final Vol.:	170	460	410	66	510	0	88	1010	0	286	360	0

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1375	4125	1375	2750	2750	1375	2750	4125	1375	2750	4125	1375

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.12	0.11	0.30	0.02	0.19	0.00	0.03	0.24	0.00	0.10	0.09	0.00
Crit Vol:	170			255			337			143		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3034 Stanford Ranch Rd./Sunset Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.767  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 98 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:	Ovl				Ignore				Ignore				Ignore							
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0					
Lanes:	1	0	2	0	1	1	0	2	0	1	2	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	460	630	50	230	370	70	60	700	390	60	480	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Initial Bse:	460	630	50	230	370	0	60	700	0	60	480	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	460	630	50	230	370	0	60	700	0	60	480	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	460	630	50	230	370	0	60	700	0	60	480	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.10	1.00	0.00	1.00	1.00	0.00
Final Vol.:	460	630	50	230	370	0	66	700	0	60	480	0

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	2750	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.33	0.23	0.04	0.17	0.13	0.00	0.02	0.25	0.00	0.04	0.17	0.00
Crit Vol:	460			185			350			60		
Crit Moves:	****			****			****			****		

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3043 Sunset Blvd./West Oaks Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.438  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 41 Level of Service: A  
\*\*\*\*\*

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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	3	0	1	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	30	210	160	110	80	10	30	890	40	90	350	200
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:	30	210	160	110	80	10	30	890	40	90	350	200
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:	30	210	160	110	80	10	30	890	40	90	350	200
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	210	160	110	80	10	30	890	40	90	350	200
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.:	30	210	160	110	80	10	30	890	40	90	350	200

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	4125	1375	1375	4125	1375

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.08	0.12	0.08	0.03	0.01	0.02	0.22	0.03	0.07	0.08	0.15
Crit Vol:	105			110			297			90		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
 Existing Plus Project Conditions  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3048 Stanford Ranch Rd./Park Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.514  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 Optimal Cycle: 47 Level Of Service: A  
 \*\*\*\*\*

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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	2	1	1	0	2	0	2	1

Volume Module:

Base Vol:	160	330	90	170	260	100	230	440	150	90	280	280
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:	160	330	90	170	260	100	230	440	150	90	280	280
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:	160	330	90	170	260	100	230	440	150	90	280	280
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	330	90	170	260	100	230	440	150	90	280	280
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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	160	330	90	187	260	100	230	440	150	90	280	280

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	2750	2750	1375	1375	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.12	0.12	0.07	0.07	0.09	0.07	0.17	0.16	0.11	0.07	0.10	0.20
Crit Vol:	160			130			230					280
Crit Moves:	****			****			****					****

\*\*\*\*\*

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3593 Stanford Ranch Rd./Five Star Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.768  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 98 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:	Ovl					Ovl					Ovl					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	2	0	3	0	1	1	1	0	0	1	1	1	0	1	0

Volume Module:

Base Vol:	420	1190	750	110	990	60	100	100	310	710	130	100
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:	420	1190	750	110	990	60	100	100	310	710	130	100
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:	420	1190	750	110	990	60	100	100	310	710	130	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	420	1190	750	110	990	60	100	100	310	710	130	100
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	462	1190	750	121	990	60	110	100	310	781	130	100

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	1.05	0.95	1.00	2.00	0.57	0.43
Final Sat.:	2750	4125	1375	2750	4125	1375	1440	1310	1375	2750	777	598

Capacity Analysis Module:

Vol/Sat:	0.17	0.29	0.55	0.04	0.24	0.04	0.08	0.08	0.23	0.28	0.17	0.17
Crit Vol:	231			330			105			390		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #3594 Stanford Ranch Rd./Fairway Dr.

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.580

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 54 Level Of Service: A

\*\*\*\*\*

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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	3	0	1	0	2	0	0	1

Volume Module:

Base Vol:	60	1060	310	60	740	30	80	100	100	280	40	30
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:	60	1060	310	60	740	30	80	100	100	280	40	30
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:	60	1060	310	60	740	30	80	100	100	280	40	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1060	310	60	740	30	80	100	100	280	40	30
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
Final Vol.:	66	1060	310	66	740	30	80	100	100	308	40	30

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	2.00	0.57	0.43
Final Sat.:	2750	2750	1375	2750	4125	1375	1375	2750	1375	2750	786	589

Capacity Analysis Module:

Vol/Sat:	0.02	0.39	0.23	0.02	0.18	0.02	0.06	0.04	0.07	0.11	0.05	0.05
Crit Vol:	530			33			80			154		
Crit Moves:	****			****			****			****		

\*\*\*\*\*



Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5034 Pleasant Grove Blvd./Fairway Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.338  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 34 Level Of Service: A  
\*\*\*\*\*

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	2	0	1	0	1	0	1	0	1	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	570	140	40	280	0	0	0	0	140	0	60
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	570	140	40	280	0	0	0	0	140	0	60
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	570	140	40	280	0	0	0	0	140	0	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	570	140	40	280	0	0	0	0	140	0	60
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	570	140	40	280	0	0	0	0	140	0	60

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	1375	1375	1375	1375	1375

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.21	0.10	0.03	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.04
Crit Vol:	285			40			0			140		
Crit Moves:	****			****						****		

\*\*\*\*\*

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5035 Pleasant Grove Blvd./NB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.432  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 33 Level Of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement:												
Control:	Permitted			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	1	0	0	0	0	0	1

Volume Module:												
Base Vol:	0	570	140	40	390	0	0	0	0	350	0	290
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	570	140	40	390	0	0	0	0	350	0	290
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	570	140	40	390	0	0	0	0	350	0	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	570	140	40	390	0	0	0	0	350	0	290
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	1.10	1.00	1.00
Final Vol.:	0	570	140	40	390	0	0	0	0	385	0	290

Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	2850	1425	1425	2850	0	0	0	0	2850	0	1425

Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.10	0.03	0.14	0.00	0.00	0.00	0.00	0.14	0.00	0.20
Crit Vol:		285		40			0					290
Crit Moves:		****		****								****

Sunset Ranchos  
Existing Plus Project Conditions  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5036 Pleasant Grove Blvd./SB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.295  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx  
Optimal Cycle: 26 Level Of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	0	0	1	0	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	400	310	130	610	0	90	0	80	0	0	0
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	400	0	130	610	0	90	0	80	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	400	0	130	610	0	90	0	80	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	400	0	130	610	0	90	0	80	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	400	0	130	610	0	90	0	80	0	0	0

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	2.00	1.00	1.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	2850	1425	1425	2850	0	1425	0	1425	0	0	0

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.14	0.00	0.09	0.21	0.00	0.06	0.00	0.06	0.00	0.00	0.00
Crit Vol:	200			130			90			0		
Crit Moves:	****			****			****					

\*\*\*\*\*

Sunset Ranchos  
 Existing Plus Project Conditions  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #5050 Sunset Blvd./Pacific Street  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.604  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 Optimal Cycle: 58 Level Of Service: B  
 \*\*\*\*\*

Approach:	North Bound				South Bound				East Bound				West Bound							
	L - T		- R		L - T		- R		L - T		- R		L - T		- R					
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Ignore				Ignore				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	2	0	1	1	0	1	0	2	0	1	1	1	1	0	1	1	0	1	1	0

Volume Module:

Base Vol:	550	540	30	70	330	400	460	120	340	60	150	70
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	550	540	30	70	330	0	460	120	0	60	150	70
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	550	540	30	70	330	0	460	120	0	60	150	70
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	550	540	30	70	330	0	460	120	0	60	150	70
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	0.00	1.00	1.00	1.00
Final Vol.:	605	540	30	70	330	0	506	120	0	60	150	70

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	1.89	0.11	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.36	0.64
Final Sat.:	2750	2605	145	1375	2750	1375	2750	1375	1375	1375	1875	875

Capacity Analysis Module:

Vol/Sat:	0.22	0.21	0.21	0.05	0.12	0.00	0.18	0.09	0.00	0.04	0.08	0.08
Crit Vol:	303			165			253			110		
Crit Moves:	****			****			****			****		

Sunset Ranchos  
 Existing Plus Project Conditions  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #5054 Park Dr./Wyckford Blvd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.309  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 27 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	2	0	2	0	0	2

Volume Module:

Base Vol:	0	0	0	30	0	210	400	240	0	0	210	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	30	0	210	400	240	0	0	210	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	30	0	210	400	240	0	0	210	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	30	0	210	400	240	0	0	210	20
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	1.10	1.00	1.10	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	33	0	231	440	240	0	0	210	20

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	1.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1425	0	2850	2850	2850	0	0	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.08	0.15	0.08	0.00	0.00	0.07	0.01
Crit Vol:	0					115	220				105	
Crit Moves:						****	****				****	

\*\*\*\*\*

Handwritten text, possibly bleed-through from the reverse side of the page, appearing as a vertical line of faint characters along the right edge.

**INTERSECTION LEVEL OF SERVICE CALCULATIONS –  
CUMULATIVE CONDITIONS**





Thu Oct 21, 1999 15:36:51

Page 2-1

Cumulative Conditions  
Scenario 1  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1055 Pleasant Grove Blvd./Fairway Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.967 **.73**  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 150 Level Of Service: **EC**

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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	2	0	3	0	1	1

Volume Module:

Base Vol:	475	1350	600	95	660	140	215	350	770	580	225	120
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:	475	1350	600	95	660	140	215	350	770	580	225	120
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:	475	1350	600	95	660	140	215	350	770	580	225	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	475	1350	600	95	660	140	215	350	770	580	225	120
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	523	1350	600	105	660	140	237	350	770	638	225	120

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2750	4125	1375	2750	4125	1375	2750	2750	1375	2750	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.19	0.33	0.44	0.04	0.16	0.10	0.09	0.13	0.56	0.23	0.08	0.09
Crit Vol:	450			53			319					
Crit Moves:	****			****			***			****		

$V/C = .33 + .04 + .13 + .23 = .73$

Thu Oct 21, 1999 09:32:07

Page 3-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1338 Stanford Ranch/SB SR 65 Ramps
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap. (X): 0.800
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 72 Level Of Service: D C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns and 12 rows including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 12 columns and 4 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows including Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
Scenario 1  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1340 Stanford Ranch/NB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.777  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	0	3	0	0	0	0	0	0

Volume Module:

Base Vol:	800	1865	0	0	2175	220	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	800	1865	0	0	2175	220	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	800	1865	0	0	2175	220	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	800	1865	0	0	2175	220	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	880	1865	0	0	2175	220	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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:	2.00	2.00	0.00	0.00	3.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	3000	3000	0	0	4500	1500	0	0	0	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.29	0.62	0.00	0.00	0.48	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:	440			725			0			0		
Crit Moves:	****			****								

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #1517 Blue Oaks/Washington/SB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.839  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 142 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:	Ovl			Ovl			Ovl			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	2	0	1	0	0	3	0	1

Volume Module:

Base Vol:	215	65	1235	115	695	225	0	915	30	520	480	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	215	65	1235	115	695	225	0	915	30	520	480	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	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	215	65	1235	115	695	225	0	915	30	520	480	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	65	1235	115	695	225	0	915	30	520	480	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.10	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	0.00
Final Vol.:	215	65	1359	127	695	225	0	915	30	572	480	0

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	1.00	2.00	2.00	2.00	1.00	0.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1375	1375	2750	2750	2750	1375	0	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.16	0.05	0.49	0.05	0.25	0.16	0.00	0.22	0.02	0.21	0.12	0.00
Crit Vol:	215			348			305			286		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #1652 Pleasant Grove Blvd./SB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.523  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 30 Level Of Service: A

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	0	3	2	0	0	0	0	0

Volume Module:

Base Vol:	0	1950	0	0	1715	0	245	0	170	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1950	0	0	1715	0	245	0	170	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	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	1950	0	0	1715	0	245	0	136	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1950	0	0	1715	0	245	0	136	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1950	0	0	1715	0	270	0	136	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	0.00	0.00	3.00	0.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	4500	0	0	4500	0	3000	0	1500	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.43	0.00	0.00	0.38	0.00	0.09	0.00	0.09	0.00	0.00	0.00
Crit Vol:	650			0			135			0		
Crit Moves:	****			****			****					

\*\*\*\*\*

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1654 Pleasant Grove Blvd./NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.653
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for each. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns and 12 rows. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 12 columns and 4 rows. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 3 rows. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Thu Oct 21, 1999 09:32:07

Page 8-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1969 Blue Oaks Blvd./NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.502
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for traffic volumes and adjustment factors across four directions.

Saturation Flow Module: Table with 12 columns for saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns for capacity analysis metrics.

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2001 Twelve Bridges Blvd./Lincoln Pkwy.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.373  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 30 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	2	1	2	0	2	0	2	1

Volume Module:

Base Vol:	0	0	0	175	0	135	415	870	0	0	205	100
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	175	0	135	415	870	0	0	205	100
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	175	0	135	415	870	0	0	205	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	175	0	135	415	870	0	0	205	100
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	0	0	0	193	0	135	457	870	0	0	205	100

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2850	2850	1425	2850	2850	1425	2850	2850	1425	2850	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.09	0.16	0.31	0.00	0.00	0.07	0.07
Crit Vol:	0			97			435			0		
Crit Moves:				****			****			****		

\*\*\*\*\*



Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2031 Old Route 65/Sterling Pkwy.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.785
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 87 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected), Rights (Include, Ovl), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing volume-to-saturation ratios, critical volumes, and critical moves.

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2037 Twelve Bridges/SB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.444
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic movements and rows for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with 12 columns for different traffic movements and rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 12 columns for different traffic movements and rows for Vol/Sat, Crit Vol, Crit Moves.

Thu Oct 21, 1999 15:36:51

Page 12-1

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2038 Twelve Bridges/NB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.453  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 34 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	1	1	1	0	2	0	0	1

Volume Module:

Base Vol:	50	0	1225	0	0	0	90	380	0	0	1010	190
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	50	0	0	0	0	0	90	380	0	0	1010	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	50	0	0	0	0	0	90	380	0	0	1010	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	0	0	0	0	0	90	380	0	0	1010	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	50	0	0	0	0	0	90	380	0	0	1010	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	1425	1425	1425	0	0	0	1425	2850	0	0	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.04	0.00	0.00	0.00	0.00	0.00	0.06	0.13	0.00	0.00	0.35	0.00
Crit Vol:	50			0			90			505		
Crit Moves:	****						****			****		

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2103 Sierra College Blvd./Clover Valley Pkwy.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.572  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 43 Level of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	2	0	0	1	0	0	0

Volume Module:

Base Vol:	320	1140	0	0	660	180	300	0	275	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	1.00	1.00	1.00
Initial Bse:	320	1140	0	0	660	180	300	0	220	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	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:	320	1140	0	0	660	180	300	0	176	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	320	1140	0	0	660	180	300	0	176	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	320	1140	0	0	660	180	330	0	176	0	0	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	2.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1425	2850	0	0	2850	1425	2850	0	1425	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.22	0.40	0.00	0.00	0.23	0.13	0.12	0.00	0.12	0.00	0.00	0.00
Crit Vol:	320				330		165			0		
Crit Moves:	****				****		****					

\*\*\*\*\*

Thu Oct 21, 1999 09:32:07

Page 14-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2917 Old Route 65/Westlake Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.748
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 90 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing traffic volumes and adjustment factors for various scenarios.

Saturation Flow Module: Table with 12 columns representing saturation flow rates and adjustment factors.

Capacity Analysis Module: Table with 12 columns representing capacity analysis metrics like Vol/Sat, Crit Vol, and Crit Moves.

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2977 Sunset Blvd./SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.566  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 33 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	0	0	0	2	0	0	2

-----

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	685	0	30	0	945	0	0	530	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	685	0	30	0	945	0	0	530	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.80	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	24	0	945	0	0	530	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	685	0	24	0	945	0	0	530	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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	754	0	24	0	945	0	0	530	0

-----

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	0.00	0.00	2.00	0.00	1.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	3000	0	1500	0	3000	0	0	3000	0

-----

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.00	0.00	0.25	0.00	0.02	0.00	0.32	0.00	0.00	0.18	0.00
Crit Vol:	0			377			473			0		
Crit Moves:	*****			*****			*****			*****		

\*\*\*\*\*

Thu Oct 21, 1999 10:38:42

Page 16-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2997 Sunset Blvd./NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.509
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 29 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 3 rows showing capacity analysis metrics like Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report

1994 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3008 Wyckford Blvd./Mountaingate Dr.
\*\*\*\*\*

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 7 rows of adjustment factors like Base Vol, Growth Adj, etc.

Adjusted Volume Module: Table with 12 columns and 7 rows showing adjusted volumes and percentages for various vehicle types.

Critical Gap Module: Table with 12 columns and 2 rows showing MoveUp Time and Critical Gap for different movements.

Capacity Module: Table with 12 columns and 4 rows showing Conflict Vol, Potent Cap, Adj Cap, and Move Cap.

Level Of Service Module: Table with 12 columns and 6 rows showing Stopped Del, LOS by Move, Movement, Shared Cap, Shrd StpDel, Shared LOS, and ApproachDel.



Thu Oct 21, 1999 09:32:07

Page 18-1

Cumulative Conditions  
 Scenario 1  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3020 Sunset Blvd./W. Stanford Ranch Rd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.616  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 59 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			Ovl			Include			Ovl								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0						
Lanes:	2	0	2	1	0	0	2	0	3	0	1	0	2	0	2	1	0	1

Volume Module:

Base Vol:	115	130	275	195	35	265	565	750	40	85	460	165
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:	115	130	275	195	35	265	565	750	40	85	460	165
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:	115	130	275	195	35	265	565	750	40	85	460	165
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	115	130	275	195	35	265	565	750	40	85	460	165
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	127	130	275	215	35	265	622	750	40	94	460	165

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.85	0.15	2.00	3.00	1.00
Final Sat.:	2750	2750	1375	2750	4125	1375	2750	3916	209	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.05	0.05	0.20	0.08	0.01	0.19	0.23	0.19	0.19	0.03	0.11	0.12
Crit Vol:	275			108			311			153		
Crit Moves:	****			****			****			****		

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3022 Sunset Blvd./Atherton Rd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.628  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 61 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:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	3	0	1	0

Volume Module:

Base Vol:	365	5	160	10	5	20	5	1390	20	10	1250	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	365	5	160	10	5	20	5	1390	20	10	1250	5
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	5	160	10	5	20	5	1390	20	10	1250	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	365	5	160	10	5	20	5	1390	20	10	1250	5
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	5	160	10	5	20	5	1390	20	10	1250	5

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	1.00	1.00	1.00	0.20	0.80	1.00	3.00	1.00	1.00	2.99	0.01
Final Sat.:	1375	1375	1375	1375	275	1100	1375	4125	1375	1375	4109	16

Capacity Analysis Module:

Vol/Sat:	0.27	0.00	0.12	0.01	0.02	0.02	0.00	0.34	0.01	0.01	0.30	0.30
Crit Vol:	365				25			463			10	
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Thu Oct 21, 1999 09:32:07

Page 20-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3027 West Stanford Ranch Rd./West Oaks Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.436
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 40 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Ovl), Min. Green (0 0 0), and Lanes (1 0 2 0 1).

Volume Module: Table with 12 columns for volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity and critical values. Rows include Vol/Sat, Crit Vol, and Crit Moves.

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3028 W. Stanford Ranch Rd./Sioux Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.361  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 36 Level Of Service: A  
 \*\*\*\*\*

Approach: Movement:	North Bound			South Bound			East Bound			West Bound									
	L	T	R	L	T	R	L	T	R	L	T	R							
Control:	Split Phase			Split Phase			Protected			Protected									
Rights:	Ovl			Ovl			Ovl			Ovl									
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0							
Lanes:	1	1	0	0	1	1	0	0	1	2	0	3	0	1	1	0	3	0	1

-----

Volume Module:

Base Vol:	425	20	150	15	10	65	110	625	30	30	205	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	425	20	150	15	10	65	110	625	30	30	205	5
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:	425	20	150	15	10	65	110	625	30	30	205	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	425	20	150	15	10	65	110	625	30	30	205	5
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	468	20	150	17	10	65	121	625	30	30	205	5

-----

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.92	0.08	1.00	1.26	0.74	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2637	113	1375	1731	1019	1375	2750	4125	1375	1375	4125	1375

-----

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.11	0.01	0.01	0.05	0.04	0.15	0.02	0.02	0.05	0.00
Crit Vol:	244			14			208			30		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Thu Oct 21, 1999 09:32:07

Page 22-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3029 Sunset Blvd./Blue Oaks Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.707
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control, Rights, Min. Green, Lanes.

Volume Module: Table with 12 columns for volume components and 12 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for saturation flow components and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis components and 3 rows for Vol/Sat, Crit Vol, Crit Moves.

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3031 Sunset Blvd./Park Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): ~~0.762~~ .63  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 96 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:	Ovl			Ovl			Include			Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	#3	0	1	2	2	0	3	#1	2	0	3

Volume Module:

Base Vol:	135	625	135	140	275	105	155	1445	240	175	885	285
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:	135	625	135	140	275	105	155	1445	240	175	885	285
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:	135	625	135	140	275	105	155	1445	240	175	885	285
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	625	135	140	275	105	155	1445	240	175	885	285
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	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	135	625	135	154	275	105	171	1445	240	193	885	285

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	2.57	0.43	2.00	3.00	1.00
Final Sat.:	1375	2750	1375	2750	2750	1375	2750	3537	588	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.10	0.23	0.10	0.06	0.10	0.08	0.06	0.41	0.41	0.07	0.21	0.21
Crit Vol:	313			77			562			97		
Crit Moves:	****			****			****			****		

$$V_c = (208 + 77 + 97 + 482) / 1375 = .63$$

Thu Oct 21, 1999 09:32:07

Page 24-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3034 Sunset Blvd./Stanford Ranch Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.823
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 129 Level Of Service: D
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns representing saturation flow rates and adjustment factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module: Table with 12 columns representing capacity analysis metrics like Vol/Sat, Crit Vol, Crit Moves, etc.

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3039 Stanford Ranch Rd./Crest Dr.  
 \*\*\*\*\*

Cycle (sec): 1 Critical Vol./Cap. (X): 0.588  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 45 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Permitted			Permitted		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	2	0	0	0	1	0	0

-----

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	520	355	245	260	0	0	0	0	125	0	195
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	520	355	245	260	0	0	0	0	125	0	195
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80
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	520	355	245	260	0	0	0	0	125	0	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	520	355	245	260	0	0	0	0	125	0	156
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	520	355	245	260	0	0	0	0	125	0	156

-----

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	1.19	0.81	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1694	1156	1425	2850	0	0	0	0	1425	0	1425

-----

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.31	0.31	0.17	0.09	0.00	0.00	0.00	0.00	0.09	0.00	0.11
Crit Vol:	438			245			0			156		
Crit Moves:	****			****						****		

\*\*\*\*\*



Thu Oct 21, 1999 09:32:07

Page 26-1

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3043 Sunset Blvd./West Oaks Blvd
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.716
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 80 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3044 S. Whitney Blvd./Crest Dr.  
 \*\*\*\*\*

Cycle (sec): 1 Critical Vol./Cap. (X): 0.519  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx  
 Optimal Cycle: 39 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	1	0	1	0	0

-----

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	205	0	125	0	0	0	0	355	245	55	115	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:	205	0	125	0	0	0	0	355	245	55	115	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:	205	0	125	0	0	0	0	355	245	55	115	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	0	125	0	0	0	0	355	245	55	115	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.:	205	0	125	0	0	0	0	355	245	55	115	0

-----

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	0.62	0.00	0.38	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	885	0	540	0	1425	0	0	1425	1425	1425	1425	0

-----

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.25	0.17	0.04	0.08	0.00
Crit Vol:	330			0			355			55		
Crit Moves:	****						****			****		

-----

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3048 Stanford Ranch Rd./Park Dr.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.535
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for traffic volumes and 12 rows for various adjustment factors like Growth Adj, Initial Bse, User Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis and 3 rows for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
 Scenario 1  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3049 Park Dr./Wyckford Blvd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.338  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 28 Level Of Service: A  
 \*\*\*\*\*

Approach: Movement:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	2	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	20	0	130	345	920	0	0	300	30
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	20	0	130	345	920	0	0	300	30
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	20	0	130	345	920	0	0	300	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	20	0	130	345	920	0	0	300	30
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	1.10	1.00	1.10	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	22	0	143	380	920	0	0	300	30

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	1.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1425	0	2850	2850	2850	0	0	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.05	0.13	0.32	0.00	0.00	0.11	0.02
Crit Vol:	0			22			460			0		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3207 Sunset Blvd./Pacific St.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.926  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 150 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:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	3	0	1	1	0	3	1	1	1	1	0	2

Volume Module:

Base Vol:	1005	970	125	65	595	820	675	85	705	85	120	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	1005	970	125	65	595	820	675	85	0	85	120	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	1005	970	125	65	595	820	675	85	0	85	120	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1005	970	125	65	595	820	675	85	0	85	120	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	0.00	1.00	1.00	1.00
Final Vol.:	1106	970	125	65	595	820	743	85	0	85	120	100

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	3.00	1.77	0.23	1.00	3.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	4125	2436	314	1375	4125	1375	2750	1375	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.27	0.40	0.40	0.05	0.14	0.60	0.27	0.06	0.00	0.06	0.04	0.07
Crit Vol:	369			820			0			85		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3586 Blue Oaks Blvd./Lonetree Blvd./Fairway Dr.  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.585  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 55 Level Of Service: A  
 \*\*\*\*\*

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:	Ovl			Ignore			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	1	2	0	3	0	1	1

-----

Volume Module:

Base Vol:	260	195	100	40	430	720	675	740	355	75	225	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	260	195	100	40	430	0	675	740	355	75	225	30
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	260	195	100	40	430	0	675	740	355	75	225	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	260	195	100	40	430	0	675	740	355	75	225	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	286	195	100	40	430	0	743	740	355	75	225	30

-----

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2750	2750	1375	1375	2750	1375	2750	4125	1375	1375	4125	1375

-----

Capacity Analysis Module:

Vol/Sat:	0.10	0.07	0.07	0.03	0.16	0.00	0.27	0.18	0.26	0.05	0.05	0.02
Crit Vol:	143			215			372			75		
Crit Moves:	****			****			****			****		

-----

-----  
 Cumulative Conditions  
 Scenario 1  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3593 Stanford Ranch Rd./Five Star Blvd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.029  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 150 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:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	1	1	0	0	1	1

-----

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	210	1780	630	170	1175	135	120	90	450	665	55	250
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:	210	1780	630	170	1175	135	120	90	450	665	55	250
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:	210	1780	630	170	1175	135	120	90	450	665	55	250
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	210	1780	630	170	1175	135	120	90	450	665	55	250
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	231	1780	630	187	1175	135	132	90	450	732	55	250

-----

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	1.19	0.81	1.00	1.86	0.14	1.00
Final Sat.:	2750	4125	1375	2750	4125	1375	1635	1115	1375	2558	192	1375

-----

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.08	0.43	0.46	0.07	0.28	0.10	0.08	0.08	0.33	0.29	0.29	0.18
Crit Vol:	593			94			450			394		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #3594 Stanford Ranch Rd./Fairway Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.686
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 73 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different volume categories and 12 rows of adjustment factors.

Saturation Flow Module table with 12 columns and 4 rows of flow-related data.

Capacity Analysis Module table with 12 columns and 4 rows of capacity and delay data.



Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2975 Industrial Ave./Placer Corporate Dr.
Cycle (sec): 100 Critical Vol./Cap. (X): 0.568
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for various volume and adjustment factors across four directions.

Saturation Flow Module table with 12 columns for saturation flow, adjustment, lanes, and final saturation.

Capacity Analysis Module table with 12 columns for volume/saturation, critical volume, and critical moves.

Cumulative Conditions  
Scenario 1  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2976 Industrial Ave./South Loop Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.674  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 57 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			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	1	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	480	420	420	360	0	0	0	0	60	0	50
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	480	420	420	360	0	0	0	0	60	0	50
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	480	420	420	360	0	0	0	0	60	0	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	480	420	420	360	0	0	0	0	60	0	50
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	480	420	420	360	0	0	0	0	60	0	50

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1425	1425	1425	1425	0	0	0	0	1425	0	1425

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.34	0.29	0.29	0.25	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Crit Vol:	480			420			0			60		
Crit Moves:	****			****						****		

\*\*\*\*\*

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5026 Athens Ave./Industrial Ave.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.717 .66
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 66 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Control, Rights, Lanes.

Volume Module table with 12 columns for different volume types and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 12 columns for capacity analysis and 4 rows for Vol/Sat, Crit Vol, Crit Moves.

reduced by 5% to reflect train crossings

20% RTOR

v/c = (620 + 280) / 1354 = .66

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5028 Pacific St./Rocklin Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.818
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 125 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5031 Sierra College Blvd./King Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.727
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 83 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5038 Taylor Rd./King Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.596
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows of adjustment factors.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow and adjustment factors.

Capacity Analysis Module: Table with 12 columns and 3 rows showing capacity analysis metrics.

\*\*\*\*\*

Cumulative Conditions  
Scenario 1  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5039 Sierra College Blvd./Taylor Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.785  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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	3	0	1	1	1	0	2	0	1	1

Volume Module:

Base Vol:	120	1320	390	30	780	90	290	370	280	330	180	60
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:	120	1320	390	30	780	90	290	370	280	330	180	60
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:	120	1320	390	30	780	90	290	370	280	330	180	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	1320	390	30	780	90	290	370	280	330	180	60
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.:	120	1320	390	30	780	90	290	370	280	330	180	60

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	4125	1375	1375	4125	1375	1375	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.09	0.32	0.28	0.02	0.19	0.07	0.21	0.13	0.20	0.24	0.07	0.04
Crit Vol:	440			30			280			330		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
Scenario 1  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #5052 Sierra College Blvd./I-80 WB Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.738

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

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:	Permitted					Permitted					Permitted					Permitted				
Rights:	Ignore					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	1	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2

Volume Module:

Base Vol:	0	1510	100	0	1430	0	0	0	0	640	0	60
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1510	0	0	1430	0	0	0	0	640	0	60
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1510	0	0	1430	0	0	0	0	640	0	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1510	0	0	1430	0	0	0	0	640	0	60
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.10
Final Vol.:	0	1510	0	0	1430	0	0	0	0	704	0	66

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	2.00	1.00	0.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	0	3000	1500	0	4500	0	0	0	0	3000	0	3000

Capacity Analysis Module:

Vol/Sat:	0.00	0.50	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.23	0.00	0.02
Crit Vol:	755			0			0			352		
Crit Moves:	****			****			****			****		

\*\*\*\*\*



Cumulative Conditions  
Scenario 1  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5053 Sierra College Blvd./I-80 EB Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.698  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 48 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	0	0	2	0	0	0	0	0

Volume Module:

Base Vol:	0	2020	0	0	1210	180	680	0	80	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2020	0	0	1210	0	680	0	80	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2020	0	0	1210	0	680	0	80	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2020	0	0	1210	0	680	0	80	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	2020	0	0	1210	0	748	0	80	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	4500	0	0	3000	1500	3000	0	1500	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.45	0.00	0.00	0.40	0.00	0.25	0.00	0.05	0.00	0.00	0.00
Crit Vol:		673			0		374				0	
Crit Moves:		****			****		****					

\*\*\*\*\*

Cumulative Conditions
Scenario 1
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5054 Sierra College Blvd./Rocklin Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.662
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 68 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Ovl), Min. Green, and Lanes.

Volume Module table with 12 columns for volume and 12 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for capacity and 3 rows for Vol/Sat, Crit Vol, and Crit Moves.

Thu Oct 21, 1999 15:37:10

Page 2-1

Cumulative Conditions  
Scenario 2  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #1055 Pleasant Grove Blvd./Fairway Dr.

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.975 **.72**  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): XXXXXXX  
Optimal Cycle: 150 Level Of Service: **F 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:	Ovl			Ovl			Ovl <b>IGN</b>			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	2	0	2	0	1	1

Volume Module:

Base Vol:	430	1225	590	105	685	100	280	350	760	635	225	120
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	1225	590	105	685	100	280	350	760	635	225	120
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	1225	590	105	685	100	280	350	760	635	225	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	430	1225	590	105	685	100	280	350	760	635	225	120
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	473	1225	590	116	685	100	308	350	760	699	225	120

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2750	4125	1375	2750	4125	1375	2750	2750	1375	2750	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.17	0.30	0.43	0.04	0.17	0.07	0.11	0.13	0.55	0.25	0.08	0.09
Crit Vol:	0				228				<del>250</del> 350			
Crit Moves:	****				****				****			

\*\*\*\*\*

$$v/c = .17 + .17 + .13 + .25 = .72$$

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #1338 Stanford Ranch/SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.792  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 69 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	1	0	2	0	3	0	0	0

-----

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	2490	320	650	1865	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2490	320	650	1865	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2490	320	650	1865	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2490	320	650	1865	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	2490	320	715	1865	0	0	0	0	0	0	0

-----

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	1.00	2.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	4500	1500	3000	4500	0	0	0	0	0	0	0

-----

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.55	0.21	0.24	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:	830			358			0			0		
Crit Moves:	****			****								

\*\*\*\*\*

Thu Oct 21, 1999 09:32:14

Page 4-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1340 Stanford Ranch/NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.787
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 68 Level Of Service: C
\*\*\*\*\*

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across four approaches.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, and Final Sat. across four approaches.

Capacity Analysis Module: Table showing Vol/Sat, Crit Vol, and Crit Moves across four approaches.

\*\*\*\*\*

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1517 Blue Oaks/Washington/SB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.908
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 150 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic volumes and adjustment factors.

Saturation Flow Module table with 12 columns representing saturation flow rates and adjustments.

Capacity Analysis Module table with 12 columns representing capacity analysis metrics.

\*\*\*\*\*

Thu Oct 21, 1999 15:37:10

Page 6-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1652 Pleasant Grove Blvd./SB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.596
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #1654 Pleasant Grove Blvd./NB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.615  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 37 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	0	3	0	0	0	2	0	1

Volume Module:

Base Vol:	0	1880	0	0	1840	0	0	0	0	370	0	370
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	1880	0	0	1840	0	0	0	0	370	0	370
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80
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	1880	0	0	1840	0	0	0	0	370	0	296
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1880	0	0	1840	0	0	0	0	370	0	296
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	1.10	1.00	1.00
Final Vol.:	0	1880	0	0	1840	0	0	0	0	407	0	296

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	4500	0	0	4500	0	0	0	0	3000	0	1500

Capacity Analysis Module:

Vol/Sat:	0.00	0.42	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.14	0.00	0.20
Crit Vol:		627			0			0				296
Crit Moves:		****			****							****

\*\*\*\*\*



Thu Oct 21, 1999 09:32:14

Page 8-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #1969 Blue Oaks Blvd./NB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.467
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis factors. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2001 Twelve Bridges Blvd./Lincoln Pkwy.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.621
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Vol, Crit Moves.

Thu Oct 21, 1999 15:37:11

Page 10-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2031 Old Route 65/Sterling Pkwy.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.886
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 150 Level Of Service: D
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 3 rows showing capacity analysis metrics like Vol/Sat, Crit Vol, and Crit Moves.

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2037 Twelve Bridges/SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.432  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 33 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	0	0	0	110	0	125	5	285	0	0	220	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	110	0	125	5	285	0	0	220	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.80	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	110	0	100	5	285	0	0	220	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	110	0	100	5	285	0	0	220	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	110	0	100	5	285	0	0	220	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Final Sat.:	0	0	0	1425	0	1425	1425	1425	0	0	1425	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.07	0.00	0.20	0.00	0.00	0.15	0.00
Crit Vol:	0			110			285			220		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
 Scenario 2  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2038 Twelve Bridges/NB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.560  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx  
 Optimal Cycle: 42 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	1	1	0	0	0	0	0	0

Volume Module:

Base Vol:	50	0	1025	0	0	0	90	305	0	0	1315	405
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	50	0	0	0	0	0	90	305	0	0	1315	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	50	0	0	0	0	0	90	305	0	0	1315	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	0	0	0	0	0	90	305	0	0	1315	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	50	0	0	0	0	0	90	305	0	0	1315	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	1425	1425	1425	0	0	0	1425	2850	0	0	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.04	0.00	0.00	0.00	0.00	0.00	0.06	0.11	0.00	0.00	0.46	0.00
Crit Vol:	50				0		90			658		
Crit Moves:	****						****			****		

\*\*\*\*\*

Thu Oct 21, 1999 09:32:15

Page 13-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #2103 Sierra College Blvd./Clover Valley Pkwy.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.655
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 13 columns and 13 rows including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 13 columns and 5 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 13 columns and 4 rows including Vol/Sat, Crit Vol, and Crit Moves.

Thu Oct 21, 1999 09:32:15

Page 14-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2917 Old Route 65/Westlake Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.801
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 114 Level Of Service: BC

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 4 rows showing capacity analysis metrics like Vol/Sat, Crit Vol, etc.

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2977 Sunset Blvd./SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.529  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 31 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	0	0	0	2	0	0	2

-----

Volume Module:

Base Vol:	0	0	0	630	0	180	0	895	0	0	770	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	630	0	180	0	895	0	0	770	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.80	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	630	0	144	0	895	0	0	770	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	630	0	144	0	895	0	0	770	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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	693	0	144	0	895	0	0	770	0

-----

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	0.00	0.00	2.00	0.00	1.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	3000	0	1500	0	3000	0	0	3000	0

-----

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.23	0.00	0.10	0.00	0.30	0.00	0.00	0.26	0.00
Crit Vol:	0			347			448			0		
Crit Moves:				****			****			****		

\*\*\*\*\*



Cumulative Conditions  
 Scenario 2  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2997 Sunset Blvd./NB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.865  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 107 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	0	0	0	0	0	0	2	0	0	2

Volume Module:

Base Vol:	85	0	400	0	0	0	0	1235	0	0	1955	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:	85	0	400	0	0	0	0	1235	0	0	1955	0
User Adj:	1.00	1.00	0.80	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:	85	0	320	0	0	0	0	1235	0	0	1955	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	0	320	0	0	0	0	1235	0	0	1955	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:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	94	0	320	0	0	0	0	1235	0	0	1955	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	3000	0	1500	0	0	0	0	3000	0	0	3000	0

Capacity Analysis Module:

Vol/Sat:	0.03	0.00	0.21	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.65	0.00
Crit Vol:			320			0			0			977
Crit Moves:			****						****			****

\*\*\*\*\*

Thu Oct 21, 1999 09:32:15

Page 17-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report

1994 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3008 Wyckford Blvd./Mountaingate Dr.

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, and Lanes.

Volume Module table with 12 columns representing volume and adjustment factors for each approach and movement.

Adjusted Volume Module table showing grade percentages and cycle/combustion factors for each approach.

Critical Gap Module table showing MoveUp Time and Critical Gap for each approach.

Capacity Module table showing Conflict Volume, Potent Capacity, and Adjusted Capacity for each approach.

Level Of Service Module table showing Stopped Delay, LOS by Movement, Shared Capacity, and Shared Delay for each approach.

Thu Oct 21, 1999 09:32:15

Page 18-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3020 Sunset Blvd./W. Stanford Ranch Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.176
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 150 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3022 Sunset Blvd./Atherton Rd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.358  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 Optimal Cycle: 150 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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	0	1	2	0	3	0	1	0

Volume Module:

Base Vol:	570	5	250	800	5	700	350	1610	35	15	2405	150
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:	570	5	250	800	5	700	350	1610	35	15	2405	150
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:	570	5	250	800	5	700	350	1610	35	15	2405	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	570	5	250	800	5	700	350	1610	35	15	2405	150
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	627	5	250	880	5	700	385	1610	35	15	2405	150

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.98	0.02	1.00	1.99	0.01	1.00	2.00	3.00	1.00	1.00	2.82	0.18
Final Sat.:	2728	22	1375	2734	16	1375	2750	4125	1375	1375	3883	242

Capacity Analysis Module:

Vol/Sat:	0.23	0.23	0.18	0.32	0.32	0.51	0.14	0.39	0.03	0.01	0.62	0.62
Crit Vol:	316			700			0			852		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Thu Oct 21, 1999 09:32:15

Page 20-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3027 West Stanford Ranch Rd./West Oaks Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.679
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 71 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3028 W. Stanford Ranch Rd./Sioux Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.300  
 Loss Time (sec): 0 (Y+R = .4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 150 Level Of Service: F  
 \*\*\*\*\*

Approach: Movement:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	0	1	2	0	3	0	1	1

Volume Module:

Base Vol:	425	20	150	670	10	1490	865	880	30	30	160	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:	425	20	150	670	10	1490	865	880	30	30	160	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:	425	20	150	670	10	1490	865	880	30	30	160	205
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	425	20	150	670	10	1490	865	880	30	30	160	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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	468	20	150	737	10	1490	952	880	30	30	160	205

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.92	0.08	1.00	1.97	0.03	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2637	113	1375	2713	37	1375	2750	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.11	0.27	0.27	1.08	0.35	0.21	0.02	0.02	0.04	0.15
Crit Vol:	244			1490			0			53		
Crit Moves:	****			****			****			****		

Thu Oct 21, 1999 09:32:15

Page 22-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3029 Sunset Blvd./Blue Oaks Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.805
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 117 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3031 Sunset Blvd./Park Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.837 **.75**  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx  
 Optimal Cycle: 140 Level Of Service: **PC**  
 \*\*\*\*\*

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:	Ovl			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	<b>3</b> 0 1	2	0	<b>2</b> 0 1	2	0	<b>3</b> <b>4</b> 1	2	0	3 0 1

Volume Module:

Base Vol:	160	505	95	115	290	90	100	1865	375	180	1045	240
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:	160	505	95	115	290	90	100	1865	375	180	1045	240
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:	160	505	95	115	290	90	100	1865	375	180	1045	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	505	95	115	290	90	100	1865	375	180	1045	240
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	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	160	505	95	127	290	90	110	1865	375	198	1045	240

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	2.50	0.50	2.00	3.00	1.00
Final Sat.:	1375	2750	1375	2750	2750	1375	2750	3434	691	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.12	0.18	0.07	0.05	0.11	0.07	0.04	0.54	0.54	0.07	0.25	0.17
Crit Vol:	160				145			747		99		
Crit Moves:	****				****			****		****		

$$V/C = (160 + 145 + 622 + 99) / 1375 = .75$$



Thu Oct 21, 1999 09:32:15

Page 24-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3034 Sunset Blvd./Stanford Ranch Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.913
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 150 Level Of Service: E

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. Rows include various volume and adjustment factors.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow and adjustment factors.

Capacity Analysis Module table with columns for Vol/Sat, Crit Vol, and Crit Moves. Rows include volume per saturation, critical volume, and critical moves.

Thu Oct 21, 1999 15:37:11

Page 25-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #3039 Stanford Ranch Rd./Crest Dr.

Cycle (sec): 1 Critical Vol./Cap. (X): 0.746
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 73 Level Of Service: C

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Lanes.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns: Vol/Sat, Crit Vol, Crit Moves.

Thu Oct 21, 1999 09:32:15

Page 26-1

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3043 Sunset Blvd./West Oaks Blvd
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap. (X): 0.855
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 150 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: Ovl Ovl Include Ovl
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 3 0 1 1 0 3 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 105 175 295 140 90 25 60 2220 225 100 1035 285
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: 105 175 295 140 90 25 60 2220 225 100 1035 285
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: 105 175 295 140 90 25 60 2220 225 100 1035 285
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 105 175 295 140 90 25 60 2220 225 100 1035 285
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.: 105 175 295 140 90 25 60 2220 225 100 1035 285
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375
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: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 3.00 1.00 1.00 3.00 1.00
Final Sat.: 1375 2750 1375 1375 2750 1375 1375 4125 1375 1375 4125 1375
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.08 0.06 0.21 0.10 0.03 0.02 0.04 0.54 0.16 0.07 0.25 0.21
Crit Vol: 295 140 740 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #3044 S. Whitney Blvd./Crest Dr.

Cycle (sec): 1 Critical Vol./Cap. (X): 0.611
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 48 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 13 columns for various volume and adjustment factors across four approaches.

Saturation Flow Module table with 13 columns for saturation flow and adjustment factors.

Capacity Analysis Module table with 13 columns for capacity analysis metrics.

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3048 Stanford Ranch Rd./Park Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.620  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 60 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:	Ovl			Ovl			Include			Ignore					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	2	0	1	2	0	2	0	1	2	0	2	1	0

Volume Module:

Base Vol:	75	380	45	155	180	185	845	730	110	50	225	435
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	75	380	45	155	180	185	845	730	110	50	225	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	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	75	380	45	155	180	185	845	730	110	50	225	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	380	45	155	180	185	845	730	110	50	225	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	0.00
Final Vol.:	75	380	45	171	180	185	930	730	110	50	225	0

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	2.61	0.39	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	2750	2750	1375	2750	3585	540	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.05	0.14	0.03	0.06	0.07	0.13	0.34	0.20	0.20	0.04	0.08	0.00
Crit Vol:	190			86			465			113		
Crit Moves:	****			****			****			****		

Cumulative Conditions  
 Scenario 2  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3049 Park Dr./Wyckford Blvd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.338  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 Optimal Cycle: 28 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	1	2	0	2	0	0	2

Volume Module:

Base Vol:	0	0	0	20	0	130	345	920	0	0	300	30
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	20	0	130	345	920	0	0	300	30
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	20	0	130	345	920	0	0	300	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	20	0	130	345	920	0	0	300	30
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	1.10	1.00	1.10	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	22	0	143	380	920	0	0	300	30

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	1.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1425	0	2850	2850	2850	0	0	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.05	0.13	0.32	0.00	0.00	0.11	0.02
Crit Vol:	0			22			460			0		
Crit Moves:				****			****			****		

\*\*\*\*\*

-----  
 Cumulative Conditions  
 Scenario 2  
 PM Peak Hour  
 -----

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3207 Sunset Blvd./Pacific St.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.891  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 Optimal Cycle: 150 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			Split Phase			Split Phase		
Rights:	Include			Ovl			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	3	0	1	1	0	3	1	1	1	1	0	2

Volume Module:

Base Vol:	1010	940	115	65	645	775	725	90	1035	80	110	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	1010	940	115	65	645	775	725	90	0	80	110	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	1010	940	115	65	645	775	725	90	0	80	110	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1010	940	115	65	645	775	725	90	0	80	110	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	0.00	1.00	1.00	1.00
Final Vol.:	1111	940	115	65	645	775	798	90	0	80	110	90

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	3.00	1.78	0.22	1.00	3.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	4125	2450	300	1375	4125	1375	2750	1375	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.27	0.38	0.38	0.05	0.16	0.56	0.29	0.07	0.00	0.06	0.04	0.07
Crit Vol:	370					775	0			80		
Crit Moves:	****					****	****			****		

\*\*\*\*\*

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3586 Blue Oaks Blvd./Lonetree Blvd./Fairway Dr.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.619
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 60 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*



Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3593 Stanford Ranch Rd./Five Star Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.985
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 150 Level Of Service: E
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3594 Stanford Ranch Rd./Fairway Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.728
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 84 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different volume types and 4 rows for North, South, East, and West bounds.

Saturation Flow Module table with 12 columns for different saturation flow types and 4 rows for North, South, East, and West bounds.

Capacity Analysis Module table with 12 columns for different capacity analysis types and 4 rows for North, South, East, and West bounds.

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2975 Industrial Ave./Placer Corporate Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.905
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): XXXXXX
Optimal Cycle: 180 Level Of Service: E

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, Lanes.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns: Vol/Sat, Crit Vol, Crit Moves.

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2976 Industrial Ave./South Loop Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.674
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 57 Level Of Service: B
\*\*\*\*\*

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLE Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Vol, Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
Scenario 2  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5026 Athens Ave./Industrial Ave.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.687 **0.64**  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 59 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			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	1	0	0	1	1	0	0	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	310	420	0	0	430	370	270	0	330	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	310	420	0	0	430	370	270	0	330	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	310	420	0	0	430	370	270	0	330	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	310	420	0	0	430	370	270	0	330	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	341	420	0	0	430	370	270	0	330	0	0	0

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	2.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	2708	1354	0	0	1354	1354	1354	0	1354	0	0	0

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.13	0.31	0.00	0.00	0.32	0.27	0.20	0.00	0.24	0.00	0.00	0.00
Crit Vol:	171			430			264	330		0		
Crit Moves:	****			****			****					

20% RTOR

$$v/c = (171 + 430 + 264) / 1354 = 0.64$$

Added →  
2.5%  
to reflect  
main  
passing.

Cumulative Conditions
Scenario 2
PM Peak Hour

Level of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #5028 Pacific St./Rocklin Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.796
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 112 Level of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
Scenario 2  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5031 Sierra College Blvd./King Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.716  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 80 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				Ovl				Ovl							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	10	1170	30	240	810	10	70	20	10	20	0	160
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:	10	1170	30	240	810	10	70	20	10	20	0	160
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	1232	32	253	853	11	74	21	11	21	0	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	1232	32	253	853	11	74	21	11	21	0	168
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.:	11	1232	32	253	853	11	74	21	11	21	0	168

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	1.97	0.03	0.78	0.22	1.00	1.00	0.00	1.00
Final Sat.:	1375	2750	1375	1375	2715	35	1071	304	1375	1375	0	1375

Capacity Analysis Module:

Vol/Sat:	0.01	0.45	0.02	0.18	0.31	0.31	0.07	0.07	0.01	0.02	0.00	0.12
Crit Vol:	616			253			95			20		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5038 Taylor Rd./King Rd.
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap. (X): 0.593
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns representing saturation flow and adjustment factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module: Table with 12 columns representing capacity analysis factors like Vol/Sat, Crit Vol, Crit Moves, etc.

\*\*\*\*\*



Cumulative Conditions  
Scenario 2  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5039 Sierra College Blvd./Taylor Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.781  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 104 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	L	T	R	L	T	R		
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Lanes:	1	0	3	0	1	1	0	3	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	110	1180	390	30	850	80	290	380	320	330	160	60
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:	110	1180	390	30	850	80	290	380	320	330	160	60
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	1180	390	30	850	80	290	380	320	330	160	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	1180	390	30	850	80	290	380	320	330	160	60
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	1180	390	30	850	80	290	380	320	330	160	60

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	4125	1375	1375	4125	1375	1375	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.08	0.29	0.28	0.02	0.21	0.06	0.21	0.14	0.23	0.24	0.06	0.04
Crit Vol:	393			30			320			330		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
Scenario 2  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5052 Sierra College Blvd./I-80 WB Ramps  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.712  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 50 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	0	1	0	0	0	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	1410	110	0	1520	0	0	0	0	660	0	60
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1410	0	0	1520	0	0	0	0	660	0	60
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1410	0	0	1520	0	0	0	0	660	0	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1410	0	0	1520	0	0	0	0	660	0	60
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.10
Final Vol.:	0	1410	0	0	1520	0	0	0	0	726	0	66

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	2.00	1.00	0.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	0	3000	1500	0	4500	0	0	0	0	3000	0	3000

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.47	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.24	0.00	0.02
Crit Vol:	705			0			0			363		
Crit Moves:	****			****						****		

\*\*\*\*\*

Cumulative Conditions  
Scenario 2  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5053 Sierra College Blvd./I-80 EB Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.683  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	0	2	0	0	1	0	0	0

Volume Module:

Base Vol:	0	1940	0	0	1300	190	680	0	80	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1940	0	0	1300	0	680	0	80	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1940	0	0	1300	0	680	0	80	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1940	0	0	1300	0	680	0	80	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1940	0	0	1300	0	748	0	80	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	4500	0	0	3000	1500	3000	0	1500	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.43	0.00	0.00	0.43	0.00	0.25	0.00	0.05	0.00	0.00	0.00
Crit Vol:	0			650			374			0		
Crit Moves:	****			****			****					

\*\*\*\*\*

Cumulative Conditions
Scenario 2
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5054 Sierra College Blvd./Rocklin Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.692
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 74 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
Scenario 3.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2037 Twelve Bridges Blvd./SB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.228  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 24 Level Of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	1	0	0	2

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	70	0	60	0	215	0	0	80	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	70	0	60	0	215	0	0	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	70	0	60	0	215	0	0	80	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	70	0	60	0	215	0	0	80	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	70	0	60	0	215	0	0	80	0

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	1425	0	1425	1425	1425	0	0	2850	0

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.04	0.00	0.15	0.00	0.00	0.03	0.00
Crit Vol:	0			70			215			40		
Crit Moves:				****			****			****		

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2038 Twelve Bridges Blvd./NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.339
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis factors like Vol/Sat, Crit Vol, Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2971 Whitney Blvd./SB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.300
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 21 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic movements and 11 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 4 rows for Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
Scenario 3.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2996 Whitney Blvd./NB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.671  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	0	0	2

Volume Module:

Base Vol:	40	0	620	0	0	0	0	825	0	0	1020	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:	40	0	620	0	0	0	0	825	0	0	1020	0
User Adj:	1.00	1.00	0.80	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:	40	0	496	0	0	0	0	825	0	0	1020	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	0	496	0	0	0	0	825	0	0	1020	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.:	40	0	496	0	0	0	0	825	0	0	1020	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	1500	0	1500	0	0	0	0	3000	0	0	3000	0

Capacity Analysis Module:

Vol/Sat:	0.03	0.00	0.33	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.34	0.00
Crit Vol:			496	0			0			510		
Crit Moves:			****				****			****		

\*\*\*\*\*



Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2977 Sunset Blvd./SB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.448
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for North Bound, South Bound, East Bound, West Bound. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with columns for North Bound, South Bound, East Bound, West Bound. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for North Bound, South Bound, East Bound, West Bound. Rows include Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2997 Sunset Blvd./NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.737
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 3 rows showing volume/saturation ratios and critical volumes.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1517 Blue Oaks Blvd./Washington Blvd./SB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.900
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 180 Level Of Service: E
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1969 Blue Oaks Blvd./NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.519
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 3 rows showing capacity analysis metrics like Vol/Sat and Crit Vol.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1652 Pleasant Grove Blvd./SB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.600
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns for traffic volumes and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1654 Pleasant Grove Blvd./NB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.709
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 49 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different volume and adjustment factors.

Saturation Flow Module table with 12 columns representing saturation flow and adjustment factors.

Capacity Analysis Module table with 12 columns representing capacity analysis metrics.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1338 Stanford Ranch Rd./SB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.795
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns for different volume types (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol) and 4 rows for North, South, East, West bounds.

Saturation Flow Module: Table with 12 columns for saturation flow types (Sat/Lane, Adjustment, Lanes, Final Sat) and 4 rows for North, South, East, West bounds.

Capacity Analysis Module: Table with 12 columns for capacity analysis types (Vol/Sat, Crit Vol, Crit Moves) and 4 rows for North, South, East, West bounds.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1340 Stanford Ranch Rd./NB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.746
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted), Rights (Include), and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.



Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3022 Sunset Blvd./Atherton Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.232
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): XXXXXX
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for traffic volumes and adjustment factors like Growth Adj, Initial Bse, User Adj, etc.

Saturation Flow Module: Table with 13 columns for saturation flow rates and adjustment factors like Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Vol, Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3020 Sunset Blvd./W. Stanford Ranch Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.703
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 77 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3043 Sunset Blvd./W. Oaks Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.842
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 145 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic flows and 10 rows of adjustment factors like Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 13 columns and 4 rows showing capacity ratios and critical volumes.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3029 Sunset Blvd./Blue Oaks Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.867
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 171 Level Of Service: D
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Ovl), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3031 Sunset Blvd./Pleasant Grove Blvd. Park Dr.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.827 .74
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): XXXXXX
Optimal Cycle: 140 Level Of Service: EC

Table with columns: Approach (North, South, East, West Bound), Movement (L, T, R), Control (Protected), Rights (Ovl), Min. Green, Lanes. Includes handwritten annotations like '53' and '3'.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol. across 12 lanes.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. across 12 lanes.

Capacity Analysis Module table with columns for Vol/Sat, Crit Vol, Crit Moves across 12 lanes.

V/C = (230 + 140 + 553 + 88) / 1375 = .74

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3034 Sunset Blvd./Stanford Ranch Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.795
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 111 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Ovl), Min. Green (0), and Lanes (2, 0, 2, 0, 1).

Volume Module table with 12 columns representing different volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 12 columns. Rows include Sat/Lane (1375), Adjustment (1.00), Lanes (2.00), and Final Sat. (2750).

Capacity Analysis Module table with 12 columns. Rows include Vol/Sat (0.22), Crit Vol (399), and Crit Moves (\*\*\*\*).

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3207 Sunset Blvd./Pacific St.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.957
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic conditions and 10 rows for various volume and adjustment factors.

Saturation Flow Module: Table with 13 columns for different traffic conditions and 4 rows for saturation flow and adjustment factors.

Capacity Analysis Module: Table with 13 columns for different traffic conditions and 4 rows for capacity analysis metrics.

\*\*\*\*\*

Cumulative Conditions  
Scenario 3.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3028 W. Stanford Ranch Rd./Sioux Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.696  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 75 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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	0	1	2	0	3	0	1	1

Volume Module:

Base Vol:	425	20	150	700	10	365	530	475	30	30	95	300
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	425	20	150	700	10	365	530	475	30	30	95	300
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:	425	20	150	700	10	365	530	475	30	30	95	300
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	425	20	150	700	10	365	530	475	30	30	95	300
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	468	20	150	770	10	365	583	475	30	30	95	300

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.92	0.08	1.00	1.97	0.03	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2637	113	1375	2715	35	1375	2750	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.11	0.28	0.28	0.27	0.21	0.12	0.02	0.02	0.02	0.22
Crit Vol:	244			390			292			32		
Crit Moves:	****			****			****			****		

\*\*\*\*\*



Cumulative Conditions
Scenario 3.
PM Peak Hour

Level of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3027 W. Stanford Ranch Rd./W. Oaks Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.595
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3048 W. Stanford Ranch Rd./Park Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.626
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different volume categories and 12 rows of adjustment factors.

Saturation Flow Module table with 12 columns and 4 rows of saturation flow data.

Capacity Analysis Module table with 12 columns and 4 rows of capacity analysis data.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3039 Stanford Ranch Rd./Crest Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.786
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 87 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Permitted, Protected, Ovl), Rights (Include, Ovl), Min. Green, and Lanes.

Volume Module table with 13 columns and 13 rows. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 13 columns and 4 rows. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 13 columns and 4 rows. Rows include Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3594 Stanford Ranch Rd./Fairway Dr.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.662
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 67 Level Of Service: B
\*\*\*\*\*

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Lanes.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns: Vol/Sat, Crit Vol, Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3593 Stanford Ranch Rd./Five Star Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 1.016
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected, Split Phase), Rights (Ovl), Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns and 5 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3586 Blue Oaks Blvd./Fairway Dr./Lonetree Blvd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.567
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing traffic flows and 10 rows of adjustment factors like Growth Adj, User Adj, PHF Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 4 rows showing capacity analysis metrics like Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1055 Pleasant Grove Blvd./Fairway Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 1.142 .78
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for traffic volumes and 12 columns for adjustment factors.

Saturation Flow Module table with 12 columns for saturation flow and 12 columns for adjustment factors.

Capacity Analysis Module table with 12 columns for capacity analysis metrics.

V/c = .38 + .04 + .13 + .23 = .78

Cumulative Conditions  
Scenario 3.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2103 Sierra College Blvd./Clover Valley Pkwy.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.795  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): XXXXXXX  
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			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	2	0	0	1	0	0	0

Volume Module:

Base Vol:	440	1035	0	0	705	205	405	0	455	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	440	1035	0	0	705	205	405	0	455	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	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:	440	1035	0	0	705	205	405	0	341	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	440	1035	0	0	705	205	405	0	341	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	440	1035	0	0	705	205	446	0	341	0	0	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	2.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1425	2850	0	0	2850	1425	2850	0	1425	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.31	0.36	0.00	0.00	0.25	0.14	0.16	0.00	0.24	0.00	0.00	0.00
Crit Vol:	440				353				341	0		
Crit Moves:	****				****				****			

\*\*\*\*\*



Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2917 Old Hwy 65/Ferrari Ranch Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.788
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 107 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows of adjustment factors.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow and adjustment factors.

Capacity Analysis Module: Table with 12 columns and 4 rows showing capacity analysis metrics.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2031 Old Hwy 65/Sterling Pkwy.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.800
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 93 Level Of Service: C

Table with columns for Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for various adjustment factors (Base Vol, Growth Adj, Initial Bse, etc.) and values for each movement.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2001 Twelve Bridges Blvd./Lincoln Pkwy.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.575
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3002 Whitney Blvd./Sioux Dr.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.504
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustment factors.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3044 S. Whitney Blvd./Crest Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.565
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted/Protected), Rights (Include/Ovl), Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
1994 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3008 Wyckford Blvd./Mountaingate Dr.
\*\*\*\*\*

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B
\*\*\*\*\*

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0, 1, 0, 0).

Volume Module: Table with 12 columns for volume components (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol) and 12 rows for different approaches.

Adjusted Volume Module: Table with 12 columns for adjusted volume components and 12 rows for different approaches, including Grade, % Cycle/Cars, % Truck/Comb, PCE Adj, Cycl/Car PCE, Trck/Cmb PCE, and Adj Vol.

Critical Gap Module: Table with 12 columns for critical gap components and 12 rows for different approaches, including MoveUp Time and Critical Gp.

Capacity Module: Table with 12 columns for capacity components and 12 rows for different approaches, including Cnflct Vol, Potent Cap., Adj Cap., and Move Cap.

Level Of Service Module: Table with 12 columns for LOS components and 12 rows for different approaches, including Stopped Del, LOS by Move, Movement, Shared Cap., Shrd StpDel, Shared LOS, and ApproachDel.

