

DRAFT ENVIRONMENTAL IMPACT REPORT

***TECHNICAL APPENDICES
VOLUME I***

The Keystone Project



Prepared for:
City of Santa Clarita

Prepared By:



CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

July, 2005

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APPENDIX 1

Notice of Preparation/Initial Study Materials

APPENDIX 1-A

Notice of Preparation/Initial Study

NOTICE OF PREPARATION

TO: State Clearinghouse
Office of Planning Research
P.O. Box 3044
Sacramento, CA 95812-3044

FROM: City of Santa Clarita
23920 Valencia Blvd., Suite 300
Santa Clarita, CA 91355

SUBJECT: Notice of Preparation of Draft Environmental Impact Report

The City of Santa Clarita 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 probable 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 written response to Heather Werner, Associate Planner at the address shown above. We would appreciate the name of a contact person in your agency.

Project Title: The Keystone, Master Case #03-358

Project Applicant: Synergy

Date: August 2, 2004

Signature: _____

Title: Heather Werner, Associate Planner

Telephone: (661) 255-4330

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

**Initial Study
City of Santa Clarita**

Project Title/Master Case Number: Master Case 03-358, General Plan Amendment 03-002, Zone Change 03-002, Tentative Parcel Map 60258, Conditional Use Permit 03-016, Hillside Review 03-006

Lead Agency name and address: City of Santa Clarita
23920 Valencia Blvd., Suite 300
Santa Clarita, CA 91355

Contact person and phone number: Heather Werner, Associate Planner
23920 Valencia Boulevard, Suite 302
Santa Clarita, CA 91355
(661) 255-4330

Project location: Approximately 247 gross acres located at the westerly extension of Ermine Street and south of the City of Santa Clarita's northern boundary, within the community of Canyon Country in the City of Santa Clarita. The proposed project site is located along the future extension of Golden Valley Road and to the north of the future Newhall Ranch Road and Golden Valley Road intersection.
Assessor Parcel Numbers: 2801-001-003, 2801-001-005, 2801-001-023, 2801-001-024, 2801-001-025, 2801-001-026, 2805-001-001, 2805-001-011, 2805-001-009, 2805-001-022, 2805-001-029 and 2812-009-003

Applicant's name and address: Synergy
Rick Doremus
19200 Von Karman Avenue, Suite 600
Irvine, CA 92612

General Plan designation: Residential Very Low and Industrial Commercial

Zoning: Residential Very Low and Industrial Commercial

Description of project and setting:

This CEQA required initial study was prepared for Tentative Tract Map 60258 which totals 247 acres. The proposed project includes the development of 96 single family residential lots on 18.6 acres west of the City of Los Angeles Department of Water and Power (DWP) Easement, 218 apartment units and 665 townhouse units on multi-family pads totaling approximately 77 acres, a proposed school site on 20.6 acres and recreational park on 4.1 acres north of the Santa Clara River, the remaining area would be roughly 76.1 acres of natural open space and 85.9 acres of graded slope lots, within the City of Santa Clarita. The development proposes a gross density of 3.9 dwelling units per acres. The net dwelling units per acre vary on each multi-family lot with a range of 18 to 25 units per acre. Approximately 5,000 linear feet of roadway will be dedicated to the City for the extension of Golden Valley Road with a total of 19 acres dedicated to streets. Access to the individual multi-family pad lots would be an interior road spurring off the extension of Golden Valley Road. The proposed single family development would be accessed from two streets traversing the DWP easement and connecting to the interior road and Golden Valley Road. In addition, seven local streets are proposed within TTM 60258 to provide internal circulation and access to all lots within the proposed single family residential area. These streets are currently designated as 'A', 'B', 'C', 'D', 'E', 'F', 'G', and 'H' Streets.

The industrial commercial lot totals approximately .5 acres, however no development is proposed on this parcel.

The proposed project would involve grading activities of approximately 5.4 million cubic yards of cut and approximately 5.4 million cubic yards of fill. All earthwork is proposed to be balanced on site. Additional off-site grading is proposed to occur to the north and west of the project site for the construction of the Golden Valley Road extension.

As part of the project, the applicant is requesting that Tentative Tract Map 60258 be granted a General Plan Amendment and Zone Change to change the existing Residential Very Low designation to Residential Moderate to allow for a higher density residential development. The Industrial Commercial designated portion of the project would remain unchanged. A Hillside Development Review is required as proposed grading activity will occur on slopes over 10 percent of the average grade. The project is subject to the provisions of the Ridgeline Preservation and Hillside Development Ordinance. A Conditional Use Permit is required for grading in excess of 100,000 cubic yards. As part of the Conditional Use Permit request, the applicant is seeking approval of an innovative application to grade on primary and secondary ridgelines for residential development and the extension of Golden Valley Road. An Oak Tree Permit may be required pending the outcome of studies to determine the impact of off-site oak trees as a result of the project.

Surrounding land uses:

The subject site is currently vacant and is surrounded by vacant land to the north and west. However, an approved development by the County of Los Angeles will construct 500 of units to the north of the project site. An existing single family residential neighborhood is located to the east and west and an existing industrial area is located south of the proposed project site. A DWP easement runs diagonally through the project site from approximately the middle of the western project edge to the center of the northern project boundary. A portion of the Santa Clara River is located on the southern portion of the project site.

Other public agencies whose approval is required:

United States Army Corps of Engineers, U.S. Fish and Wildlife Services, California Department of Fish and Game, Los Angeles County Sanitation District, Los Angeles County Fire Department, City of Los Angeles Department of Water and Power, Santa Clarita Water Company and the Castaic Lake Water Agency

A. 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" or a "Less Than Significant with Mitigation" 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 checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality | <input checked="" type="checkbox"/> Land Use / Planning |
| <input checked="" 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/Traffic |
| <input checked="" type="checkbox"/> Utilities / Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

B. DETERMINATION:

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

Initial Study
Master Case 03-358

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

Signature/ Title
Heather Werner, Associate Planner

Date

Signature/Title
Lisa Hardy, AICP, Senior Planner

Date

C. EVALUATION OF ENVIRONMENTAL IMPACTS:

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

II. AGRICULTURE 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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"/>
d) Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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"/>
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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	[X]	[]	[]	[]
d) Expose sensitive receptors to substantial pollutant concentrations?	[X]	[]	[]	[]
e) Create objectionable odors affecting a substantial number of people?	[X]	[]	[]	[]
f) Other _____	[]	[]	[]	[]

IV. BIOLOGICAL RESOURCES – Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	[X]	[]	[]	[]
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	[X]	[]	[]	[]
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	[X]	[]	[]	[]
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	[X]	[]	[]	[]
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Oak trees?	[X]	[]	[]	[]
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?	[X]	[]	[]	[]
g) Affect a Significant Ecological Area (SEA) or Significant Natural Area (SNA) as identified on the City of Santa Clarita ESA Delineation Map?	[X]	[]	[]	[]

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
c) Directly or indirectly destroy or impact a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial wind or water soil erosion or the loss of topsoil, either on or off site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Change in topography or ground surface relief features?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Earth movement (cut and/or fill) of 10,000 cubic yards or more?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Development and/or grading on a slope greater than 10% natural grade?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) The destruction, covering or modification of any unique geologic or physical feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving explosion or the release of hazardous materials into the environment (including, but not limited to oil, pesticides, chemicals, fuels, or radiation)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input 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 result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Exposure of people to existing sources of potential health hazards (e.g. electrical transmission lines, gas lines, oil pipelines)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	[X]	[]	[]	[]
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?	[X]	[]	[]	[]
j) Inundation by seiche, tsunami, or mudflow?	[X]	[]	[]	[]
k) Changes in the rate of flow, currents, or the course and direction of surface water and/or groundwater?	[X]	[]	[]	[]
l) Other modification of a wash, channel creek or river?	[X]	[]	[]	[]
m) Impact Stormwater Management in any of the following ways:	[X]	[]	[]	[]
i) Potential impact of project construction and project post-construction activity on storm water runoff?	[X]	[]	[]	[]
ii) Potential discharges from areas for materials storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas?	[X]	[]	[]	[]
iii) Significant environmentally harmful increase in the flow velocity or volume of storm water runoff?	[X]	[]	[]	[]
iv) Significant and environmentally harmful increases in erosion of the project site or surrounding areas?	[X]	[]	[]	[]
v) Storm water discharges that would significantly impair or contribute to the impairment of the beneficial uses of receiving waters or areas that provide water quality benefits (e.g. riparian corridors, wetlands, etc.)	[X]	[]	[]	[]
vi) Cause harm to the biological integrity of drainage systems, watersheds, and/or water bodies?	[X]	[]	[]	[]
vii) Does the proposed project include provisions for the separation, recycling, and reuse of materials both during construction and after project occupancy?	[X]	[]	[]	[]
IX. LAND USE AND PLANNING - Would the project:				
a) Disrupt or physically divide an established community (including a low-income or minority community)?	[]	[]	[]	[X]

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	[X]	[]	[]	[]
c) Conflict with any applicable habitat conservation plan, natural community conservation plan, and/or policies by agencies with jurisdiction over the project?	[X]	[]	[]	[]
X. MINERAL AND ENERGY 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?	[X]	[]	[]	[]
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?	[]	[]	[]	[X]
c) Use nonrenewable resources in a wasteful and inefficient manner?	[X]	[]	[]	[]
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?	[X]	[]	[]	[]
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	[X]	[]	[]	[]
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	[X]	[]	[]	[]
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	[X]	[]	[]	[]
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?	[]	[]	[]	[X]
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?	[]	[]	[]	[X]

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--	--------------------------------	---------------------------------------	------------------------------	-----------

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)? | [X] | [] | [] | [] |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere (especially affordable housing)? | [] | [] | [] | [X] |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | [] | [] | [] | [X] |

XIII. PUBLIC SERVICES - Would the project result in:

- | | | | | |
|---|-----|-----|-----|-----|
| a) 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: | | | | |
| i) Fire protection? | [X] | [] | [] | [] |
| ii) Police protection? | [X] | [] | [] | [] |
| iii) Schools? | [X] | [] | [] | [] |
| iv) Parks? | [X] | [] | [] | [] |

XIV. RECREATION - Would the project:

- | | | | | |
|--|-----|-----|-----|-----|
| a) 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? | [X] | [] | [] | [] |
| b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | [X] | [] | [] | [] |

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)? | [X] | [] | [] | [] |
|--|-----|-----|-----|-----|

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	[X]	[]	[]	[]
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	[]	[]	[]	[X]
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	[X]	[]	[]	[]
e) Result in inadequate emergency access?	[X]	[]	[]	[]
f) Result in inadequate parking capacity?	[]	[]	[]	[X]
g) Conflict with adopted policies plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	[]	[X]	[]	[]
h) Hazards or barriers for pedestrians or bicyclists?	[X]	[]	[]	[]
XVI. UTILITIES AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	[]	[X]	[]	[]
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?	[X]	[]	[]	[]
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?	[X]	[]	[]	[]
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	[X]	[]	[]	[]
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?	[X]	[]	[]	[]
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	[X]	[]	[]	[]

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<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"/>

XVII. DEPARTMENT OF FISH AND GAME 'DE MINIMUS' FINDING

a) Will the project have an adverse effect either individually or cumulatively, on fish and wildlife resources? Wildlife shall be defined for the purpose of this question as "all wild animals, birds, plants, fish, amphibians, and related ecological communities, including the habitat upon which the wildlife depends for its continued viability."	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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D. DISCUSSION OF ENVIRONMENTAL IMPACTS AND/OR EARLIER ANALYSIS:

Section and Subsections	Evaluation of Impacts
<p>I. AESTHETICS</p>	<p>a. The proposed project will change the existing visual character of the site by converting vacant land to a man-made urban environment. The ridgelines on site are visible from major City roadway corridors (Soledad Canyon Road, Golden Valley Road, Newhall Ranch Road) and are enjoyed aesthetically valley wide. The proposed project has extremely high visibility. The visual impact to the adjacent residential communities, surrounding industrial community and valley wide would be potentially significant. Views of natural features will be replaced with residential development and proposed re-creation of natural features. Further analysis is required.</p> <p>b. The project site is currently vacant and exists in its natural state. The site is encumbered with both Primary and Secondary Ridgelines that are protected by the City's Ridgeline Preservation and Hillside Development Ordinance. Chapter 17.80 of the Unified Development Code requires that contour grading be incorporated into the overall design of projects proposed on hillsides. Contour grading is intended to retain the general character of the topography present on the site, thus minimizing drainage impacts, geologic impacts and visual impacts. In an effort to propose an innovative and creative project, the project incorporates re-creation of Secondary Ridgelines, natural landscaped areas with variable gradients, and expanded landscaped setbacks. Further analysis of these proposed design concepts will be needed to assure compliance with the City's Ridgeline Preservation and Hillside Development Ordinance..</p> <p>c. The proposed project will change the existing visual character of the site by converting vacant land to a man-made urban environment. The on site are visible from major City roadway corridors (Soledad Canyon Road, Golden Valley Road, and Newhall Ranch Road) are enjoyed aesthetically valley wide. The proposed project has extremely high visibility. The visual impact to the adjacent residential communities, surrounding industrial community and valley wide would be potentially significant. Views of natural features will be replaced with residential development and proposed re-creation of natural features. Further analysis of the proposed residential development and proposed natural design features is required.</p> <p>d. The project site is vacant and exists in its natural state. Currently, there are no sources of light and glare on site. Introduction of 979 residential dwelling units will create a new source of light and glare that may potentially have a significant impact in the area. In addition, the extension of Golden Valley Road will and incorporation of new roads will further the impact of light and glare from traffic traveling on these roadways. Further analysis is required.</p> <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to aesthetics and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>II. AGRICULTURE RESOURCES</p>	<p>a. According to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation , the project sites does not contain prime farmland, unique farmland or farmland of statewide importance. Therefore, no project impacts are anticipated to result from this proposal.</p> <p>b. The General Plan designation and the zoning of the project site are Residential Very Low and Industrial Commercial. The proposed General Plan Amendment and Zone Change requests to change the project site to</p>

	<p>Residential Moderate. No conflict to the Williamson Act contract will occur because no portion of the site is within an agricultural zone. Therefore, no impacts are anticipated to occur as a result of the proposal.</p> <p>c. The project will not cause any changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use because the site is not located in or adjacent to any agricultural land. Therefore, no impacts are anticipated to occur as a result of the project.</p> <p>No impacts are anticipated to occur with the proposed project with respect to agriculture resources.</p>
<p>III. AIR QUALITY</p>	<p>a. The proposed development of 979 units with the grading of approximately 5.4 million cubic yards of earth could potentially have a significant impact on or conflict with the implementation of air quality plan established by the South Coast Air Quality Management District that governs this region. Further analysis is required.</p> <p>b. The project site is located within the South Coast Air Quality Management District, the boundaries of which consist of 6,600 square miles throughout Los Angeles, San Bernardino and Riverside counties. The project site is located within the eastern portion of the City of Santa Clarita and is therefore, within this district which is considered a non-attainment basin. The project will require extensive grading and construction activities that may increase pollution within this air quality district. This would substantially contribute to an existing air quality violation. Further analysis is required.</p> <p>c. The project may potentially result in a cumulatively considerable net increase in criteria pollutant due to the project being located in a non-attainment region under applicable federal and state ambient air quality standards. The addition of any net increase in any criteria pollutants would contribute to the cumulative effects in the region. Further analysis is required.</p> <p>d. The project site is located in close proximity to residential uses to the east and west with an approved development project located to the north in unincorporated Los Angeles County, which are considered sensitive receptors. The proposed project includes approximately 979 residential dwellings which would potentially expose sensitive receptors to pollutant during site preparation and construction. In addition, the increased automobile trips generated from traffic to, from and through the project site will create additional air pollutants for existing adjacent residents as well as new residents in the project site. Also, the project site is proposed across the Santa Clara River from heavy industrial uses which will expose future residences to pollutants created by those uses. Further analysis is required.</p> <p>e. The development of the project would require substantial earth work and construction activities that would involve the use of a variety of gasoline or diesel-powered equipment that will emit exhaust fumes. People that live in close proximity to the project sites will be exposed to fumes during construction and may find these odors objectionable. Further analysis on the potential amount of exhaust fumes emitted is required.</p> <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to air quality and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>IV. BIOLOGICAL RESOURCES</p>	<p>a. The proposed project could have a potentially significant impact through habitat modifications of a species identified as sensitive or having special status as regulated by the California Department of Fish and Game and the U.S. Fish and Wildlife Service. Biological studies including spring studies have been conducted on the project site. Further analysis of those studies will</p>

	<p>be required.</p> <ul style="list-style-type: none"> b. The project may potentially have a significant impact riparian habitat due to the project site containing the Santa Clara River and at least two blue line stream. Further analysis is required. c. The project is located on a site that contains a portion of the Santa Clara River and blue line streams that may be disturbed as a result of the project as defined by Section 404 of the Clean Water Act. Further analysis is required. d. The project site could have a potentially significant impact on or substantially modify the movement of native resident or migratory fish or wildlife species with established native resident or migratory wildlife corridors. Biological studies including spring studies have been conducted on the project site. Further analysis is required. e. The project site contains oak trees that are protected by the City's Oak Tree Preservation Ordinance. The project proposes over 5.4 million cubic yards of grading but it has not been determined if this will have an impact on the oak trees existing on site. Additionally, there are several off site oak trees that have not been surveyed that may be potentially impacted by the project. Further analysis is required. f. The project is anticipated to conflict with adopted Habitat Conservation Plans, Natural Community Conservation Plans, and other local, regional and state conservation plans. Biological and spring studies have been performed on site. Further analysis is required. g. The project site contains a portion of the Santa Clara River which is identified as a Significant Ecological Area by the City of Santa Clarita. The river may be impacted by some of the proposed grading and/or construction for the proposed development. Further analysis is required. <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to biological resources and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>V. CULTURAL RESOURCES</p>	<ul style="list-style-type: none"> a. The project site is not listed in any register of historical resources, nor does the site contain any structures with distinctive characteristics of a region, period or construction method because the site is vacant natural land. The site does not meet any criteria set forth in the California Environmental Quality Act (CEQA) to identify the site as a historical resource. Therefore, no impact is anticipated to result from the proposal. b. The project site does not have any known archaeological significance as defined by the California Environmental Quality Act because the site is currently vacant with no development at this time. The site requires extensive grading for the construction of the proposed 979 residential units. Should the excavation and disturbance of site reveal that any archaeological significance, the work will be ceased and an archaeologist or other qualified expert will be retained to assess the findings and make recommendations for the project. Further analysis will be required. c. The project site requires extensive site preparation and contains significant ridgelines. The site is not known to contain any unique paleontological resources however what is believed to be tribal Indian artifacts were discovered on a property located immediately west of the project. The potential for Indian artifacts exists on site due to its proximity to the Santa Clara River and Knowles overlooking the river typical of where American Indians in the region where known to settle are located on the project site. Therefore, further analysis is required. d. No disturbance of human remains, including those interred outside of formal cemeteries is anticipated. However, should any remains be encountered

	<p>during site preparation and construction, all work will be ceased and an assessment of the finds will be made. Further analysis is required.</p> <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts cultural resources and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>VI. GEOLOGY AND SOILS</p>	<ul style="list-style-type: none"> a. The proposed project site would potentially expose people and structures to substantial adverse impacts, including injury, the risk of loss and/or death as a result of the project. The project site is located adjacent to a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the State geologist. The site is potentially subject to strong ground shaking and seismic related hazards such liquefaction and landslides. Further analysis is required. b. The project may potentially result in wind or water soil erosion or the loss of topsoil both on and off site. Further analysis is required. c. The project site contains areas that are subject to liquefaction and landslides. The proposed grading for the project may potentially result in unstable soils and could result in landslides, lateral spreading, subsidence or collapse both on and off site. Further analysis is required. d. The Santa Clarita Valley is known to be subject to expansive soil which could potentially have a significant impact on property and pose a risk to life. Further analysis is required. e. The proposed project would be required to provide public sewer infrastructure. All development associated with the project would be required to connect to a sewer system. No impacts are anticipated but further analysis is required. f. The project proposes approximately 5.4 million cubic yards of grading that could have a potentially significant impact by changing topography and ground surface relief features. Further analysis is required. g. The project proposes approximately 5.4 million cubic yards of cut and fill to prepare the project site for development. This could potentially have a significant impact. Further analysis is required. h. Based on the slope analysis submitted by the applicant, the project site contains slopes that range between 15 % and 63%. The average cross slope of the property exceeds 10% and proposes grading on Primary and Secondary Ridgelines which makes the project subject to the City's Ridgeline Preservation and Hillside Development Ordinance. Further analysis is required. i. The project proposes to degrade Primary and Secondary Ridgelines as designated by the City by moving in approximately 5.4 cubic yards of earth. This would have a potentially significant impact on unique geologic and physical features that can be seen throughout the Santa Clarita Valley. Further analysis is required. <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to geology and soils and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>VII. HAZARDS AND HAZARDOUS MATERIALS</p>	<ul style="list-style-type: none"> a. The proposed project is not anticipated to create a significant hazard to the public or environment through the routine transport, use or disposal of hazardous material. If the need to transport hazardous material arises as a result of the project, it would have to be mitigated to a level of less than significance. Further analysis is required. b. The proposed project site contains overhead electrical lines, telephone lines and other utilities. Some of which would be required to be underground as a result of the project. This could result in accident conditions involving

	<p>explosion or brush fire that could potentially create a significant hazard to the public. Further analysis is required.</p> <ul style="list-style-type: none"> c. The project site is not located adjacent to, or in proximity to an existing school. However, the addition of 979 new residential units may result in the need for additional school facilities on site or in the immediate vicinity of the project. Further analysis is required. d. The project site is not considered a hazardous materials site as identified by Government Code 65692.5. Therefore, no impacts are anticipated to result from the proposal in this area. e. The project site is not located within two miles of any public airport and therefore, is not within an airport land use plan and no impacts are anticipated to occur from the proposal. f. The project site is not located within the vicinity of a private airstrip, and would not result in a safety hazard for people residing or working in the project area. Therefore, no impacts are anticipated to occur from the proposal. g. The proposed project will be constructed on vacant land. As part of project implementation, future Golden Valley Road, Ermine Street and seven new internal local collectors will be constructed to provide opportunities for emergency response. Furthermore, the project will not impact any evacuation plans because none exist in the undeveloped area at this time. However, the need to implement an evacuation plan may arise as a result of the project. Further analysis is required. h. The proposed project site is falls within a natural brush area which considered by the Los Angeles County Fire Department to be in Fire Zone IV which is at high risk for severe fire. The proposed project would potentially expose people and structures to a significant risk of loss, injury or death involving wildland fires. Further analysis is required. i. The project site contains corridors for large electrical transmission lines that may expose people to existing sources of potential health hazards. Further analysis is required. <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to hazards and hazardous material and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>VIII. HYDROLOGY AND WATER QUALITY</p>	<ul style="list-style-type: none"> a. The proposed development of 96 single family and 883 mutli-family dwellings could have a potentially significant impact on water quality standards or waste discharge requirements. Further analysis is required. b. It is unknown whether the project substantially depleting groundwater supplies and 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. Further analysis is required. c. The project proposes over 5.4 million cubic yards of grading both on and off-site. The project site consists of degrading the quality of both primary and significant ridgeline which would substantially alter the existing drainage pattern of the site and in the area. Additionally, at least two blue line streams are known to exist on site that would be substantially altered by the project. The southern portion of the project site contains a portion of the Santa Clara River that could potentially be affected by the changes surface water runoff which could have a potentially significant effect on erosion and siltation. Further analysis is required. d. The project proposes over 5.4 million cubic yards of grading both on and off-site located on Primary and Secondary ridgelines. Drainage patterns both on and off-site could be altered significantly potentially increasing the rate and/or the amount of surface water run-off. This could result in a potentially

	<p>significant effect on the environment. Further analysis is required.</p> <ul style="list-style-type: none"> e. The proposed project could have a potentially significant effect on runoff water capacity that exceeds the planned stormwater drainage systems existing today. Additionally, the construction of approximately 979 units could provide additional sources of polluted runoff. Further analysis is required. f. The proposed project could potentially have a significant impact on water quality. Further analysis is required to determine if the project would degrade water quality. g. Further analysis is required to determine if the proposed project would place housing within a 100 year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. h. Further analysis is required to determine if the project would place structures within a 100-year flood hazard area that would impede or redirect flood flows. i. It is unknown if the proposed project would expose people to a significant loss risk of loss, injury or death involving flooding. The impacts related to landform alterations need to be studied. Further analysis is required. j. The project site contains a portion of the Santa Clara River that may be impacted as a result of the project. It is currently unknown if the project will result in inundation by seiche, tsunami, or mudflow. Further analysis is required. k. The proposed project may potentially have a significant impact on rate of flow and the course and direction of surface water and potentially ground water as a result of extensive grading and construction. Further analysis is required. l. The Santa Clara river is located on the southern portion of the project site and may potentially be modified as a result of the project. Further analysis is required to determine impacts in this area and reduce them to a level of less than significant. m. The proposed project could potentially have a significant impact on stormwater runoff as a result of project construction and post construction activity, potential discharge from material storage, vehicle fueling, equipment fueling, an environmentally significant impact of flow velocity and volume of stormwater runoff, an environmentally harmful increase in erosion on and off the project site, impair the beneficial uses of riparian corridors from receiving waters, cause harm to the biological integrity of drainage systems and watershed and a water body. Additionally, provisions have not been established for the project for the separation, recycling, and reuse of materials both during construction and after occupancy. Further analysis is required. <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to hydrology and water quality and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>IX. LAND USE AND PLANNING</p>	<ul style="list-style-type: none"> a. The proposed project is on vacant and undeveloped land. It is located in an area that separates what is considered the community of Saugus from the community of Canyon Country. It does not appear that the project would disrupt an established low income or minority community. However, further analysis is required. b. The City of Santa Clarita General Plan designates the project site as Residential Very Low (RVL). The project involves a General Plan Amendment to remove the RVL designation and replace it with Residential Moderate (RM) on a portion of the project site to allow for a higher density. In the City's Unified Development Code, the RVL zone allows for 2.2 dwelling units per gross acre and is intended to ensure that the rural character of existing neighborhoods is maintained. Residential development is expected to consist

	<p>of large custom single-family homes with the keeping of horses and related animals as an accessory uses. (17.11.020.C). The RM zone allows for 11.0 units per gross acre and “corresponds to small groupings of attached dwellings such as duplexes, triplexes, and fourplexes” (UDC 17.11.020.F). In this way, the project would result in a density increase of 8.8 units per acre and substantially change the type of residential character achieved with the RVL designation.</p> <p>The density and characteristics of the proposed residential development do not conform to the provisions of the RVL designation or the City’s Ridgeline Preservation and Hillside Development Ordinance. Changing the RVL designation to RM may not be appropriate, given the natural terrain on the project site and the intent of the General Plan to protect such areas from more intensive land uses. Therefore, the proposed development and General Plan amendment may conflict with applicable environmental plans and policies. Additional analysis, in the form of an EIR, is required to determine conformance with the City’s Hillside Ridgeline Preservation and Hillside Development Ordinance and other regulations and policies adopted by agencies with jurisdiction over the project.</p> <p>The proposal does not conflict with any redevelopment plans or project areas. This project is not within the scope of development anticipated for this area and it conflicts with both the City’s General Plan. Further analysis is required to determine whether a General Plan amendment is appropriate for the subject property given the current land use designations and existing land uses in the area.</p> <p>c. The proposed project will conflict with some applicable habitat conservation plan, natural community conservation plan, and policies within the City of Santa Clarita. The site is encumbered with both Primary and Secondary Ridgelines that are protected by the City’s Ridgeline Preservation and Hillside Development Ordinance. Chapter 17.80 of the Unified Development Code requires that contour grading be incorporated into the overall design of projects proposed on hillsides. Contour grading is intended to retain the general character of the topography present on the site, thus minimizing drainage impacts, geologic impacts and visual impacts. The project proposes contour grading. However, the project, as proposed, may still conflict with key policies of the City’s General Plan and the requirements of the Unified Development Code, specifically the Ridgeline Preservation and Hillside Development Ordinance. Therefore, further analysis is required.</p> <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to land use and planning and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>X. MINERAL AND ENERGY RESOURCES</p>	<p>a. It is not know at this point whether the proposed project is anticipated to 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. Further analysis is required.</p> <p>b. At one time, the project site was used to mine gravel. It is not anticipated the project would result in the loss of availability of a locally important mineral resource recovery site delineated in our general plan. However, further analysis is required.</p> <p>c. It is not known at this point whether the proposed project is anticipated to use nonrenewable resources in a wasteful and inefficient manner. However, given previous uses on-site, further analysis is required.</p>

	<p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to mineral and energy resources and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>XI. NOISE</p>	<ul style="list-style-type: none"> a. The proposed project could have a potential significant impact due to the construction of Golden Valley Road through the project and the traffic noise that will result by increased trips in that area, as well as, noise from nearby existing industrial uses, by exposing people to and generating noise that exceeds levels established in the General Plan, noise ordinance and standards set by other agencies. Further analysis is required. b. The project consist of constructing 979 new residential units that has the potential to expose people the generation of excessive ground borne vibration or ground borne noise levels. Exposure to vibrations and ground borne noise levels may have a potentially significant impact. Further analysis is required. c. The proposed project will result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The project could have a potentially significant impact. Further analysis is required. d. Construction of the project will result in a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. However, the construction activity is short-term in nature and will cease upon completion of the project. Further analysis is required. e. The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, no impacts are anticipated in this area. f. The project site is not located within the vicinity of a private airstrip. Therefore, no impacts are anticipated in this area. <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to noise and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>XII. POPULATION AND HOUSING</p>	<ul style="list-style-type: none"> a. The proposed project includes 979 new residential units. This could have a potentially significant impact on the environment both directly and indirectly by substantially inducing population growth and through the extension of roads and other infrastructure which facilitates growth north of the City's northern boundary. Further analysis is required. b. The project will not displace any existing housing, necessitating the construction of replacement housing elsewhere because the project site is currently vacant and undeveloped. Therefore, no impacts are anticipated in this area. c. The project will not displace any people, necessitating the construction of replacement housing elsewhere because the project site is vacant and undeveloped. Therefore, no impacts are anticipated in this area. <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to population and housing and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>XIII. PUBLIC SERVICES</p>	<ul style="list-style-type: none"> a. The proposed development would result in 979 new residential units on currently undeveloped and unimproved property. The project would require the extension of major infrastructure and create additional demand for public services including fire, police, schools, libraries, public facilities and maintenance, and other potential governmental services. In general, the

	<p>approval of a General Plan amendment to allow for a higher density impairs the ability of public services and facilities to adequately predict future needs and will only increase the existing service and infrastructure deficits in the Santa Clarita Valley.</p> <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to public services and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>XIV. RECREATION</p>	<p>a. The proposed project would add an additional 979 residential units to the community which would potentially increase the use of existing neighborhood and regional parks and or other recreational facilities resulting in a substantial accelerated physical deterioration of the facilities. Further analysis is required.</p> <p>b. The proposed project includes approximately 76.1 acres of natural open space and an additional 4.1 acres of park land. However, no active parkland has been proposed at this time. The proposed project site is encumbered with Primary and Secondary Ridgelines and some of the proposed recreational facilities require the alteration of Secondary Ridgelines. As such, any construction of proposed recreational facilities may have a potentially significant impact on the environment. Further analysis is required.</p> <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to recreation and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
<p>XV. TRANSPORTATION / TRAFFIC</p>	<p>a. The proposed project will result in a potentially significant increase in traffic load and capacity of the City's street system. This would cause a substantial increase in vehicle trips per day, the volume to capacity ratio on roads and additional congestion at intersections. The specific impact of the project on roads and the street system is currently unknown. Further analysis is required.</p> <p>b. The proposed project could have a potentially significant impact both individually and cumulatively on the level of service standard established by City/County congestion management agency. Further analysis is required.</p> <p>c. The potential development of 979 residential units will not increase air traffic levels or change air traffic locations that would result in a substantial safety risk. No impacts to air traffic patterns are anticipated.</p> <p>d. Currently, it is unknown if the proposed project would substantially increase hazards due to a design feature or incompatible uses. Further analysis is required.</p> <p>e. Need for adequate emergency access needs to be evaluated. Further analysis is required.</p> <p>f. The proposed 979 residential units would result in a substantial increase in the need for parking. With the implementation of mitigation measures, the potential to reduce parking capacity impacts to a level of less than significant exist. However, further analysis is required.</p> <p>g. Currently, it is not known if the proposed project would conflict with adopted policies, plans or programs supporting alternative transportation. Further analysis is required.</p> <p>h. The proposed project may potentially cause hazards or barriers to pedestrian or bicyclist without the implementation of mitigation measures to reduce the hazards to a level of less than significance. Further analysis is required.</p> <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to transportation/traffic and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>

<p>XVI. UTILITIES AND SERVICE SYSTEMS</p>	<ul style="list-style-type: none"> a. The proposed project will result in the addition of approximately 979 new residential units that will substantially increase the need for waste water treatment requirements required by the Regional Water Quality Control Board. Further analysis is required. b. The proposed project may result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities. The construction or expansion new water or wastewater facilities could cause significant environmental effects. Further analysis is required. c. The proposed project may result in the need to construct new storm water facilities or the expansion of existing storm water facilities which could cause a significant effect on the environment. Further analysis is required. d. It is not known at this time if sufficient water supplies are available to serve the project from existing entitlements and resources. Further analysis is required. e. It is not currently known if the wastewater treatment provider which may serve the project has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Further analysis is required. f. The project will result in a significant increase in the need for solid waste disposal. It is unknown at this time if sufficient capacity to accommodate the project's solid waste disposal needs exist. Further analysis is required. g. Currently, it is unknown if the project will comply with federal, state, and local statues and regulations related to solid waste. Further analysis is required. <p>For the reasons stated above, additional analysis in the form of an environmental impact report is required to fully assess potential impacts to utilities and to develop mitigation measures to reduce impacts to a less-than-significant level.</p>
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Pbs\current\!2003\03-358\03-358 initial study 2

APPENDIX 1-B

Response to the Notice of Preparation



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov



August 13, 2004

R E C E I V E D
PLANNING DIVISION

AUG 18 2004

Ms. Heather Werner, Associate Planner
City of Santa Clarita
23920 Valencia Blvd., Suite 300
Santa Clarita, CA 91355

PLANNING AND BUILDING SERVICES
CITY OF SANTA CLARITA

Dear Ms. Werner:

Notice of Preparation of a Draft Environmental Impact Report for The Keystone, Master Case #03-358

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the Draft Environmental Impact Report (EIR). Please send the SCAQMD a copy of the Draft EIR upon its completion.

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2002 Model. This model is available on the CARB Website at: www.arb.ca.gov.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis. An analysis of all toxic air contaminant impacts due to the

decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (<http://www.aqmd.gov>).

The SCAQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Charles Blankson, Ph.D., Air Quality Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

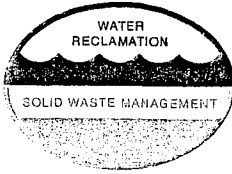
Sincerely,



Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rule Development and Area Sources

SS:CB:li

LAC040810-03LI
Control Number



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

JAMES F. STAHL
Chief Engineer and General Manager

August 16, 2004

File No: 26-00.04-00

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PLANNING DIVISION

AUG 18 2004

PLANNING AND BUILDING SERVICES
CITY OF SANTA CLARITA

Ms. Heather Werner, Associate Planner
City of Santa Clarita
23920 Valencia Boulevard, Suite 300
Santa Clarita, CA 91355

Dear Ms. Werner:

The Keystone, Master Case No. 03-358

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on August 4, 2004. We offer the following comments regarding sewerage service:

1. The area in question is outside the jurisdictional boundaries of the Districts and will require annexation into District No. 26 before sewerage service can be provided to the proposed development. For specific information regarding the annexation procedure and fees, please contact Ms. Margarita Cabrera at extension 2708. Copies of the Districts' Annexation Information and Processing Fees sheets are enclosed for your convenience.
2. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the Districts, for conveyance to the Districts' Soledad Canyon Trunk Sewer, located in Honby Avenue at Santa Clara Street. This 21-inch diameter trunk sewer has a design capacity of 3.9 million gallons per day (mgd) and conveyed a peak flow of 2.4 mgd when last measured in 2003.
3. The Districts operate two water reclamation plants (WRPs), the Saugus WRP and the Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These facilities are interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS) that currently has a permitted treatment capacity of 19.1 mgd. A 9 mgd expansion of the Valencia WRP will be completed in 2004 and is expected to meet the Regional Growth Management Plan forecasted demand through 2010. The SCVJSS currently processes an average flow of 18.2 mgd.
4. The expected average wastewater flow from the project site is 236,643 gallons per day.
5. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the existing strength and/or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is required to construct an incremental expansion of the

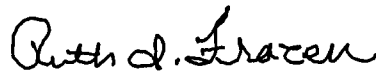
Sewerage System to accommodate the proposed project, which will mitigate the impact of this project on the present Sewerage System. Payment of a connection fee will be required before a permit to connect to the sewer is issued. A copy of the Connection Fee Information Sheet is enclosed for your convenience. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into the Air Quality Management Plan, which is prepared by the South Coast Air Quality Management District in order to improve air quality in the South Coast Air Basin as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 699-7411, extension 2717.

Very truly yours,

James F. Stahl



Ruth I. Frazen
Engineering Technician
Planning & Property Management Section

RIF:rf

Enclosures

c: M. Cabrera

387341.1

**INFORMATION SHEET FOR
APPLICANTS REQUESTING ANNEXATION TO A
COUNTY SANITATION DISTRICT OF LOS ANGELES COUNTY**

A. ELIGIBILITY CRITERIA FOR ANNEXATION TO A COUNTY SANITATION DISTRICT OF LOS ANGELES COUNTY

1. The property is contiguous to said County Sanitation District or, if not contiguous, may be drained by gravity to a trunk sewer of that District,
2. The property is not included in whole or in part in any other agency providing services similar to those of the said County Sanitation District, and
3. The property is to be benefited by its inclusion in the said County Sanitation District.

B. HOW DO I INITIATE THE ANNEXATION APPLICATION PROCESS?

1. **WRITE TO:** County Sanitation Districts of Los Angeles County
P.O. Box 4998, Whittier, CA 90607
Attn: Annexation Fee Program

The letter should contain the following information and support documentation about the property involved:

- a) Property location (street address, city, zip and Thomas Brothers map, page, grid)
- b) In case of a recorded single lot, include the County Assessor's map book-page-parcel map with the parcel highlighted.
- c) In case of a tract or parcel map, include a copy of the tentative or final map plus a closed-survey engineering traverse around the boundary to be annexed to the centerline of any public street.