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3010 Whitney Blvd./North-South Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.820
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 126 Level Of Service: D

Table with 4 columns: Approach: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for different traffic movements and 10 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 13 columns for different traffic movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for different traffic movements and 4 rows for Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
 Scenario 3.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3006 Whitney Blvd./W. Oaks Blvd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.456  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 34 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	0	0	0	0	2	0	1	1

Volume Module:

Base Vol:	120	0	280	0	0	0	0	520	190	110	125	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:	120	0	280	0	0	0	0	520	190	110	125	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:	120	0	280	0	0	0	0	520	190	110	125	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	0	280	0	0	0	0	520	190	110	125	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.:	120	0	280	0	0	0	0	520	190	110	125	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	1425	0	1425	0	0	0	0	2850	1425	1425	2850	0

Capacity Analysis Module:

Vol/Sat:	0.08	0.00	0.20	0.00	0.00	0.00	0.00	0.18	0.13	0.08	0.04	0.00
Crit Vol:	280			0			260			110		
Crit Moves:	****			****			****			****		

\*\*\*\*\*



Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3049 Park Dr./Wyckford Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.416
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for movement directions. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for movement directions. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movement directions. Rows include Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 3
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2975 Industrial Ave./Placer Corporate Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.702
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx
Optimal Cycle: 62 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic flows and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
Scenario 3  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2976 Industrial Ave./South Loop Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.596  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 46 Level Of Service: A  
\*\*\*\*\*

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	0	0	0	0				
Lanes:	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1

Volume Module:

Base Vol:	0	490	580	220	790	0	0	0	0	50	0	60
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	490	580	220	790	0	0	0	0	50	0	60
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	490	580	220	790	0	0	0	0	50	0	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	490	580	220	790	0	0	0	0	50	0	60
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	490	580	220	790	0	0	0	0	50	0	60

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1425	1425	1425	1425	0	0	0	0	1425	0	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.34	0.41	0.15	0.55	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Crit Vol:			580	220					0		50	
Crit Moves:			****	****						****		

\*\*\*\*\*

Cumulative Conditions
Scenario 3
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5026 Athens Ave./Industrial Ave.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.71
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 82 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of volume and adjustment factors.

Saturation Flow Module table with 12 columns and 4 rows of saturation flow and adjustment data.

Capacity Analysis Module table with 12 columns and 3 rows of capacity and critical volume data.

Handwritten notes: reduced 5% reflect in SSING

Handwritten note: 20% RTOR

Handwritten equation: v/c = (187 + 410 + 360) / 1354 = 0.71

Cumulative Conditions
Scenario 3
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5028 Pacific St./Rocklin Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.793
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 110 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for traffic volumes and 10 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis and 4 rows for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 3
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5031 Sierra College Blvd./King Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.788
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 108 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Table with 12 columns representing different traffic movements. Rows include Volume Module (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.) and Saturation Flow Module (Sat/Lane, Adjustment, Lanes, Final Sat.).

Capacity Analysis Module table with 12 columns. Rows include Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
Scenario 3  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5038 Taylor Rd./King Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.615  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 59 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	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	310	500	290	60	290	160	70	180	130	130	110	60
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:	310	500	290	60	290	160	70	180	130	130	110	60
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:	310	500	290	60	290	160	70	180	130	130	110	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	310	500	290	60	290	160	70	180	130	130	110	60
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.:	310	500	290	60	290	160	70	180	130	130	110	60

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	1.27	0.73	1.00	1.29	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1375	1741	1009	1375	1772	978	1375	1375	1375	1375	1375	1375

Capacity Analysis Module:

Vol/Sat:	0.23	0.29	0.29	0.04	0.16	0.16	0.05	0.13	0.09	0.09	0.08	0.04
Crit Vol:	310			225			180			130		
Crit Moves:	****			****			****			****		

Cumulative Conditions  
Scenario 3  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5039 Sierra College Blvd./Taylor Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.783  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 105 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	3	0	1	1	1	0	2	0	1	1

Volume Module:

Base Vol:	90	1280	420	40	890	90	250	360	290	320	170	70
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	1280	420	40	890	90	250	360	290	320	170	70
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	1280	420	40	890	90	250	360	290	320	170	70
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	1280	420	40	890	90	250	360	290	320	170	70
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	1280	420	40	890	90	250	360	290	320	170	70

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	4125	1375	1375	4125	1375	1375	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.07	0.31	0.31	0.03	0.22	0.07	0.18	0.13	0.21	0.23	0.06	0.05
Crit Vol:		427		40					290	320		
Crit Moves:		****		****					****	****		

\*\*\*\*\*



Cumulative Conditions  
Scenario 3  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #5052 Sierra College Blvd./I-80 WB Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.732  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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:	Permitted				Permitted				Permitted				Permitted							
Rights:	Ignore				Include				Include				Include							
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0					
Lanes:	0	0	2	0	1	0	0	3	0	0	0	0	0	0	0	2	0	0	0	2

Volume Module:

Base Vol:	0	1480	100	0	1550	0	0	0	0	650	0	60
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1480	0	0	1550	0	0	0	0	650	0	60
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1480	0	0	1550	0	0	0	0	650	0	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1480	0	0	1550	0	0	0	0	650	0	60
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.10
Final Vol.:	0	1480	0	0	1550	0	0	0	0	715	0	66

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	2.00	1.00	0.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	0	3000	1500	0	4500	0	0	0	0	3000	0	3000

Capacity Analysis Module:

Vol/Sat:	0.00	0.49	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.24	0.00	0.02
Crit Vol:		740			0			0		358		
Crit Moves:	****		****							****		

\*\*\*\*\*

Cumulative Conditions  
 Scenario 3  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #5053 Sierra College Blvd./I-80 EB Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.691  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx  
 Optimal Cycle: 47 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	0	2	0	0	0	0	0	0

Volume Module:

Base Vol:	0	1970	0	0	1300	190	690	0	70	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1970	0	0	1300	0	690	0	70	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1970	0	0	1300	0	690	0	70	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1970	0	0	1300	0	690	0	70	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1970	0	0	1300	0	759	0	70	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	4500	0	0	3000	1500	3000	0	1500	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.44	0.00	0.00	0.43	0.00	0.25	0.00	0.05	0.00	0.00	0.00
Crit Vol:		657			0			380			0	
Crit Moves:	****			****			****					

\*\*\*\*\*

Cumulative Conditions  
Scenario 3  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5054 Sierra College Blvd./Rocklin Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.667  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 69 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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	2	0	3	0	1	1

Volume Module:

Base Vol:	640	1660	100	180	1020	380	180	460	550	50	380	130
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:	640	1660	100	180	1020	380	180	460	550	50	380	130
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	640	1660	100	180	1020	380	180	460	550	50	380	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	640	1660	100	180	1020	380	180	460	550	50	380	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	704	1660	100	198	1020	380	198	460	550	55	380	130

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	2750	4125	1375	2750	4125	1375	2750	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.26	0.40	0.07	0.07	0.25	0.28	0.07	0.11	0.40	0.02	0.09	0.09
Crit Vol:	352			340			99			127		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2037 Twelve Bridges Blvd./SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.260  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 25 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	1	0	0	2

Volume Module:

Base Vol:	0	0	0	70	0	60	0	235	0	0	130	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	70	0	60	0	235	0	0	130	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.80	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	70	0	48	0	235	0	0	130	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	70	0	48	0	235	0	0	130	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	70	0	48	0	235	0	0	130	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	1425	0	1425	1425	1425	0	0	2850	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.03	0.00	0.16	0.00	0.00	0.05	0.00
Crit Vol:	0			70			235			65		
Crit Moves:				****			****			****		

\*\*\*\*\*

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #2038 Twelve Bridges Blvd./NB SR 65 Ramps

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.349

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 29 Level Of Service: A

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	0	1	1	0	2	0	0	1

Volume Module:

Base Vol:	50	0	795	0	0	0	90	215	0	0	715	200
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	0	0	0	0	0	90	215	0	0	715	200
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	0	0	0	0	0	90	215	0	0	715	200
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	0	0	0	0	0	90	215	0	0	715	200
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	50	0	0	0	0	0	90	215	0	0	715	200

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	1425	1425	1425	0	0	0	1425	2850	0	0	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.04	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.00	0.00	0.25	0.14
Crit Vol:	50				0		90				358	
Crit Moves:	****						****				****	

\*\*\*\*\*

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2971 Whitney Blvd./SB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.322  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 21 Level Of Service: A  
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Ovl			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	0	0	2	0	0	2	0

Volume Module:

Base Vol:	0	0	0	345	0	10	0	585	0	0	345	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	0.00
Initial Bse:	0	0	0	345	0	10	0	585	0	0	345	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	0	0	345	0	8	0	585	0	0	345	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	345	0	8	0	585	0	0	345	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	0	0	380	0	8	0	585	0	0	345	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	0.00	0.00	2.00	0.00	1.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	3000	0	1500	0	3000	0	0	3000	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.13	0.00	0.01	0.00	0.20	0.00	0.00	0.12	0.00
Crit Vol:	0			190				293	0			
Crit Moves:				****				****	****			

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2996 Whitney Blvd./NB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.776
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic flow metrics and 12 rows of data.

Saturation Flow Module table with 12 columns and 4 rows of data.

Capacity Analysis Module table with 12 columns and 4 rows of data.

Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2977 Sunset Blvd./SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.425  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 25 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	2	0	0	0	0	2	0	0	2

Volume Module:

Base Vol:	0	0	0	385	0	160	0	850	0	0	535	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	385	0	160	0	850	0	0	535	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.80	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	385	0	128	0	850	0	0	535	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	385	0	128	0	850	0	0	535	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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	424	0	128	0	850	0	0	535	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	0.00	0.00	2.00	0.00	1.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	3000	0	1500	0	3000	0	0	3000	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.09	0.00	0.28	0.00	0.00	0.18	0.00
Crit Vol:	0			212			425			0		
Crit Moves:	****			****			****			****		

\*\*\*\*\*



Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2997 Sunset Blvd./NB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.588
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for various volume and adjustment factors across four directions.

Saturation Flow Module table with 12 columns for saturation flow, adjustment, lanes, and final saturation.

Capacity Analysis Module table with 12 columns for volume/saturation, critical volume, and critical moves.

Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #1517 Blue Oaks Blvd./Washington Blvd./SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.902  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 Optimal Cycle: 180 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:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	2	1	0	0	3	0	1	2

Volume Module:

Base Vol:	170	65	1340	100	920	235	0	930	55	545	455	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	170	65	1340	100	920	235	0	930	55	545	455	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	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	170	65	1340	100	920	235	0	930	55	545	455	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	170	65	1340	100	920	235	0	930	55	545	455	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.10	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	0.00
Final Vol.:	170	65	1474	110	920	235	0	930	55	600	455	0

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	1.00	2.00	2.00	2.00	1.00	0.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	1375	1375	2750	2750	2750	1375	0	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.12	0.05	0.54	0.04	0.33	0.17	0.00	0.23	0.04	0.22	0.11	0.00
Crit Vol:	170			460			310			300		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1969 Blue Oaks Blvd./NB SR 65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.474
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume adjustments. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis. Rows include Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1652 Pleasant Grove Blvd./SB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.586
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1654 Pleasant Grove Blvd./NB SR 65 Ramps
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.660
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns for different volume types (Base Vol, Growth Adj, etc.) and 12 rows for different volume categories.

Saturation Flow Module: Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis and 4 rows for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #1338 Stanford Ranch Rd./SB SR 65 Ramps  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.803  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 73 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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	1	0	2	0	3	0	0	0

Volume Module:

Base Vol:	0	2510	410	670	1690	0	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2510	410	670	1690	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2510	410	670	1690	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2510	410	670	1690	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	2510	410	737	1690	0	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	1.00	2.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	4500	1500	3000	4500	0	0	0	0	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.56	0.27	0.25	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:		837		369			0			0		
Crit Moves:		****		****								

\*\*\*\*\*

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1340 Stanford Ranch Rd./NB SR 65 Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.761  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	0	3	0	0	0	0	0	0

Volume Module:

Base Vol:	800	1760	0	0	2105	220	0	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	800	1760	0	0	2105	220	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	800	1760	0	0	2105	220	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	800	1760	0	0	2105	220	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	880	1760	0	0	2105	220	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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:	2.00	2.00	0.00	0.00	3.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	3000	3000	0	0	4500	1500	0	0	0	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.29	0.59	0.00	0.00	0.47	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Crit Vol:	440				702		0				0	
Crit Moves:	***				****							

\*\*\*\*\*

Cumulative Conditions
Scenario 3.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3022 Sunset Blvd./Atherton Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.232
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Ovl, Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis. Rows include Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*



Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3020 Sunset Blvd./W. Stanford Ranch Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.833  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 137 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			Ovl								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0						
Lanes:	2	0	2	1	0	0	2	0	3	0	1	0	2	0	3	0	1	0

Volume Module:

Base Vol:	75	285	250	675	80	155	610	855	35	75	390	560
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	285	250	675	80	155	610	855	35	75	390	560
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	285	250	675	80	155	610	855	35	75	390	560
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	285	250	675	80	155	610	855	35	75	390	560
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	83	285	250	743	80	155	671	855	35	83	390	560

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.88	0.12	2.00	3.00	1.00
Final Sat.:	2750	2750	1375	2750	4125	1375	2750	3963	162	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.03	0.10	0.18	0.27	0.02	0.11	0.24	0.22	0.22	0.03	0.09	0.41
Crit Vol:	250			0			336			560		
Crit Moves:	****			****			****			****		

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3043 Sunset Blvd./W. Oaks Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.824
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 130 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic volumes and adjustment factors like Growth Adj, Initial Bse, User Adj, etc.

Saturation Flow Module table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions

Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3029 Sunset Blvd./Blue Oaks Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.838  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 141 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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	0	1	1	0	3	0	1	1

Volume Module:

Base Vol:	490	40	320	60	15	10	30	1855	405	185	1185	110
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:	490	40	320	60	15	10	30	1855	405	185	1185	110
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:	490	40	320	60	15	10	30	1855	405	185	1185	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	490	40	320	60	15	10	30	1855	405	185	1185	110
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:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	539	40	320	60	15	10	30	1855	405	185	1185	110

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.86	0.14	1.00	1.00	0.60	0.40	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2560	190	1375	1375	825	550	1375	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.21	0.21	0.23	0.04	0.02	0.02	0.02	0.45	0.29	0.13	0.29	0.08
Crit Vol:	290			60			618			185		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3031 Sunset Blvd./~~Pleasant Grove Blvd.~~ **Park Dr.**  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.815  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 123 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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	2	0	1	2	0	1	2	0	1
	<b>3</b>						<b>3</b>					

Volume Module:

Base Vol:	225	640	115	120	270	70	160	1600	340	160	1190	245
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	640	115	120	270	70	160	1600	340	160	1190	245
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	640	115	120	270	70	160	1600	340	160	1190	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	640	115	120	270	70	160	1600	340	160	1190	245
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	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	225	640	115	132	270	70	176	1600	340	176	1190	245

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	2.47	0.53	2.00	3.00	1.00
Final Sat.:	1375	2750	1375	2750	2750	1375	2750	3402	723	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.16	0.23	0.08	0.05	0.10	0.05	0.06	0.47	0.47	0.06	0.29	0.18
Crit Vol:	320			66			647			88		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

$$V/C = (225 + 135 + 533 + 88) / 1375 = .71$$

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3034 Sunset Blvd./Stanford Ranch Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.798
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 113 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3207 Sunset Blvd./Pacific St.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.945  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 180 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:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	3	0	1	1	0	3	1	1	1	1	0	2

Volume Module:

Base Vol:	1185	795	95	65	620	785	855	75	845	80	130	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	1185	795	95	65	620	785	855	75	0	80	130	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	1185	795	95	65	620	785	855	75	0	80	130	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1185	795	95	65	620	785	855	75	0	80	130	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	0.00	1.00	1.00	1.00
Final Vol.:	1304	795	95	65	620	785	941	75	0	80	130	90

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	3.00	1.79	0.21	1.00	3.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	4125	2456	294	1375	4125	1375	2750	1375	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.32	0.32	0.32	0.05	0.15	0.57	0.34	0.05	0.00	0.06	0.05	0.07
Crit Vol:	435			785			0			80		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3028 W. Stanford Ranch Rd./Sioux Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.746  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	0	0	1	2	0	3	0	1	1

Volume Module:

Base Vol:	425	20	150	550	10	620	775	660	30	30	145	270
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	425	20	150	550	10	620	775	660	30	30	145	270
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:	425	20	150	550	10	620	775	660	30	30	145	270
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	425	20	150	550	10	620	775	660	30	30	145	270
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	468	20	150	605	10	620	853	660	30	30	145	270

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.92	0.08	1.00	1.97	0.03	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2637	113	1375	2705	45	1375	2750	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.11	0.22	0.22	0.45	0.31	0.16	0.02	0.02	0.04	0.20
Crit Vol:	244			308			427			48		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3027 W. Stanford Ranch Rd./W. Oaks Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.589
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Ovl), Min. Green (0 0 0), and Lanes (1 0 2 0 1).

Volume Module table with 12 columns representing traffic volumes and adjustment factors for each bound and movement.

Saturation Flow Module table with 12 columns showing saturation flow rates and adjustments for each bound and movement.

Capacity Analysis Module table with 12 columns showing volume-to-saturation ratios, critical volumes, and critical moves for each bound and movement.

\*\*\*\*\*



Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3048 W. Stanford Ranch Rd./Park Dr.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.639  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 63 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:	Ovl			Ovl			Include			Ignore					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	2	0	1	1	2	0	1	1	1	0	1	0	2

Volume Module:

Base Vol:	85	510	40	210	175	180	670	490	105	45	280	545
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	85	510	40	210	175	180	670	490	105	45	280	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	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	85	510	40	210	175	180	670	490	105	45	280	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	510	40	210	175	180	670	490	105	45	280	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	0.00
Final Vol.:	85	510	40	231	175	180	737	490	105	45	280	0

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	2.00	1.00	2.00	1.65	0.35	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	2750	2750	1375	2750	2265	485	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.06	0.19	0.03	0.08	0.06	0.13	0.27	0.22	0.22	0.03	0.10	0.00
Crit Vol:	255			116			369			140		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3039 Stanford Ranch Rd./Crest Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.732  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 69 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:	Permitted			Protected			Permitted			Permitted		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1	0	2	0	0	0	1	0	0

Volume Module:

Base Vol:	0	605	300	375	390	0	0	0	0	135	0	270
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	605	300	375	390	0	0	0	0	135	0	270
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80
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	605	300	375	390	0	0	0	0	135	0	216
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	605	300	375	390	0	0	0	0	135	0	216
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	605	300	375	390	0	0	0	0	135	0	216

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	1.34	0.66	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1905	945	1425	2850	0	0	0	0	1425	0	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.32	0.32	0.26	0.14	0.00	0.00	0.00	0.00	0.09	0.00	0.15
Crit Vol:		453		375			0				216	
Crit Moves:	****			****							****	

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3594 Stanford Ranch Rd./Fairway Dr.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.659
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 67 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors.

Saturation Flow Module: Table with 13 columns representing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 13 columns representing capacity analysis metrics.

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3593 Stanford Ranch Rd./Five Star Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 1.024
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3586 Blue Oaks Blvd./Fairway Dr./Lonetree Blvd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.560  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 52 Level Of Service: A  
 \*\*\*\*\*

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:	Ovl			Ignore			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0	1	1	2	0	3	0	1	1

Volume Module:

Base Vol:	265	180	125	40	430	650	590	755	375	105	255	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	265	180	125	40	430	0	590	755	375	105	255	20
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	265	180	125	40	430	0	590	755	375	105	255	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	265	180	125	40	430	0	590	755	375	105	255	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	292	180	125	40	430	0	649	755	375	105	255	20

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2750	2750	1375	1375	2750	1375	2750	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.11	0.07	0.09	0.03	0.16	0.00	0.24	0.18	0.27	0.08	0.06	0.01
Crit Vol:	146			215			325			85		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions

Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1055 Pleasant Grove Blvd./Fairway Dr.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.00 ~~1.00~~ .78  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 180 Level Of Service: *YC*

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:	Ovl			Ovl			<del>Ovl</del> <i>IGN</i>			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	2	0	2	0	1	1

Volume Module:

Base Vol:	315	1570	550	110	685	130	290	350	770	580	195	170
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:	315	1570	550	110	685	130	290	350	770	580	195	170
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:	315	1570	550	110	685	130	290	350	770	580	195	170
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	315	1570	550	110	685	130	290	350	770	580	195	170
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	347	1570	550	121	685	130	319	350	770	638	195	170

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2750	4125	1375	2750	4125	1375	2750	2750	1375	2750	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.13	0.38	0.40	0.04	0.17	0.09	0.12	0.13	0.56	0.23	0.07	0.12
Crit Vol:	523			61			730			319		
Crit Moves:	****			****			<del>****</del> <i>XXXX</i>			****		

\*\*\*\*\*

$V/C = .38 + .04 + .13 + .23 = .78$

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2103 Sierra College Blvd./Clover Valley Pkwy.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.799  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 93 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			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	0	2	0	0	1	0	0	0

\*\*\*\*\*

Volume Module:

Base Vol:	465	1070	0	0	710	185	395	0	425	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	465	1070	0	0	710	185	395	0	425	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	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:	465	1070	0	0	710	185	395	0	319	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	465	1070	0	0	710	185	395	0	319	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	465	1070	0	0	710	185	435	0	319	0	0	0

\*\*\*\*\*

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	2.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1425	2850	0	0	2850	1425	2850	0	1425	0	0	0

\*\*\*\*\*

Capacity Analysis Module:

Vol/Sat:	0.33	0.38	0.00	0.00	0.25	0.13	0.15	0.00	0.22	0.00	0.00	0.00
Crit Vol:	465				355				319	0		
Crit Moves:	****				****				****			

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2917 Old Hwy 65/Ferrari Ranch Rd.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.780
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 104 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Ovl), Min. Green (0 0 0), and Lanes (2 0 2 0 1).

Volume Module: Table with 12 columns representing different volume components. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane (1375), Adjustment (1.00), Lanes (2.00), and Final Sat. (2750).

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat (0.09), Crit Vol (685), and Crit Moves (\*\*\*\*).



Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2031 Old Hwy 65/Sterling Pkwy.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.798  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
 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:	Permitted			Protected			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	3	0	1	1	2	0	2	0	0	0

Volume Module:

Base Vol:	0	1840	485	410	845	0	0	0	0	180	0	425
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	1840	485	410	845	0	0	0	0	180	0	425
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.70
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	1840	485	410	845	0	0	0	0	180	0	298
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1840	485	410	845	0	0	0	0	180	0	298
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	1.10	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
Final Vol.:	0	1840	485	451	845	0	0	0	0	198	0	298

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	3.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	4275	1425	2850	2850	0	0	0	0	2850	0	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.43	0.34	0.16	0.30	0.00	0.00	0.00	0.00	0.07	0.00	0.21
Crit Vol:	613			226			0			298		
Crit Moves:	****			****						****		

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2001 Twelve Bridges Blvd./Lincoln Pkwy.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.587
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxxx
Optimal Cycle: 55 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Ovl), Min. Green (0 0 0), and Lanes (2 0 2 0 1).

Volume Module: Table with 12 columns for volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns for saturation flow. Rows include Sat/Lane (1375), Adjustment (1.00), Lanes (2.00), and Final Sat. (2750).

Capacity Analysis Module: Table with 12 columns for capacity analysis. Rows include Vol/Sat (0.09), Crit Vol (485), and Crit Moves (\*\*\*\*).

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3002 Whitney Blvd./Sioux Dr.
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.528
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 10 rows of volume-related metrics.

Saturation Flow Module: Table with 13 columns and 4 rows showing saturation flow and adjustment factors.

Capacity Analysis Module: Table with 13 columns and 4 rows showing capacity analysis metrics.

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3044 S. Whitney Blvd./Crest Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.565
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted/Protected), Rights (Include/Ovl), Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
Scenario 4.  
PM Peak Hour

Level Of Service Computation Report  
1994 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3008 Wyckford Blvd./Mountaingate Dr.  
\*\*\*\*\*

Average Delay (sec/veh): 1.0 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	0	1	0	0	0	0	1	0

Volume Module:

Base Vol:	25	215	55	5	90	5	0	0	10	40	10	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:	25	215	55	5	90	5	0	0	10	40	10	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:	25	215	55	5	90	5	0	0	10	40	10	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	25	215	55	5	90	5	0	0	10	40	10	0

Adjusted Volume Module:

Grade:	0%			0%			0%			0%		
% Cycle/Cars:	XXXX	XXXX		XXXX	XXXX		XXXX	XXXX		XXXX	XXXX	
% Truck/Comb:	XXXX	XXXX		XXXX	XXXX		XXXX	XXXX		XXXX	XXXX	
PCE Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.10	1.10	1.10	1.10	1.10
Cycl/Car PCE:	XXXX	XXXX		XXXX	XXXX		XXXX	XXXX		XXXX	XXXX	
Trck/Cmb PCE:	XXXX	XXXX		XXXX	XXXX		XXXX	XXXX		XXXX	XXXX	
Adj Vol.:	28	215	55	6	90	5	0	0	11	44	11	0

Critical Gap Module:

MoveUp Time:	2.1	XXXX	XXXXX	2.1	XXXX	XXXXX	XXXXX	XXXX	2.6	3.4	3.3	XXXXX
Critical Gp:	5.0	XXXX	XXXXX	5.0	XXXX	XXXXX	XXXXX	XXXX	5.5	6.5	6.0	XXXXX

Capacity Module:

Cnflct Vol:	95	XXXX	XXXXX	270	XXXX	XXXXX	XXXX	XXXX	93	370	368	XXXXX
Potent Cap.:	1545	XXXX	XXXXX	1275	XXXX	XXXXX	XXXX	XXXX	1243	647	700	XXXXX
Adj Cap:	1.00	XXXX	XXXXX	1.00	XXXX	XXXXX	XXXX	XXXX	1.00	0.97	0.97	XXXXX
Move Cap.:	1545	XXXX	XXXXX	1275	XXXX	XXXXX	XXXX	XXXX	1243	628	682	XXXXX

Level Of Service Module:

Stopped Del:	2.4	XXXX	XXXXX	2.8	XXXX	XXXXX	XXXXX	XXXX	2.9	6.1	5.4	XXXXX
LOS by Move:	A	*	*	A	*	*	*	*	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	638	XXXX	XXXXX
Shrd StpDel:	XXXXX	XXXX	XXXXX	XXXXX	XXXX	XXXXX	XXXXX	XXXX	XXXXX	6.0	XXXX	XXXXX
Shared LOS:	*	*	*	*	*	*	*	*	*	B	*	*
ApproachDel:	0.2			0.2			2.9			6.0		

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3010 Whitney Blvd./North-South Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.852
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 155 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control (Protected), Rights (Ovl), Min. Green (0), and Lanes (2, 0, 2, 0, 1).

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
 Scenario 4.  
 PM Peak Hour

Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3006 Whitney Blvd./W. Oaks Blvd.  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.385  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 30 Level Of Service: A  
 \*\*\*\*\*

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	T	R		L	T	R		L	T	R		L	T	R					
Control:	Permitted				Permitted				Permitted				Protected							
Rights:	Ovl				Include				Ovl				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	2	0	1	1	0	2	0	0

Volume Module:

Base Vol:	105	0	285	0	0	0	0	400	165	120	120	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:	105	0	285	0	0	0	0	400	165	120	120	0
User Adj:	1.00	1.00	0.80	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:	105	0	228	0	0	0	0	400	165	120	120	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	0	228	0	0	0	0	400	165	120	120	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.:	105	0	228	0	0	0	0	400	165	120	120	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	1425	0	1425	0	0	0	0	2850	1425	1425	2850	0

Capacity Analysis Module:

Vol/Sat:	0.07	0.00	0.16	0.00	0.00	0.00	0.00	0.14	0.12	0.08	0.04	0.00
Crit Vol:			228	0				200		120		
Crit Moves:			****					****		****		

\*\*\*\*\*

Cumulative Conditions
Scenario 4.
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3049 Park Dr./Wyckford Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.416
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 11 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*



Cumulative Conditions  
Scenario 4  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2975 Industrial Ave./Placer Corporate Dr.  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.730  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 69 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:	0	0	1	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	590	20	50	590	0	0	0	0	400	0	120
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	590	20	50	590	0	0	0	0	400	0	120
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	590	20	50	590	0	0	0	0	400	0	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	590	20	50	590	0	0	0	0	400	0	120
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	590	20	50	590	0	0	0	0	400	0	120

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
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	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1425	1425	1425	1425	0	0	0	0	1425	0	1425

Capacity Analysis Module:

Vol/Sat:	0.00	0.41	0.01	0.04	0.41	0.00	0.00	0.00	0.00	0.28	0.00	0.08
Crit Vol:	590			50			0			400		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions
Scenario 4
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #2976 Industrial Ave./South Loop Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.589
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 3 rows showing Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
Scenario 4  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5026 Athens Ave./Industrial Ave.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.788 **0.72**  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 88 Level Of Service: C  
\*\*\*\*\*

Approach:	North Bound				South Bound				East Bound				West Bound							
	L	T	R		L	T	R		L	T	R		L	T	R					
Movement:																				
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	2	0	1	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	340	520	0	0	420	300	270	0	460	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	520	0	0	420	300	270	0	460	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	520	0	0	420	300	270	0	460	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	520	0	0	420	300	270	0	460	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	374	520	0	0	420	300	270	0	460	0	0	0

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	2.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	2708	1354	0	0	1354	1354	1354	0	1354	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.14	0.38	0.00	0.00	0.31	0.22	0.20	0.00	0.34	0.00	0.00	0.00
Crit Vol:	187				420				<del>368</del> <b>480</b>	0		
Crit Moves:	****				****				****			

20% RTOR

$$\sqrt{C} = (187 + 420 + 368) / 1354 = 0.72$$

REDUCED  
34.5% →  
0 Reflect  
2ain  
ROSSING

Cumulative Conditions
Scenario 4
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #5028 Pacific St./Rocklin Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.785
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): XXXXXX
Optimal Cycle: 106 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and rows for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 12 columns and rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and rows for Vol/Sat, Crit Vol, and Crit Moves.

Cumulative Conditions  
Scenario 4  
PM Peak Hour

Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5031 Sierra College Blvd./King Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.716  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 80 Level of Service: C  
\*\*\*\*\*

Approach:	North Bound				South Bound				East Bound				West Bound							
	L	T	R		L	T	R		L	T	R		L	T	R					
Movement:																				
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Ovl				Ovl							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	10	1250	40	260	860	10	70	30	10	30	0	190
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:	10	1250	40	260	860	10	70	30	10	30	0	190
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:	10	1250	40	260	860	10	70	30	10	30	0	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	1250	40	260	860	10	70	30	10	30	0	190
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.:	10	1250	40	260	860	10	70	30	10	30	0	190

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	1.00	1.98	0.02	0.70	0.30	1.00	1.00	0.00	1.00
Final Sat.:	1375	2750	1375	1375	2718	32	962	413	1375	1375	0	1375

Capacity Analysis Module:

Vol/Sat:	0.01	0.45	0.03	0.19	0.32	0.32	0.07	0.07	0.01	0.02	0.00	0.14
Crit Vol:	625			260			70			30		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Cumulative Conditions  
Scenario 4  
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

Intersection #5038 Taylor Rd./King Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.604  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 58 Level Of Service: **PA**

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	1	0	1	1	0	1

Volume Module:

Base Vol:	290	500	280	60	290	170	60	170	130	140	110	60
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:	290	500	280	60	290	170	60	170	130	140	110	60
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:	290	500	280	60	290	170	60	170	130	140	110	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	500	280	60	290	170	60	170	130	140	110	60
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.:	290	500	280	60	290	170	60	170	130	140	110	60

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	1.28	0.72	1.00	1.26	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1375	1763	987	1375	1734	1016	1375	1375	1375	1375	1375	1375

Capacity Analysis Module:

Vol/Sat:	0.21	0.28	0.28	0.04	0.17	0.17	0.04	0.12	0.09	0.10	0.08	0.04
Crit Vol:	290			230			170			140		
Crit Moves:	****			****			****			****		

Cumulative Conditions
Scenario 4
PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5039 Sierra College Blvd./Taylor Rd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.766
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 97 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 4 rows showing Vol/Sat, Crit Vol, and Crit Moves.

\*\*\*\*\*

Cumulative Conditions  
Scenario 4  
PM Peak Hour

Level Of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5052 Sierra College Blvd./I-80 WB Ramps  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.725  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	2	0	0	3	0	0	0	2	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	1460	100	0	1500	0	0	0	0	650	0	50
Growth Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1460	0	0	1500	0	0	0	0	650	0	50
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1460	0	0	1500	0	0	0	0	650	0	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1460	0	0	1500	0	0	0	0	650	0	50
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.10
Final Vol.:	0	1460	0	0	1500	0	0	0	0	715	0	55

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	2.00	1.00	0.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
Final Sat.:	0	3000	1500	0	4500	0	0	0	0	3000	0	3000

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.49	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.24	0.00	0.02
Crit Vol:	730			0			0			358		
Crit Moves:	****			****						****		

\*\*\*\*\*



Cumulative Conditions  
Scenario 4  
PM Peak Hour

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5053 Sierra College Blvd./I-80 EB Ramps  
\*\*\*\*\*  
Cycle (sec): 100 Critical Vol./Cap. (X): 0.702  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxxx  
Optimal Cycle: 48 Level Of Service: *e B*  
\*\*\*\*\*

Approach: Movement:	North Bound			South Bound			East Bound			West Bound					
	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted			Permitted			Permitted			Permitted					
Rights:	Include			Ignore			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	3	0	0	0	2	0	0	0	1	0	0	0	0

Volume Module:

Base Vol:	0	2070	0	0	1270	190	660	0	80	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2070	0	0	1270	0	660	0	80	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2070	0	0	1270	0	660	0	80	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2070	0	0	1270	0	660	0	80	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	2070	0	0	1270	0	726	0	80	0	0	0

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
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	3.00	0.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	4500	0	0	3000	1500	3000	0	1500	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.46	0.00	0.00	0.42	0.00	0.24	0.00	0.05	0.00	0.00	0.00
Crit Vol:	690		0				363			0		
Crit Moves:	****		****				****					

Cumulative Conditions  
Scenario 4  
PM Peak Hour

Level of Service Computation Report

Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #5054 Sierra College Blvd./Rocklin Rd.

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.678

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 71 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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	2	0	3	0	1	1

Volume Module:

Base Vol:	660	1740	100	160	1010	360	180	460	560	50	400	150
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:	660	1740	100	160	1010	360	180	460	560	50	400	150
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:	660	1740	100	160	1010	360	180	460	560	50	400	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	660	1740	100	160	1010	360	180	460	560	50	400	150
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	726	1740	100	176	1010	360	198	460	560	55	400	150

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	2750	4125	1375	2750	4125	1375	2750	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.26	0.42	0.07	0.06	0.24	0.26	0.07	0.11	0.41	0.02	0.10	0.11
Crit Vol:	363			337			99			133		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Scenario 3  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3593 Stanford Ranch Rd./Five Star Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.752  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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			Split Phase			Split Phase		
Rights:	Ovl			Ovl			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	1	1	0	0	1	1

Volume Module:

Base Vol:	215	1700	595	185	1065	145	120	90	450	680	45	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	215	1700	595	185	1065	145	120	90	0	680	45	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	215	1700	595	185	1065	145	120	90	0	680	45	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	1700	595	185	1065	145	120	90	0	680	45	260
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	0.00	1.10	1.00	1.00
Final Vol.:	237	1700	595	204	1065	145	132	90	0	748	45	260

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	4.00	1.00	2.00	3.00	1.00	1.19	0.81	1.00	1.89	0.11	1.00
Final Sat.:	2750	5500	1375	2750	4125	1375	1635	1115	1375	2594	156	1375

Capacity Analysis Module:

Vol/Sat:	0.09	0.31	0.43	0.07	0.26	0.11	0.08	0.08	0.00	0.29	0.29	0.19
Crit Vol:		425		102				111			397	
Crit Moves:		****		****				****			****	

$$V/C = (102 + 567 + 111 + 397) / 1375 = .86$$

Scenario 3  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3043 Sunset Blvd./W. Oaks Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.767  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 98 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:	Ovl			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	3	0	1	3

Volume Module:

Base Vol:	140	230	335	230	90	20	30	1780	150	115	880	700
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:	140	230	335	230	90	20	30	1780	150	115	880	700
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:	140	230	335	230	90	20	30	1780	150	115	880	700
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	230	335	230	90	20	30	1780	150	115	880	700
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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	140	230	335	253	90	20	30	1780	150	115	880	700

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1375	2750	1375	2750	1375	1375	1375	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.10	0.08	0.24	0.09	0.07	0.01	0.02	0.43	0.11	0.08	0.21	0.51
Crit Vol:			335			127			593			0
Crit Moves:			****			****			****			****

\*\*\*\*\*

Scenario 3  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #3029 Sunset Blvd./Blue Oaks Blvd.

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.788

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	1	0	1	0	1	0	3	0	1	2

Volume Module:

Base Vol:	500	40	320	60	15	10	30	1925	420	195	1195	110
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:	500	40	320	60	15	10	30	1925	420	195	1195	110
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:	500	40	320	60	15	10	30	1925	420	195	1195	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	500	40	320	60	15	10	30	1925	420	195	1195	110
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:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
Final Vol.:	550	40	320	60	15	10	30	1925	420	215	1195	110

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	1.00	1.00	1.00	0.60	0.40	1.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	2750	1375	1375	1375	825	550	1375	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.20	0.03	0.23	0.04	0.02	0.02	0.02	0.47	0.31	0.08	0.29	0.08
Crit Vol:	275			60			642			108		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Scenario 3  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3207 Sunset Blvd./Pacific St.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.795  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 111 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			Ignore			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	3	0	1	1	0	3	1	1	1	1	0	2

Volume Module:

Base Vol:	1135	915	105	55	575	820	735	105	960	80	130	95
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	1135	915	105	55	575	0	735	105	0	80	130	95
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	1135	915	105	55	575	0	735	105	0	80	130	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1135	915	105	55	575	0	735	105	0	80	130	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	0.00	1.00	1.00	1.00
Final Vol.:	1249	915	105	55	575	0	809	105	0	80	130	95

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	3.00	1.79	0.21	1.00	3.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	4125	2467	283	1375	4125	1375	2750	1375	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.30	0.37	0.37	0.04	0.14	0.00	0.29	0.08	0.00	0.06	0.05	0.07
Crit Vol:	416			192			404			80		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Scenario 3  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

```

*****
Intersection #3022 Sunset Blvd./Atherton Rd.
*****
Cycle (sec):          100          Critical Vol./Cap. (X):          0.854
Loss Time (sec):      0 (Y+R = 4 sec) Average Delay (sec/veh):          xxxxxxx
Optimal Cycle:        157          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:      Ovl      Ovl      Ovl      Ovl
Min. Green:      0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes:      2 0 1 0 1 2 0 1 0 2 2 0 3 0 1 1 0 3 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:      420 40 250 740 35 1080 590 845 115 55 745 345
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: 420 40 250 740 35 1080 590 845 115 55 745 345
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: 420 40 250 740 35 1080 590 845 115 55 745 345
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 420 40 250 740 35 1080 590 845 115 55 745 345
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: 1.10 1.00 1.00 1.10 1.00 1.10 1.10 1.00 1.00 1.00 1.00 1.00
Final Vol.: 462 40 250 814 35 1188 649 845 115 55 745 345
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane: 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375
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: 2.00 1.00 1.00 2.00 1.00 2.00 2.00 3.00 1.00 1.00 3.00 1.00
Final Sat.: 2750 1375 1375 2750 1375 2750 2750 4125 1375 1375 4125 1375
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat: 0.17 0.03 0.18 0.30 0.03 0.43 0.24 0.20 0.08 0.04 0.18 0.25
Crit Vol: 250 407 325 248
Crit Moves: **** **** **** ****
*****

```

Scenario 4  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3043 Sunset Blvd./W. Oaks Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.748  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Ovl			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	3	0	1	1

Volume Module:

Base Vol:	145	220	335	235	80	20	30	1690	135	90	900	680
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:	145	220	335	235	80	20	30	1690	135	90	900	680
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:	145	220	335	235	80	20	30	1690	135	90	900	680
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	220	335	235	80	20	30	1690	135	90	900	680
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	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	145	220	335	259	80	20	30	1690	135	90	900	680

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	1.00	2.00	1.00	2.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1375	2750	1375	2750	1375	1375	1375	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.11	0.08	0.24	0.09	0.06	0.01	0.02	0.41	0.10	0.07	0.22	0.49
Crit Vol:	335			130			563			0		
Crit Moves:	****			****			****			****		

\*\*\*\*\*



Scenario 4  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3029 Sunset Blvd./Blue Oaks Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.798  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 113 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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	1	0	1	0	1	0	3	0	1	1

Volume Module:

Base Vol:	490	40	320	60	15	10	30	1855	405	185	1185	110
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:	490	40	320	60	15	10	30	1855	405	185	1185	110
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:	490	40	320	60	15	10	30	1855	405	185	1185	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	490	40	320	60	15	10	30	1855	405	185	1185	110
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:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	539	40	320	60	15	10	30	1855	405	185	1185	110

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	1.00	1.00	1.00	0.60	0.40	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	2750	1375	1375	1375	825	550	1375	4125	1375	1375	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.20	0.03	0.23	0.04	0.02	0.02	0.02	0.45	0.29	0.13	0.29	0.08
Crit Vol:	270			25			618			185		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Scenario 4  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3593 Stanford Ranch Rd./Five Star Blvd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.769  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 99 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:	Ovl			Ovl			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	4	0	1	1	2	0	3	0	1	1

Volume Module:

Base Vol:	215	1725	595	200	1310	145	120	90	450	670	45	260
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	215	1725	595	200	1310	145	120	90	0	670	45	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	215	1725	595	200	1310	145	120	90	0	670	45	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	1725	595	200	1310	145	120	90	0	670	45	260
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	0.00	1.10	1.00	1.00
Final Vol.:	237	1725	595	220	1310	145	132	90	0	737	45	260

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	4.00	1.00	2.00	3.00	1.00	1.19	0.81	1.00	1.88	0.12	1.00
Final Sat.:	2750	5500	1375	2750	4125	1375	1635	1115	1375	2592	158	1375

Capacity Analysis Module:

Vol/Sat:	0.09	0.31	0.43	0.08	0.32	0.11	0.08	0.08	0.00	0.28	0.28	0.19
Crit Vol:	119			437			111			391		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Scenario 4  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3207 Sunset Blvd./Pacific St.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.867  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 171 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			Split Phase			Split Phase		
Rights:	Include			Ignore			Ignore			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	3	0	1	1	0	3	1	1	1	0	2	1

Volume Module:

Base Vol:	1185	795	95	65	620	785	855	75	845	80	130	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	1185	795	95	65	620	0	855	75	0	80	130	90
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	1185	795	95	65	620	0	855	75	0	80	130	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1185	795	95	65	620	0	855	75	0	80	130	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	0.00	1.10	1.00	0.00	1.00	1.00	1.00
Final Vol.:	1304	795	95	65	620	0	941	75	0	80	130	90

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	3.00	1.79	0.21	1.00	3.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	4125	2456	294	1375	4125	1375	2750	1375	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.32	0.32	0.32	0.05	0.15	0.00	0.34	0.05	0.00	0.06	0.05	0.07
Crit Vol:	435			207			471			80		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

Scenario 4  
Mitigated

Level Of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3020 Sunset Blvd./W. Stanford Ranch Rd.  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.803  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 116 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:	Ovl			Ovl			Ovl			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	1	2	0	3	0	1	1

Volume Module:

Base Vol:	75	285	250	675	80	155	610	855	35	75	390	560
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	285	250	675	80	155	610	855	35	75	390	560
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	285	250	675	80	155	610	855	35	75	390	560
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	285	250	675	80	155	610	855	35	75	390	560
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:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	83	285	250	743	80	155	671	855	35	83	390	560

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
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:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	2750	4125	1375	2750	4125	1375	2750	4125	1375	2750	4125	1375

Capacity Analysis Module:

Vol/Sat:	0.03	0.07	0.18	0.27	0.02	0.11	0.24	0.21	0.03	0.03	0.09	0.41
Crit Vol:	250			0			336			560		
Crit Moves:	****			****			****			****		

\*\*\*\*\*

**Appendix E**  
**Air Quality URBEMIS Model Output**



**Summary of Estimated Construction/Operational Emissions**

Project Number: 10481-00  
 Project Name: NW Rocklin - Sunset Ranchos  
 Calculation Method: URBEMIS7G Model, 1998  
 Trip Gen Rate: Fehr & Peers Project Fax 10-6-00

Land Use:		Land Use Distribution			Daily Vehicle Trip Gen Rt	Daily % Worker	Estd Daily Vehicle Auto Trips (trip/day)		
		Sc 2 Ex	Sc 3 Prop	Sc 4 noHM			Sc 2 Ex	Sc 3 Prop	Sc 4 noHM
Sunset Ranchos	(SF du)	130	3,187	2,868	9.0		1,170.0	28,683.0	25,812.0
	(MF du)		1,186	1,067	6.5		---	7,709.0	6,935.5
	(ksf C)		344	310	35.0		---	12,043.5	10,839.5
	(ksf BP)		158	142	17.7		---	2,798.4	2,518.7
Parcel K	(SF du)	5	113	102	9.0		45.0	1,017.0	918.0
Atherton Tech Center	(ac BP/LI)	70	70	70	125.1		8,759.8	8,759.8	8,759.8
Herman Miller	(ksf M)	358	358	358	7.6		2,720.8	2,720.8	2,720.8
	(ksf BP)	1,346	675	900	17.7		23,824.2	11,947.5	15,930.0
	(ksf LI)		675		7.6		---	5,130.0	---
Placer Ranch	(ksf C)		305	274	35.0		---	10,671.5	9,604.0
	(ksf BP)	1,803	523	470	17.7		31,913.1	9,251.8	8,326.1
	(ksf LI)		915	823	7.6		---	8,952.5	6,257.1
JBC Investments	(ksf C)		321	289	35.0		---	11,217.5	10,097.5
	(ksf BP)	1,137	587	528	17.7		20,124.9	10,389.9	9,350.9
<b>TOTAL:</b>							<b>88,557.8</b>	<b>129,292.1</b>	<b>118,069.9</b>
<b>Land Use Totals:</b>									
TOTAL:	(SF du)	135	3,300	2,970	9.0	---	1,215.0	29,700.0	26,730.0
	(MF du)	0	1,186	1,067	6.5	---	0.0	7,709.0	6,935.5
	(ksf C)	0	970	873	35.0	2.0	0.0	33,932.5	30,541.0
	(ksf M)	358	358	358	7.6	48.0	2,720.8	2,720.8	2,720.8
	(ksf BP)	4,286	1,943	2,041	17.7	48.0	75,862.2	34,387.6	36,125.7
	(ksf LI)	0	1,590	823	7.6	50.0	0.0	12,082.5	6,257.1
	(ac BP/LI)	70	70	70	125.1	41.5	8,759.8	8,759.8	8,759.8

**CONSTRUCTION EMISSION ESTIMATES**

URBEMIS/EMFAC7G Setup: Default - Sacto Metropolitan Air Basin

Analysis Year: 2002  
 Demolition: n/inc - per Sacto default  
 Site Grading: 10 ac/day - 10 pc equip/day  
 Const Worker Trips: Included per land use  
 Stationary Equipment: Included per land use  
 Mobile Equip: 14 pc equip/day  
 Arch Coatings/Asphalt: n/inc - per Sacto default

**Construction Source Emission Rates**

	Sc 2 Ex	Sc 3 Prop	Sc 4 noHM
ROC: (lb/day) s	45.2	61.9	59.7
NOx: (lb/day) s	414.2	480.6	477.4
CO: (lb/day) s	41.7	86.5	80.5
PM10: (lb/day) s	137.7	149.1	148.5

**AREA SOURCE EMISSION ESTIMATES**

URBEMIS/EMFAC7G Setup: Default - Sacto Metropolitan Air Basin

Analysis Year: n/a  
 Natural Gas: Default consumption rates  
 Woodstoves: 1 cord/season - 25% of households  
 Fireplaces: 1 cord/season - 10% of households  
 Consumer Products: n/inc - per Sacto default

**Area Source Emission Rates**

	Sc 2 Ex	Sc 3 Prop	Sc 4 noHM
ROC: (lb/day) w	121.6	3,969.8	3,572.6
NOx: (lb/day) w	56.5	887.6	801.0
CO: (lb/day) w	262.6	8,329.7	7,496.8
PM10: (lb/day) w	18.2	602.0	541.8

**MOTOR VEHICLE EMISSION ESTIMATES**

URBEMIS/EMFAC7G Setup: Default - Sacto Metropolitan Air Basin

Analysis Year: 2020  
 Ozone/CO Season Temp: Default - Sacto  
 Fleet Mix: Default - Sacto  
 Avg Trip Length: Default - Sacto  
 Starts per Soaktime: Default - Sacto  
 Avg Trip Speed: Default - Sacto

**Mobile Source Emission Rates**

	Sc 2 Ex	Sc 3 Prop	Sc 4 noHM
ROC: (lb/day) s	364.5	516.3	467.5
NOx: (lb/day) s	1,057.6	1,403.6	1,279.2
CO: (lb/day) s	3,698.4	4,900.7	4,468.7
PM10: (lb/day) s	552.0	724.7	660.2





URBEMIS 7G: Version 3.2

File Name: nwrock2.URB  
 Project Name: NW Rocklin - Sc 2  
 Project Location: Sacramento County

DETAILED REPORT - Summer

Total Land Use Area to be Developed (Estimated): 310 acres  
 Retail/Office/Institutional Square Footage: 5810958  
 Single Family Units 135 Multi-family Units 0

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	10.38	164.70	-	114.66
Const. Worker Trips	15.56	22.01	41.74	4.22
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	15.60	224.48	-	18.66
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, unmitigated)	45.24	414.21	41.74	137.71

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	10.38	164.70	-	114.66
Const. Worker Trips	15.56	22.01	41.74	4.22
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	15.60	224.48	-	18.66
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, mitigated)	45.24	414.21	41.74	137.71

Construction-Related Mitigation Measures

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	2.41	33.00	13.27	0.06
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	2.41	33.00	13.27	0.06

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	0.52	7.01	13.15	0.01
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	0.52	7.01	13.15	0.01

Area Source Mitigation Measures

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2020 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.00 trips / dwelling unit	135.00	1,215.00
Office park	17.70 trips / 1000 sq. ft.	4286.00	75,862.20
Industrial park	125.15 trips / acres	70.00	8,760.50
Manufacturing	7.60 trips / 1000 sq. ft.	358.00	2,720.80

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)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35	35	35	35	35	35
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Office park				48.0	24.0	28.0
Industrial park				41.5	20.8	37.8
Manufacturing				48.0	24.0	28.0

## UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	5.76	14.90	52.91	7.82
Office park	312.32	899.49	3155.26	468.98
Industrial park	32.93	108.45	370.39	56.86
Manufacturing	13.50	34.79	119.84	18.30
TOTAL EMISSIONS (lbs/day)	364.52	1057.63	3698.39	551.96

Includes correction for passby trips.

Does not include double counting adjustment for internal trips.

## MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	5.76	14.90	52.91	7.82
Office park	312.32	899.49	3155.26	468.98
Industrial park	32.93	108.45	370.39	56.86
Manufacturing	13.50	34.79	119.84	18.30
TOTAL EMISSIONS (lbs/day)	364.52	1057.63	3698.39	551.96

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 Infrastructure 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

Changes Made to the Default Values

Construction Related:

The demolition emissions option switch has been changed

Area Source Related:

The amount of wood burned per year and/or the percentage of wood stoves has been modified by the user.

The fireplace default values have been modified by the user.

Operational/Vehicle Related:



URBEMIS 7G: Version 3.2

File Name: nwrock2.URB  
 Project Name: NW Rocklin - Sc 2  
 Project Location: Sacramento County

DETAILED REPORT - Winter

Total Land Use Area to be Developed (Estimated): 310 acres  
 Retail/Office/Institutional Square Footage: 5810958  
 Single Family Units 135 Multi-family Units 0

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	10.38	164.70	-	114.66
Const. Worker Trips	15.56	22.01	41.74	4.22
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	15.60	224.48	-	18.66
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, unmitigated)	45.24	414.21	41.74	137.71

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	10.38	164.70	-	114.66
Const. Worker Trips	15.56	22.01	41.74	4.22
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	15.60	224.48	-	18.66
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, mitigated)	45.24	414.21	41.74	137.71

Construction-Related Mitigation Measures

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	2.41	33.00	13.27	0.06
Wood Stoves	17.05	22.28	136.60	2.67
Fireplaces	102.17	1.16	112.70	15.44
Landscaping - No winter emissions				
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	121.63	56.45	262.57	18.17

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	0.52	7.01	13.15	0.01
Wood Stoves	17.05	22.28	136.60	2.67
Fireplaces	102.17	1.16	112.70	15.44
Landscaping - No Winter Emissions				
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	119.74	30.45	262.45	18.12

Area Source Mitigation Measures

## OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2020 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC7G (10/96)

## Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.00 trips / dwelling unit	135.00	1,215.00
Office park	17.70 trips / 1000 sq. ft.	4286.00	75,862.20
Industrial park	125.15 trips / acres	70.00	8,760.50
Manufacturing	7.60 trips / 1000 sq. ft.	358.00	2,720.80

## 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)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35	35	35	35	35	35
% of Trips - Residential	27.3	21.2	51.5			

## % of Trips - Commercial (by land use)

Office park	48.0	24.0	28.0
Industrial park	41.5	20.8	37.8
Manufacturing	48.0	24.0	28.0



## UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	6.54	16.45	65.14	7.82
Office park	357.46	995.10	3871.16	468.98
Industrial park	37.71	119.81	449.24	56.86
Manufacturing	15.06	38.40	145.65	18.30

	ROG	NOX	CO	PM10
TOTAL EMISSIONS (lbs/day)	416.77	1169.76	4531.18	551.96

Includes correction for passby trips.

Does not include double counting adjustment for internal trips.

## MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	6.54	16.45	65.14	7.82
Office park	357.46	995.10	3871.16	468.98
Industrial park	37.71	119.81	449.24	56.86
Manufacturing	15.06	38.40	145.65	18.30

	ROG	NOX	CO	PM10
TOTAL EMISSIONS (lbs/day)	416.77	1169.76	4531.18	551.96

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 Infrastructure 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

Changes Made to the Default Values

Construction Related:

The demolition emissions option switch has been changed

Area Source Related:

The amount of wood burned per year and/or the percentage of wood stoves has been modified by the user.

The fireplace default values have been modified by the user.

Operational/Vehicle Related:



## URBEMIS 7G: Version 3.2

File Name: nwrock3.URB  
 Project Name: NW Rocklin - Sc 3  
 Project Location: Sacramento County

## DETAILED REPORT - Summer

Total Land Use Area to be Developed (Estimated): 1012 acres  
 Retail/Office/Institutional Square Footage: 6027958  
 Single Family Units 3300 Multi-family Units 1186

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	32.22	45.58	86.45	8.74
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, unmitigated)	61.89	480.56	86.45	149.09

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	32.22	45.58	86.45	8.74
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, mitigated)	61.89	480.56	86.45	149.09

## Construction-Related Mitigation Measures

## AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	8.27	108.57	45.57	0.21
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	8.27	108.57	45.57	0.21

## AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	6.16	80.09	42.00	0.15
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	6.16	80.09	42.00	0.15

## Area Source Mitigation Measures

## OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2020 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC7G (10/96)

## Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.00 trips / dwelling unit	3300.00	29,700.00
Condo/townhouse genera	6.50 trips / dwelling unit	1186.00	7,709.00
Regnl shop. center < 5	35.00 trips / 1000 sq. ft.	970.00	33,950.00
Office park	17.70 trips / 1000 sq. ft.	1943.00	34,391.10
General light industry	7.60 trips / 1000 sq. ft.	1590.00	12,084.00
Industrial park	125.10 trips / acres	70.00	8,757.00
Manufacturing	7.60 trips / 1000 sq. ft.	358.00	2,720.80

## 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

	Home-Work	Home-Shop	Home-Other	Commercial Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35	35	35	35	35	35
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Regnl shop. center < 570000 sf				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0
Industrial park				41.5	20.8	37.8
Manufacturing				48.0	24.0	28.0

UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	140.88	364.20	1293.25	191.22
Condo/townhouse general	39.44	94.53	335.68	49.63
Regnl shop, center < 5700	87.50	237.80	812.54	113.87
Office park	141.59	407.77	1430.39	212.60
General light industry	60.43	156.05	538.80	82.18
Industrial park	32.92	108.41	370.24	56.84
Manufacturing	13.50	34.79	119.84	18.30

	ROG	NOx	CO	PM10
TOTAL EMISSIONS (lbs/day)	516.26	1403.56	4900.74	724.65

Includes correction for passby trips.  
Does not include double counting adjustment for internal trips.

MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	140.88	364.20	1293.25	191.22
Condo/townhouse general	39.44	94.53	335.68	49.63
Regnl shop, center < 5700	87.50	237.80	812.54	113.87
Office park	141.59	407.77	1430.39	212.60
General light industry	60.43	156.05	538.80	82.18
Industrial park	32.92	108.41	370.24	56.84
Manufacturing	13.50	34.79	119.84	18.30

	ROG	NOx	CO	PM10
TOTAL EMISSIONS (lbs/day)	516.26	1403.56	4900.74	724.65

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 Infrastructure 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



Changes Made to the Default Values

Construction Related:

The demolition emissions option switch has been changed

Area Source Related:

The amount of wood burned per year and/or the percentage of wood stoves has been modified by the user.

The fireplace default values have been modified by the user.

Operational/Vehicle Related:



URBEMIS 7G: Version 3.2

File Name: nwrock3.URB  
 Project Name: NW Rocklin - Sc 3  
 Project Location: Sacramento County

## DETAILED REPORT - Winter

Total Land Use Area to be Developed (Estimated): 1012 acres  
 Retail/Office/Institutional Square Footage: 6027958  
 Single Family Units 3300 Multi-family Units 1186

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	32.22	45.58	86.45	8.74
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, unmitigated)	61.89	480.56	86.45	149.09

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	32.22	45.58	86.45	8.74
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, mitigated)	61.89	480.56	86.45	149.09

## Construction-Related Mitigation Measures

## AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	8.27	108.57	45.57	0.21
Wood Stoves	566.46	740.48	4539.12	88.86
Fireplaces	3395.08	36.55	3744.97	512.97
Landscaping - No winter emissions				
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	3969.82	887.59	8329.66	602.03

## AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	6.16	80.09	42.00	0.15
Wood Stoves	566.46	740.48	4539.12	88.86
Fireplaces	3395.08	38.55	3744.97	512.97
Landscaping - No Winter Emissions				
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	3967.71	859.11	8326.09	601.98

## Area Source Mitigation Measures

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2020 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.00 trips / dwelling unit	3300.00	29,700.00
Condo/townhouse genera	6.50 trips / dwelling unit	1186.00	7,709.00
Regnl shop. center < 5	35.00 trips / 1000 sq. ft.	970.00	33,950.00
Office park	17.70 trips / 1000 sq. ft.	1943.00	34,391.10
General light industry	7.60 trips / 1000 sq. ft.	1590.00	12,084.00
Industrial park	125.10 trips / acres	70.00	8,757.00
Manufacturing	7.60 trips / 1000 sq. ft.	358.00	2,720.80

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)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35	35	35	35	35	35
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Regnl shop. center < 570000 sf				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0
Industrial park				41.5	20.8	37.8
Manufacturing				48.0	24.0	28.0

## UNMITIGATED EMISSIONS

	ROG	NOX	CO	PM10
Single family housing	159.80	402.07	1592.20	191.22
Condo/townhouse general	44.35	104.36	413.28	49.63
Regnl shop. center < 5700	102.21	269.32	1012.42	113.87
Office park	162.05	451.11	1754.94	212.60
General light industry	67.48	172.16	655.25	82.18
Industrial park	37.69	119.77	449.06	56.84
Manufacturing	15.06	38.40	145.65	18.30

	ROG	NOX	CO	PM10
TOTAL EMISSIONS (lbs/day)	588.65	1557.19	6022.79	724.65

Includes correction for passby trips.  
Does not include double counting adjustment for internal trips.

## MITIGATED EMISSIONS

	ROG	NOX	CO	PM10
Single family housing	159.80	402.07	1592.20	191.22
Condo/townhouse general	44.35	104.36	413.28	49.63
Regnl shop. center < 5700	102.21	269.32	1012.42	113.87
Office park	162.05	451.11	1754.94	212.60
General light industry	67.48	172.16	655.25	82.18
Industrial park	37.69	119.77	449.06	56.84
Manufacturing	15.06	38.40	145.65	18.30

	ROG	NOX	CO	PM10
TOTAL EMISSIONS (lbs/day)	588.65	1557.19	6022.79	724.65

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 Infrastructure 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

Changes Made to the Default Values

Construction Related:

The demolition emissions option switch has been changed

Area Source Related:

The amount of wood burned per year and/or the percentage of wood stoves has been modified by the user.

The fireplace default values have been modified by the user.

Operational/Vehicle Related:





URBEMIS 7G: Version 3.2

File Name: nwrock4.URB  
 Project Name: NW Rocklin - Sc 4  
 Project Location: Sacramento County

## DETAILED REPORT - Summer

Total Land Use Area to be Developed (Estimated): 905 acres  
 Retail/Office/Institutional Square Footage: 5261958  
 Single Family Units 2970 Multi-family Units 1067

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	30.00	42.45	80.50	8.14
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, unmitigated)	59.67	477.43	80.50	148.49

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	30.00	42.45	80.50	8.14
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, mitigated)	59.67	477.43	80.50	148.49

## Construction-Related Mitigation Measures

## AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	7.60	99.90	41.89	0.19
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	7.60	99.90	41.89	0.19

## AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	5.58	72.51	38.68	0.14
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.00	0.00	0.00	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	5.58	72.51	38.68	0.14

## Area Source Mitigation Measures

## OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2020 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC7G (10/96)

## Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.00 trips / dwelling unit	2970.00	26,730.00
Condo/townhouse genera	6.50 trips / dwelling unit	1067.00	6,935.50
Regnl shop. center < 5	35.00 trips / 1000 sq. ft.	873.00	30,555.00
Office park	17.70 trips / 1000 sq. ft.	2041.00	36,125.70
General light industry	7.60 trips / 1000 sq. ft.	823.00	6,254.80
Industrial park	125.10 trips / acres	70.00	8,757.00
Manufacturing	7.60 trips / 1000 sq. ft.	358.00	2,720.80

## 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)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35	35	35	35	35	35
% of Trips - Residential	27.3	21.2	51.5			

## % of Trips - Commercial (by land use)

Regnl shop. center < 570000 sf	2.0	1.0	97.0
Office park	48.0	24.0	28.0
General light industry	50.0	25.0	25.0
Industrial park	41.5	20.8	37.8
Manufacturing	48.0	24.0	28.0

UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	126.79	327.78	1163.93	172.10
Condo/townhouse general	35.48	85.05	302.00	44.65
Regnl shop. center < 5700	78.75	214.02	731.28	102.48
Office park	148.73	428.34	1502.54	223.33
General light industry	31.28	80.77	278.89	42.54
Industrial park	32.92	108.41	370.24	56.84
Manufacturing	13.50	34.79	119.84	18.30
<b>TOTAL EMISSIONS (lbs/day)</b>	<b>467.45</b>	<b>1279.16</b>	<b>4468.72</b>	<b>660.24</b>

Includes correction for passby trips.  
Does not include double counting adjustment for internal trips.

MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	126.79	327.78	1163.93	172.10
Condo/townhouse general	35.48	85.05	302.00	44.65
Regnl shop. center < 5700	78.75	214.02	731.28	102.48
Office park	148.73	428.34	1502.54	223.33
General light industry	31.28	80.77	278.89	42.54
Industrial park	32.92	108.41	370.24	56.84
Manufacturing	13.50	34.79	119.84	18.30
<b>TOTAL EMISSIONS (lbs/day)</b>	<b>467.45</b>	<b>1279.16</b>	<b>4468.72</b>	<b>660.24</b>

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 Infrastructure 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

Changes Made to the Default Values

Construction Related:

The demolition emissions option switch has been changed

Area Source Related:

The amount of wood burned per year and/or the percentage of wood stoves has been modified by the user.

The fireplace default values have been modified by the user.

Operational/Vehicle Related:



URBEMIS 7G: Version 3.2

File Name: nwrock4.URB  
 Project Name: NW Rocklin - Sc 4  
 Project Location: Sacramento County

## DETAILED REPORT - Winter

Total Land Use Area to be Developed (Estimated): 905 acres  
 Retail/Office/Institutional Square Footage: 5261958  
 Single Family Units 2970 Multi-family Units 1067

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	30.00	42.45	80.50	8.14
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, unmitigated)	59.67	477.43	80.50	148.49

## CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.02	195.74	-	118.50
Const. Worker Trips	30.00	42.45	80.50	8.14
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	14.94	236.22	-	21.68
Architectural Coatings	0.00			
Asphalt Offgasing	0.00			
TOTALS (ppd, mitigated)	59.67	477.43	80.50	148.49

## Construction-Related Mitigation Measures

## AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	7.60	99.90	41.89	0.19
Wood Stoves	509.77	666.36	4084.81	79.96
Fireplaces	3055.27	34.69	3370.14	461.63
Landscaping - No winter emissions				
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	3572.64	800.95	7496.83	541.78

## AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	5.58	72.51	38.68	0.14
Wood Stoves	509.77	666.36	4084.81	79.96
Fireplaces	3055.27	34.69	3370.14	461.63
Landscaping - No Winter Emissions				
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	3570.62	773.56	7493.62	541.73

## Area Source Mitigation Measures

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2020 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.00 trips / dwelling unit	2970.00	26,730.00
Condo/townhouse genera	6.50 trips / dwelling unit	1067.00	6,935.50
Regnl shop. center < 5	35.00 trips / 1000 sq. ft.	873.00	30,555.00
Office park	17.70 trips / 1000 sq. ft.	2041.00	36,125.70
General light industry	7.60 trips / 1000 sq. ft.	823.00	6,254.80
Industrial park	125.10 trips / acres	70.00	8,757.00
Manufacturing	7.60 trips / 1000 sq. ft.	358.00	2,720.80

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)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35	35	35	35	35	35
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Regnl shop. center < 570000 sf				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0
Industrial park				41.5	20.8	37.8
Manufacturing				48.0	24.0	28.0



UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	143.82	361.87	1432.98	172.10
Condo/townhouse general	39.90	93.89	371.81	44.65
Regnl shop. center < 5700	91.99	242.39	911.18	102.48
Office park	170.22	473.87	1843.45	223.33
General light industry	34.93	89.11	339.16	42.54
Industrial park	37.69	119.77	449.06	56.84
Manufacturing	15.06	38.40	145.65	18.30
<b>TOTAL EMISSIONS (lbs/day)</b>	<b>533.62</b>	<b>1419.29</b>	<b>5493.29</b>	<b>660.24</b>

Includes correction for passby trips.  
Does not include double counting adjustment for internal trips.

MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Single family housing	143.82	361.87	1432.98	172.10
Condo/townhouse general	39.90	93.89	371.81	44.65
Regnl shop. center < 5700	91.99	242.39	911.18	102.48
Office park	170.22	473.87	1843.45	223.33
General light industry	34.93	89.11	339.16	42.54
Industrial park	37.69	119.77	449.06	56.84
Manufacturing	15.06	38.40	145.65	18.30
<b>TOTAL EMISSIONS (lbs/day)</b>	<b>533.62</b>	<b>1419.29</b>	<b>5493.29</b>	<b>660.24</b>

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 Infrastructure 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

Changes Made to the Default Values

Construction Related:

The demolition emissions option switch has been changed

Area Source Related:

The amount of wood burned per year and/or the percentage of wood stoves has been modified by the user.

The fireplace default values have been modified by the user.

Operational/Vehicle Related:



## **Appendix F**

### **Air Quality CALINE4 Model Output**



**Summary of CALINE4 Results**  
**SCENARIO 2 - PREDICTED MAXIMUM 1-HOUR AND 8-HOUR CARBON**  
**MONOXIDE CONCENTRATIONS**  
**(IN PARTS PER MILLION)**

Location	Carbon Monoxide (Cumulative Conditons)	
	1-hour	8-hour
	pm	pm
Sunset Blvd./Atherton Dr.	8.5	4.7
Pleasant Grove Blvd./Fairway Dr.	5.4	3.0
Sunset Blvd./West Stanford Ranch Rd.	5.1	3.0
Sioux Dr./West Stanford Ranch Rd.	7.8	4.2
Ambient Background	3	1.6
California Standards	20.0	20.0

**Summary of CALINE4 Results**  
**SCENARIO 3 - PREDICTED MAXIMUM 1-HOUR AND 8-HOUR CARBON**  
**MONOXIDE CONCENTRATIONS**  
**(IN PARTS PER MILLION)**

Location	Carbon Monoxide (Cumulative Conditions)	
	1-hour	8-hour
	pm	pm
Sunset Blvd./Atherton Dr.	6.1	3.4
Pleasant Grove Blvd./Fairway Dr.	5.5	3.1
Sunset Blvd./West Stanford Ranch Rd.	4.5	2.5
Sioux Dr./West Stanford Ranch Rd.	4.4	2.5
Ambient Background	3	1.6
California Standards	20.0	20.0



**Summary of CALINE4 Results**  
**SCENARIO 4 - PREDICTED MAXIMUM 1-HOUR AND 8-HOUR CARBON**  
**MONOXIDE CONCENTRATIONS**  
**(IN PARTS PER MILLION)**

Location	Carbon Monoxide (Cumulative Conditons)	
	1-hour	8-hour
	pm	pm
Sunset Blvd./Atherton Dr.	4.5	2.5
Pleasant Grove Blvd./Fairway Dr.	5.5	3.1
Sunset Blvd./West Stanford Ranch Rd.	4.4	2.5
Sioux Dr./West Stanford Ranch Rd.	5.4	2.9
Ambient Background	3	1.6
California Standards	20.0	20.0



**Intersection Turning Movements/CALINE Input**

**Project Number:** 10481-00  
**Project Name:** NW Rocklin Annex EIR  
**Traffic Volumes:** Cumulative Conditions-Scenario 2  
**Emission Factors:** ITS CO Protocol, p.A-8, p.B-7, December 1997

**Sunset Blvd./Atherton Dr. (pm)      Sunset Blvd./Atherton Dr. (pm)**

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sunset Blvd./Atherton Dr. (pm)</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	825	505	1505	55	1995	2660	2570	3675
<b># Lanes - (vphpl)</b>								
Existing (2000)	3	2	3	2	6	4	4	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	275	253	502	28	333	665	643	1225
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	50	50	50	50	50	50	50	50
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
<b>% Red Time</b>								
Existing (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	11.5	30.2	9.7	30.6	11.5	22.1	8.2	6.5
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.70	3.25	10.84	3.25	8.70	4.41	12.39	15.48

**Pleasant Grove Blvd./Fairway Dr. (pm)      Pleasant Grove Blvd./Fairway Dr. (pm)**

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Pleasant Grove Blvd./Fairway Dr. (pm)</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	2245	1625	890	2080	1390	1045	980	755
<b># Lanes - (vphpl)</b>								
Existing (2000)	6	3	6	3	5	2	5	2
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	374	542	148	693	278	523	196	378
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	50	50	50	50	50	50	50	50
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
<b>% Red Time</b>								
Existing (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	10.7	28.2	12.3	22.1	11.5	28.2	12.3	29.4
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	9.30	3.49	8.11	4.41	8.70	3.49	8.11	3.37

**Intersection Turning Movements/CALINE Input**

Project Number: 10481-00  
 Project Name: NW Rocklin Annex EIR  
 Traffic Volumes: Cumulative Conditions-Scenario 2  
 Emission Factors: ITS CO Protocol, p.A-8, p.B-7, December 1997

**Sunset Blvd./W. Stanford Ranch Rd.      Sunset Blvd./W. Stanford Ranch Rd.**

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sunset Blvd./W. Stanford Ranch Rd.</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	565	1840	1830	195	1960	2405	1130	1045
<b># Lanes - (vphpl)</b>								
Existing (2000)	5	3	6	3	5	3	6	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	113	613	305	65	392	802	188	348
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	50	50	50	50	50	50	50	50
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
<b>% Red Time</b>								
Existing (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	26.6	11.5	30.6	10.7	15.7	12.3	30.2
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	3.73	8.70	3.25	9.30	6.32	8.11	3.25

**Sioux Dr./W. Stanford Ranch Rd.      Sioux Dr./W. Stanford Ranch Rd.**

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sioux Dr./W. Stanford Ranch Rd.</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	595	1090	2170	70	1775	1700	395	2075
<b># Lanes - (vphpl)</b>								
Existing (2000)	3	1	3	1	6	3	5	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	198	1090	723	70	296	567	79	692
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	50	50	50	50	50	50	50	50
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
<b>% Red Time</b>								
Existing (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	6.5	5.7	30.6	11.5	26.6	12.3	22.1
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	15.48	17.03	3.25	8.70	3.73	8.11	4.41

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 2-Sunset (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB-Left	4	-150	4	0	AG	570	8.7	.0	10.0
B. NB-Thru	8	-150	8	0	AG	5	8.7	.0	10.0
C. NB-Right	12	-150	12	0	AG	250	8.7	.0	10.0
D. SB-Left	-4	150	-4	0	AG	800	10.8	.0	10.0
E. SB-Thru	-8	150	-8	0	AG	5	10.8	.0	10.0
F. SB-Right	-12	150	-12	0	AG	700	10.8	.0	10.0
G. EB-Left	-150	-6	0	-6	AG	350	8.7	.0	14.0
H. EB-Thru	-150	-16	0	-16	AG	1610	8.7	.0	18.0
I. EB-right	-150	-24	0	-24	AG	35	8.7	.0	10.0
J. WB-Left	150	4	0	4	AG	15	12.4	.0	10.0
K. WB-Thru	150	10	0	10	AG	2405	12.4	.0	14.0
L. WB-Right	150	16	0	16	AG	150	12.4	.0	10.0
M. NB-Depart	8	0	8	150	AG	505	3.3	.0	10.0
N. SB-Depart	-8	0	-8	-150	AG	55	3.3	.0	10.0
O. EB-Depart	0	-16	150	-16	AG	2660	4.4	.0	18.0
P. WB-Depart	0	10	-150	10	AG	3675	15.5	.0	14.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 2-Sunset (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	17	21	1.8
2. Recpt 2	*	-17	21	1.8
3. Recpt 3	*	-17	-25	1.8
4. Recpt 4	*	17	-25	1.8
5. Recpt 5	*	21	25	1.8
6. Recpt 6	*	-21	25	1.8
7. Recpt 7	*	-21	-29	1.8
8. Recpt 8	*	21	-29	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

RECEPTOR	*	BRG	* PRED	*	CONC/LINK							
	*	(DEG)	* CONC	*	(PPM)							
	*		* (PPM)	*	A	B	C	D	E	F	G	H
1. Recpt 1	*	255.	* 5.5	*	.0	.0	.0	.3	.0	.2	.2	.4
2. Recpt 2	*	252.	* 5.0	*	.0	.0	.0	.0	.0	.0	.2	.4
3. Recpt 3	*	8.	* 3.6	*	.0	.0	.0	.6	.0	.7	.1	.8
4. Recpt 4	*	290.	* 3.6	*	.2	.0	.2	.0	.0	.0	.2	.8
5. Recpt 5	*	252.	* 4.4	*	.0	.0	.0	.3	.0	.2	.2	.4
6. Recpt 6	*	140.	* 4.0	*	.1	.0	.0	.3	.0	.5	.0	.0
7. Recpt 7	*	10.	* 3.2	*	.0	.0	.0	.5	.0	.6	.1	.7
8. Recpt 8	*	291.	* 3.1	*	.2	.0	.1	.0	.0	.0	.2	.7







CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 2-Pleasant (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK	*	LINK COORDINATES (M)				*	EF	H	W
DESCRIPTION	*	X1	Y1	X2	Y2	* TYPE	(G/MI)	(M)	(M)
A. NB-Left	*	6	-150	6	0	* AG	430	9.3	.0 14.0
B. NB-Thru	*	16	-150	16	0	* AG	1225	9.3	.0 18.0
C. NB-Right	*	24	-150	24	0	* AG	590	9.3	.0 10.0
D. SB-Left	*	-6	150	-6	0	* AG	105	8.1	.0 14.0
E. SB-Thru	*	-16	150	-16	0	* AG	685	8.1	.0 18.0
F. SB-Right	*	-24	150	-24	0	* AG	100	8.1	.0 10.0
G. EB-Left	*	-150	-6	0	-6	* AG	280	8.7	.0 14.0
H. EB-Thru	*	-150	-14	0	-14	* AG	350	8.7	.0 14.0
I. EB-right	*	-150	-20	0	-20	* AG	760	8.7	.0 10.0
J. WB-Left	*	150	6	0	6	* AG	635	8.1	.0 14.0
K. WB-Thru	*	150	14	0	14	* AG	225	8.1	.0 14.0
L. WB-Right	*	150	20	0	20	* AG	120	8.1	.0 10.0
M. NB-Depart	*	16	0	16	150	* AG	1625	3.5	.0 18.0
N. SB-Depart	*	-16	0	-16	-150	* AG	2080	4.4	.0 18.0
O. EB-Depart	*	0	-14	150	-14	* AG	1045	3.5	.0 14.0
P. WB-Depart	*	0	14	-150	14	* AG	755	3.4	.0 14.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 2-Pleasant (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
		X	Y	Z
1. Recpt 1	*	29	25	1.8
2. Recpt 2	*	-29	25	1.8
3. Recpt 3	*	-29	-25	1.8
4. Recpt 4	*	29	-25	1.8
5. Recpt 5	*	33	29	1.8
6. Recpt 6	*	-33	29	1.8
7. Recpt 7	*	-33	-29	1.8
8. Recpt 8	*	33	-29	1.8

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. Recpt 1	*	191.	* 2.1	*	.2	.8	.4	.0	.0	.0	.0	.0
2. Recpt 2	*	159.	* 1.9	*	.2	.4	.2	.0	.2	.0	.0	.0
3. Recpt 3	*	72.	* 2.4	*	.1	.3	.1	.0	.0	.0	.0	.1
4. Recpt 4	*	277.	* 2.3	*	.1	.6	.4	.0	.0	.0	.1	.3
5. Recpt 5	*	193.	* 1.8	*	.2	.7	.4	.0	.0	.0	.0	.0
6. Recpt 6	*	158.	* 1.7	*	.2	.3	.1	.0	.1	.0	.0	.0
7. Recpt 7	*	68.	* 1.9	*	.1	.2	.0	.0	.0	.0	.0	.0
8. Recpt 8	*	280.	* 2.0	*	.1	.5	.3	.0	.0	.0	.1	.2

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 3

JOB: Rocklin-Scenario 2-Pleasant (pm)  
 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
1. Recpt 1	*	.0	.2	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	.2	.0	.0	.0	.0	.4	.0	.1
3. Recpt 3	*	.8	.2	.0	.0	.0	.5	.2	.0
4. Recpt 4	*	.6	.0	.0	.0	.0	.2	.0	.0
5. Recpt 5	*	.0	.2	.0	.0	.0	.1	.0	.0
6. Recpt 6	*	.2	.0	.0	.0	.0	.4	.0	.1
7. Recpt 7	*	.5	.2	.0	.0	.0	.4	.1	.0
8. Recpt 8	*	.5	.0	.0	.0	.0	.2	.0	.0



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 2-Sunset/W.Stanford  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* *	LINK COORDINATES (M)				* *	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2	* TYPE	VPH		
A. NB-Thru	*	12	-150	12	0	* AG	565	8.1	.0 26.0
B. SB-Thru	*	-14	150	-14	0	* AG	1830	8.7	.0 30.0
C. EB-Thru	*	-150	-12	0	-12	* AG	1960	9.3	.0 26.0
D. WB-Thru	*	150	14	0	14	* AG	1130	8.1	.0 30.0
E. NB-Depart	*	12	0	12	150	* AG	1840	3.7	.0 26.0
F. SB-Depart	*	-14	0	-14	-150	* AG	195	3.3	.0 30.0
G. EB-Depart	*	0	-12	150	-12	* AG	2405	6.3	.0 26.0
H. WB-Depart	*	0	14	-150	14	* AG	1045	3.3	.0 30.0

## III. RECEPTOR LOCATIONS

RECEPTOR	* *	COORDINATES (M)		
		X	Y	Z
1. Recpt 1	*	23	27	1.8
2. Recpt 2	*	-27	27	1.8
3. Recpt 3	*	-27	-23	1.8
4. Recpt 4	*	23	-23	1.8
5. Recpt 5	*	27	31	1.8

C4\$.out

6. Recpt 6 *	-31	31	1.8
7. Recpt 7 *	-31	-27	1.8
8. Recpt 8 *	27	-27	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 2-Sunset/W.Stanford  
 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. Recpt 1	* 249.	* 1.8 *	.0	.4	.6	.3	.3	.0	.0	.1		
2. Recpt 2	* 107.	* 1.9 *	.0	.7	.0	.4	.2	.0	.5	.1		
3. Recpt 3	* 11.	* 2.1 *	.0	1.0	.9	.0	.1	.0	.0	.0		
4. Recpt 4	* 277.	* 2.1 *	.2	.0	1.3	.0	.0	.0	.5	.0		
5. Recpt 5	* 247.	* 1.7 *	.0	.4	.6	.3	.3	.0	.0	.1		
6. Recpt 6	* 108.	* 1.8 *	.0	.7	.0	.4	.2	.0	.4	.1		
7. Recpt 7	* 13.	* 2.0 *	.0	.9	.8	.0	.1	.0	.0	.0		
8. Recpt 8	* 340.	* 1.9 *	.2	.5	.0	.2	.3	.0	.7	.0		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 2-Sioux/W.Stanford  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* *	LINK COORDINATES (M)				* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2						
A. NB-Thru	*	8	-150	8	0	* AG	595	8.1	.0	18.0	
B. SB-Thru	*	-8	150	-8	0	* AG	2170	17.0	.0	18.0	
C. EB-Thru	*	-150	-14	0	-14	* AG	1775	8.7	.0	30.0	
D. WB-Thru	*	150	12	0	12	* AG	395	8.1	.0	26.0	
E. NB-Depart	*	8	0	8	150	* AG	1090	15.5	.0	18.0	
F. SB-Depart	*	-8	0	-8	-150	* AG	70	3.3	.0	18.0	
G. EB-Depart	*	0	-14	150	-14	* AG	1700	3.7	.0	30.0	
H. WB-Depart	*	0	12	-150	12	* AG	2075	4.4	.0	26.0	

## III. RECEPTOR LOCATIONS

RECEPTOR	* *	COORDINATES (M)		
		X	Y	Z
1. Recpt 1	*	17	25	1.8
2. Recpt 2	*	-17	25	1.8
3. Recpt 3	*	-17	-29	1.8
4. Recpt 4	*	17	-29	1.8
5. Recpt 5	*	21	29	1.8

C4\$.out

6. Recpt 6	*	-21	29	1.8
7. Recpt 7	*	-21	-33	1.8
8. Recpt 8	*	21	-33	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 2-Sioux/W.Stanford  
 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. Recpt 1	* 250.	* 3.3	* .0	1.2	.5	.0	1.0	.0	.0	.0	.5
2. Recpt 2	* 13.	* 4.8	* .0	4.2	.0	.0	.6	.0	.0	.0	.0
3. Recpt 3	* 8.	* 4.1	* .0	2.6	.7	.0	.6	.0	.0	.0	.2
4. Recpt 4	* 347.	* 3.3	* .3	1.6	.0	.0	1.0	.0	.3	.0	.0
5. Recpt 5	* 248.	* 3.0	* .0	1.1	.5	.0	.9	.0	.0	.0	.4
6. Recpt 6	* 18.	* 3.6	* .0	2.9	.0	.0	.6	.0	.0	.0	.0
7. Recpt 7	* 11.	* 3.7	* .0	2.2	.6	.0	.6	.0	.0	.0	.2
8. Recpt 8	* 345.	* 2.9	* .2	1.5	.0	.0	.9	.0	.3	.0	.0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**Intersection Turning Movements/CALINE Input**

**Project Number:** 10481-00  
**Project Name:** NW Rocklin Annex EIR  
**Traffic Volumes:** Cumulative Conditions-Scenario 3  
**Emission Factors:** ITS CO Protocol, p.A-8, p.B-7, December 1997

<b>Sunset Blvd./Atherton Dr. (pm)</b>		<b>Sunset Blvd./Atherton Dr. (pm)</b>						
	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sunset Blvd./Atherton Dr. (pm)</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	710	975	1855	205	1550	1835	1145	2245
<b># Lanes - (vphpl)</b>								
Existing (2000)	3	2	3	2	6	4	4	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	237	488	618	103	258	459	286	748
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	28.2	8.2	30.6	11.5	28.2	11.5	22.1
<b>% Red Time</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	3.49	12.39	3.25	8.70	3.49	8.70	4.41
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	3.49	12.39	3.25	8.70	3.49	8.70	4.41
<b>Pleasant Grove Blvd./Fairway Dr. (pm)</b>		<b>Pleasant Grove Blvd./Fairway Dr. (pm)</b>						
	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Pleasant Grove Blvd./Fairway Dr. (pm)</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	2450	2010	940	2070	1440	1010	940	680
<b># Lanes - (vphpl)</b>								
Existing (2000)	6	3	6	3	5	2	5	2
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	408	670	157	690	288	505	188	340
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	10.7	22.1	12.3	22.1	11.5	28.2	12.3	30.2
<b>% Red Time</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	9.30	4.41	8.11	4.41	8.70	3.49	8.11	3.25
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	9.30	4.41	8.11	4.41	8.70	3.49	8.11	3.25

## Intersection Turning Movements/CALINE Input

**Project Number:** 10481-00  
**Project Name:** NW Rocklin Annex EIR  
**Traffic Volumes:** Cumulative Conditions-Scenario 3  
**Emission Factors:** ITS CO Protocol, p.A-8, p.B-7, December 1997

### Sunset Blvd./W. Stanford Ranch Rd.      Sunset Blvd./W. Stanford Ranch Rd.

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sunset Blvd./W. Stanford Ranch Rd.</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	620	1040	595	160	1555	1900	1005	675
<b># Lanes - (vphpl)</b>								
Existing (2000)	5	3	6	3	5	3	6	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	124	347	99	53	311	633	168	225
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	30.2	12.3	30.6	11.5	26.6	12.3	30.6
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	3.25	8.11	3.25	8.70	3.73	8.11	3.25

### Sioux Dr./W. Stanford Ranch Rd.      Sioux Dr./W. Stanford Ranch Rd.

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sioux Dr./W. Stanford Ranch Rd.</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	595	850	1075	70	1035	1325	425	885
<b># Lanes - (vphpl)</b>								
Existing (2000)	3	1	3	1	6	3	5	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	198	850	358	70	173	442	85	295
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	50	50	50	50	50	50	50	50
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	6.32	9.30	3.25	8.11	3.37	8.11	3.25

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 3-Sunset (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* *	LINK COORDINATES (M)				* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2						
A. NB-Left	*	4	-150	4	0	* AG	420	8.1	.0	10.0	
B. NB-Thru	*	8	-150	8	0	* AG	40	8.1	.0	10.0	
C. NB-Right	*	12	-150	12	0	* AG	250	8.1	.0	10.0	
D. SB-Left	*	-4	150	-4	0	* AG	740	12.4	.0	10.0	
E. SB-Thru	*	-8	150	-8	0	* AG	35	12.4	.0	10.0	
F. SB-Right	*	-12	150	-12	0	* AG	1080	12.4	.0	10.0	
G. EB-Left	*	-150	-6	0	-6	* AG	590	8.7	.0	14.0	
H. EB-Thru	*	-150	-16	0	-16	* AG	845	8.7	.0	18.0	
I. EB-right	*	-150	-24	0	-24	* AG	115	8.7	.0	10.0	
J. WB-Left	*	150	4	0	4	* AG	55	8.7	.0	10.0	
K. WB-Thru	*	150	10	0	10	* AG	745	8.7	.0	14.0	
L. WB-Right	*	150	16	0	16	* AG	345	8.7	.0	10.0	
M. NB-Depart	*	8	0	8	150	* AG	975	3.5	.0	10.0	
N. SB-Depart	*	-8	0	-8	-150	* AG	205	3.3	.0	10.0	
O. EB-Depart	*	0	-16	150	-16	* AG	1835	3.5	.0	18.0	
P. WB-Depart	*	0	10	-150	10	* AG	2245	4.4	.0	14.0	

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 3-Sunset (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	17	21	1.8
2. Recpt 2	*	-17	21	1.8
3. Recpt 3	*	-17	-25	1.8
4. Recpt 4	*	17	-25	1.8
5. Recpt 5	*	21	25	1.8
6. Recpt 6	*	-21	25	1.8
7. Recpt 7	*	-21	-29	1.8
8. Recpt 8	*	21	-29	1.8

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. Recpt 1	*	252.	* 2.5 *	*	.0	.0	.0	.3	.0	.4	.3	.3
2. Recpt 2	*	10.	* 3.1 *	*	.0	.0	.0	.6	.0	2.3	.0	.0
3. Recpt 3	*	7.	* 2.9 *	*	.0	.0	.0	.6	.0	1.2	.2	.4
4. Recpt 4	*	343.	* 2.3 *	*	.0	.0	.2	.5	.0	.6	.0	.0
5. Recpt 5	*	247.	* 2.1 *	*	.0	.0	.0	.3	.0	.4	.2	.3
6. Recpt 6	*	140.	* 2.2 *	*	.1	.0	.0	.3	.0	.9	.0	.0
7. Recpt 7	*	10.	* 2.6 *	*	.0	.0	.0	.6	.0	1.0	.2	.4
8. Recpt 8	*	341.	* 1.9 *	*	.0	.0	.1	.5	.0	.5	.0	.0



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 3

JOB: Rocklin-Scenario 3-Sunset (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK							
		I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.0	.1	.3	.2	.0	.0	.6
2. Recpt 2	*	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	*	.0	.0	.0	.0	.0	.0	.0	.2
4. Recpt 4	*	.0	.0	.2	.0	.2	.0	.4	.0
5. Recpt 5	*	.0	.0	.0	.2	.2	.0	.0	.5
6. Recpt 6	*	.0	.0	.0	.0	.0	.0	.2	.4
7. Recpt 7	*	.0	.0	.0	.0	.0	.0	.0	.2
8. Recpt 8	*	.0	.0	.2	.0	.2	.0	.3	.0

Handwritten text, possibly bleed-through from the reverse side of the page.

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 3-Pleasant (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* *	LINK COORDINATES (M)				* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2						
A. NB-Left	*	6	-150	6	0	* AG	330	9.3	.0	14.0	
B. NB-Thru	*	16	-150	16	0	* AG	1570	9.3	.0	18.0	
C. NB-Right	*	24	-150	24	0	* AG	550	9.3	.0	10.0	
D. SB-Left	*	-6	150	-6	0	* AG	110	8.1	.0	14.0	
E. SB-Thru	*	-16	150	-16	0	* AG	680	8.1	.0	18.0	
F. SB-Right	*	-24	150	-24	0	* AG	150	8.1	.0	10.0	
G. EB-Left	*	-150	-6	0	-6	* AG	285	8.7	.0	14.0	
H. EB-Thru	*	-150	-14	0	-14	* AG	350	8.7	.0	14.0	
I. EB-right	*	-150	-20	0	-20	* AG	805	8.7	.0	10.0	
J. WB-Left	*	150	6	0	6	* AG	585	8.1	.0	14.0	
K. WB-Thru	*	150	14	0	14	* AG	200	8.1	.0	14.0	
L. WB-Right	*	150	20	0	20	* AG	155	8.1	.0	10.0	
M. NB-Depart	*	16	0	16	150	* AG	2010	4.4	.0	18.0	
N. SB-Depart	*	-16	0	-16	-150	* AG	2070	4.4	.0	18.0	
O. EB-Depart	*	0	-14	150	-14	* AG	1010	3.5	.0	14.0	
P. WB-Depart	*	0	14	-150	14	* AG	680	3.3	.0	14.0	

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 3-Pleasant (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	29	25	1.8
2. Recpt 2	*	-29	25	1.8
3. Recpt 3	*	-29	-25	1.8
4. Recpt 4	*	29	-25	1.8
5. Recpt 5	*	33	29	1.8
6. Recpt 6	*	-33	29	1.8
7. Recpt 7	*	-33	-29	1.8
8. Recpt 8	*	33	-29	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

RECEPTOR	*	BRG	* PRED	*	CONC/LINK							
	*	(DEG)	* CONC	*	(PPM)							
	*		* (PPM)	*	A	B	C	D	E	F	G	H
1. Recpt 1	*	191.	* 2.3	*	.2	1.0	.4	.0	.0	.0	.0	.0
2. Recpt 2	*	159.	* 1.9	*	.1	.4	.1	.0	.2	.1	.0	.0
3. Recpt 3	*	72.	* 2.5	*	.0	.3	.1	.0	.0	.0	.0	.1
4. Recpt 4	*	277.	* 2.4	*	.1	.7	.4	.0	.0	.0	.1	.3
5. Recpt 5	*	193.	* 2.0	*	.2	.9	.4	.0	.0	.0	.0	.0
6. Recpt 6	*	156.	* 1.7	*	.1	.4	.1	.0	.1	.0	.0	.0
7. Recpt 7	*	67.	* 2.0	*	.0	.3	.0	.0	.0	.0	.0	.1
8. Recpt 8	*	280.	* 2.1	*	.1	.6	.3	.0	.0	.0	.1	.2

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 3

JOB: Rocklin-Scenario 3-Pleasant (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK							
		I	J	K	L	M	N	O	P
1. Recpt 1	*	.0	.2	.0	.0	.1	.0	.0	.0
2. Recpt 2	*	.2	.0	.0	.0	.0	.4	.0	.1
3. Recpt 3	*	.8	.2	.0	.0	.0	.5	.2	.0
4. Recpt 4	*	.6	.0	.0	.0	.0	.2	.0	.0
5. Recpt 5	*	.0	.2	.0	.0	.0	.1	.0	.0
6. Recpt 6	*	.2	.0	.0	.0	.0	.4	.0	.1
7. Recpt 7	*	.5	.2	.0	.0	.0	.4	.1	.0
8. Recpt 8	*	.5	.0	.0	.0	.0	.2	.0	.0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 3-Sunset/W.Stanford  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* *	LINK COORDINATES (M)				* *	* *	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2	TYPE	VPH			
A. NB-Thru	*	12	-150	12	0	AG	620	8.1	.0 26.0	
B. SB-Thru	*	-14	150	-14	0	AG	595	8.1	.0 30.0	
C. EB-Thru	*	-150	-12	0	-12	AG	1555	8.7	.0 26.0	
D. WB-Thru	*	150	14	0	14	AG	1005	8.1	.0 30.0	
E. NB-Depart	*	12	0	12	150	AG	1040	3.3	.0 26.0	
F. SB-Depart	*	-14	0	-14	-150	AG	160	3.3	.0 30.0	
G. EB-Depart	*	0	-12	150	-12	AG	1900	3.7	.0 26.0	
H. WB-Depart	*	0	14	-150	14	AG	675	3.3	.0 30.0	

## III. RECEPTOR LOCATIONS

RECEPTOR	* *	COORDINATES (M)		
		X	Y	Z
1. Recpt 1	*	23	27	1.8
2. Recpt 2	*	-27	27	1.8
3. Recpt 3	*	-27	-23	1.8
4. Recpt 4	*	23	-23	1.8
5. Recpt 5	*	27	31	1.8

C4\$.out

6. Recpt 6 *	-31	31	1.8
7. Recpt 7 *	-31	-27	1.8
8. Recpt 8 *	27	-27	1.8



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 3-Sunset/W.Stanford  
 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. Recpt 1	* 248.	* 1.1 *	.0	.1	.5	.2	.2	.0	.0	.0	.0	
2. Recpt 2	* 103.	* 1.0 *	.0	.2	.0	.5	.0	.0	.0	.2	.0	
3. Recpt 3	* 75.	* 1.4 *	.1	.0	.6	.3	.0	.0	.0	.4	.0	
4. Recpt 4	* 277.	* 1.5 *	.2	.0	1.0	.0	.0	.0	.0	.2	.0	
5. Recpt 5	* 247.	* 1.1 *	.0	.1	.4	.2	.2	.0	.0	.0	.0	
6. Recpt 6	* 106.	* 1.0 *	.0	.2	.0	.4	.0	.0	.0	.2	.0	
7. Recpt 7	* 71.	* 1.2 *	.1	.0	.5	.3	.0	.0	.0	.3	.0	
8. Recpt 8	* 282.	* 1.3 *	.2	.0	.8	.0	.0	.0	.0	.2	.0	



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 3-Sioux/W.Stanford  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (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=	7.5 DEGREE (C)		

## II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M)				*	EF (G/MI)	H (M)	W (M)
	*	X1	Y1	X2	Y2	* TYPE	VPH		
A. NB-Thru	*	8	-150	8	0	* AG	595	8.1	.0 18.0
B. SB-Thru	*	-8	150	-8	0	* AG	1075	9.3	.0 18.0
C. EB-Thru	*	-150	-14	0	-14	* AG	1035	8.1	.0 30.0
D. WB-Thru	*	150	12	0	12	* AG	425	8.1	.0 26.0
E. NB-Depart	*	8	0	8	150	* AG	850	6.3	.0 18.0
F. SB-Depart	*	-8	0	-8	-150	* AG	70	3.3	.0 18.0
G. EB-Depart	*	0	-14	150	-14	* AG	1325	3.4	.0 30.0
H. WB-Depart	*	0	12	-150	12	* AG	885	3.3	.0 26.0

## III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	17	25	1.8
2. Recpt 2	*	-17	25	1.8
3. Recpt 3	*	-17	-29	1.8
4. Recpt 4	*	17	-29	1.8
5. Recpt 5	*	21	29	1.8

C4\$.out

6. Recpt 6	*	-21	29	1.8
7. Recpt 7	*	-21	-33	1.8
8. Recpt 8	*	21	-33	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 3-Sioux/W.Stanford  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

RECEPTOR	* BRG	* PRED	* CONC	CONC/LINK							
	(DEG)	(PPM)	(PPM)	A	B	C	D	E	F	G	H
1. Recpt 1	* 248.	* 1.2	* .0	.0	.3	.3	.0	.3	.0	.0	.2
2. Recpt 2	* 13.	* 1.4	* .0	.0	1.2	.0	.0	.2	.0	.0	.0
3. Recpt 3	* 8.	* 1.4	* .0	.0	.8	.4	.0	.2	.0	.0	.0
4. Recpt 4	* 347.	* 1.4	* .3	.3	.5	.0	.0	.3	.0	.2	.0
5. Recpt 5	* 246.	* 1.1	* .0	.0	.3	.3	.0	.3	.0	.0	.1
6. Recpt 6	* 111.	* 1.1	* .0	.0	.5	.0	.2	.2	.0	.1	.0
7. Recpt 7	* 11.	* 1.3	* .0	.0	.7	.3	.0	.2	.0	.0	.0
8. Recpt 8	* 345.	* 1.2	* .2	.2	.4	.0	.0	.3	.0	.2	.0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**Intersection Turning Movements/CALINE Input**

Project Number: 10481-00  
 Project Name: NW Rocklin Annex EIR  
 Traffic Volumes: Cumulative Conditions-Scenario 4  
 Emission Factors: ITS CO Protocol, p.A-8, p.B-7, December 1997

Sunset Blvd./Atherton Dr. (pm)	Sunset Blvd./Atherton Dr. (pm)							
	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sunset Blvd./Atherton Dr. (pm)</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	710	475	880	210	1220	1515	985	1595
<b># Lanes - (vphpl)</b>								
Existing (2000)	3	2	3	2	6	4	4	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	237	238	293	105	203	379	246	532
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	30.6	11.5	30.6	12.3	29.4	12.3	28.2
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	3.25	8.70	3.25	8.11	3.37	8.11	3.49
<b>Pleasant Grove Blvd./Fairway Dr. (pm)</b>	<b>Pleasant Grove Blvd./Fairway Dr. (pm)</b>							
	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Pleasant Grove Blvd./Fairway Dr. (pm)</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	2435	2030	925	2035	1410	1010	945	640
<b># Lanes - (vphpl)</b>								
Existing (2000)	6	3	6	3	5	2	5	2
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	406	677	154	678	282	505	189	320
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	10.7	22.1	12.3	22.1	11.5	28.2	12.3	30.2
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	9.30	4.41	8.11	4.41	8.70	3.49	8.11	3.25

**Intersection Turning Movements/CALINE Input**

Project Number: 10481-00  
 Project Name: NW Rocklin Annex EIR  
 Traffic Volumes: Cumulative Conditions-Scenario 4  
 Emission Factors: ITS CO Protocol, p.A-8, p.B-7, December 1997

**Sunset Blvd./W. Stanford Ranch Rd.      Sunset Blvd./W. Stanford Ranch Rd.**

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sunset Blvd./W. Stanford Ranch Rd.</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	610	1455	910	190	1500	1780	1025	620
<b># Lanes - (vphpl)</b>								
Existing (2000)	5	3	6	3	5	3	6	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	122	485	152	63	300	593	171	207
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
<b>% Red Time</b>								
Existing (2000)	50	50	50	50	50	50	50	50
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	28.2	12.3	30.6	11.5	26.6	12.3	30.6
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	3.49	8.11	3.25	8.70	3.73	8.11	3.25

**Sioux Dr./W. Stanford Ranch Rd.      Sioux Dr./W. Stanford Ranch Rd.**

	NB-a	NB-d	SB-a	SB-d	EB-a	EB-d	WB-a	WB-d
<b>Sioux Dr./W. Stanford Ranch Rd.</b>								
Existing (2000)	0	0	0	0	0	0	0	0
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	595	1065	1180	70	1465	1360	445	1190
<b># Lanes - (vphpl)</b>								
Existing (2000)	3	1	3	1	6	3	5	3
Existing+Proj (2000)	0	0	0	0	0	0	0	0
Future (2020)	0	0	0	0	0	0	0	0
Future+Proj (2020)	198	1065	393	70	244	453	89	397
<b>Average Speeds (mph)</b>								
Existing (2000)	40	40	40	40	40	40	40	40
<b>% Red Time</b>								
Existing (2000)	50	50	50	50	50	50	50	50
Existing+Proj (2000)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future (2020)	12.3	30.6	12.3	30.6	12.3	30.6	12.3	30.6
Future+Proj (2020)	12.3	6.5	10.7	30.6	12.3	28.2	12.3	29.4
<b>Emission Factor (g/mi)</b>								
Existing (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Existing+Proj (2000)	17.20	6.88	17.20	6.88	17.20	6.88	17.20	6.88
Future (2020)	8.11	3.25	8.11	3.25	8.11	3.25	8.11	3.25
Future+Proj (2020)	8.11	15.48	9.30	3.25	8.11	3.49	8.11	3.37



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 4-Sunset(pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (M) Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB-Left	* 4	-150	4	0	* AG	420	8.1	.0	10.0
B. NB-Thru	* 8	-150	8	0	* AG	40	8.1	.0	10.0
C. NB-Right	* 12	-150	12	0	* AG	250	8.1	.0	10.0
D. SB-Left	* -4	150	-4	0	* AG	420	8.7	.0	10.0
E. SB-Thru	* -8	150	-8	0	* AG	40	8.7	.0	10.0
F. SB-Right	* -12	150	-12	0	* AG	420	8.7	.0	10.0
G. EB-Left	* -150	-6	0	-6	* AG	270	8.1	.0	14.0
H. EB-Thru	* -150	-16	0	-16	* AG	845	8.1	.0	18.0
I. EB-right	* -150	-24	0	-24	* AG	105	8.1	.0	10.0
J. WB-Left	* 150	4	0	4	* AG	65	8.1	.0	10.0
K. WB-Thru	* 150	10	0	10	* AG	755	8.1	.0	14.0
L. WB-Right	* 150	16	0	16	* AG	165	8.1	.0	10.0
M. NB-Depart	* 8	0	8	150	* AG	475	3.3	.0	10.0
N. SB-Depart	* -8	0	-8	-150	* AG	210	3.3	.0	10.0
O. EB-Depart	* 0	-16	150	-16	* AG	1515	3.4	.0	18.0
P. WB-Depart	* 0	10	-150	10	* AG	1595	3.5	.0	14.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 4-Sunset (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	17	21	1.8
2. Recpt 2	*	-17	21	1.8
3. Recpt 3	*	-17	-25	1.8
4. Recpt 4	*	17	-25	1.8
5. Recpt 5	*	21	25	1.8
6. Recpt 6	*	-21	25	1.8
7. Recpt 7	*	-21	-29	1.8
8. Recpt 8	*	21	-29	1.8

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. Recpt 1	*	250.	* 1.4	*	.0	.0	.0	.1	.0	.1	.1	.3
2. Recpt 2	*	104.	* 1.4	*	.0	.0	.0	.2	.0	.3	.0	.0
3. Recpt 3	*	8.	* 1.4	*	.0	.0	.0	.3	.0	.3	.0	.4
4. Recpt 4	*	281.	* 1.5	*	.2	.0	.1	.0	.0	.0	.1	.6
5. Recpt 5	*	247.	* 1.2	*	.0	.0	.0	.1	.0	.1	.1	.2
6. Recpt 6	*	106.	* 1.2	*	.0	.0	.0	.2	.0	.2	.0	.0
7. Recpt 7	*	11.	* 1.3	*	.0	.0	.0	.2	.0	.3	.0	.3
8. Recpt 8	*	285.	* 1.2	*	.1	.0	.1	.0	.0	.0	.1	.5



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 4-Pleasant (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* *	LINK COORDINATES (M)				* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2						
A. NB-Left	*	6	-150	6	0	* AG	315	9.3	.0	14.0	
B. NB-Thru	*	16	-150	16	0	* AG	1570	9.3	.0	18.0	
C. NB-Right	*	24	-150	24	0	* AG	550	9.3	.0	10.0	
D. SB-Left	*	-6	150	-6	0	* AG	110	8.1	.0	14.0	
E. SB-Thru	*	-16	150	-16	0	* AG	685	8.1	.0	18.0	
F. SB-Right	*	-24	150	-24	0	* AG	130	8.1	.0	10.0	
G. EB-Left	*	-150	-6	0	-6	* AG	290	8.7	.0	14.0	
H. EB-Thru	*	-150	-14	0	-14	* AG	350	8.7	.0	14.0	
I. EB-right	*	-150	-20	0	-20	* AG	770	8.7	.0	10.0	
J. WB-Left	*	150	6	0	6	* AG	580	8.1	.0	14.0	
K. WB-Thru	*	150	14	0	14	* AG	195	8.1	.0	14.0	
L. WB-Right	*	150	20	0	20	* AG	170	8.1	.0	10.0	
M. NB-Depart	*	16	0	16	150	* AG	2030	4.4	.0	18.0	
N. SB-Depart	*	-16	0	-16	-150	* AG	2035	4.4	.0	18.0	
O. EB-Depart	*	0	-14	150	-14	* AG	1010	3.5	.0	14.0	
P. WB-Depart	*	0	14	-150	14	* AG	640	3.3	.0	14.0	

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 4-Pleasant (pm)  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	29	25	1.8
2. Recpt 2	*	-29	25	1.8
3. Recpt 3	*	-29	-25	1.8
4. Recpt 4	*	29	-25	1.8
5. Recpt 5	*	33	29	1.8
6. Recpt 6	*	-33	29	1.8
7. Recpt 7	*	-33	-29	1.8
8. Recpt 8	*	33	-29	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

RECEPTOR	*	CONC/LINK										
	*	BRG	* PRED	*	(PPM)							
	*	(DEG)	* CONC	*	A	B	C	D	E	F	G	H
1. Recpt 1	*	191.	* 2.3	*	.2	1.0	.4	.0	.0	.0	.0	.0
2. Recpt 2	*	159.	* 1.9	*	.1	.4	.1	.0	.2	.1	.0	.0
3. Recpt 3	*	72.	* 2.5	*	.0	.3	.1	.0	.0	.0	.0	.1
4. Recpt 4	*	277.	* 2.4	*	.1	.7	.4	.0	.0	.0	.1	.3
5. Recpt 5	*	193.	* 2.0	*	.2	.9	.4	.0	.0	.0	.0	.0
6. Recpt 6	*	156.	* 1.7	*	.1	.4	.1	.0	.1	.0	.0	.0
7. Recpt 7	*	67.	* 2.0	*	.0	.3	.0	.0	.0	.0	.0	.1
8. Recpt 8	*	280.	* 2.1	*	.1	.6	.3	.0	.0	.0	.1	.2

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 3

JOB: Rocklin-Scenario 4-Pleasant (pm)  
 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
1. Recpt 1	*	.0	.2	.0	.0	.1	.0	.0	.0
2. Recpt 2	*	.2	.0	.0	.0	.0	.4	.0	.1
3. Recpt 3	*	.8	.2	.0	.0	.0	.4	.2	.0
4. Recpt 4	*	.6	.0	.0	.0	.0	.2	.0	.0
5. Recpt 5	*	.0	.2	.0	.0	.0	.1	.0	.0
6. Recpt 6	*	.1	.0	.0	.0	.0	.3	.0	.0
7. Recpt 7	*	.5	.2	.0	.0	.0	.4	.1	.0
8. Recpt 8	*	.5	.0	.0	.0	.0	.2	.0	.0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 4-Sunset/W.Stanford  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK DESCRIPTION	* *	LINK COORDINATES (M)				* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2						
A. NB-Thru	*	12	-150	12	0	* AG	610	8.1	.0	26.0	
B. SB-Thru	*	-14	150	-14	0	* AG	910	8.1	.0	30.0	
C. EB-Thru	*	-150	-12	0	-12	* AG	1500	8.7	.0	26.0	
D. WB-Thru	*	150	14	0	14	* AG	1025	8.1	.0	30.0	
E. NB-Depart	*	12	0	12	150	* AG	1455	3.5	.0	26.0	
F. SB-Depart	*	-14	0	-14	-150	* AG	190	3.3	.0	30.0	
G. EB-Depart	*	0	-12	150	-12	* AG	1780	3.7	.0	26.0	
H. WB-Depart	*	0	14	-150	14	* AG	620	3.3	.0	30.0	

## III. RECEPTOR LOCATIONS

RECEPTOR	* *	COORDINATES (M)		
		X	Y	Z
1. Recpt 1	*	23	27	1.8
2. Recpt 2	*	-27	27	1.8
3. Recpt 3	*	-27	-23	1.8
4. Recpt 4	*	23	-23	1.8
5. Recpt 5	*	27	31	1.8

C4\$.out

6. Recpt 6 *	-31	31	1.8
7. Recpt 7 *	-31	-27	1.8
8. Recpt 8 *	27	-27	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 4-Sunset/W.Stanford  
 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. Recpt 1	* 248.	* 1.3	* .0	* .2	* .5	* .3	* .3	* .0	* .0	* .0	* .0
2. Recpt 2	* 102.	* 1.2	* .0	* .3	* .0	* .5	* .1	* .0	* .1	* .0	* .0
3. Recpt 3	* 75.	* 1.3	* .1	* .0	* .6	* .3	* .0	* .0	* .3	* .0	* .0
4. Recpt 4	* 277.	* 1.4	* .2	* .0	* .9	* .0	* .0	* .0	* .2	* .0	* .0
5. Recpt 5	* 247.	* 1.2	* .0	* .2	* .4	* .2	* .2	* .0	* .0	* .0	* .0
6. Recpt 6	* 105.	* 1.1	* .0	* .3	* .0	* .4	* .1	* .0	* .2	* .0	* .0
7. Recpt 7	* 70.	* 1.2	* .1	* .0	* .5	* .3	* .0	* .0	* .3	* .0	* .0
8. Recpt 8	* 282.	* 1.3	* .2	* .0	* .8	* .0	* .0	* .0	* .2	* .0	* .0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Rocklin-Scenario 4-Sioux/W.Stanford  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (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= 7.5 DEGREE (C)

## II. LINK VARIABLES

LINK	*	LINK COORDINATES (M)				*	EF	H	W
DESCRIPTION	*	X1	Y1	X2	Y2	* TYPE	(G/MI)	(M)	(M)
A. NB-Thru	*	8	-150	8	0	* AG	595	8.1	.0 18.0
B. SB-Thru	*	-8	150	-8	0	* AG	1180	9.3	.0 18.0
C. EB-Thru	*	-150	-14	0	-14	* AG	1465	8.1	.0 30.0
D. WB-Thru	*	150	12	0	12	* AG	445	8.1	.0 26.0
E. NB-Depart	*	8	0	8	150	* AG	1065	15.5	.0 18.0
F. SB-Depart	*	-8	0	-8	-150	* AG	70	3.3	.0 18.0
G. EB-Depart	*	0	-14	150	-14	* AG	1360	3.5	.0 30.0
H. WB-Depart	*	0	12	-150	12	* AG	1190	3.4	.0 26.0

## III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	17	25	1.8
2. Recpt 2	*	-17	25	1.8
3. Recpt 3	*	-17	-29	1.8
4. Recpt 4	*	17	-29	1.8
5. Recpt 5	*	21	29	1.8

C4\$.out

6. Recpt 6	*	-21	29	1.8
7. Recpt 7	*	-21	-33	1.8
8. Recpt 8	*	21	-33	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Rocklin-Scenario 4-Sioux/W.Stanford  
 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. Recpt 1	* 347.	* 2.4 *	.0	.4	.0	.0	2.0	.0	.0	.0	.0	
2. Recpt 2	* 16.	* 1.9 *	.0	1.2	.0	.0	.7	.0	.0	.0	.0	
3. Recpt 3	* 12.	* 2.1 *	.0	.7	.6	.0	.8	.0	.0	.0	.0	
4. Recpt 4	* 351.	* 2.2 *	.3	.4	.0	.1	1.2	.0	.2	.0	.0	
5. Recpt 5	* 246.	* 1.8 *	.0	.4	.4	.0	.8	.0	.0	.0	.2	
6. Recpt 6	* 21.	* 1.6 *	.0	.9	.0	.0	.7	.0	.0	.0	.0	
7. Recpt 7	* 14.	* 1.9 *	.0	.6	.5	.0	.7	.0	.0	.0	.0	
8. Recpt 8	* 347.	* 1.9 *	.1	.4	.0	.0	1.0	.0	.2	.0	.0	





## **Appendix G**

### **Water Forum Proposal Executive Summary Excerpt**



## APPENDIX G – WATER FORUM PROPOSAL EXECUTIVE SUMMARY EXCERPT

To provide the reader of this EIR with an understanding of the Water Forum Proposal, selected text from that document's Executive Summary follows immediately.

The Water Forum, a diverse group of water agencies, business groups, agricultural interests, environmentalists, citizen groups, and local governments (also known as stakeholders), has been working since the fall of 1993 evaluating future water needs and supplies in the Sacramento area, including parts of Sacramento, Placer and El Dorado counties. The Water Forum has formulated a Water Forum Proposal (WFP) for the effective long-term management of the region's water resources. This proposal is incorporated in the Water Forum Action Plan which is being circulated concurrently with this document. The WFP was formulated based on the two coequal objectives of the Water Forum: 1) provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and 2) preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

Preservation of the Lower American River is one of the coequal objectives of the WFP. The direct effect study area, therefore, consists of those areas that would be directly affected by additional surface water diversions from the American River. Such diversions would occur above Folsom Reservoir, from Folsom Reservoir proper, Lake Natoma, and from the Lower American River, defined as the reach from Nimbus Dam to the confluence with the Sacramento River. Therefore, the direct effect study area consists of the in-stream and riparian areas of these surface water resources.

The indirect effect study area is the broader geographic area that encompasses the surface water resources and facilities outside of the Lower American River that may be affected by the WFP. This area includes the Central Valley Project (CVP) and State Water Project (SWP) systems both upstream of the confluence of the Sacramento and American rivers (exclusive of the direct effect study area), along with associated reservoirs and rivers, and downstream of the confluence, into and including the Sacramento-San Joaquin Delta. The water service study area consists of the communities served by Water Forum stakeholders, and is coincident with the boundaries of stakeholder purveyors in the cities of Sacramento, Folsom, Citrus Heights, and Galt; County of Sacramento (excluding the Delta); the City of Roseville; South Placer County and western El Dorado County.

### **Elements of the Water Forum Proposal**

To achieve the Water Forum's coequal objectives, a comprehensive package of linked actions has been developed to make more water available for consumption while protecting the natural resources of the Lower American River from environmental damage. This approach requires the support and participation of each of the Water Forum stakeholders. The WFP was developed over a period of years by representatives of the Water Forum stakeholder groups, and includes seven elements:

**Element:**

- I Increased Surface Water Diversions**
- II Actions to Meet Customers' Needs While Reducing Diversion Impacts on the Lower American River in Drier Years**
- III Support for an Improved Pattern of Fishery Flow Releases from Folsom Reservoir**
- IV Lower American River Habitat Management Element**
- V Water Conservation**
- VI Groundwater Management**
- VII Water Forum Successor Effort**

**Element I: Increased Surface Water Diversions**

This element provides for increased surface water diversions. These increased diversions will be needed to serve planned growth through the year 2030 even with the active conservation programs and the recommended sustainable use of the groundwater which are also part of the WFP. As part of the WFP, all signatory organizations would support the diversions agreed to for each supplier. All signatory organizations would also support the facilities needed to divert, treat and distribute this water. Support for increased diversions is linked to the suppliers' endorsement and, where appropriate, participation in each of the seven elements.

**Element II: Actions to Meet Customers' Needs While Reducing Diversion Impacts on the Lower American River in Drier Years**

This element is to ensure that sufficient water supplies will be available to customers in dry years as well as wet years, and that suppliers continue to meet their customers' needs to the year 2030 while minimizing diversion impacts on the Lower American River in the drier and driest years. It is envisioned that Lower American River diversions above the H Street Bridge in average and wetter years will increase from the current level of about 216,500 acre-feet (AF) annually to about 481,000 AF annually. This represents a significant portion of the total annual flow of the American River which averages about 2.6 million AF with a range of less than 400,000 AF to greater than 6.3 million AF. Actions to meet customers' needs while reducing diversion impacts on the Lower American River in drier years include: conjunctive use of groundwater basins consistent with the sustainable yield objectives; utilizing other surface water resources; reoperation of reservoirs on the Middle Fork of the American River; increased conservation during drier and driest years; and reclamation. Some of these actions would also help reduce impacts outside of the American River watershed.

**Element III: Support for an Improved Pattern of Fishery Flow Releases from Folsom Reservoir**

This element supports needed assurances for continued implementation of a pattern of water releases from Folsom Reservoir that more closely matches the needs of anadromous fish, in particular fall run chinook salmon, which need more cool water in the fall and are not present in the American River in the summer.

Beginning in December 1994, the Water Forum convened a Fish Biologists' Working Session of fish experts with special knowledge of the Lower American River. Their charge was to develop recommendations for an improved pattern of releases from Folsom Reservoir. Participants included representatives from the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), State Water Resources Control Board (SWRCB), U.S. Bureau of Reclamation (USBR), and representatives from the Water Forum. The group came to general agreement regarding which fish species in the Lower American River should be given priority when there are constraints in water availability and developed an Improved Pattern by which available water can be released from Folsom Reservoir in a "fish friendly" manner consistent with the reservoir's flood control objectives.

The Central Valley Project Improvement Act was passed in 1992. This law authorized fish and wildlife restoration as an additional purpose of the Central Valley Project. It also required the federal government to develop an Anadromous Fish Restoration Program (AFRP) plan including implementation of an improved pattern of fishery flow releases from Folsom Reservoir to benefit anadromous fish. The Water Forum recommendations were considered by the U.S. Department of the Interior when it developed its recommendations for AFRP flows for the Lower American River.

Since 1995 USBR, in consultation with the USFWS and CDFG, has attempted on a voluntary basis to release water from Folsom Reservoir in a manner consistent with the flow objectives for the Lower American River to the extent USBR's available water supply has permitted it to do so. Their AFRP flow objectives for the Lower American River are set forth in the November 20, 1997 "Department of the Interior Final Administrative Proposal on the Management of Section 3406 (b) (2) Water." They are essentially the same as the Improved Pattern of Fishery Flow Releases developed by the Fish Biologists' Working Session which was convened by the Water Forum. It is recognized that as additional information becomes available in the future it could be beneficial to further refine this Improved Pattern.

For purposes of the Water Forum Proposal, the Improved Pattern of Fishery Flow Releases is defined as the AFRP flow objective for the Lower American River as set forth in the November 20, 1997 "Department of the Interior Final Administrative Proposal on the Management of Section 3406 (b) (2) Water."

Signatories agree to recommend that the updated Lower American River standard be included in the USBR's permit for operation of Folsom and Nimbus dams. It will incorporate two of the Water Forum Proposal provisions:

- (1) Agreement on water diversions upstream of Nimbus Dam under varying hydrologic conditions; and
- (2) The Improved Pattern of Fishery Flow Releases which would be implemented essentially the same as the AFRP Lower American River flow objectives in the November 20, 1997 Final Administrative Proposal.

#### **Element IV: Lower American River Habitat Management Element**

This element, combined with an "Improved Pattern of Fishery Flow Releases from Folsom Reservoir" and "Actions to Meet Customers' Needs While Reducing Diversion Impacts on the Lower American River in the Drier Years," is included to mitigate the impacts of the increased diversions on the Lower American River. The Water Forum Habitat Management Element (HME) will be part of a coordinated multi-agency Lower American River ecosystem partnership established by a Memorandum of Understanding. Agencies expected to participate include: the Water Forum Successor Effort (legally administered by the City of Sacramento under the auspices of the City-County Office of Metropolitan Water Planning); the Sacramento Area Flood Control Agency (SAFCA); CALFED (or its successor); USBR (responsible for administering the Central Valley Project [CVP] and the Central Valley Project Improvement Act [CVPIA]); USFWS; National Marine Fisheries Service (NMFS); CDFG; and the Sacramento County Parks Department (which administers the Lower American River Parkway Plan). The multi-agency program will contain four components that together will address flow, temperature, and physical habitat issues for the Lower American River:

- Habitat Management Plan Development, Updating, and Technical Assistance;
- Projects that benefit the Lower American River Ecosystem;
- Monitoring and Evaluation Program; and
- Project-Specific Mitigation (which will remain the responsibility of each supplier).

In addition, because summertime recreation flows in the Lower American River are expected to be adversely affected by increased diversions, the Water Forum Proposal also includes commitments to fund projects to mitigate recreational impacts.

#### **Element V: Water Conservation**

The Water Conservation Element of the WFP promotes more efficient use of limited water resources. This element is essential to meeting both of the coequal objectives of the Water Forum. Conserved water will be available to help supply the region's water needs and will minimize the need for increased groundwater pumping and increased use of surface water, including water diverted from the American River. Major components of the Water Conservation Element include: residential water meters; other water conservation programs similar to the Best Management Practices included in the statewide Memorandum of Understanding Regarding Urban Water Conservation; public involvement; water conservation plans; and agricultural water conservation. The water conservation practices in the element have been defined considering the specific circumstances of the Water Forum stakeholders. The element does not preclude implementing other, more aggressive conservation approaches to the extent additional, feasible measures become available in the future.