CALL: County Sanitation Districts of Los Angeles County
(562) 699-7411, Extension 2708
7:00 a.m. through 4:30 p.m., Monday through Thursday
7:00 a.m. through 3:30 p.m., Fridays, except holidays

2. Districts' staff will calculate the acreage involved and will provide the applicant with a quote of annexation fees to be paid. At this time, the applicant will also be provided with a "Request for Annexation" form along with necessary instructions.
3. An annexation application file will be opened upon submittal by applicant of all the required documents (refer to Section C) along with a check for the annexation fee made payable to:

County Sanitation Districts of Los Angeles County

C. WHAT DOCUMENTS DO I NEED TO FILE?

1. **"Request for Annexation" Form (4 pages):** All applicants must complete, in detail, and return the Request for Annexation form signed by the legal owner whose name appears on the current Los Angeles County assessment roll. See C5) for assistance in completing page 4 of this form.
2. **Los Angeles County Local Agency Formation Commission Party Disclosure Form:** All applicants must complete and return the Party Disclosure Form pursuant to the Local Agency Formation Commission Party Disclosure Form Information Sheet.
3. **Annexation Fee payment** as stated in the quotation letter. Cash will not be accepted.

**ANNEXATION PROCESSING FEES FOR THE
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY**

COUNTY SANITATION DISTRICTS' PROCESSING FEE	ACREAGE			FEE
	0.0	to	1.5	\$800
	>1.5	to	5.0	\$1,075
	>5.0	to	20.0	\$215/Acre
	Over 20.0			\$4,300 Plus \$35/Additional Acre And Every Fraction Thereof
LOCAL AGENCY FORMATION COMMISSION FILING FEE^{1/}	ACREAGE			FEE
ANNEXATIONS AND DETACHMENTS	0.0	to	1.0	\$2,500
	>1.0	to	5.0	\$3,000
	>5.0	to	10.0	\$3,500
	>10.0	to	25.0	\$5,000
	>25.0	to	50.0	\$6,000
	>50.0	to	160.0	\$7,000
	160.0+ Acres			\$8,000
OTHER PROPOSALS	Special Reorganization			\$10,000
	Incorporation/Disincorporation/Consolidation			\$7,500
	District Formation			\$7,500
	District Dissolution/Consolidation/Merger			\$5,000
	Establishment of Subsidiary District			\$4,000
	Reorganizations			Basic Fee*+ 20%
	Amend Existing Sphere of Influence for an Annexation			\$500
	Amend Existing Sphere of Influence for Action other than an Annexation			20% of Basic Fee
	Amend/Update Existing Sphere of Influence Without other Action			
	0.0	to	1.0	\$2,500
	>1.0	to	5.0	\$3,000
	>5.0	to	10.0	\$3,500
	>10.0	to	25.0	\$5,000
	>25.0	to	50.0	\$6,000
	>50.0	to	160.0	\$7,000
	160.0+ Acres			\$7,000
	Reconsideration of LAFCO Determinations			50% of Basic Fee
	Special District Study			Actual Cost
	Out-of-Agency Service Agreements			\$2,000
	Petition Verification			Actual Cost
	Notice/Radius Map			Actual Cost
	State Controller Review			\$2,000 + Actual Cost
*The "Basic Fee" is the filing fee charged for the underlying change of organization associated with the action indicated. If more than one change of organization is proposed, it is the higher fee.				
STATE BOARD OF EQUALIZATION^{2/}	ACREAGE			FEE
SINGLE AREA TRANSACTIONS	0.0	to	1.0	\$300
	1.0	to	5.0	\$350
	6.0	to	10.0	\$500
	11.0	to	20.0	\$800
	21.0	to	50.0	\$1,200
	51.0	to	100.0	\$1,500
	101.0	to	500.0	\$2,000
	501.0	to	1,000.0	\$2,500
	1,001.0	to	2,000.0	\$3,000
	2,001.0 and Above			\$3,500
OTHER PROPOSALS	Deferral of Fees			\$35
	Additional County per Transaction			\$250
	Consolidation per District or Zone			\$300
	Entire District Transaction			\$300
	Coterminous Transaction			\$300
	Dissolution or Name Change			\$0

^{1/}Most recent LAFCO fee increase effective June 1, 2003.

^{2/}Most recent SBE fee increase effective December 2, 1998.

**INFORMATION SHEET FOR APPLICANTS
PROPOSING TO CONNECT OR INCREASE THEIR DISCHARGE TO
THE COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY SEWERAGE SYSTEM**

THE PROGRAM

The County Sanitation Districts of Los Angeles County are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting to a Sanitation District's sewerage system. Your connection to a City or County sewer constitutes a connection to a Sanitation District's sewerage system as these sewers flow into a Sanitation District's system. The County Sanitation Districts of Los Angeles County provide for the conveyance, treatment, and disposal of your wastewater. **PAYMENT OF A CONNECTION FEE TO THE COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY WILL BE REQUIRED BEFORE A CITY OR THE COUNTY WILL ISSUE YOU A PERMIT TO CONNECT TO THE SEWER.**

I. WHO IS REQUIRED TO PAY A CONNECTION FEE?

1. Anyone connecting to the sewerage system for the first time for any structure located on a parcel(s) of land within a County Sanitation District of Los Angeles County.
2. Anyone increasing the quantity of wastewater discharged due to the construction of additional dwelling units on or a change in land usage of a parcel already connected to the sewerage system.
3. Anyone increasing the improvement square footage of a commercial or institutional parcel by more than 25 percent.
4. Anyone increasing the quantity and/or strength of wastewater from an industrial parcel.
5. If you qualify for an Ad Valorem Tax or Demolition Credit, connection fee will be adjusted accordingly.

II. HOW ARE THE CONNECTION FEES USED?

The connection fees are used to provide additional conveyance, treatment, and disposal facilities (capital facilities) which are made necessary by new users connecting to a Sanitation District's sewerage system or by existing users who significantly increase the quantity or strength of their wastewater discharge. The Connection Fee Program insures that all users pay their fair share for any necessary expansion of the system.

III. HOW MUCH IS MY CONNECTION FEE?

Your connection fee can be determined from the Connection Fee Schedule specific to the Sanitation District in which your parcel(s) to be connected is located. A Sanitation District boundary map is attached to each corresponding Sanitation District Connection Fee Schedule. Your City or County sewer permitting office has copies of the Connection Fee Schedule(s) and Sanitation District boundary map(s) for your parcel(s). If you require verification of the Sanitation District in which your parcel is located, please call the Sanitation Districts' information number listed under Item IX below.

IV. WHAT FORMS ARE REQUIRED*?

The Connection Fee application package consists of the following:

1. Information Sheet for Applicants (this form)
2. Application for Sewer Connection



Los Angeles County
Department of Regional Planning
Director of Planning James E. Hartl, AICP



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PLANNING AND BUILDING SERVICES
CITY OF SANTA CLARITA

August 12, 2004

Ms. Heather Werner
City of Santa Clarita
23920 Valencia Boulevard, Suite 302
Santa Clarita, CA 91355

**SUBJECT: Notice of Preparation of Draft Environmental Impact Report
The Keystone Project, Master Case #03-358**

Dear Ms. Werner:

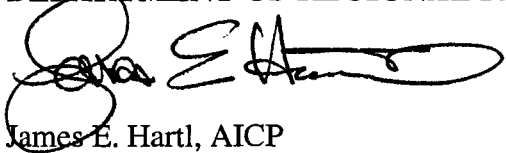
Thank you for providing this Department the opportunity to comment on the Notice of Preparation for the Keystone project, Master Case #03-358. The proposed project is a residential development south of unincorporated Los Angeles County, north of the Santa Clara River and east of Bouquet Canyon Road.

The County of Los Angeles concurs that the project could have a significant impact on the environment and supports the preparation of an environmental impact report (EIR). The EIR should analyze the aesthetics impacts of the development on the prominent ridgelines north of the Santa Clara River. A photographic simulation of the existing and post-development conditions should be included to adequately demonstrate the loss of these ridgelines to residential uses. The City of Santa Clarita is a non-attainment region of the South Coast Air Basin and the air quality impacts from the over 5 million cubic yards of earth movement must be sufficiently documented with an URBEMIS2002 analysis and the presumed operating parameters clearly stated. As the Santa Clara River is designated a Significant Ecological Area by both the County and the City, the potential impacts on biological resources, especially on the endangered arroyo toad, must be completely assessed. Appropriately timed surveys for sensitive biological resources such as the endangered San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) must be undertaken. The City should consider utilizing the County's Significant Ecological Area Technical Advisory Committee (SEATAC) to better assess these impacts. State law requires compliance with SB 221 and 610 to demonstrate adequate long-term water supply prior to adoption of the general plan amendment and subdivision approval. Traffic within the City of Santa Clarita is currently intolerable at many intersections and these conditions are getting worse almost daily. The significant traffic impacts from the proposed residential development must be adequately analyzed with realistic long-term mitigation including a thorough discussion of cumulative impacts. This traffic analysis should adequately discuss and analyze the construction traffic related to the transport of sand and gravel, cement and other building materials, from the point of origin to the project site. A full range of project alternatives must be included in the DEIR including a project that lessens all significant impacts to less than significant. An alternative that is consistent with the current zoning and general plan land use designations should also be included. As significant environmental impacts will result from the development that cannot be fully mitigated, the City of Santa Clarita must clearly state the overriding considerations if this project is to be approved.

The County of Los Angeles appreciates this opportunity to offer comments on the content of the Draft EIR for the Keystone project. If you have any questions, please contact Daryl Koutnik at (213) 974-6461, Monday through Thursday between 7:30 a.m. and 6:00 p.m. Our offices are closed on Fridays.

Very truly yours,

DEPARTMENT OF REGIONAL PLANNING

A handwritten signature in black ink, appearing to read 'James E. Hartl', written over a circular stamp or seal.

James E. Hartl, AICP
Director of Planning

JEH:FM:dlk

c: Supervisor Michael D. Antonovich

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
120 SO. SPRING ST.
LOS ANGELES, CA 90012
PHONE (213) 897-6536
FAX (213) 897-1337
E-Mail: NersesYerjanian@dot.ca.gov



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PLANNING AND BUILDING SERVICES
CITY OF SANTA CLARITA

*Flex your power!
Be energy efficient!*

Ms. Heather Werner
Planning Department
City of Santa Clarita
23920 Valencia Blvd., Suite 302
Santa Clarita, CA. 91355

IGR/CEQA# 040811/NY
NOP/Master Case 03-358/Major Residential
SCH#2004081017
LA/5,14

August 11, 2004

Dear Ms. Werner:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the proposed 96 single family residential units, 218 apartment units, 665 townhouse units, proposed school site and recreation park development.

Based on the information received, and to assist us in our efforts to completely evaluate and assess the impacts of this project on the State transportation system, a traffic study in advance of the DEIR should be prepared to analyze the following information:

Please reference the Department's **Traffic Impact Study Guideline** on the Internet at <http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>

1. Presentations of assumptions and methods used to develop trip generation, trip distribution, choice of travel mode, and assignments of trips to State Route(s) 5 & 14.
2. Consistency of project travel modeling with other regional and local modeling forecasts and with travel data. The IGR/CEQA office may use indices to check results. Differences or inconsistencies must be thoroughly explained.
3. Analysis of ADT, AM, and PM peak-hour volumes for both existing and future conditions in the affected area. This should include freeways, interchanges, and intersections, and all HOV facilities. Interchange Level of Service should be

specified (HCM2000 method requested). Utilization of transit lines and vehicles, and of all facilities, should be realistically estimated. Future conditions would include build-out of all projects (see next item) and any plan-horizon years.

4. Inclusion of all appropriate traffic volumes. Analysis should include traffic from the project, cumulative traffic generated from all specific approved developments in the area, and traffic growth other than from the project and developments. That is, include: existing + project + other projects + other growth.
5. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts. These mitigation discussions should include, but not be limited to, the following:
 - description of transportation infrastructure improvements
 - financial costs, funding sources and financing
 - sequence and scheduling considerations
 - implementation responsibilities, controls and monitoringAny mitigation involving transit, HOV, or TDM must be rigorously justified and its effects conservatively estimated. Improvements involving dedication of land or physical construction may be favorably considered.
6. Specification of developer's percent share of the cost, as well as a plan of realistic mitigation measures under the control of the developer. The following ratio should be estimated: Additional traffic volume due to project implementation is divided by the total increase in the traffic volume (see Appendix "B" of the Guidelines). That ratio would be the project equitable share responsibility.

We note for purposes of determining project share of costs, the number of trips from the project on each traveling segment or element is estimated in the context of forecasted traffic volumes which include build-out of all approved and not yet approved projects, and other sources of growth. Analytical methods such as select-zone travel forecast modeling might be used.

The Department as a commenting agency under CEQA has jurisdiction superceding that of MTA in identifying the freeway analysis needed for this project. Caltrans is responsible for obtaining measures that will off-set project vehicle trip generation that worsens Caltrans facilities and hence, it does not adhere to the CMP guide of 150 or more vehicle trips added before freeway analysis is needed. MTA's Congestion Management Program in acknowledging the Department's role, stipulates that Caltrans must be consulted to identify specific locations to be analyzed on the State Highway System. Therefore State Route(s) mentioned in item #1 and it's facilities must be analyzed per the Department's **Traffic Impact Study Guidelines**.

Ms. Werner

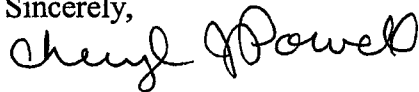
August 11, 2004

We look forward to reviewing the DEIR. We expect to receive a copy from the State Clearinghouse. However, to expedite the review process, you may send two copies in advance to the undersigned at the following address:

Cheryl J. Powell
IGR/CEQA Branch Chief
Caltrans District 07
Regional Transportation Planning Office
120 S. Spring St., Los Angeles, CA 90012

If you have any questions regarding this response, please call the Project Engineer/Coordinator Mr. Yerjanian at (213) 897-6536 and refer to IGR/CEQA # 040811NY.

Sincerely,



Cheryl J. Powell
IGR/CEQA Branch Chief
Regional Transportation Planning

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax



August 6, 2004

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PLANNING DIVISION

AUG 09 2004

Heather Werner
City of Santa Clarita
23920 Valencia Boulevard, Suite 302
Santa Clarita, CA 91355

PLANNING AND BUILDING SERVICES
CITY OF SANTA CLARITA

RE: SCH# 2004081017 - Master Case 03-358, General Plan Amendment 03-002, Zone Change 03-002, Tentative Parcel Map 60258, Conditional Use Permit 03-016, Hillside Review 03-006, Santa Clarita, Los Angeles County

Dear Ms. Werner:

The Native American Heritage Commission has reviewed the Notice of Preparation (NOP) regarding the above project. To adequately assess and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

- ✓ Contact the appropriate Information Center for a record search to determine:
 - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measurements should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check. **Check Completed with negative results**
 - A list of appropriate Native American Contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
 - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Wood".

Rob Wood
Environmental Specialist III
(916) 653-4040

CC: State Clearinghouse

NATIVE AMERICAN CONTACTS
Los Angeles County
August 6, 2004

Charles Cooke
32835 Santiago Road
Acton , CA 93510
(661) 269-1244

Chumash
Fernandeno
Tataviam
Kitanemuk

Randy Guzman - Folkes
3044 East Street
Simi Valley , CA 93065-3929
traditional75@hotmail.com
(805) 579-9206
(805) 797-5605 (cell)

Chumash
Fernandeno
Tataviam
Shoshone Paiute
Yaqui

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
805 492-7255

Chumash
Tataviam
Fernandeno

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5308
(213) 386-3995 FAX

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall , CA 91322
tsen2u2@msn.com
(661) 753-9833 Office
(760) 885-0955 Cell
(760) 949-2103 Home

Fernandeno
Tataviam
Serrano
Vanyume
Kitanemuk

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed SCH# 2004081017 - Master Case 03-358, General Plan Amendment 03-002, Zone Change 03-002, Tentative Parcel Map 60258, Conditional Use Permit 03-016, Hillside Review 03-006, Santa Clarita, Los Angeles County



Arnold
Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Jan Boel
Acting Director

Notice of Preparation

August 3, 2004

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PLANNING AND BUILDING SERVICES
CITY OF SANTA CLARITA

To: Reviewing Agencies

Re: Master Case 03-358, General Plan Amendment 03-002, Zone Change 03-002, Tentative Parcel Map 60258, Conditional Use Permit 03-016, Hillside Review 03-006
SCH# 2004081017

Attached for your review and comment is the Notice of Preparation (NOP) for the Master Case 03-358, General Plan Amendment 03-002, Zone Change 03-002, Tentative Parcel Map 60258, Conditional Use Permit 03-016, Hillside Review 03-006 draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.


Please direct your comments to:

Heather Werner
City of Santa Clarita
23920 Valencia Boulevard, Suite 302
Santa Clarita, CA 91355

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

for 
Scott Morgan
Associate Planner, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2004081017
Project Title Master Case 03-358, General Plan Amendment 03-002, Zone Change 03-002, Tentative Parcel Map 60258,
Lead Agency Conditional Use Permit 03-016, Hillside Review 03-006
Santa Clarita, City of

Type **NOP** Notice of Preparation
Description Tentative Tract Map 30258 totals 247 acres. The proposed project includes the development of 96 single family residential lots on 18.6 acres west of the City of Los Angeles Department of Water and Power (DWP) Easement, 218 apartment units and 665 townhouse units on multi-family pads totaling approximately 77 acres, a proposed school site on 20.6 acres and recreational park on 4.1 acres north of the Santa Clara River, the remaining area would be roughly 76.1 acres of natural open space and 85.9 acres of graded slope lots, within the City of Santa Clarita. The development proposes a gross density of 3.9 dwelling units per acre. Approximatel 5,000 linear feet of roadway will be dedicated to the City for the extension of Golden Valley Road with a total of 19 acres dedicated to streets. The industrial commercial lot toals approximately .5 acre, however no development is proposed on this parcel. The proposed project would involve grading activities of approximately 5.4 million cubic yards of fill.

Lead Agency Contact

Name Heather Werner
Agency City of Santa Clarita
Phone 661-255-4330 **Fax**
email
Address 23920 Valencia Boulevard, Suite 302
City Santa Clarita **State** CA **Zip** 91355

Project Location

County Los Angeles
City Santa Clarita
Region
Cross Streets Ermine Street
Parcel No. 2801-001-003, -005, -023 through -026; 2805-001-001, -011, -009, -022, -029, 2812-009-003
Township **Range** **Section** **Base**

Proximity to:

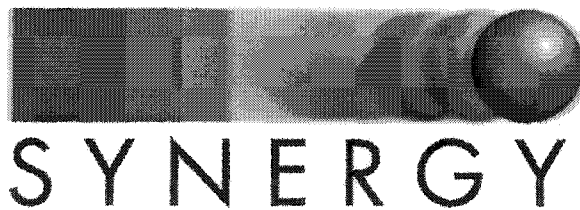
Highways
Airports
Railways
Waterways Santa Clara River
Schools
Land Use Residential Very Low and Industrial Commercial

Project Issues Aesthetic/Visual; Biological Resources; Toxic/Hazardous; Minerals; Public Services; Other Issues; Water Quality; Noise; Recreation/Parks; Air Quality; Geologic/Seismic; Soil Erosion/Compaction/Grading; Landuse; Population/Housing Balance; Traffic/Circulation

Reviewing Agencies Resources Agency; Department of Conservation; Department of Forestry and Fire Protection; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4

Date Received 08/03/2004 **Start of Review** 08/03/2004 **End of Review** 09/01/2004

Resources Agency	Public Utilities Commission	State Lands Commission	Tahoe Regional Planning Agency (TRPA)	Business, Trans & Housing	Caltrans - Division of Aeronautics	Caltrans - Planning	California Highway Patrol	Housing & Community Development	Dept. of Transportation	Dept. of Transportation 1	Dept. of Transportation 2	Dept. of Transportation 3	Dept. of Transportation 4	Dept. of Transportation 5	Dept. of Transportation 6	Dept. of Transportation 7	Dept. of Fish & Game 3	Dept. of Fish & Game 4	Dept. of Fish & Game 5	Dept. of Fish & Game 6	Dept. of Fish & Game 6 I/M	Dept. of Fish & Game M	Other Departments	Food & Agriculture	Dept. of General Services	Dept. of Health Services	Independent Commissions, Boards	Delta Protection Commission	Office of Emergency Services	Governor's Office of Planning & Research	Native American Heritage Comm.	Resources Agency	Dept. of Boating & Waterways	California Coastal Commission	Colorado River Board	Dept. of Conservation	California Energy Commission	Dept. of Forestry & Fire Protection	Office of Historic Preservation	Dept. of Parks & Recreation	Reclamation Board	Santa Monica Mountains Conservancy	Bay Conservation & Development Comm.	Dept. of Water Resources	Fish and Game	Dept. of Fish & Game	Dept. of Fish & Game 1	Dept. of Fish & Game 2
<input type="checkbox"/> Robert Floerke Region 3	<input type="checkbox"/> Ken Lewis	<input type="checkbox"/> Jean Sarino	<input type="checkbox"/> Cherry Jacques	<input type="checkbox"/> Sandy Hesnard	<input type="checkbox"/> Terry Pencovic	<input type="checkbox"/> John Olejnik Office of Special Projects	<input type="checkbox"/> Lisa Nichols Housing Policy Division	<input type="checkbox"/> Mike Eagan District 1	<input type="checkbox"/> Don Anderson District 2	<input type="checkbox"/> Jeff Pulverman District 3	<input type="checkbox"/> Tim Sable District 4	<input type="checkbox"/> David Murray District 5	<input type="checkbox"/> Marc Birnbaum District 6	<input type="checkbox"/> Cheryl J. Powell District 7	<input type="checkbox"/> William Laudermilk Region 4	<input type="checkbox"/> Don Chadwick Region 5, Habitat Conservation Program	<input type="checkbox"/> Gabriela Gatchel Region 6, Habitat Conservation Program	<input type="checkbox"/> Tammy Allen Region 6, Inyo/Mono, Habitat Conservation Program	<input type="checkbox"/> George Isaac Marine Region	<input type="checkbox"/> Steve Shaffer Dept. of Food and Agriculture	<input type="checkbox"/> Robert Sleppey Environmental Services Section	<input type="checkbox"/> Wayne Hubbard Dept. of Health/Drinking Water	<input type="checkbox"/> Debby Eddy	<input type="checkbox"/> Dennis Castillo	<input type="checkbox"/> State Clearinghouse	<input type="checkbox"/> Debbie Treadway	<input type="checkbox"/> Nadell Gayou	<input type="checkbox"/> David Johnson	<input type="checkbox"/> Elizabeth A. Fuchs	<input type="checkbox"/> Gerald R. Zimmerman	<input type="checkbox"/> Roseanne Taylor	<input type="checkbox"/> Environmental Office	<input type="checkbox"/> Allen Robertson	<input type="checkbox"/> Wayne Donaldson	<input type="checkbox"/> B. Noah Tilghman Environmental Stewardship Section	<input type="checkbox"/> DeeDee Jones	<input type="checkbox"/> Paul Edelman	<input type="checkbox"/> Steve McAdam	<input type="checkbox"/> Nadell Gayou	<input type="checkbox"/> Scott Flint Environmental Services Division	<input type="checkbox"/> Donald Koch Region 1	<input type="checkbox"/> Banky Curtis Region 2						
<input type="checkbox"/> John Pagano District 8	<input type="checkbox"/> Gayle Rosander District 9	<input type="checkbox"/> Tom Dumas District 10	<input type="checkbox"/> Mario Orso District 11	<input type="checkbox"/> Bob Joseph District 12	<input type="checkbox"/> Air Resources Board	<input type="checkbox"/> Airport Projects Jim Lerner	<input type="checkbox"/> Transportation Projects Kurt Karperos	<input type="checkbox"/> Industrial Projects Mike Tolstrup	<input type="checkbox"/> California Integrated Waste Management Board Sue O'Leary	<input type="checkbox"/> State Water Resources Control Board Jim Hockenberry Division of Financial Assistance	<input type="checkbox"/> State Water Resources Control Board Student Intern, 401 Water Quality Certification Unit Division of Water Quality	<input type="checkbox"/> State Water Resources Control Board Steven Herrera Division of Water Rights	<input type="checkbox"/> Dept. of Toxic Substances Control CEQA Tracking Center	<input type="checkbox"/> Dept. of Fish & Game 3	<input type="checkbox"/> Dept. of Fish & Game 4	<input type="checkbox"/> Dept. of Fish & Game 5	<input type="checkbox"/> Dept. of Fish & Game 6	<input type="checkbox"/> Dept. of Fish & Game 7	<input type="checkbox"/> Dept. of Fish & Game 8	<input type="checkbox"/> Dept. of Fish & Game 9	<input type="checkbox"/> Environmental Document Coordinator San Francisco Bay Region (2)	<input type="checkbox"/> Central Coast Region (3)	<input type="checkbox"/> Jonathan Bishop Los Angeles Region (4)	<input type="checkbox"/> Central Valley Region (5)	<input type="checkbox"/> Central Valley Region (5) Fresno Branch Office	<input type="checkbox"/> Central Valley Region (5) Redding Branch Office	<input type="checkbox"/> Lahontan Region (6)	<input type="checkbox"/> Lahontan Region (6) Victorville Branch Office	<input type="checkbox"/> Colorado River Basin Region (7)	<input type="checkbox"/> Santa Ana Region (8)	<input type="checkbox"/> San Diego Region (9)	<input type="checkbox"/> North Coast Region (1)	<input type="checkbox"/> Environmental Document Coordinator San Francisco Bay Region (2)	<input type="checkbox"/> Central Coast Region (3)	<input type="checkbox"/> Los Angeles Region (4)	<input type="checkbox"/> Central Valley Region (5)	<input type="checkbox"/> Central Valley Region (5) Fresno Branch Office	<input type="checkbox"/> Central Valley Region (5) Redding Branch Office	<input type="checkbox"/> Lahontan Region (6)	<input type="checkbox"/> Lahontan Region (6) Victorville Branch Office	<input type="checkbox"/> Colorado River Basin Region (7)	<input type="checkbox"/> Santa Ana Region (8)	<input type="checkbox"/> San Diego Region (9)					



Copy

August 24, 2004

Attn: Heather Werner, Associate Planner
City of Santa Clarita
Department of Planning & Building Services
23920 Valencia Blvd., 3rd Floor
Santa Clarita, CA 91355

Re: The Keystone, Master Case #03-358, Tent. Tract # 60258

Dear Ms. Werner:

Synergy Brookfield LLC ("Synergy") is the proponent of The Keystone project ("Project"). We appreciate the opportunity to review the Notice of Preparation and Initial Study ("IS") for the Project.

Synergy seeks to develop The Keystone Project to provide needed housing opportunities in the City of Santa Clarita, while assuring that environmental effects are limited to the greatest extent feasible. Therefore, Synergy appreciates the very conservative approach of the IS, which concludes that most environmental topics will be subject to detailed study in the Draft Environmental Impact Report ("DEIR") to be prepared for the Project.

Synergy looks forward to working with the City and the City's DEIR preparation team. In scoping the key areas of the DEIR, we encourage particular focus on the following:

- Detailed evaluation of the Project's effects on existing local plans - including a complete study of consistency with the General Plan, the Ridgeline Preservation and Hillside Development Ordinance and any habitat or transportation plans that cover the site.
- A detailed visual analysis to address the aesthetic impact of development on ridgelines and the significant grading is needed.
- With respect to air quality issues, the following items should be addressed and discussed in the DEIR:

- ❖ Conflicts with or obstructions to implementation of the applicable Air Quality Plan, as well as possible violations of any air quality standards or substantial contributions to an existing or projected air quality violation, should be analyzed. The IS focuses only on construction emissions, but operational emissions will also need to be addressed, as well as cumulative impacts on air quality.
- ❖ An analysis should be undertaken as to whether the Project will result in a cumulatively considerable net increase of any criteria pollutant for which the project region is deemed to be in non-attainment. The IS seemed to indicate that a “list of project approach” will be used to analyze cumulative impacts. However, the SCAQMD’s CEQA Air Quality Handbook recommends that a “summary of projections approach” be used in order to insure consistency with the SCAQMD’s Air Quality Management Plan.
- ❖ Exposure of sensitive receptors to substantial pollutant concentrations should be discussed. The IS implies that air dispersion modeling will be done to address the impacts to nearby residences. This is typically not necessary because residential developments do not have sources that require this type of modeling. However, the IS mentions that industrial sources are located across the Santa Clara River, which could possibly expose future residences to pollutants. Therefore, some dispersion modeling may be required to determine the impacts (i.e., criteria pollutants and/or toxics) of industrial sources on future residences.
- ❖ The creation of objectionable odors affecting a substantial number of people should be discussed. The IS mentions that nearby residences may be exposed to diesel fumes from diesel-powered construction equipment. Although the use of diesel-powered equipment could generate comments that a health risk assessment is required, short-term construction related diesel emissions do not typically warrant such a health risk assessment.
- Consistently with CEQA Guidelines and Appendix F, the DEIR should evaluate gas and electricity impacts. Also, it should be made clear that, although the IS did not address potential impacts to energy, the DEIR will evaluate that topic.

Attn: Heather Werner
August 23, 2004
Page 3

- The DEIR should indicate that the on-site portion of the Santa Clara River will be maintained and preserved in open space, and that buffer areas separating development and the Santa Clara River will be created as a part of the Project. The Project Description should be revised to incorporate these and other avoidance measures pertinent to the protection of the Santa Clara River (including the mitigation solution of eliminating the River Bike Trail).
- The IS does not mention the fact that applicable statutes require preparation of a water supply assessment for the Project by the local water agency. The DEIR analysis and a determination of whether sufficient water supply exists for the Project will be dependent upon the water supply assessment prepared by the local water agency.

Synergy, a Land + Development Company.

Rick Doremus, President

RD:ca

Cc: Dave Colgan, Esq., Nossaman Guthner Knox & Elliot, LLP
Peter Lewandowski, Environmental Impact Science
Rick Cuoco, Brookfield Homes

APPENDIX 2

Air Quality Calculations

Criteria Air Pollutants and Ambient Air Quality Standards

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³) ⁸	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)*		0.08 ppm (157 µg/m ³) ⁸		
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		50 µg/m ³		
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		65 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m ³)		—		
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	—	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)		
	3 Hour	—		—		
	1 Hour	0.25 ppm (655 µg/m ³)		—		—
Lead ⁹	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m ³		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ⁹	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

*This concentration was approved by the Air Resources Board on April 28, 2005 and is expected to become effective in early 2006.

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM₁₀, PM_{2.5}, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.
8. New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.
9. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Existing Localized Carbon Monoxide Concentrations

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

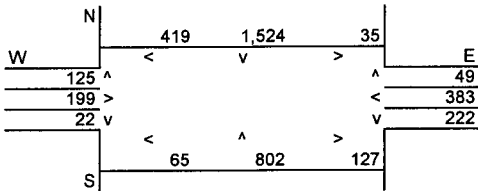
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 6.1
 Background 8-hour CO Concentration (ppm): 3.7
 Persistence Factor: 0.6
 Analysis Year: 2004

Roadway Data

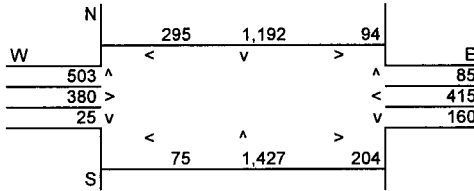
Intersection: Valencia Boulevard & Magic Mountain Parkway
 Analysis Condition: Existing Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed		
			A.M.	P.M.	
North-South Roadway:	Valencia Boulevard	At Grade	6	20	20
East-West Roadway:	Magic Mountain Parkway	At Grade	4	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,954	N-S Road:	3,596
E-W Road:	1,213	E-W Road:	1,693

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	A ₁ Reference CO Concentrations			B Traffic Volume	C Emission Factors ²	Estimated CO Concentrations		
	25 Feet	50 Feet	100 Feet			25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	6.1	4.9	3.5	2,954	7.65	1.38	1.11	0.79
East-West Road	2.6	2.2	1.7	1,213	7.65	0.24	0.20	0.16
P.M. Peak Traffic Hour								
North-South Road	6.1	4.9	3.5	3,596	7.65	1.68	1.35	0.96
East-West Road	2.6	2.2	1.7	1,693	7.65	0.34	0.29	0.22

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	7.7	8.1	4.9
50 Feet from Roadway Edge	7.4	7.7	4.7
100 Feet from Roadway Edge	7.0	7.3	4.4

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

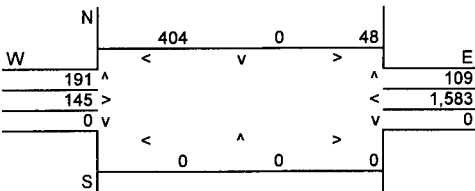
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 6.1
 Background 8-hour CO Concentration (ppm): 3.7
 Persistence Factor: 0.6
 Analysis Year: 2004

Roadway Data

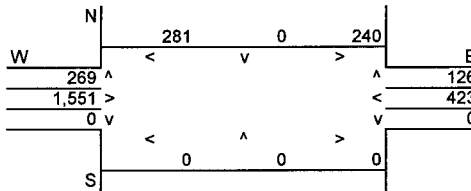
Intersection: Sierra Highway & Golden Valley Road
 Analysis Condition: Existing Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed	
			A.M.	P.M.
North-South Roadway:	Golden Valley Road	4	20	20
East-West Roadway:	Sierra Highway	4	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	752	N-S Road:	916
E-W Road:	2,323	E-W Road:	2,524

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	Reference CO Concentrations			B Traffic Volume	C Emission Factors ²	Estimated CO Concentrations		
	A ₁ 25 Feet	A ₂ 50 Feet	A ₃ 100 Feet			25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	752	7.65	0.15	0.13	0.10
East-West Road	7.0	5.4	3.8	2,323	7.65	1.24	0.96	0.68
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	916	7.65	0.18	0.15	0.12
East-West Road	7.0	5.4	3.8	2,524	7.65	1.35	1.04	0.73

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	7.5	7.6	4.6
50 Feet from Roadway Edge	7.2	7.3	4.4
100 Feet from Roadway Edge	6.9	7.0	4.2

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

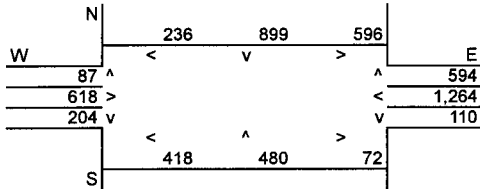
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 6.1
 Background 8-hour CO Concentration (ppm): 3.7
 Persistence Factor: 0.6
 Analysis Year: 2004

Roadway Data

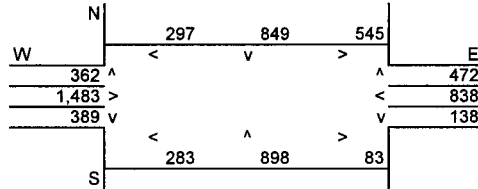
Intersection: Whites Canyon Road & Soledad Canyon Road
 Analysis Condition: Existing Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed	
			A.M.	P.M.
North-South Roadway:	Whites Canyon Road	4	15	10
East-West Roadway:	Soledad Canyon Road	6	15	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,892	N-S Road:	3,423
E-W Road:	3,254	E-W Road:	3,652

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	A _i Reference CO Concentrations			B Traffic Volume	C Emission Factors ²	Estimated CO Concentrations		
	25 Feet	50 Feet	100 Feet			25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	2,892	8.95	0.67	0.57	0.44
East-West Road	6.1	4.9	3.5	3,254	8.95	1.78	1.43	1.02
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	3,423	10.83	0.96	0.82	0.63
East-West Road	6.1	4.9	3.5	3,652	10.83	2.41	1.94	1.38

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	8.6	9.5	5.7
50 Feet from Roadway Edge	8.1	8.9	5.4
100 Feet from Roadway Edge	7.6	8.1	4.9

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

**Construction Related Emissions:
Grading Phase Without Mitigation**

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Grading.url
Project Name: The Keystone - Construction Grading Phase
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007 ***							
TOTALS (lbs/day, unmitigated)	51.86	343.35	430.01	0.01	4,130.93	14.60	4,116.33
TOTALS (lbs/day, mitigated)	51.86	343.35	430.01	0.01	380.35	14.60	365.75

Worker Trips	0.38	0.46	9.05	0.01	0.03	0.01	0.02
Maximum lbs/day	51.86	343.35	430.01	0.01	380.35	14.60	365.75
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	51.86	343.35	430.01	0.01	380.35	14.60	365.75

Construction-Related Mitigation Measures

- Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
- Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
- Phase 2: Soil Disturbance: Water exposed surfaces - 3x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 50.0%)
- Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
- Phase 2: Unpaved Roads: Water all haul roads 3x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 45.0%)
- Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
- Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: May '07

Phase 2 Duration: 7 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Rubber Tired Dozers	352	0.590	7.0
10	Scrapers	313	0.660	8.0
4	Tractor/Loaders/Backhoes	79	0.465	7.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 3x daily
has been changed from off to on.

Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Water all haul roads 3x daily
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

**Construction Related Emissions:
Roads and Utilities Without Mitigation**

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Streets.url
 Project Name: The Keystone - Roads and Utilities Phase
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007 ***							
TOTALS (lbs/day,unmitigated)	8.23	52.59	68.55	0.00	1.97	1.97	0.00

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008 ***							
TOTALS (lbs/day,unmitigated)	13.38	80.32	110.67	0.00	2.67	2.66	0.01

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Streets.url
 Project Name: The Keystone - Roads and Utilities Phase
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: December, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 158.1 acres
 Maximum Acreage Disturbed Per Day: 30 acres
 Single Family Units: 2 Multi-Family Units: 8
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	8.18	52.48	67.41	-	1.97	1.97	0.00
Bldg Const Worker Trips	0.05	0.11	1.14	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	8.23	52.59	68.55	0.00	1.97	1.97	0.00
Max lbs/day all phases	8.23	52.59	68.55	0.00	1.97	1.97	0.00
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	8.18	51.27	67.93	-	1.82	1.82	0.00
Bldg Const Worker Trips	0.07	0.12	1.42	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.25	-	-	-	-	-	-
Asphalt Off-Road Diesel	4.79	28.00	40.76	-	0.81	0.81	0.00
Asphalt On-Road Diesel	0.05	0.91	0.18	0.00	0.02	0.02	0.00
Asphalt Worker Trips	0.03	0.02	0.38	0.00	0.01	0.00	0.01
Maximum lbs/day	13.38	80.32	110.67	0.00	2.67	2.66	0.01
Max lbs/day all phases	13.38	80.32	110.67	0.00	2.67	2.66	0.01

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Dec '07

Phase 3 Duration: 5 months

Start Month/Year for SubPhase Building: Dec '07

SubPhase Building Duration: 5 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	4.0
2	Off Highway Trucks	417	0.490	4.0
4	Tractor/Loaders/Backhoes	79	0.465	6.0
2	Trenchers	82	0.695	7.0

SubPhase Architectural Coatings Turned OFF

Start Month/Year for SubPhase Asphalt: Feb '08

SubPhase Asphalt Duration: 3 months

Acres to be Paved: 6.4

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	4.0
2	Pavers	132	0.590	7.0
2	Rollers	114	0.430	7.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

**Construction Related Emissions:
School, YMCA and Phase I and Phase II Residential
Construction Without Mitigation**

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - School.urb
 Project Name: The Keystone - School, YMCA, and Residential Construction
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008 ***							
TOTALS (lbs/day,unmitigated)	28.98	163.23	313.56	0.08	7.18	6.52	0.66

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009 ***							
TOTALS (lbs/day,unmitigated)	36.28	199.42	374.57	0.09	8.18	7.51	0.67

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - School.urb
 Project Name: The Keystone - School, YMCA, and Residential Construction
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: May, 2008
 Construction Duration: 12
 Total Land Use Area to be Developed: 0 acres
 Maximum Acreage Disturbed Per Day: 0 acres
 Single Family Units: 64 Multi-Family Units: 588
 Retail/Office/Institutional/Industrial Square Footage: 167000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	22.41	156.36	175.45	-	6.30	6.30	0.00
Bldg Const Worker Trips	4.92	5.99	118.46	0.08	0.53	0.20	0.33
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	1.65	0.88	19.64	0.00	0.35	0.02	0.33
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	28.98	163.23	313.56	0.08	7.18	6.52	0.66
Max lbs/day all phases	28.98	163.23	313.56	0.08	7.18	6.52	0.66
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	22.41	149.49	180.52	-	5.94	5.94	0.00
Bldg Const Worker Trips	4.77	5.92	116.94	0.08	0.53	0.20	0.33
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	1.50	0.81	18.11	0.00	0.35	0.02	0.33
Asphalt Off-Gas	0.71	-	-	-	-	-	-
Asphalt Off-Road Diesel	6.90	41.47	58.19	-	1.30	1.30	0.00
Asphalt On-Road Diesel	0.13	1.93	0.47	0.01	0.05	0.05	0.00
Asphalt Worker Trips	0.03	0.01	0.35	0.00	0.01	0.00	0.01
Maximum lbs/day	36.28	199.42	374.57	0.09	8.18	7.51	0.67
Max lbs/day all phases	36.28	199.42	374.57	0.09	8.18	7.51	0.67

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08

Phase 3 Duration: 12 months

Start Month/Year for SubPhase Building: May '08

SubPhase Building Duration: 12 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
5	Concrete/Industrial saws	84	0.730	3.0
10	Other Equipment	190	0.620	6.0
11	Rough Terrain Forklifts	94	0.475	4.0
3	Tractor/Loaders/Backhoes	79	0.465	2.0

Start Month/Year for SubPhase Architectural Coatings: Aug '08

SubPhase Architectural Coatings Duration: 9 months

Start Month/Year for SubPhase Asphalt: Apr '09

SubPhase Asphalt Duration: 0.5 months

Acres to be Paved: 3

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	2.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	7.0
1	Paving Equipment	111	0.530	7.0
1	Rollers	114	0.430	7.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Architectural Coatings: # ROG/ft² (residential) changed from 0.0185 to 0

Architectural Coatings: # ROG/ft² (non-res) changed from 0.0185 to 0

Construction Related Emissions:
Phase III Residential Construction Without Mitigation

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Residential
Project Name: The Keystone - Residential Construction Phase
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	18.27	106.27	180.27	0.03	4.27	3.99	0.28

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Residential
 Project Name: The Keystone - Residential Construction Phase
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: May, 2008
 Construction Duration: 6
 Total Land Use Area to be Developed: 0 acres
 Maximum Acreage Disturbed Per Day: 0 acres
 Single Family Units: 32 Multi-Family Units: 295
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	12.77	87.65	100.77	-	3.44	3.44	0.00
Bldg Const Worker Trips	2.04	2.49	49.20	0.03	0.22	0.08	0.14
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.68	0.36	8.16	0.00	0.15	0.01	0.14
Asphalt Off-Gas	0.12	-	-	-	-	-	-
Asphalt Off-Road Diesel	2.62	15.33	22.25	-	0.45	0.45	0.00
Asphalt On-Road Diesel	0.02	0.43	0.08	0.00	0.01	0.01	0.00
Asphalt Worker Trips	0.02	0.01	0.25	0.00	0.00	0.00	0.00
Maximum lbs/day	18.27	106.27	180.27	0.03	4.27	3.99	0.28
Max lbs/day all phases	18.27	106.27	180.27	0.03	4.27	3.99	0.28

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08
 Phase 3 Duration: 6 months
 Start Month/Year for SubPhase Building: May '08
 SubPhase Building Duration: 6 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
3	Concrete/Industrial saws	84	0.730	3.0
6	Other Equipment	190	0.620	5.0
7	Rough Terrain Forklifts	94	0.475	5.0
2	Tractor/Loaders/Backhoes	79	0.465	2.0

Start Month/Year for SubPhase Architectural Coatings: Aug '08
 SubPhase Architectural Coatings Duration: 3 months
 Start Month/Year for SubPhase Asphalt: Oct '08
 SubPhase Asphalt Duration: 0.5 months

Acres to be Paved: .5

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	3.0
1	Pavers	132	0.590	7.0
1	Rollers	114	0.430	7.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Architectural Coatings: # ROG/ft² (residential) changed from 0.0185 to 0

Architectural Coatings: # ROG/ft² (non-res) changed from 0.0185 to 0

Daily Operational Emissions for Summer and Winter Seasons

EXPLANATION OF CHANGES MADE TO DEFAULT SETTINGS IN URBEMIS 2002

Project Name: The Keystone
Analysis Scenario: Proposed Project

The following pages include the printed results of the air pollutant emissions modeling for one of the land use components of the proposed project. The air emissions modeling was conducted using the URBEMIS 2002 for Windows computer program developed for the Yolo-Solano Air Quality Management District in May 2003. URBEMIS 2002 is programmed with EMFAC 2002 emission factors developed by the California Air Resources Board.

As part of this analysis, changes have been made to several of the default values programmed into URBEMIS 2002. These changes were made to more accurately reflect the nature of the proposed land use. Each of these changes are discussed below.

Vehicle Trip Rates

The default vehicle trip rate values were changed to be consistent with the traffic impact analysis prepared for the project.

Vehicle Fleet Mix

URBEMIS 2002 is programmed with the following state-wide average vehicle fleet mix:

State-Wide Vehicle Type	Total	
Automobiles	54.9%	
Light-Duty Trucks <3,750 pounds	15.1%	
Light-Duty Trucks 3,751-5,750 pounds	16.1%	
Medium-Duty Trucks 5,751-8,500 pounds	7.3%	} 9.70% Total Trucks
Light-Heavy-Duty Trucks 8,501-10,000 pounds	1.1%	
Light-Heavy-Duty Trucks 10,001-14,000 pounds	0.3%	
Medium-Heavy-Duty Trucks 14,001-33,000 pounds	0.1%	
Heavy-Heavy-Duty Trucks 33,001-60,000 pounds	0.9%	
Line-Haul Vehicles	0.0%	
Urban Buses	0.2%	
Motorcycles	1.6%	
School Buses	0.1%	
Motor Homes	1.4%	

assessed in this analysis is identified below along with the total percentage of trucks (medium and heavy) that are expected for this land use. The following vehicle mix was calculated based on the percentage of trucks associated with this land use. The percentage of trucks for each land use were determined from the 3rd, 4th, 5th, and 6th Editions of the ITE Trip Generation manual.

ITE Code	Project Land Use:	Truck %	ADT	Truck #
210	Single Family	0.44%	919	4
220	Townhome	0.88%	5,320	47
220	Apartment	0.88%	1,465	13
522	Middle School	0.44%	2,592	11
495	YMCA	0.44%	709	3
0			0	0
0			0	0
0			0	0
0			0	0
0			0	0
0			0	0
0			0	0
Project Totals:			11,005	78
Project Truck %:			0.71%	

Vehicle Type	Total	
Automobiles	60.97%	
Light-Duty Trucks <3,750 pounds	16.77%	
Light-Duty Trucks 3,751-5,750 pounds	17.88%	
Medium-Duty Trucks 5,751-8,500 pounds	0.54%	} 0.71% Total Trucks
Light-Heavy-Duty Trucks 8,501-10,000 pounds	0.08%	
Light-Heavy-Duty Trucks 10,001-14,000 pounds	0.02%	
Medium-Heavy-Duty Trucks 14,001-33,000 pounds	0.01%	
Heavy-Heavy-Duty Trucks 33,001-60,000 pounds	0.07%	
Line-Haul Vehicles	0.00%	
Urban Buses	0.22%	
Motorcycles	1.78%	
School Buses	0.11%	
Motor Homes	1.55%	

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Project.url
 Project Name: The Keystone - Proposed Project
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	48.85	9.51	5.96	0.02	0.02
TOTALS (lbs/day, mitigated)	48.85	9.51	5.96	0.02	0.02

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	103.01	58.51	849.26	0.53	85.57
TOTALS (lbs/day, mitigated)	98.20	54.00	784.09	0.49	79.00

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	151.85	68.02	855.22	0.55	85.59
TOTALS (lbs/day, mitigated)	147.05	63.51	790.04	0.51	79.02

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Project.url
Project Name: The Keystone - Proposed Project
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.72	9.48	3.99	-	0.02
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.23	0.03	1.97	0.02	0.00
Consumer Prdcts	47.90	-	-	-	-
TOTALS (lbs/day, unmitigated)	48.85	9.51	5.96	0.02	0.02

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	7.08	5.29	77.61	0.05	7.85
Apartments low rise	12.30	8.43	123.75	0.08	12.51
Condo/townhouse general	42.70	30.63	449.39	0.28	45.43
Junior high school	37.55	11.71	165.17	0.10	16.59
YMCA	3.38	2.45	33.34	0.02	3.19
TOTAL EMISSIONS (lbs/day)	103.01	58.51	849.26	0.53	85.57

Includes correction for passby trips.

Includes the following double counting adjustment for internal trips:

Residential trips: 3.43 % reduction. Nonresidential trips: 8.00 % reduction.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.57 trips / dwelling units	96.00	887.24
Apartments low rise	6.72 trips / dwelling units	218.00	1,414.76
Condo/townhouse general	8.00 trips / dwelling units	665.00	5,137.69
Junior high school	1.62 trips / students	1,600.00	2,384.72
YMCA	22.88 trips / 1000 sq. ft.	31.00	652.56

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	60.97	1.30	98.40	0.30
Light Truck < 3,750 lbs	16.77	2.60	95.40	2.00
Light Truck 3,751- 5,750	17.88	1.20	98.10	0.70
Med Truck 5,751- 8,500	0.54	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	0.08	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.02	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.01	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.07	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.22	0.00	50.00	50.00
Motorcycle	1.78	75.00	25.00	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	1.55	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Junior high school	20.0	10.0	70.0
YMCA	5.0	2.5	92.5

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	6.65	4.88	71.67	0.04	7.25
Apartments low rise	11.62	7.79	114.29	0.07	11.55
Condo/townhouse general	40.22	28.28	415.04	0.26	41.96
Junior high school	36.57	10.80	152.54	0.09	15.32
YMCA	3.14	2.24	30.54	0.02	2.92
TOTAL EMISSIONS (lbs/day)	98.20	54.00	784.09	0.49	79.00

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.57 trips / dwelling units	96.00	887.24
Apartments low rise	6.72 trips / dwelling units	218.00	1,414.76
Condo/townhouse general	8.00 trips / dwelling units	665.00	5,137.69
Junior high school	1.62 trips / students	1,600.00	2,384.72
YMCA	22.88 trips / 1000 sq. ft.	31.00	652.56

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	60.97	1.30	98.40	0.30
Light Truck < 3,750 lbs	16.77	2.60	95.40	2.00
Light Truck 3,751- 5,750	17.88	1.20	98.10	0.70
Med Truck 5,751- 8,500	0.54	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	0.08	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.02	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.01	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.07	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.22	0.00	50.00	50.00
Motorcycle	1.78	75.00	25.00	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	1.55	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Junior high school	20.0	10.0	70.0
YMCA	5.0	2.5	92.5

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

2.0 Side Walks/Paths: Most Destinations Covered
0.5 Street Trees Provide Shade: Some Coverage
3.0 Pedestrian Circulation Access: Most Destinations
3.0 Visually Interesting Uses: Moderate Number and Variety
2.0 Street System Enhances Safety: Most Streets
1.0 Pedestrian Safety from Crime: Moderate Degree of Safety
1.0 Visually Interesting Walking Routes: Moderate Level
12.5 <- Pedestrian Environmental Credit
12.5 /19 = 0.7 <- Pedestrian Effectiveness Factor

Transit Service

0.0 Transit Service: Dial-A-Ride or No Transit Service
0.0 <- Transit Effectiveness Credit
12.5 <- Pedestrian Factor
12.5 <-Total
12.5 /110 = 0.1 <-Transit Effectiveness Factor

Bicycle Environment

3.0 Interconnected Bikeways: Moderate Coverage
3.0 Bike Routes Provide Paved Shoulders: Most Major Destinations
1.0 Safe Vehicle Speed Limits: Some Destinations
1.0 Safe School Routes: One School
2.0 Uses w/in Cycling Distance: Moderate Number and Variety
1.0 Bike Parking Ordinance: Requires Unprotected Bike Racks
11.0 <- Bike Environmental Credit
11.0 /20 = 0.6 <- 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
15.0	Credit for Existing or Planned Community Transit Service
15.0	<- Totals

Pedestrian Enhancing Infrastructure Measures (Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
3.0	Mixed Use Project (Residential Oriented)
1.0	Provide Sidewalks and/or Pedestrian Paths
1.0	Provide Direct Pedestrian Connections
0.5	Provide Pedestrian Safety
0.5	Provide Street Lighting
0.5	Provide Pedestrian Signalization and Signage
8.5	<- Totals

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
1.0	Provide Wide Sidewalks and Onsite Pedestrian Facilities
0.5	Provide Street Lighting
0.5	Project Provides Shade Trees to Shade Sidewalks
0.5	Provide Pedestrian Safety Designs/Infrastructure at Crossings
0.3	No Long Uninterrupted Walls Along Pedestrian Walkways
4.8	<- Totals

Bicycle Enhancing Infrastructure Measures (Residential)

% Trips Reduced	Measure
7.0	Credit for Surrounding Bicycle Environment
2.0	Provide Bike Lanes/Paths Connecting to Bikeway System
9.0	<- Totals

Bike Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
5.0	Credit for Surrounding Area Bike Environment
2.0	Provide Bike Lanes/Paths Connecting to Bikeway System
7.0	<- Totals

Operational Measures (Applying to Commute Trips)

% Trips Reduced	Measure
0.0	<- Totals

Operational Measures (Applying to Employee Non-Commute Trips)

% Trips Reduced	Measure
0.0	<- Totals

Operational Measures (Applying to Customer Trips)

% Trips Reduced	Measure
0.0	<- Totals

Measures Reducing VMT (Non-Residential)

VMT Reduced	Measure
0.0	Park and Ride Lots
0.0	<- Totals

Measures Reducing VMT (Residential)

VMT Reduced	Measure
0.0	<- Totals

Total Percentage Trip Reduction with Environmental Factors and Mitigation Measures				
Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips	
Pedestrian	0.62	2.46	2.46	
Transit	1.70	0.38	0.46	
Bicycle	4.95	4.95	4.95	
Totals	0.00	0.00	0.00	
Travel Mode	Work Trips	Employee Trips	Customer Trips	
Pedestrian	0.34	3.13	3.12	
Transit	1.70	0.03	1.70	
Bicycle	3.85	3.85	3.85	
Other	0.00	0.00	0.00	
Totals	0.00	0.00	0.00	

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The wood stove option switch changed from on to off.
The area source mitigation measure option switch changed from off to on.
The fireplace cords of wood burned changed from 1.48 to 0.46.
The fireplace percentage of residential units changed from 10 to 4.9.
The landscape year changed from 2004 to 2009.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The light auto percentage changed from 54.9 to 60.97.
The light truck < 3750 lbs percentage changed from 15.1 to 16.77.
The light truck 3751-5750 percentage changed from 16.1 to 17.88.
The med truck 5751-8500 percentage changed from 7.3 to .54.
The lite-heavy truck 8501-10000 percentage changed from 1.1 to .08.
The lite-heavy truck 10001-14000 percentage changed from 0.3 to .02.
The med-heavy truck 14001-33000 percentage changed from 1.0 to .01.
The heavy-heavy truck 33001-60000 percentage changed from 0.9 to .07.
The urban bus percentage changed from 0.2 to 0.22.
The motorcycle percentage changed from 1.6 to 1.78.
The school bus percentage changed from 0.1 to 0.11.
The motorhome percentage changed from 1.4 to 1.55.
The operational emission year changed from 2004 to 2009.
The operational winter temperature changed from 50 to 60.
The operational summer selection item changed from 8 to 7.
The travel mode environment settings changed from both to: both
The default/noddefault travel setting changed from noddefault to: noddefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Most Destinations Covered
Street Trees Provide Shade: No Coverage
changed to: Street Trees Provide Shade: Some Coverage
Pedestrian Circulation Access: No Destinations
changed to: Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to: Visually Interesting Uses: Moderate Number and Variety
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Most Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to: Pedestrian Safety from Crime: Moderate Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to: Visually Interesting Walking Routes: Moderate Level
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: Moderate Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to: Bike Routes Provide Paved Shoulders: Most Major Destinations
Safe Vehicle Speed Limits: No Routes Provided
changed to: Safe Vehicle Speed Limits: Some Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: One School
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to: Uses w/in Cycling Distance: Moderate Number and Variety
Bike Parking Ordinance: No Ordinance or Unenforceable
changed to: Bike Parking Ordinance: Requires Unprotected Bike Racks
Mitigation measure Mixed Use Project (Residential Oriented):3
has been changed from off to on.
Mitigation measure Provide Sidewalks and/or Pedestrian Paths:1
has been changed from off to on.
Mitigation measure Provide Direct Pedestrian Connections:1
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety:0.5
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Provide Pedestrian Signalization and Signage:0.5
has been changed from off to on.
Mitigation measure Provide Wide Sidewalks and Onsite Pedestrian Facilities:1
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Project Provides Shade Trees to Shade Sidewalks:0.5
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety Designs/Infrastructure at Crossings:0.5
has been changed from off to on.
Mitigation measure No Long Uninterrupted Walls Along Pedestrian Walkways:0.25

has been changed from off to on.
Mitigation measure Provide Bike Lanes/Paths Connecting to Bikeway System:2
has been changed from off to on.
Mitigation measure Provide Bike Lanes/Paths Connecting to Bikeway System:2
has been changed from off to on.

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Project.url
 Project Name: The Keystone - Proposed Project
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	215.62	11.37	188.21	0.29	25.25
TOTALS (lbs/day, mitigated)	215.62	11.37	188.21	0.29	25.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	72.02	77.96	742.95	0.42	85.57
TOTALS (lbs/day, mitigated)	66.84	71.97	685.81	0.39	79.00

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	287.64	89.34	931.16	0.71	110.82
TOTALS (lbs/day, mitigated)	282.46	83.34	874.01	0.68	104.25

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Project.url
 Project Name: The Keystone - Proposed Project
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.72	9.48	3.99	-	0.02
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fireplaces	167.00	1.90	184.22	0.29	25.23
Landscaping - No winter emissions					
Consumer Prdcts	47.90	-	-	-	-
TOTALS (lbs/day, unmitigated)	215.62	11.37	188.21	0.29	25.25

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	6.18	7.06	67.46	0.04	7.85
Apartments low rise	9.98	11.26	107.56	0.06	12.51
Condo/townhouse general	36.00	40.89	390.61	0.23	45.43
Junior high school	16.62	15.54	146.48	0.08	16.59
YMCA	3.24	3.22	30.85	0.02	3.19
TOTAL EMISSIONS (lbs/day)	72.02	77.96	742.95	0.42	85.57

Includes correction for passby trips.

Includes the following double counting adjustment for internal trips:

Residential trips: 3.43 % reduction. Nonresidential trips: 8.00 % reduction.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 60 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.57 trips / dwelling units	96.00	887.24
Apartments low rise	6.72 trips / dwelling units	218.00	1,414.76
Condo/townhouse general	8.00 trips / dwelling units	665.00	5,137.69
Junior high school	1.62 trips / students	1,600.00	2,384.72
YMCA	22.88 trips / 1000 sq. ft.	31.00	652.56

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	60.97	1.30	98.40	0.30
Light Truck < 3,750 lbs	16.77	2.60	95.40	2.00
Light Truck 3,751- 5,750	17.88	1.20	98.10	0.70
Med Truck 5,751- 8,500	0.54	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	0.08	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.02	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.01	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.07	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.22	0.00	50.00	50.00
Motorcycle	1.78	75.00	25.00	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	1.55	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Junior high school	20.0	10.0	70.0
YMCA	5.0	2.5	92.5

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	5.72	6.52	62.29	0.04	7.25
Apartments low rise	9.24	10.40	99.33	0.06	11.55
Condo/townhouse general	33.34	37.76	360.71	0.21	41.96
Junior high school	15.56	14.34	135.22	0.07	15.32
YMCA	2.97	2.95	28.25	0.01	2.92
TOTAL EMISSIONS (lbs/day)	66.84	71.97	685.81	0.39	79.00

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 60 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.57 trips / dwelling units	96.00	887.24
Apartments low rise	6.72 trips / dwelling units	218.00	1,414.76
Condo/townhouse general	8.00 trips / dwelling units	665.00	5,137.69
Junior high school	1.62 trips / students	1,600.00	2,384.72
YMCA	22.88 trips / 1000 sq. ft.	31.00	652.56

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	60.97	1.30	98.40	0.30
Light Truck < 3,750 lbs	16.77	2.60	95.40	2.00
Light Truck 3,751- 5,750	17.88	1.20	98.10	0.70
Med Truck 5,751- 8,500	0.54	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	0.08	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.02	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.01	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.07	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.22	0.00	50.00	50.00
Motorcycle	1.78	75.00	25.00	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	1.55	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Junior high school	20.0	10.0	70.0
YMCA	5.0	2.5	92.5

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

2.0 Side Walks/Paths: Most Destinations Covered
0.5 Street Trees Provide Shade: Some Coverage
3.0 Pedestrian Circulation Access: Most Destinations
3.0 Visually Interesting Uses: Moderate Number and Variety
2.0 Street System Enhances Safety: Most Streets
1.0 Pedestrian Safety from Crime: Moderate Degree of Safety
1.0 Visually Interesting Walking Routes: Moderate Level

12.5 <- Pedestrian Environmental Credit
12.5 /19 = 0.7 <- Pedestrian Effectiveness Factor

Transit Service

0.0 Transit Service: Dial-A-Ride or No Transit Service

0.0 <- Transit Effectiveness Credit
12.5 <- Pedestrian Factor
12.5 <-Total
12.5 /110 = 0.1 <-Transit Effectiveness Factor

Bicycle Environment

3.0 Interconnected Bikeways: Moderate Coverage
3.0 Bike Routes Provide Paved Shoulders: Most Major Destinations
1.0 Safe Vehicle Speed Limits: Some Destinations
1.0 Safe School Routes: One School
2.0 Uses w/in Cycling Distance: Moderate Number and Variety
1.0 Bike Parking Ordinance: Requires Unprotected Bike Racks

11.0 <- Bike Environmental Credit
11.0 /20 = 0.6 <- 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
15.0	Credit for Existing or Planned Community Transit Service
15.0	<- Totals

Pedestrian Enhancing Infrastructure Measures (Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
3.0	Mixed Use Project (Residential Oriented)
1.0	Provide Sidewalks and/or Pedestrian Paths
1.0	Provide Direct Pedestrian Connections
0.5	Provide Pedestrian Safety
0.5	Provide Street Lighting
0.5	Provide Pedestrian Signalization and Signage
8.5	<- Totals

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
1.0	Provide Wide Sidewalks and Onsite Pedestrian Facilities
0.5	Provide Street Lighting
0.5	Project Provides Shade Trees to Shade Sidewalks
0.5	Provide Pedestrian Safety Designs/Infrastructure at Crossings
0.3	No Long Uninterrupted Walls Along Pedestrian Walkways
4.8	<- Totals

Bicycle Enhancing Infrastructure Measures (Residential)

% Trips Reduced	Measure
7.0	Credit for Surrounding Bicycle Environment
2.0	Provide Bike Lanes/Paths Connecting to Bikeway System
9.0	<- Totals

Bike Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
5.0	Credit for Surrounding Area Bike Environment
2.0	Provide Bike Lanes/Paths Connecting to Bikeway System
7.0	<- Totals

Operational Measures (Applying to Commute Trips)

% Trips Reduced	Measure
0.0	<- Totals

Operational Measures (Applying to Employee Non-Commute Trips)

% Trips Reduced	Measure
0.0	<- Totals

Operational Measures (Applying to Customer Trips)

% Trips Reduced	Measure
0.0	<- Totals

Measures Reducing VMT (Non-Residential)

VMT Reduced	Measure
0.0	Park and Ride Lots
0.0	<- Totals

Measures Reducing VMT (Residential)

VMT Reduced	Measure
0.0	<- Totals

Total Percentage Trip Reduction with Environmental Factors and Mitigation Measures			
Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips
Pedestrian	0.62	2.46	2.46
Transit	1.70	0.38	0.46
Bicycle	4.95	4.95	4.95
Totals	0.00	0.00	0.00
Travel Mode	Work Trips	Employee Trips	Customer Trips
Pedestrian	0.34	3.13	3.12
Transit	1.70	0.03	1.70
Bicycle	3.85	3.85	3.85
Other	0.00	0.00	0.00
Totals	0.00	0.00	0.00

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The wood stove option switch changed from on to off.
The area source mitigation measure option switch changed from off to on.
The fireplace cords of wood burned changed from 1.48 to 0.46.
The fireplace percentage of residential units changed from 10 to 4.9.
The landscape year changed from 2004 to 2009.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The light auto percentage changed from 54.9 to 60.97.
The light truck < 3750 lbs percentage changed from 15.1 to 16.77.
The light truck 3751-5750 percentage changed from 16.1 to 17.88.
The med truck 5751-8500 percentage changed from 7.3 to .54.
The lite-heavy truck 8501-10000 percentage changed from 1.1 to .08.
The lite-heavy truck 10001-14000 percentage changed from 0.3 to .02.
The med-heavy truck 14001-33000 percentage changed from 1.0 to .01.
The heavy-heavy truck 33001-60000 percentage changed from 0.9 to .07.
The urban bus percentage changed from 0.2 to 0.22.
The motorcycle percentage changed from 1.6 to 1.78.
The school bus percentage changed from 0.1 to 0.11.
The motorhome percentage changed from 1.4 to 1.55.
The operational emission year changed from 2004 to 2009.
The operational winter temperature changed from 50 to 60.
The operational summer selection item changed from 8 to 7.
The travel mode environment settings changed from both to: both
The default/noddefault travel setting changed from noddefault to: noddefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Most Destinations Covered
Street Trees Provide Shade: No Coverage
changed to: Street Trees Provide Shade: Some Coverage
Pedestrian Circulation Access: No Destinations
changed to: Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to: Visually Interesting Uses: Moderate Number and Variety
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Most Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to: Pedestrian Safety from Crime: Moderate Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to: Visually Interesting Walking Routes: Moderate Level
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: Moderate Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to: Bike Routes Provide Paved Shoulders: Most Major Destinations
Safe Vehicle Speed Limits: No Routes Provided
changed to: Safe Vehicle Speed Limits: Some Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: One School
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to: Uses w/in Cycling Distance: Moderate Number and Variety
Bike Parking Ordinance: No Ordinance or Unenforceable
changed to: Bike Parking Ordinance: Requires Unprotected Bike Racks
Mitigation measure Mixed Use Project (Residential Oriented):3
has been changed from off to on.
Mitigation measure Provide Sidewalks and/or Pedestrian Paths:1
has been changed from off to on.
Mitigation measure Provide Direct Pedestrian Connections:1
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety:0.5
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Provide Pedestrian Signalization and Signage:0.5
has been changed from off to on.
Mitigation measure Provide Wide Sidewalks and Onsite Pedestrian Facilities:1
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Project Provides Shade Trees to Shade Sidewalks:0.5
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety Designs/Infrastructure at Crossings:0.5
has been changed from off to on.
Mitigation measure No Long Uninterrupted Walls Along Pedestrian Walkways:0.25

has been changed from off to on.
Mitigation measure Provide Bike Lanes/Paths Connecting to Bikeway System:2
has been changed from off to on.
Mitigation measure Provide Bike Lanes/Paths Connecting to Bikeway System:2
has been changed from off to on.

Future Localized Carbon Monoxide Concentrations

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

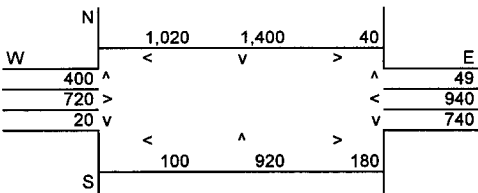
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 5.1
 Background 8-hour CO Concentration (ppm): 2.6
 Persistence Factor: 0.6
 Analysis Year: 2015

Roadway Data

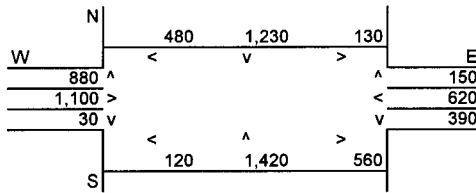
Intersection: Valencia Boulevard & Magic Mountain Parkway
 Analysis Condition: Future (Interim Year With Project) Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed	
			A.M.	P.M.
North-South Roadway: Valencia Boulevard	At Grade	6	5	5
East-West Roadway: Magic Mountain Parkway	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,829	N-S Road:	4,290
E-W Road:	3,200	E-W Road:	3,230

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	A ₁	A ₂	A ₃	B	C	Estimated CO Concentrations		
	Reference CO Concentrations 25 Feet	50 Feet	100 Feet	Traffic Volume	Emission Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	6.1	4.9	3.5	3,829	4.70	1.10	0.88	0.63
East-West Road	2.6	2.2	1.7	3,200	4.70	0.39	0.33	0.26
P.M. Peak Traffic Hour								
North-South Road	6.1	4.9	3.5	4,290	4.70	1.23	0.99	0.71
East-West Road	2.6	2.2	1.7	3,230	4.70	0.39	0.33	0.26

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.6	6.7	3.6
50 Feet from Roadway Edge	6.3	6.4	3.4
100 Feet from Roadway Edge	6.0	6.1	3.2

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

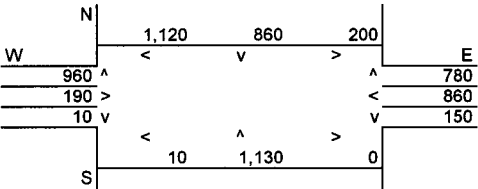
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 5.1
 Background 8-hour CO Concentration (ppm): 2.6
 Persistence Factor: 0.6
 Analysis Year: 2015

Roadway Data

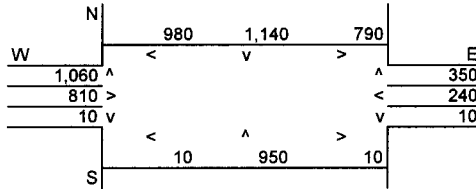
Intersection: Sierra Highway & Golden Valley Road
 Analysis Condition: Future (Interim Year With Project) Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed	
			A.M.	P.M.
North-South Roadway:	Golden Valley Road	4	5	5
East-West Roadway:	Sierra Highway	4	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	5,050	N-S Road:	5,270
E-W Road:	3,150	E-W Road:	3,110

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	Reference CO Concentrations			B Traffic Volume	C Emission Factors ²	Estimated CO Concentrations		
	A ₁ 25 Feet	A ₂ 50 Feet	A ₃ 100 Feet			25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	5,050	4.70	1.66	1.28	0.90
East-West Road	2.6	2.2	1.7	3,150	3.85	0.32	0.27	0.21
P.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	5,270	4.70	1.73	1.34	0.94
East-West Road	2.6	2.2	1.7	3,110	3.85	0.31	0.26	0.20

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration⁴

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	7.1	7.1	3.8
50 Feet from Roadway Edge	6.6	6.7	3.6
100 Feet from Roadway Edge	6.2	6.2	3.3

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

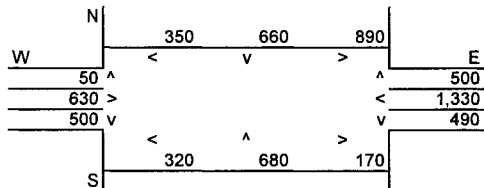
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 5.1
 Background 8-hour CO Concentration (ppm): 2.6
 Persistence Factor: 0.6
 Analysis Year: 2015

Roadway Data

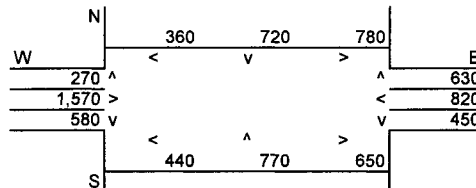
Intersection: Whites Canyon Road & Soledad Canyon Road
 Analysis Condition: Future (Interim Year With Project) Traffic Volumes

Roadway Type	No. of Lanes	Average Speed	
		A.M.	P.M.
North-South Roadway: Whites Canyon Road At Grade	4	10	5
East-West Roadway: Soledad Canyon Road At Grade	6	10	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road: 3,130
 E-W Road: 4,010

N-S Road: 3,610
 E-W Road: 4,900

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	A ₁ Reference CO Concentrations			B Traffic Volume	C Emission Factors ²	Estimated CO Concentrations		
	25 Feet	50 Feet	100 Feet			25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	3,130	3.85	0.31	0.27	0.20
East-West Road	6.1	4.9	3.5	4,010	3.85	0.94	0.76	0.54
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	3,610	4.70	0.44	0.37	0.29
East-West Road	6.1	4.9	3.5	4,900	4.70	1.40	1.13	0.81

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.4	6.9	3.7
50 Feet from Roadway Edge	6.1	6.6	3.5
100 Feet from Roadway Edge	5.8	6.2	3.3

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

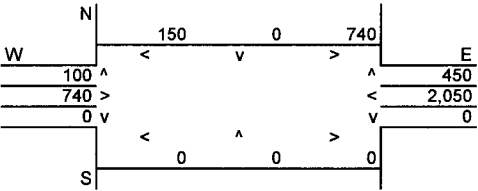
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 5.1
 Background 8-hour CO Concentration (ppm): 2.6
 Persistence Factor: 0.6
 Analysis Year: 2015

Roadway Data

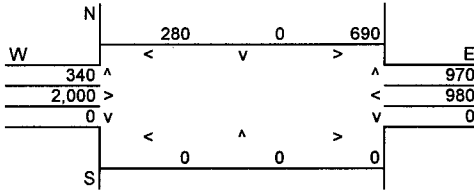
Intersection: Valley Center & Soledad Canyon Road
 Analysis Condition: Future (Interim Year With Project) Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed	
			A.M.	P.M.
North-South Roadway:	Valkley Center	4	20	20
East-West Roadway:	Soledad Canyon Road	6	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,440	N-S Road:	2,280
E-W Road:	3,980	E-W Road:	4,640

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	Reference CO Concentrations			B Traffic Volume	C Emission Factors ²	Estimated CO Concentrations		
	A ₁ 25 Feet	A ₂ 50 Feet	A ₃ 100 Feet			25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	1,440	2.84	0.11	0.09	0.07
East-West Road	6.1	4.9	3.5	3,980	2.84	0.69	0.55	0.40
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	2,280	2.84	0.17	0.14	0.11
East-West Road	6.1	4.9	3.5	4,640	2.84	0.80	0.65	0.46

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²
 8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	5.9	6.1	3.2
50 Feet from Roadway Edge	5.7	5.9	3.1
100 Feet from Roadway Edge	5.6	5.7	2.9

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: The Keystone

Background Information

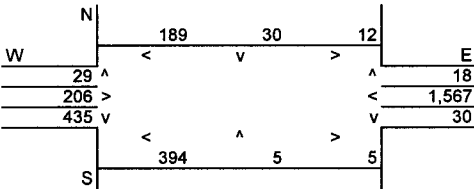
Nearest Air Monitoring Station measuring CO: Santa Clarita
 Background 1-hour CO Concentration (ppm): 5.1
 Background 8-hour CO Concentration (ppm): 2.6
 Persistence Factor: 0.6
 Analysis Year: 2015

Roadway Data

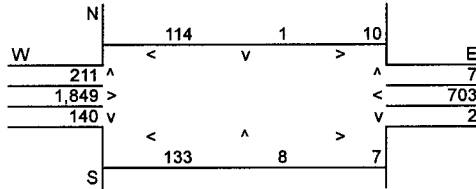
Intersection: Golden Valley Road & "I" Street
 Analysis Condition: Future (Interim Year With Project) Traffic Volumes

	Roadway Type	No. of Lanes	Average Speed	
			A.M.	P.M.
North-South Roadway:	"I" Street	2	20	20
East-West Roadway:	Golden Valley Road	4	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	899	N-S Road:	351
E-W Road:	2,820	E-W Road:	3,150

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

Roadway	Reference CO Concentrations			B Traffic Volume	C Emission Factors ²	Estimated CO Concentrations		
	A ₁ 25 Feet	A ₂ 50 Feet	A ₃ 100 Feet			25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	899	2.84	0.07	0.06	0.04
East-West Road	7.0	5.4	3.8	2,820	2.84	0.56	0.43	0.30
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	351	2.84	0.03	0.02	0.02
East-West Road	7.0	5.4	3.8	3,150	2.84	0.63	0.48	0.34

¹ Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

² Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	5.7	5.8	3.0
50 Feet from Roadway Edge	5.6	5.6	2.9
100 Feet from Roadway Edge	5.4	5.5	2.8

² Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

**Construction Related Emissions:
Grading Phase With Mitigation**

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Grading Mi
Project Name: The Keystone - Construction Grading Phase With Mitigation
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day, unmitigated)	51.86	343.35	430.01	0.01	4,130.93	14.60	4,116.33
TOTALS (lbs/day, mitigated)	5.53	177.39	51.15	0.01	365.92	0.17	365.75

Worker Trips	0.38	0.46	9.05	0.01	0.03	0.01	0.02
Maximum lbs/day	5.53	177.39	51.15	0.01	365.92	0.17	365.75
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	5.53	177.39	51.15	0.01	365.92	0.17	365.75

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 3x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 50.0%)
Phase 2: Off-Road Diesel Exhaust: Use aqueous diesel fuel
Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
Phase 2: Off-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
Phase 2: Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
Percent Reduction(ROG 90.0% NOx 40.0% CO 90.0% SO2 0.0% PM10 85.0%)
Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
Phase 2: Unpaved Roads: Water all haul roads 3x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 45.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: May '07
Phase 2 Duration: 7 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Rubber Tired Dozers	352	0.590	7.0
10	Scrapers	313	0.660	8.0
4	Tractor/Loaders/Backhoes	79	0.465	7.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Site Grading Fugitive Dust Option changed from Level 1 to Level 2
Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 3x daily
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.
Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Water all haul roads 3x daily
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

**Construction Related Emissions:
Roads and Utilities With Mitigation**

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Streets Mi
 Project Name: The Keystone - Roads and Utilities Phase With Mitigation
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007 ***							
TOTALS (lbs/day, unmitigated)	8.23	52.59	68.55	0.00	1.97	1.97	0.00
TOTALS (lbs/day, mitigated)	0.86	27.19	7.88	0.00	0.02	0.02	0.00
*** 2008 ***							
TOTALS (lbs/day, unmitigated)	13.38	80.32	110.67	0.00	2.67	2.66	0.01
TOTALS (lbs/day, mitigated)	1.70	41.96	12.85	0.00	0.06	0.05	0.01

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Streets Mi
 Project Name: The Keystone - Roads and Utilities Phase With Mitigation
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: December, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 158.1 acres
 Maximum Acreage Disturbed Per Day: 30 acres
 Single Family Units: 2 Multi-Family Units: 8
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	8.18	52.48	67.41	-	1.97	1.97	0.00
Bldg Const Worker Trips	0.05	0.11	1.14	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	8.23	52.59	68.55	0.00	1.97	1.97	0.00
Max lbs/day all phases	8.23	52.59	68.55	0.00	1.97	1.97	0.00
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	8.18	51.27	67.93	-	1.82	1.82	0.00
Bldg Const Worker Trips	0.07	0.12	1.42	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.25	-	-	-	-	-	-
Asphalt Off-Road Diesel	4.79	28.00	40.76	-	0.81	0.81	0.00
Asphalt On-Road Diesel	0.05	0.91	0.18	0.00	0.02	0.02	0.00
Asphalt Worker Trips	0.03	0.02	0.38	0.00	0.01	0.00	0.01
Maximum lbs/day	13.38	80.32	110.67	0.00	2.67	2.66	0.01
Max lbs/day all phases	13.38	80.32	110.67	0.00	2.67	2.66	0.01

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Dec '07

Phase 3 Duration: 5 months

Start Month/Year for SubPhase Building: Dec '07

SubPhase Building Duration: 5 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	4.0
2	Off Highway Trucks	417	0.490	4.0
4	Tractor/Loaders/Backhoes	79	0.465	6.0
2	Trenchers	82	0.695	7.0

SubPhase Architectural Coatings Turned OFF

Start Month/Year for SubPhase Asphalt: Feb '08

SubPhase Asphalt Duration: 3 months

Acres to be Paved: 6.4

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	4.0
2	Pavers	132	0.590	7.0
2	Rollers	114	0.430	7.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.82	27.08	6.74	-	0.02	0.02	0.00
Bldg Const Worker Trips	0.05	0.11	1.14	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.86	27.19	7.88	0.00	0.02	0.02	0.00
Max lbs/day all phases	0.86	27.19	7.88	0.00	0.02	0.02	0.00
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.82	26.46	6.79	-	0.02	0.02	0.00
Bldg Const Worker Trips	0.07	0.12	1.42	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.25	-	-	-	-	-	-

Asphalt Off-Road Diesel	0.48	14.45	4.08	-	0.01	0.01	0.00
Asphalt On-Road Diesel	0.05	0.91	0.18	0.00	0.02	0.02	0.00
Asphalt Worker Trips	0.03	0.02	0.38	0.00	0.01	0.00	0.01
Maximum lbs/day	1.70	41.96	12.85	0.00	0.06	0.05	0.01
Max lbs/day all phases	1.70	41.96	12.85	0.00	0.06	0.05	0.01

Construction-Related Mitigation Measures

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Dec '07

Phase 3 Duration: 5 months

Start Month/Year for SubPhase Building: Dec '07

SubPhase Building Duration: 5 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	4.0
2	Off Highway Trucks	417	0.490	4.0
4	Tractor/Loaders/Backhoes	79	0.465	6.0
2	Trenchers	82	0.695	7.0

SubPhase Architectural Coatings Turned OFF

Start Month/Year for SubPhase Asphalt: Feb '08

SubPhase Asphalt Duration: 3 months

Acres to be Paved: 6.4

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	4.0
2	Pavers	132	0.590	7.0
2	Rollers	114	0.430	7.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.