#### **Element VI: Groundwater Management**

This element provides a framework by which the groundwater resource in Sacramento County can be protected and used in a sustainable manner and a mechanism for coordination with those

adjacent counties that share the groundwater basin. A key provision of the element includes recommendations on "sustainable yield," which is the amount of water that can be safely pumped from the basin over a long period of time without damaging the aquifer. Estimated average annual sustainable yield recommendations for each of the three sub-areas of the basin are: North Area: 131,000 AF; South Area: 273,000 AF; and Galt Area: 115,000 AF. Recommendations for locally controlled groundwater management include monitoring groundwater withdrawal and "conjunctive use", or the planned use of surface water in conjunction with groundwater. The Sacramento North Area Groundwater Management Authority was established in August, 1998 through adoption of a joint powers authority using the existing authority of the City of Sacramento, the City of Folsom, the City of Citrus Heights, and the County of Sacramento. The Authority will be charged with facilitating conjunctive use programs and maintaining long-term sustainable yield. Discussions about groundwater management in the South Area and the Galt Area will be undertaken by the Water Forum Successor Effort.

The groundwater management governance structure should facilitate participation by water agencies with specific and relevant interest in the groundwater governance structure outside of Sacramento County and encourage cooperation and collaboration with such agencies.

#### **Element VII: Water Forum Successor Effort**

In order to ensure implementation of the WFP, a Water Forum Successor Effort will be created with membership consisting of those organizations signatory to the WFP. Its responsibilities will be to oversee, monitor, and report on implementation of the WFP. The Water Forum Successor Effort will not have any authority to govern or regulate.

#### **Essential Actions to be Carried Out by Other Agencies**

Three projects anticipated to be carried out by other agencies are essential for the overall WFP:

- Temperature Control Device for the urban water intake from Folsom Dam;
- Optimal use of the cold water pool in Folsom Reservoir; and
- Improved Pattern of Fishery Flow Releases from Folsom Reservoir.

In the analysis of the WFP impacts, each of these projects is assumed to be in place in the future.

#### **Process for Environmental Review and Adoption of the Water Forum Agreement**

The environmental review process and the WFP process are taking place concurrently in a manner that allows the integration of public and agency comments into the planning process. The public and agency review of the Draft EIR and the stakeholders' review of the Agreement will provide comments that will be used in refining the WFP. As the CEQA Lead Agencies, the City and County of Sacramento each have the authority to certify the Final EIR. After Final EIR certification, the stakeholders of the Water Forum will be asked to approve the Agreement and agree to participate in its implementation. If the public agency stakeholders rely on the EIR in deciding whether to approve the Agreement they will act as Responsible Agencies under CEQA. The Agreement will be implemented by the Water Forum Successor Effort representing the stakeholders who adopt the proposal.

After approval of the Agreement by the Water Forum stakeholders, the Final EIR will be forwarded to other agencies for their consideration in connection with (1) their responsibilities as State Trustee Agencies, as defined by State CEQA Guidelines §15386 and/or (2) separate, subsequent actions potentially needed for the plan's implementation. State Trustee Agencies and other affected state agencies include: California Department of Water Resources (DWR), State Water Resources Control Board (SWRCB), State Lands Commission (S.C.), CDFG, California Department of Parks and Recreation, and State Historic Preservation Office (SHPO). Federal agencies which may have separate, subsequent actions related to the plan's implementation include the USBR, USFWS, NMFS, and U. S. Army Corps of Engineers (USACE). The Final EIR will provide program-level technical analysis which may support environmental review of implementation actions and their project-level environmental documents.

### **Approach for Environmental Analysis Recognizing Mitigating Features of the Water Forum Proposal**

In reviewing the environmental impacts and mitigation measures described in this document, it is important to understand the context in which the WFP was developed. Because one of the Water Forum's coequal objectives is the preservation of the fishery, wildlife, recreational and aesthetic values of the Lower American River, the WFP is designed to minimize adverse environmental impacts to the extent feasible. The WFP contains seven elements, each integral to the overall agreement. Element I, Increased Surface Water Diversions, provides for increased diversions from the Lower American River. The remaining six elements all, in one way or another, are intended to reduce the adverse impacts of those increased diversions. Therefore, the project itself reduces the impacts to the environment, through negotiated measures throughout the proposal.

For example, Element II, Actions to Meet Customers' Needs While Reducing Diversion Impacts on the Lower American River in Drier Years, contains provisions by which purveyors agree to reduce their diversions from the Lower American River by specified levels in defined drier years. These actions include extraordinary conservation during the driest years beyond that included in Element V of the WFP. These cutbacks will decrease the severity of the adverse impacts to the river in drier years. These reduced levels of diversions are an integral part of the WFP, and the modeling of impacts in this EIR assumes these reductions. In addition, in defined "driest" years (also known as "conference years"), the WFP signatories will meet and confer regarding diversions and river flows.

Similarly, Element III, Support for a Improved Pattern of Fishery Flow Releases From Folsom Reservoir, provides for the operation of Folsom in a manner that more closely matches the needs of anadromous fish, particularly fall run chinook salmon. One of the essential requirements of the WFP is that this improved flow standard be incorporated into the long-term management of Folsom and Nimbus Dams.

Element IV, the Habitat Management Element (HME), provides for Water Forum participation and funding of a multi-agency Habitat Management Program (HMP) for the Lower American River. The WFP supports habitat improvements and other ecosystem-enhancing projects for the river, which are to be contained in the Implementation Plan of the HMP, described in more detail



in Appendix B to this EIR. The HME also includes commitments to fund projects to mitigate adverse recreational impacts of the WFP identified in this Draft EIR.

However, because the details of the Water Forum Successor Effort's Implementation Plan for the Habitat Management Program are still being worked out, this Draft EIR, in identifying the adverse impacts of the WFP, does *not* include the benefits of the habitat improvement components of the HMP.

It does, however, assume the implementation of an Improved Pattern of Fishery Flow Releases, the Folsom Dam Temperature Control Device, and Folsom Reservoir Optimal Cold Water Pool Management all of which are necessary for the WFP to be effective. Therefore, this EIR describes aspects of the proposed HMP that will provide additional benefit to the Lower American River beyond what is the basis of impact analysis of the EIR.

Element V, the Water Conservation Element of the WFP, commits purveyors to specified water conservation programs. The diversions identified in the WFP reflect the reduced demand resulting from these conservation programs.

Element VI, the Groundwater Management Element, includes conjunctive use programs that provide for storing water in the wet years so that groundwater can safely be used in dry years, conserving surface water supplies. Several of the elements in the WFP would reduce impacts on, CVP and State Water Project (SWP) water deliveries, CVP hydropower generation, Shasta Reservoir, and Folsom Reservoir. These elements of the WFP include Water Conservation, Groundwater Management, and some of the Actions That Meet Customers' Needs While Reducing Diversion Impacts on the Lower American River in Drier Years. The analysis on this Draft EIR reflects implementation of all of the elements.

Based on the State CEQA Guidelines, the impact assessment approach is focused on identifying potential impacts due to implementation of the WFP. It is important to note that there are numerous programs underway or planned to improve fishery conditions for Sacramento River Valley fisheries, particularly salmonid fisheries, including the AFRP of the CVPIA and the Ecosystem Restoration Program Plan of the CALFED Bay-Delta Program.

When implemented over the next several decades, these and other future programs are expected to improve fishery conditions. However, it is not possible at this time to quantify all the benefits of those programs. [This means that the quantitative analyses and impact determinations in the Water Forum Proposal EIR do not reflect anticipated benefits of those programs.]

The EIR identifies environmental impacts and additional mitigation measures, to further reduce adverse impacts, for consideration by the Water Forum stakeholders. As described below, certain impacts are considered significant and unavoidable.

### **Response to Impacts on the Sacramento River and the Bay-Delta**

As discussed previously, the WFP already includes many provisions that would reduce impacts. These include potential aquatic impacts of increased diversions on the Sacramento River and the Bay-Delta. Even with these actions, unless additional water supplies are developed or diversions

are reduced, there would still be remaining impacts on the Sacramento River and the Bay-Delta, especially under cumulative conditions, based on the scenario addressed in this EIR (refer to Table 2-3 and Chapter 6).

When purveyors in the American River watershed exercise area-of-origin water rights, it will reduce the amount of water available from Folsom Reservoir for use by USBR in meeting Sacramento River and Bay-Delta environmental and water delivery obligations. The USBR will have to operate its entire system, including Shasta and Folsom Reservoirs, differently in order to meet those obligations. Unless additional supplies are developed or diversions are reduced, this would result in impacts on the Sacramento River, above and below the American River, and the Bay-Delta.

The USBR will be involved in almost all of the diversion projects included in the WFP. In some cases the USBR needs to issue a contract for a new water supply. In other cases, it has to sign a Warren Act agreement or grant a right-of-way.

In order to take any of these actions, the USBR is required to consult with the resource agencies under Section 7 of the Endangered Species Act (ESA). In addition to Water Forum actions, the consultation will also cover the USBR's entire Operational Criteria and Plan (OCAP) for the CVP.

Under the ESA, the USBR is prohibited from taking any actions that will jeopardize the continued existence of threatened or endangered species. Resource agencies participate in the ESA process by developing biologic objectives for species listed or proposed for listing. Biological objectives serve as specific performance criteria which are included in the biological opinions under the ESA. The USBR is required by the ESA to operate the CVP in a way that meets the biologic objectives set for each species listed or proposed for listing.

Because resource agencies are in the process of developing these biological objectives, it is impossible to specify performance criteria at this time. That uncertainty is combined with uncertainty over the extent and effectiveness of several future actions to protect Sacramento River and Bay-Delta resources. Therefore, it is impossible at this time to formulate specific mitigation measures for Sacramento River or Bay-Delta aquatic impacts or to assign responsibility for the mitigation.

The Water Forum Proposal EIR is a Program EIR and it is recognized that individual projects included in the WFP will need to comply with CEQA and, where applicable, the National Environmental Policy Act (NEPA) and the state and federal Endangered Species Acts. Compliance with the state and federal Endangered Species Acts may result in diversion restrictions or other conditions beyond those that are included in the WFP.

**Appendix H**  
**Preliminary Drainage Master Plan**



**PRELIMINARY  
DRAINAGE MASTER PLAN  
MARCHBROOK-SUNSET RANCHOS**

Prepared for: **Marchbrook Building Co., a  
Subsidiary of The Grupe Company**

**VOLUME I**

◆ **INCLUDES APPENDICES A thru G**

June 16, 1999

**TLA**  
TERRANCE E. LOWELL  
& ASSOCIATES, INC.



# TABLE OF CONTENTS

---

<b>INTRODUCTION</b> .....	1
General.....	1
Conclusion.....	2
<b>EXISTING DRAINAGE PLANS AND FLOOD PLAIN STUDIES</b> .....	3
General.....	3
Orchard Creek Main Channel.....	4
Orchard Creek Tributary #2-1.....	4
Pleasant Grove Creek.....	4
SWM Relative to all Watersheds.....	5
<b>DESIGN CRITERIA</b> .....	5
General.....	5
Hydrologic Calculation Method.....	5
Precipitation.....	6
Hydrologic Soils Group and Infiltration Rates.....	7
Hydraulic Design Criteria – Culverts and Channels.....	8
Hydraulic Design Criteria – HEXRAS Backwater Analysis.....	9
Overflow Drainage Release Paths.....	10
<b>PRE PROJECT CONDITIONS</b> .....	10
General.....	10
Existing Culverts and Ponds.....	11
Results.....	11
<b>POST PROJECT CONDITIONS (unmitigated)</b> .....	11
General.....	11
Proposed Culverts and Ponds.....	11
Results.....	12
<b>POST PROJECT CONDITIONS MITIGATED</b> .....	12
General.....	12
Mitigation Detention Basins.....	13
<b>FLOOD PLAINS</b> .....	14
General.....	14
<b>BEST MANAGEMENT PRACTICE (BMP) FACILITIES</b> .....	14

**DETENTION FACILITIES  
and  
BMP MAINTENANCE RECOMMENDATIONS..... 14**

**RETENTION QUANTITY GEMENT PRACTICE FACILITIES..... 15**

**CONCLUSIONS..... 15**

**TABLES**

- 1. Pre Project Subbasin Drainage Characteristics
- 2. Post Project Major Drainage Shed Areas Studied
- 3. Post Project Subbasin Drainage Characteristics
- 4. Existing Major Culverts & Pond Capacity
- 5. Pre, Post and Post Mitigated Drainage Results at Selected Comparison Points
- 6. Proposed Post Project New Detention Basins

**FIGURES**

- 1A. Site Location and Major Drainage Sheds
- 1B. Pre Project Subbasins
- 2. Post Project Subbasins
- 3. 100-Year Post Project Flood Plains

**APPENDICES**

- A. SCS Excerpts Roseville & Rockland Quadrangles and Table 13 soils groups
- B. Typical project lot and road hard surface calculations
- C. FEMA Flood Plain Excerpts
- D. Parcel K Drainage Report, August 17, 1998 by Terrance E. Lowell & Associates, excerpts
- E. PCFCD Hec-1 data subbasin excerpts and Stanford Ranch Drainage Study relationship
- F. Caltrans excerpts: SH65 Improvements 1998 fronting property to Sunset Boulevard existing



- G. Excerpts: "Auburn Ravine, Coon and Pleasant Grove Creeks Flood Mitigation" Volume 1 and 2 (Appendix) prepared for Placer County Flood Control and Water Conservation District, CHEMHILL, June 1993  
(Project is located in Quadrangles)

**APPENDIX VOLUME II**  
**Appendices H thru R**

- H. Existing pond storage/outfall capacity calculations  
Ponds 1 through 11
- I. Auburn Ravine, Coon and Pleasant Grove Creeks Flood Plain Mitigation (PGC) excerpts, w\TB PHI area shown
  - 1. Volume 1
  - 2. Volume 2
- J. South Lincoln Master Drainage Plan, Aug. 15, 1998, (SLMD-AIO) excerpts w\TB PHI area shown
  - 1. Final report
  - 2. Technical Appendix
  - 3. 1/98 Draft (map relationship only)
- K. Draft Lincoln Stormwater Management Plan (Plan95) excerpts from Montgomery Watson Report with tabulated flow results and Map
- L. Pre Project Hec-1 Calculation Results
 

1. HEC1 event	FILE NO.	DESCRIPTION
2 yr	MBP2.out	output results only
10 yr	MBP10.out	output results only
25 yr	MBP25.out	output results only
50 yr	MBP50.out	output results only
100 yr	MBP100.out	output results only
500 yr	MBP500.out	output results only
- M. Post Project Hec-1 Calculation Results
 

1. HEC1 event	FILE NO.	DESCRIPTION
2 yr	MBD2out	output results only
10 yr	MBD10.out	output results only
25 yr	MBD25.out	output results only
50 yr	MBD50.out	output results only
100 yr	MBD100.out	output results only
500 yr	MBD500.out	output results only

# TABLE OF CONTENTS, con't

*page iv of iv*

## N. Post Hec-1 Mitigated

### 1. Summary Table of 1 yr thru 500 yr flows and Shed Map

2. HEC1 event	FILE NO.	DESCRIPTION
2 yr	MBDM2.out	output results only
10 yr	MBDM10.out	output results only
25 yr	MBDM25.out	output results only
50 yr	MBDM50.out	output results only
100 yr	MBDM100.out	output results only
500 yr	MBDM500.out	output results only

## O. Post HECRAS Floodplain Calculations

## P. Mitigation Detention Basins

## Q. Miscellaneous

## R. Disks

## INTRODUCTION

### General

This report provides the Preliminary Master Drainage Plan (Plan) and criteria design for project facilities within the Marchbrook–Sunset Ranchos (Project) located in the Placer County, California. Supplemental drainage reports will be submitted for each subsequently proposed construction project and subdivision. The supplemental reports will utilize the information developed in this Report for the design of drainage facilities once the areas master plan has been approved.

The Project is located south of the City of Lincoln near the east side of SR65, west of Whitney Oaks (in the City of Rocklin) and abuts the City of Rocklin on the south side. The location of the Project is shown on Figure 1.

The Project is a proposed master plan community consisting of residential, commercial/business, parks, schools, roads and open space uses.

Just west of the Project (between the Projects west boundary and SR65) is an area proposed for development as business professional. This area is included in the drainage study although not in as great a detail under the developed conditions as is the Project area.

The Project and the area west of the Project to SR65 is proposed for annexation to and development in the City of Rocklin.

The Project is located in four drainage basins as follows:

1. Orchard Creek Main Channel:  
Middle north to west portion drainage basins consisting of approximately 184 acres. This area consists of several sub areas draining north and thence west through the Twelve Bridges project in the City of Lincoln to existing culverts crossing under SR65;
2. Orchard Creek Tributary #2-1:  
Northwest portion drainage basins consisting of approximately 78 acres. This area drains north then west to existing culverts crossing under SR65.
3. Orchard Creek Tributary #2:  
Middle west portion drainage basins consisting of 525 acres. This area drains west through the proposed offsite business area to existing culverts crossing under SR65.
4. Pleasant Grove Creek:  
The east and south portion drainage basins consisting of 1013 acres. This area drains southwesterly and leaves the property at various locations to existing sub-tributaries of Pleasant Grove Creek and eventually to culverts crossing under SR65.

The total Project property consists of 1342 acres.

All the drainage basins have been studied by Placer County Flood Control and Water Conservation District (PCFCD).

In addition, the City of Lincoln has prepared a "South Lincoln Master Drainage Plan, (SLMDP) dated August 15, 1998 (more current than the PCFCD's) that applies to portions of Orchard Creek which may be applicable to this Project. Also, the PCFCD has prepared a "Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation" plan dated June 1993 that applies to portions of Pleasant Grove Creek applicable to this Project. The results of studies conclude that in the Project some areas require detention to pre project conditions to prevent aggravating downstream/upstream flooding problems.

The developed Project acreage will consist of buildings, paved parking with driveways, landscaping, open grassed play areas, some storm water detention basins, open space, parks, schools, residential and commercial/business development, and roadways.

This report contains:

1. Design criteria used;
2. Existing plans and studies relative to the Project;
3. Pre project, post project and post project mitigated drainage flows;
4. Post project drainage mitigation facility approximate sizes;
5. Orchard Creek and Pleasant Grove Creek flood plains in the Project area;
6. Best Management Practice (BMP) Concepts;
7. Detention Facilities and BMP Maintenance Needs;
8. Drainage Release Path concepts; and,
9. Conclusions.

## Conclusion

The Project with the proposed mitigation facilities:

1. Will not aggravate downstream runoff or floodplains;
2. Is in conformance with the PCFCD's Stormwater Management Plan, the City of Lincoln's SLMDP, and the PCFCD Pleasant Grove Creek study;
3. Will provide for areas proposed for development to be above the floodplain;
4. Will provide for drainage release paths that will allow drainage around proposed project structures without encroaching on the finished floor; and,
5. Will provide for BMP's to be included with each development as may be required.

## EXISTING DRAINAGE PLANS AND FLOOD PLAIN STUDIES

### General

There are eight (8) drainage plans and studies that are pertinent to the Project. The plans are:

1. “Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation”(PGC), dated June 1993, prepared for the Placer County Flood Control and Water Conservation District (PCFD) by CH2MHill;

Portions of these plans applicable to the Project are excerpted and included in Appendix I & G.

2. “Final Report south Lincoln Master Drainage Plan: Auburn Ravine, Ingram Slough and Orchard Creek” (SLMP-AIO), dated August 15, 1998, prepared City of Lincoln, Montgomery Watson, and Civil Solutions.

Portions of these plans applicable to the Project are excerpted and included in Appendix J.

3. “Stormwater Management Manual” (SWM), as revised to October 1997, prepared by the PCFD;

4. Draft “Lincoln Stormwater Management Plan” (Plan95) dated February 1995, prepared by Montgomery Watson.

Portions of these plans applicable to the Project are excerpted and included in Appendix K.

5. “Parcel K Preliminary Drainage Report” dated August 17, 1998, prepared for The Rocklin Project LP by Terrance E. Lowell & Associates

Portions of these plans applicable to the Project are excerpted and included in Appendix D & E.

6. “FEMA” Study’s excerpts
  - a. Placer County @ time of study.

*Note that these studies, although dated because of more recent hydrologic and hydraulic data, provide useful information relative to stream stations, major culvert locations, and flood plain areas at the time of their studies.*

Portions of these plans applicable to the Project are excerpted and included in Appendix C.

7. Caltrans
  - a. Improvement plan excerpts

Portions of these plans applicable to the Project are excerpted and included in Appendix F.

8. "Twelve Bridges, PHI Portion Master Drainage Plan" dated April 1999 prepared by Terrance E. Lowell & Associates.

#### **Orchard Creek Main Channel, reports relative to Project Area**

The plans relative to Orchard Creek Main Channel are: PGC, SLMP-AIO, Plan95, FEMA, Caltrans, PHI, and the SWM.

In general, detention is not required on the main channel under developed project conditions. However, because of the adjacent north side development of Twelve Bridges within the City of Lincoln, detention facilities may be needed for flows not to exceed the Twelve Bridges system designs which are based on undeveloped offsite condition flows.

For the purpose of this preliminary study, it is assumed that detention facilities are not required because the Project proposed drainages are directed primarily to offsite open channel areas that pass through the Twelve Bridges site and the Project flows will not have any significant effect on the channels.

#### **Orchard Creek Tributary #2-1, reports relative to Project Area**

The plans relative to Orchard Creek Tributary #2-1 are: PGC, SLMP-AIO, Plan95, FEMA, Caltrans, PHI, and the SWM.

In general, detention is not required on the main channel under developed project conditions. However, because of the adjacent north side development of Twelve Bridges within the City of Lincoln, detention facilities may be needed for flows not to exceed the Twelve Bridges system designs which are based on undeveloped offsite condition flows.

For the purpose of this preliminary study, it is assumed that detention facilities are not required because the Project proposed drainages are directed primarily to offsite open channel areas that pass through the Twelve Bridges site and the Project flows will not have any significant effect on the channels.

#### **Pleasant Grove Creek reports relative to Project Area**

The plans relative to Pleasant Grove Creek are: PGC, Caltrans, PHI, and the SWM.

In general, detention is required on the main channel under developed project conditions.

## **SWM relative to all Watersheds**

The SWM is relative to all watersheds studied. It provides methodology and criteria for the design of facilities and detention facility sizing, and rainfall amounts and distribution for use in ungaged drainage basins.

Where other reports have been prepared subsequent to the SWM such as the PGC, SLMP-AIO, PHI, Caltrans, and Plan95, these plans shall govern in lieu of the SWM where a conflict may occur. The reason for this is that the other plans provide for a master area coordinated plan and in some cases, detention is not required where the SWM would require detention.

## **DESIGN CRITERIA**

### **General**

Existing and proposed system drainage flows and facilities are calculated and will be designed in accordance with:

1. The Placer County Flood Control and Water Conservation District's Stormwater Management Manual, version February 1994 & October 1997 amendments (SWM);
2. City of Rocklin requirements;
3. Applicable drainage master plans PGC, SLMP-AIO, Plan95, Caltrans, PHI, and FEMA; and
4. Industry standard practice.

The SWM requires post project objective flows for 2-year, 10-year and 100-year storm events to be less than pre-project flow conditions unless master drainage plans indicate otherwise. The Project will be designed to conform to the post project objective SWM flow requirements unless otherwise noted.

The following sections describe the various components of the design methodology.

### **Hydrologic calculation method**

The HEC-1 2000 point program was used to calculate the peak flows for the 2-year through 100-year storm event. For the studied ungaged subbasins, precipitation used was developed using the SWM theoretical information. The routing methods used are the Kinematic Wave for overland flow and Modified Muskingum-Cunge for channels. Two overland flow routings were used per subbasin, one for pervious areas and one for impervious areas including paved and roofed areas. The initial and uniform loss rate method was used to determine precipitation loss due to interception and infiltration.

Existing and post project detention storage basin volumes were calculated using surface storage area at various storage elevations. Detention basin outlet control facilities were calibrated for the various storage elevations determined above using existing or proposed pipes as applicable. Inlet or outlet

control conditions were applied depending on the pipe slope and downstream tailwater. The detention storage area, elevation, and outflow capacity data was then included in the HEC-1 project runs for calculation of project outlet flows under pre-project and post-project mitigated conditions.

For HEC-1 input, the following were used for friction values for pre and post Project conditions:

Sheet flow:	impervious	N = 0.11
	pervious	N = 0.40 to 0.70 depending on location
Channel flow:	impervious	n = .015 to 0.16
	pervious	n = .03 to 0.06 depending on location and use
CMP:		n = .024
Concrete/Plastic		n = .012 to .015

### Precipitation

Precipitation is based on the SWM depth-duration-frequency versus elevation tables prepared for Placer County. Precipitation input into the HEC-1 models was developed using the Placer County Design Precipitation Program (PDP). This program uses elevation and subbasin centroid x and y coordinates to center a storm with a given return period over a specified subbasin and then produces HEC-1 precipitation input (PI cards) for each subbasin in the model. Although the drainage basins are larger than 200 acres, the storm basin centering application was not used in this study and is conservative for sizing of facilities. An elevation of 275 feet was used for determination of the rainfall amounts for all basins studied.

The maximum precipitation occurs within the maximum 1-hour of rainfall near the center of the total storm time selected.

A 24-hour rainfall, in 5-minute increments was developed using the PDP program, and input into a HEC-1 basin calculation. The PDP program includes the peak incremental rainfall that occurs. The HEC-1 program model used 1-minute intervals (by interpolation) for a period of 1440 minutes (24-hours) for developed watersheds. Since the Project drainage subbasins studied have a relatively short time of concentration, e.g. -minutes to 1-hour, the peak rainfall and peak runoff occurs within the 24-hour storm event. A storm event longer than 24 hours will not increase peak runoff quantities.

The following is the rainfall depth-duration for a 100-year frequency event at an elevation of 275 feet and maximum cloudburst amounts:



<u>Time</u>	<u>Rainfall Inches</u>	<u>Equivalent Inches/Hour</u>
5 minute	0.44 inches	5.23
10 minute	0.61 inches	3.69
15 minute	0.73 inches	2.91
30 minute	0.95 inches	1.90
1 hour	1.24 inches	1.24
2 hour	1.64 inches	0.82
3 hour	1.91 inches	0.64
6 hour	2.34 inches	0.40
12 hour	3.49 inches	0.30
1 day	4.55 inches	0.19

### Hydrologic Soils Group and Infiltration Rates

The hydrologic soil groups and infiltration rates are used to develop the HEC-1 initial and uniform loss rates. These losses are deducted from the rainfall; the excess rainfall results in stormwater runoff. A negative excess is not allowed.

Initial loss is defined as all rainfall lost until a specified amount is satisfied. No stormwater runoff results until the specified amount is exceeded. For example, if 1-inch per hour of rain were to fall for 6 hours for a total of 6-inches on a pervious material, and the initial loss was estimated to be 4-inches, no runoff would result for the first 4 hours of rainfall.

For the area, an initial loss rate of zero "0" is used for pervious and impervious areas. This would be the case for an area that has been subject to prior storms and the ground and depressions already saturated.

The uniform loss rate takes effect after initial losses are satisfied. Uniform loss rates were calculated using SCS and SWM information as follows:

The soil hydrologic characteristics were determined using information contained in the Soil Survey of Placer County, California, Western Part, prepared by USDA and SCS in Cooperation with UC Agricultural Experiment Station (SCS), issued July 1989 based on a 1973 survey.

See Appendix A for applicable SCS map and table excerpts.

The SCS quadrangle maps that cover the study area are #s 13 (Roseville) and 14 (Rocklin). The portion of the SCS maps shows the area soil numbers in the Project drainage sheds Orchard Creek main channel and Tributary 2-1 as #s 104, 105, 144, 145, 152, 153, and 154. Table 13 of the SCS report lists the hydrologic group for all these soil as D for map soil number shown. The portion of the SCS maps shows the area soil numbers in the Project drainage shed for Pleasant Grove Creek as #s 106, 107 (SCS group C), #s 145, 153, 154 (SCS group D), and # 194 (SCS group B). Hydrologic soil groups are used to estimate a soil's water intake capability after the soil has been wetted and has received precipitation from long duration storms.

Using Table 5-4 of the SWM, a constant infiltration rate was estimated for the SCS hydrologic soil groups between 0.07 and 0.09 (group D) and 0.12 (group B) inches/hour for pervious areas depending on location under pre and post project conditions. The same infiltration were used under pre and post project conditions to reflect the underlying soil condition as being dominant with the landscaping material assumed to be shallow and saturated.

A constant infiltration rate of 0.0 inches/hour is used for all impervious areas including paved roads, paved walkways, roofed areas and detention areas.

Because of a HEC-1 version 4.0.1E program limitation, it was necessary to show at least 1% impervious or 1% pervious area where two runoff characteristics in a subbasin were included. However, this amount is so small it is considered to have an insignificant affect on basins with no impervious area.

#### Hydraulic Design Criteria – Culverts and Channels

When facilities are designed for improvement plans the following criteria applies for hydraulic systems for curbs and gutters, drainage inlets and manholes, drainage pipes, and overflow channels and shall conform to the SWM and as follows.

Hydraulic criteria used for roughness coefficients in the design of culverts, channels and in backwater analysis may be different than those used in the HEC1 program. Where different, the roughness coefficients used in HEC1 are generally less than those used in the hydraulic design. The reason for the difference is that a smoother HEC1 roughness coefficient will almost always result in a larger runoff amount than when a rougher coefficient is used. This results in conservative flow values used in the design of the major drainage systems. Then in the design of the major and minor drainage systems, the higher roughness coefficient (where it occurs) combined with the HEC1 flows noted above, provide conservative results with regards to the hydraulic grade line (HGL) calculated.

1A. Curbs and gutters Arterial classed roads per SWM Table 6-1:

- a. Continuous slope areas: 100-year storm, maximum elevation less than 6-inches over sidewalk; all travel lanes clear of stormwater flow; bike lanes allowed to be inundated; stormwater flow contained in right-of-way.
- b. Sag areas: Same as continuous slope areas.

1B. Curbs and gutters for Collector classed roads per SWM Table 6-1:

- a. Continuous slope areas: 10-year storm, traveled way free of water; 25-year storm, water not above back of sidewalk elevation or greater than 6" deep in traveled way; 100-year storm, stormwater contained within right-of-way, center 12-feet of road clear, a water flow cannot exceed 3-feet/second.

- b. At sag points: 10-year storm, water not above back of sidewalk or greater than 6-inches deep in travelled way; 25-year storm, maximum elevation less than 4-inches above top of curb and less than 6" deep in travelled way; 100-year storm, stormwater contained within right-of-way, center 12-feet of road clear, water flow cannot exceed 3-feet/second, maximum depth over sidewalk 6".
2. Drainage inlets (closed system)
  - a. At design storm, 10-year event, inlets assumed 50% blocked.
  - b. Hydraulic grade line (HGL): at 10-year storm, HGL minimum of 6-inches below top of gratings, inlets, and manhole covers.
  - c. Maximum spacing 500-feet between inlets.
3. Drainage pipes
  - a. Minimum pipe velocities 2 1/2 feet/second computed using Mannings formula for pipes flowing full;
  - b. Slopes less than 70% of critical slope or more than 130% of critical slope at design flow for pipes not under pressure flow;
  - c. Mannings "n" per SWM Table 6-3 and as follows.
    1. all culverts except CSP 0.015
    2. CSP 0.024
    3. concrete curb and gutter 0.016
    4. graded shoulders & ditches 0.030
4. Drainage channel and overflow release channel
  - a. per SWM Section VIII, and culverts less than 5 square feet in area completely blocked;
  - b. 100-year event flow with HGL 1-foot minimum below pad elevation.
5. Entrance loss coefficients @ manholes, drop inlets, culvert pipe inlets.
  - a. 0.2 @ minor structures; to 1.5 @ drop and culvert inlets;
  - b. Loss coefficients also consider and include hydraulic losses due to change in both volume and direction of flow.

#### Hydraulic Design Criteria – HEXRAS Backwater Analysis

A HECRAS program (replaces HEC-2) is used to calculate the 100-year flood plains for the major channels. The HECRAS program used for this Project is included in a BOSS program within AutoCadd14. The BOSS HECRAS program allows the development of the cross sections and plotting of the flood plain without the need of separate hand input. The BOSS program utilizes all the HECRAS criteria and formatting.

Program input after creation of the cross sections include:

- a. "n" values:
  1. For channel locations between overbank areas: 0.03 to 0.07 depending on location and estimated potential for shrubbery and tree growth;
  2. For overbank areas: 0.10
  
- b. Beginning and ending station starting HGL's calibration calculated at various flows either outside or inside the program depending upon location:
  1. Utilizing existing FEMA flow and other study information;
  2. For subchannels: main channel HGL elevations for a particular storm event for the nearest downstream cross section;
  3. At road crossings: inside program or outside program HGL elevation calculation;
  4. Overbank width limitation was developed from the proposed large lot boundaries to contain the floodplain within the open space area where the boundaries would limit the spread of flooding. Large lot grading will be used to contain flows to the proposed open space areas.

### **Overflow Drainage Release Paths**

Overflow release channels will be incorporated into the design when each large lot subdivision is further divided or developed. The release paths will be made to provide for the 100-year storm event to be released through the subdivision, assuming local inlets 100% blocked, without flooding of adjacent building pads.

The release paths may be in proposed road sections and or easements that access the major channels.

Release paths to sag points in roads will be released through median or over curb/sidewalks to access natural or design drainage channels.

Major channel under road drainage structures are assumed not to be blocked and are assumed to be part of the drainage release path.

Design calculations for the drainage release paths will be provided with each construction project in accordance with the above criteria.

## **PRE PROJECT CONDITIONS**

### **General**

The preproject drainage basin areas are shown on Figures 1A and 1B. The subbasin characteristics are included in Table 1.

The existing basin areas studied drain a total of 1801 acres. A summary of the onsite and offsite acreage for each of the four drainage basin areas studied is shown in Table 2.

The Project areas are all undeveloped except for portions of SR65 and a portion of the area near Sunset Boulevard known as Herman Melville.

### **Existing Culverts and Ponds**

Existing major culverts and ponds are located at eleven (11) locations and their storage and outfall capacity are summarized in Table 4

Capacity calculations for each of the above existing facilities are included in Appendixes H for the locations noted above.

### **Results**

HEC-1 results for the drainage shed areas and storm events studied are summarized in Table 5.

The HEC-1 run results calculations for the 2-year through 500-year event are included in the Appendix L and on computer disk in Appendix R.

## **POST PROJECT CONDITIONS (unmitigated)**

### **General**

Post project subbasin drainage areas studied are shown on Figures 2 except for the southwest basins of Pleasant Grove Creek tributary which is shown on Figure 1A. Subbasin characteristics are tabulated in Table 3.

The Project area and the offsite downstream areas are developed consisting of single family, multifamily, commercial/business, parks, schools, and buildings, roads, drainage facilities, paved parking areas, and open space.

Onsite drainage facilities will consist of drainage inlets and pipes with stormwater discharge to natural and/or reconstructed channels.

### **Proposed Culverts and Ponds**

Proposed major culverts and ponds are located at the same preproject eleven (11) locations, and their storage and outfall capacity are summarized in Table 4. Their characteristics under preproject unmitigated conditions are assumed for this study to be the same as under preproject conditions.

Proposed major culverts and ponds, are located at the following locations:

Capacity calculations for each of the above existing facilities are included in Appendix H.

## Results

HEC-1 results for the drainage shed areas and storm events studied are summarized in Table 5.

Under the unmitigated conditions studied, no major roads or SR65 become overtopped.

The HEC-1 run for the 2-year through 500 year events are included in the Appendix M and on disk in Appendix R.

## POST PROJECT CONDITIONS MITIGATED

### General

The SWM requires that post Project flows not be greater than pre project conditions and objective flows unless an adopted Master Plan indicate otherwise.

For the Project area and drainage basins studied, sheds that may require detention are:

a. Orchard Creek Main Channel

In accordance with the Lincoln Master Plan no detention required is required. However, detention may be required at some locations if the adjacent north side Twelve Bridges PHI proposed developed drainage facilities are inadequate to accept the Project flows.

For the purpose of this preliminary study, it is assumed that detention facilities are not required because the Project proposed drainages are directed primarily to offsite open channel areas that pass through the Twelve Bridges site and the Project flows will not have any significant effect on the channels

b. Orchard Creek Tributary #2-1

In accordance with the Lincoln Master Plan no detention required is required. However, detention may be required at some locations if the adjacent north side Twelve Bridges PHI proposed developed drainage facilities are inadequate to accept the Project flows.

For the purpose of this preliminary study, it is assumed that detention facilities are not required because the Project proposed drainages are directed primarily to offsite open channel areas that pass through the Twelve Bridges site and the Project flows will not have any significant effect on the channels

c. Orchard Creek Tributary #2

This basin requires detention in order to not increase downstream flows to the west side of

SR65. The existing culvert at SR65 is adequate for undetained flows. However, in order to reduce post project flows to preproject conditions or less, detention is required.

d. Pleasant Grove Creek

The Pleasant Grove Creek basins require detention in order to not increase downstream flow to adjacent properties. In order to reduce post project flows to preproject conditions or less, detention is required.

Where detention is required, the SWM criteria requires that post project flows be mitigated to less than preproject conditions for the 2-year, 10-year and 100-year event flows. The SWM post project objective flows are based on a variable amount per SWM Figure 7-1 depending on the flow increase from pre Project to post Project unmitigated flow amounts. The post project object flow varies from a maximum of one (1.00) times the preproject flow to 0.90 times the preproject flow.

The post Project objective flows were calculated for each of the storm events studied per the SWM Figure 7-1 and are summarized in Table 5.

The post project drainage basin areas, amount of development and characteristics are the same as post project unmitigated conditions.

**Mitigation Detention Basins**

The mitigations proposed are tabulated in Table 6. channel.

Mitigation facility sketch and calibrations for surface storage basin volumes, elevations and outlet flows are included in Appendix P. Note that the eleven Ponds included in the pre and post Project unmitigated are to remain except as may be modified or incorporated into a proposed detention basin for mitigation measures.

The mitigated discharge flows from the proposed project outlets are less than predevelopment conditions and the SWM objective flows for the 2-year through the 100-year events studied. These results show that the proposed mitigation detention basins are adequate for the projected flows.

The HEC-1 results for all flow events studied are summarized in Table 5.

The HEC-1 output for the 2-year through 500-year storm events are included in the Appendix N and on disk in Appendix R.

## FLOOD PLAINS

### General

The 100-year flood plains for the post project mitigated conditions are shown on Figure 3 for major channel locations.

Flood plains were not calculated for smaller basin drainage ways as they are in steeper terrain open space areas where there is no floodplain effect to adjacent property from the intended flows.

The HECRAS output for the 100-year event is included in Appendix Q and on disk in Appendix R

## BEST MANAGEMENT PRACTICE (BMP) FACILITIES

BMP area facilities will be developed in accordance with agency requirements at the time construction projects are proposed.

The BMP's will be designed using the California Storm Water BMP Handbook, March 1993 as amended, Municipal Handbook prepared by Mckee, et al, for the Stormwater Task force or industry standard practice to meet each developments need.

## DETENTION FACILITIES

and

## BMP MAINTENANCE RECOMMENDATIONS

Detention and BMP facilities including diversion structures, diversion channels, detention basins, detention basin outlet structures, and outlet pipes will require observation and maintenance.

Periodic inspections need to be made before the onset of winter and after major storm events and more often to:

1. Verify no debris is blocking inlets, channels, pipes, or structures. Clean if needed.
2. Verify that detention basin is not filling in with sediment or debris that would reduce its capacity. Remove sediment and debris as required to maintain capacity.
3. Verify that overflow spill path is free of blocking debris and will allow flow without jeopardizing Project structures.
4. Repair areas that may become damaged due to excessive flows or debris/sediment buildup.

More specific recommendations will be included when design systems are proposed for construction.



## RETENTION QUANTITY REQUIREMENTS

PCFCD as has the City of Lincoln (SLMP-AIO) has prepared a study prepared to attenuate increased volume of runoff attributable to new impervious areas created by new developments. The volume changes are related to the 8-day 100-year storm. The purpose of the retention basin is to reduce the additional new volumes effect on downstream Sutter County facilities.

The total new hard surface (impervious areas) to be created by the proposed developments is 891 acres.

Table 2 summarizes the areas by major shed and developer for total impervious acres (new and existing).

The areas of hard surface created is based the impervious area increase from pre development to post development. Tables 1 and 3 include an additional breakdown of the impervious acreages by subbasins based upon existing and proposed land uses.

The location and cost sharing for the retention basins has not been completely defined at this time.

The City of Lincoln in its SLMP-AIO is proposing a 390 acre foot retention basin for areas to be developed within the City of Lincoln which drain areas of Orchard Creek and Ingram Slough. The Project area developed hard surface in the Orchard Creek drainage shed is not included in the 390 acre foot retention basin area.

The hard surface area that drains to the City of Rocklin is in the Rocklin jurisdiction. The method of mitigating this drainage shed areas new development hard surface area is subject to the City of Rocklin requirements

## CONCLUSIONS

The Project with the proposed mitigation facilities:

1. Will not aggravate downstream runoff or floodplains;
2. Is in conformance with the PCFCD's Stormwater Management Plan, the City of Lincoln's SLMDP, and the PCFCD Pleasant Grove Creek study;
3. Will provide for areas proposed for development to be above the floodplain;
4. Will provide for drainage release paths that will allow drainage around proposed project structures without encroaching on the finished floor; and,
5. Will provide for BMP's to be included with each development as may be required.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**Appendix I**  
**Acoustical Terminology**



## **APPENDIX I: ACOUSTICAL TERMINOLOGY**

---

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise-level with noise occurring during evening hours (7 – 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>L<sub>dn</sub></b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>L<sub>eq</sub></b>	Equivalent or energy-averaged sound level.
<b>L<sub>max</sub></b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Noise</b>	Unwanted sound.
<b>Peak Noise</b>	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the “Maximum” level, which is the highest RMS level.

**Threshold  
of Hearing**

The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.

**Threshold  
of Pain**

Approximately 120 dB above the threshold of hearing.

## **Appendix J**

### **CNDDDB Database Search Output**





California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

SCAPHIOPUS HAMMONDII  
WESTERN SPADEFOOT  
Element Code: AAABF01030

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G3? CDFG Status: SC  
State: None State: S3?

Habitat Associations

General: OCCURS PRIMARILY IN GRASSLAND HABITATS, BUT CAN BE FOUND IN VALLEY-FOOTHILL HARDWOOD WOODLANDS.  
Micro: VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Occurrence No. 55 Map Index:32324 ---Dates Last Seen--- Lat/Long: 38°39'05" / 121°13'07" Township: 09N  
Occ Rank: Unknown Element: 1978-03-05 UTM: Zone-10 N4279384 E655025 Range: 07E  
Origin: Introduced Back into Native Site: 1978-03-05 Precision: NON-SPECIFIC Section: XX Qtr XX  
Hab./Range  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 47.4 ac Elevation: 260 ft  
Main Source: MCCREADY, A. 1978 (PERS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: PHOENIX PARK, PHOENIX FIELD, FAIR OAKS; APPROX. 0.5 KM ESE OF THE INTERSECTION BETWEEN SUNSET AVENUE AND HAZEL AVENUE.

Comments

Distribution:  
Ecological: PHOENIX FIELD VERNAL POOLS.  
Threat:  
General: CAPTURED & RELEASED 2 MALES. FIRST EVIDENCE OF POP AT THIS SITE; MCCREADY BELIEVES FROGS ARE INTRODUCED. NO EVIDENCE OF BREEDING; INFORMED FAIR OAKS RECREATION & PARK DISTRICT AS POOLS REGISTERED IN NATIONAL REGISTRY OF NATURAL LANDMARKS.  
Owner/Manager: CITY OF FAIR OAKS

Occurrence No. 171 Map Index:42145 ---Dates Last Seen--- Lat/Long: 38°45'43" / 121°20'12" Township: 11N  
Occ Rank: Unknown Element: 1991-04-12 UTM: Zone-10 N4291480 E644500 Range: 06E  
Origin: Natural/Native occurrence Site: 1991-04-12 Precision: SPECIFIC Section: 32 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 115 ft  
Main Source: BALFOUR, P. 1991 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: TRIB TO KASEBERG CREEK, 1.3 MILES NE OF JCT BASE LINE & FIDDYMENT ROADS, ROSEVILLE.

Comments

Distribution: 5 CONSTRUCTED VERNAL POOLS AND TRIB TO KASEBERG CREEK. MAPPED TO SITE DESCRIPTION (ELEVATION GIVEN DOESN'T MATCH)  
Ecological: VERNAL POOLS AND INERMITTENT CREEK. SURROUNDING LAND USE: MITIGATION SITE, VARIOUS DEVELOPMENTS.  
Threat: INCREASED HYDROLOGY, NON NATIVE FISHES  
General: SERVERAL TADPOLES OBSERVED, 1991  
Owner/Manager: UNKNOWN

Occurrence No. 172 Map Index:42147 ---Dates Last Seen--- Lat/Long: 38°46'10" / 121°15'09" Township: 11N  
Occ Rank: Poor Element: 1994-03-19 UTM: Zone-10 N4292434 E651799 Range: 06E  
Origin: Natural/Native occurrence Site: 1994-03-19 Precision: SPECIFIC Section: 25 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 200 ft  
Main Source: BALFOUR, P. 1994 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: POOLS ADJACENT TO RAILROAD TRACKS NEAR TAYLOR ROAD, 0.4 MILE SOUTH OF SEWAGE DISPOSAL PONDS, ROSEVILLE.

Comments

Distribution: POOLED AREAS BETWEEN TRACKS AND DEVELOPMENT.  
Ecological: SURROUNDING LAND USE: RAILROAD EASEMENT  
Threat: DEVELOPMENT  
General: 5 TADPOLES OBSERVED, 1994. CALIFORNIA LINDERIELLA ALSO PRESENT.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

SCAPHIOPUS HAMMONDII (cont.)

WESTERN SPADEFOOT

Element Code: AAABF01030

-----List Status-----

Federal: None  
State: None

-----NDDB Element Ranks-----

Global: G3?  
State: S3?

-----Other Lists-----

CDFG Status: SC

Occurrence No. 173      Map Index:42150      ---Dates Last Seen---      Lat/Long: 38°46'11" / 121°19'46"      Township: 11N  
 Occ Rank: Poor      Element: 1990-02-XX      UTM: Zone-10 N4292366 E645108      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1990-02-XX      Precision: NON-SPECIFIC      Section: 29 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 2/5 mile      Elevation: 140 ft  
 Main Source: MUTH, D. 1990 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: NEAR THE INTERSECTION OF WOODCREEK OAKS BLVD AND PLEASANT GROVE BLVD, WOODCREEK OAKS SUBDIVISION IN WESTERN ROSEVILLE

-----Comments-----

Distribution: MAPPED TO DESCRIPTION GIVEN (TOWNSHIP, SECTION AND ELEVATION DON'T MATCH SITE DESCRIPTION).  
 Ecological: GRASSLAND WITH NUMEROUS VERNAL POOLS AND SWALES.  
 Threat: LAND HAS BEEN DEVELOPED SINCE OBSERVATION  
 General: 30+ METAMORPHS OBSERVED IN A DRYING INTERMITTENT DRAINAGE, 1990.  
 Owner/Manager: PVT

Occurrence No. 174      Map Index:42151      ---Dates Last Seen---      Lat/Long: 38°47'29" / 121°23'00"      Township: 11N  
 Occ Rank: Good      Element: 1993-03-21      UTM: Zone-10 N4294689 E640393      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1993-03-21      Precision: SPECIFIC      Section: 23 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 100 ft  
 Main Source: BALFOUR, P. 1993 (OBS)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: BEND IN PHILLIP ROAD, 1.5 MILE W OF JCT WITH FIDDYMENT ROAD, 0.3 MILE WEST WHERE ROAD PARALLELS PLEASANT GROVE CREEK.

-----Comments-----

Distribution:  
 Ecological: ANNUAL GRASSLAND  
 Threat: CHANGES IN HYDROLOGY/URBAN RUNOFF  
 General: 1 ADULT FOUND CROSSING THE ROAD  
 Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

ARDEA HERODIAS GREAT BLUE HERON Element Code: ABNGA04010		-----List Status----- Federal: None State: None	-----NDDB Element Ranks----- Global: G5 State: S4	-----Other Lists----- CDFG Status:
--	--	---	---	---------------------------------------

-----Habitat Associations-----  
General: (ROOKERY) COLONIAL NESTER IN TALL TREES, CLIFFSIDES, AND SEQUESTERED SPOTS ON MARSHES.  
Micro: ROOKERY SITES IN CLOSE PROXIMITY TO FORAGING AREAS: MARSHES, LAKE MARGINS, TIDE-FLATS, RIVERS AND STREAMS, WET MEADOWS.

Occurrence No. 12      Map Index: 11633      ---Dates Last Seen---      Lat/Long: 38°57'16" / 121°19'21"  
Occ Rank: Unknown      Element: 1971-06-16      UTM: Zone-10 N4312851 E645358      Township: 13N  
Origin: Natural/Native occurrence      Site: 1971-06-16      Precision: NON-SPECIFIC      Range: 06E  
Presence: Presumed Extant      Symbol Type: POINT      Section: 29 Qtr NE  
Trend: Unknown      Radius: 1/5 mile      Meridian: M  
Elevation: 150 ft  
Main Source: WILBURN, J. 1971 (LIT)  
Quad Summary: LINCOLN (3812183/528A)  
County Summary: PLACER  
SNA Summary:  
Location: S BANK OF COON CREEK, ON THE CHAMBERLAIN RANCH, APPROX 4 MI NNW OF LINCOLN.  
-----Comments-----  
Distribution: COLONY IS LOCATED IN TWO GROUPS OF VALLEY OAKS, LOCATED APPROXIMATELY 150 YARDS APART.  
Ecological: HABITAT IS VALLEY OAKS ALONG CREEK, SURROUNDED BY WHITE ALDER, OSAGE-ORANGE, WILLOW, ELDERBERRY, AND BLACKBERRY.  
Threat: THREATS INCLUDE GRAZING AND OTHER RELATED RANCHING ACTIVITIES.  
General: THIS AREA IS A DESIGNATED AUDUBON "AREA OF CRITICAL CONCERN." 68 ACTIVE NESTS IN 1970; 61 ACTIVE NESTS IN 1971.  
Owner/Manager: PVT

Occurrence No. 16      Map Index: 11341      ---Dates Last Seen---      Lat/Long: 38°39'46" / 121°28'02"  
Occ Rank: Poor      Element: 1988-03-XX      UTM: Zone-10 N4280263 E633360      Township: 09N  
Origin: Natural/Native occurrence      Site: 1988-03-XX      Precision: NON-SPECIFIC      Range: 05E  
Presence: Presumed Extant      Symbol Type: POINT      Section: 05 Qtr NW  
Trend: Unknown      Radius: 1/5 mile      Meridian: M  
Elevation: 30 ft  
Main Source: VENNARD, M. 1988 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary: Ascot Road Vernal Pools  
Location: DRY CREEK, 0.5 MI S OF JCT OF WEST 2ND ST AND ASCOT AVE, RIOLINDA.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF A LARGE OAK TREE ALONG A DRY CHANNEL OF DRY CREEK.  
Threat: THREATENED BY PROPOSED GOLF COURSE; NEST TREE STANDS IN THE DRIVING RANGE, AS PRESENTLY PLANNED.  
General: THIS IS THE ONLY REMAINING ROOKERY SITE KNOWN IN THE NW PART OF SACRAMENTO COUNTY. BOTH GREAT EGRETS AND GREAT BLUE HERONS NEST HERE.  
Owner/Manager: CITY OF SACRAMENTO

Occurrence No. 30      Map Index: 17072      ---Dates Last Seen---      Lat/Long: 38°40'45" / 121°07'19"  
Occ Rank: None      Element: 1989-06-05      UTM: Zone-10 N4282653 E663359      Township: 10N  
Origin: Natural/Native occurrence      Site: 1990- -      Precision: NON-SPECIFIC      Range: 08E  
Presence: Possibly Extirpated      Symbol Type: POINT      Section: 32 Qtr NE  
Trend: Unknown      Radius: 1/5 mile      Meridian: M  
Elevation: 350 ft  
Main Source: JOHNSON, D. 1989 (OBS)  
Quad Summary: CLARKSVILLE (3812161/511A)\*, FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: JUST SOUTH OF THE INTERSECTION OF BLUE RAVINE RD AND THE RD CONNECTING BLUE RAVINE AND GREEN VALLEY RDS, S OF FOLSOM LK.  
-----Comments-----  
Distribution: ROOKERY IS LOCATED IN SOME COTTONWOODS BORDERING DREDGER TAILINGS.  
Ecological:  
Threat: THE PROXIMITY OF A NEW SUBDIVISION MAY HAVE ALREADY CREATED CONDITIONS TOO ADVERSE FOR CONTINUED NESTING BY HERONS.  
General: 14 ADULTS AND 2 JUVENILES OBSERVED IN 1989; NONE IN 1990. GREAT EGRETS ALSO NEST HERE.  
Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

ARDEA HERODIAS (cont.) GREAT BLUE HERON Element Code: ABNGA04010	-----List Status----- Federal: None State: None	-----NDDB Element Ranks----- Global: G5 State: S4	-----Other Lists----- CDFG Status:
--	---	---	---------------------------------------

Occurrence No. 32      Map Index: 17120      ---Dates Last Seen---      Lat/Long: 38°41'58" / 121°09'52"      Township: 10N  
 Occ Rank: Excellent      Element: 1990-03-18      UTM: Zone-10 N4284802 E659621      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1990-03-18      Precision: NON-SPECIFIC      Section: 25 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Stable      Radius: 1/5 mile      Elevation: 200 ft  
 Main Source: JOHNSON, D. 1990 (OBS)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary: American River Canyon  
 Location: AMERICAN RIVER CANYON, ADJACENT TO FOLSOM STATE PRISON, ON THE EAST SIDE OF THE AMERICAN RIVER, 0.6 MI BELOW FOLSOM DAM.

-----Comments-----  
 Distribution: 22 ADULTS OBSERVED NESTING IN COTTONWOOD TREES.  
 Ecological: HABITAT IS A COTTONWOOD RIPARIAN WOODLAND. NO VISIBLE DISTURBANCES, DESPITE ITS PROXIMITY TO THE STATE PRISON BUILDINGS.  
 Threat:  
 General: NESTS WERE ALREADY BUILT IN THE COTTONWOOD TREES; MOST ADULTS WERE STANDING IN PAIRS ON THE NESTS, ALTHOUGH ONE NEST HAD AN ADULT SITTING ON THE NEST.  
 Owner/Manager: DOC-FOLSOM STATE PRISON

Occurrence No. 33      Map Index: 17121      ---Dates Last Seen---      Lat/Long: 38°42'22" / 121°09'39"      Township: 10N  
 Occ Rank: Excellent      Element: 1990-03-18      UTM: Zone-10 N4285563 E659916      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1990-03-18      Precision: NON-SPECIFIC      Section: 24 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Stable      Radius: 1/5 mile      Elevation: 200 ft  
 Main Source: JOHNSON, D. 1990 (OBS)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary: American River Canyon  
 Location: 0.25 MI SOUTH OF THE BASE OF FOLSOM DAM, ON THE WEST SIDE OF THE AMERICAN RIVER CANYON.

-----Comments-----  
 Distribution: 32 ADULTS OBSERVED NESTING IN COTTONWOOD TREES.  
 Ecological: HABITAT IS COTTONWOOD RIPARIAN WOODLAND.  
 Threat:  
 General: APPROXIMATELY 20 NESTS WERE OBSERVED IN JANUARY BY SOGGE WITH 10 UNPAIRED, STANDING ADULTS; MOST ADULTS WERE STANDING IN PAIRS ON THE NESTS BY MARCH WHEN OBSERVED BY JOHNSON, ALTHOUGH 2 NESTS HAD ADULTS SITTING ON NESTS, AS WELL.  
 Owner/Manager: BOR

Occurrence No. 34      Map Index: 17123      ---Dates Last Seen---      Lat/Long: 38°38'59" / 121°11'41"      Township: 09N  
 Occ Rank: Unknown      Element: 1989-05-10      UTM: Zone-10 N4279250 E657111      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1989-05-10      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Stable      Radius: 1/5 mile      Elevation: 150 ft  
 Main Source: KOCH, G. 1989 (OBS)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: MISSISSIPPI BAR, ON THE WEST SIDE OF LAKE NATOMA, ACROSS FROM THE WILLOW CREEK ACCESS, FOLSOM LAKE STATE RECREATION AREA

-----Comments-----  
 Distribution: UNKNOWN NUMBER OF NESTS LOCATED IN THE TOPS OF SOME FOOTHILL PINES.  
 Ecological:  
 Threat:  
 General:  
 Owner/Manager: DPR-FOLSOM LAKE SRA

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

ARDEA ALBA GREAT EGRET Element Code: ABNGA05010	-----List Status----- Federal: None State: None	-----NDDB Element Ranks----- Global: G5 State: S4	-----Other Lists----- CDFG Status:
---	---	---	---------------------------------------

-----Habitat Associations-----  
General: (ROOKERY) COLONIAL NESTER IN LARGE TREES.  
Micro: ROOKERY SITES LOCATED NEAR MARSHES, TIDE-FLATS, IRRIGATED PASTURES, AND MARGINS OF RIVERS AND LAKES.

Occurrence No. 9      Map Index:11341      ---Dates Last Seen---      Lat/Long: 38°39'46" / 121°28'02"      Township: 09N  
 Occ Rank: Poor      Element: 1988-03-XX      UTM: Zone-10 N4280263 E633360      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1988-03-XX      Precision: NON-SPECIFIC      Section: 05 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 30 ft  
 Main Source: VENNARD, M. 1988 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary: Ascot Road Vernal Pools  
 Location: DRY CREEK, 0.5 MI S OF JCT OF WEST 2ND ST AND ASCOT AVE, RIO LINDA  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF A LARGE OAK TREE SITUATED ALONG A DRY CHANNEL OF DRY CREEK.  
 Threat: THREATENED BY PROPOSED GOLF COURSE; NEST TREE STANDS IN THE DRIVING RANGE, AS PRESENTLY PLANNED.  
 General: THIS IS THE ONLY REMAINING ROOKERY SITE KNOWN IN THE NW PART OF SACRAMENTO COUNTY. BOTH GREAT EGRETS AND GREAT BLUE HERONS NEST HERE.  
 Owner/Manager: CITY OF SACRAMENTO

Occurrence No. 15      Map Index:17072      ---Dates Last Seen---      Lat/Long: 38°40'45" / 121°07'19"      Township: 10N  
 Occ Rank: None      Element: 1989-05-09      UTM: Zone-10 N4282653 E663359      Range: 08E  
 Origin: Natural/Native occurrence      Site: 1990-      Precision: NON-SPECIFIC      Section: 32 Qtr NE  
 Presence: Possibly Extirpated      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 350 ft  
 Main Source: JOHNSON, D. 1989 (OBS)  
 Quad Summary: CLARKSVILLE (3812161/511A)\*, FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: JUST SOUTH OF THE INTERSECTION OF BLUE RAVINE RD AND THE RD CONNECTING BLUE RAVINE AND GREEN VALLEY RDS, S OF FOLSOM LK.  
 -----Comments-----  
 Distribution: ROOKERY IS LOCATED IN SOME COTTONWOODS BORDERING DREDGER TAILINGS.  
 Ecological:  
 Threat: THE PROXIMITY OF A NEW SUBDIVISION MAY HAVE ALREADY CREATED CONDITIONS TOO ADVERSE FOR CONTINUED NESTING BY EGRETS.  
 General: 4 ADULTS OBSERVED NESTING IN 1989; NONE IN 1990. GREAT BLUE HERONS ALSO NEST AT THIS LOCATION.  
 Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

ELANUS LEUCURUS

WHITE-TAILED KITE  
Element Code: ABNKC06010

-----List Status----- NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G5 CDFG Status:  
State: None State: S3

Habitat Associations

General: (NESTING) ROLLING FOOTHILLS/VALLEY MARGINS W/SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND  
Micro: OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.