**Construction Related Emissions:
School, YMCA and Phase I and Phase II Residential
Construction With Mitigation**

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - School Mit:
 Project Name: The Keystone - School, YMCA, and Residential Construction With Mitigation
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008 ***							
TOTALS (lbs/day, unmitigated)	28.98	163.23	313.56	0.08	7.18	6.52	0.66
TOTALS (lbs/day, mitigated)	8.81	87.55	155.65	0.08	0.95	0.29	0.66
*** 2009 ***							
TOTALS (lbs/day, unmitigated)	36.28	199.42	374.57	0.09	8.18	7.51	0.67
TOTALS (lbs/day, mitigated)	9.90	106.99	159.74	0.09	1.02	0.35	0.67

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - School Mit:
 Project Name: The Keystone - School, YMCA, and Residential Construction With Mitigation
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: May, 2008
 Construction Duration: 12
 Total Land Use Area to be Developed: 0 acres
 Maximum Acreage Disturbed Per Day: 0 acres
 Single Family Units: 64 Multi-Family Units: 588
 Retail/Office/Institutional/Industrial Square Footage: 167000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	22.41	156.36	175.45	-	6.30	6.30	0.00
Bldg Const Worker Trips	4.92	5.99	118.46	0.08	0.53	0.20	0.33
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	1.65	0.88	19.64	0.00	0.35	0.02	0.33
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	28.98	163.23	313.56	0.08	7.18	6.52	0.66
Max lbs/day all phases	28.98	163.23	313.56	0.08	7.18	6.52	0.66
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	22.41	149.49	180.52	-	5.94	5.94	0.00
Bldg Const Worker Trips	4.77	5.92	116.94	0.08	0.53	0.20	0.33
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	1.50	0.81	18.11	0.00	0.35	0.02	0.33
Asphalt Off-Gas	0.71	-	-	-	-	-	-
Asphalt Off-Road Diesel	6.90	41.47	58.19	-	1.30	1.30	0.00
Asphalt On-Road Diesel	0.13	1.93	0.47	0.01	0.05	0.05	0.00
Asphalt Worker Trips	0.03	0.01	0.35	0.00	0.01	0.00	0.01
Maximum lbs/day	36.28	199.42	374.57	0.09	8.18	7.51	0.67
Max lbs/day all phases	36.28	199.42	374.57	0.09	8.18	7.51	0.67

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08

Phase 3 Duration: 12 months

Start Month/Year for SubPhase Building: May '08

SubPhase Building Duration: 12 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
5	Concrete/Industrial saws	84	0.730	3.0
10	Other Equipment	190	0.620	6.0
11	Rough Terrain Forklifts	94	0.475	4.0
3	Tractor/Loaders/Backhoes	79	0.465	2.0

Start Month/Year for SubPhase Architectural Coatings: Aug '08

SubPhase Architectural Coatings Duration: 9 months

Start Month/Year for SubPhase Asphalt: Apr '09

SubPhase Asphalt Duration: 0.5 months

Acres to be Paved: 3

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	2.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	7.0
1	Paving Equipment	111	0.530	7.0
1	Rollers	114	0.430	7.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	2.24	80.68	17.55	-	0.07	0.07	0.00
Bldg Const Worker Trips	4.92	5.99	118.46	0.08	0.53	0.20	0.33
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	1.65	0.88	19.64	0.00	0.35	0.02	0.33
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	8.81	87.55	155.65	0.08	0.95	0.29	0.66
Max lbs/day all phases	8.81	87.55	155.65	0.08	0.95	0.29	0.66
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	2.24	77.14	18.05	-	0.07	0.07	0.00
Bldg Const Worker Trips	4.77	5.92	116.94	0.08	0.53	0.20	0.33

Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	1.50	0.81	18.11	0.00	0.35	0.02	0.33
Asphalt Off-Gas	0.71	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.69	21.40	5.82	-	0.01	0.01	0.00
Asphalt On-Road Diesel	0.13	1.93	0.47	0.01	0.05	0.05	0.00
Asphalt Worker Trips	0.03	0.01	0.35	0.00	0.01	0.00	0.01
Maximum lbs/day	9.90	106.99	159.74	0.09	1.02	0.35	0.67
Max lbs/day all phases	9.90	106.99	159.74	0.09	1.02	0.35	0.67

Construction-Related Mitigation Measures

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08

Phase 3 Duration: 12 months

Start Month/Year for SubPhase Building: May '08

SubPhase Building Duration: 12 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
5	Concrete/Industrial saws	84	0.730	3.0
10	Other Equipment	190	0.620	6.0
11	Rough Terrain Forklifts	94	0.475	4.0
3	Tractor/Loaders/Backhoes	79	0.465	2.0

Start Month/Year for SubPhase Architectural Coatings: Aug '08

SubPhase Architectural Coatings Duration: 9 months

Start Month/Year for SubPhase Asphalt: Apr '09

SubPhase Asphalt Duration: 0.5 months

Acres to be Paved: 3

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	2.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	7.0
1	Paving Equipment	111	0.530	7.0
1	Rollers	114	0.430	7.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Architectural Coatings: # ROG/ft² (residential) changed from 0.0185 to 0

Architectural Coatings: # ROG/ft² (non-res) changed from 0.0185 to 0

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.

Construction Related Emissions:
Phase III Residential Construction With Mitigation

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Residential
Project Name: The Keystone - Residential Construction Phase With Mitigation
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008 ***							
TOTALS (lbs/day, unmitigated)	18.27	106.27	180.27	0.03	4.27	3.99	0.28
TOTALS (lbs/day, mitigated)	4.43	56.43	69.56	0.03	0.42	0.14	0.28

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For Windows\Projects2k2\Santa Clarita Keystone - Residential
 Project Name: The Keystone - Residential Construction Phase With Mitigation
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: May, 2008
 Construction Duration: 6
 Total Land Use Area to be Developed: 0 acres
 Maximum Acreage Disturbed Per Day: 0 acres
 Single Family Units: 32 Multi-Family Units: 295
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	12.77	87.65	100.77	-	3.44	3.44	0.00
Bldg Const Worker Trips	2.04	2.49	49.20	0.03	0.22	0.08	0.14
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.68	0.36	8.16	0.00	0.15	0.01	0.14
Asphalt Off-Gas	0.12	-	-	-	-	-	-
Asphalt Off-Road Diesel	2.62	15.33	22.25	-	0.45	0.45	0.00
Asphalt On-Road Diesel	0.02	0.43	0.08	0.00	0.01	0.01	0.00
Asphalt Worker Trips	0.02	0.01	0.25	0.00	0.00	0.00	0.00
Maximum lbs/day	18.27	106.27	180.27	0.03	4.27	3.99	0.28
Max lbs/day all phases	18.27	106.27	180.27	0.03	4.27	3.99	0.28

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08
 Phase 3 Duration: 6 months
 Start Month/Year for SubPhase Building: May '08
 SubPhase Building Duration: 6 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
3	Concrete/Industrial saws	84	0.730	3.0
6	Other Equipment	190	0.620	5.0
7	Rough Terrain Forklifts	94	0.475	5.0
2	Tractor/Loaders/Backhoes	79	0.465	2.0

Start Month/Year for SubPhase Architectural Coatings: Aug '08
 SubPhase Architectural Coatings Duration: 3 months
 Start Month/Year for SubPhase Asphalt: Oct '08
 SubPhase Asphalt Duration: 0.5 months
 Acres to be Paved: .5

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	3.0
1	Pavers	132	0.590	7.0
1	Rollers	114	0.430	7.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
--------	-----	-----	----	-----	---------------	-----------------	--------------

*** 2008***

Phase 1 - Demolition Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 2 - Site Grading Emissions

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	1.28	45.23	10.08	-	0.04	0.04	0.00
Bldg Const Worker Trips	2.04	2.49	49.20	0.03	0.22	0.08	0.14
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.68	0.36	8.16	0.00	0.15	0.01	0.14
Asphalt Off-Gas	0.12	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.26	7.91	2.23	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.02	0.43	0.08	0.00	0.01	0.01	0.00
Asphalt Worker Trips	0.02	0.01	0.25	0.00	0.00	0.00	0.00
Maximum lbs/day	4.43	56.43	69.56	0.03	0.42	0.14	0.28
Max lbs/day all phases	4.43	56.43	69.56	0.03	0.42	0.14	0.28

Construction-Related Mitigation Measures

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08

Phase 3 Duration: 6 months

Start Month/Year for SubPhase Building: May '08

SubPhase Building Duration: 6 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
3	Concrete/Industrial saws	84	0.730	3.0
6	Other Equipment	190	0.620	5.0
7	Rough Terrain Forklifts	94	0.475	5.0
2	Tractor/Loaders/Backhoes	79	0.465	2.0

Start Month/Year for SubPhase Architectural Coatings: Aug '08

SubPhase Architectural Coatings Duration: 3 months

Start Month/Year for SubPhase Asphalt: Oct '08

SubPhase Asphalt Duration: 0.5 months

Acres to be Paved: .5

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
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Changes made to the default values for Construction

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Appendix 3
Biological Resources

APPENDIX 3-A

**Draft Biological Assessment of Vesting Tentative Tract No. 060258 and Associated
Roadway Improvements, Thomas Leslie Corporation (February 21, 2005)**



Thomas Leslie Corporation

Biological and Cultural Investigations & Monitoring

**BIOLOGICAL ASSESSMENT
OF VESTING TENTATIVE
TRACT NO. 060258 AND
ASSOCIATED ROADWAY IMPROVEMENTS
SANTA CLARITA, CALIFORNIA**

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Date Report Prepared:

December 30, 2003
Revised: February 21, 2005
Finalized: June 16, 2005

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- APPENDIX A: 2004 Vesting Tentative Tract No. 060258
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- APPENDIX C: 2005 Wildlife Compendium for Study Area
- APPENDIX D: Photo Plate Nos. 1-16 for Study Area
- APPENDIX E: Statement of Qualifications

I. PROJECT DESCRIPTION

This section of the biological assessment report describes the biological assessment study area location, its size and the project proposed by VTTN 060258.

A. LOCATION OF THE STUDY AREA

- **Figure 1** illustrates the boundaries of the study area on the *2005 Thomas Brothers Los Angeles and Ventura Counties Street Guide and Directory* on detail map page 4461, map coordinates C-6, D-6, C-7 and D-7 and on detail map page 4551, map coordinates C-1, D-1 and C-2.
- **Figure 2** plots the boundaries of the study area in Sections 7 and 18, Township 4 North, Range 15 West, of the 1995 Newhall, CA and 1995 Mint Canyon, CA, USGS quadrangles.

The biological assessment **STUDY AREA** is comprised of the following elements:

- the 246± acre Vesting Tentative Tract No. 060258 (VTTN 060258),
- a 200-foot wide “strip” around the boundaries of VTTN 060258 and
- three off-site roadways: proposed Streets “A” and “B” and a 200-foot wide “strip” along the centerline of Golden Valley Road between the western boundary of VTTN 060258 and the future Newhall Ranch Road.

Acres of the Study Area: As VTTN 060258 documents, the property is comprised of 246± acres (SIKAND, 2004). The acreages of the three off-site roadways are 4.93± acres, for a total of 250.93-acres. The acreages of the 200-foot wide “strip” surveyed around the periphery of the boundaries of the Study Area, were not computed.

As Figure 1 illustrates, VTTN 060258 is located in the City of Santa Clarita. The Antelope Valley Freeway (State Highway 14; Hwy. 14) provides regional access to the property. More specifically, as the numbers “1” and “2” on Figure 1 of this report indicate, presently VTTN 060258 can be accessed by the two routes described below.

Access Route # 1: One way to access VTTN 060258 is to exit Hwy. 14 at Via Princessa. Once on Via Princessa, proceed 1.3± miles northwesterly to Whites Canyon Road. Turn right onto Whites Canyon Road and continue 0.5± miles to Soledad Canyon Road. Turn left (west) onto Soledad Canyon Road and drive westerly 1.8± miles to Oak Avenue. Turn right onto Oak Avenue and drive 0.4± miles to Santa Clara Street. A narrow north-south oriented strip of land, fronting Santa Clara Street, provides access to the southern portion of VTTN 060258 north of Santa Clara River.

Access Route # 2: The northeastern portion of the study area can also be accessed by taking Via Princessa exit off Hwy. 14 and driving 1.3± miles northwesterly to Whites Canyon Road. Turn right onto Whites Canyon Road and proceed 2.3± miles to Steinway Street. Turn left onto Steinway Street and proceed 0.5± miles to and turn left onto Langside Avenue and make first right turn onto Ermine Street. Continue 0.6± miles on Ermine Street to the dead end of the roadway. Access to the study area is by foot from the terminus of Ermine Street (see Photo Plate No 2a).

B. SIZE OF THE STUDY AREA

As noted on the Vesting Tentative Tract Map No. 060258 (SIKAND, 2004), VTTN 060258 is a 246-acre property. VTTN 060258 is comprised of the following five Assessors' Parcel Numbers: 2801-001-033, -026, -024, 2805-001-063 and 2812-009-003.

The three off-site roadways, portions of Streets “A” and “B” and Golden Valley Road are 4.93± acres.

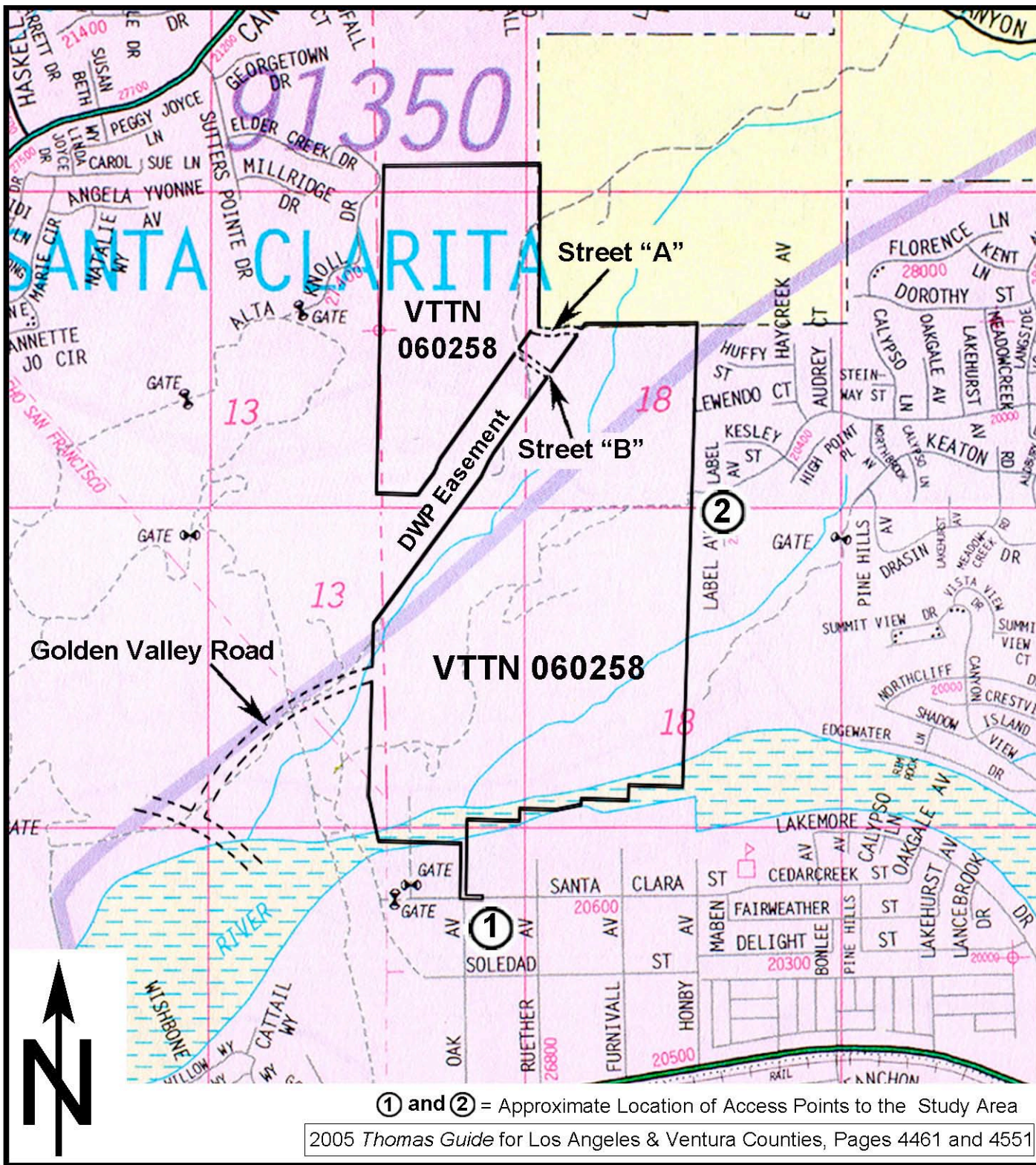
C. PROPOSED PROJECT

Table 1 identifies the land uses proposed by Vesting Tentative Tract Map No. 060258 (SIKAND, 2004). In addition, the table also identifies the acreages and lot numbers of each land use.

Table 1: Land Use Proposed by VTTN 060258

Uses	Acreages	Lot Nos.
SINGLE-FAMILY RESIDENTIAL	14.8±	1-96
MULTI-FAMILY RESIDENTIAL	21.2±	97 and 98 “to be gated” – 395 DU
MULTI-FAMILY RESIDENTIAL	17.6±	99 and 100 “to be gated” – 488 DU
INDUSTRIAL LOT	0.5±	101
SCHOOL	20.0±	102
RECREATION/PARK	4.3±	102A
GRADED SLOPE LOTS	88.6±	103-114, 114A, 114B, 115
NATURAL OPEN SPACE	72.6±	116-123
STREET LOTS	6.4±	124-130
TOTAL:	246± AC	

In addition, implementation of the land use plan proposed by VTTN 060258 involves construction of three off-site roadways, portions of Streets “A” and “B” and Golden Valley Road. The acreages of the 200-foot wide “strip” around the boundaries of the Study Area were not computed.



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Figure 1

Location of Biological Study Area
 Illustrated on the Thomas Guide Map

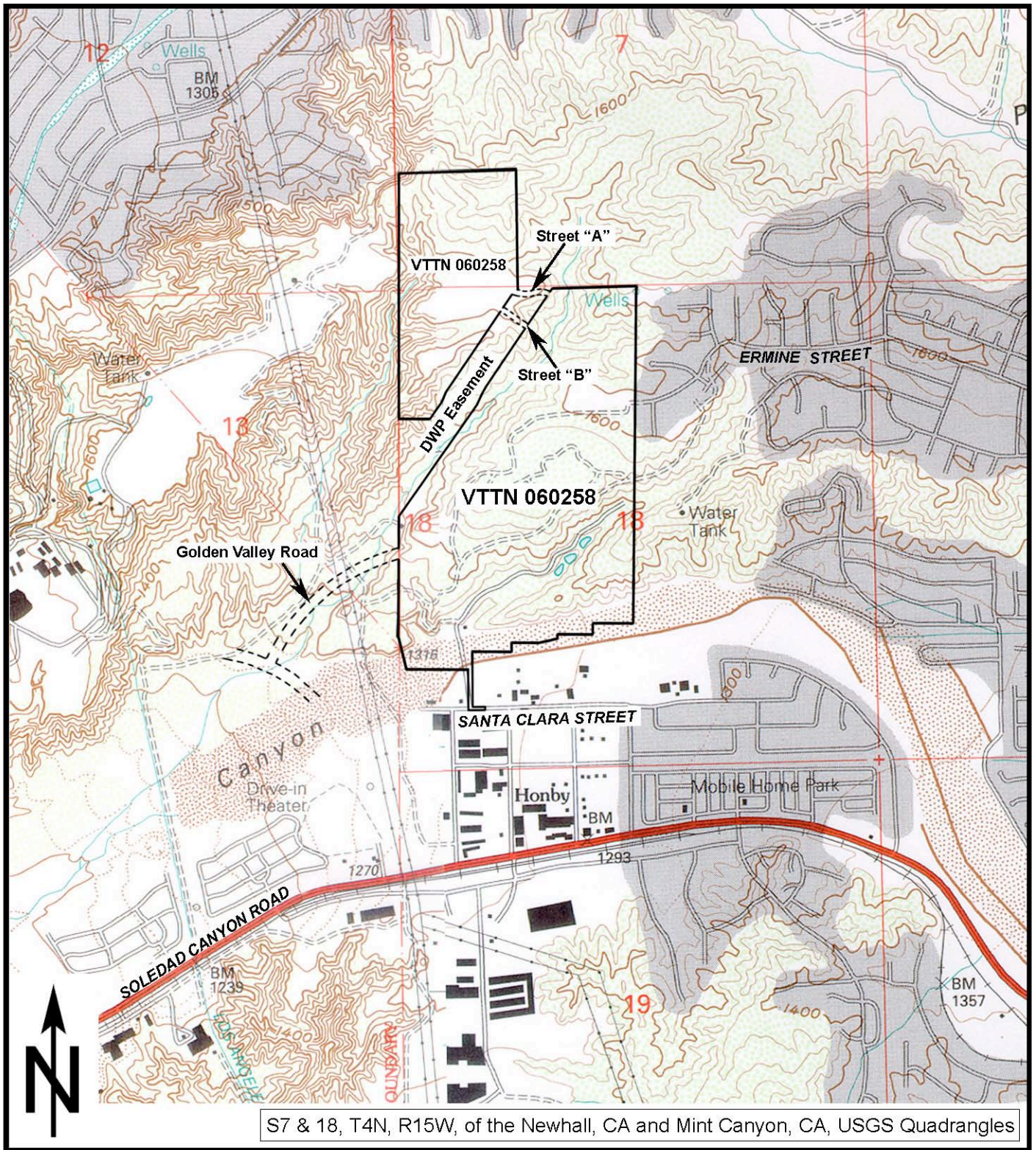


Figure 2
 Location of Biological Study Area
 Illustrated on USGS Quadrangle Maps

II. SETTING

A. CHARACTERISTIC OF THE SITE

A-1. Project Description Summary

As shown on Table 1, the land use plan proposed by VTTN 060258 involves division of the 246-acre property into 96 single family residential lots, 4 multi-family residential lots (883 Dwelling Units), an industrial lot, a junior high school site, a recreation/parking lot, 8 open space lots, and 15 graded slopes and streets lots. In addition, the following three off-site roadways will be constructed: Streets “A” and “B” and Golden Valley Road.

A-2. SEA Boundaries

As shown on Figure 3, the southern portion of VTTN 060258 is located within Significant Ecological Area (SEA) # 23 - *Santa Clara River* (ENEC, 1976). However, as illustrated on the land use plan, the portion of the tract situated within the Santa Clara River will be left as is, in undeveloped Natural Open Space Lot 121 (15.1± acres).

A-3. Acreage of the Study Area

As VTTN 060258 documents, the property size is 246± acres (SIKAND, 2004). The acreages of the three off-site roadways are 4.93± acres.

A-4. Water Resources

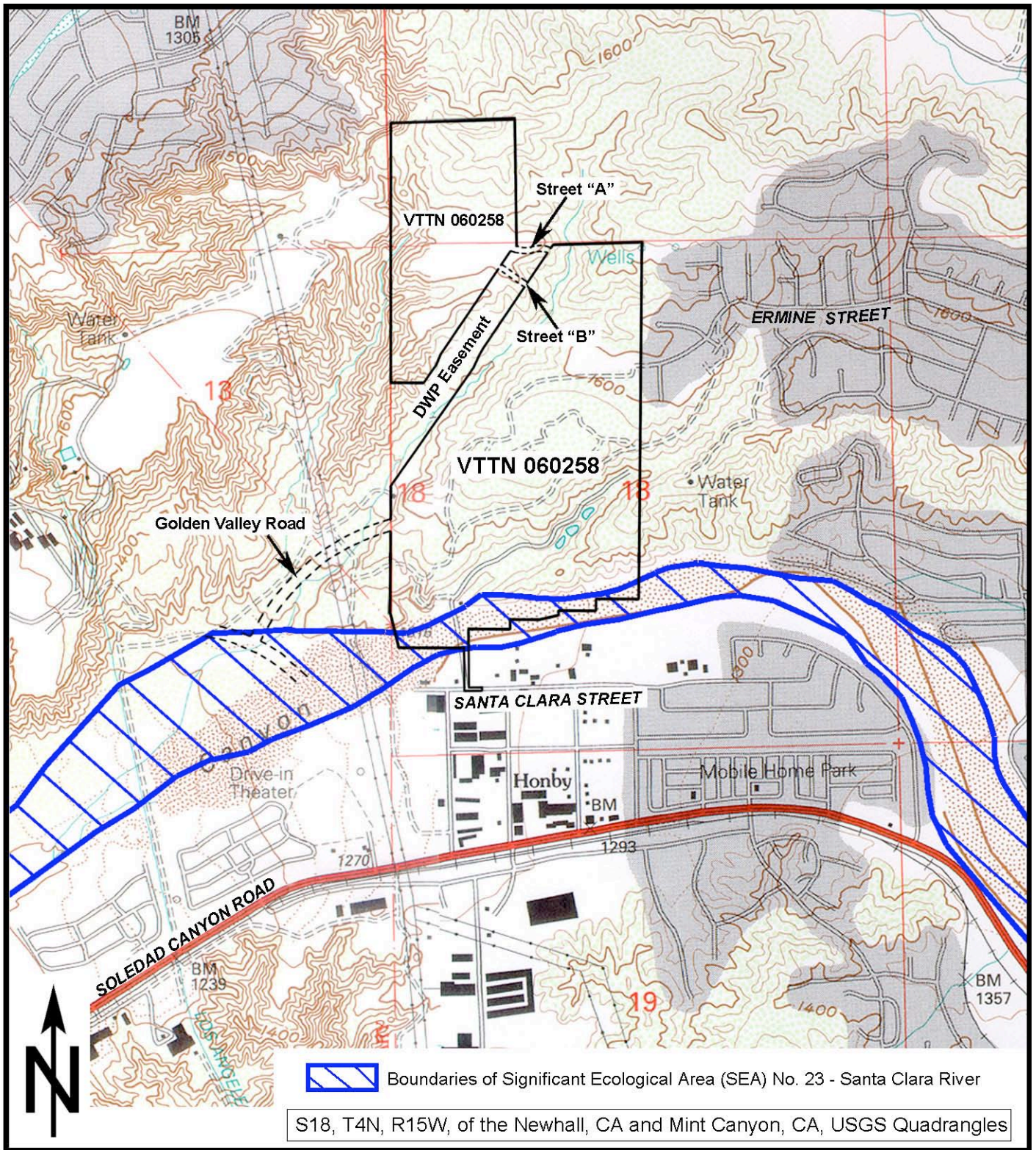
The southern boundary of VTTN 060258 is located in the Santa Clara River. In addition, USGS blue-line tributary to the Santa Clara River is mapped within the study area (see Figure 2).

A jurisdictional delineation was performed within the study area by Vandermost Consulting Services, Inc. (VCS, 2003; VCS, 2005). Based on the VCS delineation results, the tract contains

- (a) 11.69 acres Corps jurisdictional waters, “of which 0.33 acre is man-made wetland waters and 11.36 acres are ephemeral waters” and
- (b) 16.74 acres of CDFG jurisdictional waters, including 3.09 acres of riparian habitat.

The delineation report identified four main drainages within VTTN 060258:

- Drainage Complex A (main drainage A and eight tributaries, A1 through A5-A),
- Drainage Complex B (main drainage B and twelve tributaries, B1 through B9),
- Drainage Complex C (drainage C, which is tributary to Santa Clara River, and one tributary, C1) and
- Drainage Complex D (Santa Clara River and three tributaries, D1 through D3).



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Figure 3
Relation of SEA # 23
Santa Clara River (ENEC, 1976)
to the Biological Study Area

A-5. Soil Types Mapped Within the Study Area

As shown on the *General Soils Map, Los Angeles County, California* (USDA, 1969), VTTN 060258 is located within the Agua Dulce-Ojai Soil Association, 30 to 50% slopes. The soils of this association occur on steep foothills between elevations from 1,300 to 2,700 feet. The average annual rainfall is 12 to 16 inches, mean annual temperature is 63 degrees Fahrenheit, and the frost-free season ranges from 265 to 300 days. Natural vegetation on these soils consists mainly of annual grasses, forbs and oak trees but includes scattered California junipers, chamise, and manzanita (USDA, 1969).

Agua Dulce soils are 36 to 60 inches deep, are well drained, and have moderately slow subsoil permeability. They have a grayish-brown stony loam and heavy loam surface layer about 6 inches thick. The subsoil is a brown, very cobbly and gravelly clay loam about 14 inches thick underlain by light yellowish-brown very gravelly loamy coarse sand. Weakly consolidated conglomerate occurs at a depth of about 40 inches. The amount of gravel and cobbles below the surface layer ranges from 55 to nearly 85 percent, by volume. Available water-holding capacity is 3.0 to 4.0 inches for 36 to 60 inches of soil depth. Inherent fertility is moderate.

Ojai soils are over 60 inches deep, well drained, and have moderately slow subsoil permeability. They have a grayish-brown and brown, slightly acid loam surface layer about 25 inches thick. The subsoil is reddish-brown and brown, slightly acid and neutral clay loam about 28 inches thick. The substratum is reddish-yellow, slightly acid sandy loam that has lenses of gravelly sandy loam and is stratified. The subsoil contains from 0 to 15 percent, by volume, gravel. Available water-holding capacity is 9.0 to 11.0 inches for 60 inches of soil depth. Inherent fertility is low.

The Agua Dulce-Ojai soil association is comprised of 45 percent of Agua Dulce and 45 percent of Ojai soils. The remaining 10 percent of the association is comprised of Saugus soils. These soils are used for range, wildlife and watershed (USDA, 1969).

A-6. Study Area Plant Habitat Types and Associations

As Figure 4 illustrates and Table 2 summarizes, the following habitat types, and “weedy exotic” vegetational associations, occur within the boundaries of VTTN 060258 and along the proposed Streets “A” and “B” and Golden Valley Road.

Table 2: Habitat Types and Vegetational Associations within the Boundaries of the Study Area: VTTN 060258 and along Off-site Roadways - Streets “A” and “B” and Golden Valley Road

Habitat Types and Vegetational Associations	Acres
Buckwheat Scrub habitat	100.07±
Chaparral habitat (including Chaparral burnt in recent fires)	85.18±
Non-native Grassland habitat	18.42±
Southern Cottonwood-Willow Riparian Forest	3.09±
Active Wash of Santa Clara River	9.95±
Residential/Urban/Exotic disturbed habitat	34.11±
Individual Oak trees (they do <i>not</i> comprise an Oak Woodland)	0.11±

Each habitat type is discussed in more details below. The locations of the major plant communities identified within the study area in 2005, 2005, 2004 and 2003 are illustrated on Figure 4.

NOTE: Although, this BAR discusses acreages of each habitat to be removed and identifies the acreages to be preserved after “build-out” of VTTN 060258, these acreage numbers could change if the grading plans change.

Overall Habitat Quality: The quality of the vegetational associations (habitat) discussed below were determined to be **low to moderate**: low due to past and previous disturbances (e.g., disking of firebreaks, off-road vehicle use, hiking, mountain biking, fires, etc.) and moderate due to the connection of onsite native habitats of the study area with adjacent off-site.

1. BUCKWHEAT SCRUB HABITAT, A SUBASSOCIATE OF RIVERSIDEAN SAGE SCRUB HABITAT (BS)

100.07± acres of this habitat grows randomly across the study area: 100.05± acres within the boundaries of VTTN 060258 and 0.02± acres within alignment of the off-site portions Streets “A” and “B” (Figure 4). The predominant plant species of Buckwheat Scrub of the study area include California Buckwheat (*Eriogonum fasciculatum*), Foxtail Chess (*Bromus madritensis* ssp. *rubens*), Mediterranean Schismus (*Schismus barbatus*) and Slender Wild Oat (*Avena barbata*).

Photo Plate Nos. 1a, 2a, 3a, 3b, 4 and 13 provide representative views of onsite BS habitat.

Development Impacts within the Boundaries of VTTN 060258: 85.28± acres of the Buckwheat Scrub will be removed during development of VTTN 060258. The remaining 14.77± acres of the Buckwheat Scrub will be retained in Natural Open Space Lot Nos. 116-123, not proposed for development.

Development Impacts within the Off-site Roadways: 0.02± acres of Buckwheat Scrub will be removed during construction of the off-site portions of Streets “A” and “B.”

2. CHAPARRAL HABITAT (Ch)

85.18± acres of this habitat grows within the study area: 71.99± acres within VTTN 060258, 4.91± acres of open Chaparral mixed with Non-native Grassland within the boundaries of the proposed Golden Valley Road and 8.28± acres of Chaparral within the boundaries of APN 2812-009-003, which were burnt recently [see Photo Plate Nos. 10a, 10b and 10c] (Figure 4). The predominant plant species of Chaparral include Chamise (*Adenostoma fasciculatum*), Purple Sage (*Salvia leucophylla*), Holly-leaf Cherry (*Prunus ilicifolia*) and Foxtail Chess.

NOTE: Although, Holly-leaf Cherry is a common plant in the onsite Chaparral habitat, *no* Mainland Cherry Forest Habitat is present onsite for the reasons listed below.

1. As described in Sawyer and Keeler-Wolf (1995, page 339), Hollyleaf Cherry Stands, which is the equivalent of Holland’s Mainland Cherry Forest, is solely dominated by Hollyleaf Cherry or Lyon Cherry, **with shrub layer absent**. Although, Hollyleaf Cherry occur onsite they **do not dominate** within the Chaparral habitat and they are **subtended by a dense shrub understory** (see Photo Plate No. 7d).