Occurrence No. 29 Map Index:24812 ---Dates Last Seen--- Lat/Long: 38°40'01" / 121°11'36" Township: 09N  
Occ Rank: Excellent Element: 1989-06-20 UTM: Zone-10 N4281147 E657195 Range: 07E  
Origin: Natural/Native occurrence Site: 1989-06-20 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 200 ft  
Main Source: BARRIERI, R. 1989 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary: Camp Pendleton Southern Coast  
Location: SNIPES/PERSHING RAVINE, ON THE WEST SIDE OF LAKE NATOMA, ORANGEVALE.  
-----Comments-----  
Distribution:  
Ecological: MIX OF BLUE OAK, FOOTHILL PINE, POISON OAK, AND BUCKEYE.  
Threat: POSSIBILITY OF DEVELOPMENT - MANY LOTS ARE FOR SALE.  
General: 2 ADULTS AND 3 JUVENILES OBSERVED IN 1989.  
Owner/Manager: PVT

Occurrence No. 30 Map Index:24811 ---Dates Last Seen--- Lat/Long: 38°38'15" / 121°14'32" Township: 09N  
Occ Rank: Good Element: 1988-06-XX UTM: Zone-10 N4277815 E652980 Range: 07E  
Origin: Natural/Native occurrence Site: 1988-06-XX Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 125 ft  
Main Source: MOHR, B. 1988 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary: Camp Pendleton Southern Coast  
Location: SAILOR BAR, NEAR THE END OF KENNETH AVENUE, NORTH OF THE AMERICAN RIVER AND 1 MILE WEST OF HAZEL AVENUE, FAIR OAKS.  
-----Comments-----  
Distribution: NEST IS LOCATED IN THE CENTER-TOP OF A LIVE OAK FOUND AMONG DREDGER TAILINGS, BETWEEN THE BLUFFS TO THE NORTH AND THE SERVICE ROAD FOLLOWING THE RIVER TO THE SOUTH.  
Ecological: NEST TREE IS A LIVE OAK; SURROUNDING VEGETATION CONSISTS OF COTTONWOODS, WILLOWS, COYOTE BUSH, POISON OAK, WILD GRAPE, AND ELDERBERRY.  
Threat: THREATS INCLUDE HUMAN DISTURBANCE AND UNLEASHED DOGS.  
General: ONE BIRD OBSERVED ON NEST IN 1988.  
Owner/Manager: SAC COUNTY

Occurrence No. 31 Map Index:24810 ---Dates Last Seen--- Lat/Long: 38°42'53" / 121°14'14" Township: 10N  
Occ Rank: Good Element: 1992-XX-XX UTM: Zone-10 N4286383 E653266 Range: 07E  
Origin: Natural/Native occurrence Site: 1992-XX-XX Precision: SPECIFIC Section: 20 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 200 ft  
Main Source: JOHNSON, D. 1992 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary: Camp Elliot  
Location: WOODBRIDGE PARK, EAST SIDE OF LINDA CREEK, 0.5 MILE SOUTH OF OLD AUBURN ROAD, ORANGEVALE.  
-----Comments-----  
Distribution: NEST SITE LOCATED SOUTH OF POND AND EAST OF THE TENNIS COURTS, BORDERING THE FENCELINE; DEVELOPED PARK ON ONE SIDE AND LINDA CREEK RIPARIAN AREA ON THE OTHER.  
Ecological: HABITAT CONSISTS OF OAK/RIPARIAN WOODLAND ALONG THE CREEKSIDE  
Threat:  
General: NEST WITH 2 ADULTS OBSERVED ON 26 MAY 1992; 2 YOUNG OBSERVED IN NEST DURING A SUBSEQUENT VISIT.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

ELANUS LEUCURUS (cont.)  
WHITE-TAILED KITE  
Element Code: ABNKC06010

-----List Status----- NDDB Element Ranks -----Other Lists-----  
Federal: None Global: G5 CDFG Status:  
State: None State: S3

Occurrence No. 32 Map Index: 24831 ---Dates Last Seen--- Lat/Long: 38°37'45" / 121°16'58" Township: 09N  
Occ Rank: Good Element: 1990-05-05 UTM: Zone-10 N4276820 E649475 Range: 06E  
Origin: Natural/Native occurrence Site: 1990-05-05 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 90 ft  
Main Source: JOHNSON, D. 1990 (OBS)  
Quad Summary: CITRUS HEIGHTS (3812163/512A)  
County Summary: SACRAMENTO  
SNA Summary: Goethe Park  
Location: SACRAMENTO BAR, ON THE NORTH SIDE OF THE AMERICAN RIVER, NEAR THE END OF BANNISTER AVENUE, FAIR OAKS.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF A DISTURBED RIPARIAN AREA CONTAINING GRAVEL DREDGE TAILINGS; VEGETATED BY LIVE OAK AND COTTONWOOD TREES.  
Threat:  
General: ADULT WAS OBSERVED SETTLING DOWN ON THE NEST IN 1990.  
Owner/Manager: SAC COUNTY

Occurrence No. 40 Map Index: 24987 ---Dates Last Seen--- Lat/Long: 38°38'00" / 121°11'53" Township: 09N  
Occ Rank: Good Element: 1991-03-10 UTM: Zone-10 N4277411 E656835 Range: 07E  
Origin: Natural/Native occurrence Site: 1991-03-10 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 160 ft  
Main Source: JOHNSON, D. 1991 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: S OF FOLSOM BLVD, S OF PAC BELL BLDG, PRIOR TO ENTRANCE TO AEROJET, 1 MI E OF HAZEL AVE EXIT FROM HWY 50, RANCHO CORDOVA  
-----Comments-----  
Distribution:  
Ecological: TRANSITIONAL PLANT COMMUNITIES, FOOTHILL PINE, TOYAN PRESENT.  
Threat:  
General: 1 ADULT OBSERVED SITTING ON A NEST IN A TREE IN 1991.  
Owner/Manager: UNKNOWN

Occurrence No. 54 Map Index: 26582 ---Dates Last Seen--- Lat/Long: 38°39'42" / 121°24'56" Township: 09N  
Occ Rank: Unknown Element: 1995-XX-XX UTM: Zone-10 N4280216 E637852 Range: 05E  
Origin: Natural/Native occurrence Site: 1995-XX-XX Precision: NON-SPECIFIC Section: 24 Qtr W  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 5.5 ac Elevation: 50 ft  
Main Source: LACY, T. 1995 (LIT)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG DON JULIO CREEK, ABOUT 1.4 KM NE OF THE INTERSECTION OF MAIN AVENUE AND RALEY BOULEVARD, MCCLELLAN AIR FORCE BASE  
-----Comments-----  
Distribution:  
Ecological: NEST IS IN BOXELDER ALONG DON JULIO CREEK. SURROUNDING AREA IS ANNUAL GRASSLAND.  
Threat: THREATS INCLUDE MILITARY OPERATIONS AND DEVELOPMENT.  
General: 1 NEST OBSERVED FROM FEB-JUN 1995 DURING A FAIRY SHRIMP SURVEY; NESTING SUCCESS UNKNOWN.  
Owner/Manager: DOD-MCCLELLAN AFB

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

ELANUS LEUCURUS (cont.)

WHITE-TAILED KITE

Element Code: ABNKC06010

-----List Status----- NDDE Element Ranks-----Other Lists-----  
Federal: None Global: G5 CDFG Status:  
State: None State: S3

Occurrence No. 56 Map Index: 42671 ---Dates Last Seen--- Lat/Long: 38°46'53" / 121°19'34" Township: 11N  
Occ Rank: Good Element: 1998-07-XX UTM: Zone-10 N4293664 E645379 Range: 06E  
Origin: Natural/Native occurrence Site: 1999-XX-XX Precision: SPECIFIC Section: 20 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 125 ft  
Main Source: WARENYCIA, D. 1998 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: ON THE WEST SIDE OF THE SOUTH BRANCH OF PLEASANT GROVE CREEK, BETWEEN FOOTHILLS BLVD AND WOODCREEK OAKS BLVD,  
ROSEVILLE.

-----Comments-----

Distribution: SITE IS LOCATED ALONG THE BORDER BETWEEN WOODCREEK GOLF COURSE AND HEWLETT-PACKARD.  
Ecological: HABITAT CONSISTS OF RIPARIAN/OAK WOODLAND, DOMINATED BY BLUE OAKS AND INTERIOR LIVE OAKS.  
Threat: THREATENED BY ENCROACHING DEVELOPMENT ALONG WOODCREEK OAKS BLVD.  
General: SITE WAS VISITED WEEKLY, MAR-JUL 1998; ADULT COURTSHIP TO 5 BEGGING FLEDGLINGS OBSERVED. KITES DID NOT NEST AT  
THIS LOCATION IN 1999, POSSIBLY DUE TO BOTH GREAT HORNED OWLS AND AMERICAN KESTRELS NESTING NEARBY.  
Owner/Manager: PVT-HEWLETT PACKARD



California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

ACCIPITER COOPERII  
COOPER'S HAWK  
Element Code: ABNKCI2040

-----List Status-----  
Federal: None  
State: None

-----NDDB Element Ranks-----  
Global: G4  
State: S3

-----Other Lists-----  
CDFG Status: SC

-----Habitat Associations-----

General: (NESTING) WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.

Micro: NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.

-----  
Occurrence No. 54      Map Index: 17187      ---Dates Last Seen---      Lat/Long: 38°38'46" / 121°11'51"      Township: 09N  
Occ Rank: Good      Element: 1990-06-30      UTM: Zone-10 N4278850 E656859      Range: 07E  
Origin: Natural/Native occurrence      Site: 1990-06-30      Precision: SPECIFIC      Section: XX Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 30 meters      Elevation: 150 ft  
Main Source: JOHNSON, D. 1990 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: MISSISSIPPI BAR, ON THE WEST SIDE OF LAKE NATOMA NEAR THE BIKE TRAIL, ORANGEVALE.  
-----Comments-----  
Distribution:  
Ecological: 3 JUVENILES OBSERVED IN AN AREA OF LIVE OAKS, COTTONWOODS, FOOTHILL PINE AND POISON OAK.  
Threat: AREA IS A NATURE/RECREATION AREA, ALTHOUGH DISTURBANCE MAY EXIST FROM A GRAVEL COMPANY JUST WEST OF THE SITE.  
General:  
Owner/Manager: DPR-FOLSOM LAKE SRA  
-----

CNDDB Report for the Northwest Rocklin Annexation Project

BUTEO SWAINSONI

SWAINSON'S HAWK

Element Code: ABNKCL9070

-----List Status-----

Federal: None

State: Threatened

-----NDDB Element Ranks-----

Global: G4

State: S2

-----Other Lists-----

CDFG Status:

-----Habitat Associations-----

General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 791      Map Index: 42026      ---Dates Last Seen---      Lat/Long: 38°46'15" / 121°20'37"      Township: 11N  
Occ Rank: Fair      Element: 1996-07-01      UTM: Zone-10 N4292445 E643888      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-XX-XX      Precision: SPECIFIC      Section: 30 Qtr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 125 ft  
Main Source: WILLIAMS, B. 1996 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: KASEBERG CREEK, 0.75 MILE EAST OF FIDDYMENT ROAD AND 0.25 MILE NORTH OF PLEASANT GROVE BOULEVARD, EAST SIDE OF ROSEVILLE

-----Comments-----

Distribution: NEST TREE IS LOCATED IN WHAT IS NOW THE NORTH EDGE OF AN OPEN SPACE CORRIDOR.

Ecological: HABITAT CONSISTS OF A WOODLAND CORRIDOR ALONG THE CREEK DRAINAGE.

Threat: THREATENED BY THE CONSTRUCTION OF A SUBDIVISION AND GOLF COURSE.

General: NESTING WAS INITIATED IN 1996, DURING GRADING, BUT PRIOR TO CONSTRUCTION, OF HOUSING; 2 YOUNG PRODUCED IN 1996. NEST SITE WAS UNUSED IN 1997, ALTHOUGH NEST TREE IS WITHIN AN OPEN SPACE CORRIDOR.

Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

ATHENE CUNICULARIA  
BURROWING OWL  
Element Code: ABNSB10010

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G4 CDFG Status: SC  
State: None State: S2

Habitat Associations

General: (BURROW SITES) OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.  
Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 62 Map Index:11296 ---Dates Last Seen--- Lat/Long: 38°41'04" / 121°29'32" Township: 10N  
Occ Rank: Fair Element: 1993-07-18 UTM: Zone-10 N4282620 E631144 Range: 04E  
Origin: Natural/Native occurrence Site: 1993-07-18 Precision: SPECIFIC Section: 36 Qtr N  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Increasing Area: 7.8 ac Elevation: 25 ft  
Main Source: VENNARD, M. 1988 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.4 MILE WEST OF EAST LEVEE ROAD, ON THE SOUTH SIDE OF ELKHORN BLVD, 2 MILES WEST OF RIO LINDA.

Comments

Distribution: EXTENSIVE BURROW NETWORK, WITH AT LEAST 2 TO 3 FAMILY GROUPS OBSERVED.  
Ecological: HABITAT CONSISTS OF ARID ANNUAL GRASSLAND ON A 2-12 FOOT SLOPE (BLUFF).  
Threat: LAND IS CURRENTLY USED FOR CATTLE GRAZING, BUT DEVELOPMENT IS MOVING INTO SURROUNDING AREAS.  
General: OWLS HAVE BEEN OBSERVED AT THIS LOCATION SINCE AT LEAST 1987. IN 1993, 2 ADULTS WERE OBSERVED IN MID-MARCH, AND BY MID-JULY, 14 INDIVIDUALS WERE OBSERVED.  
Owner/Manager: PVT

Occurrence No. 129 Map Index:20689 ---Dates Last Seen--- Lat/Long: 38°42'20" / 121°28'48" Township: 10N  
Occ Rank: Fair Element: 1993-02-04 UTM: Zone-10 N4284998 E632179 Range: 05E  
Origin: Natural/Native occurrence Site: 1993-02-04 Precision: NON-SPECIFIC Section: 19 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 2/5 mile Elevation: 40 ft  
Main Source: KOPFORD, E. 1992 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: JUST WNW OF 6TH AND "U" STREETS, RIO LINDA.

Comments

Distribution: THREE SETS OF BURROWS AT THIS SITE; ONE SET LOCATED ADJACENT TO WPRR TRACKS, ONE ADJACENT TO SOME VERNAL POOLS, AND ONE ADJACENT TO 6TH AND "U" STREETS.  
Ecological: HABITAT IS OPEN GRASSLAND WITH CUT SOIL BANKS.  
Threat: POSSIBLE THREAT FROM A PROPOSED ENERGY FACILITY.  
General: ONE ADULT OBSERVED ROOSTING IN A DEBRIS PILE NEAR A BURROW SITE IN 1992; TWO ADULTS OBSERVED AT A BURROW ADJACENT TO VERNAL POOLS IN 1993.  
Owner/Manager: PVT

Occurrence No. 339 Map Index:42028 ---Dates Last Seen--- Lat/Long: 38°46'55" / 121°22'19" Township: 11N  
Occ Rank: Good Element: 1998-05-08 UTM: Zone-10 N4293637 E641409 Range: 05E  
Origin: Natural/Native occurrence Site: 1998-05-08 Precision: NON-SPECIFIC Section: 24 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 26.8 ac Elevation:  
Main Source: WILLIAMS, B. 1998 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)\*, PLEASANT GROVE (3812174/528C)  
County Summary: PLACER  
SNA Summary:  
Location: NORTH SIDE OF PHILIP ROAD, APPROXIMATELY 0.75 MILE WEST OF FIDDYMENT ROAD, NW OF ROSEVILLE.

Comments

Distribution:  
Ecological: HABITAT CONSISTS OF MODERATELY-GRAZED, ROLLING GRASSLAND, WITH NO EVIDENCE OF HISTORIC SOIL DISTURBANCE. SITE WOULD BE BETTER IF MORE BURROWS WERE PRESENT; HARD SOILS AND LACK OF GROUND SQUIRRELS MAY BE THE CAUSE.  
Threat: THREATS INCLUDE POSSIBLE FUTURE DEVELOPMENT OR LOSS OF GRAZERS.  
General: OWLS (NEVER MORE THAN 2) OBSERVED YEAR-ROUND DURING 1998.  
Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

RIPARIA RIPARIA BANK SWALLOW Element Code: ABPAU08010	—List Status—	—NDDB Element Ranks—	—Other Lists—
	Federal: None	Global: G5	CDFG Status:
	State: Threatened	State: S2S3	

—Habitat Associations—  
 General: (NESTING) COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT.  
 Micro: REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.

Occurrence No. 76      Map Index:11013      —Dates Last Seen—      Lat/Long: 38°37'49" / 121°17'33"      Township: 09N  
 Occ Rank: Good      Element: 1989-05-06      UTM: Zone-10 N4276939 E648631      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1989-05-06      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Stable      Area: 25.6 ac      Elevation: 100 ft  
 Main Source: HUMPHREY, J. 1986 (PERS)  
 Quad Summary: CITRUS HEIGHTS (3812163/512A)  
 County Summary: SACRAMENTO  
 SNA Summary: Goethe Park  
 Location: NORTH SIDE OF THE AMERICAN RIVER, JUST DOWNSTREAM FROM THE SAN JUAN RAPIDS, AMERICAN RIVER PARKWAY, SACRAMENTO.

—Comments—  
 Distribution:  
 Ecological: HABITAT CONSISTS OF A VERTICAL BLUFF, CONTAINING 40-50 NEST HOLES; SEVERAL LARGE COTTONWOODS RISE UP FROM THE RIVER'S EDGE IN CLOSE PROXIMITY TO THE NEST SITE.  
 Threat: POSSIBLE THREAT FROM HUMANS, AS SITE IS JUST BELOW SOME PRIVATE RESIDENCES.  
 General: NESTING COLONY OF 20 INDIVIDUALS OBSERVED IN 1985; ~20 ADULTS OBSERVED FORAGING (ALONG WITH NORTHERN ROUGH-WINGED SWALLOWS) AND ENTERING NESTING BURROWS ON 15 APRIL 1989; 40 ADULTS OBSERVED FORAGING ON 6 MAY 1989.  
 Owner/Manager: SAC COUNTY

Occurrence No. 197      Map Index:25468      —Dates Last Seen—      Lat/Long: 38°38'15" / 121°15'28"      Township: 09N  
 Occ Rank: Good      Element: 1990-04-27      UTM: Zone-10 N4277783 E651642      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1990-04-27      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 17.2 ac      Elevation: 75 ft  
 Main Source: MOHR, B. 1989 (OBS)  
 Quad Summary: CITRUS HEIGHTS (3812163/512A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTH SIDE OF THE AMERICAN RIVER, 0.6 MILE UPSTREAM FROM THE SUNRISE BLVD BRIDGE, AMERICAN RIVER PARKWAY, FAIR OAKS.

—Comments—  
 Distribution:  
 Ecological: HABITAT CONSISTS OF A RECENTLY-ERODED SANDY BLUFF, ~12-15 FEET HIGH; NEARBY VEGETATION INCLUDES A BROAD BAND OF DECIDUOUS RIPARIAN FOREST AND A NARROW BAND OF GRASS/THISTLE.  
 Threat: MAIN THREAT TO THE SITE IS FROM HUMAN RECREATION.  
 General: 8 ADULTS OBSERVED ENTERING BURROWS ON 7 MAY 1989; 15-20 BIRDS OBSERVED DURING A FOLLOW-UP VISIT IN JUNE 1989. A MIXED GROUP OF BANK SWALLOWS (15-20 MINIMUM) AND NORTHERN ROUGH-WINGED SWALLOWS WERE OBSERVED ON 27 APRIL 1990.  
 Owner/Manager: SAC COUNTY

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

<b>ACELAIUS TRICOLOR</b> TRICOLORED BLACKBIRD Element Code: ABPBXB0020	—List Status—	—NDDB Element Ranks—	—Other Lists—
	Federal: None	Global: G3	CDFG Status: SC
	State: None	State: S3	

Habitat Associations

General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.  
 Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

\* SENSITIVE \*

Occurrence No. 4      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Good      Element: 1994-XX-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1997-XX-XX      Precision:      Section: Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Fluctuating      Radius:      Elevation:  
 Main Source: HOSEA, R. 1986 (LIT)  
 Quad Summary: POLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 —Comments—  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF BLACKBERRIES, SURROUNDED BY GRASSLAND.  
 Threat: THREATENED BY ENCROACHING DEVELOPMENT. NESTING HABITAT PRESERVED, BUT SITE NO LONGER ATTRACTIVE TO BREEDING TRICOLOREDS.  
 General:  
 Owner/Manager:

\* SENSITIVE \*

Occurrence No. 91      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: None      Element: 1971-XX-XX      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1971-XX-XX      Precision:      Section: Qtr  
 Presence: Possibly Extirpated      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: HOSEA, R. 1986 (OBS)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 —Comments—  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: CATTAILS AROUND MARSH CREATED BY WATERING PASTURE LANDS.  
 Threat:  
 General:  
 Owner/Manager:

\* SENSITIVE \*

Occurrence No. 242      Map Index:      —Dates Last Seen—      Lat/Long: /      Township:  
 Occ Rank: Unknown      Element: 1994-04-30      UTM:      Range:  
 Origin: Natural/Native occurrence      Site: 1994-04-30      Precision:      Section: Qtr  
 Presence: Presumed Extant      Symbol Type:      Meridian:  
 Trend: Unknown      Radius:      Elevation:  
 Main Source: WHITMORE, D. 1992 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: \*SENSITIVE\* Location information suppressed.  
 —Comments—  
 Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.  
 Ecological: NESTING SUBSTRATE CONSISTS OF SCIRPUS ACUTUS (BULRUSH) GROWING IN A SHALLOW FARM POND.  
 Threat: THREATENED BY FUTURE DEVELOPMENT.  
 General:  
 Owner/Manager:

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

AGELAIUS TRICOLOR (cont.) TRICOLORED BLACKBIRD Element Code: ABPBXB0020	List Status Federal: None State: None	NDDB Element Ranks Global: G3 State: S3	Other Lists CDFG Status: SC
---	---	---	--------------------------------

**\* SENSITIVE \***

Occurrence No. 302      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:

Occ Rank: Unknown      Element: 1993-XX-XX      UTM:      Range:

Origin: Natural/Native occurrence      Site: 1994-04-22      Precision:      Section:      Qtr

Presence: Presumed Extant      Symbol Type:      Meridian:

Trend: Unknown      Radius:      Elevation:

Main Source: MANOLIS, T. & C. BURKE 1994 (OBS)

Quad Summary: RIO LINDA (3812164/512B)

County Summary: SACRAMENTO, SUTTER

SNA Summary:

Location: \*SENSITIVE\* Location information suppressed.

Comments:

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: NESTING SUBSTRATE CONSISTS OF A BLACKBERRY HEDGE, WITH BIRDS FORAGING IN ADJACENT PASTURELANDS.

Threat:

General:

Owner/Manager:

**\* SENSITIVE \***

Occurrence No. 330      Map Index:      ---Dates Last Seen---      Lat/Long: /      Township:

Occ Rank: Good      Element: 1997-04-20      UTM:      Range:

Origin: Natural/Native occurrence      Site: 1997-04-20      Precision:      Section:      Qtr

Presence: Presumed Extant      Symbol Type:      Meridian:

Trend: Unknown      Radius:      Elevation:

Main Source: WARENYCIA, D. 1997 (OBS)

Quad Summary: FOLSOM (3812162/511B)

County Summary: PLACER

SNA Summary:

Location: \*SENSITIVE\* Location information suppressed.

Comments:

Distribution: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS, IN FRESHWATER MARSH HABITAT. SITE APPEARS TO BE A WETLAND IN "RECOVERY," DUE TO SURROUNDING DEVELOPMENT.

Threat: POSSIBLY THREATENED BY HUMAN DISTURBANCE FROM SURROUNDING RESIDENTIAL DEVELOPMENT.

General:

Owner/Manager:

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

CLEMMYS MARMORATA			
WESTERN FOND TURTLE			
Element Code: ARAAD02030	-----List Status-----	NDDB Element Ranks-----	-----Other Lists-----
	Federal: None	Global: G4	CDFG Status: SC
	State: None	State: S3	

Habitat Associations

General: A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS & IRRIGATION DITCHES WITH AQUATIC VEGETATION.  
Micro: NEED BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT FOR EGG-LAYING.

Occurrence No. 1      Map Index:22879      ---Dates Last Seen---      Lat/Long: 38°53'21" / 121°13'04"      Township: 12N  
 Occ Rank: Unknown      Element: 1993-02-12      UTM: Zone-10 N4305772 E654574      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1993-02-12      Precision: NON-SPECIFIC      Section: 17 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 7.6 ac      Elevation: 280 ft  
 Main Source: JUREK, R. 1993 (OBS)  
 Quad Summary: GOLD HILL (3812182/527B)  
 County Summary: PLACER  
 SNA Summary:  
 Location: JUST WEST OF FOWLER ROAD, 0.2 MILE NORTH OF HWY 193, 4 MILES WNW OF NEWCASTLE.  
 ---Comments---  
 Distribution:  
 Ecological: HABITAT CONSISTS OF A 1-2 ACRE RESERVOIR, SURROUNDED BY OAK SAVANNAH, OAK WOODLAND, AND RIPARIAN.  
 Threat:  
 General: ONE ADULT OBSERVED ON A ROCK NEAR THE MIDDLE OF THE RESERVOIR. POND TURTLES HAVE BEEN KNOWN FROM THIS SITE SINCE THE 1970'S.  
 Owner/Manager: UNKNOWN

Occurrence No. 2      Map Index:26582      ---Dates Last Seen---      Lat/Long: 38°39'42" / 121°24'56"      Township: 09N  
 Occ Rank: Unknown      Element: 1995-XX-XX      UTM: Zone-10 N4280216 E637852      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-XX-XX      Precision: NON-SPECIFIC      Section: 24 Qtr W  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 5.5 ac      Elevation: 50 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: MCCLELLAN AFB. DON JULIO CREEK ABOUT 1.4 KM NE OF THE INTERSECTION OF MAIN AVE & RALEY BLVD.  
 ---Comments---  
 Distribution:  
 Ecological: SURROUNDING AREA IS ANNUAL GRASSLAND WITH MANY VERNAL POOLS.  
 Threat: MILITARY ACTIVITIES, DEVELOPMENT.  
 General: 2 TURTLES SEEN AT ONE SITE AND AN UNKNOWN NUMBER SEEN AT A NEARBY BASKING SITE DURING A FEBRUARY TO JUNE FAIRY SHRIMP SURVEY.  
 Owner/Manager: DOD-MCCLELLAN AFB

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

CLEMMYS MARMORATA MARMORATA  
NORTHWESTERN POND TURTLE  
Element Code: ARAAD02031

-----List Status----- NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G4T4 CDFG Status: SC  
State: None State: S3

-----Habitat Associations-----

General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.  
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

Occurrence No. 35 Map Index:32697 ---Dates Last Seen--- Lat/Long: 38°39'40" / 121°07'47" Township: 09N  
Occ Rank: Fair Element: 1991-03-07 UTM: Zone-10 N4280638 E662723 Range: 08E  
Origin: Natural/Native occurrence Site: 1991-03-07 Precision: SPECIFIC Section: 05 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 375 ft  
Main Source: BRODE, J. 1991 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: NATOMAS DITCH; NORTHEAST SIDE OF PLACERVILLE ROAD; 0.1-0.2 MILES N OF NATOMAS DITCH X PLACERVILLE ROAD.  
-----Comments-----  
Distribution:  
Ecological: OLD MAN-MADE DITCH; VERY LITTLE AQUATIC VEGETATION; SPIKE RUSH AND BLACKBERRIES DOMINANT; SOME WILLOWS AND A FEW ALDERS; SURROUNDING HABITAT IS GRAZED GRASSLAND.  
Threat: DITCH THREATENED BY DEWATERING; GRAZING; PROPOSED DEVELOPMENT FOR COMMUNITY COLLEGE AND SHOPPING CENTER.  
General: 2 ADULTS OBSERVED, 1 RETAINED BY DPG AS LIVE SPECIMEN; SITE IS UNDER LITIGATION; GOOD POND TURTLE HABITAT, NOT MUCH FOR FISH; NO FROGS OBSERVED.  
Owner/Manager: PVT

Occurrence No. 36 Map Index:32698 ---Dates Last Seen--- Lat/Long: 38°39'50" / 121°11'27" Township: 09N  
Occ Rank: Fair Element: 1993-04-25 UTM: Zone-10 N4280838 E657399 Range: 07E  
Origin: Natural/Native occurrence Site: 1993-04-25 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 80 ft  
Main Source: WARENYCIA, D. 1993 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: POND AT SNIPES-PERSHING RAVINE; ADJACENT TO LAKE NATOMAS (WEST SIDE), AT NORTH END OF MISSISSIPPI BAR; ORANGEVALE.  
-----Comments-----  
Distribution:  
Ecological: POND, MAY BE SOMEWHAT ARTIFICIAL; CULVERTS ON EAST END TO DELIVER EXCESS WATER TO RIVER SIDE OF BIKE TRAIL; MIXED VEGETATION, DOMINATED BY LIVE OAK AND FOOTHILL PINE SURROUNDING POND.  
Threat: POTENTIAL THREAT INCLUDE: DEVELOPMENT OF PRIVATE PARCELS, RECREATIONAL DISTURBANCE-HIKING AND BIKING TRAILS.  
General: 1 ADULT OBSERVED FORAGING; HIKING TRAIL ENCIRCLES HALF OF POND; BIKE TRAIL VISIBLE FROM POND.  
Owner/Manager: DPR-FOLSOM LAKE SRA, PVT

Occurrence No. 46 Map Index:32824 ---Dates Last Seen--- Lat/Long: 38°38'02" / 121°13'35" Township: 09N  
Occ Rank: Unknown Element: XXXX-XX-XX UTM: Zone-10 N4277425 E654384 Range: 07E  
Origin: Natural/Native occurrence Site: XXXX-XX-XX Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 105 ft  
Main Source: HOLLAND, D. 1988 (PERS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 2.5 MILES EAST OF FAIR OAKS, IMMEDIATELY DOWNSTREAM FROM NIMBUS DAM AT NIMBUS FISH HATCHERY.  
-----Comments-----  
Distribution:  
Ecological:  
Threat:  
General: COLLECTION MADE BY DFG, DATE AND NUMBERS OF SPECIMENS UNKNOWN.  
Owner/Manager: DFG-NIMBUS FH



California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

CLEMMYS MARMORATA MARMORATA (cont.) NORTHWESTERN POND TURTLE Element Code: ARAAD02031	-----List Status----- Federal: None State: None	-----NDDDB Element Ranks----- Global: G4T4 State: S3	-----Other Lists----- CDFG Status: SC
---	---	--	--

Occurrence No. 96      Map Index: 37856      ---Dates Last Seen---      Lat/Long: 38°42'54" / 121°10'46"      Township: 10N  
Occ Rank: Good      Element: 1997-04-19      UTM: Zone-10 N4286503 E658283      Range: 07E  
Origin: Natural/Native occurrence      Site: 1997-04-19      Precision: SPECIFIC      Section: 14 Qtr XX  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 26.8 ac      Elevation: 500 ft  
Main Source: SANDERS, S. 1997 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: PLACER, SACRAMENTO  
SNA Summary:  
Location: BALDWIN RESERVOIR WETLAND AND WILDLIFE PRESERVE, GRANITE BAY.  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF FRESHWATER MARSH, SURROUNDING AN ABANDONED WATER DISTRICT RESERVOIR. OPEN WATER IS SURROUNDED BY SCIRPUS & TYPHA. ISLANDS & ROCKY BASKING SITES PRESENT. ADJACENT UPLANDS SUPPORT MOSTLY RUDERAL SPECIES.  
Threat:  
General: 2 ADULTS OBSERVED ON 19 APRIL 1997.  
Owner/Manager: PVT-SAN JUAN WATER DIST

CNDDB Report for the Northwest Rocklin Annexation Project

<i>THAMNOPHIS GIGAS</i> GIANT GARTER SNAKE Element Code: ARADEB36150	-----List Status----- Federal: Threatened State: Threatened	-----NDDDB Element Ranks----- Global: G2G3 State: S2S3	-----Other Lists----- CDFG Status:
--	---	--	---------------------------------------

-----Habitat Associations-----  
General: PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.  
Micro: THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Occurrence No. 145      Map Index: 36594      ---Dates Last Seen---      Lat/Long: 38°41'07" / 121°29'39"      Township: 10N  
Occ Rank: Unknown      Element: 1996-09-27      UTM: Zone-10 N4282735 E630984      Range: 04E  
Origin: Natural/Native occurrence      Site: 1996-09-27      Precision: SPECIFIC      Section: 36 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 15 ft  
Main Source: RODDY, F. 1996 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ELKHORN ROAD, 0.5 MILE WEST OF EAST LEVEE ROAD  
-----Comments-----  
Distribution:  
Ecological: SURROUNDING HABITAT CONSISTS OF RICE FIELDS TO THE SOUTH, PLOWED AGRICULTURAL FIELDS TO THE NORTH, AND RUDERAL  
VEGETATION ALONG THE ROADWAY.  
Threat: POSSIBLE THREAT OF URBAN DEVELOPMENT.  
General: 1 INDIVIDUAL (3 FEET IN LENGTH) WAS FOUND DOR ON ELKHORN ROAD ON 27 SEPTEMBER 1996.  
Owner/Manager: PVT, SAC COUNTY

California Department of Fish and Game  
Natural Diversity Data Base

CNDDS Report for the Northwest Rocklin Annexation Project

VALLEY NEEDLEGRASS GRASSLAND

Element Code: CTT42110CA

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G1  
State: None State: S3.1

-----Habitat Associations-----

General: None for this Element

Micro: None for this Element

Occurrence No. 42 Map Index:11960 ---Dates Last Seen--- Lat/Long: 38°40'02" / 121°09'06" Township: 09N  
Occ Rank: Unknown Element: 1987-06-08 UTM: Zone-10 N4281262 E660807 Range: 07E  
Origin: Natural/Native occurrence Site: 1988-12-09 Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 270 ft  
Main Source: JOKERST, J. 1986 (PERS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary: Humbug Creek  
Location: S OF PLACERVILLE RD (=SCOTT RD) JUST E OF JCT W/BLUE RAVINE RD. NEAR HUMBUG CR, FOLSOM.

-----Comments-----

Distribution: JUST D/S FROM SM EARTH DAM SUPPORTING TYPHA MARSH.  
Ecological: VIRTUALLY PURE STAND OF NASSELLA PULCHRA & JUNCUS BALTICUS. ASSOC SPP INCL CENTAURIUM VENUSTUM, EPILOBIUM DENSIFLORA. THOUGH SMALL, THE STAND IS LUSH, DENSE AND NOT GRAZED.  
Threat: DEVELOPMENT IS A THREAT.  
General: ONLY SUCH STAND KNOWN FROM SAC & PLACER CO PER BAILEY, 1986. STIPA PLANTS UNUSUALLY LARGE AND ROBUST. PERHAPS EXOTIC OR NEW SPECIES. THIS WAS OCC #042 OF CTT42110CA.  
Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

NORTHERN HARDPAN VERNAL POOL

Element Code: CTT44110CA

-----List Status----- NDDB Element Ranks -----Other Lists-----  
Federal: None Global: G3  
State: None State: S3.1

-----Habitat Associations-----  
General: None for this Element  
Micro: None for this Element

Occurrence No. 23 Map Index: 11651 ---Dates Last Seen--- Lat/Long: 38°51'13" / 121°18'52" Township: 12N  
Occ Rank: Unknown Element: 1980-XX-XX UTM: Zone-10 N4301671 E646259 Range: 06E  
Origin: Natural/Native occurrence Site: 1980-XX-XX Precision: SPECIFIC Section: 33 Qtr NW  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 1,251.8 ac Elevation: 125 ft  
Main Source: GRIGGS, T. 1980 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: SOUTH OF LINCOLN 2-3 MILES WEST OF HWY 65.  
-----Comments-----  
Distribution: POOLS IN TREERLESS ANNUAL GRASSLAND. BOUNDRIES INDICATE EXTENT OF UNDEVELOPED AREA.  
Ecological: DIVERSE POOL FLORA. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat: THREAT OF INDUSTRIAL DEVEL.  
General: SEVERAL POOLS KNOWN FOR THEIR INVERTEBRATE FAUNA.  
Owner/Manager: UNKNOWN

Occurrence No. 24 Map Index: 11653 ---Dates Last Seen--- Lat/Long: 38°54'10" / 121°18'30" Township: 12N  
Occ Rank: Unknown Element: 1976-05-XX UTM: Zone-10 N4307140 E646692 Range: 06E  
Origin: Natural/Native occurrence Site: 1976-05-XX Precision: NON-SPECIFIC Section: 09 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 145 ft  
Main Source: RUBTZOFF, P. 1976 (LIT)  
Quad Summary: LINCOLN (3812183/528A)  
County Summary: PLACER  
SNA Summary:  
Location: LINCOLN NORTH VERNAL POOLS. W OF HWY 65 AT N CITY LIMITS (1 MI N) OF LINCOLN.  
-----Comments-----  
Distribution: SEVERAL POOLS SCATTERED IN GRASSLAND.  
Ecological: CUSCUTA HOWELLIA REPORTED HERE. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat:  
General:  
Owner/Manager: UNKNOWN

Occurrence No. 25 Map Index: 11862 ---Dates Last Seen--- Lat/Long: 38°42'50" / 121°12'23" Township: 10N  
Occ Rank: Unknown Element: 1975-12-XX UTM: Zone-10 N4286346 E655945 Range: 07E  
Origin: Natural/Native occurrence Site: 1975-12-XX Precision: NON-SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 250 ft  
Main Source: HOOD, L. 1977 (LIT)  
Quad Summary: POLSOM (3812162/511B)  
County Summary: PLACER, SACRAMENTO  
SNA Summary:  
Location: ROCK CORRAL VERNAL POOLS. (ABOUT 0.4 MILE NORTH OF CHERRY AVENUE NEAR LINDA CREEK).  
-----Comments-----  
Distribution: POOL AND GRASSLAND ADJACENT TO RELATIVELY UNDISTURBED OAK WOODLAND/RIPARIAN COMMUNITY.  
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO  
Threat: SOME GRAZING, HORSEBACK RIDING HERE.  
General: LARGELY INTACT.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

NORTHERN HARDPAN VERNAL POOL (cont.)

Element Code: CTT44110CA

-----List Status-----  
Federal: None  
State: None

-----NDDB Element Ranks-----  
Global: G3  
State: S3.1

-----Other Lists-----

Occurrence No. 29      Map Index: 11854      ---Dates Last Seen---      Lat/Long: 38°39'42" / 121°12'28"  
Occ Rank: Unknown      Element: 1976-08-XX      UTM: Zone-10 N4280549 E655937      Township: 99X  
Origin: Natural/Native occurrence      Site: 1976-08-XX      Precision: NON-SPECIFIC      Range: 99X  
Presence: Presumed Extant      Symbol Type: POINT      Section: XX Qtr XX  
Trend: Unknown      Radius: 1 mile      Meridian: M  
Elevation: 270 ft  
Main Source: MACDONALD, R. 1976 (LIT)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: PHOENIX FIELD VERNAL POOLS VIC OF AIRPORT. AREA MOSTLY N & E OF AIRPORT.  
-----Comments-----  
Distribution: POOLS IN FIELDS ON BLUFF TOPS W/EXTENSIVE MIMA MOUND TOPOGRAPHY.  
Ecological: DOWNINGIA, 4 SPP OF BRODIAEA, LASTHENIA, POGOGYNE ZIZYPHROIDES, LILEA SCILLOIDES, RANUNCULUS ALVEOLATUS.  
UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat: FAIR OAKS REC & PARK DESTROYED PART OF ACREAGE.  
General: CDFG NOW PROTECTING 8 ACRES.  
Owner/Manager: UNKNOWN

Occurrence No. 66      Map Index: 11800      ---Dates Last Seen---      Lat/Long: 38°44'34" / 121°14'19"  
Occ Rank: Unknown      Element: 1982-XX-XX      UTM: Zone-10 N4289498 E653075      Township: 10N  
Origin: Natural/Native occurrence      Site: 1982-XX-XX      Precision: SPECIFIC      Range: 07E  
Presence: Presumed Extant      Symbol Type: POLYGON      Section: 08 Qtr NW  
Trend: Unknown      Area: 150.6 ac      Meridian: M  
Elevation: 230 ft  
Main Source: WESCO 1982 (LIT)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: PLACER  
SNA Summary:  
Location: BOTH SIDES DOUGLAS BLVD <1 MILE WEST OF JUNCTION WITH SIERRA COLLEGE BLVD, ROSEVILLE.  
-----Comments-----  
Distribution:  
Ecological: 4 AREAS; 14 ACRES HIGH QUALITY POOLS ON HIGH TERRACE HARDPAN, ZONED AG; 50 AC HIGH QUALITY LOW TERRACE HARDPAN  
POOLS, ZONED RESID; 22 AC MED QUALITY VOLCANIC MUDFLOW POOLS, ZONED AG; 14 AC LOW QUALITY LOW TERRACE HARDPAN  
POOLS ZONED RESID.  
Threat:  
General: RANKINGS AND 1977 ZONING FROM WESCO, 1982. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP.INFO.  
Owner/Manager: UNKNOWN

Occurrence No. 68      Map Index: 11613      ---Dates Last Seen---      Lat/Long: 38°47'11" / 121°19'26"  
Occ Rank: Unknown      Element: 1982-XX-XX      UTM: Zone-10 N4294195 E645588      Township: 11N  
Origin: Natural/Native occurrence      Site: 1982-XX-XX      Precision: SPECIFIC      Range: 06E  
Presence: Presumed Extant      Symbol Type: POLYGON      Section: 20 Qtr S  
Trend: Unknown      Area: 51.4 ac      Meridian: M  
Elevation: 110 ft  
Main Source: WESCO 1982 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: ADJACENT TO SOUTH BRANCH (PLEASANT GROVE CREEK) ABOUT 1 MILE SW OF FIDDYMENT RANCH, ROSEVILLE  
-----Comments-----  
Distribution: TWO AREAS; 38 AC RANKED AS MEDIUM QUALITY BY WESCO, 1982, ZONED FORM AG IN 1977 ROSEVILLE GENERAL PLAN; 13 AC  
OF LOW QUALITY POOLS, ZONED RESIDENTIAL.  
Ecological: LOW TERRACE HARDPAN SUBSTRATE. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat:  
General:  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

NORTHERN HARDPAN VERNAL POOL (cont.)

Element Code: CTT44110CA	-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
	Federal: None	Global: G3	
	State: None	State: S3.1	

Occurrence No. 78      Map Index: 11433      ---Dates Last Seen---      Lat/Long: 38°42'32" / 121°25'15"      Township: 10N  
 Occ Rank: Unknown      Element: 1983-XX-XX      UTM: Zone-10 N4285448 E637308      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1983-XX-XX      Precision: NON-SPECIFIC      Section: 22 Qtr W  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 70 ft  
 Main Source: HOLLAND, R. & V. DAINS 1986 (MAP)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: BETWEEN ELVERTA RD & U ST, E OF 16TH ST, W OF DRY CR, NE OF RIO LINDA.  
 Comments:  
 Distribution: SPARSE VERNAL POOLS AS SEEN 1983 AERIAL PHOTOS.  
 Ecological: ON SAN JOAQUIN ASSOC SOILS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
 Threat:  
 General:  
 Owner/Manager: PVT

Occurrence No. 79      Map Index: 11427      ---Dates Last Seen---      Lat/Long: 38°39'49" / 121°25'16"      Township: 09N  
 Occ Rank: Unknown      Element: 1983-XX-XX      UTM: Zone-10 N4280432 E637361      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1983-XX-XX      Precision: NON-SPECIFIC      Section: 19 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 320.6 ac      Elevation: 50 ft  
 Main Source: HOLLAND & DAINS 1986 (MAP)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: WEST OF MC CLELLAN AIR FORCE BASE BETWEEN MAGPIE CREEK & ASCOT AVE, N OF SACRAMENTO.  
 Comments:  
 Distribution: SPARSE VERNAL POOLS AS SEEN IN 1983 AERIAL PHOTOS. FIELD CHECKED BY WYMER AND ASSOC. IN 1987.  
 Ecological: ON SAN JOAQUIN ASSOC SOILS. NO RARE OR ENDANGERED PLANTS WERE FOUND DURING THE 1987 FIELD SURVEYS, HOWEVER, OVER 100 DIFFERENT SPECIES WERE FOUND AND ARE LISTED IN WYM87R02. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
 Threat:  
 General: SOME OF THESE POOLS WERE MOVED BY WYMER AND ASSOC. A NARRATION OF THE PROCESS IS FOUND IN WYM88R03, "VERNAL POOL RESTORATION PROJECT AT MCCLELLAN A.F.B."  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

NORTHERN CLAYPAN VERNAL POOL

Element Code: CTT44120CA

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G1  
State: None State: S1.1

-----Habitat Associations-----

General: None for this Element  
Micro: None for this Element

Occurrence No. 30 Map Index: 11332 ---Dates Last Seen--- Lat/Long: 38°40'04" / 121°28'15" Township: 09N  
Occ Rank: Unknown Element: 1983-04-13 UTM: Zone-10 N4280812 E633036 Range: 05E  
Origin: Natural/Native occurrence Site: 1984-04-13 Precision: NON-SPECIFIC Section: 05 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 35 ft  
Main Source: SCHONHOLTZ, R. 1984 (OBS)  
Quad Summary: RIO LINDA (3812164/512E)  
County Summary: SACRAMENTO  
SNA Summary: Ascot Road Vernal Pools  
Location: N OF DRY CR, S OF ASCOT AVE, JUST E OF WESTERN PACIFIC RR TRACKS, SACRAMENTO.

-----Comments-----

Distribution:

Ecological: VERNAL POOL COMPLEX W/SEASONAL & PERENNIAL FRESHWATER MARSH. ANNUAL GRASSLAND SURROUNDS. POOL TAXA INCL  
ERYNGIUM, DOWNINGIA, PLAGIOBOTHRYS, JUNCUS. ON CLAY SUBSTRATE. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION,  
LACKS SPP. INFO

Threat: MODERATELY GRAZED, EROSION THREATENING ONE POOL.

General: AREA PROPOSED FOR REGIONAL PARK BY CITY OF SACRAMENTO PER SCHONHOLTZ.

Owner/Manager: UNKNOWN

CNDDB Report for the Northwest Rocklin Annexation Project

NORTHERN VOLCANIC MUD FLOW VERNAL POOL

Element Code: CTT44132CA

-----List Status----- NDDB Element Ranks----- Other Lists-----  
Federal: None Global: G1  
State: None State: S1.1

-----Habitat Associations-----

General: None for this Element  
Micro: None for this Element

Occurrence No. 1 Map Index:11782 ---Dates Last Seen--- Lat/Long: 38°45'07" / 121°15'12" Township: 10N  
Occ Rank: Unknown Element: 1982-XX-XX UTM: Zone-10 N4290497 E651789 Range: 07E  
Origin: Natural/Native occurrence Site: 1982-XX-XX Precision: SPECIFIC Section: 06 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 432.3 ac Elevation: 240 ft  
Main Source: WESCO 1982 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)\*, FOLSOM (3812162/511B), CITRUS HEIGHTS (3812163/512A), ROCKLIN (3812172/527C)  
County Summary: PLACER  
SNA Summary: Roseville Eastern Vernal Pools  
Location: BETWEEN DOUGLAS BLVD & MINERS RAVINE JUST EAST OF ROSEVILLE.  
-----Comments-----  
Distribution:  
Ecological: DIVERSITY OF POOL TAXA PRESENT INCLUDES DICHELOSTEMMA LACUNA-VERNALIS. MOST OF THIS LARGE AREA IS ON VOLCANIC SUBSTRATE. <50 ACRES IN THE NW PORTION OF THE BOUNDED AREA IS LOW TERRACE FORMATION W/HARDPAN VERNAL POOLS.  
Threat:  
General: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO  
Owner/Manager: UNKNOWN

Occurrence No. 2 Map Index:11828 ---Dates Last Seen--- Lat/Long: 38°45'56" / 121°13'27" Township: 11N  
Occ Rank: Unknown Element: 1986-04-14 UTM: Zone-10 N4292056 E654299 Range: 07E  
Origin: Natural/Native occurrence Site: 1986-04-14 Precision: SPECIFIC Section: 32 Qtr NW  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 346.4 ac Elevation: 400 ft  
Main Source: WESCO 1982 (LIT)  
Quad Summary: ROCKLIN (3812172/527C)  
County Summary: PLACER  
SNA Summary: Roseville Eastern Vernal Pools  
Location: RIDGE BETWEEN MINERS RAVINE & SECRET RAVINE, VICINITY OF ROCKLIN-ROSEVILLE CORPORATE BOUNDARIES.  
-----Comments-----  
Distribution: WESCO SURVEYED 70 AC W/IN ROSEVILLE CITY LIMITS BUT TOTAL POOL AREA MUCH LARGER (ALONG SIERRA COLLEGE BLVD).  
Ecological: POOLS ON VOLCANIC SUBSTRATE. MANY POOL TAXA PRESENT INCL DICHELOSTEMMA LACUNA-VERNALIS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.  
Threat: ROSEVILLE PORTION ZONED FOR AGRICULTURE W/2 AC MIN IN 1977 GENERAL PLAN.  
General:  
Owner/Manager: UNKNOWN

Occurrence No. 3 Map Index:11798 ---Dates Last Seen--- Lat/Long: 38°46'07" / 121°14'25" Township: 11N  
Occ Rank: Unknown Element: 1982-XX-XX UTM: Zone-10 N4292353 E652887 Range: 07E  
Origin: Natural/Native occurrence Site: 1982-XX-XX Precision: SPECIFIC Section: 30 Qtr S  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 141.8 ac Elevation: 280 ft  
Main Source: WESCO 1982 (LIT)  
Quad Summary: ROCKLIN (3812172/527C)  
County Summary: PLACER  
SNA Summary: Roseville Eastern Vernal Pools  
Location: N & W OF ROSEVILLE RESERVOIR, SE OF SECRET RAVINE, ROSEVILLE-ROCKLIN CORPORATE BOUNDARY.  
-----Comments-----  
Distribution: BOUNDARY INCL 2 POOL AREAS; ONE AREA HAS 48 ACRES OF POOLS (WESCO, 1982); THE OTHER AREA HAS 30 ACRES OF LOWER QUALITY POOLS.  
Ecological: ON VOLCANIC SUBSTRATE. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO  
Threat: BOTH AREAS ZONED FOR AGRICULTURE.  
General:  
Owner/Manager: UNKNOWN



California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

NORTHERN VOLCANIC MUD FLOW VERNAL POOL (cont.)

Element Code: CTT44132CA

-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
Federal: None	Global: G1	
State: None	State: S1.1	

Occurrence No. 4      Map Index:11746      ---Dates Last Seen---      Lat/Long: 38°46'34" / 121°15'54"      Township: 11N  
 Occ Rank: Unknown      Element: 1987-04-22      UTM: Zone-10 N4293168 E650705      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1987-04-22      Precision: SPECIFIC      Section: 25 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 428.3 ac      Elevation: 225 ft  
 Main Source: WESCO 1982 (LIT)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary: Roseville Northern Vernal Pools  
 Location: W OF ANTELOPE CR ON HILL E OF DIAMOND OAKS MUNICIPAL GOLF COURSE. ROCKLIN-ROSEVILLE BOUNDARY.  
 -----Comments-----  
 Distribution: 330 AC IN ROSEVILLE; ZONED AG IN 1977 GENERAL PLAN.  
 Ecological: LARGE AREA OF POOLS ON MEHRTEN FORMATION, EXCHEQUER VERY STONY LOAM. SPP INCL GRATIOLA HETEROSEPALA. PORTION  
 SEEN IN 1987 EXCELLENT EXAMPLE OF VOLCANIC MUDFLOW POOLS. UNABLE TO CONVERT FLORISTIC CLASSIFICATION, LACKS  
 SPP. INFO  
 Threat: PROPOSED FOR REGIONAL SHOPPING CENTER.  
 General:  
 Owner/Manager: UNKNOWN

Occurrence No. 5      Map Index:11695      ---Dates Last Seen---      Lat/Long: 38°46'54" / 121°17'00"      Township: 11N  
 Occ Rank: Unknown      Element: 1982-XX-XX      UTM: Zone-10 N4293741 E649112      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1982-XX-XX      Precision: SPECIFIC      Section: 27 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 62.7 ac      Elevation: 165 ft  
 Main Source: WESCO 1982 (LIT)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary: Roseville Northern Vernal Pools  
 Location: LESS THAN 1 MILE NORTH OF DIAMOND OAKS MUNICIPAL GOLF COURSE, EAST OF HIGHWAY 65, ROCKLIN.  
 -----Comments-----  
 Distribution: 51 ACRES.  
 Ecological: ON VOLCANIC SUBSTRATE. DICHLOSTEMMA LACUNA-VERNALIS PRESENT. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION,  
 LACKS SPP. INFO  
 Threat: ZONED AS RESIDENTIAL IN 1977 ROSEVILLE GENERAL PLAN.  
 General:  
 Owner/Manager: UNKNOWN

CNDDB Report for the Northwest Rocklin Annexation Project

ALKALI MEADOW

Element Code: CTT45310CA

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G3  
State: None State: S2.1

-----Habitat Associations-----

General: None for this Element  
Micro: None for this Element

-----  
Occurrence No. 1 Map Index:11773 ---Dates Last Seen--- Lat/Long: 38°48'48" / 121°15'20" Township: 11N  
Occ Rank: Unknown Element: 1982-08-23 UTM: Zone-10 N4297300 E651459 Range: 06E  
Origin: Natural/Native occurrence Site: 1982-08-23 Precision: NON-SPECIFIC Section: 12 Qtr S  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 175 ft  
Main Source: JENSEN, D. 1982 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary: Upper Pleasant Grove Creek  
Location: N OF ROSEVILLE ON HWY 65, E ON PLACER BLVD, E ON PVT DIRT RD.  
-----  
Comments-----  
Distribution:  
Ecological: LOW DISTICHLIS MEADOWS W/PATCHES OF BARE WHITE SALT ENCRUSTED SOIL. OCCURS BETW SEEPS DOMINATED BY OLNEY  
BULLRUSH. MOSAIC OF DIFF COVER TYPES. SPECIES LIST ON FILE AT CNDDB.  
Threat: GRAZED IN WINTER. DEVEL PLANNED FOR THE AREA.  
General: THIS WAS OCC #001 OF CTT45310CA.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

ALKALI SEEP

Element Code: CTT45320CA

-----List Status-----  
Federal: None  
State: None

-----NDDB Element Ranks-----  
Global: G3  
State: S2.1

-----Other Lists-----

-----Habitat Associations-----

General: None for this Element  
Micro: None for this Element

Occurrence No. 2      Map Index: 11773      ---Dates Last Seen---      Lat/Long: 38°48'48" / 121°15'20"      Township: 11N  
Occ Rank: Unknown      Element: 1982-08-23      UTM: Zone-10 N4297300 E651459      Range: 06E  
Origin: Natural/Native occurrence      Site: 1989-04-19      Precision: NON-SPECIFIC      Section: 12 Qtr S  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 175 ft  
Main Source: JENSEN, D. 1982 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary: Upper Pleasant Grove Creek  
Location: 0.5 MI E OF PLEASANT GROVE CR, APPROX 2.5 MI N OF ROCKLIN. ACCESS VIA HWY 65.

-----Comments-----

Distribution:

Ecological: SEEPS AND OLNEY BULLRUSH DOM. OCCURS IN PATCHES W/ALKALI MEADOW BTWN A HOMOGENEOUS STAND OF VEG. APPROX 1 M TALL. FRESHWATER SEEP OCCURS ABOVE ALKALINE-SEEP. FILL HAS BEEN ILLEGALLY DISCHARGED INTO SITE AS OF 1989.

Threat: GRAZED IN WINTER. DEVELOPMENT PLANS FOR SITE.

General: ARMY CORPS INVOLVED IN RESTORATION AND MITIGATION. THIS WAS OCC #002 OF CTT45320CA.

Owner/Manager: UNKNOWN

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI

VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

—List Status—	—NDDDB Element Ranks—	—Other Lists—
Federal: Threatened	Global: G2G3	CDFG Status:
State: None	State: S2S3	

—Habitat Associations—

General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTS, AND SOUTH COAST MTS, IN ASTATIC RAIN-FILLED POOLS.  
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 3      Map Index:23049      —Dates Last Seen—      Lat/Long: 38°42'25" / 121°28'54"      Township: 10N  
Occ Rank: Fair      Element: 1993-02-11      UTM: Zone-10 N4285141 E632014      Range: 05E  
Origin: Natural/Native occurrence      Site: 1993-02-11      Precision: NON-SPECIFIC      Section: 19 Qtr W  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 8.3 ac      Elevation: 35 ft  
Main Source: YORK, R. 1993 (OBS)  
Quad Summary: RIO LINDA (3812164/S12B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.5 MILE WEST OF THE JUNCTION OF WEST 6TH STREET AND "U" STREET, RIO LINDA.  
—Comments—  
Distribution:  
Ecological: HABITAT CONSISTS OF TWO DISTURBED VERNAL POOLS. BURROWING OWLS ALSO FOUND AT THIS LOCATION.  
Threat: POSSIBLY THREATENED BY PROPOSED CONSTRUCTION OF AN ACCESS ROAD LEADING TO A NEW POWER PLANT.  
General: FAIRY SHRIMP IDENTIFIED BY STEPHANIE MYERS (JSA); ALTHOUGH NOT COMMON, THERE WERE TOO MANY TO COUNT.  
Owner/Manager: PVT

Occurrence No. 4      Map Index:23050      —Dates Last Seen—      Lat/Long: 38°42'48" / 121°28'57"      Township: 10N  
Occ Rank: Poor      Element: 1996-02-13      UTM: Zone-10 N4285837 E631929      Range: 05E  
Origin: Natural/Native occurrence      Site: 1996-02-13      Precision: NON-SPECIFIC      Section: 19 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 35 ft  
Main Source: LEACH, S. 1996 (OBS)  
Quad Summary: RIO LINDA (3812164/S12B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: EAST SIDE OF WESTERN PACIFIC RR TRACKS, SOUTH OF JUNCTION OF ELVERTA RD/SORENTO RD, 2.0 KM WEST OF ELVERTA.  
—Comments—  
Distribution: 1993: 1 DISTURBED POND ADJACENT TO RR TRACKS SAMPLED, SHRIMP ID'D BY S. MEYERS (JSA); ALTHOUGH NOT COMMON, TOO MANY TO COUNT. 1996: 3 POOLS SAMPLED BY S. LEACH; TOTAL APPROX. SIZE OF POOLS AND SWALES ARE 250 SQ. METERS.  
Ecological: HABITAT IS COMPLEX OF SEASONAL POOLS AND SWALES; SAN JOAQUIN SOIL SERIES; ASSOCIATED PLANTS: TILLAEA AQUATICA, LOLIUM MULTIFLORUM, CALLITRICHE MARGINATA, LILAEA SCILLOIDES, LYTHRUM HYSSOPIFOLIUM, MIMULUS GUTTATUS, MOUTIA FONTANA ET AL.  
Threat: THREAT: HIGH POTENTIAL FOR DEGRADATION OF WATER QUALITY; POSSIBLE HERBICIDE USE; SEDIMENTATION OF POOLS, RR ROW, ET AL.  
General: 1993: SHRIMP OBS BY S. MEYERS. 2/13/1996: >50 ADULTS OBS IN SMALL (93 SQ. METERS) ISOLATED POOL ABOUT 1000 FT S OF ELVERTA RD; 50-100 ADULTS OBS IN POOL 800 FT E OF SORENTO RD; 50-100 ADULTS OBS IN 92 SQ. METER POOL 230 FT S OF ELVERTA RD.  
Owner/Manager: PVT, UNKNOWN

Occurrence No. 29      Map Index:33250      —Dates Last Seen—      Lat/Long: 38°51'43" / 121°17'46"      Township: 12N  
Occ Rank: Good      Element: 1994-12-28      UTM: Zone-10 N4302616 E647839      Range: 06E  
Origin: Natural/Native occurrence      Site: 1994-12-28      Precision: SPECIFIC      Section: 27 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 140 ft  
Main Source: MARTINE, A. & B. HELM 1994 (OBS)  
Quad Summary: ROSEVILLE (3812173/S28D)  
County Summary: PLACER  
SNA Summary:  
Location: EAST SIDE OF HWY 65, 0.4 MILE SOUTH OF THE LINCOLN RODEO GROUNDS, 2 MILES SOUTH OF LINCOLN.  
—Comments—  
Distribution:  
Ecological: HABITAT CONSISTS OF VERNAL POOLS IN ROLLING GRASSLAND.  
Threat: THREATENED BY PROPOSED DEVELOPMENT.  
General: MANY SHRIMP OBSERVED/COLLECTED (DEPOSITED AT CAS) ON 28 DECEMBER 1994.  
Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.) VERNAL POOL FAIRY SHRIMP Element Code: ICBRA03030	-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
	Federal: Threatened	Global: G2G3	CDFG Status:
	State: None	State: S2S3	

Occurrence No. 30      Map Index: 33251      ---Dates Last Seen---      Lat/Long: 38°50'48" / 121°16'07"      Township: 12N  
 Occ Rank: Good      Element: 1994-12-28      UTM: Zone-10 N4300992 E650252      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1994-12-28      Precision: SPECIFIC      Section: 35 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 195 ft  
 Main Source: MARTINE, A. & B. HELM 1994 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: 2 MILES SE OF THE LINCOLN RODEO GROUNDS, ~3 MILES SSE OF LINCOLN.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF VERNAL POOLS WITHIN ROLLING GRASSLAND.  
 Threat: THREATENED BY PROPOSED DEVELOPMENT.  
 General: MANY SHRIMP OBSERVED/COLLECTED (DEPOSITED AT CAS) ON 28 DECEMBER 1994.  
 Owner/Manager: PVT

Occurrence No. 41      Map Index: 32449      ---Dates Last Seen---      Lat/Long: 38°47'19" / 121°17'32"      Township: 11N  
 Occ Rank: Unknown      Element: 2000-02-25      UTM: Zone-10 N4294489 E648327      Range: 06E  
 Origin: Natural/Native occurrence      Site: 2000-02-25      Precision: SPECIFIC      Section: 22 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 150 ft  
 Main Source: SUGNET & ASSOC. 1995 (LIT)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: 0.7 KM E OF HWY 65; 2.5 KM SSW OF INTERSECTION PLEASANT GROVE CREEK AND PLACER BLVD/SUNSET BLVD; N OF ROSEVILLE.  
 -----Comments-----  
 Distribution: HIGHLAND RESERVE SOUTH. THE ECORP 2000 SURVEY LAT/LONG GIVEN ARE NOT AT THE LOCATION THEY MAPPED; REPORT HAS TEMP, DEPTH, & SURFACE AREA OF POOLS.  
 Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND; WETLAND COMPENSATION/MITIGATION PRESERVE. ON 2/6/95 THE POOL HAD A SURFACE AREA OF 94 SQUARE METERS & A DEPTH OF 17 CM.  
 Threat:  
 General: POOL #NB: 50+ ADULTS OBSERVED IN 1995; 1 ADULT COLLECTED AND DEPOSITED IN CAS. 10'S OF THEM OBSERVED IN 2000, VERNAL POOL #VPN10; LINDERIELLA OCCIDENTALIS ALSO OBSERVED IN 2 POOLS SOMEWHERE NOT IDENTIFIED IN THE PRESERVE.  
 Owner/Manager: PVT-ROSEVILLE PROPERTIES

Occurrence No. 44      Map Index: 32456      ---Dates Last Seen---      Lat/Long: 38°45'38" / 121°20'24"      Township: 11N  
 Occ Rank: Unknown      Element: 1995-03-XX      UTM: Zone-10 N4291306 E644227      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1996-03-11      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 59.3 ac      Elevation: 145 ft  
 Main Source: SUGNET & ASSOC. 1996 (LIT)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: NORTHWEST OF ROSEVILLE; BETWEEN FIDDYMENT ROAD & HWY 65, SOUTH OF PLEASANT GROVE CREEK.  
 -----Comments-----  
 Distribution: 1995: 15 TOTAL WETLANDS SAMPLED BTW PARCELS 32 & 72. 1996: 10 TOTAL WETLANDS SAMPLED ON SILVERADO OAKS URBAN RESERVE MITIGATION SITE; POOLS IN URBAN RESERVE ARE MUTUALLY EXCLUSIVE FROM PARCEL 72 (1995), BUT SHARE THE SAME GEOGRAPHIC SPACE.  
 Ecological: CONSTRUCTED AND SEASONAL HARDPAN VERNAL POOLS WITH NON-NATIVE ANNUAL GRASSLAND.  
 Threat:  
 General: 1995: POOLS #47 & 71: 50+ ADULTS OBSERVED IN EACH POOL, POOLS #47 & 71 ARE NOT ON MAP, MAPPED ACCORDING TO DATA FORMS; VISUAL OBSERVATION ONLY. 1996: NO B. LYNCHI OBSERVED, BUT LINDERIELLA OCCIDENTALIS PRESENT.  
 Owner/Manager: PVT-ELLIOTT HOMES

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status----- NDDB Element Ranks----- Other Lists-----  
Federal: Threatened Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 45 Map Index:32457 ---Dates Last Seen--- Lat/Long: 38°46'11" / 121°19'21" Township: 11N  
Occ Rank: Unknown Element: 1995-03-14 UTM: Zone-10 N4292338 E645737 Range: 06E  
Origin: Natural/Native occurrence Site: 1995-03-14 Precision: NON-SPECIFIC Section: 29 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 130 ft  
Main Source: SUGNET & ASSOC. 1995 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: BETWEEN KASEBERG CREEK AND SOUTH BRANCH PLEASANT GROVE CREEK; 1.8 KM WEST OF SOUTHERN PACIFIC RR X HWY 65.  
Comments:  
Distribution: WOODCREEK OAKS MITIGATION SITES. 14 WATER BODIES WERE SAMPLED ON FEB 9, 10, 27 & MARCH 14, 1995. B. LYNCHI  
FOUND IN ONLY 1 POOL & ONLY ON 3/14/95.  
Ecological: HARDPAN VERNAL POOL IN ANNUAL NON-NATIVE GRASSLAND. ON 3/14 THE SURFACE AREA WAS 129 SQ METERS & THE DEPTH  
WAS 18 CM. WETLAND COMPENSATION/MITIGATION PRESERVE.  
Threat:  
General: POOL #C2: 50+ ADULTS OBSERVED; 1 ADULT COLLECTED & DEPOSITED IN CAS. THE INFORMATION PROVIDED BY THE  
CONSULTANT HAS CONFLICTING DATA ON THE LOCATION OF THIS POOL; THIS SITE WAS MAPPED ACCORDING TO THE MAP THEY  
PROVIDED, NOT THE T-R-S GIVEN.  
Owner/Manager: PVT-SARES REGIS GROUP

Occurrence No. 46 Map Index:32458 ---Dates Last Seen--- Lat/Long: 38°51'31" / 121°18'52" Township: 12N  
Occ Rank: Unknown Element: 1996-01-29 UTM: Zone-10 N4302218 E646263 Range: 06E  
Origin: Natural/Native occurrence Site: 1996-01-29 Precision: SPECIFIC Section: 28 Qtr SW  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 19.0 ac Elevation: 130 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: INGRAM SLOUGH; 3.2 KM ESE OF MOORE ROAD X FIDDYMENT ROAD; SSW OF LINCOLN.  
Comments:  
Distribution: LINCOLN CROSSING MITIGATION SITE. 1995: 10 TOTAL WETLANDS SAMPLED, THE INFORMATION FROM CONSULTANT HAD  
DISCREPANCIES BETWEEN FIELD SURVEY FORMS & MAP - MAPPED ACCORDING TO THEIR MAP. 1996: 42 TOTAL WATERBODIES  
WERE SURVEYED.  
Ecological: CONSTRUCTED HARDPAN VERNAL POOL IN ANNUAL NON-NATIVE GRASSLAND. WETLAND COMPENSATION/MITIGATION PRESERVE.  
Threat:  
General: 1995: <50 ADULTS OBSERVED IN POOL #211. 1996: <50 ADULTS OBSERVED IN 5 POOLS (101, 204, 206, 216 & 220).  
LINDERIELLA OCCIDENTALIS ALSO PRESENT IN MOST OF SITE DURING 1995 & 1996.  
Owner/Manager: PVT-STERLING PACIFIC ASSETS

Occurrence No. 90 Map Index:32510 ---Dates Last Seen--- Lat/Long: 38°40'00" / 121°24'57" Township: 09N  
Occ Rank: Excellent Element: 1996-01-22 UTM: Zone-10 N4280763 E637829 Range: 05E  
Origin: Natural/Native occurrence Site: 1996-01-22 Precision: SPECIFIC Section: 24 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 50 ft  
Main Source: LACY, T. 1995 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: MC CLELLAN AFB; 0.25 MILE SE OF ASCOT ROAD X 20TH STREET, SACRAMENTO.  
Comments:  
Distribution: SMALL POOL: 15-FT X 25-FT.  
Ecological: VERNAL POOL WITH ALGAE AND GRASS BOTTOM. POOL ESTIMATED TO BE 25 FEET LONG AND 15 FEET WIDE WITH A MAXIMUM  
DEPTH OF 10 INCHES. SURROUNDING AREA IS ANNUAL GRASSLAND. OSTRACODS, COPEPODS, AND LINDERIELLA OCCIDENTALIS  
ALSO PRESENT.  
Threat: EXPANSION OF BASE FACILITIES; MODIFICATION OF WATERSHED; AIRCRAFT REPAIR, LIGHT INDUSTRIAL, RESIDENT,  
COMMERCIAL.  
General: POOL #M95B (AKA MCC95B) MANY ADULTS OBSERVED ON 2/10 & 3/16/95, BUT NO STANDING WATER ON 3/2/95; 2 COLLECTED  
ON 2/10 (CAS #102856); 6 COLLECTED ON 3/16 (CAS #102858). 100'S OBSERVED ON 22 JAN 1996 (COLLECTION-CAS  
#105746).  
Owner/Manager: DOD-MCCLELLAN AFB

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status----- NDDB Element Ranks -----Other Lists-----  
Federal: Threatened Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 91 Map Index:32516 ---Dates Last Seen--- Lat/Long: 38°51'55" / 121°17'34" Township: 12N  
Occ Rank: Excellent Element: 1998-02-04 UTM: Zone-10 N4302990 E648111 Range: 06E  
Origin: Natural/Native occurrence Site: 1998-02-04 Precision: NON-SPECIFIC Section: 27 Qtr NW  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 108.2 ac Elevation: 140 ft  
Main Source: GIBSON, J. 1996 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: EASTRIDGE SOUTHERN WETLAND PRESERVE, JUST EAST OF HWY 65 (AT THE LINCOLN RODEO GROUNDS), 0.5 MILE SE OF LINCOLN

-----Comments-----  
Distribution:  
Ecological: NORTHERN HARDPAN VERNAL POOL HABITAT WITH CONSTRUCTED VERNAL POOLS (3.95 ACRES), CONSTRUCTED SEASONAL WETLANDS (1.95 ACRES), AND REFERENCE VERNAL POOLS IN ANNUAL GRASSLAND.  
Threat: FUTURE RESIDENTIAL DEVELOPMENT PLANNED IN ADJACENT AREA; DIRT ROADS BISECT PRESERVE; GRAZING; RODEO GROUNDS TO THE NW.  
General: 1995 (SECOND MONITORING YEAR): OBS IN 7 REFERENCE VERNAL POOLS, IN 17 CONSTRUCTED VERNAL POOLS, IN 2 1996 (THIRD YEAR): OBS IN 21 OF 45 CONSTRUCTED POOLS, 6 OF 10 REFERENCE POOLS. PRESENT ON-SITE IN 1997 AND 1998.  
Owner/Manager: PVT-PLACER HOLDINGS

Occurrence No. 130 Map Index:34789 ---Dates Last Seen--- Lat/Long: 38°40'56" / 121°28'42" Township: 10N  
Occ Rank: Unknown Element: 1992-04-01 UTM: Zone-10 N4282411 E632349 Range: 05E  
Origin: Natural/Native occurrence Site: 1992-04-01 Precision: SPECIFIC Section: 31 Qtr N  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 40 ft  
Main Source: KOFORD, E. 1992 (PERS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ALONG UNION PACIFIC RR (USED TO BE WESTERN PACIFIC RR?); 0.2 MILES SOUTH OF ELKHORN BLVD, RIO LINDA.

-----Comments-----  
Distribution:  
Ecological:  
Threat:  
General: KOFORD OBSERVED B. LYNCHI DURING SURVEY IN SPRING OF 1992; LINDERIELLA OCCIDENTALIS ALSO OBSERVED.  
Owner/Manager: PVT-UNION PACIFIC RR

Occurrence No. 135 Map Index:34808 ---Dates Last Seen--- Lat/Long: 38°38'08" / 121°14'02" Township: 09N  
Occ Rank: Good Element: 1996-01-30 UTM: Zone-10 N4277594 E653719 Range: 07E  
Origin: Natural/Native occurrence Site: 1996-01-30 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 105 ft  
Main Source: MARTIN, D. 1996 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: EAST END OF SAILOR BAR; 100 METERS NORTH OF AMERICAN RIVER; 0.9 KM WEST OF HAZEL AVENUE BRIDGE.

-----Comments-----  
Distribution: SOUTHEAST OF PARKING LOT AT FIRST FISHING ACCESS ROAD; ADJACENT LAND USE: PUBLIC PARKWAY, GRAVEL STORAGE AREA FOR COUNTY.  
Ecological: VERNAL POOL IN DREDGE TAILINGS; GRAVEL AND COBBLED SOIL; SCATTERED LIVE OAKS AND COTTONWOOD TREES BORDERING RIPARIAN AREA.  
Threat: POSSIBLE THREAT: PUBLIC PARKWAY, RECREATIONAL AND FISHING ACCESS AREA.  
General: >50 ADULTS OBSERVED IN POOL; UNKNOWN NUMBER COLLECTED AND DEPOSITED IN CAS; LINDERIELLA OCCIDENTALIS ALSO PRESENT.  
Owner/Manager: SAC COUNTY

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.) VERNAL POOL FAIRY SHRIMP Element Code: ICBRA03030		—List Status— Federal: Threatened State: None	—NDDB Element Ranks— Global: G2G3 State: S2S3	—Other Lists— CDFG Status:
---	--	---	---	-------------------------------

Occurrence No. 137      Map Index: 34810      —Dates Last Seen—      Lat/Long: 38°46'59" / 121°26'50"      Township: 11N  
 Occ Rank: Unknown      Element: 1999-02-25      UTM: Zone-10 N4293661 E634863      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1999-02-25      Precision: SPECIFIC      Section: 20 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 69.2 ac      Elevation: 60 ft  
 Main Source: SUGNET & ASSOC. 1996 (LIT)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: 0.25 MILE NORTHEAST OF BREWER ROAD & CURRY CREEK, 73 MILES SOUTHEAST OF PLEASANT GROVE.  
 Comments:  
 Distribution: BASELINE BREWER MITIGATION SITE; A TOTAL OF 46 WATERBODIES WERE SURVEYED IN FEBRUARY/MARCH 1996. PROPERTY MGR: EVERGREEN MANAGEMENT  
 Ecological: CONSTRUCTED AND EXISTING SEASONAL WATERBODIES WITHIN NON-NATIVE ANNUAL GRASSLAND. LASTHENIA FREMONTII, NAVARRETTIA LEUCOCEPHALA, & ELOCHARIS MACROSTACHYA DOMINANT.  
 Threat:  
 General: 1996: B. LYNCHI OBS IN 7 POOLS (#105, 122, 140 & 143 HAD >50 SHRIMP; POOLS #131, 133 & 148 HAD <50 SHRIMP); LINDERIELLA OCCIDENTALIS ALSO PRESENT IN MITIGATION SITE. 1999: 100'S OBSERVED IN MANY POOLS WITHIN MONITORED AREA.  
 Owner/Manager: PVT-ROSEVILLE 150 PARTNERSHIP

Occurrence No. 139      Map Index: 34813      —Dates Last Seen—      Lat/Long: 38°48'15" / 121°18'08"      Township: 11N  
 Occ Rank: Unknown      Element: 1996-01-30      UTM: Zone-10 N4296194 E647419      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1996-03-11      Precision: SPECIFIC      Section: 16 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 105 ft  
 Main Source: SUGNET & ASSOC. 1996 (LIT)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: NORTH OF ROSEVILLE; BETWEEN HWY 65 AND INDUSTRIAL AVENUE; 0.3 KM WSW OF HWY 65 X PLEASANT GROVE CREEK.  
 Comments:  
 Distribution: FOOTHILL BUSINESS PARK MITIGATION SITE, PARCEL 1. 1995: 12 WATERBODIES SURVEYED. 1996: 14 WATERBODIES SURVEYED.  
 Ecological: CONSTRUCTED VERNAL POOL WITHIN NON-NATIVE ANNUAL GRASSLAND. POOL #VP32-1995: SURFACE AREA WAS 0, DEPTH WAS 39.0 CM; 1996: SURFACE AREA WAS 461 SQ METERS, DEPTH WAS 19.0 CM.  
 Threat:  
 General: 1/30/1996: >50 FAIRY SHRIMP OBSERVED IN POOL #VP32; LINDERIELLA OCCIDENTALIS ALSO PRESENT.  
 Owner/Manager: PVT-STANFORD RANCH

Occurrence No. 140      Map Index: 34818      —Dates Last Seen—      Lat/Long: 38°52'34" / 121°18'36"      Township: 12N  
 Occ Rank: Unknown      Element: 1996-01-29      UTM: Zone-10 N4304189 E646595      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1996-01-29      Precision: SPECIFIC      Section: 21 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 144 ft  
 Main Source: SUGNET & ASSOC. 1996 (LIT)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: 2.1 KM SOUTHWEST OF LINCOLN IN INGRAM SLOUGH, 1.5 KM WSW OF MOORE ROAD X HWY 65.  
 Comments:  
 Distribution: LINCOLN CROSSING MITIGATION SITE. 1996: 42 TOTAL POOLS SURVEYED.  
 Ecological: CONSTRUCTED HARDPAN VERNAL POOL IN NON-NATIVE ANNUAL GRASSLAND.  
 Threat:  
 General: POOL #229: <50 ADULTS OBSERVED IN POOL; SURFACE AREA=1,177 SQ. METERS, WATER DEPTH=28.0 CM.  
 Owner/Manager: PVT-STERLING PACIFIC ASSETS



California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.) VERNAL POOL FAIRY SHRIMP Element Code: ICBRA03030	-----List Status----- Federal: Threatened State: None	-----NDDB Element Ranks----- Global: G2G3 State: S2S3	-----Other Lists----- CDFG Status:
---	---	---	---------------------------------------

Occurrence No. 141      Map Index:34819      ---Dates Last Seen---      Lat/Long: 38°51'53" / 121°18'17"      Township: 12N  
 Occ Rank: Unknown      Element: 1996-01-30      UTM: Zone-10 N4302936 E647082      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1996-01-30      Precision: SPECIFIC      Section: 28 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 140 ft  
 Main Source: SUGNET & ASSOC. 1996 (LIT)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: NNW OF ROSEVILLE IN INGRAM SLOUGH; 0.4 KM WEST OF HWY 65 X INDUSTRIAL BLVD.  
 -----Comments-----  
 Distribution: LILCOLN CROSSING MITIGATION SITE. 1996: 42 TOTAL WATERBODIES SURVEYED.  
 Ecological: CONSTRUCTED HARDPAN VERNAL POOL WITHIN NON-NATIVE ANNUAL GRASSLAND. WETLAND COMPENSATION/MITIGATION PRESERVE.  
 Threat:  
 General: 1996: <50 ADULTS OBSERVED IN POOL #222; SURFACE AREA=574 SQ METERS, WATER DEPTH=32.0 CM, TEMPERATURE= 11.5 DEGREES C, CONDUCTIVITY=75.80, TURBIDITY WAS LOW. LINDERIELLA ALSO PRESENT IN POOL AND IN SURROUNDING AREAS.  
 Owner/Manager: PVT-STERLING PACIFIC ASSETS

Occurrence No. 145      Map Index:28339      ---Dates Last Seen---      Lat/Long: 38°37'56" / 121°28'10"      Township: 09N  
 Occ Rank: Poor      Element: 1995-01-14      UTM: Zone-10 N4276858 E633235      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-01-14      Precision: SPECIFIC      Section: 03 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 14.6 ac      Elevation: 25 ft  
 Main Source: WALKER, R. 1995 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 200 FEET NORTH OF SILVER EAGLE ROAD BRIDGE, ADJ. TO NATOMAS MAIN DRAINAGE CANAL LEVEE ROAD; 1.1 KM SOUTH OF HWY 80.  
 -----Comments-----  
 Distribution: EAST SIDE OF LEVEE ROAD, WEST SIDE OF WESTERN PACIFIC RR TRACKS IN ROW.  
 Ecological: LONG POOL (14 FEET WIDE AND 275 FEET LONG, DEPTH=0.15M) IN TIRE RUTS FROM VEHICLES; TEMP=16.5 DEGREES CELSIUS, VERY TURBID WATER; INUNDATED AREA DEVOID OF VEGETATION; SOIL IS SANDY CLAY LOAM; SITE HAS 0% SLOPE AND A FLAT ASPECT.  
 Threat: MAINTENANCE ROAD PRO WESTERN PACIFIC RR, AREA IMPACTED BY SACRAMENTO AREA FLOOD CONTROL AGENCY.  
 General: 2 SITES IN SAME POOL WERE SAMPLED: IN SOUTHERN SITE FEW (<50) ADULTS WERE OBSERVED, & A VOUCHER SPECIMEN WAS COLLECTED & DEPOSITED IN CAS. IN NORTHERN SITE MANY (>50) ADULTS WERE OBSERVED, & 3 VOUCHER SPECIMENS COLLECTED & DEPOSITED IN CAS.  
 Owner/Manager: PVT-WESTERN PACIFIC RR

Occurrence No. 146      Map Index:28338      ---Dates Last Seen---      Lat/Long: 38°40'05" / 121°28'23"      Township: 09N  
 Occ Rank: Good      Element: 1995-02-22      UTM: Zone-10 N4280841 E632837      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-02-22      Precision: SPECIFIC      Section: 05 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 20 ft  
 Main Source: WALKER, R. 1995 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: APPROX. 1500 FEET NORTHEAST OF NATOMAS EAST MAIN DRAINAGE CANAL X DRY CREEK; 700 FEET SE OF ASCOT AVE X WEST 6TH ST.  
 -----Comments-----  
 Distribution:  
 Ecological: SEASONAL POND (500 FEET LONG X 45 FEET WIDE), AVERAGE DEPTH=6 INCHES; MAX. DEPTH=20 INCHES; TEMP=21.5 DEGREES CELSIUS; TURBIDITY=98%; CONDUCTIVITY=98 MICROHOS/CM.  
 Threat: CATTLE GRAZING AND CITY PLANS FOR GOLF COURSE DEVELOPMENT (HANSEN RANCH).  
 General: <10 ADULTS OBSERVED IN POND, NO VOUCHER SPECIMENS TAKEN.  
 Owner/Manager: CITY OF SACRAMENTO

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

List Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G2G3	CDFG Status:
State: None	State: S2S3	

Occurrence No. 154      Map Index:33672      ---Dates Last Seen---      Lat/Long: 38°48'10" / 121°22'00"      Township: 11N  
 Occ Rank: Unknown      Element: 1993-01-27      UTM: Zone-10 N4295937 E641823      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1993-01-27      Precision: NON-SPECIFIC      Section: 13 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,932.4 ac      Elevation: 95 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ROSEVILLE (3812173/528D)\*, PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: NORTH OF PHILLIP ROAD IN THE VICINITY OF PLEASANT GROVE CREEK. NORTHWEST OF ROSEVILLE.  
 ---Comments---  
 Distribution: VERNAL POOLS ARE FOUND IN T11N, R05E, SECTIONS 13 & 14 AND IN T11N, R06E, SECTION 18.  
 Ecological: NATURAL VERNAL POOLS.  
 Threat:  
 General: 1/27/93: B. LYNCHI OBSERVED IN 16 OF 52 FEATURES INSPECTED IN SECTION 13, & IN 4 OF 9 FEATURES INSPECTED IN SECTION 14. 1/16/93: OBSERVED IN 3 INSPECTED FEATURES IN SECTION 18. NO LEPIDURUS PACKARDI OBSERVED. SUGNET RECORD #'S 87, 88 & 91.  
 Owner/Manager: UNKNOWN

Occurrence No. 155      Map Index:33674      ---Dates Last Seen---      Lat/Long: 38°46'25" / 121°22'01"      Township: 11N  
 Occ Rank: Unknown      Element: 1993-01-27      UTM: Zone-10 N4292707 E641871      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1993-01-27      Precision: NON-SPECIFIC      Section: 25 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 110 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ROSEVILLE (3812173/528D)\*, PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: SOUTH OF PHILLIP ROAD AND WEST OF FIDDYMENT ROAD. WNW OF ROSEVILLE.  
 ---Comments---  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTION 25.  
 Ecological: NATURAL VERNAL POOLS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 5 OF 31 FEATURES INSPECTED. NO LEPIDURUS PACKARDI OBSERVED. SUGNET RECORD NUMBER 89.  
 Owner/Manager: UNKNOWN

Occurrence No. 156      Map Index:33673      ---Dates Last Seen---      Lat/Long: 38°48'11" / 121°18'41"      Township: 11N  
 Occ Rank: Unknown      Element: 1993-02-18      UTM: Zone-10 N4296072 E646640      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-02-18      Precision: NON-SPECIFIC      Section: 16 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 100 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: WEST OF HWY 65 & NORTH OF SCOW ROAD. MNW OF ROSEVILLE.  
 ---Comments---  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTION 16.  
 Ecological: NATURAL VERNAL POOLS.  
 Threat:  
 General: B. LYNCHI WAS FOUND IN 5 OF 54 FEATURES INSPECTED. NO LEPIDURUS PACKARDI OBSERVED. SUGNET RECORD #90.  
 Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status-----	NDDB Element Ranks	-----Other Lists-----
Federal: Threatened	Global: G2G3	CDFG Status:
State: None	State: S2S3	

Occurrence No. 157      Map Index:33676      ---Dates Last Seen---      Lat/Long: 38°52'32" / 121°17'34"      Township: 12N  
 Occ Rank: Unknown      Element: 1993-01-18      UTM: Zone-10 N4304137 E648089      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-01-18      Precision: NON-SPECIFIC      Section: 22 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 150 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: LINCOLN (3812183/528A)\*, ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: SOUTH OF AUBURN RAVINE, ON BOTH SIDES OF HWY 65, SOUTH OF LINCOLN.  
 -----Comments-----  
 Distribution: VERNAL POOLS LOCATED SOMEWHERE IN SECTION 22.  
 Ecological: NATURAL VERNAL POOLS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 2 OF 5 FEATURES INSPECTED. NO LEPIDURUS PACKARDI OBSERVED. SUGNET RECORD #95.  
 Owner/Manager: UNKNOWN

Occurrence No. 158      Map Index:33675      ---Dates Last Seen---      Lat/Long: 38°54'43" / 121°20'20"      Township: 12N  
 Occ Rank: Unknown      Element: 1993-02-05      UTM: Zone-10 N4308099 E644018      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1993-02-05      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,287.1 ac      Elevation: 125 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: NORTH & EAST OF LINCOLN MUNICIPAL AIRPORT.  
 -----Comments-----  
 Distribution: 17 FEATURES INSPECTED IN SECTION 6 & 33 FEATURES INSPECTED IN SECTION 8.  
 Ecological: NATURAL SEASONAL WETLANDS & NATURAL VERNAL POOLS.  
 Threat:  
 General: B. LYNCHI OBSERVED IN 1 OF 17 INSPECTED SEASONAL WETLANDS AND 1 OF 33 INSPECTED VERNAL POOLS. NO LEPIDURUS  
 PACKARDI OBSERVED. SUGNET RECORD #'S 93 & 94.  
 Owner/Manager: UNKNOWN

Occurrence No. 167      Map Index:33694      ---Dates Last Seen---      Lat/Long: 38°40'41" / 121°28'43"      Township: 10N  
 Occ Rank: Unknown      Element: 1992-04-01      UTM: Zone-10 N4281952 E632332      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1992-04-01      Precision: NON-SPECIFIC      Section: 31 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 300.5 ac      Elevation: 30 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SOUTH OF ELKHORN BLVD, WEST OF WEST 6TH ST, EAST OF NATOMAS EAST MAIN DRAINAGE CANAL. SOUTHWEST OF RIO LINDA.  
 -----Comments-----  
 Distribution: LOCATED SOMEWHERE IN SECTION 31.  
 Ecological: MANMADE ROADSIDE DITCH.  
 Threat:  
 General: UNKNOWN NUMBER OF B. LYNCHI OBSERVED IN THE ONE FEATURE INSPECTED. SUGNET RECORD #82. NO LEPIDURUS PACKARDI  
 OBSERVED.  
 Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status----- NDDB Element Ranks -----Other Lists-----  
Federal: Threatened Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 175 Map Index: 33707 ---Dates Last Seen--- Lat/Long: 38°46'23" / 121°29'49" Township: 11N  
Occ Rank: Unknown Element: 1993-03-12 UTM: Zone-10 N4292469 E630579 Range: 04E  
Origin: Natural/Native occurrence Site: 1993-03-12 Precision: NON-SPECIFIC Section: 26 Qtr XX  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 3/5 mile Elevation: 35 ft  
Main Source: SUGNET & ASSOC. 1993 (PERS)  
Quad Summary: PLEASANT GROVE (3812174/528C)\*, VERONA (3812175/529D)  
County Summary: SUTTER  
SNA Summary:  
Location: SOUTHWEST OF THE INTERSECTION OF PLEASANT GROVE ROAD AND SANKEY ROAD.  
-----Comments-----  
Distribution: ROADSIDE DITCHES SOMEWHERE IN SECTION 26.  
Ecological: MANMADE ROADSIDE DITCHES.  
Threat:  
General: B. LYNCHI OBSERVED IN THE ONE FEATURE INSPECTED. SUGNET RECORD #86. LEPIDURUS PACKARDI ALSO OBSERVED.  
Owner/Manager: UNKNOWN

Occurrence No. 182 Map Index: 36116 ---Dates Last Seen--- Lat/Long: 38°42'41" / 121°28'36" Township: 10N  
Occ Rank: Good Element: 1997-01-22 UTM: Zone-10 N4285630 E632459 Range: 05E  
Origin: Natural/Native occurrence Site: 1997-01-22 Precision: SPECIFIC Section: 19 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 31 ft  
Main Source: LEACH, S. 1997 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: 0.25 MILE SOUTH OF ELVERTA ROAD AND 0.4 MILE EAST OF SORENTO ROAD, WEST OF ELVERTA  
-----Comments-----  
Distribution:  
Ecological: HABITAT CONSISTS OF A VERNAL POOL (12-14 INCHES DEEP); ASSOCIATED PLANT SPECIES INCLUDE CALLITRICHE MARGINATA, ELEOCHARIS MACROSTACHYA, LASTHENIA GLABRATA, LILEA SCILLOIDES, LIMNANTHES ALBA, AND OTHERS. LINDERIBELLA OCCIDENTALIS ALSO PRESENT  
Threat: POSSIBLY THREATENED BY CONTAMINATED RUNOFF FROM A CEMENT MIXING FACILITY SE OF THE SITE.  
General: 30 ADULTS OBSERVED ON 22 JAN 1997.  
Owner/Manager: WESTERN AREA POWER ADMIN

Occurrence No. 191 Map Index: 36947 ---Dates Last Seen--- Lat/Long: 38°50'40" / 121°18'49" Township: 12N  
Occ Rank: Good Element: 1997-01-17 UTM: Zone-10 N4300647 E646346 Range: 06E  
Origin: Natural/Native occurrence Site: 1997-01-17 Precision: NON-SPECIFIC Section: 33 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 115 ft  
Main Source: GIBSON, J. & T. SKORDAL 1997 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: ORCHARD CREEK AREA, 0.25 MILE NORTH OF ATHENS AVENUE (PLEASANT GROVE BLVD) AND WEST OF SPRR TRACKS, NORTH OF ROSEVILLE.  
-----Comments-----  
Distribution: SITE IS LOCATED ON A 632-ACRE MITIGATION BANK PRESERVE. THIS UNDEVELOPED PASTURELAND IS BEING ESTABLISHED AS A MITIGATION BANK.  
Ecological: HABITAT CONSISTS OF NORTHERN HARDPAN VERNAL POOLS.  
Threat:  
General: AN UNSPECIFIED NUMBER OF FAIRY SHRIMP WERE OBSERVED ON 17 JAN 1997.  
Owner/Manager: PVT-WILDLANDS INC

California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.) VERNAL POOL FAIRY SHRIMP Element Code: ICBRA03030	—List Status—	—NDDB Element Ranks—	—Other Lists—
	Federal: Threatened	Global: G2G3	CDFG Status:
	State: None	State: S2S3	

Occurrence No. 195      Map Index: 38256      —Dates Last Seen—      Lat/Long: 38°46'51" / 121°20'54"      Township: 11N  
 Occ Rank: Good      Element: 1997-01-16      UTM: Zone-10 N4293555 E643480      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-01-16      Precision: NON-SPECIFIC      Section: 30 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 1,183.4 ac      Elevation: 120 ft  
 Main Source: GIBSON, J. & T. SKORDAL 1997 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: EAST OF FIDDYMENT ROAD, WEST OF FOOTHILLS BLVD, AND NORTH OF BASELINE ROAD, NW OF ROSEVILLE.  
 —Comments—  
 Distribution:  
 Ecological: HABITAT CONSISTS OF SEASONAL WETLANDS, REFERENCE VERNAL POOLS, AND CONSTRUCTED VERNAL POOLS WITHIN A DESIGNATED WETLAND MITIGATION AREA. SURROUNDING UPLAND CONSISTS OF NON-NATIVE ANNUAL GRASSLAND/MIXED OAK WOODLAND.  
 Threat: THREATENED BY SURROUNDING DEVELOPMENT (GOLF COURSES AND RESIDENTIAL DEVELOPMENT).  
 General: VERNAL POOL FAIRY SHRIMP WERE IDENTIFIED WITHIN 71 CONSTRUCTED VERNAL POOLS AND SEASONAL WETLANDS. LINDERIELLA OCCIDENTALIS ALSO OBSERVED.  
 Owner/Manager: PVT

Occurrence No. 196      Map Index: 38629      —Dates Last Seen—      Lat/Long: 38°51'28" / 121°22'19"      Township: 12N  
 Occ Rank: Fair      Element: 1997-11-06      UTM: Zone-10 N4302055 E641263      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1997-11-06      Precision: SPECIFIC      Section: 25 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 100 ft  
 Main Source: SUGNET & ASSOC. 1997 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: MOORE RANCH PROPERTY, 0.8 MILE NORTH OF PLEASANT VALLEY ROAD, SOUTH OF AUBURN RAVINE, 7 MILES NNW OF ROSEVILLE.  
 —Comments—  
 Distribution:  
 Ecological: HABITAT CONSISTS OF A VERNAL POOL IN GRAZED ANNUAL GRASSLAND.  
 Threat:  
 General: SITE WAS HISTORICALLY (SINCE AT LEAST 1937) DISCED; HAS ONLY BEEN GRAZED OVER THE PAST SEVERAL YEARS. 6 CYSTS FOUND IN POOL #3 (PRESUMED TO BE BRANCHINECTA LYNCHI, SINCE THAT IS THE ONLY MEMBER OF THAT GENUS KNOWN TO OCCUR IN THIS AREA).  
 Owner/Manager: UNKNOWN

Occurrence No. 229      Map Index: 42058      —Dates Last Seen—      Lat/Long: 38°45'57" / 121°14'13"      Township: 11N  
 Occ Rank: Good      Element: 1998-12-22      UTM: Zone-10 N4292072 E653155      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1998-12-22      Precision: SPECIFIC      Section: 31 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 320 ft  
 Main Source: WHITNEY, K. 1998 (OBS)  
 Quad Summary: ROCKLIN (3812172/527C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: 0.2 MILE SW OF ROSEVILLE RES, 1.1 MILES S OF JCT TAYLOR RD & SUNSET BLVD, 2.2 MILES SW OF SIERRA COLLEGE, ROSEVILLE.  
 —Comments—  
 Distribution: OLYMPUS OAKS PROJECT SITE, AKT DEVELOPMENT.  
 Ecological: VERNAL POOL COMMUNITY  
 Threat: DEVELOPMENT  
 General: 100'S OBSERVED IN 1998  
 Owner/Manager: PVT-AKT DEVELOPMENT

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 230 Map Index:42059 ---Dates Last Seen--- Lat/Long: 38°45'45" / 121°14'45" Township: 11N  
Occ Rank: Good Element: 1998-12-22 UTM: Zone-10 N4291702 E652407 Range: 07E  
Origin: Natural/Native occurrence Site: 1998-12-22 Precision: SPECIFIC Section: 31 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 260 ft  
Main Source: WHITNEY, K. 1998 (OBS)  
Quad Summary: ROCKLIN (3812172/527C)  
County Summary: PLACER  
SNA Summary:  
Location: 0.8 MILE SW OF ROSEVILLE RES, 1.3 MILES S OF JCT TAYLOR RD & SUNSET BLVD, 2.6 MILES SW OF SIERRA COLLEGE, ROSEVILLE.

-----Comments-----  
Distribution: OLYMPUS OAKS PROJECT SITE, AKT DEVELOPMENT.  
Ecological: VERNAL POOL COMMUNITY  
Threat: DEVELOPMENT  
General: 100'S OBSERVED IN 1998  
Owner/Manager: PVT-AKT DEVELOPMENT

Occurrence No. 235 Map Index:42745 ---Dates Last Seen--- Lat/Long: 38°50'45" / 121°18'28" Township: 12N  
Occ Rank: Unknown Element: 1997-01-17 UTM: Zone-10 N4300827 E646845 Range: 06E  
Origin: Natural/Native occurrence Site: 1997-01-17 Precision: SPECIFIC Section: 33 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 120 ft  
Main Source: GIBSON & SKORDAL 1997 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: 0.5 MILE N OF PLEASANT GROVE RD & SP RR, 1.7 MILES ESE OF ORCHARD CREEK & INGRAM SLOUGH CONFLUENCE, NNW OF ROSEVILLE.

-----Comments-----  
Distribution: FOUND IN THE SOUTHEAST PORTION OF THE ORCHARD CREEK MIDIGATION BANK. MAJORITY OF VERNAL POOLS ARE ON SAN JOAQUIN SANDY LOAM AND ALAMO-FIDDYMENT COMPLEX SOILS.  
Ecological: VERNAL POOLS ENDEMIC VEGETATION: RANUNCULUS ALVEOLATUS, ERYNGIUM VASEYI, PLAGIOBOTHRYUS STIPITAUS, PSILICARPHUS ZIZYPHOROIDES, DESCHAMPSIA DAMTHONIOIDES, NAVARRETTIA LEUCOCEPHALA  
Threat:  
General: OBSERVED SHRIMP IN 2 OF THE 170 SURVEY POOLS SAMPLED. THIS POOL WAS RATED AS LOW IN ABUNDANCE (LESS THAN ONE INDIVIDUAL PER PULL).  
Owner/Manager: UNKNOWN

Occurrence No. 236 Map Index:42746 ---Dates Last Seen--- Lat/Long: 38°50'25" / 121°19'08" Township: 12N  
Occ Rank: Unknown Element: 1997-01-17 UTM: Zone-10 N4300216 E645892 Range: 06E  
Origin: Natural/Native occurrence Site: 1997-01-17 Precision: SPECIFIC Section: 33 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 115 ft  
Main Source: GIBSON & SKORDAL 1997 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: 0.7 MILE W OF PLEASANT GROVE RD & SP RR, 1.3 MILES SE OF ORCHARD CREEK & INGRAM SLOUGH CONFLUENCE, NNW OF ROSEVILLE.

-----Comments-----  
Distribution: FOUND IN THE SOUTHWEST PORTION OF THE ORCHARD CREEK MIDIGATION BANK. MAJORITY OF VERNAL POOLS ARE ON SAN JOAQUIN SANDY LOAM AND ALAMO-FIDDYMENT COMPLEX SOILS.  
Ecological: VERNAL POOLS ENDEMIC VEGETATION: RANUNCULUS ALVEOLATUS, ERYNGIUM VASEYI, PLAGIOBOTHRYUS STIPITAUS, PSILICARPHUS ZIZYPHOROIDES, DESCHAMPSIA DAMTHONIOIDES, NAVARRETTIA LEUCOCEPHALA  
Threat:  
General: OBSERVED SHRIMP IN 2 OF THE 170 SURVEY POOLS SAMPLED. THIS POOL WAS RATED MEDIUM IN ABUNDANCE (1 TO 5 INDIVIDUALS PER PULL).  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

BRANCHINECTA LYNCHI (cont.)  
VERNAL POOL FAIRY SHRIMP  
Element Code: ICBRA03030

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 247 Map Index:43395 ---Dates Last Seen--- Lat/Long: 38°49'41" / 121°17'46" Township: 11N  
Occ Rank: Unknown Element: 2000-02-11 UTM: Zone-10 N4298893 E647906 Range: 06E  
Origin: Natural/Native occurrence Site: 2000-02-11 Precision: NON-SPECIFIC Section: 03 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 1/5 mile Elevation: 150 ft  
Main Source: KWAN, K. & S. CAPELL 2000 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: STANFORD RANCH NORTH, 0.75 MILES NNE JCT OF SUNSET BLVD & HWY 65, 1.8 MILES WSW OF TELEGRAPH HILL, ~4 MILES N  
OF ROCKLIN

-----Comments-----  
Distribution: VERNAL POOL AT THIS SITE NUMBERED VP42, MAX SURFACE AREA ~10 METERS BY 13 METERS & 35 CM DEEP. MAPPED TO THE  
LAT/LONG GIVEN (38 49'42"/121 17'46") AND NOT THE PROJECT SITE (UNCERTAIN HOW LAT/LONG WERE ESTABLISHED SO  
MAPPED AS A 1/5 MILE)  
Ecological: FALLOW FIELD THAT IS DISTURBED (NOT MENTIONED BY WHAT) YET UNGRAZED.  
Threat: DISTURBED FIELD (SOURCE OF DISTURBANCE NOT GIVEN)  
General: OBSERVED IN (AN ORDER OF MAGNITUDE) 10'S IN VERNAL POOL #VP42.  
Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

<b>LINDERIELLA OCCIDENTALIS</b> CALIFORNIA LINDERIELLA Element Code: ICBRA06010	-----List Status-----	NDDB Element Ranks-----	-----Other Lists-----
	Federal: None	Global: G2G3	CDPG Status:
	State: None	State: S2S3	

-----Habitat Associations-----  
 General: SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.  
 Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 22      Map Index:24520      ---Dates Last Seen---      Lat/Long: 38°53'13" / 121°15'16"      Township: 12N  
 Occ Rank: Good      Element: 1992-03-28      UTM: Zone-10 N4305469 E651404      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1992-03-28      Precision: SPECIFIC      Section: 13 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 2.4 ac      Elevation: 235 ft  
 Main Source: HUBER, A. 1992 (OBS)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: NORTH SIDE OF HWY 193, 2 MILES EAST OF LINCOLN.  
 -----Comments-----  
 Distribution:  
 Ecological: HABITAT CONSISTS OF 4 VERNAL POOLS SURROUNDED BY BLUE OAK WOODLAND. 3 POOLS ARE CONNECTED DURING PERIODS OF HIGH WATER AND ARE DOMINATED BY ISOETES HOWELLI. THE FOURTH POOL WAS DOMINATED BY LILAEA SCILLOIDES AND RUMEX CRISPUS.  
 Threat: POSSIBLE THREAT TO ONE POOL FROM ROAD IMPROVEMENTS PLANNED FOR HWY 193.  
 General: MANY LINDERIELLA WERE OBSERVED; APPROXIMATELY 30 WERE COLLECTED.  
 Owner/Manager: CALTRANS

Occurrence No. 51      Map Index:32503      ---Dates Last Seen---      Lat/Long: 38°52'24" / 121°23'12"      Township: 12N  
 Occ Rank: Good      Element: 1995-02-09      UTM: Zone-10 N4303763 E639946      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-03-15      Precision: SPECIFIC      Section: 23 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 15.2 ac      Elevation: 93 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: USAF LINCOLN COMMUNICATIONS FACILITY; 1.1 KM WNW MOORE ROAD X DOWD AVENUE.  
 -----Comments-----  
 Distribution: THE SITE ENCOMPASSES ABOUT 231 ACRES & HAS ABOUT 236 VERNAL POOLS. 36 POOLS WERE SAMPLED DURING 1995. 15 IN 1994 & 2 IN 1993. SOME POOLS THAT HAD LINDERIELLA ONE YEAR DIDN'T HAVE THEM THE FOLLOWING YEAR.  
 Ecological: ANNUAL GRASSLAND & OAK SAVANNAH W/VERNAL POOLS INTERSPERSED. POOL #214 HAD GRASS BOTTOM, ABOUT 30 FT X 15 FT & 10 INCHES DEEP. POOL #215 HAD ALGAE & GRASS BOTTOM, ABOUT 180 FT X 20 FT & 10 INCHES DEEP. POOL 141 HAD ALGAE & MUD BOTTOM.  
 Threat: DISKING OF POOLS; POSSIBLE HERBICIDE RUNOFF FROM ANTENNA PADS; AGRICULTURE-CATTLE & SHEEP GRAZING, RICE FARMING NEARBY.  
 General: VERNAL POOLS #141, #214, & #215: FAIRY SHRIMP FOUND ON 2/9/95 BUT NOT ON 3/1 OR 3/15/95. COPEPODS, OSTRACODS, FLATWORMS, INSECT LARVAE, BEETLES, CLAM SHRIMP & TADPOLES ALSO FOUND.  
 Owner/Manager: DOD-LINCOLN COMMUNICATIONS FAC

Occurrence No. 52      Map Index:32504      ---Dates Last Seen---      Lat/Long: 38°52'16" / 121°23'26"      Township: 12N  
 Occ Rank: Unknown      Element: 1995-03-15      UTM: Zone-10 N4303505 E639631      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-03-15      Precision: SPECIFIC      Section: 23 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 92 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: USAF LINCOLN COMMUNICATIONS FACILITY; 1.3 KM WNW OF MOORE ROAD X DOWD AVENUE.  
 -----Comments-----  
 Distribution: THE SITE ENCOMPASSES ABOUT 231 ACRES WITH 236 VERNAL POOLS. 36 POOLS WERE SAMPLED IN 1995, 15 WERE SAMPLED IN 1994 & 2 IN 1993. POOL #205 HAD LINDERIELLA IN BOTH 1994 & 1995.  
 Ecological: VERNAL POOLS INTERSPERSED AMONG ANNUAL GRASSLANDS AND OAK WOODLAND/SAVANNAH HABITAT.  
 Threat: SOME CATTLE GRAZING, RICE FARMING NEARBY.  
 General: POOL #205: ALGAE BOTTOM. POOL ESTIMATED TO BE 200 FT LONG, 50 FT WIDE & 8 INCHES DEEP. SPECIES OBSERVED ON 2/9, 3/1 & 3/15/95. BEETLES, OSTRACODS, FLATWORMS, INSECT LARVAE & SNAILS ALSO FOUND HERE.  
 Owner/Manager: DOD-LINCOLN COMMUNICATIONS FAC



California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)		List Status		NDDB Element Ranks		Other Lists	
CALIFORNIA LINDERIELLA		Federal: None		Global: G2G3		CDFG Status:	
Element Code: ICBRA06010		State: None		State: S2S3			

Occurrence No. 53      Map Index: 32505      ---Dates Last Seen---      Lat/Long: 38°52'09" / 121°23'17"      Township: 12N  
 Occ Rank: Unknown      Element: 1995-02-09      UTM: Zone-10 N4303282 E639850      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-03-15      Precision: SPECIFIC      Section: 23 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 91 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: USAF LINCOLN COMMUNICATIONS FACILITY; 1.1 KM W OF MOORE ROAD X DOWD AVENUE.  
 Comments:  
 Distribution:  
 Ecological: NATURAL VERNAL POOLS INTERSPERSED AMONG ANNUAL GRASSLANDS AND OAK WOODLAND/SAVANNAH HABITAT.  
 Threat: CATTLE GRAZING; RICE FARMING.  
 General: POOLS #95A, 95B: GRASS BOTTOM TYPE POOL, SPECIES OBSERVED ON 2/9/1995, NO STANDING WATER PRESENT ON 3/1/1995.  
 Owner/Manager: DOD-LINCOLN COMMUNICATIONS FAC

Occurrence No. 55      Map Index: 32506      ---Dates Last Seen---      Lat/Long: 38°52'14" / 121°24'06"      Township: 12N  
 Occ Rank: Unknown      Element: 1995-02-09      UTM: Zone-10 N4303404 E638673      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-03-15      Precision: SPECIFIC      Section: 22 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 86 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: USAF LINCOLN COMMUNICATIONS FACILITY; ABOUT 0.4 KM NE OF MOORE ROAD INTERSECTION WITH WESTERN SITE BOUNDARY.  
 Comments:  
 Distribution: THE LINCOLN COMMUNICATIONS FACILITY ENCOMPASSES ABOUT 231 ACRES WITH ABOUT 236 VERNAL POOLS. 36 POOLS WERE  
 SAMPLED DURING 1995. LINDERIELLA WAS FOUND IN ONLY 6 POOLS.  
 Ecological: A NATURAL VERNAL POOL INTERSPERSED AMONG ANNUAL GRASSLAND AND OAK WOODLAND/SAVANNAH HABITAT. SURROUNDING AREAS  
 HAVE GRAZING & RICE FARMING.  
 Threat: SOME GRAZING.  
 General: POOL #59: MUD BOTTOM POOL. ESTIMATED LENGTH WAS 40 FEET, WIDTH WAS 20 FEET, DEPTH WAS 24 INCHES. SPECIES  
 OBSERVED ON 2/9/1995, BUT NOT 3/1 OR 3/15/95. COPEPODS, OSTRACODS AND PLATWORMS ALSO PRESENT.  
 Owner/Manager: DOD-LINCOLN COMMUNICATIONS FAC

Occurrence No. 57      Map Index: 32510      ---Dates Last Seen---      Lat/Long: 38°40'00" / 121°24'57"      Township: 09N  
 Occ Rank: Excellent      Element: 1995-02-10      UTM: Zone-10 N4280763 E637829      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-03-15      Precision: SPECIFIC      Section: 24 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 50 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: MC CLELLAN AFB; 0.4 KM SE ASCOT ROAD X 20TH STREET.  
 Comments:  
 Distribution:  
 Ecological: VERNAL POOL WITH ALGAE AND GRASS BOTTOM. ESTIMATED TO BE 25 FEET LONG AND 15 FEET WIDE WITH A MAXIMUM DEPTH OF  
 10 INCHES. SURROUNDING AREA IS ANNUAL GRASSLAND. OSTRACODS AND COPEPODS ALSO FOUND IN THE POOLS.  
 Threat: EXPANSION OF BASE FACILITIES; MODIFICATION OF WATERSHED; AIRCRAFT REPAIR; LIGHT INDUSTRIAL; RESIDENTIAL;  
 COMMERCIAL.  
 General: POOL #M95B (AKA MCC95B): LINDERIELLA OCCIDENTALIS PRESENT ON 2/10/95; B. LYNCHI ALSO PRESENT; NO STANDING  
 WATER OBSERVED ON 3/2/1995. POOL REFILLED BUT NO LINDERIELLA FOUND ON 3/16/95.  
 Owner/Manager: DOD-MCCLELLAN AFB

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)

CALIFORNIA LINDERIELLA  
Element Code: ICBRA06010

-----List Status----- NDDDB Element Ranks----- Other Lists-----  
Federal: None Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 58 Map Index:32509 ---Dates Last Seen--- Lat/Long: 38°40'04" / 121°24'56" Township: 09N  
Occ Rank: Unknown Element: 1995-03-16 UTM: Zone-10 N4280897 E637840 Range: 05E  
Origin: Natural/Native occurrence Site: 1995-03-16 Precision: SPECIFIC Section: 03 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 55 ft  
Main Source: LACY, T. 1995 (LIT)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: MCCLELLAN AFB; 0.3 KM ESE OF JUNCTION OF ASCOT ROAD AND 20TH STREET.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL WITH MUD BOTTOM. ESTIMATED TO BE 75 FEET LONG AND 45 FEET WIDE WITH A MAXIMUM DEPTH OF 2 INCHES. SURROUNDING AREA IS ANNUAL GRASSLAND. OSTRACODS AND UNIDENTIFIED INSECT LARVAE WERE ALSO PRESENT.  
Threat: DEVELOPMENT; MILITARY USES; COMMERCIAL; RESIDENTIAL; LIGHT INDUSTRIAL.  
General: POOL #111-LINDERIELLA OCCIDENTALIS OBSERVED ON 2/10 & 3/16/1995. NONE OBSERVED ON 3/2/95.  
Owner/Manager: DOD-MCCLELLAN AFB

Occurrence No. 59 Map Index:32511 ---Dates Last Seen--- Lat/Long: 38°39'55" / 121°25'21" Township: 09N  
Occ Rank: Unknown Element: 1995-02-10 UTM: Zone-10 N4280622 E637234 Range: 05E  
Origin: Natural/Native occurrence Site: 1995-03-16 Precision: SPECIFIC Section: 03 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 50 ft  
Main Source: LACY, T. 1995 (LIT)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: MC CLELLAN AFB; CREEKS AREA; 0.5 KM SW OF ASCOT ROAD X 20TH STREET.  
-----Comments-----  
Distribution:  
Ecological: 2 POOLS W/ALGAE & GRASS BOTTOMS WITHIN ANNUAL GRASSLAND. POOL M076 IS ABOUT 200 FT X 60 FT W/ 10 IN MAX DEPTH. POOL M052 IS ABOUT 50 FT X 30 FT W/ 8 IN MAX DEPTH. OSTRACODS, COPEPODS, INSECT LARVAE, MOSQUITO LARVAE & FLATWORMS ALSO FOUND.  
Threat: DEVELOPMENT; MILITARY USES; COMMERCIAL AND LIGHT INDUSTRIAL; RESIDENTIAL.  
General: LINDERIELLA OBSERVED IN BOTH POOLS ON 2/10/95. NONE FOUND IN EITHER POOL ON 3/2 OR 3/16/95. HYLEA TADPOLES OBSERVED ON 3/2/1995 IN POOL M076.  
Owner/Manager: DOD-MCCLELLAN AFB

Occurrence No. 60 Map Index:32512 ---Dates Last Seen--- Lat/Long: 38°39'50" / 121°24'58" Township: 09N  
Occ Rank: Unknown Element: 1995-02-10 UTM: Zone-10 N4280465 E637816 Range: 05E  
Origin: Natural/Native occurrence Site: 1995-03-16 Precision: SPECIFIC Section: 24 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 55 ft  
Main Source: LACY, T. 1995 (LIT)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: MC CLELLAN AFB; CREEKS AREA; 0.6 KM SSE OF ASCOT ROAD X 20TH STREET.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL WITH GRASS BOTTOM IN ANNUAL GRASSLAND. POOL ESTIMATED TO BE 300 FEET LONG & 150 FEET WIDE WITH A MAXIMUM DEPTH OF 24 INCHES. COPEPODS, OSTRACODS, FLATWORMS AND UNIDENTIFIED INSECT LARVAE ALSO FOUND.  
Threat: DEVELOPMENT; MILITARY USES; COMMERCIAL AND LIGHT INDUSTRIAL; RESIDENTIAL.  
General: POOL M131: LINDERIELLA OBSERVED ON 2/10/1995 BUT NOT ON 3/2 OR 3/16/95. TADPOLES PRESENT ON 3/16/1995.  
Owner/Manager: DOD-MCCLELLAN AFB

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)		List Status		NDDB Element Ranks		Other Lists	
CALIFORNIA LINDERIELLA		Federal: None		Global: G2G3		CDFG Status:	
Element Code: ICBRA06010		State: None		State: S2S3			

Occurrence No. 61      Map Index:32508      ---Dates Last Seen---      Lat/Long: 38°39'56" / 121°25'05"      Township: 09N  
 Occ Rank: Unknown      Element: 1995-03-16      UTM: Zone-10 N4280631 E637629      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-03-16      Precision: NON-SPECIFIC      Section: 24 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 4.9 ac      Elevation: 50 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: MC CLELLAN AFB; CREEKS AREA; 0.5 KM S OF ASCOT ROAD X 20TH STREET.  
 Comments:  
 Distribution:  
 Ecological: 2 VERNAL POOLS WITH ALGAE & GRASS BOTTOMS IN ANNUAL GRASSLAND. POOLS ARE 200 X 30 FT & 400 X 50 FT. WITH MAX DEPTHS OF 14 & 40 INCHES. OSTRACODS, COPEPODS, CLAM SHRIMP, & UNIDENTIFIED INSECT LARVAE ALSO FOUND IN THE POOLS.  
 Threat: DEVELOPMENT; MILITARY USES; COMMERCIAL AND LIGHT INDUSTRIAL; RESIDENTIAL.  
 General: POOL M073: L. OCCIDENTALIS OBSERVED ON 2/9 & 3/16/95 BUT NOT 3/2/95, HYLEA TADPOLES OBSERVED ON ALL 3 SURVEYS DATES. POOL M95A (AKA MCC95A): LINDERIELLA OBSERVED ON ALL 3 SURVEY DATES, HYLEA TADPOLES OBSERVED ON 3/2/1995.  
 Owner/Manager: DOD-MCCLELLAN AFB

Occurrence No. 62      Map Index:32513      ---Dates Last Seen---      Lat/Long: 38°39'34" / 121°25'16"      Township: 09N  
 Occ Rank: Unknown      Element: 1995-03-16      UTM: Zone-10 N4279946 E637390      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1995-03-16      Precision: NON-SPECIFIC      Section: 19 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 4.0 ac      Elevation: 50 ft  
 Main Source: LACY, T. 1995 (LIT)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: MC CLELLAN AFB; CREEKS AREA; 0.8 KM NE OF MAIN AVENUE AND RALEY BLVD.  
 Comments:  
 Distribution:  
 Ecological: 3 VERNAL POOLS WITH ALGAE OR GRASS BOTTOMS IN ANNUAL GRASSLAND. POOL SIZES: 25 FT X 10 FT, 50 X 15 FT & 150 X 50 FT WITH MAX DEPTHS OF 4, 6 & 12 INCHES. OSTRACODS, COPEPODS, FLATWORMS, BEETLES, & INSECT LARVAE ALSO FOUND IN POOLS.  
 Threat: DEVELOPMENT; MILITARY USES; COMMERCIAL AND LIGHT INDUSTRIAL; RESIDENTIAL.  
 General: POOL M028: LINDERIELLA OBSERVED ON 2/10 & 3/2/95, BUT NOT ON 3/16. TOAD TADPOLES OBSERVED ON 3/2; POOL M148: LINDERIELLA OBSERVED ON 2/10, 3/2, & 3/16/95. POOL M157: LINDERIELLA OBSERVED 2/10 BUT NOT 3/2 OR 3/16/95.  
 Owner/Manager: DOD-MCCLELLAN AFB

Occurrence No. 63      Map Index:32517      ---Dates Last Seen---      Lat/Long: 38°39'18" / 121°12'59"      Township: 09N  
 Occ Rank: Unknown      Element: 1996-03-20      UTM: Zone-10 N4279784 E655196      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1996-06-10      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 17.2 ac      Elevation: 270 ft  
 Main Source: GIBSON, J. & T. SKORDAL 1996 (LIT)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: PHOENIX FIELD UNIT 4. 1.3 KM ENE OF SUNSET AVENUE X HAZEL AVENUE.  
 Comments:  
 Distribution: 1995-2 SEASONAL WETLANDS AND 1 VERNAL POOL WERE SURVEYED. LINDERIELLA OBSERVED IN 1 SEASONAL WETLAND AND 1 VERNAL POOL. 1996-SAME WETLANDS AND POOL SURVEYED AS 1995; LINDERIELLA OBSERVED ONLY IN VP-1.  
 Ecological: VERNAL POOL AND SEASONAL WETLAND HABITAT IN ANNUAL GRASSLAND. THE SURVEY AREA IS SITUATED ON A PORTION OF THE OLD PHOENIX FIELD AIRPORT AND A MAJORITY OF THE SURVEY AREA IS COVERED BY THE REMAINS OF THE ABANDONED TARMAC.  
 Threat: RESIDENTIAL DEVELOPMENT IS UNDERWAY; SILT SCREENS, FENCES AND/OR RETAINING WALLS INSTALLED FOR HABITAT PROTECTION.  
 General: 1995: POOL #SW-1: L. OCCIDENTALIS OBSERVED ON 1/27; POOL #VP-1: L. OCCIDENTALIS OBSERVED ON 1/13, 1/27, AND 2/9. 1996: POOL #VP1-L. OCCIDENTALIS OBSERVED ON 1/9, 1/24, 2/7, 2/21, 3/6 & 3/20; MAX DEPTH OF POOL #VP1 WAS 18 INCHES.  
 Owner/Manager: CITY OF FAIR OAKS

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)

CALIFORNIA LINDERIELLA  
Element Code: ICBRA06010

—List Status—	—NDDB Element Ranks—	—Other Lists—
Federal: None	Global: G2G3	CDFG Status:
State: None	State: S2S3	

Occurrence No. 64      Map Index:32518      —Dates Last Seen—      Lat/Long: 38°41'21" / 121°17'46"      Township: 10N  
 Occ Rank: Unknown      Element: 1996-03-06      UTM: Zone-10 N4283457 E648193      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1996-05-27      Precision: SPECIFIC      Section: 26 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 125 ft  
 Main Source: GIBSON, J. & T. SKORDAL 1996 (LIT)  
 Quad Summary: CITRUS HEIGHTS (3812163/512A)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: STOCK RANCH; 0.8 KM SW OF AUBURN ROAD X SYLVAN ROAD.  
 —Comments—  
 Distribution: 1995-18 SEASONAL WETLAND/VERNAL POOL HABITATS SURVEYED; POOLS RANGED IN SIZE FROM 65 TO 9,920 SQ. FT; LINDERIELLA WAS FOUND IN SW-4. 1996-9 SEASONAL WETLAND/VERNAL POOL HABITAT SURVEYED; LINDERIELLA ONLY OBSERVED IN SW-4.  
 Ecological: SEASONAL WETLAND/VERNAL POOL HABITAT IN NON-NATIVE GRASSLAND, ORCHARDS, OAK WOODLAND AND PORTIONS OF SAN JUAN & ARCADE CREEKS W/ ASSOCIATED DRAINAGES; PLANT SPECIES: AVENA SP., BROMUS RIGIDUS, B. MOLLIS, PERENNIAL RYE, ERODIUM & VICIA SPP.  
 Threat: PREDATION BY HYLEA TADPOLES; COMPETITION PRESSURE FROM AQUATIC INSECTS; HEAVY VEHICLE USE ON SITE.  
 General: POOL #SW-4: LINDERIELLA OBSERVED IN 1995 (1/13, 1/27 & 2/9) AND 1996 (2/7, 2/21 & 3/6); SEVERAL GENERATIONS OF SHRIMP OBSERVED, WITH LACK OF ADULTS IN LAST GENERATION, POSSIBLY DUE TO PREDATION FROM HYLEA TADPOLES.  
 Owner/Manager: PVT-STOCK RANCH