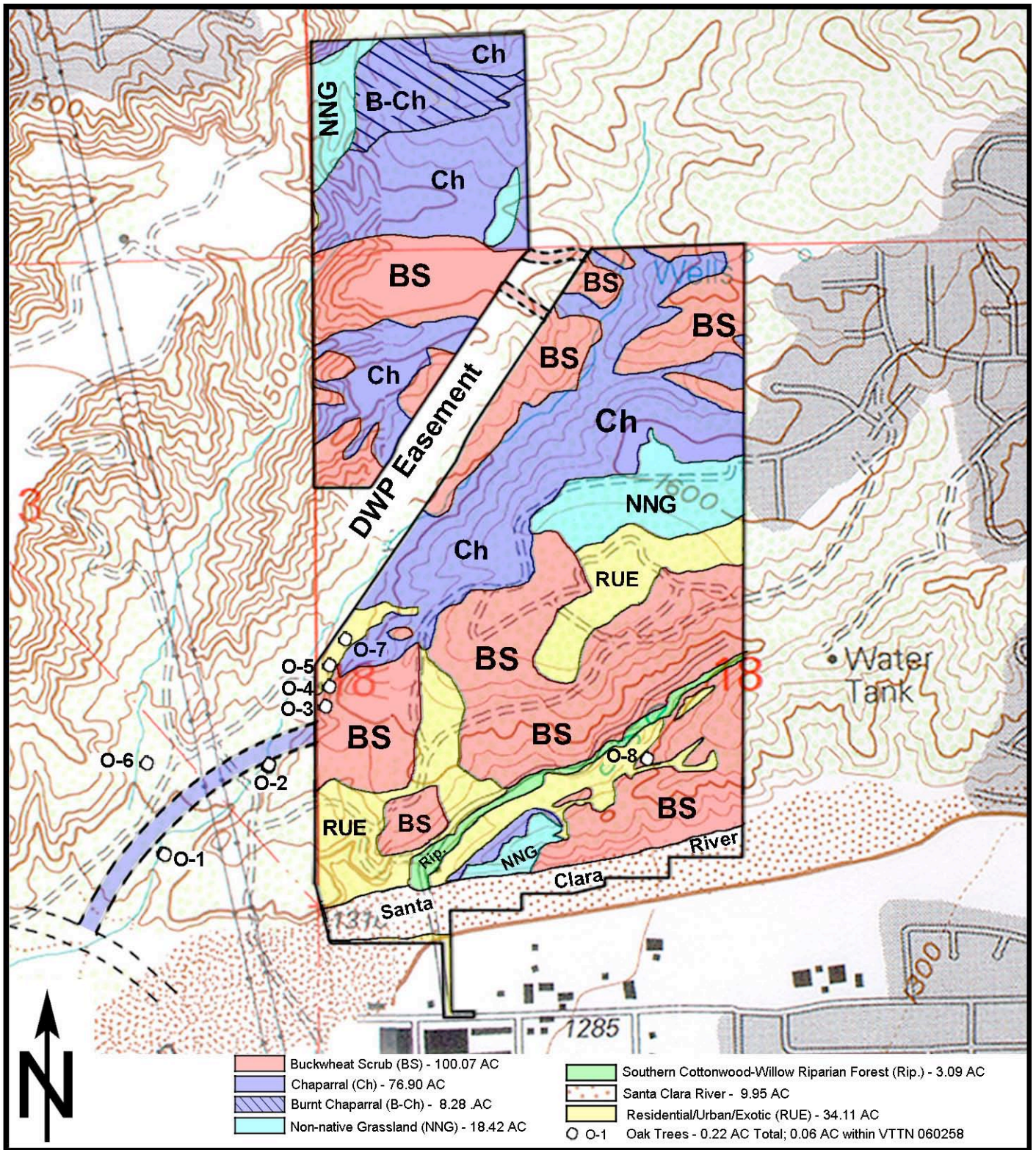


Figure 4
Schematic
Vegetational Types Map
of the Biological Study Area

2. No CNDDDB records for the Mainland Cherry Forest are present onsite. The nearest record is 5± miles northwesterly of the northwestern corner of the property. All three records on the CNDDDB were last seen in 1935 and considered “extirpated” (CDFG, 2005a, b, c, d).

Photo Plate Nos. 1b, 6a, 6b, 7a, 7b, 7c, 9c, 10a, 10b, 10c, 11a, 12a and 12b provide representative views of onsite Ch habitat.

Development Impacts within the Boundaries of VTTN 060258: 48.22± acres of Chaparral habitat will be removed from the study area during development of VTTN 060258. The remaining 32.05± acres of Chaparral will be retained in Natural Open Space Lot Nos. 116-119, 121 and 123 not proposed for development.

Development Impacts within the Off-site Roadways: 4.91± acres of Chaparral will be removed during construction of the off-site Golden Valley Road.

3. NON-NATIVE GRASSLAND HABITAT (NNG)

18.42± acres (7.30% of the study area) of this habitat grows within the study area (Figure 4). The predominant plant species of NNG include Slender Wild Oat, Foxtail Chess and Fascicled Tarplant (*Hemizonia fasciculata*).

Photo Plate Nos. 1a, 1b, 2a, 2b, 2c, 3a, 7a, 7b, 10a, 10b, 11a, 12a and 12b provide representative views of onsite NNG habitat.

Development Impacts within the Boundaries of VTTN 060258: 10.81± acres of NNG will be removed during development of VTTN 060258. The majority of the remaining 7.61± acres of NNG will be retained in Natural Open Space Lot Nos. 116, 120 and 121 not proposed for development.

4. SOUTHERN COTTONWOOD-WILLOW RIPARIAN FOREST HABITAT (SCWRF)

3.09± acres [VCS, 2003] (1.21% of the study area) of this riparian habitat grows along Drainage Complex C (VCS, 2003), north of northern bank of Santa Clara River, in the southern portion of the study area. The predominant plant species of this habitat include Fremont Cottonwood (*Populus fremontii*), Goodding’s Black Willow (*Salix gooddingii*), Arroyo Willow (*Salix lasiolepis*) and Mule Fat (*Baccharis salicifolia*).

Photo Plate No. 4 provides representative view of onsite SCWRF habitat.

Development Impacts within the Boundaries of VTTN 060258: 2.44± acres of the riparian habitat will be removed during the development of VTTN 060258. The remaining 0.65± acres will be left in Natural Open Space Lot No. 120 and 121 not proposed for development.

5. RESIDENTIAL/URBAN/EXOTIC DISTURBED HABITAT (RUE)

34.11± acres (13.53% of the study area) of this ruderal disturbed habitat grows within the study area. The predominant plant species of RUE disturbed habitat include Short-pod Mustard (*Hirschfeldia incana*), Tocalote (*Centaurea melitensis*), Red-stemmed Filaree (*Erodium cicutarium*) and Mediterranean Schismus.

Photo Plate No. 6b provides representative views of the onsite disturbed RUE habitat.

Development Impacts within the Boundaries of VTTN 060258: 26.64± acres of RUE disturbed habitat will be removed during development of VTTN 060258.

The remaining 7.47 ± acres of RUE disturbed habitat will be retained in Natural Open Space Lot No. 120, 121 and 123 not proposed for development.

6. THE ACTIVE WASH OF SANTA CLARA RIVER

The southern 9.95± acres of the study area (3.94% of the study area) is located in the Santa Clara River. This portion of the river is very sandy and contains limited vegetation.

Photo Plate No. 4 provides representative view of the Santa Clara River wash bottom and vegetation along the banks.

Development Impacts within the Boundaries of VTTN 060258: *No* impacts to Santa Clara River wash, resulting from the development of VTTN 060258, are proposed by the tentative tract map.

7. INDIVIDUAL OAK TREES-NOT REPRESENTING OAK WOODLAND HABITAT

As the *Oak Tree Assessment Report* documents (TLC, 2005), eight oak trees [seven Coast Live Oak (*Quercus agrifolia*) trees and one Tucker's Oak (*Q. john-tuckeri*)] were identified within the study area. The acreage of the eight oak trees growing within the boundaries of the study area represent 0.22± acres: 0.06± acres within the boundaries of VTTN 060258 and 0.16± acres within the 200-foot wide "strip" around the boundaries of VTTN 060258 and Streets "A" and "B" and a 200-foot wide "strip" along the alignment of Golden Valley Road. However, these individual oaks do not represent oak woodland habitat.

Development Impacts within the Boundaries of VTTN 060258: A review of latest VTTN 060258 shows that Oak #s O-3, O-4, O-5, and O-7 are situated outside any proposed construction area. That is, all four of these oaks will be preserved *in situ* in open space areas not proposed for development. Oak # O-8, located within slope Lot No. 115, will also be preserved.

Development Impacts within the Off-site Roadways: Oak tree #s O-2 and O-6 will be removed by construction of the off-site extension of Golden Valley Road to Newhall Ranch Road. Oak O-1 will be preserved.

A-7. Rough Estimates of the Population Sizes of Flora and Fauna within the Study Area

Both the Appendix B *Floral Compendium* and Appendix C *Wildlife Compendium* provide estimates of population sizes of the flora and fauna observed within the study area by indicating the **relative abundance** (rare, uncommon, common and abundant) for each plant and wildlife species observed within the study area. A total of 150 plant and 88 wildlife species were identified within the study area during twenty-four (24) 2005, 2004 and 2003 plant and wildlife field surveys.

No quantitative population studies were conducted within the study area. However, based on the results of twenty-four (24) 2005, 2004 and 2003 field surveys, it is estimated that the plant and wildlife populations present on the project site are very similar to those occurring in the same or similar habitat types growing elsewhere in the immediately surrounding local vicinity. That is, the floral and faunal populations within the study area are similar to, and characteristic of, the populations in the Buckwheat Scrub, Chaparral, Non-native Grassland and Southern Cottonwood-Willow Riparian Forest habitat types and Residential/Urban/Exotic disturbed habitats of the vacant naturally vegetated lands immediately adjacent to the boundaries of the study area to the north, southeast, south and west.

B. CHARACTERISTIC OF THE SURROUNDING AREA

B-1. Existing Land Uses in the Neighborhood

The existing land uses in the vicinity of the study area, are briefly described below.

North: Vacant undeveloped land directly to the north; single-family homes to the northeast and northwest.

East: Single-family residential development directly to the east and vacant land to the southeast.

South: The Santa Clara River, commercial/industrial buildings including a recycling center.

West: Vacant undeveloped land to the west; large lot single-family estate homesites to the northwest.

B-2. Open Space Reserves in the Area Surrounding the Study Area

The largest open space reserves in the vicinity surrounding the study area are disjunct portions of the Angeles National Forest to the south and north. The portion of the Angeles National Forest, 3.3± miles to the south of the study area, is separated from VTTN 060258 by commercial/industrial buildings and associated surface streets, Soledad Canyon Road, vacant lands and several surface streets and the Antelope Valley Freeway (Hwy. 14), 2.7± miles to the south of the study area. The portion of the Angeles National Forest to the north is separated from VTTN 060258 by vacant land, residential developments and Bouquet Canyon Road.

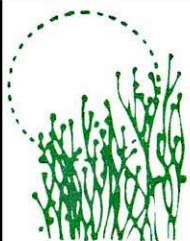
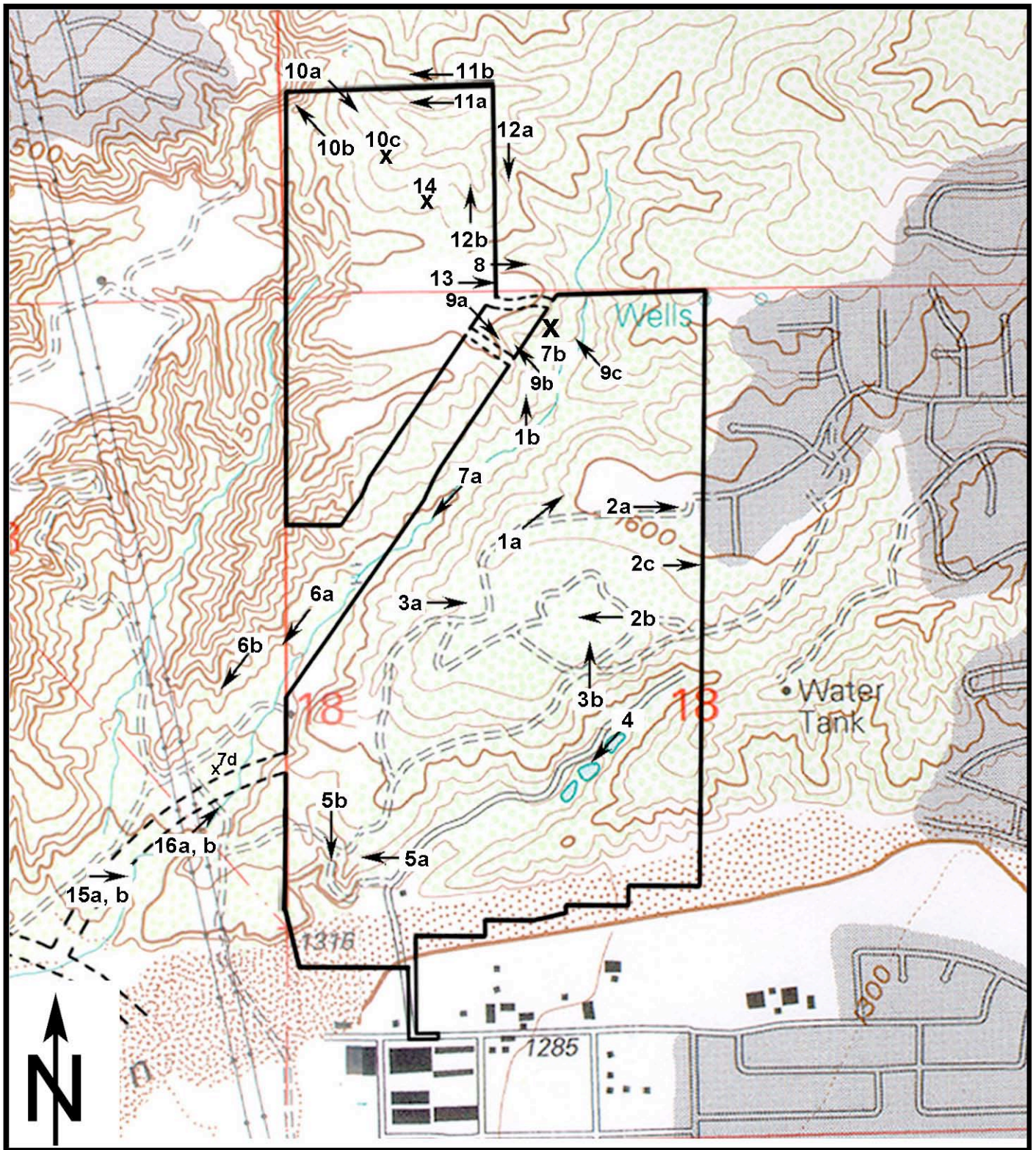
A more detailed discussion, of the open space reserves in the vicinity surrounding the study area, will be provided in the project Environmental Impact Report (EIR) being prepared by the City EIR consultant Christopher A. Joseph & Associates.

B-3. Overall Biological Value of the Area Including and Surrounding the Study Area

Based on the results of 24 comprehensive focused and protocol species field surveys, the overall biological value of the study area was determined to vary between *low* and *moderate*. Because the surrounding vacant lands, are biologically and topographically similar to the study area, the study area represents the biotic mosaic of the surrounding area and supports comparable ecological functions.

B-4. Photographs of the Vicinity Surrounding Study Area

The thirty-four photographs, comprising the 16 Appendix D Photo Plates, photographically document the March-May 2005, March and April 2004 and June-October 2003 field survey conditions of VTTN 060258 and the surrounding areas: encompassing the following: a minimum of 200 feet adjacent to the boundaries of VTTN 060258 and the off-site Streets “A” and “B” and Golden Valley Road. Figure 5 shows the location and direction from which each of the 34 photographs was taken.



Thomas Leslie Corporation
 BIOLOGICAL & CULTURAL
 INVESTIGATIONS & MONITORING

Figure 5
Biological Study Area
Photographs:
 Location and Direction of Photos

III. GENERAL BIOTA SURVEY

A. DATES AND TIME PERIODS SPENT SURVEYING THE STUDY AREA

Table 3 identifies the survey dates, times, purpose of survey and surveyors who performed the twenty-four (24) 2005, 2004 and 2003 filed surveys within the boundaries of VTTN 060258 and along the right-of-ways of off-site Streets “A,” “B” and Golden Valley Road.

B. METHODS

The approach and methods used in preparing the 2005 biological assessment of the study area is described in detail in this section. The purposes of the biological assessment, and field surveys, are briefly summarized into *Pre-Field Survey* and *Field Survey* investigations. Field data, used to prepare this report, was collected during 24 field surveys performed between March 25 and May 7, 2005, on March 14 and 26 and April 9, 2004 and between June 7 and October 17, 2003.

B-1. Pre-Field Survey Investigations

Prior to performing the biological field surveys within the boundaries of the study area the following *Pre-Field Survey* investigations were conducted.

B-1.1. Literature Review

Available, environmental literature, maps and references, including reports documenting previous general and focused biological resources surveys and assessments conducted in the vicinity of VTTN 060258, were reviewed to accomplish the following work tasks:

- Search for and obtain available, previously compiled inventories (lists) of plant and wildlife species and natural plant communities of properties in the vicinity immediately surrounding VTTN 060258.
- Identify biologically sensitive elements (species and habitat types) known or expected to occur on, or in the immediate vicinity, of VTTN 060258.
- Ascertain the need to conduct focused biological surveys to determine the presence or absence of biologically sensitive elements potentially occurring on or in the immediate vicinity of VTTN 060258.

B-1.2. State Records Search and Velum Overlay Map Analysis

A current 2005 California Department of Fish and Game (CDFG) Natural Diversity Data Base (CNDDDB) *record search reports* for the 1995 Mint Canyon, CA and 1995 Newhall, CA USGS 7.5 Minute Topographic Quadrangles (CDFG, 2005a, b) were analyzed. In addition, a CNDDDB *velum overlay maps*, for the 1995 Mint Canyon, CA and 1995 Newhall, CA USGS 7.5 Minute Topographic Quadrangles were used to assist in visually locating biologically sensitive resources (species or habitat) identified by the CNDDDB records search reports (CDFG, 2005c, d).

CNDDDB record search reports list sensitive plant species and habitat (biologically sensitive elements) occurring within USGS quadrangles, and provide specific information (e.g., state and federal protection status; global and state rank; CDFG listing status; R.E.D. Code status; specific locational data such as township, range, section, quarter, elevation, existence status, habitat quality, dates last observed, habitat preferences, usual species associates, ecological notes, etc.) for each recorded biologically sensitive element occurrence.

Table 3: 24 Field Surveys Conducted within the Study Area in 2004 and 2003

Survey Date and Total Surveyor Hours	Survey Hours	Purpose of Survey	Surveyor(s)
1. June 7, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
2. June 14, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
3. June 21, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
4. June 28, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
5. June 29, 2003 (4 person hrs.)	1100-1300	Focused plant and wildlife species surveys and inventories and vegetational mapping	Thomas Leslie Nadya Leslie
6. July 5, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
7. July 26, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
8. August 9, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
9. August 23, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
10. September 6, 2003 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
11. September 27, 2003 (4 person hrs.)	1500-1700	Focused plant and wildlife species surveys and inventories and vegetational mapping	Thomas Leslie Nadya Leslie
12. October 11, 2003 (5 person hrs.)	1000-1500	Oak Tree Survey of VTTN 060258 (TLC, 2003c) (included an inventory of all plant and wildlife species within the study area)	Gilberto Ruiz
13. October 17, 2003 (4 person hrs.)	1000-1400	Oak Tree Survey of VTTN 060258 (TLC, 2003c) (included an inventory of all plant and wildlife species within the study area and vegetational mapping)	Thomas Leslie
14. March 14, 2004 (7.5 person hrs.)	1045-1430	A - Focused spring plant and wildlife field survey B - Expanded oak tree surveys within 200-foot "strip" around boundaries of VTTN 060258 (TLC, 2004)	Thomas Leslie Nadya Leslie

Table 3 (continued):

Survey Date and Total Surveyor Hours	Survey Hours	Purpose of Survey	Surveyor(s)
15. March 26, 2004 (4 person hrs.)	0930-1130	A - Focused spring plant and wildlife field survey B - Oak tree survey and vegetational mapping of the 36-AC APN 2812-009-003	Thomas Leslie Nadya Leslie
16. April 9, 2004 (6.5 person hrs.)	1045-1400	A - Focused spring plant and wildlife field survey B - Oak tree survey and vegetational mapping of the 36-AC APN 2812-009-003	Thomas Leslie Nadya Leslie
17. March 25, 2005 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
18. April 1, 2005 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
19. April 8, 2005 (4 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
20. April 9, 2005 (6 person hrs.)	1000-1200	Focused plant and wildlife species surveys and inventories	Thomas Leslie Nadya Leslie
21. April 15, 2005 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
22. April 22 2005 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
23. April 29, 2005 (6 person hrs.)	0600-1200	Protocol CAGN survey (included an inventory of all wildlife and plant species observed during survey)	Gilberto Ruiz
24. May 7, 2005 (4 person hrs.)	1000-1200	Focused plant and wildlife species surveys and inventories	Thomas Leslie Nadya Leslie
TOTAL SURVEY HOURS:	99		

USGS quadrangle map overlay: In addition to reviewing current *Rare Find* report data, a CDFG velum map overlays (CDFG, 2005c, d) for the Newhall, CA and Mint Canyon, CA USGS quadrangles, were obtained from the CDFG. Velum map overlays graphically illustrate occurrences for sensitive biological elements (species and habitat) within a USGS quadrangle. The velum map overlays for the Agua Dulce, CA and Mint Canyon, CA USGS quadrangles were analyzed to determine if sensitive biological elements are mapped by the CDFG as occurring within or immediately adjacent to the study area.

The results of the record search and velum overlay map analysis were used to determine (a) if any sensitive resources had been previously reported within, or in the immediate local vicinity, of VTTN 060258 which might be impacted by implementation of the project proposed by VTTN 060258 and (b) which sensitive biological resources should be specifically searched for on the study area during biological assessment level field surveys.

B-1.3. Report Format Used

Since the City of Santa Clarita Planning Department has not adopted any required format for biological reports (Mr. Nathan Gapper, Assistant Planner I, 2003, Pers. Comm.), appropriate portions of the County of Los Angeles biological report format were used to prepare this biological assessment report.

B-2. Field Survey Investigations

Using information gathered, during the *Pre-Field Survey* investigations, the following field survey investigations were performed (see Table 3):

2005:

- **Two (2)** focused plant and wildlife species surveys were performed within the study area on April 9 and May 7, 2005, to inventory the plant and wildlife species utilizing the site.
- **Six (6)** protocol CAGN surveys were performed within the proposed development area ***before noon*** on March 25, April 1, 8, 15, 22 and 29, 2005. All wildlife and plant species observed were recorded.

2004:

- **Three (3)** focused spring surveys were performed on March 14 and 26 and April 9, 2004, over the entirety of the 250.93± acre study area (VTTN 060258 and associated roadways). The March 14, 2004 field survey also included performance of a focused field surveys for oak trees located within the 36-acre APN 2812-009-003 and 200-foot “strip” of land bordering the boundaries of the study area.

2003:

- **Nine (9)** protocol CAGN surveys were performed within the proposed development area ***before noon*** on June 7, 14, 21 and 28, July 5 and 26, August 9 and 23 and September 6, 2003. All wildlife and plant species observed were recorded.
- **Two (2)** focused plant and wildlife species surveys, and a vegetational mapping, were performed within the study area ***after noon***, on June 29 and September 27, 2003, to inventory the species utilizing the site and map existing vegetational cover.
- **Two (2)** Oak tree assessment field surveys were conducted on October 11 and 17, 2003 to map and assess oak trees growing within the development area. Both oak tree assessment field surveys also included updating the Appendix B and C species compendia. The October 17, 2003 field survey included a species inventory and vegetational mapping.

No limitations that could have negatively influenced the results of the biological assessment field investigations, were encountered (e.g., inclement weather, wrong time of day for surveys, too hot, too cold, etc.).

B-2.1. Field Survey Notes

Hand written field survey notes were made to document the survey conditions of each of the twenty-four (24) 2005, 2004 and 2003 biological field surveys and the vegetational cover and predominant plant and wildlife species identified within the study area. The field notes were later transcribed to computer files as the Appendix B *Floral Compendium* and the Appendix C *Wildlife Compendium* and used to prepare this biological assessment report. Appendices B and C provide lists of the plant and wildlife species actually observed/identified within the study area during the twenty-four (24) 2005, 2004 and 2003 field survey investigations.

B-2.2. Photo Documentation of the Existing Conditions of the Study Area

The existing conditions of the study area, and immediately surrounding land uses (encompassing at least 200 feet adjacent to all boundaries of the study area), as observed during performance of the 24 March-May 2005, March and April 2004 and June-October 2003 field surveys, are photodocumented by the thirty-four photographs comprising the 16 Appendix D Photo Plates. Figure 5 shows the location and direction from which each of the 34 photographs was taken.

B-2.3. Field Surveys Methodologies

Field surveys methodologies used are those currently accepted natural community and plant and wildlife survey guidelines for biological elements, set forth by relevant state and federal resource agencies such as the California Department of Fish and Game, US Fish and Wildlife Service, etc. The City of Santa Clarita has not adopted any field survey guidelines (N. Gapper, 2003, Pers. Comm.).

The surveys were conducting by walking through accessible portions of the property. Binoculars were used to search through inaccessible portions of the property and to assist in identification of the plant and wildlife species.

NOTE: Nocturnal surveys, and focused surveys for bats and aquatic species were not performed onsite due to the absence of suitable habitat onsite.

B-2.4. Areas Surveyed

The entire 246-acre VTTN 060258, and the right-of-ways of three off-site roadways (4.93± acres) were surveyed during 24 comprehensive March-May 2005, March and April 2004 and 7 June to 17 October 2003 field surveys. All accessible portions of the development areas were thoroughly surveyed on foot. Inaccessible areas (e.g., private property posted with “No Trespassing” signs), and adjacent off-site areas, were subjected to binocular surveys.

B-2.5. Plant and Wildlife Species Inventory

An inventory, listing the *predominant* field identified plant and wildlife species of the study area, was compiled during the performance of the 24 biological field surveys conducted: eight in March, April and May 2005, three in March and April 2004 and 13 in June, July, August, September and October 2003. As appropriate, the predominant plant and wildlife species observed within the study area were field identified to species by sight, calls, tracks, scat, external morphological features, flight patterns, etc.

Lists of the field identified plant and wildlife species of the study area are situated in the floral and wildlife compendia provided in Appendices B and C respectively. The species lists are meant to provide information for use in characterizing the biological resources of the study area: plant community types and wildlife populations.

B-2.6. Plant Communities

The types of plant communities (native habitat and non-native disturbed habitats) present within the study area were identified and classified according to Holland's *Preliminary Description of the Terrestrial Natural Communities of California* (Holland, 1986).

C. PERSONNEL INVOLVED IN THE FIELD AND LABORATORY WORK

The biologists listed below were involved in the 2005, 2005, 2004 and 2003 field and laboratory work and preparation of this biological assessment and the initial October 17, 2003 oak tree report, supplemental letter reports and the updated/expanded 2005 oak tree report (TLC, 2005).

C-1. Thomas A. Leslie, B.S./M.S.

Performed the following investigations:

- focused plant and wildlife surveys,
- four of the five oak tree assessment field surveys,
- vegetational mapping,
- prepared the Biological Assessment Report (BAR),
- co-authored the initial October 2003 Oak Tree Assessment report (TLC, 2003c), the March 2004 expanded Oak Tree Report supplemental letter (TLC, 2004b), the updated April 2004 Oak Tree Report (TLC, 2004a) and the revised Oak Report (TLC, 2005) for the study area.

Permits: USFWS permit TE-781384-4 and associated state Memorandum of Understanding (CAGN, WIFL, SRB); CDFG Scientific Collecting Permit No. 801061-05.

Address: P.O. Box 2229, Temecula, California, 92593; Phone (951) 296-6232; Fax (951) 296-6232.

C-2. Nadya V. Leslie, M.S.

Performed the following investigations:

- focused plant and wildlife surveys,
- vegetational mapping,
- three of the five oak tree assessment field surveys,
- co-authored the BAR,
- co-authored the initial October 2003 Oak Tree Assessment report, the March 2004 expanded Oak Tree Report supplemental letter, the updated/expanded Oak Tree Report and the revised Oak Report for the study area.

Permits: Authorized individual under USFWS permit TE-781384-4 and associated state Memorandum of Understanding (CAGN, WIFL, SRB); CDFG Scientific Collecting Permit No. 801280-05.

Address: P.O. Box 2229, Temecula, California, 92593; Phone (951) 296-6232; Fax (951) 296-6232.

NOTE: At the request of Christopher A. Joseph & Associates, Mr. Tony Bomkamp, Senior Biologist with Glenn Lukos Associates reviewed the draft BAR in November 2004 and provided constructive edits and comments that were incorporated into the June 16, 2005 final BAR report (GLA, 2004).

C-3. Gilberto B. Ruiz, M.A.

Performed the following investigations:

- protocol CAGN surveys
- one of the five oak tree assessment field surveys,
- co-authored the initial October 2003 Oak Tree Assessment report.

Permits: USFWS permit TE-840036-3.

Address: P.O. Box 1514, Santa Monica, California 90406, Phone (323) 449-1050, Fax (323) 965-7858.

The resumes, and copies of state and federal permits of the three biologists involved in field and laboratory work, are provided in Appendix E.

D. SURVEY OF THE FLORA AND FAUNA

D-1. Plants Species Observed on VTTN 060258

The Appendix B *Floral Compendium* (FC) provides a summary of the types of plants identified within the boundaries of VTTN 060258. It was compiled using the results of the following 24 field surveys (see Table 3):

- **8 surveys:** March, April and May 2005
- **3 surveys:** March 14 and 26 and April 9, 2004
- **5 surveys:** June 7, 14, 21, 28 and 29, 2003
- **2 surveys:** July 5 and 26, 2003
- **2 surveys:** August 9 and 23, 2003
- **2 surveys:** September 6 and 27, 2003
- **2 surveys:** October 11 and 17, 2003

The FC was compiled to inventory botanical resources within the study area and to determine the presence or absence of sensitive plant species, present and identifiable at the time the surveys were conducted. It only lists those plant species actually identified within the boundaries of VTTN 060258 during the 24 field surveys. It does not include a list of “expected but not observed” species. The FC was compiled by TLC biologists Thomas A. Leslie, Nadya V. Leslie and Gilberto B. Ruiz.

An analysis of the FC shows the following:

- *No* listed threatened or endangered plant species, species candidate for listing or unlisted special-status plant species were identified within the study area during 24 March-May 2005, March and April 2004 and June-October 2003 botanical surveys.
- A total of 150 plant species were identified within the boundaries of the study area in 2004 and 2003.
- The plant species identified within the study area are locally common species typically associated with Buckwheat Scrub, Chaparral, Non-native Grassland and Southern Cottonwood-Willow Riparian Forest habitat, and Residential/Urban/Exotic disturbed habitat of Santa Clarita, California.

- 36 non-native plant types were identified within the study area. Buckwheat Scrub, Chaparral and Southern Cottonwood-Willow Riparian Forest habitats were dominated by native plants; Non-native Grassland habitat and Residential/Urban/Exotic vegetational association were dominated by non-natives.

D-2. Wildlife Species Observed within the Study Area

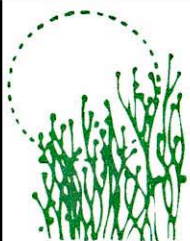
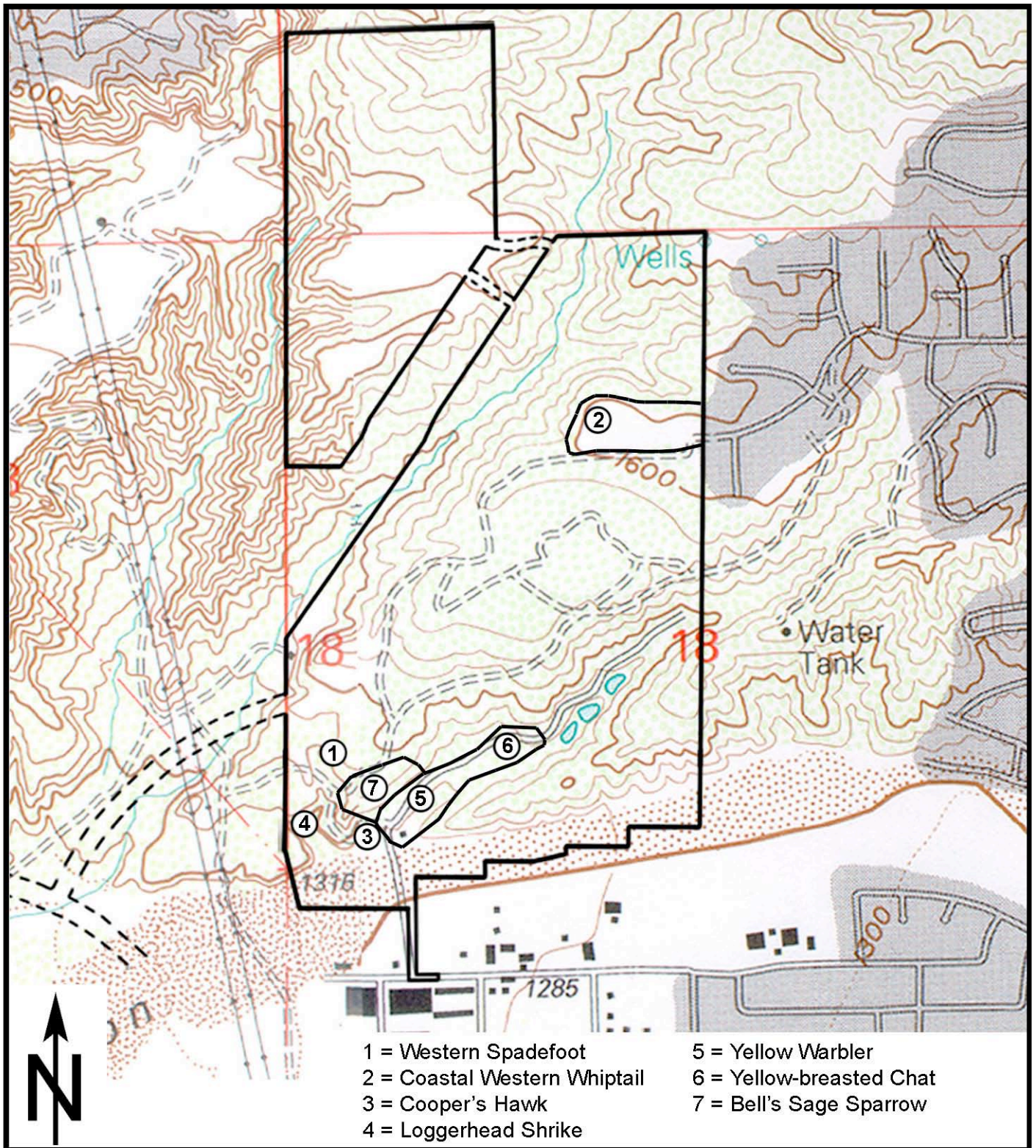
The Appendix C *Wildlife Compendium* (WC) provides a summary of the types of wildlife identified within the boundaries of the study area. It was compiled using the results of the following 24 field surveys (see Table 3):

- **8 surveys:** March 25, April 1, 8, 9, 15, 22 and 29 and May 7, 2005
- **3 surveys:** March 14 and 26 and April 9, 2004
- **5 surveys:** June 7, 14, 21, 28 and 29, 2003
- **2 surveys:** July 5 and 26, 2003
- **2 surveys:** August 9 and 23, 2003
- **2 surveys:** September 6 and 27, 2003
- **2 surveys:** October 11 and 17, 2003

The WC was compiled to inventory faunal resources within the study area and to determine the presence or absence of sensitive wildlife species, such as the CAGN, present and identifiable at the time the surveys were conducted. It only lists those wildlife species actually identified within the boundaries of the study area during the 24 field surveys. It does not include a list of “expected but not observed” species. The WC was compiled by TLC biologists Thomas A. Leslie, Nadya V. Leslie and Gilberto B. Ruiz.

An analysis of the WC shows the following:

- *No* listed threatened or endangered wildlife species like CAGN, were identified within the study area during 24 March, April and May 2005, March and April 2004 and June-October 2003 wildlife surveys. The absence of the CAGN on VTTN 060258 is documented in more detail in two separate reports submitted to the Ventura, California office of the US Fish and Wildlife Service on October 10, 2003 and on June 8, 2005 (TLC, 2003b; TLC, 2005). In addition, no CAGN were observed within the three off-site roadways in 2005, 2004 or 2003.
- A total of 88 wildlife species were identified within the boundaries of the study area in 2005, 2004 and 2003, including 1 amphibian, 5 reptile, 46 bird, 6 mammal and 31 invertebrate species. Due to the presence of relatively undisturbed (“pristine”) habitat within the study area, wildlife utilization of the study area is relatively normal to vacant property in Santa Clarita, California.
- The wildlife species of the study area are in general locally common species typically associated with Buckwheat Scrub, Chaparral, Non-native Grassland and Southern Cottonwood-Willow Riparian Forest habitat and Residential/Urban/Exotic disturbed habitat of Santa Clarita, California.
- Seven *unlisted special-status* species, the Western Spadefoot Toad, the Coastal Western Whiptail, the Cooper’s Hawk, the Loggerhead Shrike the Yellow Warbler, the Yellow-breasted Chat and the Bell’s Sage Sparrow were observed within the study area (see Appendix C and Figure 6).



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Figure 6
Approximate Location
of Sensitive Species
Observed Onsite

IV. SENSITIVE SPECIES AND COMMUNITIES OF THE STUDY AREA

A. LISTED AND UNLISTED SPECIAL-STATUS PLANT SPECIES

Findings Summary:

- *No* plant species listed as threatened or endangered, *no* plant species candidates for listing and *no* unlisted special-status plant species were identified within the study area during performance of twenty-four (24) 2005, 2005, 2004 and 2003 field surveys.
- The Appendix B *Floral Compendium* provides a complete list of the locally common plant species identified within the study area.

As part of the 2005 BAR, Table 4 *Sensitive Species and Habitat Types Recorded by the CNDDDB in the Vicinity of the Study Area* was prepared to identify which listed, and unlisted plant species of concern, are recorded within a 2.0-mile radius of the study area. Table 4 was created using information obtained from an analysis of a 2005 CNDDDB records search report and velum quadrsheet overlay for the Mint Canyon, CA and Newhall, CA, USGS quadrangles (CDFG, 2005a, b, c, d). In addition, recently rediscovered unlisted, CNPS List 1B Los Angeles Sunflower (*Helianthus nuttallii* ssp. *parishii*) is also addressed on Table 4.