Occurrence No. 68      Map Index:32324      —Dates Last Seen—      Lat/Long: 38°39'05" / 121°13'07"      Township: 09N  
 Occ Rank: Good      Element: 1994-03-27      UTM: Zone-10 N4279384 E655025      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1994-03-27      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 47.4 ac      Elevation: 260 ft  
 Main Source: WYMER, N. 1994 (OBS)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: PHOENIX PARK; PHOENIX FIELD VERNAL POOLS; 0.5 KM ESE OF SUNSET AVENUE X HAZEL AVENUE.  
 —Comments—  
 Distribution: VP1, VP11, VP12, VP12(A & B); ACCIDENTAL HERBICIDE SPRAYING IN VP1 ON 2/24/1992.  
 Ecological: PHOENIX FIELD VERNAL POOLS; PROTECTED AREA WITH PUBLIC ACCESS; ORCUTTIA VISCIDA PRESENT IN VP1, VP11, VP12, VP12A & VP12B, AND IN FULL FLOWER ON 4/20/1994, NOT USUAL FLOWER TIME AT END OF MAY.  
 Threat: ACCIDENTAL HERBICIDE SPRAYING (DIURON-KARMEX, SIMAZINE-PRINCEP, GLYPHOSATE-ROUNDUP); BICYCLE RIDERS; FOOT TRAFFIC.  
 General: 4/13/1979-ENG & BRODE COLLECT, ENG CAT#391. 1993-3/31-2 MALES, 5 FEMALES OBS; 4/1-2 MALES, 8 FEMALES OBS; 4/6-2 FEMALES OBS; 3/27/94-MANY ADULTS OBS CLASPING-PROTECT FROM PREDATION BY DAMSELFLY & DIVING BEETLE; ALL FEMALES W/ BROOD PATCH.  
 Owner/Manager: CITY OF FAIR OAKS

Occurrence No. 72      Map Index:26042      —Dates Last Seen—      Lat/Long: 38°41'59" / 121°29'12"      Township: 10N  
 Occ Rank: Fair      Element: 1993-02-12      UTM: Zone-10 N4284334 E631594      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1993-02-12      Precision: SPECIFIC      Section: 25 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 30 ft  
 Main Source: LEACH, S. 1993 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 600 FEET WEST OF EAST LEVEE ROAD; IMMEDIATELY SOUTH OF 2 TRANSMISSION-LINE TOWERS; 1.0 MI N OF ELKHORN BLVD.  
 —Comments—  
 Distribution:  
 Ecological: NORTHERN HARDPAN VERNAL POOL; DOMINANT PLANTS: PLAGIOBOTHRYS STIPITATUS VAR. MIRCANTHUS; P. GRENEI; PSILOCARPHUS OREGANUS; P. BREVISSIMUS; GRATIOLA EBRACTEATA; LYTHRUM HYSSOPIFOLIA; POLYGONUM AVICULARE AND DOWNINGIA PUSILLA.  
 Threat: ADJACENT LANDOWNERS WANT LEVEL LAND FOR AGRICULTURE AND SELL SURFACE MATERIAL FOR SACRAMENTO METRO AIRPORT DEVELOPMENT.  
 General: >500 ADULTS OBSERVED, 1 COLLECTED FOR PERSONAL COLLECTION.  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)		-----List Status-----		-----NDDB Element Ranks-----		-----Other Lists-----	
CALIFORNIA LINDERIELLA.		Federal: None		Global: G2G3		CDFG Status:	
Element Code: ICBRA06010		State: None		State: S2S3			

Occurrence No. 73      Map Index:26043      ---Dates Last Seen---      Lat/Long: 38°42'22" / 121°29'07"      Township: 10N  
 Occ Rank: Fair      Element: 1993-02-12      UTM: Zone-10 N4285042 E631699      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1993-02-12      Precision: SPECIFIC      Section: 24 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 28 ft  
 Main Source: LEACH, S. 1993 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ON SOUTH SIDE OF GRAVEL ROAD; 220 FT W OF EAST LEVEE ROAD; 0.6 MI S OF ELVERTA ROAD X EAST LEVEE ROAD.  
 ---Comments---  
 Distribution:  
 Ecological: NORTHERN HARDPAN VERNAL POOL ON SAN JOAQUIN SERIES SOIL; DOMINANT PLANTS: PLAGIOBOTHRYIS, ERYNGIUM, GRATIOLA, LASTERIA, RANUNCULUS, AND LIMNANTHUS. WATER WAS 6-10 INCHES DEEP IN FEBRUARY 1993. SITE CONTAINED WATER UNTIL LATE APRIL 1993.  
 Threat: FARMING ON SITE; POSSIBILITY THAT OWNER WILL GRADE SITE TO FACILITATE IRRIGATION FOR GROWING MORE INTENSIVE CROPS (HAY).  
 General: >500 ADULTS AND JUVENILES OBSERVED; 1 ADULT COLLECTED FOR PERSONAL COLLECTION; THIS POOL HAD MOST DIVERSE COMPOSITION OF ALL POOLS SURVEYED ALONG EAST LEVEE ROAD; RARE PLANT-DOWNING PUSILLA OBSERVED.  
 Owner/Manager: PVT

Occurrence No. 74      Map Index:32524      ---Dates Last Seen---      Lat/Long: 38°41'06" / 121°29'12"      Township: 10N  
 Occ Rank: Fair      Element: 1993-02-12      UTM: Zone-10 N4282686 E631622      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1993-02-12      Precision: SPECIFIC      Section: 36 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 20 ft  
 Main Source: LEACH, S. 1993 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 700 FEET WEST OF EAST LEVEE ROAD X ELKHORN BLVD, ON SOUTH SIDE OF ELKHORN BLVD.  
 ---Comments---  
 Distribution:  
 Ecological: HEAVILY GRAZED NORTHERN HARDPAN VERNAL POOL; SOIL IS MAPPED AS SAN JOAQUIN SERIES WITH HARDPAN UNDERNEATH; HYDROLOGY IS CONTROLLED BY ~10 ACRE DRAINAGE AREA; PLANTS: RANUNCULUS, PHYLA, LIAEA, AND PLAGIOBOTHRYIS.  
 Threat: GRAZING; POTENTIAL WIDENING OF ELKHORN BLVD OR REMOVAL OF SOIL FOR FILL OR AGRICULTURAL DEVELOPMENT.  
 General: >200 ADULTS OBSERVED; 1 COLLECTED FOR PERSONAL COLLECTION.  
 Owner/Manager: PVT

Occurrence No. 75      Map Index:32525      ---Dates Last Seen---      Lat/Long: 38°40'46" / 121°29'05"      Township: 10N  
 Occ Rank: Fair      Element: 1993-02-12      UTM: Zone-10 N4282073 E631806      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1993-02-12      Precision: SPECIFIC      Section: 36 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 35 ft  
 Main Source: LEACH, S. 1993 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: TOE OF FILL ON WEST SIDE OF EAST LEVEE ROAD; 0.7 KM S OF ELKHORN BLVD.  
 ---Comments---  
 Distribution:  
 Ecological: SEASONALLY INNUNDATED DEPRESSION NEXT TO FLOOD CONTROL LEVEE; DOMINATED BY FACULTATIVE UPLAND GRASSES AND HERBS; SOIL MAPPED AS SAN JOAQUIN SERIES UNDERLAIN BY CARBONATE-CEMENTED HARDPAN; HYDROLOGY MAY BE DUE TO FILL FOR EAST LEVEE.  
 Threat: ILLEGAL DUMPING; FUTURE EXPANSION OF EAST LEVEE.  
 General: >500 ADULTS AND JUVENILES OBSERVED; 1 ADULT COLLECTED FOR PERSONAL COLLECTION; AGE STRUCTURE 90% ADULTS AND 10% JUVENILES.  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.) CALIFORNIA LINDERIELLA		List Status		NDDB Element Ranks		Other Lists	
Element Code: ICBRA06010		Federal: None State: None		Global: G2G3 State: S2S3		CDFG Status:	
Occurrence No. 84	Map Index:32539	---Dates Last Seen---	Lat/Long: 38°53'13" / 121°15'37"	UTM: Zone-10 N4305465 E650886	Township: 12N	Range: 06E	
Occ Rank: Unknown		Element: 1995-04-14		Precision: SPECIFIC	Section: 13 Qtr SW	Meridian: M	
Origin: Natural/Native occurrence		Site: 1995-04-14		Symbol Type: POINT	Elevation: 220 ft	Radius: 80 meters	
Presence: Presumed Extant							
Trend: Unknown							
Main Source: COLLISON, C. 1995 (LIT)							
Quad Summary: LINCOLN (3812183/528A)							
County Summary: PLACER							
SNA Summary:							
Location: EAST OF LINCOLN. POOL ON NORTH SIDE OF HWY 193; 2.1 KM W OF SIERRA COLLEGE BLVD.							
Comments:							
Distribution:							
Ecological: VEGETATED POOL WITHIN OAK WOODLAND SETTING; VEGETATION IS LIMITED TO EDGE OF POOL; DOMINANT PLANTS: CALLITRICHE SP., RUMEX CRISPUS; DENSE GRASS AROUND MARGINS; BOTTOM COVERED WITH LEAF LITTER. COPEPODS, OSTRACODS, CLADOCERANS & INSECTS OBS.							
Threat:							
General: POOL #3A: >100 PER NET SWEEP ON 2/9, 2/24 & 3/15/95. 51-100 PER NET SWEEP ON 3/31 & 4/14/95. VERY SMALL (NEEDED NET TO SEE) INDIVIDUALS OBSERVED 3/15 - POSSIBLE NEW HATCH. MANY TADPOLES OF 2 SPECIES PRESENT.							
Owner/Manager: CALTRANS							
Occurrence No. 90	Map Index:32457	---Dates Last Seen---	Lat/Long: 38°46'11" / 121°19'21"	UTM: Zone-10 N4292338 E645737	Township: 11N	Range: 06E	
Occ Rank: Unknown		Element: 1995-02-09		Precision: NON-SPECIFIC	Section: 29 Qtr SE	Meridian: M	
Origin: Natural/Native occurrence		Site: 1995-02-09		Symbol Type: POINT	Elevation: 130 ft	Radius: 1/5 mile	
Presence: Presumed Extant							
Trend: Unknown							
Main Source: SUGNET & ASSOC. 1995 (LIT)							
Quad Summary: ROSEVILLE (3812173/528D)							
County Summary: PLACER							
SNA Summary:							
Location: BETWEEN KASEBERG CREEK & SOUTH BRANCH PLEASANT GROVE CREEK; 1.8 KM WEST OF SOUTHERN PACIFIC RR X HWY 65.							
Comments:							
Distribution: 14 WATER BODIES WERE SAMPLED ON 2/9,10,27 & 3/14/95. LINDERIELLA WAS FOUND IN THIS POOL & 2 OTHERS ON 2/9/95. IN 5 POOLS ON 2/10, IN 1 POOL ON 2/27 & 1 POOL ON 3/14/95. THE LOCATIONS OF THE OTHER POOLS WAS NOT GIVEN.							
Ecological: HARDEPAN VERNAL POOL IN ANNUAL NON-NATIVE GRASSLAND. ON 2/9/95 THE SURFACE AREA WAS 129 SQ METERS & THE DEPTH WAS 16 CM. WETLAND COMPENSATION/MITIGATION PRESERVE.							
Threat:							
General: POOL #C2: >50 ADULTS OBSERVED. ALSO FOUND IN POOLS 49, C1, 06, 26, E2, N2, 102, 15, & 30. THE INFORMATION PROVIDED BY THE CONSULTANT HAS CONFLICTING DATA ON LOCATION OF THIS POOL; SITE WAS MAPPED ACCORDING TO THEIR MAP, NOT THEIR T-R-S.							
Owner/Manager: PVT-SARES REGIS GROUP							
Occurrence No. 111	Map Index:32456	---Dates Last Seen---	Lat/Long: 38°45'38" / 121°20'24"	UTM: Zone-10 N4291306 E644227	Township: 11N	Range: 06E	
Occ Rank: Unknown		Element: 1996-XX-XX		Precision: SPECIFIC	Section: XX Qtr XX	Meridian: M	
Origin: Natural/Native occurrence		Site: 1996-03-11		Symbol Type: POLYGON	Elevation: 145 ft	Area: 59.3 ac	
Presence: Presumed Extant							
Trend: Unknown							
Main Source: SUGNET & ASSOC. 1996 (LIT)							
Quad Summary: ROSEVILLE (3812173/528D)							
County Summary: PLACER							
SNA Summary:							
Location: NORTHWEST OF ROSEVILLE; BETWEEN FIDDYMENT ROAD & HWY 65, SOUTH OF PLEASANT GROVE CREEK.							
Comments:							
Distribution: 1995: 15 TOTAL WETLANDS SAMPLED BTW PARCELS 32 & 72. 1996: 10 TOTAL WETLANDS SAMPLED ON SILVERADO OAKS URBAN RESERVE MITIGATION SITE; POOLS IN URBAN RESERVE ARE MUTUALLY EXCLUSIVE FROM PARCEL 72 (1995), BUT SHARE THE SAME GEOGRAPHIC SPACE.							
Ecological: CONSTRUCTED AND SEASONAL HARDEPAN VERNAL POOLS WITHIN NON-NATIVE ANNUAL GRASSLAND.							
Threat:							
General: 1995: UNKNOWN NUMBERS OF LINDERIELLA OBSERVED IN CONSTRUCTED POOLS IN PARCELS 32 & 72; B. LYNCHI ALSO PRESENT. 1996: >50 ADULTS OBSERVED IN CONSTRUCTED POOLS (#VP106 & VP108) IN URBAN RESERVE (PARCEL 72), NO B. LYNCHI OBSERVED.							
Owner/Manager: PVT-ELLIOTT HOMES							

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)

CALIFORNIA LINDERIELLA  
Element Code: ICBRA06010

-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
Federal: None	Global: G2G3	CDFG Status:
State: None	State: S2S3	

Occurrence No. 122      Map Index:34789      ---Dates Last Seen---      Lat/Long: 38°40'56" / 121°28'42"      Township: 10N  
 Occ Rank: Unknown      Element: 1992-04-01      UTM: Zone-10 N4282411 E632349      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1992-04-01      Precision: SPECIFIC      Section: 31 Qtr N  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 40 ft  
 Main Source: KOFORD, E. 1992 (PERS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: ALONG UNION PACIFIC RR (USED TO WESTERN PACIFIC RR?); 0.2 MILES SOUTH OF ELKHORN BLVD, RIO LINDA.  
 -----Comments-----  
 Distribution:  
 Ecological:  
 Threat:  
 General: KOFORD OBSERVED LINDERIELLAS DURING SURVEY IN SPRING OF 1992; BRANCHINECTA LYNCHI ALSO OBSERVED.  
 Owner/Manager: PVT-UNION PACIFIC RR

Occurrence No. 123      Map Index:34790      ---Dates Last Seen---      Lat/Long: 38°42'53" / 121°29'04"      Township: 10N  
 Occ Rank: Unknown      Element: 1992-04-01      UTM: Zone-10 N4285999 E631755      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1992-04-01      Precision: NON-SPECIFIC      Section: 13 Qtr SE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 35 ft  
 Main Source: KOFORD, E. 1992 (PERS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: CORNER OF ELVERTA ROAD X UNION PACIFIC RR (USED TO BE WESTERN PACIFIC RR?) AT EAST MAIN DRAINAGE CANAL, RIO LINDA.  
 -----Comments-----  
 Distribution:  
 Ecological:  
 Threat:  
 General: KOFORD OBSERVED LINDERIELLA DURING SURVEY IN SPRING OF 1992.  
 Owner/Manager: PVT-UNION PACIFIC RR

Occurrence No. 137      Map Index:34808      ---Dates Last Seen---      Lat/Long: 38°38'08" / 121°14'02"      Township: 09N  
 Occ Rank: Good      Element: 1996-01-30      UTM: Zone-10 N4277594 E653719      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1996-01-30      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 105 ft  
 Main Source: MARTIN, D. 1996 (OBS)  
 Quad Summary: FOLSOM (3812162/S11B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST END OF SAILOR BAR, 100 METERS NORTH OF AMERICAN RIVER; 0.9 KM WEST OF HAZEL AVENUE BRIDGE.  
 -----Comments-----  
 Distribution: SE OF PARKING LOT AT FIRST FISHING ACCESS ROAD; ADJACENT LAND USE: GRAVEL STORAGE AREA FOR COUNTY, PUBLIC PARKWAY.  
 Ecological: VERNAL POOL IN DREDGE TAILINGS; GRAVEL AND COBBLED SOIL, SCATTERED LIVE OAKS AND COTTONWOOD TREES BORDERING RIPARIAN AREA.  
 Threat: POSSIBLE THREAT: PUBLIC PARKWAY, FISHING ACCESS AREA AND RECREATIONAL USES.  
 General: LINDERIELLA OBSERVED; BRANCHINECTA LYNCHI ALSO PRESENT.  
 Owner/Manager: SAC COUNTY

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)

CALIFORNIA LINDERIELLA

Element Code: ICBRA06010

-----List Status----- NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G2G3 CDFG Status:  
State: None State: S2S3

Occurrence No. 139 Map Index:34811 ---Dates Last Seen--- Lat/Long: 38°47'10" / 121°26'28" Township: 11N  
Occ Rank: Unknown Element: 1996-03-12 UTM: Zone-10 N4293992 E635406 Range: 05E  
Origin: Natural/Native occurrence Site: 1996-03-12 Precision: SPECIFIC Section: 20 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 470.9 ac Elevation: 60 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: PLEASANT GROVE (3812174/528C)  
County Summary: PLACER  
SNA Summary:  
Location: WNW OF ROSEVILLE; BETWEEN BREWER ROAD AND 1001 ROAD, JUST NORTH OF CURRY CREEK.  
-----Comments-----  
Distribution: BASELINE BREWER MITIGATION SITE; 46 WATERBODIES WERE SAMPLED DURING FEBRUARY AND MARCH 1996.  
Ecological: CONSTRUCTED AND EXISTING SEASONAL WATERBODIES WITHIN NON-NATIVE ANNUAL GRASSLAND.  
Threat:  
General: LINDERIELLA OBSERVED IN 30 WATERBODIES; BRANCHINECTA LYNCHI ALSO PRESENT IN 7 POOLS.  
Owner/Manager: PVT-ROSEVILLE 150 PARTNERSHIP

Occurrence No. 142 Map Index:34814 ---Dates Last Seen--- Lat/Long: 38°48'10" / 121°18'11" Township: 11N  
Occ Rank: Unknown Element: 1996-03-11 UTM: Zone-10 N4296038 E647368 Range: 06E  
Origin: Natural/Native occurrence Site: 1996-03-11 Precision: SPECIFIC Section: 16 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 80.1 ac Elevation: 100 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: NORTH OF ROSEVILLE; WEST OF HWY 65, SOUTH OF PLEASANT GROVE CREEK AND 0.8 KM NORTH OF SCOW ROAD.  
-----Comments-----  
Distribution: FOOTHILL BUSINESS PARK MITIGATION SITE, PARCELS 1 AND 6. 1995: 12 POOLS SAMPLED. 1996: 14 POOLS SURVEYED.  
Ecological: CONSTRUCTED AND HISTORIC WETLANDS (VERNAL POOLS, SEASONAL WETLANDS) ARE INTERSPERSED WITHIN NON-NATIVE ANNUAL GRASSLAND.  
Threat:  
General: 1995: NO FAIRY SHRIMP FOUND. 1/30/1996: 50+ ADULTS OBSERVED IN 4 POOLS (VP5, VP27, VP32, VP33); BRANCHINECTA LYNCHI OBSERVED IN POOL #VP32. 3/11/1996: 50+ ADULTS OBSERVE IN 2 POOLS (VP32 AND VP33), NO OTHER SHRIMP FOUND.  
Owner/Manager: PVT-STANFORD RANCH

Occurrence No. 143 Map Index:34815 ---Dates Last Seen--- Lat/Long: 38°47'37" / 121°19'14" Township: 11N  
Occ Rank: Unknown Element: 1996-02-05 UTM: Zone-10 N4295016 E645856 Range: 06E  
Origin: Natural/Native occurrence Site: 1996-04-29 Precision: NON-SPECIFIC Section: 21 Qtr NW  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 117.1 ac Elevation: 125 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: NNW OF ROSEVILLE; 1.8 KM SOUTHWEST OF SOUTHERN PACIFIC RR X PLEASANT GROVE CREEK.  
-----Comments-----  
Distribution: HEWLETT PACKARD-90 ACRE PARCEL. 1995 AND 1996: TOTAL OF 103 WATERBODIES SURVEYED EACH YEAR.  
Ecological: SEASONAL WATERBODIES WITHIN NON-NATIVE ANNUAL GRASSLAND.  
Threat:  
General: 1995: LINDERIELLA OBSERVED IN 8 POOLS (#10, 16, 29, 59, 65, 69, 76 & 78) BETWEEN 12/22/1994 AND 3/7/1995.  
1996: LINDERIELLA OBSERVED IN 3 POOLS (#10, 16 & 29) BETWEEN 12/25/1995 AND 2/5/1996.  
Owner/Manager: PVT-HEWLETT PACKARD



California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

*LINDERIELLA OCCIDENTALIS* (cont.)

CALIFORNIA LINDERIELLA

Element Code: ICBRA06010

-----List Status-----

Federal: None

State: None

-----NDDB Element Ranks-----

Global: G2G3

State: S2S3

-----Other Lists-----

CDFG Status:

Occurrence No. 145      Map Index:34816      ---Dates Last Seen---      Lat/Long: 38°47'10" / 121°19'26"  
Occ Rank: Unknown      Element: 1996-04-02      UTM: Zone-10 N4294161 E645579      Township: 11N  
Origin: Natural/Native occurrence      Site: 1996-04-29      Precision: NON-SPECIFIC      Range: 06E  
Presence: Presumed Extant      Symbol Type: POLYGON      Section: 20 Qtr SE  
Trend: Unknown      Area: 233.1 ac      Meridian: M  
Elevation: 115 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: NORTHWEST OF ROSEVILLE; 2.0 KM NORTHWEST OF HWY 65 X INDUSTRIAL BLVD.  
-----Comments-----  
Distribution: HEWLETT PACKARD-210 ACRE PROPERTY. 1996: TOTAL OF 43 WATERBODIES SURVEYED.  
Ecological: SEASONAL WATERBODIES (VERNAL POOLS, SEASONAL WETLANDS) WITHIN NON-NATIVE ANNUAL GRASSLAND.  
Threat:  
General: 1996: 50+ ADULTS OBSERVED IN 6 POOLS (148, 149, 150, 151, 152 & 153), AND <50 ADULTS OBSERVED IN POOL #129.  
Owner/Manager: PVT-HEWLETT PACKARD

Occurrence No. 146      Map Index:34817      ---Dates Last Seen---      Lat/Long: 38°51'46" / 121°19'22"  
Occ Rank: Unknown      Element: 1996-03-19      UTM: Zone-10 N4302684 E645526      Township: 12N  
Origin: Natural/Native occurrence      Site: 1996-03-19      Precision: SPECIFIC      Range: 06E  
Presence: Presumed Extant      Symbol Type: POLYGON      Section: XX Qtr XX  
Trend: Unknown      Area: 218.8 ac      Meridian: M  
Elevation: 125 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)\*, LINCOLN (3812183/528A)  
County Summary: PLACER  
SNA Summary:  
Location: MNW OF ROSEVILLE; WEST OF HWY 65 IN INGRAM SLOUGH.  
-----Comments-----  
Distribution: LINCOLN CROSSING MITIGATION SITE. 1995: 10 TOTAL WATERBODIES SURVEYED. 1996: 42 TOTAL WATERBODIES SURVEYED.  
Ecological: SEASONALLY INUNDATED WATERBODIES (VERNAL POOLS, SEASONAL WETLANDS) WITHIN NON-NATIVE ANNUAL GRASSLAND. WETLAND COMPENSATION/MITIGATION PRESERVE.  
Threat:  
General: 1995: LINDERIELLA WAS OBSERVED, BUT POOLS NOT LISTED. 1996: 32 OF 42 SURVEYED POOLS HAD LINDERIELLA, ALL POOLS EXCEPT 4 (POOLS #205, 207, 220 & 228) HAD 50+ ADULTS OBSERVED; BRANCHINECTA LYNCHI ALSO PRESENT IN SOME POOLS.  
Owner/Manager: PVT-STERLING PACIFIC ASSETS

Occurrence No. 148      Map Index:34820      ---Dates Last Seen---      Lat/Long: 38°43'51" / 121°12'26"  
Occ Rank: Unknown      Element: 1996-03-04      UTM: Zone-10 N4288219 E655847      Township: 10N  
Origin: Natural/Native occurrence      Site: 1996-03-04      Precision: SPECIFIC      Range: 07E  
Presence: Presumed Extant      Symbol Type: POLYGON      Section: 09 Qtr SE  
Trend: Unknown      Area: 3.3 ac      Meridian: M  
Elevation: 285 ft  
Main Source: SUGNET & ASSOC. 1996 (LIT)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: PLACER  
SNA Summary:  
Location: WEST OF FOLSOM LAKE; 1.7 KM ESE OF EUREKA ROAD X SIERRA COLLEGE BLVD.  
-----Comments-----  
Distribution: SILVERWOOD/GB HIGH SCHOOL MITIGATION SITE. 1995: 9 TOTAL WETLANDS SAMPLED. 1996: 8 TOTAL WETLANDS SAMPLED.  
Ecological: CONSTRUCTED SEASONAL WETLANDS WITHIN NON-NATIVE ANNUAL GRASSLAND.  
Threat:  
General: 2/9/1995: >50 ADULTS OBSERVED IN POOL #6, SURFACE AREA=263 SQ METERS, WATER DEPTH=9.0 CM; NO OTHER BRANCHIOPODS OBSERVED. 1996: >50 ADULTS OBSERVED IN 4 POOLS (#HV2, VP3, VP4 & VP6); NO OTHER BRANCHIOPODS OBSERVED.  
Owner/Manager: PVT-HOMEFED COMMUNITIES

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)		List Status		NDDB Element Ranks		Other Lists	
CALIFORNIA LINDERIELLA		Federal: None		Global: G2G3		CDFG Status:	
Element Code: ICBRA06010		State: None		State: S2S3			
Occurrence No. 150	Map Index:32516	---Dates Last Seen---	Lat/Long: 38°51'55" / 121°17'34"	UTM: Zone-10 N4302990 E648111	Township: 12N	Range: 06E	Section: 27 Qtr NW
Occ Rank: Excellent		Element: 1996-02-09					Meridian: M
Origin: Natural/Native occurrence		Site: 1996-03-13	Precision: NON-SPECIFIC	Symbol Type: POLYGON	Area: 108.2 ac	Elevation: 140 ft	
Presence: Presumed Extant							
Trend: Unknown							
Main Source: GIBSON, J. 1996 (OBS)							
Quad Summary: ROSEVILLE (3812173/528D)							
County Summary: PLACER							
SNA Summary:							
Location: EASTRIDGE PROJECT SOUTHERN WETLAND PRESERVE; 1.0 KM EAST OF HWY 65; 2.2 KM SOUTH OF LINCOLN.							
-----Comments-----							
Distribution:							
Ecological: NORTHERN HARDPAN VERNAL POOL HABITAT WITH CONSTRUCTED VERNAL POOLS (3.95 ACRES), CONSTRUCTED SEASONAL WETLANDS (1.95 ACRES), AND REFERENCE VERNAL POOLS IN ANNUAL GRASSLAND.							
Threat: FUTURE RESIDENTIAL DEVELOPMENT PLANNED IN ADJACENT AREA; DIRT ROADS BISECT PRESERVE; GRAZING; RODEO GROUNDS TO THE NW.							
General: 1996 (THIRD MONITORING YEAR): 1/11-LOW DENSITIES OF LINDERIELLA OBSERVED IN POOL #SW4, B. LYNCHI ALSO PRESENT. 2/9-LOW DENSITIES OF LINDERIELLAS OBSERVED IN POOLS #7 AND 8.							
Owner/Manager: PVT-PLACER HOLDINGS							
-----							
Occurrence No. 157	Map Index:38256	---Dates Last Seen---	Lat/Long: 38°46'51" / 121°20'54"	UTM: Zone-10 N4293555 E643480	Township: 11N	Range: 06E	Section: 30 Qtr XX
Occ Rank: Unknown		Element: 1997-01-16					Meridian: M
Origin: Natural/Native occurrence		Site: 1997-01-16	Precision: NON-SPECIFIC	Symbol Type: POLYGON	Area: 1,183.4 ac	Elevation: 120 ft	
Presence: Presumed Extant							
Trend: Unknown							
Main Source: GIBSON, J. & T. SKORDAL 1997 (OBS)							
Quad Summary: ROSEVILLE (3812173/528D)							
County Summary: PLACER							
SNA Summary:							
Location: EAST OF FIDDYMENT ROAD, WEST OF FOOTHILLS BLVD, AND NORTH OF BASELINE ROAD, NW OF ROSEVILLE.							
-----Comments-----							
Distribution:							
Ecological: HABITAT CONSISTS OF SEASONAL WETLANDS, REFERENCE VERNAL POOLS, AND CONSTRUCTED VERNAL POOLS WITHIN A DESIGNATED WETLAND MITIGATION AREA. SURROUNDING UPLAND CONSISTS OF NON-NATIVE ANNUAL GRASSLAND/MIXED OAK WOODLAND.							
Threat: THREATENED BY SURROUNDING DEVELOPMENT (GOLF COURSES AND RESIDENTIAL DEVELOPMENT).							
General: CALIFORNIA LINDERIELLA WERE IDENTIFIED WITHIN 83 (44%) OF THE CONSTRUCTED VERNAL POOLS & SEASONAL WETLANDS AND 4 (21%) OF THE REFERENCE VERNAL POOLS SEASONAL WETLANDS. BRANCHINECTA LYNCHI ALSO OBSERVED.							
Owner/Manager: PVT							
-----							
Occurrence No. 184	Map Index:42742	---Dates Last Seen---	Lat/Long: 38°51'03" / 121°19'07"	UTM: Zone-10 N4301379 E645901	Township: 12N	Range: 06E	Section: 33 Qtr XX
Occ Rank: Unknown		Element: 1997-02-12					Meridian: M
Origin: Natural/Native occurrence		Site: 1997-02-12	Precision: SPECIFIC	Symbol Type: POLYGON	Area: 224.1 ac	Elevation: 120 ft	
Presence: Presumed Extant							
Trend: Unknown							
Main Source: GIBSON & SKORDAL 1997 (LIT)							
Quad Summary: ROSEVILLE (3812173/528D)							
County Summary: PLACER							
SNA Summary:							
Location: 1 MILE NW OF PLEASANT GROVE ROAD & SP RAILROAD, 1 MILE E OF ORCHARD CREEK & INGRAM SLOUGH CONFLUENCE, NNW OF ROSEVILLE.							
-----Comments-----							
Distribution: MOST OF THE NW AND BOTTOM HALF NE PORTIONS OF ORCHARD CREEK MIDIGATION BANK. MAJORITY OF VERNAL POOLS ARE ON SAN JOAQUIN SANDY LOAM AND ALAMO-FIDDYMENT COMPLEX SOILS. MORE MAP DETAIL IN REPORT. 170 OF THE 694 EXISTING POOLS WERE SAMPLED.							
Ecological: ENDEMIC VEGETATION: RANUNCULUS ALVEOLATUS, ERYNGIUM VASEYI, PLAGIOBOTHRYUS STIPITATUS, PSILICARPHUS ZIZYPHOIDEOS, DESCHAMPسيا DAMTHONIOIDES, NAVARRETTIA LEUCOCEPHALA							
Threat:							
General: OBSERVED LINDERIELLA IN 82 OF THE 170 POOLS SAMPLED, 81 AT THIS LOCATION, FOR AN APPROXIMATE OCCURANCE RATE OF 48 PERCENT, WITH ABUNDANCE RANGING FROM LOW TO HIGH.							
Owner/Manager: UNKNOWN							

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LINDERIELLA OCCIDENTALIS (cont.)  
CALIFORNIA LINDERIELLA  
Element Code: ICBRA06010

-----List Status----- NDDB Element Ranks -----Other Lists-----  
Federal: None Global: G2G3 CDFG Status:  
State: None State: S283

Occurrence No. 185 Map Index: 42747 ---Dates Last Seen--- Lat/Long: 38°50'41" / 121°18'53" Township: 12N  
Occ Rank: Unknown Element: 1997-02-12 UTM: Zone-10 N4300705 E646249 Range: 06E  
Origin: Natural/Native occurrence Site: 1997-02-12 Precision: SPECIFIC Section: 33 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 115 ft  
Main Source: GIBSON & SKORDAL 1997 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: 0.6 MILE NW OF PLEASANT GROVE RD & SP RR, 1.4 MILE ESE OF ORCHARD CREEK & INGRAM SLOUGH CONFLUENCE, NNW OF ROSEVILLE.

-----Comments-----  
Distribution: JUST SOUTH OF ORCHARD CREEK, ORCHARD CREEK MIDIGATION BANK. MAJORITY OF VERNAL POOLS ARE ON SAN JOAQUIN SANDY LOAM AND ALAMO-FIDDYMENT COMPLEX SOILS. MORE MAP DETAIL IN REPORT.  
Ecological: ENDEMIC VEGETATION: RANUNCULUS ALVEOLATUS, ERYNGIUM VASSYI, PLAGIOBOTHRYUS STIPITAUS, PSILICARPHUS ZIZYPHOIDES, DESCHAMPSIA DAMTHONIODES, NAVARRETTIA LEUCOCEPHALA  
Threat:  
General: OBSERVED LINDERIELLA THIS POOL WAS RATED HIGH IN ABUNDANCE.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

**LEPIDURUS PACKARDI**

VERNAL POOL TADPOLE SHRIMP  
Element Code: ICBRA10010

-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
Federal: Endangered	Global: G2G3	CDFG Status:
State: None	State: S2S3	

-----Habitat Associations-----

General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.  
Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 24      Map Index:32457      ---Dates Last Seen---      Lat/Long: 38°46'11" / 121°19'21"      Township: 11N  
Occ Rank: Unknown      Element: 1995-02-09      UTM: Zone-10 N4292338 E645737      Range: 06E  
Origin: Natural/Native occurrence      Site: 1995-02-09      Precision: NON-SPECIFIC      Section: 29 Qtr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 130 ft  
Main Source: SUGNET & ASSOC. 1995 (LIT)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: BETWEEN KASEBERG CREEK AND SOUTH BRANCH PLEASANT GROVE CREEK; 1.8 KM WEST OF SOUTHERN PACIFIC RR X HWY 65.  
-----Comments-----  
Distribution: WOODCREEK OAKS MITIGATION SITES. 14 WATER BODIES WERE SAMPLED ON FEB 9, 10, 27 & MARCH 14, 1995. LEPIDURUS PACKARDI FOUND IN ONLY 1 POOL & ONLY ON 2/9/95. SUGNET OBSERVED TADPOLE SHRIMP IN A MANMADE VERNAL POOL SOMEWHERE IN SEC 29 ON 2/4/93  
Ecological: HARDPAN VERNAL POOL IN ANNUAL NON-NATIVE GRASSLAND. ON 2/9/95 THE SURFACE AREA WAS 129 SQ METERS & THE WATER DEPTH WAS 16 CM. WETLAND COMPENSATION/MITIGATION PRESERVE. ALSO, A MANMADE VERNAL POOL SOMEWHERE IN SEC 29.  
Threat:  
General: POOL #C2: 50+ ADULTS OBSERVED; 3 ADULTS COLLECTED & DEPOSITED IN CAS. THE INFORMATION PROVIDED BY THE CONSULTANT HAS CONFLICTING DATA ON THE LOCATION OF THIS POOL; THIS SITE WAS MAPPED ACCORDING TO THE MAP THEY PROVIDED, NOT THE T-R-S GIVEN  
Owner/Manager: PVT-SARES REGIS GROUP

Occurrence No. 27      Map Index:32503      ---Dates Last Seen---      Lat/Long: 38°52'24" / 121°23'12"      Township: 12N  
Occ Rank: Good      Element: 1996-02-15      UTM: Zone-10 N4303763 E639946      Range: 05E  
Origin: Natural/Native occurrence      Site: 1996-02-15      Precision: SPECIFIC      Section: 23 Qtr SW  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 15.2 ac      Elevation: 93 ft  
Main Source: LACY, T. 1995 (LIT)  
Quad Summary: PLEASANT GROVE (3812174/528C)  
County Summary: PLACER  
SNA Summary:  
Location: USAF LINCOLN COMMUNICATIONS FACILITY; 1.1 KM WNW OF MOORE ROAD X DOWD AVENUE.  
-----Comments-----  
Distribution: FACILITY ~231 ACRES W/ABOUT 236 VERNAL POOLS. 36 POOLS SAMPLED IN 1995, 15 POOLS SAMPLED IN 1994 & 2 POOLS SAMPLED IN 1993. ONLY 1 LIVE TADPOLE SHRIMP FOUND IN 1 POOL DURING THESE 3 YEARS. IN 1996 100'S FOUND IN 4 POOLS IN NE CORNER OF SITE  
Ecological: ANNUAL GRASSLAND & OAK SAVANNAH WITH VERNAL POOLS INTERSPERSED AMONG THESE HABITATS. TADPOLES, OSTRACODS, COPEPODS, FLATWORMS, BEETLES & INSECT LARVAE ALSO FOUND.  
Threat: DISCING OF POOLS; POSSIBLE HERBICIDE RUNOFF FROM ANTENNA PADS; AGRICULTURE-CATTLE & SHEEP GRAZING, RICE FARMING NEARBY.  
General: POOL #215: GRASS & ALGAE BOTTOM. POOL EST TO BE 180 X 20 FT, & 10 INCHES DEEP. 1 INDIVIDUAL FOUND 2/9/95, NONE FOUND 3/1 OR 3/15/95. ONLY DISSOLVED CARAPACES FOUND IN 1994. 100'S FOUND IN POOLS 180, 140, 141 & 143 ON 2/15/96.  
Owner/Manager: DOD-LINCOLN COMMUNICATIONS FAC

Occurrence No. 103      Map Index:33706      ---Dates Last Seen---      Lat/Long: 38°49'01" / 121°29'47"      Township: 11N  
Occ Rank: Unknown      Element: 1993-03-12      UTM: Zone-10 N4297319 E630531      Range: 04E  
Origin: Natural/Native occurrence      Site: 1993-03-12      Precision: NON-SPECIFIC      Section: 11 Qtr XX  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 3/5 mile      Elevation: 40 ft  
Main Source: SUGNET & ASSOC. 1993 (PERS)  
Quad Summary: PLEASANT GROVE (3812174/528C)\*, VERONA (3812175/529D)  
County Summary: SUTTER  
SNA Summary:  
Location: SOUTHWEST OF THE INTERSECTION OF PLEASANT GROVE ROAD AND HOWSLEY ROAD.  
-----Comments-----  
Distribution: ROADSIDE DITCHES SOMEWHERE IN SECTION 11.  
Ecological: MANMADE ROADSIDE DITCHES.  
Threat:  
General: LEPIDURUS PACKARDI OBSERVED IN THE 2 FEATURES INSPECTED. SUGNET RECORD #185. NO B. LYNCHI OBSERVED.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LEPIDURUS PACKARDI (cont.)		-----List Status-----		-----NDDB Element Ranks-----		-----Other Lists-----	
VERNAL POOL TADPOLE SHRIMP		Federal: Endangered		Global: G2G3		CDFG Status:	
Element Code: ICBRA10010		State: None		State: S2S3			

Occurrence No. 104      Map Index: 33707      ---Dates Last Seen---      Lat/Long: 38°46'23" / 121°29'49"      Township: 11N  
 Occ Rank: Unknown      Element: 1993-03-12      UTM: Zone-10 N4292469 E630579      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1993-03-12      Precision: NON-SPECIFIC      Section: 26 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 3/5 mile      Elevation: 35 ft  
 Main Source: SUGNET & ASSOC. 1993 (PERS)  
 Quad Summary: PLEASANT GROVE (3812174/528C)\*, VERONA (3812175/529D)  
 County Summary: SUTTER  
 SNA Summary:  
 Location: SOUTHWEST OF THE INTERSECTION OF PLEASANT GROVE ROAD AND SANKEY ROAD.  
 Comments:  
 Distribution: ROADSIDE DITCHES SOMEWHERE IN SECTION 26.  
 Ecological: MANMADE ROADSIDE DITCHES.  
 Threat:  
 General: LEPIDURUS PACKARDI OBSERVED IN THE ONE FEATURE INSPECTED. SUGNET RECORD #186. B. LYNCHI ALSO OBSERVED.  
 Owner/Manager: UNKNOWN

Occurrence No. 147      Map Index: 11427      ---Dates Last Seen---      Lat/Long: 38°39'49" / 121°25'16"      Township: 09N  
 Occ Rank: Fair      Element: 1998-07-10      UTM: Zone-10 N4280432 E637361      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1998-07-10      Precision: NON-SPECIFIC      Section: 19 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 320.6 ac      Elevation: 50 ft  
 Main Source: WALKER, R. & B. HELM 1998 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: WEST OF MCCLELLAN AIR FORCE BASE BETWEEN MAGPIE CREEK AND ASCOT AVE, DEL PASO, NORTH OF SACRAMENTO.  
 Comments:  
 Distribution: SEASONAL WETLANDS, INNUNDATED APPROXIMATELY >30 DAYS DURING WINTER 1998. LOCATION GIVEN ONLY AS T9N, R5E, SEC 19. SNAPPED TO EXISTING MAPPED VERNAL POOLS.  
 Ecological: SURROUNDING LAND USE: AGRICULTURE AND FALLOW FIELDS  
 Threat: DISCING, DEVELOPMENT  
 General: 10 CYSTS WERE FOUND IN THE SURVEYS IN JUNE AND JULY, 1998.  
 Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DESMOCERUS CALIFORNICUS DIMORPHUS  
VALLEY ELDERBERRY LONGHORN BEETLE  
Element Code: IICOL48011

-----List Status----- NDDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G3T2 CDFG Status:  
State: None State: S2

-----Habitat Associations-----

General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).  
Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 1 Map Index:11640 ---Dates Last Seen--- Lat/Long: 38°36'55" / 121°18'09" Township: 09N  
Occ Rank: Unknown Element: 1987-04-23 UTM: Zone-10 N4275244 E647788 Range: 06E  
Origin: Natural/Native occurrence Site: 1987-04-23 Precision: SPECIFIC Section: XX Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 1,403.9 ac Elevation: 60 ft  
Main Source: ARNOLD, R. 1985 (PERS)  
Quad Summary: CARMICHAEL (3812153/512D)\*, FOLSOM (3812162/511B), CITRUS HEIGHTS (3812163/512A)  
County Summary: SACRAMENTO  
SNA Summary: Goethe Park  
Location: ALONG AMERICAN RIVER, NIMBUS FLAT AREA OF LAKE NATOMA SOUTH TO DOWNSTREAM END OF GOETHE PARK.  
-----Comments-----  
Distribution: FOUND ALONG THE AMERICAN RIVER PARKWAY TO THE LOWER SOUTHEAST SHORE OF LAKE NATOMA; INCLUDES CRITICAL AND ESSENTIAL HABITAT AREAS.  
Ecological: LARVAE ARE STEM AND ROOT BORERS OF ELDERBERRY; EXIT HOLES ARE ROUND. BUPRESTID LARVAE ALSO BORE INTO ELDERBERRY; EXIT HOLES ARE OVAL. ADULTS FEED ON FOLIAGE AND FLOWERS.  
Threat: POPULATIONS OF VELV ARE REDUCED AS ELDERBERRY GROVES ARE REDUCED IN NUMBER.  
General: 1987 SURVEY OF NIMBUS FLATS FOUND BOTH OLD AND NEW EXIT HOLES.  
Owner/Manager: SAC COUNTY, DPR

Occurrence No. 57 Map Index:24044 ---Dates Last Seen--- Lat/Long: 38°44'37" / 121°12'26" Township: 10N  
Occ Rank: Fair Element: 1992-01-14 UTM: Zone-10 N4289637 E655810 Range: 07E  
Origin: Natural/Native occurrence Site: 1992-01-14 Precision: SPECIFIC Section: 09 Qtr NE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 260 ft  
Main Source: KOFORD, E. 1992 (OBS)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: PLACER  
SNA Summary:  
Location: SOUTH OF DOUGLAS BLVD WHERE IT INTERSECTS WITH KINGSGATE, GRANITE BAY.  
-----Comments-----  
Distribution: SITE INCLUDES TWO GROUPS OF ELDERBERRY SHRUBS: ONE IS 100 FEET EAST OF KINGSGATE INTERSECTION AND THE SECOND IS 200 FEET WEST OF THE KINGSGATE INTERSECTION.  
Ecological: HABITAT CONSISTS OF TWO SMALL OUTCROPS OF ELDERBERRY SHRUBS; ONE GROUP OF 6 PLANTS WITH STEMS <1" AND THE OTHER GROUP OF 2 PLANTS WITH STEMS UP TO 4".  
Threat:  
General: WEATHERED BOREHOLES FOUND IN BOTH PLANT GROUPINGS.  
Owner/Manager: PVT

Occurrence No. 84 Map Index:33016 ---Dates Last Seen--- Lat/Long: 38°47'55" / 121°07'55" Township: 11N  
Occ Rank: Poor Element: 1991-04-25 UTM: Zone-10 N4295870 E662228 Range: 08E  
Origin: Natural/Native occurrence Site: 1991-04-25 Precision: SPECIFIC Section: 18 Qtr SW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 480 ft  
Main Source: BARR, C. 1991 (OBS)  
Quad Summary: ROCKLIN (3812172/527C)  
County Summary: PLACER  
SNA Summary:  
Location: MINERS Ravine, BRIDGE AT FOLSOM-AUBURN ROAD (TRIB TO DRY CREEK), 0.50 MILE SOUTH OF TUDSBURY ROAD, GRANITE BAY.  
-----Comments-----  
Distribution: REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.  
Ecological: HABITAT CONSISTS OF 2 LARGE ROADSIDE ELDERBERRY CLUMPS.  
Threat: THREATENED BY ROADSIDE CLEARANCE/CUTTING.  
General: 2 RECENT EXIT HOLES OBSERVED ON 1 OF THE 2 CLUMPS.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DESMOCERUS CALIFORNICUS DIMORPHUS (cont.)			
VALLEY ELDERBERRY LONGHORN BEETLE			
Element Code: IICOL48011			
List Status		NDDB Element Ranks	
Federal: Threatened		Global: G3T2	
State: None		State: S2	
Other Lists		CDFG Status:	

Occurrence No. 85      Map Index:33017      ---Dates Last Seen---      Lat/Long: 38°46'15" / 121°09'13"      Township: 11N  
 Occ Rank: Excellent      Element: 1991-04-25      UTM: Zone-10 N4292791 E660400      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1991-04-25      Precision: SPECIFIC      Section: 25 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 410 ft  
 Main Source: BARR, C. 1991 (OBS)  
 Quad Summary: ROCKLIN (3812172/527C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: MINERS RAVINE, TRIB TO DRY CREEK, WEST SIDE OF AUBURN-FOLSOM ROAD, 0.25 MILE NE OF CAVITT/STALLMAN ROAD, GRANITE BAY.

---Comments---  
 Distribution: REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.  
 Ecological: HABITAT CONSISTS OF OAK WOODLAND, WITH SCATTERED ELDERBERRIES AND LOTS OF POISON OAK; HILLY AND ROCKY SUBSTRATE.  
 Threat:  
 General: ELDERBERRIES WERE SCATTERED, BUT COMMON; ONLY 2 CLUMPS WERE FOUND WITH EXIT HOLES. MANY EXIT HOLES, 1 POSSIBLY RECENT. DEAD WOOD SAMPLE WITH A PROBABLE VELV TUNNEL COLLECTED.  
 Owner/Manager: PVT

Occurrence No. 86      Map Index:33018      ---Dates Last Seen---      Lat/Long: 38°47'39" / 121°12'37"      Township: 11N  
 Occ Rank: Excellent      Element: 1991-04-10      UTM: Zone-10 N4295254 E655442      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1991-04-10      Precision: SPECIFIC      Section: 20 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 320 ft  
 Main Source: BARR, C. 1991 (OBS)  
 Quad Summary: ROCKLIN (3812172/527C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: SECRET RAVINE, TRIBUTARY TO DRY CREEK, ALONG THE SIERRA COLLEGE NATURE TRAIL, ROCKLIN.

---Comments---  
 Distribution: REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.  
 Ecological: HABITAT CONSISTS OF OAK WOODLAND, WITH SPARSE/SCATTERED ELDERBERRIES GROWING WITH OAKS, BUCKEYES, AND POISON OAK.  
 Threat:  
 General: ALTHOUGH THE ELDERBERRIES WERE FEW AND WIDELY-SCATTERED, MOST HAD OLD, CLEAN-CUT EXIT HOLES.  
 Owner/Manager: LOS RIOS COMM COLLEGE DIST

Occurrence No. 87      Map Index:33019      ---Dates Last Seen---      Lat/Long: 38°59'03" / 121°29'07"      Township: 13N  
 Occ Rank: Fair      Element: 1991-04-25      UTM: Zone-10 N4315897 E631206      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1991-04-25      Precision: SPECIFIC      Section: 12 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 65 ft  
 Main Source: BARR, C. 1991 (OBS)  
 Quad Summary: SHERIDAN (3812184/528B)  
 County Summary: SUTTER  
 SNA Summary:  
 Location: BEAR RIVER (SOUTH BANK), EAST SIDE OF PLEASANT GROVE ROAD, SW OF WHEATLAND.

---Comments---  
 Distribution: REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.  
 Ecological: HABITAT CONSISTS OF ELDERBERRIES GROWING IN ROWS PARALLEL TO THE RIVER, AT THE BASE OF THE LEVEE; A FEW SCATTERED, REMNANT COTTONWOODS PRESENT.  
 Threat: THREATENED BY BRUSH-CLEARING EFFORTS; BURN SCARS AND SOOT PRESENT ON ELDERBERRY TRUNKS.  
 General: MANY ELDERBERRIES OBSERVED, BUT ONLY A COUPLE WITH EXIT HOLES (2 POSSIBLY RECENT ON LIVE WOOD).  
 Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DESMOCERUS CALIFORNICUS DIMORPHUS (cont.)  
VALLEY ELDERBERRY LONGHORN BEETLE  
Element Code: IICOL48011

-----List Status----- NDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G3T2 CDFG Status:  
State: None State: S2

Occurrence No. 88 Map Index:33020 ---Dates Last Seen--- Lat/Long: 38°59'06" / 121°29'16" Township: 13N  
Occ Rank: Fair Element: 1991-04-25 UTM: Zone-10 N4315987 E630969 Range: 04E  
Origin: Natural/Native occurrence Site: 1991-04-25 Precision: SPECIFIC Section: 11 Qtr SE  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 60 ft  
Main Source: BARR, C. 1991 (OBS)  
Quad Summary: SHERIDAN (3812184/528B)  
County Summary: SUTTER  
SNA Summary:  
Location: BEAR RIVER (NORTH BANK), WEST OF PLEASANT GROVE ROAD, SW OF WHEATLAND.  
Comments:  
Distribution: REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.  
Ecological: HABITAT CONSISTS OF ELDERBERRIES GROWING IN ROWS PARALLEL TO THE RIVER, AT THE BASE OF THE LEVEE; A FEW  
SCATTERED, REMNANT COTTONWOODS ARE ALSO PRESENT.  
Threat: THREATENED BY BRUSH-CLEARING EFFORTS; ELDERBERRIES BEAR BURN SCARS.  
General: MANY ELDERBERRIES OBSERVED, BUT ONLY A COUPLE CONTAIN EXIT HOLES (OLD, AS WELL AS POSSIBLY RECENT).  
Owner/Manager: UNKNOWN

Occurrence No. 169 Map Index:39545 ---Dates Last Seen--- Lat/Long: 38°40'14" / 121°07'36" Township: 09N  
Occ Rank: Unknown Element: 1990-62-9 UTM: Zone-10 N4281685 E662966 Range: 08E  
Origin: Natural/Native occurrence Site: 1990-62-9 Precision: SPECIFIC Section: 05 Qtr SW  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 13.9 ac Elevation: 340 ft  
Main Source: ZENTNER & ZENTNER 1997 (LIT)  
Quad Summary: FOLSOM (3812162/511B)\*, CLARKSVILLE (3812161/511A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: WILLOW CREEK, 0.1 MILE WEST OF PREWETT DRIVE, FOLSOM.  
Comments:  
Distribution: FOUND IN AREA "E" AND JUST EAST OF AREA "H" IN THE LAKE NATOMA SHORES VELB MITIGATION MONITORING PROJECT AREA.  
ALSO THE LEXINGTON HILLS PRESERVE SITE.  
Ecological: ELDERBERRY AND ASSOCIATED NATIVE HABITAT.  
Threat:  
General: 1 EXIT HOLE OBSERVED IN 1994, NO CHANGE 1995. 2 PLANTS WITH NEW EXIT HOLES JUST OUTSIDE MONITORING AREA, 1996.  
16 PLANTS WITH NEW EXIT HOLES & 1 ADULT, 1999. SAME AREA, 1997. EXIT HOLES IN PRESERVE, 1999.  
Owner/Manager: UNKNOWN

Occurrence No. 170 Map Index:39550 ---Dates Last Seen--- Lat/Long: 38°43'20" / 121°11'32" Township: 10N  
Occ Rank: Unknown Element: 1992-XX-XX UTM: Zone-10 N4287312 E657146 Range: 07E  
Origin: Natural/Native occurrence Site: 1999-06-15 Precision: SPECIFIC Section: 15 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 32.8 ac Elevation: 300 ft  
Main Source: JONES & STOKES ASSOC. 1994 (LIT)  
Quad Summary: FOLSOM (3812162/511B)  
County Summary: PLACER  
SNA Summary:  
Location: LINDA CREEK, GRANITE BAY GOLF CLUB, SOUTH OF EAST ROSEVILLE PARKWAY AND EAST OF BARTON ROAD.  
Comments:  
Distribution: SEVERAL PLANTS IN RIPARIAN CORRIDOR OF LINDA CREEK, OTHERS WERE MOVED TO ONSITE MITIGATION AREA ABOUT IN THE  
MIDDLE OF THE PROPERTY.  
Ecological: RIPARIAN, OPEN OAK WOODLAND. SITE IS BEING DEVELOPED AS A GOLF COURSE. SOME AREAS WILL REMAIN IN OPEN SPACE  
AND A VELB COMPENSATION AREA IS BEING CREATED FOR MITIGATION. IN 1997 69 OF THE 86 PLANTED ELDERBERRIES HAD  
SURVIVED.  
Threat:  
General: 20 ELDERBERRIES, 8 WITH EXIT HOLES OBSERVED IN 1991 & 1992. SOME BUSHES TRANSPLANTED TO COMPENSATION AREA &  
ADDITIONAL SEEDLINGS PLANTED. YEARLY SURVEYS CONDUCTED 1993-1999 BUT NO ADULTS OR NEW EXIT HOLES OBSERVED.  
Owner/Manager: FVT



California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DESMOCERUS CALIFORNICUS DIMORPHUS (cont.)  
VALLEY ELDERBERRY LONGHORN BEETLE  
Element Code: IICOL48011

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: Threatened Global: G3T2 CDFG Status:  
State: None State: S2

Occurrence No. 184 Map Index:42848 ---Dates Last Seen--- Lat/Long: 38°59'07" / 121°24'48" Township: 13N  
Occ Rank: Unknown Element: 1999-07-13 UTM: Zone-10 N4316157 E637410 Range: 05E  
Origin: Natural/Native occurrence Site: 1999-07-13 Precision: NON-SPECIFIC Section: 10 Qtr XX  
Presence: Presumed Extant Symbol Type: POLYGON Meridian: M  
Trend: Unknown Area: 37.1 ac Elevation: 80 ft  
Main Source: JONES & STOKES ASSOC. 2000 (LIT)  
Quad Summary: SHERIDAN (3812184/528B)  
County Summary: PLACER, SUTTER  
SNA Summary:  
Location: ALONG THE SUTTER, PLACER COUNTY LINE, JUST NORTH OF BEAR RIVER ROAD ON COUNTY LINE, 2 MILES WNW OF SHERIDAN.  
-----Comments-----  
Distribution: WILDLANDS MITIGATION BANK, 1 MILE SSW OF BEAR RIVER AT HIGHWAY 65 CROSSING.  
Ecological: ELDERBERRY WOODLAND, ELDERBERRY SAVANNA AND RIPARIAN. AREA ALSO CONTAINS MANY VERNAL POOLS.  
Threat:  
General: EXIT HOLES OBSERVED AT SEVERAL LOCATIONS  
Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

BALSAMORHIZA MACROLEPIS VAR MACROLEPIS			
BIG-SCALE BALSAMROOT			
Element Code: PDAST11061	-----List Status----- Federal: None State: None	-----NDDB Element Ranks----- Global: G3T2 State: S2.2	-----Other Lists----- CNPS List: 1B R-E-D Code: 2-2-3

-----Habitat Associations-----  
 General: VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.  
 Micro: SOMETIMES ON SERPENTINE. 35-1000M.

Occurrence No. 1      Map Index:30665      ---Dates Last Seen---      Lat/Long: 38°53'34" / 121°17'30"      Township: 12N  
 Occ Rank: Unknown      Element: 1939-10-05      UTM: Zone-10 N4306045 E648161      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1939-10-05      Precision: NON-SPECIFIC      Section: 15 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1 mile      Elevation: 165 ft  
 Main Source: HOOVER #4092 JEPS #32252 (HERB)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: TOWN OF LINCOLN.  
 -----Comments-----  
 Distribution: MAPPED AT CNDDB IN VICINITY OF LINCOLN.  
 Ecological: SANDY HILLSIDES.  
 Threat:  
 General: LOCALLY FREQUENT. ANNOTATED BY WEBER MARCH 1953.  
 Owner/Manager: UNKNOWN

Occurrence No. 9      Map Index:32045      ---Dates Last Seen---      Lat/Long: 38°47'39" / 121°18'25"      Township: 11N  
 Occ Rank: Unknown      Element: 1957-05-07      UTM: Zone-10 N4295075 E647044      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1957-05-07      Precision: SPECIFIC      Section: 21 Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 98.3 ac      Elevation: 125 ft  
 Main Source: CRAMPTON #3983 UC #1278006 (HERB)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: ALONG RAILROAD AND U.S. HIGHWAY 99, 3.2 MILES NORTH OF ROSEVILLE.  
 -----Comments-----  
 Distribution: UNCULTIVATED STRIP ALONG ROADWAY.  
 Ecological:  
 Threat:  
 General: NOT ANNOTATED AND LABEL AS BALSAMORHIZA HOOKERI, BUT IN THIS FOLDER AND LOOKS RIGHT, (RB 1987).  
 Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

<p><i>DOWNINGIA PUSILLA</i> DWARF DOWNINGIA Element Code: PDCAM060C0</p>	<p>-----List Status----- Federal: None State: None</p>	<p>-----NDDDB Element Ranks----- Global: G3 State: S3.1</p>	<p>-----Other Lists----- CNPS List: 2 R-E-D Code: 1-2-1</p>
--	--	---	---

-----Habitat Associations-----  
General: VALLEY AND FOOTHILL GRASSLAND (MESIC SITES), VERNAL POOLS.  
Micro: VERNAL LAKE AND POOL MARGINS WITH A VARIETY OF ASSOCIATES. IN SEVERAL TYPES OF VERNAL POOLS. 1-485M.