Table 4 provides the following information for each species: common and scientific name, habitat and distribution, flowering period, state, federal and the CNPS protection status, R-E-D Code, global and state ranking, and probability of occurrence within the study area. The probability of occurrence is based on such factors as the presence/absence of suitable habitat, the presence/absence of CNDDDB records on or in the immediate vicinity of the study area, the results of focused plant surveys, etc.

In addition to the sensitive species, recorded by the CNDDDB in the vicinity of the study area, 21 sensitive plant species “occurring or potentially occurring within the proposed Santa Clara River SEA” (PFF, 2000), were also searched for. The results are provided in Table 5 of this report.

A-1. LISTED Plant Species

- *No* CNDDDB records for listed plant species occur within the boundaries of the study area.
- *None* are recorded by the CNDDDB within 2.0-mile radius of the study area (CDFG, 2005a, b, c, d).
- *No* listed plant species were identified within the study area during 24 field surveys performed within the study area between March 25 and May 7, 2005, on March 14 and 26 and April 9, 2004 and between June 7 and October 17, 2003.
- *None* of the five listed plant species recorded as “occurring or potentially occurring within the proposed Santa Clara River SEA” (PFF, 2000) were observed within the study area. The potential for these species to occur within the study area are addressed on Table 5.

A-2. Unlisted special-status Plant Species

- *No* CNDDDB records for unlisted special-status plant species occur within the boundaries of the study area.
- *None* are recorded by the CNDDDB within 2.0-mile radius of the study area (CDFG, 2005a, b, c, d).
- *No* unlisted special-status plant species were identified within the study area during 24 field surveys performed within the study area between March 25 and May 7, 2005, on March 14 and 26 and April 9, 2004 and between June 7 and October 17, 2003.
- *None* of the 16 unlisted special-status plant species recorded as “occurring or potentially occurring within the proposed Santa Clara River SEA” (PFF, 2000) were observed within the study area. The potential for these species to occur within the study area are addressed on Table 5.

Table 4: Sensitive Species and Habitat Types Recorded by the CNDDDB in the Vicinity of the Study Area

SPECIES or HABITAT TYPE	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	LISTING STATUS (Federal, State, CNPS, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
A. UNLISTED SPECIAL-STATUS PLANT SPECIES				
<p><i>Helianthus nuttallii</i> <i>ssp. parishii</i> Los Angeles Sunflower</p>	<p><u>Suitable habitat:</u> Coastal saltwater and freshwater marshes, marshy banks of the river, at elevations of 10-500 meters (33-1,640 feet) above msl. <u>Nearest CNDDDB location:</u> 6.4± miles W of the SW corner of VTTN 060258 (CDFG, 2005a, b, c, d).</p>	<p>August-October</p>	<p>Fed: None CA: None CNPS: List 1A G5T1; S1</p>	<p>Not expected to occur. Not Observed onsite during six August-October 2003 focused botanical field surveys.</p>
B. LISTED WILDLIFE SPECIES				
<p><i>Gasterosteus aculeatus williamsoni</i> Unarmored Threespine Stickleback</p>	<p><u>Suitable habitat:</u> Weedy pools, backwaters with cool clear water and abundant vegetation. <u>Nearest CNDDDB location:</u> 1.23± miles SW of the center of VTTN 060258 (CDFG, 2005a, b, c, d).</p>	<p>Year-round</p>	<p>Fed: Endangered CA: Endangered CDFG: CSC G5T1; S1</p>	<p>Not expected to occur within the study area due to the complete absence of suitable habitat.</p>
C. UNLISTED SPECIAL-STATUS WILDLIFE SPECIES				
<p><i>Gila orcutti</i> Arroyo Chub</p>	<p><u>Suitable habitat:</u> Slow waters stream sections with mud or sand bottoms in Los Angeles basin south coastal streams. <u>Nearest CNDDDB location:</u> 1.23± miles SW of the center of VTTN 060258 (CDFG, 2005a, b, c, d).</p>	<p>Year-round</p>	<p>Fed: None CA: None CDFG: CSC G2; S2</p>	<p>Not expected to occur within the study area due to the complete absence of suitable habitat.</p>
D. SENSITIVE HABITAT TYPES				
<p>Southern Riparian Scrub</p>	<p>Developed along streams and rivers. <u>Distribution:</u> Canyons and valleys of southern California. <u>Nearest CNDDDB location:</u> mapped on VTTN 060258 (CDFG, 2005a, b, c, d).</p>	<p>Year-round</p>	<p>Fed: None CA: None CNPS: None G3; S3.2</p>	<p>No Southern Riparian Scrub habitat grows within the study area. Instead, as Figure 4 illustrates, Southern Cottonwood-Willow Riparian Forest grows onsite in Drainage Complex C.</p>
<p>Southern Willow Scrub</p>	<p>Loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. <u>Distribution:</u> Formerly extensive along the major rivers of coastal southern California, but now much reduced by urban expansion, flood control, and channel "improvements". <u>Nearest CNDDDB location:</u> mapped on VTTN 060258 (CDFG, 2005a, b, c, d).</p>	<p>Year-round</p>	<p>Fed: None CA: None CNPS: C.H.I.P. G3; S2.1</p>	<p>No Southern Willow Scrub habitat grows within the study area. Instead, as Figure 4 illustrates, Southern Cottonwood-Willow Riparian Forest grows onsite in Drainage Complex C.</p>

Table 5: List of “Sensitive Species (21 Plants and 57 Animals) Occurring Or Potentially Occurring Within the Proposed Santa Clara River SEA” (PFF, 2000)

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	FLOWERING PERIOD	LISTING STATUS (Federal, State, CNPS)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
A. LISTED PLANT SPECIES (5)				
<i>Berberis nevini</i> Nevin’s Barberry	<p><u>Suitable habitat*</u>: Sage scrub, chaparral, cismontane woodland, riparian scrub; sandy or gravelly substrate.</p> <p><u>Location*</u>: Warm Spring Mt. and Newhall quads; San Francisquito Canyon (1987); 0.5 mi. N of San Francisquito powerhouse.</p> <p><u>CNDDDB Records in the Vicinity</u>: Six CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 3.85 miles NW of the center of VTTN 060258 (Occurrence # 12). However, the species has not been seen in this locality since 1965.</p>	March-April	Fed: Endangered CA: Endangered CNPS: List 1B RED 3-3-3 G2; S2.2	<p>Not Observed onsite during twenty-four 2005, 2004 and 2003 focused botanical field surveys.</p> <p>Not Expected To Occur because this <u>large sized perennial shrub</u> would have been identifiable even when not flowering if present onsite. <i>No</i> Barberry of any species was observed onsite. Therefore no further surveys for this species are identified.</p>
<i>Chorizanthe parryi</i> var. <i>fernandina</i> San Fernando Valley Spineflower	<p><u>Suitable habitat</u>: Coastal scrub, sandy soils.</p> <p><u>Location</u>: Potential where habitat occurs; record outside SEA on Newhall Ranch (2000).</p> <p><u>CNDDDB Records in the Vicinity</u>: Nine CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 4.98 miles W of the center of VTTN 060258 (Occurrence # 15).</p>	April-June	Fed: Candidate CA: Endangered CNPS: List 1B RED 2-2-2 G2T1; S1.1	<p>Not Observed onsite during seven April-May 2005, one April 2004 and five June 2003 focused botanical field surveys.</p> <p>Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records.</p>
<i>Dodecahema leptoceras</i> Slender-horned Spineflower	<p><u>Suitable habitat*</u>: Alluvial sage scrub vegetation on sandy flood-deposited rivers and washes.</p> <p><u>Location*</u>: Recorded near Newhall (1989) and in Mint Canyon, also observed in Bee Canyon.</p> <p><u>CNDDDB Records in the Vicinity</u>: Five CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 4.01 miles SW of the center of VTTN 060258 (Occurrence # 16).</p>	April-June	Fed: Endangered CA: Endangered CNPS: List 1B RED 3-3-3 G1; S1.1	<p>Not Observed onsite during seven April-May 2005, one April 2004 and five June 2003 focused botanical field surveys.</p> <p>Not Expected to Occur due to the absence of suitable habitat onsite.</p>
<i>Navarretia fossalis</i> Spreading Navarretia	<p><u>Suitable habitat*</u>: Chenopod scrub, shallow freshwater marshes, vernal pools.</p> <p><u>Location*</u>: Newhall area within vernal pools (1995-96).</p> <p><u>CNDDDB Records in the Vicinity</u>: Three CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 2.68 miles NE of the center of VTTN 060258 (Occurrence # 41).</p>	April-June	Fed: Threatened CA: None CNPS: List 1B RED 2-3-2 G2; S2.1	<p>Not Observed onsite during seven April-May 2005, one April 2004 and five June 2003 focused botanical field surveys.</p> <p>Not Expected to Occur due to the absence of suitable habitat onsite.</p>

* = Suitable habitat and location data are taken from *Biological Resources Assessment of the Proposed Santa Clara River Significant Ecological Area* (PFF, 2000).

Table 5 (continued):

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	FLOWERING PERIOD	LISTING STATUS (Federal, State, CNPS)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Orcuttia californica</i> California Orcutt Grass</p>	<p><u>Suitable habitat:</u> Vernal pools. <u>Location:</u> Potential where habitat occurs. <u>CNDDDB Records in the Vicinity:</u> Four CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 2.68 miles NE of the center of VTTN 060258 (Occurrence # 30).</p>	<p>April-August</p>	<p>Fed: Endangered CA: Endangered CNPS: List 1B RED 3-3-2 G2; S2.1</p>	<p>Not Observed onsite during seven April-May 2005, one April 2004 and nine June–August 2003 focused botanical field surveys. Not Expected to Occur due to the absence of suitable habitat onsite.</p>
<p>B. UNLISTED SPECIAL-STATUS PLANT SPECIES (16)</p>				
<p><i>Boykinia rotundifolia</i> Round-leaved Boykinia</p>	<p><u>Suitable habitat*:</u> Chaparral, riparian woodland, streambanks. <u>Location*:</u> Common in local canyons. <u>CNDDDB Records in the Vicinity:</u> No records in CNDDDB DataBase.</p>	<p>June-July</p>	<p>Fed: None CA: None CNPS: None (“considered rejected: common”) but too</p>	<p>Not Observed onsite during seven June-July 2003 focused botanical field surveys. Moderate Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during 16 focused botanical surveys and absence of CNDDDB occurrence records onsite. No further focused surveys recommended for this unlisted species.</p>
<p><i>Brickellia nevinii</i> Nevin’s Bricklebush</p>	<p><u>Suitable habitat*:</u> Chaparral, coastal sage scrub; steep slopes. <u>Location*:</u> Recorded in N portion of San Francisquito Creek wash; common locally. <u>CNDDDB Records in the Vicinity:</u> No records in CNDDDB DataBase.</p>	<p>September-November</p>	<p>Fed: None CA: None CNPS: None (“considered rejected: common”) but too</p>	<p>Not Observed onsite during four September-October 2003 focused botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during 16 focused botanical surveys and absence of CNDDDB occurrence records onsite. No further focused surveys recommended for this unlisted species.</p>
<p><i>Calochortus catalinae</i> Catalina Mariposa Lily</p>	<p><u>Suitable habitat*:</u> Openings in chaparral, valley and foothill grassland, cismontane woodland; heavy soils. <u>Location*:</u> Placerita Canyon. <u>CNDDDB Records in the Vicinity:</u> No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>February-May</p>	<p>Fed: None CA: None CNPS: List 4 RED 1-2-3 G3; S3.2</p>	<p>Not Observed onsite during seven March-April 2005 and three March-April 2004 botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. No further focused surveys recommended for this unlisted species.</p>

Table 5 (continued):

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	FLOWERING PERIOD	LISTING STATUS (Federal, State, CNPS)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Calochortus clavatus</i> var. <i>clavatus</i></p> <p>Club-haired Mariposa Lily</p>	<p><u>Suitable habitat*</u>: Coastal sage scrub, clayish flats and slopes.</p> <p><u>Location*</u>: Common on Golden Valley Ranch property.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>May-June</p>	<p>Fed: None</p> <p>CA: None</p> <p>CNPS: List 4</p> <p>RED 1-1-3</p> <p>G4T3; S3.3</p>	<p>Not Observed onsite during one May 2005 and five June 2003 focused botanical field surveys.</p> <p>Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. <i>No</i> further focused surveys recommended for this unlisted species.</p>
<p><i>Calochortus clavatus</i> var. <i>gracilis</i></p> <p>Slender Mariposa Lily</p>	<p><u>Suitable habitat*</u>: Chaparral, especially in foothill canyons; generally found in shade.</p> <p><u>Location*</u>: Confluence of Bee Canyon and Soledad Canyon Rd.; Oak Spring Canyon.</p> <p><u>CNDDDB Records in the Vicinity</u>: Eight CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 3.5 miles E of the center of VTTN 060258 (Occurrence # 5).</p>	<p>March-May</p>	<p>Fed: None</p> <p>CA: None</p> <p>CNPS: List 1B</p> <p>RED 3-2-3</p> <p>G4T1; S1.1</p>	<p>Not Observed onsite during eight March-May 2005 and three March-April 2004 botanical field surveys.</p> <p>Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records.</p>
<p><i>Calochortus plummerae</i></p> <p>Plummer's Mariposa Lily</p>	<p><u>Suitable habitat*</u>: Sage scrub, valley and foothill grassland, yellow pine forest; dry, rocky or sandy sites, granitic or alluvial soil; to 4,800 feet.</p> <p><u>Location*</u>: Sunland, near Reese Ranch, little Tujung Canyon (1989); Santa Susana Pass (1928) on Robinson Ranch Golf Course.</p> <p><u>CNDDDB Records in the Vicinity</u>: Four CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 4.01 miles SW of the center of VTTN 060258 (Occurrence # 77). However, this occurrence is dated 1897, and “much of this area now developed” (CDFG, 2003a, b, c, d).</p>	<p>May-July</p>	<p>Fed: None</p> <p>CA: None</p> <p>CNPS: List 1B</p> <p>RED 2-2-3</p> <p>G3; S3.2</p>	<p>Not Observed onsite during one May 2005 and seven June-July 2003 focused botanical field surveys.</p> <p>Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. <i>No</i> further focused surveys recommended for this unlisted species.</p>

Table 5 (continued):

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	FLOWERING PERIOD	LISTING STATUS (Federal, State, CNPS)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Calystegia peirsonii</i> Pierson's Morning Glory</p>	<p><u>Suitable habitat*</u>: Sage scrub, chenopod (saltbush) scrub, chaparral, cismontane woodland, lower montane coniferous forest, rocky slopes. <u>Location*</u>: Locally common in several canyons along the Santa Clara River. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>May-June</p>	<p>Fed: None CA: None CNPS: List 4 RED 1-2-3 G3; S3.2</p>	<p>Not Observed onsite during one May 2005 and five June 2003 focused botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. No further focused surveys recommended for this unlisted species.</p>
<p><i>Harpagonella palmeri</i> Palmer's Grapplinghook</p>	<p><u>Suitable habitat*</u>: Sage scrub; clay soils; below 2,500 feet. <u>Location*</u>: Historic occurrence in L.A. county, Newhall quadrangle. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>March-May</p>	<p>Fed: None CA: None CNPS: List 4 RED 1-2-1 G4; S3.2</p>	<p>Not Observed onsite during eight March-May 2005 and three March-April 2004 botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat and clay soils but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. No further focused surveys recommended for this unlisted species.</p>
<p><i>Lilium humboldtii</i> ssp. <i>ocellatum</i> Ocellated Humboldt Lily</p>	<p><u>Suitable habitat*</u>: Openings in chaparral, cismontane woodland, lower montane coniferous forest; below 5,500 feet. <u>Location*</u>: Common in local canyons. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>March-July</p>	<p>Fed: None CA: None CNPS: List 4 RED 1-2-3 G4T3; S3.2</p>	<p>Not Observed onsite during eight March-May 2005 and three March-April 2004 and seven June-July 2003 focused botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during 16 focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. No further focused surveys recommended for this unlisted species.</p>

Table 5 (continued):

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	FLOWERING PERIOD	LISTING STATUS (Federal, State, CNPS)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Lotus nuttallianus</i> Nuttall's Lotus</p>	<p><u>Suitable habitat*</u>: Chaparral and buckwheat communities.</p> <p><u>Location*</u>: Unconfirmed record in sandy areas of chaparral and buckwheat scrub near convergence of Soledad and Agua Dulce Canyons.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>March-June</p>	<p>Fed: None CA: None CNPS: List 1B RED 3-3-2 G1; S1</p>	<p>Not Observed onsite during eight March-May 2005 and three March-April 2004 and five June 2003 focused botanical field surveys.</p> <p>Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during 16 focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. No further focused surveys recommended for this unlisted species.</p>
<p><i>Malacothamnus davidsonii</i> Davidson's Bush Mallow</p>	<p><u>Suitable habitat*</u>: Sage scrub, chaparral, riparian woodland.</p> <p><u>Location*</u>: Unconfirmed record from Oak Spring Canyon near Santa Clara River.</p> <p><u>CNDDDB Records in the Vicinity</u>: Eight CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 7.37 miles S of the center of VTTN 060258 (Occurrence # 9).</p>	<p>June-January</p>	<p>Fed: Sp. of Conc. CA: None CNPS: List 1B RED 2-2-3 G1; S1.1</p>	<p>Not Observed onsite during eight March-May 2005 and 13 June-October 2003 focused botanical field surveys.</p> <p>Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. No further focused surveys recommended for this unlisted species.</p>
<p><i>Opuntia basilaris</i> var. <i>brachyclada</i> Short-joint Beavertail</p>	<p><u>Suitable habitat*</u>: Chaparral, joshua tree woodland, mohavean desert scrub, pinyon-juniper woodland, riparian woodland, sandy soil or coarse granitic loam.</p> <p><u>Location*</u>: Potential where habitat occurs; recorded outside SEA near Quigley Canyon, E of Newhall.</p> <p><u>CNDDDB Records in the Vicinity</u>: Three CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 2.67 miles S of the center of VTTN 060258 (Occurrence # 10).</p>	<p>April-June</p>	<p>Fed: None CA: None CNPS: List 1B RED 3-2-3 G5T1; S1.2</p>	<p>Not Observed onsite during seven April-May 2005, one April 2004 and five June 2003 focused botanical field surveys.</p> <p>Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. No further focused surveys recommended for this unlisted species.</p>

Table 5 (continued):

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	FLOWERING PERIOD	LISTING STATUS (Federal, State, CNPS)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Perideridia pringlei</i> Adobe Yampah</p>	<p><u>Suitable habitat*</u>: Chaparral, cismontane woodland, coastal scrub. <u>Location*</u>: Recorded in N Los Angeles, Kern and Ventura Cos. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>April-July</p>	<p>Fed: None CA: None CNPS: List 4 RED 1-1-3 G3; S3.3</p>	<p>Not Observed onsite during seven April-May 2005, one April 2004 and seven June-July 2003 focused botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during 16 focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. <i>No</i> further focused surveys recommended for this unlisted species.</p>
<p><i>Ribes divaricatus</i> var. <i>parishii</i> Parish's Gooseberry</p>	<p><u>Suitable habitat*</u>: Willow thickets, coastal sage scrub, riparian woodland. Perennial shrub. <u>Location*</u>: Potential where habitat occurs. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>February-April</p>	<p>Fed: None CA: None CNPS: List 1B RED 3-3-3 G4T1; S1.1</p>	<p>Not Observed onsite during 24 focused 2005, 2004 and 2003 botanical field surveys. Not Expected To Occur because this <u>moderate sized perennial shrub</u> would have been identifiable even when not flowering if present onsite. <i>No</i> Gooseberry of any species was observed onsite. Therefore no further surveys for this species are identified.</p>
<p><i>Selaginella cinerascens</i> Ashy Spike-moss</p>	<p><u>Suitable habitat*</u>: Dry slopes on mesas in coastal sage scrub and chaparral. <u>Location*</u>: Potential where habitat occurs. <u>CNDDDB Records in the Vicinity</u>: No records in CNDDDB Data Base.</p>	<p>N/A (present and identifiable year-round)</p>	<p>Fed: None CA: None CNPS: None ("considered but rejected: common") too</p>	<p>Not Observed onsite during 24 focused 2005, 2004 and 2003 botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during 16 focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. <i>No</i> further focused surveys recommended for this unlisted species.</p>
<p><i>Senecio aphanactis</i> Rayless Ragwort</p>	<p><u>Suitable habitat*</u>: Cismontane woodland, coastal scrub; 20-575 m (65.6-1,886 feet). <u>Location*</u>: Historic record. <u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Newhall, CA, USGS quad, 3.01 miles SW of the center of VTTN 060258 (Occurrence # 4). This record is dated 1901.</p>	<p>January-April</p>	<p>Fed: None CA: None CNPS: List 2 RED 3-2-1 G3?; S1.2</p>	<p>Not Observed onsite during seven March-April 2005 and three March-April 2004 focused botanical field surveys. Low Potential to Occur onsite due to the presence of suitable habitat but failure to observe the species onsite during focused botanical surveys, absence of CNDDDB occurrence records onsite and lack of proximal CNDDDB occurrence records. <i>No</i> further focused surveys recommended for this unlisted species.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
C. LISTED WILDLIFE SPECIES (12)				
<p><i>Streptocephalus woottoni</i> Riverside Fairy Shrimp</p>	<p><u>Suitable habitat*</u>: Vernal pools/swales. <u>Location*</u>: Golden Valley Ranch. <u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Simi, Calif., USGS quad, 23.42 miles SW of the center of VTTN 060258 (Occurrence # 9).</p>	<p>Wet Season: after pool/swale holds greater than 3 cm of standing water 24 hours after a rain event.</p>	<p>Fed: Endangered CA: None CDFG: None G1; S1</p>	<p>Not Expected to Occur. No suitable habitat present onsite: vernal pools.</p>
<p><i>Catostomus santaanae</i> Santa Ana Sucker</p>	<p><u>Suitable habitat*</u>: Sand, rubble, boulder bottoms; cool, clear water; feed on algae. <u>Location*</u>: Santa Clara River. <u>CNDDDB Records in the Vicinity</u>: Five CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 7.51 miles W of the center of VTTN 060258 (Occurrence # 6).</p>	<p>Year-round</p>	<p>Fed: Threatened CA: None CDFG: CSC G1; S1</p>	<p>Not Expected to Occur. No suitable habitat onsite: perennial water source.</p>
<p><i>Gasterosteus aculeatus williamsoni</i> Unarmored Threespine Stickleback</p>	<p><u>Suitable habitat*</u>: Fresh water rivers and streams in the L.A. basin; low flow areas. <u>Location*</u>: Common in Santa Clara River; Arrastre Creek. <u>CNDDDB Records in the Vicinity</u>: Six CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 1.23 miles SW of the center of VTTN 060258 (Occurrence # 10).</p>	<p>Year-round</p>	<p>Fed: Endangered CA: Endangered CDFG: Fully Protected G5T1; S1</p>	<p>Not Expected to Occur. No suitable habitat onsite: perennial water source.</p>
<p><i>Bufo californicus</i> Arroyo Toad</p>	<p><u>Suitable habitat*</u>: Washes/streams, sandy banks, grown to willows, cottonwoods or sycamores; riparian habitats of semi-arid areas, small cobbly streambeds. <u>Location*</u>: One individual recorded along the Santa Clara River; San Francisquito Canyon; Castaic Creek (above dam). <u>CNDDDB Records in the Vicinity</u>: Three CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 4.81 miles W of the center of VTTN 060258 (Occurrence # 29).</p>	<p>March 15- July 1</p>	<p>Fed: Endangered CA: None CDFG: CSC G2G3; S2S3</p>	<p>Not Expected to Occur. Not Observed onsite during eight March-May 2005, three March-April 2004 and five June 2003 focused wildlife field surveys.</p>
<p><i>Rana aurora draytonii</i> California Red-legged Frog</p>	<p><u>Suitable habitat*</u>: Humid forests, woodlands, grasslands and stream sides, especially where cattails and other plants provide good cover. <u>Location*</u>: San Francisquito Canyon (USFS 1999). <u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Sleepy Valley, Calif., USGS quad, 18.08 miles NE of the center of VTTN 060258 (Occurrence # 167).</p>	<p>March-August</p>	<p>Fed: Threatened CA: None CDFG: CSC G4T2T3; S2S3</p>	<p>Not Expected to Occur. Not Observed onsite during eight March-May 2005, three March-April 2004 and nine June-August 2003 focused wildlife field surveys.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Buteo swainsoni</i> Swainson's Hawk</p>	<p><u>Suitable habitat*</u>: Plains, ranges, open hills, sparse trees. <u>Location*</u>: Occasional along Santa Clara River; Newhall (100 birds in 2000). <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>September-October; April-May</p>	<p>Fed: Species of concern CA: Threatened CDFG: None G4; S2</p>	<p>Not Expected to Occur. Not Observed onsite during seven April-May, 2005, one April 2004 and four September-October 2003 focused wildlife field surveys.</p>
<p><i>Coccyzus americanus occidentalis</i> Western Yellow-billed Cuckoo</p>	<p><u>Suitable habitat*</u>: Riverine woodlands, thickets, and farms. <u>Location*</u>: Record from Santa Clara River near Magic Mountain Park (Newhall Ranch; 1974). <u>CNDDDB Records in the Vicinity</u>: Two CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 10.58 miles S of the center of VTTN 060258 (Occurrence # 74).</p>	<p>February-May</p>	<p>Fed: Candidate CA: Endangered CDFG: None G5T2; S1</p>	<p>Not Expected to Occur. Not Observed onsite during eight March-May 2005 and three March-April 2004 surveys. No suitable habitat present onsite.</p>
<p><i>Empidonax traillii extimus</i> Southwestern Willow Flycatcher</p>	<p><u>Suitable habitat*</u>: Low elevational sites: Riparian woodlands that contain water and low growing willow thickets. High elevational sites: Large, flat, wet meadows that contain patches of willow trees. <u>Location*</u>: One individual observed in mature riparian woodlands of Santa Clara River; nests near Lang, approx. 6 mi. E of Newhall. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>May 15-July 17</p>	<p>Fed: None CA: Endangered CDFG: None G5; S1S2</p>	<p>Not Expected to Occur. Not Observed onsite during one May 2005 and six June-July 2003 focused wildlife surveys. No suitable habitat present onsite.</p>
<p><i>Falco peregrinus anatum</i> American Peregrine Falcon</p>	<p><u>Suitable habitat*</u>: Coastal estuaries, open country, cliffs to coasts. <u>Location*</u>: Occasional/rare visitor. Federally delisted Aug. 1999. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (mostly active September-March)</p>	<p>Fed: Delisted (Species of concern) CA: Endangered CDFG: Sensitive G4T3; S2</p>	<p>Not Expected to Occur. Not Observed onsite during one March 2005, two March 2004 and four September-October 2003 focused wildlife field surveys.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Gymnogyps californianus</i> California Condor</p>	<p><u>Suitable habitat*</u>: Montane and foothill regions; vast expanses of open savannah, grasslands, and chaparral, with cliffs, large trees, and snags. <u>Location*</u>: Recorded flying over agricultural fields and resting on ridges adjacent to S. end of Tesoro project. <u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Liebre Mtn., Calif., USGS quad, 17.47 miles NW of the center of VTTN 060258 (Occurrence # 8).</p>	<p>Year-round</p>	<p>Fed: Endangered CA: Endangered CDFG: Fully protected G1; S1</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife field surveys.</p>
<p><i>Poliophtila californica</i> California Gnatcatcher</p>	<p><u>Suitable habitat*</u>: Coastal sage scrub, below 2,500 feet, generally avoids steep slopes and dense vegetation for nesting. <u>Location*</u>: Oak Springs Canyon (1999); Plum Canyon (1999); Golden Valley Ranch (1996); Placerita Canyon (1970s); Vasquez Rancho Park (1970s). <u>CNDDDB Records in the Vicinity</u>: Two CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 13.75 miles SE of the center of VTTN 060258 (Occurrence # 260).</p>	<p>Year-round</p>	<p>Fed: Threatened CA: None CDFG: CSC G3T2; S2</p>	<p>ABSENT. Not Observed onsite during six protocol 2005 surveys, nine protocol 2003 surveys or during any of the 24 2005, 2004 and 2003 surveys.</p>
<p><i>Vireo bellii pusillus</i> Least Bell's Vireo</p>	<p><u>Suitable habitat*</u>: Perennial and intermittent streams with low, dense riparian scrub and riparian woodland habitats below 2,000 feet elevation; nests primarily in willows and forages in the riparian and occasionally in adjoining upland habitats. <u>Location*</u>: Small population recorded in Santa Clara River riparian woodland and scrub zone along the Ventura-LA county border; Castaic Creek at Santa Clara River. <u>CNDDDB Records in the Vicinity</u>: Four CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 7.16 miles W of the center of VTTN 060258 (Occurrence # 149).</p>	<p>April 10- July 31</p>	<p>Fed: Endangered CA: Endangered CDFG: None G5T2; S2</p>	<p>Not Expected to Occur. Not Observed onsite during seven June-July 2003 focused wildlife surveys. <i>No</i> suitable habitat present onsite.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
D. UNLISTED SPECIAL-STATUS WILDLIFE SPECIES (45)				
<i>Gila orcutti</i> Arroyo Chub	<p><u>Suitable habitat*</u>: Slow water sections of streams with mud or sand substrates.</p> <p><u>Location*</u>: San Francisquito Creek, Soledad Rock Quarry project site in SEA 23.</p> <p><u>CNDDDB Records in the Vicinity</u>: Five CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 1.23 miles SW of the center of VTTN 060258 (Occurrence # 43).</p>	Year-round	Fed: None CA: None CDFG: CSC G2; S2	Not Expected to Occur. Not Observed onsite during 24 March-April 2004 and June-October 2003 focused wildlife surveys. <i>No</i> suitable habitat present onsite.
<i>Spea</i> (= <i>Scaphiopus</i>) <i>hammondii</i> Western Spadefoot	<p><u>Suitable habitat*</u>: Open areas in lowland grasslands, chaparral, and pine-oak woodlands, areas of sandy or gravelly soil in alluvial fans, washes, and floodplains.</p> <p><u>Location*</u>: Tadpoles and toadlets observed near Via pond and a pond in middle Potero Canyon; Placerita Canyon; Sand Canyon.</p> <p><u>CNDDDB Records in the Vicinity</u>: Six CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 3.63 miles W of the center of VTTN 060258 (Occurrence # 201).</p>	February-July (EMA, 1992)	Fed: Species of Concern CA: None CDFG: CSC G3; S3	PRESENT. Observed Onsite on June 28, 2003, but <i>not</i> in 2005 or 2004.
<i>Anniella pulchra pulchra</i> Silvery Legless Lizard	<p><u>Suitable habitat*</u>: Several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub habitats.</p> <p><u>Location*</u>: Placerita Canyon; Sand Canyon; common in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Sunland, Calif., USGS quad, 14.08 miles SE of the center of VTTN 060258 (Occurrence # 15).</p>	Year-round (mostly active March-July)	Fed: Species of Concern CA: None CDFG: CSC G3G4T3T4Q; S3	Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.
<i>Aspidoscelis tigris stejnegeri</i> Coastal Western Whiptail	<p><u>Suitable habitat*</u>: Arid and semi-arid desert to open woodlands, where vegetation is sparse.</p> <p><u>Location*</u>: Santa Clara River and San Francisquito Creek; common in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: Two CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 20.21 miles SW (Occurrence # 12).</p>	Year-round (mostly active April-August)	Fed: None CA: None CDFG: None G5T3T4; S2S3	PRESENT. Observed Onsite on June 28, 2003.

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Coleonyx variegatus abbotti</i> San Diego Banded Gecko</p>	<p><u>Suitable habitat*</u>: Rocky tracts, canyon walls, and sand dunes in deserts and semi-arid areas. <u>Location*</u>: Tick Canyon; tributary to the Santa Clara River. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (mostly active April-August)</p>	<p>Fed: None CA: None CDFG: None G5T3T4; S2S3</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<p><i>Diadophis punctatus modoestus</i> San Bernardino Ring-neck Snake</p>	<p><u>Suitable habitat*</u>: Open, relatively rocky areas within valley-foothill, mixed chaparral, and annual grass habitats. <u>Location*</u>: Placerita Canyon; Santa Clara River. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (mostly active April-August)</p>	<p>Fed: None CA: None CDFG: None G5T2T3; S2?</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-April 2004 and June-August 2003 focused wildlife surveys.</p>
<p><i>Emys (=Clemmys) marmorata pallida</i> Southwestern Pond Turtle (SPT)</p>	<p><u>Suitable habitat*</u>: Ponds, marshes, rivers, streams, irrigation ditches. NOTE: No suitable SPT habitat was observed onsite during 24 field surveys performed in 2003, 2004 and 2005. <u>Location*</u>: Ben Canyon; Vasquez Rocks; one individual in the Santa Clara River, on the Newhall Ranch. <u>CNDDDB Records in the Vicinity</u>: Eleven CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the location information for this species is suppressed. However, according to Ms. Dee Warenycia, a CNDDDB biologist (Pers. Comm, January 20, 2005), the nearest state SPT occurrence record is <i>off-site</i> 5± miles west of VTTN 060258 in the Newhall, Calif. USGS quadrangle.</p>	<p>Year-round (mostly active April-August)</p>	<p>Fed: Species of Concern CA: None CDFG: CSC G3G4T2T3; S2</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-August 2003 focused wildlife surveys. No suitable habitat onsite.</p>
<p><i>Lampropeltis zonata pulchra</i> San Diego Mountain Kingsnake</p>	<p><u>Suitable habitat*</u>: Moist woods, coniferous forests, woodland and chaparral. <u>Location*</u>: Placerita Canyon; Sand Canyon. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (mostly active April-August)</p>	<p>Fed: None CA: None CDFG: CSC G4G5; S1S2</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-April 2004 and June-October 2003 focused wildlife surveys.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Phrynosoma coronatum blainvillei</i> San Diego Coast Horned Lizard</p>	<p><u>Suitable habitat*</u>: Valley-foothill hardwood, conifer, and riparian habitats, pine-cypress, juniper and annual grassland habitats below 6,000 feet, open country, especially sandy areas, washes, floodplains, and windblown deposits. <u>Location*</u>: Observed throughout San Francisquito Creek in various locations. <u>CNDDDB Records in the Vicinity</u>: Nineteen CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 3.01 miles SW of the center of VTTN 060258 (Occurrence # 145).</p>	<p>Year-round (mostly active March-June)</p>	<p>Fed: None CA: None CDFG: CSC G4T3T4; S2S3</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<p><i>Phrynosoma coronatum frontale</i> California Horned Lizard</p>	<p><u>Suitable habitat*</u>: Scrubland, grassland, coniferous forest, broad-leaf woodlands. <u>Location*</u>: One individual on Newhall Ranch property; common in SEA. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (mostly active March-June)</p>	<p>Fed: None CA: None CDFG: CSC G4T3T4; S3S4</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<p><i>Salvadora hexalepis virgultea</i> Coast Patch-nosed Snake</p>	<p><u>Suitable habitat*</u>: Found in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas. Barren creosote bush desert flats. Sagebrush semi-deserts; sea level to 7,000 feet. <u>Location*</u>: 3 mi. E of Acton; historically collected in Placerita, Sand, and Soledad canyons. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (mostly active April-August)</p>	<p>Fed: None CA: None CDFG: CSC G5T3; S2S3</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<p><i>Thamnophis hammondi</i> Two-striped Garter Snake</p>	<p><u>Suitable habitat*</u>: Riparian and freshwater marshes with perennial water. <u>Location*</u>: Several records in upper Santa Clara River; Placerita Canyon; Sand Canyon. <u>CNDDDB Records in the Vicinity</u>: Five CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 5.24 miles E of the center of VTTN 060258 (Occurrence # 43).</p>	<p>Year-round (mostly active April-August)</p>	<p>Fed: None CA: None CDFG: CSC G2G3; S2</p>	<p>Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys. No perennial water sources onsite.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<i>Accipiter cooperi</i> Cooper's Hawk	<p><u>Suitable habitat*</u>: Open woodlands especially riparian woodland.</p> <p><u>Location*</u>: Santa Clara River nesting records; foraging over Newhall Ranch; San Francisquito Creek, common in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Val Verde, Calif., USGS quad, 12.90 miles W of the center of VTTN 060258 (Occurrence # 43).</p>	Year-round (mostly active September-October-August)	Fed: None CA: None CDFG: CSC G5; S3	PRESENT. Observed Onsite on June 21, 28, July 5 and September 6, 2003.
<i>Accipiter striatus</i> Sharp-shinned Hawk	<p><u>Suitable habitat*</u>: Woodlands; forages over chaparral and other scrublands; prefers riparian habitats and N-facing slopes, with plucking perch sites.</p> <p><u>Location*</u>: Common local migrant.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Winter (October - April)	Fed: None CA: None CDFG: CSC G5; S3	Not Expected to Occur. Not Observed onsite during seven March-April 2005, one April 2004 and two October 2003 focused wildlife surveys.
<i>Agelaius tricolor</i> Tricolored Blackbird	<p><u>Suitable habitat*</u>: Freshwater marshes and riparian scrub.</p> <p><u>Location*</u>: Flocks of 20-50 individuals observed at two sites near SEA 23.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round (mostly active February-June)	Fed: Species of concern CA: None CDFG: CSC G2; S2	Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.
<i>Aimophila ruficeps canescens</i> Southern California Rufous-crowned Sparrow	<p><u>Suitable habitat*</u>: Generally, steep, rocky areas within coastal sage scrub and chaparral, often with scattered bunches of grass; prefers relatively recently burned areas.</p> <p><u>Location*</u>: Locally common.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round (mostly active March-May)	Fed: None CA: None CDFG: CSC G5T2T4; S2S3	Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.
<i>Amphispiza belli belli</i> Bell's Sage Sparrow	<p><u>Suitable habitat*</u>: Dense, dry chamise chaparral and coastal slopes of coastal sage scrub.</p> <p><u>Location*</u>: Locally common.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Spring-summer (mostly active March-May)	Fed: Species of Concern CA: None CDFG: CSC G5T2T4; S2?	PRESENT. Observed Onsite in 2005 and 2003.

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<i>Aquila chrysaetos</i> Golden Eagle	<p><u>Suitable habitat*</u>: Mountains, deserts, and open country; prefer to forage over grasslands, deserts, savannahs and early successional stages of forest and shrub habitats.</p> <p><u>Location*</u>: Occasional over eastern portion of SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round (mostly active March-May)	Fed: None CA: None CDFG: CSC G5; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<i>Asio otus</i> Long-eared Owl	<p><u>Suitable habitat*</u>: Riparian and live oak woodlands.</p> <p><u>Location*</u>: Placerita, Sand Canyons. (nests),</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round (mostly active October-March)	Fed: None CA: None CNPS: CSC G5; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<i>Athene cunicularia</i> Burrowing Owl	<p><u>Suitable habitat*</u>: Dry grasslands, desert habitats, open pinyon-juniper, ponderosa pine woodlands below 5,300 feet elevation; berms, ditches, and grasslands adjacent to rivers, agricultural, and scrub areas.</p> <p><u>Location*</u>: Occasional visitor; no recent nests in Santa Clara Valley, probably nests in upland along Santa Clara River in E half of SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Simi, Calif., USGS quad, 15.93 miles SW of the center of VTTN 060258 (Occurrence # 85).</p>	Year-round resident in Southern CA (February 1-August 31: nesting; December 1-January: winter residents)	Fed: Species of concern CA: None CDFG: CSC G4; S2	<p>Not Expected to Occur.</p> <p>Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<i>Buteo regalis</i> Ferruginous Hawk	<p><u>Suitable habitat*</u>: Rivers, lakes, and coasts; open tracts of sparse shrubs and grasslands, and agricultural areas during winter.</p> <p><u>Location*</u>: Rare local migrant.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Winter (November-March)	Fed: Species of concern CA: None CDFG: CSC G4; S3S4	<p>Not Expected to Occur.</p> <p>Not Observed onsite during one March 2005 and two March 2004 focused wildlife surveys.</p>
<i>Chaetura vauxi</i> Vaux's swift	<p><u>Suitable habitat*</u>: Redwood and douglas fir habitats.</p> <p><u>Location*</u>: Common migrant.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Summer migrant.	Fed: Species of concern CA: None CDFG: CSC G5; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during nine June-August 2003 focused wildlife surveys. No suitable habitat present onsite.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<i>Circus cyaneus</i> Northern Harrier	<p><u>Suitable habitat*</u>: Coastal salt marshes, freshwater marshes, grasslands, and agricultural fields; occasionally forages over open desert and brushlands.</p> <p><u>Location*</u>: Common local migrant; adjacent to SEA near Pico Canyon.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Winter (November-March)	Fed: None CA: None CDFG: CSC G5; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during one March 2005 and two March 2004 focused wildlife surveys.</p>
<i>Dendroica petechia brewsteri</i> Yellow Warbler	<p><u>Suitable habitat*</u>: Riparian woodlands, montane chaparral, and mixed conifer habitats.</p> <p><u>Location*</u>: Several pairs recorded nesting in Nat'l Forest near Francisquito Creek; occasionally nests along the Santa Clara River.</p> <p><u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Simi, Calif., USGS quad, 12.90 miles W of the center of VTTN 060258 (Occurrence # 63).</p>	Spring-summer (mostly active in March-May)	Fed: None CA: None CDFG: CSC G5T3?; S2	<p>PRESENT.</p> <p>Observed Onsite on June 7 and 14, 2003.</p>
<i>Elanus leucurus</i> White-tailed Kite	<p><u>Suitable habitat*</u>: Grasslands with scattered trees, near marshes, along highways.</p> <p><u>Location*</u>: nesting in woodlands along Santa Clara River, Live Oak Springs Canyon, Placerita Canyon; near Pico Canyon; common locally.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round (mostly active February-October)	Fed: Species of concern CA: None CDFG: Fully protected G5; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during 24 March-May 2005, March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<i>Eremophila alpestris actia</i> California Horned Lark	<p><u>Suitable habitat*</u>: Open habitats, grasslands along the coast, deserts near sea level to alpine dwarf shrub habitat, uncommonly in coniferous and chaparral habitats.</p> <p><u>Location*</u>: San Francisquito Creek; near Pico Canyon; common in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round (mostly active March-August)	Fed: None CA: None CDFG: CSC G5T3; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<i>Falco columbarius</i> Merlin	<p><u>Suitable habitat*</u>: Coastlines, wetlands, woodlands, agricultural fields, and grasslands.</p> <p><u>Location*</u>: Occasional migrant.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Winter (October-November)	Fed: None CA: None CDFG: CSC G5; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during two October 2003 focused wildlife surveys.</p>
<i>Falco mexicanus</i> Prairie Falcon	<p><u>Suitable habitat*</u>: Grasslands, savannahs, rangeland, agricultural fields, and desert scrub; often uses sheltered cliff ledges for cover.</p> <p><u>Location*</u>: Nests in upper Placerita Canyon.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round	Fed: None CA: None CDFG: CSC G5; S3	<p>Not Expected to Occur.</p> <p>Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<i>Icteria virens</i> Yellow-breasted Chat	<p><u>Suitable habitat*</u>: Riparian woodlands with a thick understory.</p> <p><u>Location*</u>: One individual recorded in San Francisquito Creek near the Santa Clara River.</p> <p><u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Val Verde, Calif., USGS quad, 12.90 miles W of the center of VTTN 060258 (Occurrence # 43).</p>	Spring-summer (mostly active March-May)	Fed: None CA: None CDFG: CSC G5; S3	PRESENT. Observed Onsite on June 7, 14, July 26, August 9, 23 and September 6, 2003.
<i>Ixobrychus exilis hesperis</i> Western Least Bittern	<p><u>Suitable habitat*</u>: Emergent wetlands of cattails and tules.</p> <p><u>Location*</u>: Santa Clara River.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round (most active May-September)	Fed: None CA: None CDFG: CSC G5; S1	Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys. <i>No</i> suitable habitat onsite.
<i>Lanius ludovicianus</i> Loggerhead Shrike	<p><u>Suitable habitat*</u>: Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.</p> <p><u>Location*</u>: 4 pairs near agricultural fields/open chaparral near San Francisquito Creek; near Santa Clara River at County line; common locally in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Year-round	Fed: Species of concern CA: None CDFG: CSC G4; S4	PRESENT. Observed Onsite on June 28, July 5, 26 and August 9, 2003.
<i>Pandion haliaetus</i> Osprey	<p><u>Suitable habitat*</u>: Rivers, lakes, and coasts, mixed conifer.</p> <p><u>Location*</u>: Potential where habitat occurs.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	September-April	Fed: None CA: None CDFG: CSC G5; S3	Not Expected to Occur. Not Observed onsite during seven March-April 2005, three March-April 2004 and four September-October 2003 focused wildlife surveys. No suitable habitat onsite.
<i>Piranga rubra</i> Summer tanager	<p><u>Suitable habitat*</u>: Cottonwood-willow woodland and riparian scrub.</p> <p><u>Location*</u>: Santa Clara River near Lang.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	Summer	Fed: None CA: None CDFG: CSC G5; S2	Not Expected to Occur. Not Observed onsite during nine June-August 2003 focused wildlife surveys.

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Antrozous pallidus</i> Pallid Bat</p>	<p><u>Suitable habitat*</u>: Nests in dry, rocky habitats/caves, crevices in rocks, arid habitats including deserts, chaparral, and scrublands. <u>Location*</u>: Historic records in Santa Clara River watershed, Soledad Canyon, and Castaic Creek; common locally. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (most active spring-early fall)</p>	<p>Fed: None CA: None CDFG: CSC G5; S3</p>	<p>Not Expected to Occur due to the absence of suitable habitat onsite. Therefore, <i>no</i> focused nocturnal surveys were conducted.</p>
<p><i>Bassariscus astutus</i> Ringtail Cat</p>	<p><u>Suitable habitat*</u>: Mixture of forest and shrublands in close association with rocky areas or riparian habitats. <u>Location*</u>: Placerita Canyon; locally rare, but present throughout eastern half of SEA. <u>CNDDDB Records in the Vicinity</u>: No records in CNDDDB DataBase.</p>	<p>Year-round</p>	<p>Fed: None CA: None CDFG: None</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<p><i>Corynorhinus townsendii pallescens</i> Pale Big-eared Bat</p>	<p><u>Suitable habitat*</u>: Caves, tunnels, or other structures for roosting; vegetation and mesic edges for feeding; extremely sensitive to roosting site disturbance; maternity roosts in warm places. <u>Location*</u>: Multiple historic records in old mines along the Santa Clara River. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (most active spring-early fall)</p>	<p>Fed: Species of concern CA: None CDFG: CSC G4T4; S2S3</p>	<p>Not Expected to Occur due to the absence of suitable habitat onsite. Therefore, <i>no</i> focused nocturnal surveys were conducted.</p>
<p><i>Euderma maculatum</i> Spotted Bat</p>	<p><u>Suitable habitat*</u>: Deserts, scrublands, chaparral, and coniferous woodlands. <u>Location*</u>: Mouth of Castaic Creek. <u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (most active spring-early fall)</p>	<p>Fed: Species of concern CA: None CDFG: CSC G4; S2S3</p>	<p>Not Expected to Occur due to the absence of suitable habitat onsite. Therefore, <i>no</i> focused nocturnal surveys were conducted.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Eumops perotis californicus</i> Western Mastiff Bat</p>	<p><u>Suitable habitat*</u>: Primarily arid lowlands, especially deserts. Open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban.</p> <p><u>Location*</u>: Rare locally, but present in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round (most active spring-early fall)</p>	<p>Fed: Species of concern CA: None CDFG: CSC G5; S3?</p>	<p>Not Expected to Occur due to the absence of suitable habitat onsite.</p> <p>Therefore, <i>no</i> focused nocturnal surveys were conducted.</p>
<p><i>Lepus californicus bennettii</i> San Diego Black-tailed Jackrabbit</p>	<p><u>Suitable habitat*</u>: Open brushlands and scrub habitats between sea level and 4,000 feet elevation.</p> <p><u>Location*</u>: Near San Francisquito Creek; common in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: One CNDDDB record in Sunland, Calif., USGS quad, 13.78 miles SE of the center of VTTN 060258 (Occurrence # 13).</p>	<p>Year-round</p>	<p>Fed: None CA: None CDFG: CSC G5T3; S3?</p>	<p>Not Expected to Occur.</p> <p>Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys. <i>No</i> suitable habitat onsite.</p>
<p><i>Macrotus californicus</i> California Leaf-nosed Bat</p>	<p><u>Suitable habitat*</u>: Desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis. Roosts in tunnels, caves and possible buildings and bridges.</p> <p><u>Location*</u>: Becoming rare locally.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round</p>	<p>Fed: None CA: None CDFG: CSC G4; S2S3</p>	<p>Not Expected to Occur due to the absence of suitable habitat onsite.</p> <p>Therefore, <i>no</i> focused nocturnal surveys were conducted.</p>
<p><i>Myotis thysanodes</i> Fringed Myotis</p>	<p><u>Suitable habitat*</u>: Dry, rocky habitats/caves, crevices in rocks, arid habitats, chaparral.</p> <p><u>Location*</u>: Potential where habitat occurs.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round</p>	<p>Fed: Species of concern CA: None CDFG: None G4G5; S4</p>	<p>Not Expected to Occur due to the absence of suitable habitat onsite.</p> <p>Therefore, <i>no</i> focused nocturnal surveys were conducted.</p>
<p><i>Myotis yumanensis</i> Yuma Myotis</p>	<p><u>Suitable habitat*</u>: Open forests and woodlands with water are optimal but uses a variety of habitats.</p> <p><u>Location*</u>: Potential where habitat occurs.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round</p>	<p>Fed: Species of concern CA: None CDFG: None G5; S4?</p>	<p>Not Expected to Occur due to the absence of suitable habitat onsite.</p> <p>Therefore, <i>no</i> focused nocturnal surveys were conducted.</p>

Table 5 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES WITHIN PROPOSED SEA	SURVEY PERIOD	LISTING STATUS (Federal, State, CDFG)	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR WITHIN THE STUDY AREA
<p><i>Neotoma lepida</i> <i>intermedia</i> San Diego Desert Woodrat</p>	<p><u>Suitable habitat*</u>: Chaparral, coastal sage scrub, and pinyon-juniper woodland.</p> <p><u>Location*</u>: Adjacent to Santa Clara River, Newhall Ranch; common in SEA.</p> <p><u>CNDDDB Records in the Vicinity</u>: Four CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads; the closest is 6.37 miles S of the center of VTTN 060258 (Occurrence # 20).</p>	<p>Year-round</p>	<p>Fed: None CA: None CDFG: CSC G5T3?; S3?</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys.</p>
<p><i>Onychomys torridus ramona</i> Southern Grasshopper Mouse</p>	<p><u>Suitable habitat*</u>: Grasslands, desert areas, especially scrub with friable soils.</p> <p><u>Location*</u>: Soledad Canyon.</p> <p><u>CNDDDB Records in the Vicinity</u>: No CNDDDB records in Newhall, Mint Canyon and ten surrounding USGS quads.</p>	<p>Year-round</p>	<p>Fed: Species of concern CA: None CDFG: CSC G5T3?; S3?</p>	<p>Not Expected to Occur. Not Observed onsite during 24 March-May 2005, March-April 2004 and June-October 2003 focused wildlife surveys. <i>No</i> suitable habitat onsite.</p>

Short-joint Beavertail (SJB)

- **No** CNDDDB records for Short-joint Beavertail occur within the study area.
- The closest CNDDDB record for the Short-joint Beavertail is 2.37± miles southwesterly of the center of VTTN 060258 (Occurrence # 10).
- **No** Short-joint Beavertail was observed within the study area in 2005, 2004 or 2003. As Photo Plate No. 14 documents, the only beavertail cactus observed growing within the study area was the common, not sensitive Beavertail (*Opuntia basilaris* var. *basilaris*).

Los Angeles Sunflower (LAS)

- This unlisted, CNPS List 1A plant species, previously thought to be extirpated, was rediscovered in 2002, “on a boggy bank along the (Santa Clara) river” (SPN, 2002).
- **No** LAS are recorded onsite. The closest CNDDDB record for the LAS is 6.4± miles westerly of the southwestern property corner.
- **No** LAS were observed onsite during six August-October 2003 surveys conducted during the August-October flowering period for the LAS. No boggy banks are present along the reach of Santa Clara River that passes through the southern portion of VTTN 060258.
- Therefore, the LAS is not expected to occur onsite.

B. LISTED AND UNLISTED SPECIAL-STATUS WILDLIFE SPECIES

Findings Summary:

- **No** listed endangered or threatened wildlife species were identified within the boundaries of the study area during 24 focused and protocol wildlife species field surveys performed within the study area between March 25 and May 7, 2005, on March 14 and 26 and April 9, 2004 and between June 7 and October 17, 2003.
- Seven unlisted special-status species, the Western Spadefoot Toad, the Coastal Western Whiptail, the Cooper’s Hawk, the Loggerhead Shrike, the Yellow Warbler, the Yellow-breasted Chat and the Bell’s Sage Sparrow were observed within the study area (see Table 6).
- A complete list of the wildlife species identified within the study area is provided in the Appendix C *Wildlife Compendium*.

As part of the 2005 BAR, Table 4 *Sensitive Species and Habitat Types Recorded by the CNDDDB in the Vicinity of the Study Area* was prepared to identify which listed, and unlisted special-status wildlife species of concern, are recorded within a 2.0-mile radius of the study area. Table 4 was created using information obtained from an analysis of a 2005 CNDDDB records search report and velum quad sheet overlay for the Mint Canyon, CA and Newhall, CA, USGS quadrangles (CDFG, 2005a, b, c, d).

Table 4 provides the following information for each species: common and scientific name, habitat and distribution, activity period, state, federal and CDFG protection status, global and state ranking, and probability of occurrence within the study area. The probability of occurrence is based on such factors as the presence/absence of suitable habitat, the presence/absence of CNDDDB records on, or in the immediate vicinity of the study area, the results of 2005, 2004 and 2003 focused wildlife surveys, etc.

In addition to the sensitive species, recorded by the CNDDDB in the vicinity of the study area, 57 sensitive wildlife species “occurring or potentially occurring within the proposed Santa Clara River SEA” (PFF, 2000), were also searched for. The results of the search for the 57 species are provided on Table 5 of this report.

B-1. LISTED Wildlife Species

- *No* CNDDDB records for listed wildlife species occur within the boundaries of the study area.
- *One* listed species, the Unarmored Threespine Stickleback, is recorded by the CNDDDB 1.23± miles southwesterly from the center of VTTN 060258 (CDFG, 2005a, b, c, d). The potential for this species to occur within the study area is discussed in more detail below. In addition, the potential for the California Gnatcatcher to occur within the study area, is also discussed below.
- *No* listed wildlife species were identified within the study area during 24 field surveys performed within the study area between March 25 and May 7, 2005, on March 14 and 26 and April 9, 2004 and between June 7 and October 17, 2003.
- *None* of the twelve listed wildlife species identified as present or “potentially occurring” within the proposed Santa Clara River SEA (PFF, 2000) were observed within the study area. The potential for these species to occur within the study area are addressed in detail on Table 5.

Unarmored Threespine Stickleback (UTS)

- *No* suitable UTS habitat (weedy pools, backwaters with cool clear water and abundant vegetation) was observed within the study area during 2005, 2004 or 2003 surveys. Therefore, this species is not expected to occur within the study area and no impacts to UTS will occur.
- State CNDDDB record, Occurrence # 10, for the Unarmored Threespine Stickleback is present 1.23± miles southwesterly of the center of VTTN 060258 (CDFG, 2005a, b, c, d). This record is from 1999, in the Santa Clara River in an “isolated pool” with “no surface flow present.”

California Gnatcatcher (CAGN)

- *No* CAGN were observed within the boundaries of VTTN 060258 during six breeding season protocol surveys performed between March 25 and April 29, 2005. Similarly, *none* were observed during nine protocol CAGN surveys performed between June 7 and September 6, 2003 (TLC, 2005; TLC, 2003b).
- The entire study area is located **inside** proposed and designated critical CAGN habitat (FWS, 2003; FWS, 2000).
- *No* state CAGN occurrences are recorded within the study area. *None* are recorded within entire Newhall, CA and Mint Canyon, CA, USGS quadrangles (CNDDDB, 2003a, b, c, d).
- The nearest CNDDDB record for the CAGN is 13.75 miles southeasterly of the center of VTTN 060258 (Occurrence # 260). However, according to the County biologist, there are known CAGN occurrences in Mint Canyon and at the Copperhill Drive crossing of San Francisquito Creek (Decruyenaere, 2004, pers.comm.).
- Based on the above data, the CAGN is determined to be absent from the study area.
- The project site is located within both the designated CAGN critical habitat (FWS, 2000) and proposed (FWS, 2003) CAGN critical habitat. Therefore, since a 404 permit will be needed, a Section 7 consultation with the US Fish and Wildlife Service (FWS) will be necessary.

B-2. Unlisted special-status Wildlife Species

- *No* CNDDDB records for unlisted special-status wildlife species occur within the study area.
- *One* unlisted species, the Arroyo Chub, is recorded by the CNDDDB 1.23± miles southwesterly of the center of VTTN 060258 (CDFG, 2005a, b, c, d). This species is not expected to occur within the study area due to the complete absence of suitable habitat.

- Seven unlisted special-status wildlife species were identified within the study area in 2005, 2004 and 2003: the Western Spadefoot, the Coastal Western Whiptail, the Cooper’s Hawk, the Loggerhead Shrike, the Yellow Warbler, the Yellow-breasted Chat and the Bell’s Sage Sparrow. Table 6 provides information regarding locations, numbers or nesting/breeding status for the seven special-status species observed onsite.

NOTE: The presence of these seven unlisted special-status species must be addressed during preparation of the City’s EIR by Christopher A. Joseph & Associates.

Western Spadefoot Toad

- □ Single Western Spadefoot was observed onsite on June 28, 2003, in mud cracks in an area that appears to pond during the rainy season, south of the existing fence. **NOTE:** The observation was made during the survey period (February-July) when the species would have been present and identifiable in Santa Clarita, California (EMP, 1992). **NOTE:** As documented in other literature sources, the Western Spadefoot Toad survey period can extend between January to August depending on rainfall. For example, see www.enature.com/fieldguide/showSpeciesFT.asp?fotogID=788&curPageNum=12&recnum=ar0539.
- None were observed in 2005 or 2004 in the same area or anywhere onsite.

Burrowing Owl (BO)

- **No** CNDDDB records for Burrowing Owl occur within the boundaries of the study area.
- The closest CNDDDB record for the Burrowing Owl is 15.93 miles southwesterly of the center of VTTN 060258 (Occurrence # 85).
- **No** Burrowing Owl individuals, or nest burrows, were observed within the study area on any of the 24 field surveys performed in 2005, 2004 and 2003.
- Due to the presence of suitable BUOW habitat elements (grassland and vacant ground squirrel burrows), pre-construction BUOW survey will be necessary 30-days before issuance of a grading permits to ascertain the presence/absence of BUOW individuals. This survey is intended to prevent direct mortality to BUOW individuals, if any are present onsite at the start of construction activities.

Table 6: Seven Unlisted Special-status Species Observed Onsite

Species Name	Dates seen onsite	Numbers observed	Presumed Breeding Status	Location Onsite
Western Spadefoot	June 28, 2003	One	Non-breeding	See Figure 6
Coastal Western Whiptail	June 28, 2003	One	Non-breeding	See Figure 6
Cooper’s Hawk	June 21, 28, July 5, 26, September 6, 2003	One	Non-breeding	See Figure 6
Loggerhead Shrike	June 28, July 5, 26, August 9, 2003	One	Non-breeding	See Figure 6
Yellow Warbler	March 25, April 1, 8, 2005, June 7, 14, 2003	One	Non-breeding	See Figure 6
Yellow-breasted Chat	June 7, 14, July 26, August 9, 23, September 6, 2003	One	Non-breeding	See Figure 6
Bell’s Sage Sparrow	March 25, April 1, 8, 15 and 22, 2005, June 7, 14, 21, 28, July 5, 26, August 9, 23, September 6, 2003	One	Non-breeding	See Figure 6

C. SENSITIVE HABITAT TYPES

- Two sensitive habitat types are recorded by the CNDDDB within the study area: Southern Riparian Scrub (SRS) and Southern Willow Scrub (SWS).
- Neither habitat type was identified within the study area.
- Both Southern Riparian Scrub (CNDDDB Occurrence # 56) and Southern Willow Scrub (CNDDDB Occurrence # 41) are mapped in 1978, “from interpretation of 1978 aerial photos” and “need field verification of vegetation condition, composition” (CDFG, 2005a, b). That is, Southern Cottonwood-Willow Riparian Forest, actually growing onsite, was mistakenly identified as SWS and SRS.

The only riparian habitat present within the study area in 2005, 2004 and 2003 is the Southern Cottonwood-Willow Riparian Forest (SCWRF) along the Drainage Complex C (VCS, 2003), north of the northern bank of Santa Clara River, in the southern portion of within the study area (see Figure 4 of this report). The SCWRF habitat type is also correctly illustrated on *Generalized Vegetation Map* (Exhibit OS-1) of the *General Plan* of the City of Santa Clarita (City, 1991).

This habitat type is considered sensitive by the CNDDDB. Since development impacts are proposed to this habitat, mitigation for the loss of 2.44± acres of SCWRF will be necessary.

In addition to the SCWRF, 100.07± acres of Buckwheat Scrub, a sub-association of Riversidean Sage Scrub, was identified onsite. Development of the property will result in removal of 85.30± acres of this habitat. Therefore, mitigation for loss of 85.30± acres of Coastal Sage Scrub will be necessary.

NOTE: Although, Holly-leaf Cherry is a common plant in the onsite Chaparral habitat, *no* Mainland Cherry Forest Habitat is present onsite for the reasons listed below.

1. As described in Sawyer and Keeler-Wolf (1995, page 339), Hollyleaf Cherry Stands, which is the equivalent of Holland’s Mainland Cherry Forest, is solely dominated by Hollyleaf Cherry or Lyon Cherry, **with shrub layer absent**. Although, Hollyleaf Cherry occur onsite they **do not dominate** within the Chaparral habitat and they are **subtended by a dense shrub understory** (see Photo Plate No. 7d).
2. No CNDDDB records for the Mainland Cherry Forest are present onsite. The nearest record is 5± miles northwesterly of the northwestern corner of the property. All three records on the CNDDDB were last seen in 1935 and considered “extirpated” (CDFG, 2005a, b, c, d).

V. IMPACTS

A. THRESHOLDS FOR DETERMINING SIGNIFICANCE

The following analysis was conducted in accordance with guidelines of the *California Environmental Quality Act* (CEQA), Appendix G criteria for threshold of significance. A specific criterion that applies to the removal of existing non-significant vegetational habitat is listed below. The CEQA defines *significant effect* upon the vegetational habitat, and associated locally common wildlife species, in the following manner. That is, effects are significant if they result in the following actions.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species listed as threatened or endangered, or identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

B. DIRECT PROJECT IMPACTS

B-1. Impacts to Threatened, Rare, Endangered or Unique PLANT Species

Development of VTTN 060258, and construction of three associated off-site roadways [Streets “A” and “B” and Golden Valley Road] (study area), will *not* reduce the number or restrict the range of a rare or endangered plant species for the following reasons.

- *No* CNDDDB records for listed threatened or endangered, or unlisted special-status *plant* species occur within the boundaries of the study area.
- *No* CNDDDB records for listed threatened or endangered, or unlisted special-status *plant* species occur within the 2.0-mile radius of the study area.
- *No* listed or unlisted special-status *plant* species were identified within the study area during twenty-four (24) 2005, 2004 and 2003 field surveys.

Finding:

- Implementation of the project proposed by VTTN 060258 will not directly impact listed, or unlisted special-status *plant* species, because *none* were observed within the study area during twenty-four (24) 2005, 2004 and 2003 field surveys. That is, development of the study area will not reduce the

number or restrict the range of a rare or endangered plant or wildlife because none are recorded within the study area by the CNDDDB or identified during 24 field 2005, 2004 and 2003 surveys.

B-2. Impacts to Threatened, Rare, Endangered or Unique WILDLIFE Species

Findings:

- *No* listed threatened or endangered wildlife species were identified within the study area during twenty-four (24) 2005, 2004 and 2003 field surveys. Therefore, development of the study area will not substantially reduce the habitat of a fish or wildlife species or cause a fish or wildlife population to drop below self-sustaining levels.
- Loss of potential raptor foraging habitat, Non-native Grassland, Buckwheat Scrub and RUE with rodents, will be considered a significant under the CEQA.
- Development of the study area will result in significant impact to locally common and abundant natural Chaparral, Non-native Grassland, Buckwheat Scrub and Southern Cottonwood-Willow Riparian Forest habitat occupied by seven unlisted special-status species: the Western Spadefoot Toad, the Coastal Western Whiptail, the Cooper's Hawk, the Loggerhead Shrike, the Yellow Warbler, the Yellow-breasted Chat and the Bell's Sage Sparrow. The presence of the seven unlisted special-status wildlife species within the study area must be addressed in the City's EIR being prepared by Christopher A. Joseph & Associates. The loss of habitat occupied by unlisted special-status wildlife species will be considered significant under the CEQA.
- Preparation of the site for construction would involve removal of 81.13± acres (32.16%) of the existing natural plant habitat and disturbed habitats, and subsequently covering of these areas with residential development structures, landscaping, streets, driveways, etc. Furthermore, development preparation activities will result in the immediate mortality of small or slow moving animals, especially those inhabiting subterranean burrows. The potential mortality of a large number of small animals has several consequences: (1) a reduction in the prey base for larger predators; (2) increased pressure on surviving wildlife populations in the adjacent open space areas to absorb individuals that seek to escape mortality by fleeing the study area; (3) decline in genetic diversity; and (4) reduction in individuals available to recolonize adjacent off-site areas following off-site disturbances such as wildfires. However, these impacts would not be considered a significant impact to wildlife under the CEQA because they will not threaten to eliminate a wildlife habitat.

B-3. Impacts to Plant Communities (Habitat and Non-habitat Vegetational Types)

Findings:

- Removal of 2.44± acres of sensitive Southern Cottonwood-Willow Riparian Forest and 85.30± acres of Buckwheat Scrub, a sub-association of sensitive Coastal Sage Scrub habitat, will be considered significant under the CEQA.
- Implementation of land use plan proposed by VTTN 060258 will involve removal of 171.10± acres (68%) of existing vegetation. Although, this will not substantially reduce the habitat of a fish or wildlife species, will not cause a fish or wildlife population to drop below self-sustaining levels and will not threaten to eliminate a plant or wildlife community (habitat) in Los Angeles County, California, it will contribute to cumulative loss of raptor foraging habitat and Buckwheat Scrub, Chaparral, Non-native Grassland and Riparian habitat types in the City of Santa Clarita and in Los Angeles County, California. The cumulative loss of habitat will be considered significant under the CEQA.

- □ The project site is located within both the designated CAGN critical habitat (FWS, 2000) and proposed (FWS, 2003) CAGN critical habitat. Therefore, since a 404 permit will be needed, a Section 7 consultation with the US Fish and Wildlife Service (FWS) will be necessary.

Table 7 presents an estimate of the acreages and percentage of the vegetational types to be removed and left in an undeveloped open space.

NOTE: If the grading plans change, the acreages to be impacted and to be preserved after “build-out” of VTTN 060258, could change.

Table 7: Acreage and Percentage of Vegetational Communities to be Removed

Vegetational Types	Total Acres	Acres to be Removed/Disturbed	Acres to be Retained
Buckwheat Scrub habitat	100.07±	85.30±	14.77±
Chamise Chaparral habitat	85.18±	53.13±	32.05±
Non-native Grassland habitat	18.42±	10.81±	7.61±
Southern Cottonwood-Willow Riparian Forest	3.09±*	2.44±*	0.65±
Residential/Urban/Exotic disturbed habitat	34.11±	26.64±	7.47±
Actively Scoured Santa Clara River bottom	9.95± *	0.0	9.95±
Individual Oak trees (not Oak Woodland)	0.11±	0.01±	0.10±
TOTAL:	250.93±**	178.33±	72.6±

* = The acres of Southern Cottonwood-Willow Riparian Forest and Santa Clara River were identified in the jurisdictional delineation report prepared by Vandermost Consulting Services, Inc.

** = Total of VTTN 060258 (246± acres) + off-site roadways (4.93± acres).

B-4. Impacts to State and Federal Jurisdictional Elements

A jurisdictional delineation was performed within the 250± acre VTTN 060258 by Vandermost Consulting Services, Inc. (VCS, 2003; VCS, 2005). Based on the VCS delineation results, the tract contains

- (a) 11.69 acres Corps jurisdictional waters, “of which 0.33 acre is man-made wetland waters and 11.36 acres are ephemeral waters” and
- (b) 16.74 acres of CDFG jurisdictional waters, including 3.09 acres of riparian habitat.

Total impacts to state and federal jurisdiction included impacts to

- □ 1.23 acres of Corps jurisdiction (0.93 acres of the onsite impacts and 0.30 acres of the off-site impacts) and
- □ 4.71 acres of CDFG jurisdiction (3.92 acres of the onsite impacts and 0.79 acres of the off-site impacts)

B-5. Impacts to Wildlife Movement Corridors (WMC)

VTTN 060258 supports two types of wildlife movement corridors: short-term corridors that begin and end within the project boundaries (e.g. game trails, hiking trails, etc.) and long-term corridors that are connected to off-site naturally vegetated habitat areas.

The largest *available* open space reserve that could be involved in wildlife movement/exchanges with VTTN 060258 along long-term corridors are disjunct portions of the Angeles National Forest to the south and north.

The portion of the Angeles National Forest 3.3± miles to the south is separated from VTTN 060258 by a commercial development south of the study area, Soledad Canyon Road and the Antelope Valley Freeway (Hwy. 14). The portion of the Angeles National Forest 2.7± miles to the north is separated by a vacant land, residential development and Bouquet Canyon Road. Therefore, movement between the disjunct portions of the Angeles National Forest are presently very constrained.

An analysis of the current land uses and existing geography/topography showed that the *few constrained opportunities* for wildlife movement primarily occur to the north and to the west of VTTN 060258. Movement easterly and southerly is restricted by an existing residential development and commercial/industrial uses. Consequently, the only opportunity for the movement of wildlife on and off VTTN 060258 along the constrained long-term corridors is to the north and west along the southwest-northeast oriented canyon: Drainage complex B (VCS, 2003).

Presently, wildlife move onto and across VTTN 060258 via long-term corridors from the north and west and along Santa Clara River and its tributaries. Movement of wildlife species onto and across the study area has resulted in development of a relatively diverse wildlife population within the study area. Theoretically, post-development wildlife movement and wildlife populations diversity in open space lots will be maintained if they remain interconnected to off-site undeveloped lands in a way that allows relatively unrestricted movement of individuals and the unimpeded exchange of genetic information between on and off-site open space areas. However, this is an unlikely scenario since the property north of VTTN 060258 is being developed by SunCal. Completion of the SunCal project will further constrain wildlife movement between the disjunct portions of the National Forest.

Finding:

- Although development of the study area will further constrain wildlife movement between the disjunct already constrained portions of the Angeles National Forest, and along the long-term wildlife movement corridors of the study area, it will not interfere substantially with the movement of any resident or migrating fish or wildlife.

C. INDIRECT PROJECT IMPACTS

A range of incidental effects, generally referred to as “edge effects,” could potentially indirectly impact plants and wildlife along the development interface with any native vegetation remaining outside the boundaries of the property to the south, east and northwest. Typical “edge effects” resulting from human activities near natural, undeveloped open space areas include:

- human related disturbance (e.g., hiking, pet walking, illegal dumping of landscape clipping, etc.),
- facility lighting (e.g., street lights, residential porch and security lightning, pool lightning, etc.),

- an in-flux of non-native invasive plant and pet species from the development proposed by VTTN 060258 into the surrounding open space area and off-site natural habitat, etc., and
- increased runoff and pollutants.

Finding:

- Implementation of the land use plan proposed by VTTN 060258 will result in significant indirect impacts as defined under the CEQA.

D. CUMULATIVE PROJECT IMPACTS

Within the State CEQA Guidelines, §15065, subd. (c), mandatory findings of significance are required when “the project has possible environmental effects which are individually limited but cumulatively considerable.” CEQA defines “cumulatively considerable”, as, “the incremental effects of an individual 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.”

Finding:

- The loss of naturally vegetated open space (not occupied by listed threatened or endangered species) and raptor foraging habitat due to implementation of the project proposed by VTTN 060258, will significantly add to the cumulative impacts on the diminishing biological resources of the surrounding local vicinity.

VI. MITIGATION RECOMMENDATIONS

A. DIRECT IMPACTS

A-1. Impacts to Plant and Wildlife Species and Habitat Types

Loss of habitat for plant and wildlife species from the study area cannot be mitigated. However, as shown on the site map (SIKAND, 2004), 76.2± acres will be left as undisturbed *Natural Open Space* Lot Nos. 116-123. The habitat of the undisturbed open space lots are the same habitat types that vegetate the surrounding off-site open space lands north, west and south of the study area. Open Space Lots shall be deed restricted from future development and managed in accordance with an *Open Space Management Plan* (OSMP) as a natural reserve in perpetuity. The OSMP must be developed by a qualified biologist. The OSMP will be (1) in effect for the life of the project and (2) incorporated into the Covenants, Codes and Regulations (CC&Rs) for the tract. The OSMP will contain at least the following elements:

- Goals and Objectives
- Permitted and Prohibited Uses
- Program for Prescribed Burns
- Biological Monitoring Protocols and Reports
- Sensitive Species and Habitats Management
- Exotic Plant and Animal Management
- Habitat Restoration including California Junipers
- Permitted and Prohibited Uses
- Plan Implementation Schedule
- Responsible Parties
- Funding
- Enforcement and Penalties
- Trespass Remediation
- Contingencies
- Plan Update

A-2. Impacts to Federal and State Jurisdictional Elements

Implementation of the land use plan proposed by VTTN 060258 and construction of the three off-site roadways (Streets “A” and “B” and Golden Valley Road) will result in filling of state and federal jurisdictional waters and riparian vegetation. The following regulatory approvals will be required to authorize the removal of the jurisdictional elements.

- California Regional Water Quality Control 401 certification.
- US Army Corps of Engineers Individual 404 Permit.
- California Department of Fish and Game 1602 Streambed Alteration Agreement.

Mitigation for filling of jurisdictional waters and removal of riparian habitat, in the form of “Conditions of permit issuance” (conditions), attached to the agency approvals, will be required by the state and federal agencies issuing the regulatory approvals listed above.

It is not possible to predict what mitigation measures will be required. However, they will be specified in the mandatory “conditions” that will accompany the required agency issued regulatory approvals: 401, 404 and 1602. Failure to comply with the agency required mitigation “conditions” could result in withdrawal of the project’s state and/or federal regulatory approvals.

B. INDIRECT IMPACTS

B-1. Human-related Disturbances

- Owners of residences and visitors shall be notified in writing in their residential purchase contract that access to Open Space Lots is prohibited, except along approved trails and via designated access points. Pedestrians and bicycles must remain on approved trails.
- The following additional open space activities/uses are also prohibited: motorized vehicles; nighttime use of approved trails; possession of firearms including air or gas propelled weapons (e.g., paintball guns), slings and sling-shots; collection or possession of native plants or wildlife, or engaging in activity to harass, harm, pursue, hunt, shoot, wound, kill, trap, poison, capture or collect wildlife; smoking or the use of fire; unauthorized trail construction; removal, defacement or damage to natural features.
- Rules and restrictions shall be included in CC&Rs regarding mitigation measures mentioned above. New residents must sign a statement that they understand and agree with mitigation measures mentioned above prior to purchase and “move-in.”

B-2. Facility Lighting

- A facility lighting plan should be developed to reduce light impacts on the undeveloped open space areas and off-site to the west, south and southeast of VTTN 060258.

B-3. Introduction of Non-native Invasive Plants and Pets

- All development landscaping shall be planted with *non-invasive* plant species, preferably species native to the study area and the surrounding local vicinity (refer to the list of native plant species in the Floral Compendium, Appendix B). Exotic plant species listed by the California Invasive Plant Council [formerly *California Exotic Plant Pest Council*] (<http://www.caleppc.org>) as noxious weeds shall be prohibited for use as landscaping material.
- Control of exotic plants shall be addressed in the OSMP called for above, and implemented per the specifications identified therein.
- Owners of residences in the residential development area shall be informed that dogs and cats are not allowed in open space areas.
- Signs shall be erected at designated access points to open space lots informing pet owners that the pets are prohibited in natural open space area.
- Residents should be told that loss of pets to native predators is highly likely, unless (an even if) pets are contained on their owners' property (a number of mammalian predators can jump over residential fences). Such pet losses shall *not* result in the proposal or implementation of actions to control native predators by the residents through an HOA if one exists, or by the City. New residents must sign a statement that they understand and agree with this condition prior to purchase and “move-in.”
- Trapping, shooting, or poisoning of native predators such as coyotes or bobcats will be prohibited except by duly authorized state or county fish and game or animal control officers.