Occurrence No. 32      Map Index: 26044      ---Dates Last Seen---      Lat/Long: 38°42'30" / 121°28'32"  
Occ Rank: Fair      Element: 1994-04-04      UTM: Zone-10 N4285302 E632563      Township: 10N  
Origin: Natural/Native occurrence      Site: 1994-04-04      Precision: SPECIFIC      Range: 05E  
Presence: Presumed Extant      Symbol Type: POINT      Section: 19 Qtr NW  
Trend: Unknown      Radius: 80 meters      Meridian: M  
Elevation: 35 ft  
Main Source: YORK, R. 1994 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ABOUT 800' DUE SOUTH OF THE WEST END OF DELANO ROAD; BETWEEN RIO LINDA AND ELVERTA.  
-----Comments-----  
Distribution: DELANO ROAD IS JUST SOUTH OF ELVERTA ROAD AND NORTH OF "U" STREET.  
Ecological: GRASSLAND WITH SEASONAL WETLANDS AND VERNAL POOLS. ASSOCIATED WITH RANUNCULUS BONARIENSIS VAR. TRISEPALUS AND PLAGIOBOTHRYS STIPITATUS VAR. MICRANTHUS.  
Threat:  
General: 100+ PLANTS OBSERVED IN 1994. SITE IS NEAR A MICROWAVE TOWER AND A DIRT PARKING AREA. PLANNED ACCESS ROADS NEARBY WILL AVOID THE SITE. MAPPED AS SAME SITE AS 1951 COLLECTION BY A. CARTER (#3015 CAS, JEPS, UC) AT KEITHLY RANCH, RIO LINDA.  
Owner/Manager: PVT

Occurrence No. 33      Map Index: 11696      ---Dates Last Seen---      Lat/Long: 38°49'38" / 121°17'16"  
Occ Rank: Good      Element: 1985-04-19      UTM: Zone-10 N4298788 E648632      Township: 11N  
Origin: Natural/Native occurrence      Site: 1985-04-19      Precision: NON-SPECIFIC      Range: 06E  
Presence: Presumed Extant      Symbol Type: POINT      Section: 03 Qtr SE  
Trend: Unknown      Radius: 1/5 mile      Meridian: M  
Elevation: 145 ft  
Main Source: DAINS, V. 1985 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: 0.75 MI S OF INTERSECTION OF HWY 65 & PLEASANT GROVE RD, E OF HWY 65.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL ON CLAYPAN SUBSTRATE. ASSOCIATED WITH DOWNINGIA BICORNUTA, D. ORNATISSIMA, ALLOCARYA STIPITATA MICRANTHA.  
Threat: AREA GRAZED, BUT LITTLE DISTURBANCE. PARCEL TO EAST BEING DEVELOPED.  
General: MORE THAN 30 PLANTS.  
Owner/Manager: PVT, CALTRANS

Occurrence No. 36      Map Index: 11732      ---Dates Last Seen---      Lat/Long: 38°46'08" / 121°16'04"  
Occ Rank: None      Element: 1987-04-15      UTM: Zone-10 N4292347 E650491      Township: 11N  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: NON-SPECIFIC      Range: 06E  
Presence: Possibly Extirpated      Symbol Type: POINT      Section: 26 Qtr SE  
Trend: Decreasing      Radius: 1/5 mile      Meridian: M  
Elevation: 210 ft  
Main Source: STROMBERG, L. 1987 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary: Roseville Northern Vernal Pools  
Location: NE OF ROSEVILLE & SW OF ROCKLIN POWER LINE.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL ON INKS-EXCHEQUER SOILS. ASSOCIATED WITH ALLOCARYA STIPITATA MICRANTHA, ALOPECURUS HOWELLII, LASTHENIA CHRYSOSTOMA AND ERYNGIUM VASEYI.  
Threat: SITE GRAZED AND RUTED BY VEHICLE TRACKS. ROSEVILLE PLANS TO RETAIN AS URBAN RESERVE, BUT DEVELOPMENT SURROUNDS.  
General: 1000-1500 PLANTS IN 1987. THIS AREA WAS GRADED WHEN VISITED IN 1997. SITE IS NOW LOCATED S OF ROSEVILLE PARKWAY AT DIAMOND OAKES RD.  
Owner/Manager: UNKNOWN

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DOWNINGIA PUSILLA (cont.)			
DWARF DOWNINGIA			
Element Code: PDCAM06000			
-----List Status-----		-----NDDB Element Ranks-----	
Federal: None		Global: G3	
State: None		State: S3.1	
		-----Other Lists-----	
		CNPS List: 2	
		R-E-D Code: 1-2-1	

Occurrence No. 37      Map Index:11676      ---Dates Last Seen---      Lat/Long: 38°47'20" / 121°17'50"      Township: 11N  
 Occ Rank: None      Element: 1987-04-15      UTM: Zone-10 N4294519 E647892      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: NON-SPECIFIC      Section: 22 Qtr NW  
 Presence: Extirpated      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 135 ft  
 Main Source: STROMBERG, L. 1987 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: N OF ROSEVILLE, E OF HWY 65, 2500 FT E OF HWY 65/HWY 65 BY-PASS JUNCTION.  
 -----Comments-----  
 Distribution:  
 Ecological: SHALLOW VERNAL POOLS ON COMETA-FIDDYMENT SOILS COMPLEX. ASSOCIATED WITH ALLOCARYA STIPITATA MICRANTHA, CRASULA AQUATICA, DOWNINGIA ORNATISSIMA, GRATIOLA EBRACTEATA.  
 Threat: SITE GRAZED. THREATENED BY INDUSTRIAL PARK DEVELOPMENT TO SOUTHEAST.  
 General: MORE THAN 7000 PLANTS IN THREE VERNAL POOLS IN 1987. SITE WAS GRADED WHEN VISITED IN 1997. PLANTS PRESUMED EXTIRPATED.  
 Owner/Manager: UNKNOWN

Occurrence No. 57      Map Index:26045      ---Dates Last Seen---      Lat/Long: 38°42'42" / 121°25'00"      Township: 10N  
 Occ Rank: None      Element: 1991-05-26      UTM: Zone-10 N4285761 E637664      Range: 05W  
 Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 22 Qtr NE  
 Presence: Extirpated      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 75 ft  
 Main Source: DAINS, V. 1991 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.2 MILES SOUTH OF ELVERTA ROAD AND 0.6 MILE EAST OF 16TH STREET, RIO LINDA.  
 -----Comments-----  
 Distribution: LOCATED ABOUT 0.5 MILE SOUTHWEST OF GIBSON RANCH COUNTY PARK, NORTH OF DRY CREEK.  
 Ecological: GROWING ON BORDER OF A CREATED PONDED DEPRESSION IN ASSOCIATION WITH GRATIOLA EBRACTEATA, DOWNINGIA ORNATISSIMA, AND ELEOCHARIS MACROSTACHYA. THIS IS NOT A TYPICAL VERNAL POOL BUT A SEMI-PERMANANT MARSH WITH WILLOWS AND TULE.  
 Threat: DEVELOPMENT IS PLANNED FOR THIS SITE.  
 General: 50 PLANTS OBSERVED IN 1991. WETLAND MITIGATION FOR THE PROPOSED DEVELOPMENT COULD INCLUDE RETENTION OF THIS POPULATION. SITE A SUBDIVISION IN 1997; FORMER POP SITE IS NOW NEAR E END OF RUSHING RIVER CT OFF OF CHERRY BROOK DR.  
 Owner/Manager: PVT

Occurrence No. 58      Map Index:26042      ---Dates Last Seen---      Lat/Long: 38°41'59" / 121°29'12"      Township: 10N  
 Occ Rank: Fair      Element: 1993-04-22      UTM: Zone-10 N4284334 E631594      Range: 04E  
 Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 25 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 30 ft  
 Main Source: LEACH, S. 1993 (OBS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: UNDER TRANSMISSION LINE WEST OF EAST LEVEE ROAD AND 1 MILE NORTH OF ELKHORN BLVD, RIO LINDA.  
 -----Comments-----  
 Distribution: APPROX 600 FEET WEST OF EAST LEVEE ROAD IMMEDIATELY SOUTH OF TWIN TRANSMISSION LINE TOWERS. WITHIN THE NE 1/4 OF THE NE 1/4 OF SECTION 25.  
 Ecological: NORTHERN HARDPAN VERNAL POOL, DOMINATED BY PLAGIOBOTHRYIS STIPITATUS VAR. MICRANTHUS AND HEMIZONIA. CALIFORNIA LINDERIELLA (LINDERIELLA OCCIDENTALIS) HAS ALSO BEEN OBSERVED IN THIS POOL.  
 Threat: MAY HAVE BEEN DISKED IN THE PAST; NO PRESENT DISTURBANCES.  
 General: 50 PLANTS OBSERVED IN 1993. POTENTIAL DISTURBANCE TO SITE IF LANDOWNER SELLS TOPSOIL AND LEVELS THE AREA FOR AGRICULTURE AS NEIGHBORING LANDOWNERS HAVE ALREADY DONE. HABITAT INTACT IN 1997, BUT NO PLANTS SEEN (TOO LATE).  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DOWNINGIA PUSILLA (cont.)

DWARF DOWNINGIA

Element Code: PDCAM060C0

—List Status—

Federal: None

State: None

—NDDB Element Ranks—

Global: G3

State: S3.1

—Other Lists—

CNPS List: 2

R-E-D Code: 1-2-1

Occurrence No. 59      Map Index:26043      —Dates Last Seen—      Lat/Long: 38°42'22" / 121°29'07"      Township: 10N  
Occ Rank: Good      Element: 1993-05-12      UTM: Zone-10 N4285042 E631699      Range: 04E  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 24 Qtr SE  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 28 ft  
Main Source: LEACH, S. 1993 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: ABOUT 0.6 AIR MILE SOUTH OF ELVERTA ROAD JUST WEST OF EAST LEVEE ROAD, WEST OF RIO LINDA.  
—Comments—  
Distribution: VERNAL POOL ON SOUTH SIDE OF GRAVEL ACCESS ROAD TO PRIVATE PROPERTY. WITHIN THE NE 1/4 OF THE SE 1/4 OF SECTION 24.  
Ecological: NORTHERN HARDPAN VERNAL POOL ON SAN JOAQUIN SOILS. ASSOCIATED WITH PLAGIOBOTHRYIS STIPITATUS VAR. MICRANTHUS, ERYNGIUM VASEYI, LASTHENIA GLABERRIMA, RANUNCULUS BONARIENSIS VAR. TRISEPALUS, AND LIMNANTHES DOUGLASII.  
Threat: AGRICULTURE; SITE IS USED FOR A MIXED SPECIES FORAGE CROP (HAY).  
General: OVER 150 PLANTS IN 1993. OWNER HAS INDICATED THAT HE PLANS TO LEVEL THE SITE AND SELL SURFACE MATERIAL TO SAC METRO AIRPORT FOR ON-GOING DEVELOPMENT. CA LINDERIELLA ALSO HERE. NO PLANTS SEEN IN 1997 (TOO LATE), BUT HABITAT WAS INTACT.  
Owner/Manager: PVT

Occurrence No. 60      Map Index:26041      —Dates Last Seen—      Lat/Long: 38°51'30" / 121°18'10"      Township: 12N  
Occ Rank: Excellent      Element: 1990-04-14      UTM: Zone-10 N4302208 E647258      Range: 06E  
Origin: Natural/Native occurrence      Site: 1990-04-14      Precision: SPECIFIC      Section: 28 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 10.1 ac      Elevation: 130 ft  
Main Source: MARTZ, C. 1989 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: BETWEEN HIGHWAY 65 AND INDUSTRIAL BLVD NORTH OF ORCHARD CREEK, 2.2 MILES SOUTH OF LINCOLN.  
—Comments—  
Distribution: MAPPED ABOUT 0.6 AIR MILE SSW OF THE LINCOLN RODEO GROUNDS. WITHIN THE NE 1/4 OF THE SE 1/4 OF SECTION 28 AND THE NW 1/4 OF THE SW 1/4 OF SECTION 27.  
Ecological: NORTHERN CLAYPAN VERNAL POOLS ON SAN JOAQUIN SOIL SERIES AND NORTHERN VOLCANIC MUDFLOW VERNAL POOLS ON EXCHEQUER SERIES SOILS. ASSOCIATED WITH PLAGIOBOTHRYIS STIPITATUS, DOWNINGIA BICORNUTA, LASTHENIA FREMONTII, NAVARRETTIA LEUCOCEPHALA ETC.  
Threat: SITE IS CURRENTLY GRAZED BY CATTLE. GENERAL AREA IS BEING DEVELOPED RAPIDLY.  
General: MORE THAN 1000 PLANTS OBSERVED IN 1989, 237 PLANTS OBSERVED IN 1990. SITE HAS MANY LARGE POOLS, SWALES AND VERNAL FLATS. SAN JOAQUIN SERIES AND MUDFLOW POOLS BOTH PRESENT. AREA SHOULD BE EVALUATED FOR REGIONAL POOL PRESERVE.  
Owner/Manager: PVT

Occurrence No. 61      Map Index:26040      —Dates Last Seen—      Lat/Long: 38°52'30" / 121°23'12"      Township: 12N  
Occ Rank: Unknown      Element: 1993-04-26      UTM: Zone-10 N4303929 E639965      Range: 05E  
Origin: Natural/Native occurrence      Site: 1993-04-26      Precision: SPECIFIC      Section: 23 Qtr SW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 93 ft  
Main Source: HOLLAND, R. 1993 (OBS)  
Quad Summary: PLEASANT GROVE (3812174/528C)\*, SHERIDAN (3812184/528B)  
County Summary: PLACER  
SNA Summary:  
Location: LINCOLN COMMUNICATION ANNEX (USAF) NORTH OF MOORE ROAD, ABOUT 5 AIR MILES WEST OF LINCOLN.  
—Comments—  
Distribution: MAPPED ABOUT 0.75 MILE NNW OF THE INTERSECTION OF DOWD AVENUE AND MOORE ROAD WITHIN THE NE 1/4 OF THE SW 1/4 OF SECTION 23.  
Ecological: GROWING IN SATURATED SOIL IN NORTHERN HARDPAN VERNAL POOL. ASSOCIATED WITH PLAGIOBOTHRYIS BRACTEATUS, ELEOCHARIS MACROSTACHYA, MARSILEA VESTITA, AND PSILOCARPHUS OREGANUS. SOILS ARE A HYDRIC INCLUSION WITHIN COMETA LOAM.  
Threat: CATTLE GRAZING; SITE HAS BEEN LEASED TO THE LINCOLN HIGH SCHOOL FFA.  
General:  
Owner/Manager: DOD-USAF

California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

<i>DOWNINGIA PUSILLA</i> (cont.)			
DWARF DOWNINGIA			
Element Code: FDCAM060C0		-----List Status-----	-----NDDB Element Ranks-----
		Federal: None	Global: G3
		State: None	State: S3.1
		-----Other Lists-----	
		CNPS List: 2	
		R-E-D Code: 1-2-1	

Occurrence No. 62      Map Index:26037      ---Dates Last Seen---      Lat/Long: 38°54'09" / 121°19'03"      Township: 12N  
 Occ Rank: Good      Element: 1990-04-18      UTM: Zone-10 N4307086 E645895      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1990-04-18      Precision: SPECIFIC      Section: 09 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 9.7 ac      Elevation: 140 ft  
 Main Source: MARTZ, C. 1989 (OBS)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: EAST OF LAKESIDE ROAD, ABOUT 1.6 AIR MILES NORTHWEST OF DOWNTOWN LINCOLN.  
 Comments:  
 Distribution: TWO POOLS MAPPED ABOUT 0.5 MILE SOUTHWEST OF CLAYTON WITHIN THE NW 1/4 OF THE SW 1/4 OF SECTION 9.  
 Ecological: NORTHERN HARDPAN VERNAL POOL ON SAN JOAQUIN-COMETA SANDY SOILS. ASSOCIATED WITH ERYNGIUM VASEYI, ELEOCHARIS MACROSTACHYIA, NAVARRETTIA LEUCOCEPHALA, LASTHENIA FREMONTII, RANUNCULUS BONARIENSIS, PLAGIOBOTHRYUS, DOWNINGIA SPP, AND CUSCUTA.  
 Threat: GRAZING, HEAVY DEVELOPMENT PRESSURE ON PARCELS IN THIS GENERAL AREA.  
 General: 200-400 PLANTS OBSERVED IN 1989 BY MARTZ, 36 PLANTS OBSERVED BY MCCARTEN AND BITTMAN IN 1990. THIS AREA SUPPORTS A LARGE CONCENTRATION OF POOLS, MOSTLY ON SAN JOAQUIN SERIES SOILS. FAIR DIVERSITY OF POOL SIZES AND TYPES.  
 Owner/Manager: PVT

Occurrence No. 63      Map Index:23872      ---Dates Last Seen---      Lat/Long: 38°54'56" / 121°19'06"      Township: 12N  
 Occ Rank: Good      Element: 1989-04-20      UTM: Zone-10 N4308529 E645798      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1989-04-20      Precision: SPECIFIC      Section: 04 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 155 ft  
 Main Source: MARTZ, C. 1989 (OBS)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: ABOUT 2.2 AIR MILES NORTHWEST OF DOWNTOWN LINCOLN, 1.2 ROAD MILES SOUTH OF WISE ROAD/HWY 65 INTERSECTION.  
 Comments:  
 Distribution: LOCATED 700' EAST OF HWY 65 AND 0.7 MILE NORTH OF ENTRANCE TO CLAY PIT. WITHIN THE SW 1/4 OF THE SW 1/4 OF SECTION 4.  
 Ecological: NORTHERN VOLCANIC MUDFLOW VERNAL POOL. ASSOCIATED WITH PLAGIOBOTHRYUS STIPITATUS, DOWNINGIA BICORNUTA, LASTHENIA FREMONTII, NAVARRETTIA LEUCOCEPHALA, PULULARIA AMERICANA, RANUNCULUS BONARIENSIS, GRATIOLA HETEROSEPALA, AND G. EBRACTEATA.  
 Threat: AREA GRAZED. LINCOLN AREA IS GROWING RAPIDLY; PROPERTY FOR SALE.  
 General: THIS IS A FAIRLY GOOD SITE WITH MORE THAN 50 POOLS AND ASSOCIATED SWALES. SOME POOLS HAVE FORMED BEHIND OLD ROCK WALLS THAT TRAVERSE THE SITE; THESE TEND TO BE LARGER AND DEEPER THAN TYPICAL FOR MEHRTEN FORMATION POOLS.  
 Owner/Manager: PVT

Occurrence No. 64      Map Index:26039      ---Dates Last Seen---      Lat/Long: 38°56'12" / 121°22'14"      Township: 13N  
 Occ Rank: Good      Element: 1990-04-18      UTM: Zone-10 N4310813 E641220      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1990-04-18      Precision: NON-SPECIFIC      Section: 36 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 110 ft  
 Main Source: MCCARTEN, N. & C. ROGERS 1990 (OBS)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: VIC OF LINCOLN. 0.25 MILE NORTH OF COON CREEK, 0.25 MILE WEST OF DOWD ROAD, 1 MILE WEST OF HWY 65; SOUTH OF SHERIDAN.  
 Comments:  
 Distribution: SPECIES OCCURS IN SIX VERNAL POOLS WITHIN THE SE 1/4 OF THE NW 1/4 OF SECTION 36.  
 Ecological: NORTHERN HARDPAN VERNAL POOLS DOMINATED BY DOWNINGIA BICORNUTA, RANUNCULUS BONARIENSIS VAR. TRISEPALUS, LYTHRUM HYSSOPIFOLIA, AND LASTHENIA FREMONTII.  
 Threat: HEAVY CATTLE GRAZING.  
 General: 147 PLANTS OBSERVED IN 1990.  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DOWNINGIA PUSILLA (cont.) DWARF DOWNINGIA Element Code: PDCAM060C0	-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
	Federal: None	Global: G3	CNPS List: 2
	State: None	State: S3.1	R-E-D Code: 1-2-1

Occurrence No. 65      Map Index: 26038      ---Dates Last Seen---      Lat/Long: 38°55'11" / 121°20'46"  
 Occ Rank: Poor      Element: 1991-04-23      UTM: Zone-10 N4308951 E643387      Township: 12N  
 Origin: Natural/Native occurrence      Site: 1991-04-23      Precision: NON-SPECIFIC      Range: 06E  
 Presence: Presumed Extant      Symbol Type: POINT      Section: 06 Qtr NE  
 Trend: Unknown      Radius: 1/5 mile      Meridian: M  
 Elevation: 125 ft  
 Main Source: DAINS, V. 1991 (OBS)  
 Quad Summary: LINCOLN (3812183/528A)  
 County Summary: PLACER  
 SNA Summary:  
 Location: 0.5 MILE SOUTH OF WISE ROAD, WEST OF HWY 65, NORTHWEST OF LINCOLN.  
 Comments:  
 Distribution: SWALE WITHIN THE NORTHWEST CORNER OF PASTURE. SW 1/4 OF NE 1/4 OF SECTION 6.  
 Ecological: WETLAND SWALE WITH 70% BARE GROUND/THATCH. ASSOCIATED WITH PLAGIOBOTHRYIS BRACATEATA AND ERNGIUM VASEYI. SWALE CONTINUES OFF SITE.  
 Threat: SITE IS GRAZED BY CATTLE AND HAS BEEN LEVELED AND DISKED IN THE PAST. SITE MAY BE DEVELOPED IN THE FUTURE.  
 General: 100 PLANTS OBSERVED IN 1991 LOCATION OF SITE MAKES IT EASY TO AVOID DURING DEVELOPMENT. HOWEVER, RELEASE FROM GRAZING MAY ALLOW OTHER SEASONAL WETLAND PLANTS TO DOMINATE, THEREBY MAKING SITE UNSUITABLE FOR DOWNINGIA PUSILLA.  
 Owner/Manager: PVT

Occurrence No. 97      Map Index: 43402      ---Dates Last Seen---      Lat/Long: 38°47'32" / 121°21'52"  
 Occ Rank: Good      Element: 2000-04-12      UTM: Zone-10 N4294783 E642042      Township: 11N  
 Origin: Natural/Native occurrence      Site: 2000-04-12      Precision: SPECIFIC      Range: 05E  
 Presence: Presumed Extant      Symbol Type: POLYGON      Section: 24 Qtr NE  
 Trend: Unknown      Area: 1.8 ac      Meridian: M  
 Elevation: 95 ft  
 Main Source: ROBISON, R. 2000 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary:  
 Location: JUST WEST OF CONFLUENCE OF KASEBERG CREEK AND PLEASANT GROVE CREEK, NORTHWEST OF ROSEVILLE.  
 Comments:  
 Distribution: MAPPED IN SINGLE POOL ABOUT 0.35 MILE WEST OF ELBOW IN FIDDYMENT ROAD. WITHIN THE NW 1/4 NE 1/4 SECTION 24.  
 Ecological: VERNAL POOLS DOMINATED BY PLAGIOBOTHRYIS STIPITATUS, POGOGYNE ZIZIPHOROIDEIS, PSILOCARPUS BREVISSIMUS, NAVARETTIA LEUCOCEPHALA, AND HORDEUM MURINUM SSP. GOSSONEANUM.  
 Threat: SITE IS GRAZED AND RECEIVES RUNOFF FROM ADJACENT HOUSING. AREA IS SLATED FOR DEVELOPMENT.  
 General: UNKNOWN NUMBER OF PLANTS OBSERVED IN SINGLE POOL IN 2000.  
 Owner/Manager: PVT

Occurrence No. 98      Map Index: 43406      ---Dates Last Seen---      Lat/Long: 38°47'30" / 121°22'29"  
 Occ Rank: Good      Element: 2000-04-12      UTM: Zone-10 N4294709 E641146      Township: 11N  
 Origin: Natural/Native occurrence      Site: 2000-04-12      Precision: SPECIFIC      Range: 05E  
 Presence: Presumed Extant      Symbol Type: POLYGON      Section: 24 Qtr NW  
 Trend: Unknown      Area: 7.1 ac      Meridian: M  
 Elevation: 90 ft  
 Main Source: ROBISON, R. 2000 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)\*, PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: ABOUT 0.7 MILE WEST OF CONFLUENCE OF KASEBERG CREEK AND PLEASANT GROVE CREEK, NORTHWEST OF ROSEVILLE.  
 Comments:  
 Distribution: FOUR POOLS MAPPED WITHIN THREE POLYGONS AT CNDDB, ABOUT 1 MILE WEST OF ELBOW IN FIDDYMENT ROAD. POOLS ARE WITHIN THE W 1/2 NW 1/4 SECTION 24.  
 Ecological: VERNAL POOLS DOMINATED BY PLAGIOBOTHRYIS STIPITATUS, POGOGYNE ZIZIPHOROIDEIS, PSILOCARPUS BREVISSIMUS, NAVARETTIA LEUCOCEPHALA, AND HORDEUM MURINUM SSP. GOSSONEANUM.  
 Threat: SITE IS GRAZED AND RECEIVES RUNOFF FROM ADJACENT HOUSING. AREA IS SLATED FOR DEVELOPMENT.  
 General: UNKNOWN NUMBER OF PLANTS OBSERVED IN FOUR POOLS IN 2000.  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DOWNINGIA PUSILLA (cont.)  
DWARF DOWNINGIA  
Element Code: PDCAM060CO

-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
Federal: None	Global: G3	CNPS List: 2
State: None	State: S3.1	R-E-D Code: 1-2-1

Occurrence No. 99      Map Index:43407      ---Dates Last Seen---      Lat/Long: 38°46'54" / 121°22'24"      Township: 11N  
 Occ Rank: Good      Element: 2000-04-12      UTM: Zone-10 N4293612 E641286      Range: 05E  
 Origin: Natural/Native occurrence      Site: 2000-04-12      Precision: SPECIFIC      Section: 24 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 3.8 ac      Elevation: 100 ft  
 Main Source: ROBISON, R. 2000 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)\*, PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: ABOUT 1 MILE SOUTHWEST OF CONFLUENCE OF KASEBERG CREEK AND PLEASANT GROVE CREEK, NORTHWEST OF ROSEVILLE.  
 -----Comments-----  
 Distribution: TWO POOLS MAPPED AT CNDDB, JUST NORTH OF PHILIP ROAD ABOUT 0.9 MILE WEST OF FIDDYMENT ROAD. POOLS ARE WITHIN THE SW 1/4 SW 1/4 SECTION 24.  
 Ecological: VERNAL POOLS DOMINATED BY PLAGIOBOTHRYIS STIPITATUS, POGOGYNE ZIZIPHOROIDES, PSILOCARPUS BREVISSIMUS, NAVARETTIA LEUCOCEPHALA, AND HORDEUM MURINUM SSP. GOSSONEANUM.  
 Threat: SITE IS GRAZED AND RECEIVES RUNOFF FROM ADJACENT HOUSING. AREA IS SLATED FOR DEVELOPMENT.  
 General: UNKNOWN NUMBER OF PLANTS OBSERVED IN TWO POOLS IN 2000.  
 Owner/Manager: PVT

Occurrence No. 100      Map Index:43408      ---Dates Last Seen---      Lat/Long: 38°47'37" / 121°23'29"      Township: 11N  
 Occ Rank: Good      Element: 2000-04-12      UTM: Zone-10 N4294907 E639688      Range: 05E  
 Origin: Natural/Native occurrence      Site: 2000-04-12      Precision: SPECIFIC      Section: 23 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 8.5 ac      Elevation: 90 ft  
 Main Source: ROBISON, R. 2000 (OBS)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: SOUTH SIDE OF PHILLIP ROAD ABOUT 3 MILES EAST OF BREWER ROAD, NORTHWEST OF ROSEVILLE.  
 -----Comments-----  
 Distribution: FIVE POOLS MAPPED IN THREE POLYGONS AT CNDDB, JUST SOUTH OF PHILIP ROAD. POOLS ARE WITHIN THE NW 1/4 NW 1/4 SECTION 23 AND THE NE CORNER OF SECTION 22.  
 Ecological: VERNAL POOLS DOMINATED BY PLAGIOBOTHRYIS STIPITATUS, POGOGYNE ZIZIPHOROIDES, PSILOCARPUS BREVISSIMUS, NAVARETTIA LEUCOCEPHALA, AND HORDEUM MURINUM SSP. GOSSONEANUM.  
 Threat: SITE IS GRAZED AND RECEIVES RUNOFF FROM ADJACENT HOUSING. AREA IS SLATED FOR DEVELOPMENT.  
 General: UNKNOWN NUMBER OF PLANTS OBSERVED IN FIVE POOLS IN 2000.  
 Owner/Manager: PVT

Occurrence No. 101      Map Index:43409      ---Dates Last Seen---      Lat/Long: 38°47'04" / 121°23'06"      Township: 11N  
 Occ Rank: Good      Element: 2000-04-12      UTM: Zone-10 N4293888 E640255      Range: 05E  
 Origin: Natural/Native occurrence      Site: 2000-04-12      Precision: SPECIFIC      Section: 23 Qtr S  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 7.1 ac      Elevation: 100 ft  
 Main Source: ROBISON, R. 2000 (OBS)  
 Quad Summary: PLEASANT GROVE (3812174/528C)  
 County Summary: PLACER  
 SNA Summary:  
 Location: SOUTH OF PHILLIP ROAD ABOUT 3.5 MILES EAST OF BREWER ROAD, NORTHWEST OF ROSEVILLE.  
 -----Comments-----  
 Distribution: FOUR POOLS MAPPED IN THREE POLYGONS AT CNDDB, ABOUT 0.5 MILE SOUTH OF PHILIP ROAD. POOLS ARE NEAR THE CENTER OF THE S 1/2 SECTION 23.  
 Ecological: VERNAL POOLS DOMINATED BY PLAGIOBOTHRYIS STIPITATUS, POGOGYNE ZIZIPHOROIDES, PSILOCARPUS BREVISSIMUS, NAVARETTIA LEUCOCEPHALA, AND HORDEUM MURINUM SSP. GOSSONEANUM.  
 Threat: SITE IS GRAZED AND RECEIVES RUNOFF FROM ADJACENT HOUSING. AREA IS SLATED FOR DEVELOPMENT.  
 General: UNKNOWN NUMBER OF PLANTS OBSERVED IN FOUR POOLS IN 2000.  
 Owner/Manager: PVT



California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

DOWNINGIA PUSILLA (cont.)  
DWARF DOWNINGIA  
Element Code: PDCAM060C0

List Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CNPS List: 2
State: None	State: S3.1	R-E-D Code: 1-2-1

Occurrence No. 102      Map Index: 43416      —Dates Last Seen—      Lat/Long: 38°46'41" / 121°22'48"      Township: 11N  
Occ Rank: Good      Element: 2000-04-12      UTM: Zone-10 N4293192 E640702      Range: 05E  
Origin: Natural/Native occurrence      Site: 2000-04-12      Precision: SPECIFIC      Section: 26 Qtr NE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 1.9 ac      Elevation: 100 ft  
Main Source: ROBISON, R. 2000 (OBS)  
Quad Summary: PLEASANT GROVE (3812174/528C)  
County Summary: PLACER  
SNA Summary:  
Location: SOUTHWEST OF PHILLIP ROAD; ABOUT 3.7 MI EAST OF BREWER RD AND 1.8 MILES NORTH OF BASE LINE RD, NORTHWEST OF ROSEVILLE.

—Comments—  
Distribution: SINGLE POOL MAPPED AT CNDDB, ABOUT 0.3 MILE SOUTHWEST OF ELBOW PHILIP ROAD. POOL IS NEAR THE CENTER OF THE N 1/2 NE 1/4 SECTION 26.  
Ecological: VERNAL POOLS DOMINATED BY FLAGIOBOTHRYIS STIPITATUS, POGOGYNE ZIZIPHOROIDES, PSILOCARPUS BREVISSIMUS, NAVARETTIA LEUCOCEPHALA, AND HORDEUM MURINUM SSP. GOSSONEANUM.  
Threat: SITE IS GRAZED AND RECEIVES RUNOFF FROM ADJACENT HOUSING. AREA IS SLATED FOR DEVELOPMENT.  
General: UNKNOWN NUMBER OF PLANTS OBSERVED IN POOL IN 2000.  
Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

LEGENERE LIMOSA			
LEGENERE	-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
Element Code: PDCAM0C010	Federal: None State: None	Global: G2 State: S2.2	CNPS List: 1B R-E-D Code: 2-3-3

-----Habitat Associations-----  
General: VERNAL POOLS. MANY HISTORICAL OCCURRENCES ARE EXTIRPATED.  
Micro: IN BEDS OF VERNAL POOLS. 1-880M.

Occurrence No. 11      Map Index:11680      ---Dates Last Seen---      Lat/Long: 38°48'42" / 121°17'39"      Township: 11N  
Occ Rank: Unknown      Element: 1984-04-XX      UTM: Zone-10 N4297051 E648112      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 10 Qtr SW  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Decreasing      Area: 58.7 ac      Elevation: 120 ft  
Main Source: DAINS, V. 1983 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary:  
Location: N TRIBUTARY OF PLEASANT GROVE CR, N OF PLEASANT GROVE CR, S OF PLACER BLVD, E OF HWY 65.  
-----Comments-----  
Distribution:  
Ecological: VERNAL POOL AREA ON FLOODPLAIN OF INTERMITTENT STREAM.  
Threat: PART OF AREA PLANNED FOR INDUSTRIAL PARK USE (AREA GRADED IN 1983). GRAVEL PIT TO SOUTH.  
General: ABOUT 200 PLANTS IN 1984. NONE FOUND IN 1997 (TOO LATE IN SEASON). THE NORTHERN POOLS WHICH WERE MAPPED HERE IN 1984 APPEAR TO BE EXTIRPATED. S POOLS UNDISTURBED IN 1997.  
Owner/Manager: PVT

Occurrence No. 14      Map Index:11739      ---Dates Last Seen---      Lat/Long: 38°48'42" / 121°16'01"      Township: 11N  
Occ Rank: None      Element: 1984-04-05      UTM: Zone-10 N4297096 E650474      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: NON-SPECIFIC      Section: 11 Qtr SE  
Presence: Extirpated      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 1/5 mile      Elevation: 150 ft  
Main Source: HOLLAND, R. 1984 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary: Upper Pleasant Grove Creek  
Location: FLOODPLAIN OF PLEASANT GROVE CREEK, APPROX 2.2 AIRMI E OF JCT PLACER BLVD & SPRR TRACKS.  
-----Comments-----  
Distribution: WHEN VISITED IN 1997, WHAT APPEARS TO BE DEDICATED OPEN SPACE WAS SEEN JUST TO THE E OF MAPPED LOCATION FOR THIS SITE. FUTURE SURVEYS SHOULD TARGET THIS AREA.  
Ecological: VERNAL POOL AREA IN FLOODPLAIN OF INTERMITTENT STREAM. ASSOCIATED WITH RANUNCULUS BONARIENSIS TRISEPALUS.  
Threat:  
General: ABOUT 100 PLANTS IN 1984. WINDSHIELD SURVEY CONDUCTED IN 1997 TO CONFIRM PRESENCE OR ABSENCE OF HABITAT; IF MAPS ARE ACCURATE, THIS SITE IS NOW UNDER THE PAVEMENT AT DEVON DR, FARRIER RD & RACHEL CT IN THE STANFORD RANCH SUBDIVISION.  
Owner/Manager: PVT

Occurrence No. 32      Map Index:30202      ---Dates Last Seen---      Lat/Long: 38°42'40" / 121°24'53"      Township: 10N  
Occ Rank: None      Element: 1991-05-26      UTM: Zone-10 N4285699 E637847      Range: 05E  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 22 Qtr NE  
Presence: Extirpated      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 75 ft  
Main Source: DAINS, V. 1991 (OBS)  
Quad Summary: RIO LINDA (3812164/512B)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: SOUTH OF ELVERTA ROAD AND 0.5 MILE SOUTHWEST OF GIBSON RANCH, RIO LINDA.  
-----Comments-----  
Distribution: MAPPED IN SEASONAL POND 0.2 MILE SOUTH OF ELVERTA ROAD AND 0.75 MILE EAST OF 16TH STREET. NEAR THE CENTER OF THE NE 1/4 OF SECTION 22.  
Ecological: ARTIFICIAL POND EXCAVATED WITHIN A VERNAL POOL LANDSCAPE. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA AND LASTHENIA GLABERRIMA IN ADDITION TO MANY WEEDY SPECIES. LARGELY OPEN GROUND.  
Threat: DEVELOPMENT IS PLANNED FOR THIS SITE.  
General: 150 PLANTS SEEN IN 1991. WETLAND MITIGATION FOR THIS PROPERTY COULD INCLUDE THIS POPULATION. SITE WAS A SUBDIVISION IN 1997; FORMER POPULATION WAS UNDER INTERSECTION OF RANCH RIVER DR AND COLONNADE WAY.  
Owner/Manager: PVT

California Department of Fish and Game  
 Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

LEGENERE LIMOSA (cont.)			
LEGENERE	-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
Element Code: PDCAMOC010	Federal: None	Global: G2	CNPS List: 1B
	State: None	State: S2.2	R-E-D Code: 2-3-3

Occurrence No. 33      Map Index: 30203      --Dates Last Seen--      Lat/Long: 38°40'04" / 121°26'39"      Township: 09N  
 Occ Rank: Fair      Element: 1991-05-11      UTM: Zone-10 N4280850 E635351      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 10 Qtr NE  
 Presence: Presumed Extant      Symbol Type: POLYGON      Area: 5.8 ac      Meridian: M  
 Trend: Unknown      Elevation: 35 ft  
 Main Source: WITHAM, C. 1991 (OBS)  
 Quad Summary: RIO LINDA (3612164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: EAST OF ROSE STREET AND SOUTH OF MAGPIE DRAIN, ROBLA, JUST NORTH OF SACRAMENTO.  
 Comments:  
 Distribution: MAPPED ABOUT 0.4 MILE NNE OF WHERE MARYSVILLE ROAD AND RIO LINDA BLVD JOIN. WITHIN THE NW 1/4 OF THE NE 1/4 OF SECTION 10.  
 Ecological: SEASONAL WETLAND DOMINATED BY RANUNCULUS BONARIENSIS TRISEPALUS, PLAGIOBOTHRYUS BRACTEATUS, LASTHENIA GLABERRIMA, AND ELEOCHARIS MACROSTACHYA. FRITILLARIA AGRESTIS IS FOUND IN NEARBY GRASSLAND.  
 Threat: SITE TO BE DEVELOPED, WETLAND DISKED ANNUALLY FOR FIRE BREAK; "DIRT-BIKE" USE AND REFUSE DUMPING ALSO IMPACT THIS SITE.  
 General: 1000-10,000 PLANTS OBSERVED IN 1991. PLANTS ROBUST, UP TO 6" TALL. PORTION OF THIS SITE WILL NOT BE DEVELOPED. NO PLANTS SEEN IN 1997 (PROB TOO LATE). HABITAT STILL EXISTS.  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

NAVARRETTIA MYERSII SSP MYERSII  
PINCUSHION NAVARRETTIA  
Element Code: PDPLM0C0X1

List Status	NDDB Element Ranks	Other Lists
Federal: None	Global: GIT1	CNPS List: 1B
State: None	State: S1.1	R-E-D Code: 3-3-3

Habitat Associations

General: VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND.  
Micro: CLAY SOILS WITHIN NONNATIVE GRASSLAND. 20-330M.

Occurrence No. 3	Map Index: 11841	—Dates Last Seen—	Lat/Long: 38°39'20" / 121°12'51"	Township: 09N
Occ Rank: Good		Element: 1994-04-19	UTM: Zone-10 N4279852 E655405	Range: 07E
Origin: Natural/Native occurrence		Site: 1994-04-19	Precision: SPECIFIC	Section: XX Qtr XX
Presence: Presumed Extant			Symbol Type: POLYGON	Meridian: M
Trend: Unknown			Area: 7.1 ac	Elevation: 270 ft
Main Source: HORENSTEIN, J. 1994 (OBS)				
Quad Summary: FOLSOM (3812162/511B)				
County Summary: SACRAMENTO				
SNA Summary: Phoenix Field				
Location: CDFG PHOENIX FIELD ECOLOGICAL RESERVE, ABOUT 0.5 MILE EAST OF HAZEL AVE AND NORTH OF SUNSET AVE, FAIR OAKS.				
—Comments—				
Distribution: PLANTS FOUND IN THE MORE SHALLOW, DRY POOLS AT THIS SITE, GROWING ON OR CLOSE TO SIDE SLOPE OF POOLS.				
Ecological: ASSOCIATED WITH LASTHENIA FREMONTII, POGOGYNE ZIZYPHROIDES, PSILOCARPHUS SP., ERODIUM BOTRYS, JUNCUS CAPITATUS, BRODIAEA MINOR, ERYNGIUM VASEYI, DESCHAMPSIA DANTHONCIDES. ANOTHER RARE PLANT: ORCUTTIA VISCIDA ALSO HERE.				
Threat: IRRIGATION RUNOFF AND HORTICULTURAL ESCAPES FROM SURROUNDING BACKYARDS THREATEN.				
General: AT LEAST 1000 PLANTS IN 1994.				
Owner/Manager: DFG-PHOENIX FIELD ER				

California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

*CORDYLANTHUS MOLLIS SSP HISPIDUS*

HISPID BIRD'S-BEAK

Element Code: PDCROJ0D1

-----List Status-----

Federal: None

State: None

-----NDDDB Element Ranks-----

Global: G2T2

State: S2.1

-----Other Lists-----

CNPS List: 1B

R-E-D Code: 2-3-3

-----Habitat Associations-----

General: MEADOWS, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.

Micro: IN DAMP ALKALINE SOILS, ESPECIALLY IN ALKALINE MEADOWS AND ALKALI SINKS WITH DISTICHLIS. 10-155M.

Occurrence No. 11      Map Index: 11763      ---Dates Last Seen---      Lat/Long: 38°48'48" / 121°15'32"      Township: 11N  
Occ Rank: Good      Element: 1991-10-16      UTM: Zone-10 N4297308 E651160      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 12 Qtr SW  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 25.4 ac      Elevation: 150 ft  
Main Source: HOLLAND & DAINS 1982 (OBS)  
Quad Summary: ROSEVILLE (3812173/528D)  
County Summary: PLACER  
SNA Summary: Upper Pleasant Grove Creek  
Location: APPROXIMATELY 4 MILES NORTHEAST OF ROSEVILLE.

-----Comments-----

Distribution: STANFORD RANCH ALKALI SEEP PRESERVE, SPRING VALLEY. SITE IS NEAR JUNCTION OF PARK DRIVE AND STANFORD RANCH ROAD.

Ecological: ALKALI MEADOW WITH SCIRPUS, AND DISTICHLIS SPICATA. AREA SURROUNDED BY ALMO VARIANT CLAY, BUT SOIL AT SITE IS UNCLASSIFIED.

Threat: GRAZING REMOVED BY 1991. FILL HAD BEEN DUMPED ON SITE IN 1989; SUBSEQUENTLY REMOVED TO RESOLVE WETLANDS VIOLATIONS.

General: OVER 10,000 PLANTS SEEN IN 1985, ABOUT 3500 SEEN IN 1989, 2500 IN 1991. ACCORDING TO DAINS, DECLINE IN POPULATION PROBABLY DUE TO WEATHER, NOT MANAGEMENT. SITE FENCED, HABITAT LOOKED GOOD IN LATE SEASON (JUNE) 1997 WINDSHIELD SURVEY.

Owner/Manager: PVT

CNDDB Report for the Northwest Rocklin Annexation Project

GRATIOLA HETEROSEPALA

BOGGS LAKE HEDGE-HYSSOP  
Element Code: PDSCR0R060

-----List Status-----	-----NDDB Element Ranks-----	-----Other Lists-----
Federal: None	Global: G3	CNPS List: 1B
State: Endangered	State: S3.1	R-E-D Code: 1-2-2

-----Habitat Associations-----

General: MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.

Micro: CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 5-2400M.

Occurrence No. 3      Map Index:11397      ---Dates Last Seen---      Lat/Long: 38°42'20" / 121°26'17"      Township: 10N  
 Occ Rank: None      Element: XXXX-XX-XX      UTM: Zone-10 N4285053 E635817      Range: 05E  
 Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: NON-SPECIFIC      Section: 21 Qtr NW  
 Presence: Possibly Extirpated      Symbol Type: POINT      Meridian: M  
 Trend: Decreasing      Radius: 1 mile      Elevation: 55 ft  
 Main Source: BACIGALUPI, R. 1977 (PERS)  
 Quad Summary: RIO LINDA (3812164/512B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: SHALLOW VERNAL POOLS JUST N OF & ADJACENT TO U ST. AT NE BORDER OF RIO LINDA.  
 -----Comments-----  
 Distribution: FOUND IN SEVERAL POOLS.  
 Ecological: SHALLOW WATER VERNAL POOLS ON REDDISH ADOBE SOIL.  
 Threat:  
 General: PLANT SEARCHED FOR IN 1976 BUT NOT FOUND, IN 1977 SITE HAD BEEN PLOWED, HARROWED AND LEVELED FOR A HOUSING TRACT. SURROUNDING AREA HAS BEEN DEVELOPED. SOME HABITAT REMAINED IN 1997, MORE SURVEYS NEEDED.  
 Owner/Manager: PVT

Occurrence No. 15      Map Index:11792      ---Dates Last Seen---      Lat/Long: 38°45'40" / 121°14'36"      Township: 11N  
 Occ Rank: Good      Element: 1986-04-14      UTM: Zone-10 N4291525 E652632      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1986-04-14      Precision: NON-SPECIFIC      Section: 31 Qtr NW  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 290 ft  
 Main Source: JOKERST, J. 1986 (OBS)  
 Quad Summary: ROCKLIN (3812172/527C)  
 County Summary: PLACER  
 SNA Summary: Roseville Eastern Vernal Pools  
 Location: JOHNSON RANCH, APPROX 0.75 MI S OF HWY 80 BETW ROCKLIN & ROSEVILLE.  
 -----Comments-----  
 Distribution:  
 Ecological: NORTHERN MUDFLOW VERNAL POOL IN OPEN ANNUAL GRASSLAND NEAR EDGE OF OAK WOODLAND. G. EBRACTEATA ALSO FOUND IN DEEPER VERNAL POOLS IN THE AREA.  
 Threat: LAND USE FOR LIVESTOCK.  
 General: MORE THAN 500 PLANTS.  
 Owner/Manager: PVT

Occurrence No. 16      Map Index:11749      ---Dates Last Seen---      Lat/Long: 38°46'02" / 121°15'45"      Township: 11N  
 Occ Rank: Good      Element: 1987-04-22      UTM: Zone-10 N4292180 E650945      Range: 06E  
 Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 25 Qtr SW  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 6.4 ac      Elevation: 230 ft  
 Main Source: STROMBERG, L. 1987 (OBS)  
 Quad Summary: ROSEVILLE (3812173/528D)  
 County Summary: PLACER  
 SNA Summary: Roseville Northern Vernal Pools  
 Location: N OF ROSEVILLE, W OF ANTELOPE CREEK, WSW OF ROCKLIN.  
 -----Comments-----  
 Distribution:  
 Ecological: NORTHERN HARDPAN VERNAL POOL ON EXCHEQUER VERY STONY LOAM SOIL. ASSOCIATED VEGETATION INCLUDES ERYNGIUM VASEYI, ALLOCARYA STIPATATA MICRANTHA AND GRATIOLA EBRACTEATA.  
 Threat: AREA GRAZED AND PROPOSED FOR REGIONAL SHOPPING CENTER.  
 General: OVER 40 PLANTS IN 2 SUBPOPULATIONS IN 1987. DEVELOPMENT IMMINENT IN 1997; ROSEVILLE BLVD EXPANSION HAS/WILL PROBABLY WIPE OUT MOST OF THIS OCCURRENCE UNLESS SET ASIDE.  
 Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

GRATIOLA HETEROSEPALA (cont.)  
BOGGS LAKE HEDGE-HYSSOP  
Element Code: PDSCROR060

List Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CNPS List: 1B
State: Endangered	State: S3.1	R-E-D Code: 1-2-2

Occurrence No. 31      Map Index: 23872      --Dates Last Seen--      Lat/Long: 38°54'56" / 121°19'06"  
Occ Rank: Good      Element: 1989-04-20      UTM: Zone-10 N4308529 E645798      Township: 12N  
Origin: Natural/Native occurrence      Site: 1989-04-20      Precision: SPECIFIC      Range: 06E  
Presence: Presumed Extant      Symbol Type: POINT      Section: 04 Qtr SW  
Trend: Unknown      Radius: 80 meters      Meridian: M  
Elevation: 155 ft  
Main Source: MARTZ, C. 1989 (OBS)  
Quad Summary: LINCOLN (3812183/528A)  
County Summary: PLACER  
SNA Summary:  
Location: APPROX 2.2 AIRMI NW OF DOWNTOWN LINCOLN, 1.2 ROAD MILES S OF WISE ROAD INTERSECTION, 0.7 MI N OF ENTRANCE TO CLAY PIT.

Comments

Distribution: 700 FT E OF HWY 65.  
Ecological: ASSOCIATED WITH PLAGIOBOTHRYIS STIPITATUS STIPITATUS, DOWNINGIA BICORNUTA, LASTHENIA FREMONTII, G. EBRACTEATA, NAVARRETTIA LEUCOCEPHALA, AND DOWNINGIA PUSILLA (ALSO RARE).  
Threat: AREA GRAZED. LINCOLN AREA GROWING RAPIDLY; PROPERTY FOR SALE IN 1989.  
General: FEWER THAN 200 PLANTS IN 1989.  
Owner/Manager: PVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

SAGITTARIA SANFORDII			
SANFORD'S ARROWHEAD			
Element Code: PMALI040Q0	-----List Status-----	NDDB Element Ranks-----	Other Lists-----
	Federal: None	Global: G3	CNPS List: 1B
	State: None	State: S3.2	R-E-D Code: 2-2-3

-----Habitat Associations-----  
General: MARSHES AND SWAMPS.  
Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. 0-610M.

Occurrence No. 46      Map Index:30124      ---Dates Last Seen---      Lat/Long: 38°42'58" / 121°18'55"      Township: 10N  
Occ Rank: Fair      Element: 1997-06-18      UTM: Zone-10 N4286415 E646475      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 15 Qtr SW  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 16.9 ac      Elevation: 150 ft  
Main Source: NORTON, K. 1993 (MAP)  
Quad Summary: CITRUS HEIGHTS (3812163/512A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: EAST SIDE OF ROSEVILLE ROAD ABOUT 0.9 MILE FROM ANTELOPE ROAD, ANTELOPE.  
-----Comments-----  
Distribution: TWO COLONIES MAPPED BY NORTON IN 1993 IN DRAINAGES BETWEEN ROSEVILLE ROAD AND VILLAVIEW DRIVE AND NORTH OF  
OUTLOOK DRIVE ONLY THE SOUTH COLONY REMAINING IN 1997.  
Ecological: UNLINED +/- NATURAL CHANNEL WITH SALIX AND TYPHA. SAGITTARIA DOMINATES MUCH OF THIS SHORT WATERCOURSE.  
Threat: SITE SURROUNDED BY NEW DEVELOPMENT. NORTH COLONY OBLITERATED BY EARTHMOVING EQUIPMENT.  
General: 1000'S OF PLANTS OBSERVED IN 1997. THIS SMALL SECTION OF HABITAT APPEARS TO BE SET ASIDE BY THE CURRENT  
DEVELOPERS. CHANNEL IS MARKED AND EQUIPEMENT APPEARS TO AVOID IMPACTING AREA.  
Owner/Manager: UNKNOWN

Occurrence No. 49      Map Index:37753      ---Dates Last Seen---      Lat/Long: 38°43'20" / 121°18'35"      Township: 10N  
Occ Rank: Good      Element: 1997-06-18      UTM: Zone-10 N4287089 E646946      Range: 06E  
Origin: Natural/Native occurrence      Site: 1997-06-18      Precision: SPECIFIC      Section: 15 Qtr NW  
Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
Trend: Unknown      Radius: 80 meters      Elevation: 150 ft  
Main Source: NOSAL, T. ET AL 1997 (OBS)  
Quad Summary: CITRUS HEIGHTS (3812163/512A)  
County Summary: PLACER, SACRAMENTO  
SNA Summary:  
Location: ROSEVILLE ROAD AT WHYTE AVE, JUST SOUTH OF SAC/PLA COUNTY LINE, ANTELOPE.  
-----Comments-----  
Distribution: WEST OF ROSEVILLE ROAD IN CHANNEL BETWEEN ROAD AND RR TRACKS. NEAR CENTER OF SECTION.  
Ecological: FRESHWATER MASH WITH TYPHA.  
Threat:  
General: ABOUT 1000 PLANTS OBSERVED IN 1997. MOST PLANTS OCCUR WITHIN TWO 10X10 OPENINGS WITHIN THICK TYPHA STAND.  
SITE APPEARS TO BE UNMAINTAINED CHANNEL, FEW VISITORS. NO OBVIOUS THREATS.  
Owner/Manager: UNKNOWN

Occurrence No. 50      Map Index:37757      ---Dates Last Seen---      Lat/Long: 38°42'26" / 121°15'40"      Township: 10N  
Occ Rank: Excellent      Element: 1994-07-21      UTM: Zone-10 N4285512 E651208      Range: 06E  
Origin: Natural/Native occurrence      Site: 1994-07-21      Precision: SPECIFIC      Section: 24 Qtr SE  
Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
Trend: Unknown      Area: 21.9 ac      Elevation: 180 ft  
Main Source: WYMER, N. 1994 (OBS)  
Quad Summary: CITRUS HEIGHTS (3812163/512A)  
County Summary: SACRAMENTO  
SNA Summary:  
Location: CITRUS HEIGHTS; ALONG CREEK JUST EAST OF FAIR OAKS BLVD BETWEEN OAK BLVD AND OLD AUBURN ROAD.  
-----Comments-----  
Distribution: MAPPED BETWEEN VILLA OAKS AND OLD AUBURN ROAD ALONG SUNRISE CREEK.  
Ecological: DRAINAGE CHANNEL WITH SLOW-MOVING WATER. ASSOCIATED WITH ECHINOCHLOA CRUSGALLI, POLYGONUM LAPATHIFOLIUM,  
PASPALUM DILATUM, CYPERUS ERAGROSTIS, AND SORGHUM HALAPENSE.  
Threat: HERBICIDE SPRAYING AND CHANNEL MAINTENANCE.  
General: NUMEROUS PLANTS SEEN IN JUNE 1994; CHANNEL CLEARED IN EARLY JULY 1994; PLANTS RECOLONIZED/NUMEROUS IN LATE  
JULY 1994.  
Owner/Manager: SAC COUNTY PUBLIC WORKS



California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

JUNCUS LEIOSPERMUS VAR AHARTII  
AHART'S DWARF RUSH  
Element Code: PMJUN011L1

-----List Status-----NDDB Element Ranks-----Other Lists-----  
Federal: None Global: G2T1 CNPS List: 1B  
State: None State: S1.2 R-E-D Code: 3-2-3

-----Habitat Associations-----

General: VERNAL POOLS.  
Micro: RESTRICTED TO THE EDGES OF VERNAL POOLS. 30-100M.

Occurrence No. 3 Map Index: 30031 ---Dates Last Seen--- Lat/Long: 38°54'36" / 121°19'14" Township: 12N  
Occ Rank: Fair Element: 1990-04-12 UTM: Zone-10 N4307927 E645625 Range: 06E  
Origin: Natural/Native occurrence Site: 1990-04-12 Precision: SPECIFIC Section: 09 Qtr NW  
Presence: Presumed Extant Symbol Type: POINT Meridian: M  
Trend: Unknown Radius: 80 meters Elevation: 135 ft  
Main Source: WITHAM, C. & G. KAREOFELAS 1990 (OBS)  
Quad Summary: LINCOLN (3812183/528A)  
County Summary: PLACER  
SNA Summary:  
Location: 1 MILE EAST OF THE LINCOLN AIRPORT, LINCOLN.

-----Comments-----

Distribution: MAPPED 0.85 MILE NORTH OF NICHOLAS ROAD AND 0.3 MILE SOUTH OF HIGHWAY 65 WITHIN THE NW 1/4 OF THE NW 1/4 OF SECTION 9. SITE IS WEST OF CLAY PIPE FACTORY ON HWY 65.  
Ecological: VERNAL POOLS AND SWALES ON GOPHER TURNINGS. DOMINANTS ARE LASTHENIA FREMONTII, DESCHAMPSIA DANTHONIOIDES, AND ERYNGIUM VASEYI. SPECIES TENDS TOWARDS POOL MARGINS AND IS ASSOCIATED WITH J. CAPITATUS, J. UNCIALIS, GRATIOLA, AND MIMULUS.  
Threat: MUCH DISTURBANCE BY ORVS, RECENT ROAD CONSTRUCTION, CATTLE GRAZING, AND NEARBY DEVELOPMENT.  
General: 45 PLANTS OBSERVED IN 1990. SITE IS SLATED FOR SUBDIVISION; DEVELOPER PLANS ON PRESERVING SOME VERNAL POOLS, NONE OF WHICH HAVE BEEN SHOWN TO HAVE JUNCUS LEIOSPERMUS AHARTII. SITE INTERESTING DUE TO NUMEROUS SEEP AREAS.  
Owner/Manager: FVT

California Department of Fish and Game  
Natural Diversity Data Base

CNDDDB Report for the Northwest Rocklin Annexation Project

JUNCUS LEIOSPERMUS VAR LEIOSPERMUS

RED BLUFF DWARF RUSH  
Element Code: PMJUN011L2

List Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2T2	CNPS List: 1B
State: None	State: S2.2	R-E-D Code: 2-3-3

Habitat Associations

General: CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLANDS, VERNAL POOLS.  
Micro: VERANLLY MESIC SITES. SOMETIMES ON EDGES OF VERNAL POOLS. 30-1020M.

Occurrence No. 10	Map Index: 11642	—Dates Last Seen—	Lat/Long: 38°48'14" / 121°18'39"	Township: 11N
Occ Rank: Unknown		Element: 1982-04-28	UTM: Zone-10 N4296161 E646679	Range: 06E
Origin: Natural/Native occurrence		Site: 1997-06-18	Precision: NON-SPECIFIC	Section: 16 Qtr NE
Presence: Presumed Extant			Symbol Type: POINT	Meridian: M
Trend: Unknown			Radius: 1/5 mile	Elevation: 110 ft
Main Source: HOLLAND, R. 1982 (OBS)				
Quad Summary: ROSEVILLE (3812173/528D)				
County Summary: PLACER				
SNA Summary:				
Location: APPROX 0.5 MI N OF SCOW RD INDUSTRIAL BLVD, ROSEVILLE.				
Comments:				
Distribution: WEST OF RR TRACKS, SOUTH OF INDUSTRIAL WASTE PONDS AND EAST OF A POWERLINE.				
Ecological: MARGINS OF VERNAL POOLS, LARGELY ON KILAGA LOAM SOILS.				
Threat: THREATS INCLUDE HOUSING OR LIGHT INDUSTRY DEVELOPMENT.				
General: NO PLANTS SEEN IN 1997, BUT WINDSHIELD SURVEY ONLY, HABITAT APPEARED INTACT.				
Owner/Manager: PVT				

California Department of Fish and Game  
Natural Diversity Data Base

CNDDB Report for the Northwest Rocklin Annexation Project

<b>ORCUTIA VISCIDA</b> SACRAMENTO ORCUTT GRASS Element Code: PMPOA4G070	-----List Status-----	NDDB Element Ranks-----	-----Other Lists-----
	Federal: Endangered	Global: G1	CNPS List: 1B
	State: Endangered	State: S1.1	R-E-D Code: 3-3-3

-----Habitat Associations-----  
 General: VERNAL POOLS. ENDEMIC TO SACRAMENTO COUNTY.  
 Micro: 30-100M.

Occurrence No. 4      Map Index: 11886      ---Dates Last Seen---      Lat/Long: 38°40'42" / 121°11'42"      Township: 10N  
 Occ Rank: None      Element: 1958-07-07      UTM: Zone-10 N4282420 E657012      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1986-06-16      Precision: NON-SPECIFIC      Section: XX Qtr XX  
 Presence: Extirpated      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 1/5 mile      Elevation: 240 ft  
 Main Source: CRAMPTON, B. #5003 AHUC (HERB)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary:  
 Location: 0.4 MI E OF JCT MAIN AVE AND GREENBACK LN, ABOUT 2 MI E OF ORANGEVALE, 2.1 MI NW OF FOLSOM.  
 -----Comments-----  
 Distribution:  
 Ecological: NEARLY BARREN AREA IN THE MIDDLE OF LARGE VERNAL POOL WITH ERYNGIUM. OPEN ROLLING PLAINS WITH BLUE OAKS.  
 Threat: AREA NOW DEVELOPED FOR HOUSING, SHOPPING CENTER, AND PARKING LOTS.  
 General:  
 Owner/Manager: PVT

Occurrence No. 5      Map Index: 11841      ---Dates Last Seen---      Lat/Long: 38°39'20" / 121°12'51"      Township: 09N  
 Occ Rank: Good      Element: 1997-07-14      UTM: Zone-10 N4279852 E655405      Range: 07E  
 Origin: Natural/Native occurrence      Site: 1997-07-14      Precision: SPECIFIC      Section: XX Qtr XX  
 Presence: Presumed Extant      Symbol Type: POLYGON      Meridian: M  
 Trend: Unknown      Area: 7.1 ac      Elevation: 270 ft  
 Main Source: SMITH, K. 1980 (OBS)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary: Phoenix Field  
 Location: N OF SUNSET BLVD JUST E OF PHOENIX FIELD AIRPORT, "PHOENIX VERNAL POOLS", FAIR OAKS.  
 -----Comments-----  
 Distribution:  
 Ecological: IN SILICA-IRON HARDPAN IN VERNAL POOLS IN BLUE OAK WOODLAND. WITH ERYNGIUM VASEYI, EREMOCARPUS SETIGERUS, ALLOCARYA STIPITATA, PSILOCARPHUS BREVISSIMUS. NAVARRETIA MYERSII, ANOTHER RARE PLANT, ALSO AT THIS SITE.  
 Threat: PROPERTY INVADDED BY EXOTIC PLANTS, ESPECIALLY FROM ADJACENT YARDS.  
 General: POOL ACQUIRED & FENCED BY CDFG AS ECOLOGICAL RESERVE. MONITORED ANNUALLY. OVER 200,000 PLANTS IN 1986, AN EXCEPTIONALLY GOOD YEAR, OVER 100,000 IN 1994-1996, 9500 IN 1997. INCLUDES FORMER OCC #2.  
 Owner/Manager: DFG-PHOENIX FIELD ER

Occurrence No. 15      Map Index: 11839      ---Dates Last Seen---      Lat/Long: 38°39'06" / 121°13'05"      Township: 09N  
 Occ Rank: Good      Element: 1997-06-16      UTM: Zone-10 N4279425 E655070      Range: 07E  
 Origin: Introduced Back into Native      Site: 1997-06-16      Precision: SPECIFIC      Section: XX Qtr XX  
 Hab./Range  
 Presence: Presumed Extant      Symbol Type: POINT      Meridian: M  
 Trend: Unknown      Radius: 80 meters      Elevation: 270 ft  
 Main Source: WITHAM, C. 1995 (OBS)  
 Quad Summary: FOLSOM (3812162/511B)  
 County Summary: SACRAMENTO  
 SNA Summary: Phoenix Field  
 Location: PHOENIX PARK, SOUTH OF SUNSET AVE, 0.5 MILE EAST OF HAZEL AVE, FAIR OAKS.  
 -----Comments-----  
 Distribution:  
 Ecological: ON REDDING SERIES SOILS. ASSOCIATES INCLUDE ELECCHARIS MACROSTACHYA, PLAGIOBOTHRYS STIPITATA, DOWNINGIA BICORNUTA, TRICHOSTEMA LANCEOLATUM, PSILOCARPHUS BREVISSIMUS, ERYNGIUM VASEYI, LILAEA SCILLOIDES, AND BRODIAEA MINOR.  
 Threat: SUMMER RUNOFF FROM ADJACENT BALL PARK ENTERS W LOBE OF POOL. ALSO THREATENED BY RECREATIONAL USE.  
 General: THIS OCCURRENCE ESTABLISHED FROM SEED COLLECTED FROM NEARBY NATIVE OCCURRENCE #5 BY T. GRIGGS IN 1978. 1000+ PLANTS IN 1985, 10,000+ IN 1986, 1000+ IN 1991, ABOUT 100,000 IN 1995, 35 IN 1996, 1000 IN 1997.  
 Owner/Manager: CITY OF FAIR OAKS-PARKS & REC

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100