C. CUMULATIVE IMPACTS

It may not be possible to reduce the significance of potential cumulative impacts to less than significant. In that case, the City may need to consider making a “finding of overriding consideration.”

VII. CERTIFICATION

I hereby certify that the statements furnished above, and in the attached exhibits, present the data and information required for this biological survey, and that the facts, statements and information present herein are true and correct to the best of my knowledge and belief.

DATE: 07-16-05

SIGNED: 

Report Author
Thomas A. Leslie, B.S./M.S.
Los Angeles County Consulting Biologist

1. Fieldwork Performed By:



Thomas A. Leslie, B.S./M.S.

2. Fieldwork Performed By:



Nadya V. Leslie, M.S.

3. Fieldwork Performed By:



Gilberto B. Ruiz, M.A.

VIII. REFERENCES CITED, REFERENCES NOT CITED BUT RELEVANT, AND PERSONAL CONTACTS

Baldwin, B., *et al.*, Editors, 2002, The Jepson Desert Manual.

California Department of Fish and Game (CDFG), April 6, 2005a, Natural Diversity Data Base (CNDDDB) Rare Find Record Search Results for the 1995 Mint Canyon, CA, USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), June 7, 2005b, Natural Diversity Data Base (CNDDDB) Rare Find Record Search Results for the 1995 Newhall, CA, USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), January 31, 2005c, Natural Diversity Data Base (CNDDDB) Quadrangle Velum Overlay Map No. 34118D4 for the 1995 Mint Canyon, CA, USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), January 31, 2005d, Natural Diversity Data Base (CNDDDB) Quadrangle Velum Overlay Map No. 34118D3 for the 1995 Newhall, CA, USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), August 2004, Special Animals.

California Department of Fish and Game (CDFG), May 8, 2000, Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities.

California Department of Fish and Game (CDFG), September 2003, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database.

California Department of Fish and Game (CDFG), February 4, 1998, Non-Game Heritage Program, Endangered Plant Program: How to Read Natural Diversity Data Base Reports.

California Department of Fish and Game (CDFG), February 1991 (Revised April 1998), Mitigation Guidelines Regarding Impacts to Rare, Threatened, and Endangered Plants.

California Invasive Plant Council (formerly California Exotic Plant Pest Council): <http://www.caleppc.org/>

California Native Plant Society (CNPS), August 2001, Inventory of Rare and Endangered Plants of California, 6th edition.

City of Santa Clarita, June 26, 1991, General Plan.

Clarke, Herbert, 1989, An Introduction to Southern California Birds, Mountain Press Publish. Co., Missouri, MT.

County of Los Angeles, Department of Regional Planning, November 2002, Biota Report Guidelines.

Decruyenaere Joseph, County of Los Angeles, Personal Communication Regarding California Gnatcatcher (*Polioptila californica*) locations that are not recorded in the CNDDDB.

England and Nelson Environmental Consultants (ENEC), 1976, Los Angeles County Significant Ecological Area Study.

- Gapper, Nathan, Assistant Planner I, City of Santa Clarita, June 30, 2003, Personal Communication During Meeting at the City Offices.
- Glenn Lukos Associates (GLA), November 6, 2004, Revised November 20, 2004, Mr. Tony Bomkamp's Review of Biological Assessment and Jurisdictional Delineation for Tentative Tract No. 060258 and Associated Roadway Improvements, Santa Clarita, California.
- Hickman, J.C. Ed, 1996 (3rd Edition), The Jepson Manual: Higher Plants of California, University of California Press, Ltd., Berkeley and Los Angeles, California.
- Hogue, C., 1993, Insects of the Los Angeles Basin; Second Edition, Natural History Museum of Los Angeles County.
- Holland, R. F., October 1986, State of California, the Resources Agency, California Department of Fish and Game: Preliminary Descriptions of the Terrestrial Natural Communities of California.
- Jameson, E. And H. Peeters, 1989, California Mammals, University of California Press, Los Angeles.
- Jennings, M., Hayes, M., November 1, 1994, Amphibian and Reptile Species of Special Concern in California, California Department of Fish and Game.
- Munz, P.A., 1974, A Flora of Southern California, University of California Press.
- Orange County, June 1992, Environmental Management Project (EMP), Species of special interest, Natural Resources Geographic Information System (GIS). **NOTE:** As documented in other literature sources, the Western Spadefoot Toad survey period can extend between January to August depending on rainfall. For example, see www.enature.com/fieldguide/showSpeciesFT.asp?fotogID=788&curPageNum=12&recnum=ar0539.
- PCR Services Corporation, Frank Hovore & Associates and FORMA Systems (PFF), November 2000, Biological Resources Assessment of the Proposed Santa Clara River Significant Ecological Area.
- Peterson, Roger T, 1990, A Field Guide to Western Birds, Houghton Mifflin Company, Boston, 432 Page.
- Powell, J., C. Hogue, 1979, California Insects, University of California Press.
- Robbins, C.S., B. Bruun, H.S., Zim, 2001, Birds of North America, Western Publishing Company, Racine, Wisconsin.
- Roberts, F., 1995, Illustrated Guide to the Oaks of the Southern Californian Floristic Province.
- Santa Paula News (SPN), October 9, 2002, SC River Full of Surprises as Another Extinct Flower Found on Newhall Ranch, <http://www.geocities.com/Yosemite/Gorge/5604/lasunflowerpaulanews.htm>.
- SIKAND Engineering, Planning, Surveying, December 14, 2004, 1 Inch = 100 Feet Scale Map: Vesting Tentative Tract No. 060258, in the City of Santa Clarita, State of California.
- Stebbins, R. C., 1985, A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin, Boston.
- Thomas Guide 2003 Los Angeles and Ventura Counties Street Guide and Directory, Detail Map Page 4461, Coordinates C-6, D-6, C-7 and D-7 and Detail Map Page 4551, Coordinates C-1, C-2 and D-1.
- Thomas Leslie Corporation (TLC), June 7 , 2005a, Results of Protocol California Gnatcatcher Surveys.

APPENDIX A

2004

**VESTING TENTATIVE
TRACT
NO. 060258**

SANTA CLARITA, CALIFORNIA

The Tentative Tract maps was not included in the June 16, 2005 Biological Assessment Report since according to SYNERGY, copies of the “tract map has already been submitted to the City.”

APPENDIX B

2005

FLORAL COMPENDIUM

FOR

The Biological Assessment Study Area:

- (1) Vesting Tentative Tract No. 060258 (VTTN 060258).**
- (2) Three off-site roadways: Streets “A” & “B” & Golden Valley Road.**
- (3) A 200-foot wide “strip” around the boundaries of VTTN 060258 and Streets “A” and “B” and a 200-foot wide “strip” along the alignment of Golden Valley Road.**

SANTA CLARITA, CALIFORNIA

INTRODUCTION

The Appendix B *Floral Compendium* (FC) provides a summary of the types of plants identified within the boundaries of the biological assessment study area. It was compiled using the results of the following 24 field surveys (see Table 3):

- **8 surveys:** March 25, April 1, 8, 9, 15, 22 and 29 and May 7, 2005
- **3 surveys:** March 14 and 26 and April 9, 2004
- **5 surveys:** June 7, 14, 21, 28 and 29, 2003
- **2 surveys:** July 5 and 26, 2003
- **2 surveys:** August 9 and 23, 2003
- **2 surveys:** September 6 and 27, 2003
- **2 surveys:** October 11 and 17, 2003

The FC was compiled to inventory botanical resources within the study area and to determine the presence or absence of sensitive plant species, present and identifiable at the time the surveys were conducted. It only lists those plant species actually identified within the boundaries of the study area during the 24 field surveys identified above. It does not include a list of “expected but not observed” species. The FC was compiled by TLC biologists Thomas A. Leslie, Nadya V. Leslie and Gilberto B. Ruiz.

The *Floral Compendium* is comprised of five (5) columns.

COLUMN 1. NON-NATIVE: Each non-native plant type observed and identified during the twenty-four (24) 2005, 2004 and 2003 botanical field surveys is indicated by an “X”. The presumed origins of plant species follow those listed in Hickman (1993) and Munz (1974).

- 36 non-native plant types were identified within the study area. Buckwheat Scrub, Chaparral and Southern Cottonwood-Willow Riparian Forest habitats were dominated by native plants; Non-native Grassland habitat and Residential/Urban/Exotic vegetational association were dominated by non-natives.

COLUMN 2. SCIENTIFIC NAMES: All plant species observed within the biological study area, during the twenty-four (24) 2005, 2004 and 2003 botanical field surveys, were identified to scientific family, genus and species names whenever possible. The floral taxonomy used in Appendix B follows the third edition of Hickman (1996). Families are listed in alphabetical order in accordance with Hickman (1996); within each family, the genus and species names are alphabetically arranged.

COLUMN 3. COMMON NAMES: Common names may vary among biologists, published botanical literature and regions, but scientific names are “universal.” Whenever possible, Jepson manual common names were given precedent (Hickman, 1996). When no common name was provided in Jepson, common names listed in Munz (1974) or other available, southern California botanical literature were used. The total number of plant types identified within the biological study area (150) is indicated in parentheses at the head of this column.

COLUMN 4. FLOWERING: The “F”s in this column indicates the species flowering during the March and April 2004 surveys. 42.9% of the flowering plant species identified within the biological study area were blooming during March-May 2005 survey

COLUMN 5. RELATIVE ABUNDANCE: The letters “R,” “U,” “C” and “A” identify the relative abundance and provide population sizes estimates for each plant species observed within the study area:

R = RARE - Applied to plant species hardly ever observed within the study area during the March-May 2005, March and April 2004 and June-October 2003 BAR field surveys.

U = UNCOMMON - Applied to plant species that were only infrequently encountered within the study area during the March-May 2005, March and April 2004 and June-October 2003 BAR field surveys.

C = COMMON - Applied to plant species regularly encountered within the study area during the March-May 2005, March and April 2004 and June-October 2003 BAR field surveys.

A = ABUNDANT - Applied to plant species frequently encountered within the study area during the March-May 2005, March and April 2004 and June-October 2003 BAR field surveys.

Non-native (36)	SCIENTIFIC NAMES	COMMON NAMES (150)	Flowering on April 9 and May 7, 2005	Relative Abundance (see page B-1)
		# of species:	61	
	DIVISION CONIFEROPHYTA	CONIFERS		
	FAMILY CUPRESSACEAE	CYPRESS FAMILY		
	<i>Juniperus californica</i>	California Juniper	N/A	U
	FAMILY PINACEAE	PINE FAMILY		
X	<i>Pinus halepensis</i>	Aleppo Pine	N/A	R
	DIVISION ANTHOPHYTA	FLOWERING PLANTS		
	Class Dicotyledones	Dicots		
	FAMILY ANACARDIACEAE	SUMAC FAMILY		
	<i>Rhus trilobata</i>	Skunkbrush	---	C
	FAMILY APIACEAE	CARROT FAMILY		
X	<i>Foeniculum vulgare</i>	Fennel	---	U
	<i>Lomatium utriculatum</i>	Common Lomatium	---	U
	FAMILY ASTERACEAE	SUNFLOWER FAMILY		
	<i>Achyraea mollis</i>	Blow-wives	---	C
	<i>Acourtia microcephala</i>	Sacapellote	---	C
	<i>Ambrosia psilostachya</i>	Western Ragweed	---	C
	<i>Artemisia californica</i>	California Sagebrush	---	A
	<i>Artemisia tridentata</i>	Big Sagebrush	---	C
	<i>Baccharis salicifolia</i>	Mule Fat	F	U
X	<i>Centaurea melitensis</i>	Tocalote	---	C
X	<i>Centaurea solstitialis</i>	Yellow Star-thistle	---	U
X	<i>Chamomilla suaveolens</i>	Pinapple Weed	F	C
X	<i>Chaenactis glabriuscula</i>	Yellow Pincushion	F	C
	<i>Cirsium occidentale</i>	Cobwebby Thistle	---	U
X	<i>Cirsium vulgare</i>	Bull Thistle	F	U
	<i>Encelia californica</i>	California Encelia	F	U
	<i>Encelia farinosa</i>	Brittlebush	F	C
	<i>Eriophyllum confertiflorum</i>	Golden-yarrow	F	C
X	<i>Gazania linearis</i>	Gazania	---	R
	<i>Gnaphalium californicum</i>	California Everlasting	---	C
	<i>Gnaphalium canescens</i>	Everlasting	---	C
	<i>Helianthus annuus</i>	Common Sunflower	---	U
	<i>Helianthus gracilentus</i>	Slender Sunflower	---	U
	<i>Hemizonia fasciculata</i>	Fascicled Tarplant	F	A
	<i>Heterotheca grandiflora</i>	Telegraph Weed	---	U
X	<i>Lactuca serriola</i>	Prickly Lettuce	---	C
	<i>Lasthenia californica</i>	Common Goldfields	F	A
	<i>Lepidospartum squamatum</i>	Scale-broom	---	R
	<i>Lessingia filaginifolia</i>	California-aster	---	C

Non-native (36)	SCIENTIFIC NAMES	COMMON NAMES (150)	Flowering on April 9 and May 7, 2005	Relative Abundance (see page B-1)
	<i>Malacothrix saxatilis</i>	Cliff Malacothrix	- - -	U
	<i>Senecio flaccidus</i>	Sand-wash Butterweed	F	U
X	<i>Silybum marianum</i>	Milk Thistle	F	U
	<i>Stephanomeria virgata</i>	Wand Chicory	- - -	C
X	<i>Tragopogon dubius</i>	Goat's Beard	- - -	R
	<i>Uropappus lindleyi</i>	Silver Puffs	- - -	C
	<i>Xanthium strumarium</i>	Cocklebur	- - -	U
	FAMILY BORAGINACEAE	BORAGE FAMILY		
	<i>Amsinckia menziesii</i>	Rancher's Fireweed	- - -	U
	<i>Cryptantha intermedia</i>	Nievitans Cryptantha	- - -	C
	<i>Pectocarya linearis</i>	Slender Pectocarya	- - -	C
	<i>Plagiobothrys nothofulvus</i>	Popcorn Flower	- - -	C
	FAMILY BRASSICACEAE	MUSTARD FAMILY		
X	<i>Brassica nigra</i>	Black Mustard	F	A
X	<i>Hirschfeldia incana</i>	Short-pod Mustard	F	C
	<i>Lepidium nitidum</i>	Shining Peppergrass	- - -	A
X	<i>Lobularia maritima</i>	Sweet Alyssum	- - -	R
X	<i>Sisymbrium orientale</i>	Hare's-ear Cabbage	- - -	U
	<i>Tropidocarpium gracile</i>	Slender Keel-fruit	F	U
	FAMILY CACTACEAE	CACTUS FAMILY		
	<i>Opuntia basilaris</i> ssp. <i>basilaris</i>	Beavertail Cactus	F	U
	FAMILY CAPPARACEAE	CAPER FAMILY		
	<i>Isomeris arborea</i>	Bladderpod	F	U
	FAMILY CAPRIFOLIACEAE	HONEYSUCKLE FAMILY		
	<i>Sambucus mexicana</i>	Blue Elderberry	F	U
	FAMILY CHENOPODIACEAE	GOOSEFOOT FAMILY		
	<i>Chenopodium californicum</i>	California Goosefoot	- - -	C
X	<i>Salsola tragus</i>	Russian Thistle	- - -	U
	FAMILY CONVULVULACEAE	MORNING GLORY FAMILY		
	<i>Calystegia macrostegia</i>	Morning Glory	F	U
	FAMILY CRASSULACEAE	STONECROP FAMILY		
	<i>Dudleya lanceolata</i>	Coastal Dudleya	- - -	R
	<i>Dudleya saxosa</i>	Desert Savior	- - -	R

Non-native (36)	SCIENTIFIC NAMES	COMMON NAMES (150)	Flowering on April 9 and May 7, 2005	Relative Abundance (see page B-1)
	FAMILY CUCURBITACEAE	GOURD FAMILY		
	<i>Cucurbita foetidissima</i>	Calabazilla	---	R
	<i>Marah macrocarpus</i>	Man-root	---	R
	FAMILY CUSCUTACEAE	DODDER FAMILY		
	<i>Cuscuta californica</i>	California Dodder	---	C
	FAMILY EUPHORBIACEAE	SPURGE FAMILY		
	<i>Chamaesyce albomarginata</i>	Rattlesnake Weed	F	C
	<i>Chamaesyce melanadenia</i>	Squaw Spurge	---	A
	<i>Croton californicus</i>	California Croton	---	U
	<i>Eremocarpus setigerus</i>	Dove Weed	---	U
	<i>Stillingia linearifolia</i>	Linear-leaf Stillingia	---	U
	FAMILY FABACEAE	LEGUME FAMILY		
	<i>Astragalus didymocarpus</i>	Dwarf Milkwetch	F	U
	<i>Lotus scoparius</i>	California Broom	F	C
	<i>Lotus strigosus</i>	Bishop's Lotus	F	C
	<i>Lupinus arizonicum</i>	Arizona Lupine	F	U
	<i>Lupinus bicolor</i>	Miniature Lupine	F	C
	<i>Lupinus hirsutissimum</i>	Stinging Lupine	F	U
X	<i>Melilotus indica</i>	Sourclover	F	C
	FAMILY FAGACEAE	OAK FAMILY		
	<i>Quercus agrifolia</i>	Coast Live Oak	---	R
	<i>Quercus john-tuckeri</i>	Tucker's Oak	---	R
	FAMILY GERANIACEAE	GERANIUM FAMILY		
X	<i>Erodium cicutarium</i>	Red-stemmed Filaree	F	A
	FAMILY GROSSULARIACEAE	GOOSEBERRY FAMILY		
	<i>Ribes aureum</i>	Golden Currant	---	U
	FAMILY HYDROPHYLLACEAE	WATERLEAF FAMILY		
	<i>Emmenanthe penduliflora</i>	Whispering Bells	F	C
	<i>Eriodictyon crassifolium</i>	Wooly Yerba Santa	F	R
	<i>Eucrypta chrysanthemifolia</i>	Eucrypta	---	C
	<i>Nemophila menziesii</i>	Baby Blue-eyes	F	U
	<i>Phacelia cicutaria</i>	Caterpillar Phacelia	F	C
	<i>Phacelia distans</i>	Wild-heliotrope	F	C
	<i>Phacelia minor</i>	California Bells	F	U

Non-native (36)	SCIENTIFIC NAMES	COMMON NAMES (150)	Flowering on April 9 and May 7, 2005	Relative Abundance (see page B-1)
	FAMILY LAMIACEAE	MINT FAMILY		
X	<i>Marrubium vulgare</i>	Horehound	F	U
	<i>Salvia columbariae</i>	Chia	F	A
	<i>Salvia leucophylla</i>	Purple Sage	F	R
	<i>Salvia mellifera</i>	Black Sage	F	C
	<i>Trichostema lanatum</i>	Woolly Bluecurls	F	U
	<i>Trichostema lanceolatum</i>	Vinegar Weed	---	U
	FAMILY LOASACEAE	LOASA FAMILY		
	<i>Petalonyx thurberya</i>	Sandpaper Plant	---	U
	FAMILY NYCTAGINACEAE	FOUR O'CLOCK FAMILY		
	<i>Mirabilis californica</i>	Wishbone Bush	F	C
	FAMILY ONAGRACEAE	EVENING PRIMROSE FAMILY		
	<i>Camissonia bistorta</i>	California Sun Cup	F	A
	<i>Camissonia micrantha</i>	Small Evening Primrose	F	A
	<i>Clarkia purpurea</i>	Wine Cup Clarkia	F	C
	<i>Oenothera californica</i>	California Evening Primrose	---	U
	FAMILY PAPAVERACEAE	POPPY FAMILY		
	<i>Eschscholzia californica</i>	California Poppy	F	C
	FAMILY PLANTAGINACEAE	PLANTAIN FAMILY		
	<i>Plantago erecta</i>	California Plantain	---	U
	FAMILY PLATANACEAE	SYCAMORE FAMILY		
	<i>Platanus racemosa</i>	Western Sycamore	---	U
	FAMILY POLEMONIACEAE	PHLOX FAMILY		
	<i>Eriastrum sapphirinum</i>	Sapphire Woolly-star	---	R
	<i>Gilia angelensis</i>	Grassland Gilia	F	C
	FAMILY POLYGONACEAE	BUCKWHEAT FAMILY		
	<i>Chorizanthe staticoides</i>	Turkish Rugging	---	A
	<i>Eriogonum fasciculatum</i>	California Buckwheat	F	A
	<i>Eriogonum gracile</i>	Slender Buckwheat	---	U
	FAMILY PORTULACACEAE	PURSLANE FAMILY		
	<i>Claytonia perfoliata</i>	Miner's Lettuce	---	U
	FAMILY PRIMULACEAE	PRIMROSE FAMILY		
X	<i>Anagallis arvensis</i>	Scarlet Pimpernel	F	C

Non-native (36)	SCIENTIFIC NAMES	COMMON NAMES (150)	Flowering on April 9 and May 7, 2005	Relative Abundance (see page B-1)
	FAMILY RHAMNACEAE	BUCKTHORN FAMILY		
	<i>Ceanothus crassifolius</i>	Hoaryleaf Ceanothus	---	C
	<i>Ceanothus cuneatus</i>	Buckbrush	---	C
	<i>Rhamnus ilicifolia</i>	Holly-Leaf Redberry	---	U
	FAMILY ROSACEAE	ROSE FAMILY		
	<i>Adenostoma fasciculatum</i>	Chamise	F	A
	<i>Cercocarpus betuloides</i>	Mountain-mahogany	---	U
	<i>Heteromeles arbutifolia</i>	Christmas Berry	---	U
	<i>Prunus ilicifolia</i>	Holly-leaf Cherry	F	C
	FAMILY SALICACEAE	WILLOW FAMILY		
	<i>Populus fremontii</i>	Fremont Cottonwood	---	U
	<i>Salix exigua</i>	Narrow-leaved Willow	---	C
	<i>Salix laevigata</i>	Red Willow	---	C
	FAMILY SCROPHULARIACEAE	FIGWORT FAMILY		
	<i>Antirrhinum nuttalianum</i>	Violet Snapdragon	F	U
	<i>Castilleja exserta</i>	Purple Owl's Clover	F	R
	<i>Mimulus aurantiacus</i>	Bush Monkey Flower	F	C
	<i>Mimulus brevipes</i>	Yellow Monkeyflower	---	R
	<i>Mimulus guttatus</i>	Seep Monkeyflower	F	C
	<i>Penstemon centranthifolius</i>	Scarlet Bugler	F	U
	<i>Scrophularia californica</i>	California Figwort	---	U
X	<i>Veronica anagallis-aquatica</i>	Water Speedwell	---	R
	FAMILY SOLANACEAE	NIGHTSHADE FAMILY		
	<i>Datura wrightii</i>	Jimson Weed	---	R
X	<i>Nicotiana glauca</i>	Tree Tobacco	F	C
	<i>Nicotiana quadrivalvis</i>	Wallace's Tobacco	---	U
	<i>Solanum xanti</i>	Purple Nightshade	---	U
	FAMILY TAMARICACEAE	TAMARISK FAMILY		
X	<i>Tamarix ramosissima</i>	Tamarisk	F	U
	Class Monocotyledones	Monocots		
	FAMILY ARECACEAE	PALM FAMILY		
	<i>Washingtonia filifera</i>	California Fan Palm	---	U
X	<i>Washingtonia robusta</i>	Mexican Fan Palm	---	U
	FAMILY LILIACEAE	LILY FAMILY		
X	<i>Agave americana</i>	Century Plant	---	R
	<i>Bloomeria crocea</i>	Common Goldenstar	---	A
	<i>Calochortus clavatus ssp. pallidus</i>	Yellow Mariposa Lily	F	U

Non-native (36)	SCIENTIFIC NAMES	COMMON NAMES (150)	Flowering on April 9 and May 7, 2005	Relative Abundance (see page B-1)
	<i>Calochortus splendens</i>	Splendid Mariposa Lily	F	C
	<i>Calochortus venustus</i>	Square Mariposa	- - -	U
	<i>Chlorogalum pomeridianum</i>	Soap Plant	- - -	A
	<i>Dichelostemma capitatum</i>	Blue Dicks	F	A
	<i>Yucca whipplei</i>	Our Lord's Candle	F	U
	FAMILY POACEAE	GRASS FAMILY		
X	<i>Arundo donax</i>	Giant Reed	- - -	U
X	<i>Avena barbata</i>	Slender Wild Oat	- - -	A
X	<i>Bromus diandrus</i>	Ripgut Grass	F	C
X	<i>Bromus hordeaceus</i>	Soft Chess	- - -	C
X	<i>Bromus madritensis ssp. rubens</i>	Foxtail Chess	- - -	C
X	<i>Bromus tectorum</i>	Cheat Grass	- - -	C
X	<i>Hordeum murinum ssp. leporinum</i>	Hare Barley	- - -	C
X	<i>Lamarckia aurea</i>	Goldentop	- - -	A
	<i>Melica imperfecta</i>	Coast Range Melic	- - -	U
	<i>Nassella lepida</i>	Foothill Needlegrass	F	U
X	<i>Polypogon monspeliensis</i>	Annual Beard Grass	- - -	U
X	<i>Schismus barbatus</i>	Mediterranean Schismus	- - -	C
X	<i>Vulpia myuros</i>	Foxtail Fescue	- - -	C

APPENDIX C

2005

WILDLIFE COMPENDIUM

FOR

The Biological Assessment Study Area:

- (1) Vesting Tentative Tract No. 060258 (VTTN 060258).**
- (2) Three off-site roadways: Streets “A” & “B” & Golden Valley Road.**
- (3) A 200-foot wide “strip” around the boundaries of VTTN 060258 and Streets “A” and “B” and a 200-foot wide “strip” along the alignment of Golden Valley Road.**

SANTA CLARITA, CALIFORNIA

INTRODUCTION

The Appendix C *Wildlife Compendium* (WC) provides a summary of the types of wildlife resources identified within the boundaries of the biological assessment study area. It was compiled using the results of the following 24 field surveys (see Table 3):

- **8 surveys:** March 25, April 1, 8, 9, 15, 22 and 29 and May 7, 2005
- **3 surveys:** March 14 and 26 and April 9, 2004
- **5 surveys:** June 7, 14, 21, 28 and 29, 2003
- **2 surveys:** July 5 and 26, 2003
- **2 surveys:** August 9 and 23, 2003
- **2 surveys:** September 6 and 27, 2003
- **2 surveys:** October 11 and 17, 2003

The WC was compiled to inventory the botanical resources of the biological study area and to determine the presence or absence of sensitive wildlife species, such as the CAGN, present and identifiable at the time the surveys were conducted. It only lists those wildlife species actually identified within the boundaries of VTTN 060258 during the 24 field surveys. It does not include a list of “expected but not observed” species. The WC was compiled by TLC biologists Thomas A. Leslie, Nadya V. Leslie and Gilberto B. Ruiz.

The *Wildlife Compendium* is comprised of four (4) columns.

COLUMN 1: FAMILY, GENUS AND SPECIES SCIENTIFIC NAMES

All wildlife species observed within the biological study area, during the twenty-four (24) 2005, 2004 and 2003 wildlife field surveys, were assigned to a scientific family, genus and species names whenever possible. Scientific taxonomic nomenclature used in the *Wildlife Compendium* follows that of Clarke (1989) and Robbins *et al.* (2001) for birds of southern California, Peterson (1990) for western birds, Jameson and Peeters (1989) for California mammals, Stebbins (1966) for reptiles and amphibians and Houge (1993) and Powell and Houge (1979), for insects. Classes and families are listed in phylogenetic order in accordance with Clarke and Robbins *et al.*, Jameson and Peeters, Peterson, Stebbins, Houge and Powell, within each family, the genus and species names are alphabetically arranged.

The wildlife species of the study area are locally common species typically associated with Buckwheat Scrub, Chaparral, Non-native Grassland and Riparian habitat and Residential/Urban/Exotic disturbed habitat of Santa Clarita, California.

COLUMN 2: FAMILY, GENUS AND SPECIES COMMON NAMES

Common family and wildlife names also follow Clarke and Robbins *et al.*, Peterson, Jameson and Peeters, Stebbins and Houge and Powell. Common names may vary among biologists, published wildlife literature, and regions but scientific names are “universal.” Whenever possible, common names listed in Clarke, Robbins *et. al.*, Jameson and Peeters, Stebbins and Houge and Powell were given precedent. When no common name was provided in Clarke, Peterson, Jameson and Peterson,

Stebbins and Houge and Powell, common names listed in other available, southern California faunal literature was used. The total number of wildlife species identified within the biological study area (88) is indicated in parentheses at the head of this column.

COLUMN 3: RELATIVE ABUNDANCE

Letters “R,” “U,” “C” and “A” in this column identify the relative abundance of the wildlife species identified within the study area and provide estimates of wildlife population sizes within the study area:

R = RARE - Applied to wildlife species hardly ever observed within the study area during the March-May 2005, March and April 2004 and June-October 2003 BAR field surveys.

U = UNCOMMON - Applied to wildlife species that were only infrequently encountered within the study area during the March-May 2005, March and April 2004 and June-October 2003 BAR field surveys.

C = COMMON - Applied to wildlife species regularly encountered within the study area during the March and April, 2005, March and April 2004 and June-October 2003 BAR field surveys.

A = ABUNDANT - Applied to wildlife species frequently encountered within the study area during the March-May 2005, March and April 2004 and June-October 2003 BAR field surveys.

COLUMN 4: LISTING STATUS

The listing status/codes used to prepare Appendix C was derived from the August 2004 Special Animals List (CDFG, 2004). The list is available online at <http://www.dfg.ca.gov/hcpb/species/lists.shtml>.

SCIENTIFIC NAMES	COMMON NAMES (88)	Relative Abundance (see page C-2)	State or Federal Listing Status
CLASS AMPHIBIA	AMPHIBIANS (1)		
FAMILY PELOBATIDAE	SPADEFoot TOADS		
<i>Scaphiopus hammondi</i>	Western Spadefoot Toad	R	CSC
CLASS REPTILIA	REPTILES (5)		
FAMILY IGUANIDAE	IGUANIDS		
<i>Sceloporus occidentalis</i>	Western Fence Lizard	C	None
<i>Sceloporus orcutti</i>	Granite Spiny Lizard	R	None
<i>Uta stansburiana</i>	Side-blotched Lizard	C	None
FAMILY TEIIDAE	WHIPTAILS AND THEIR ALLIES		
<i>Cnemidophorus tigris multiscutatus</i>	Coastal Western Whiptail	U	CSC
FAMILY VIPERIIDAE	VIPERS		
<i>Crotalus viridis</i>	Western Rattlesnake	U	None
CLASS AVES	BIRDS (46)		
FAMILY CATHARTIDAE	NEW WORLD VULTURES		
<i>Cathartes aura</i>	Turkey Vulture	R	None
FAMILY ACCIPITRIDAE	BUTEOS, KITES, HARRIERS		
<i>Accipiter cooperii</i>	Cooper's Hawk	R	CSC
<i>Buteo jamaicensis</i>	Red-tailed Hawk	C	None
FAMILY ANATIDAE	WATERFOWL FAMILY		
<i>Anas platyrhynchos</i>	Mallard	U	None
FAMILY ODONTOPHORIDAE	NEW WORLD QUAILS		
<i>Callipepla californica</i>	California Quail	C	None
FAMILY COLUMBIDAE	PIGEON AND DOVES		
<i>Zenaida macroura</i>	Mourning Dove	C	None
<i>Columba livia</i>	Rock Dove	C	None
FAMILY CUCULIDAE	CUCKOOS, ANIS, AND ROADRUNNERS		
<i>Geococcyx californianus</i>	Greater Roadrunner	R	None
FAMILY TROCHILIDAE	HUMMINGBIRDS		
<i>Calypte anna</i>	Anna's Hummingbird	C	None
<i>Calypte costae</i>	Costa's Hummingbird	C	None
FAMILY PICIDAE	WOODPECKERS		
<i>Picoides nuttallii</i>	Nuttall's Woodpecker	R	None

SCIENTIFIC NAMES	COMMON NAMES (88)	Relative Abundance (see page C-2)	State or Federal Listing Status
FAMILY TYRANNIDAE	TYRANT FLYCATCHERS		
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher	C	None
<i>Sayornis nigricans</i>	Black Phoebe	C	None
<i>Tyrannus verticalis</i>	Western Kingbird	C	None
FAMILY HIRUNDINIDAE	SWALLOWS		
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	C	None
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	C	None
FAMILY CORVIDAE	JAYS, MAGPIES, AND CROWS		
<i>Aphelocoma californica</i>	Western Scrub-jay	C	None
<i>Corvus brachyrhynchos</i>	American Crow	C	None
<i>Corvus corax</i>	Common Raven	C	None
FAMILY AEGITHALIDAE	BUSHTITS		
<i>Psaltriparus minimus</i>	Bushtit	C	None
FAMILY TIMALIIDAE	WRENTITS		
<i>Chamaea fasciata</i>	Wrentit	C	None
FAMILY TROGLODYTIDAE	WRENS		
<i>Thryomanes bewickii</i>	Bewick's Wren	C	None
FAMILY MIMIDAE	MOCKINGBIRDS AND THRASHERS		
<i>Mimus polyglottos</i>	Northern Mockingbird	C	None
<i>Toxostoma redivivum</i>	California Thrasher	R	None
FAMILY TURDIDAE	THRUSHES, SOLITAIRES AND BLUEBIRDS		
<i>Sialia mexicana</i>	Western Bluebird	C	None
FAMILY PTILOGONATIDAE	SILKY FLYCATCHERS		
<i>Phainopepla nitens</i>	Phainopepla	R	None
FAMILY LANIIDAE	SHRIKES		
<i>Lanius ludovicianus</i>	Loggerhead Shrike	R	CSC
FAMILY PARULIDAE	WOOD WARBLERS		
<i>Dendroica petechia</i>	Yellow Warbler	C	CSC
<i>Icteria virens</i>	Yellow-breasted Chat	C	CSC
<i>Dendroica coronata</i>	Yellow-rumped Warbler	C	None
FAMILY ICTERIDAE	BLACKBIRDS AND ORIOLES		
<i>Icterus bullockii</i>	Bullock's Oriole	C	None
<i>Icterus cucullatus</i>	Hooded Oriole	U	None
<i>Sturnella neglecta</i>	Western Meadowlark	C	None

SCIENTIFIC NAMES	COMMON NAMES (88)	Relative Abundance (see page C-2)	State or Federal Listing Status
FAMILY CARDINALIDAE	CARDINALS		
<i>Passerina amoena</i>	Lazuli Bunting	R	None
<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak	R	None
FAMILY FRINGILLIDAE	FINCHES		
<i>Carduelis psaltria</i>	Lesser Goldfinch	C	None
<i>Carduelis tristis</i>	American Goldfinch	C	None
<i>Carpodacus mexicanus</i>	House Finch	C	None
<i>Carpodacus purpureus</i>	Purple Finch	C	None
FAMILY EMBERIZIDAE	SPARROWS		
<i>Amphispiza belli</i>	Bell's Sage Sparrow	C	CSC
<i>Chondestes grammacus</i>	Lark Sparrow	R	None
<i>Melospiza melodia</i>	Song Sparrow	C	None
<i>Passerella iliaca</i>	Fox Sparrow	U	None
<i>Pipilo crissalis</i>	California Towhee	C	None
<i>Pipilo maculatus</i>	Spotted Towhee	C	None
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	C	None
CLASS MAMMALIA	MAMMALS (5)		
FAMILY CANIDAE	DOGS, FOXES AND ALLIES		
<i>Canis latrans</i>	Coyote	R	None
FAMILY CERVIDAE	DEER, ELK, AND RELATIVES		
<i>Odocoileus hemionus</i>	Mule Deer	R	None
FAMILY SCIURIDAE	SQUIRRELS		
<i>Spermophilus beecheyi</i>	California Ground Squirrel	C	None
FAMILY GEOMYIDAE	POCKET GOPHERS		
<i>Thomomys bottae</i>	Southern Pocket Gopher	C	None
FAMILY CRICETIDAE	DEER MICE, WOOD RATS AND ALLIES		
<i>Neotoma lepida</i>	Desert Wood Rat	R	None
INVERTEBRATES			
CLASS INSECTA	INSECTS (30)		
<i>Aeshna multicolor</i>	Multicolor Darner	U	None
<i>Anthocharis sara</i>	Sara Orangetip	C	None
<i>Apis mellifera</i>	Honey Bee	C	None
<i>Apodemia virgulti</i>	Mormon Metalmark	C	None
<i>Argia vivida</i>	Violet Dancer	U	None
<i>Arphia pseudonietana</i>	Bloody-winged Grasshopper	U	None
<i>Bombylius major</i>	Large Bee Fly	C	None
<i>Brephidium exilis</i>	Pygmy Blue	C	None

SCIENTIFIC NAMES	COMMON NAMES (88)	Relative Abundance (see page C-2)	State or Federal Listing Status
<i>Charidryas gabbi</i>	Gabb's Checkerspot Butterfly	U	None
<i>Coccinella californica</i>	California Ladybird Beetle	C	None
<i>Colias eurytheme</i>	Orange Sulfur	C	None
<i>Ctenolepisma</i> sp.	Silverfish	U	None
<i>Dasymutilla</i> sp.	Velvet-ant	U	None
<i>Erynnis funeralis</i>	Funeral Duckywing	C	None
<i>Gryllus pennsylvanicus</i>	Field Cricket	C	None
<i>Murgantia histrionica</i>	Harlequin Bug	U	None
<i>Musca domestica</i>	House Fly	C	None
<i>Myrmeleon</i> sp.	Ant Lion	U	None
<i>Papilio eurymedon</i>	Pale Swallowtail	U	None
<i>Papilio rutulus</i>	Western Tiger Swallowtail	U	None
<i>Pieris protodice</i>	Common White Butterfly	C	None
<i>Pogonomyrmex californicus</i>	California Harvester Ant	C	None
<i>Schistocerca nitens</i>	Gray Bird Grasshopper	C	None
<i>Solenopsis xyloni</i>	Southern Fire Ant	C	None
<i>Strymon melinus</i>	Common Hairstreak	U	None
<i>Tabanus punctifer</i>	Big Black Horse Fly	U	None
<i>Tibicinoides cupreosparsus</i>	Red-winged Grass Cicada	C	None
<i>Trimerotropis pallidipennis</i>	Pallid Band-wing	C	None
<i>Vanessa cardui</i>	Painted Lady	C	None
<i>Xylocopa</i> sp.	Carpenter Bee	C	None
CLASS ARACHNIDAE	SPIDERS, MITES, SCORPIONS (1)		
<i>Dermacentor occidentalis</i>	Pacific Coast Tick	C	None

APPENDIX D

PHOTO PLATE NOS. 1-16

FOR

The Biological Assessment Study Area:

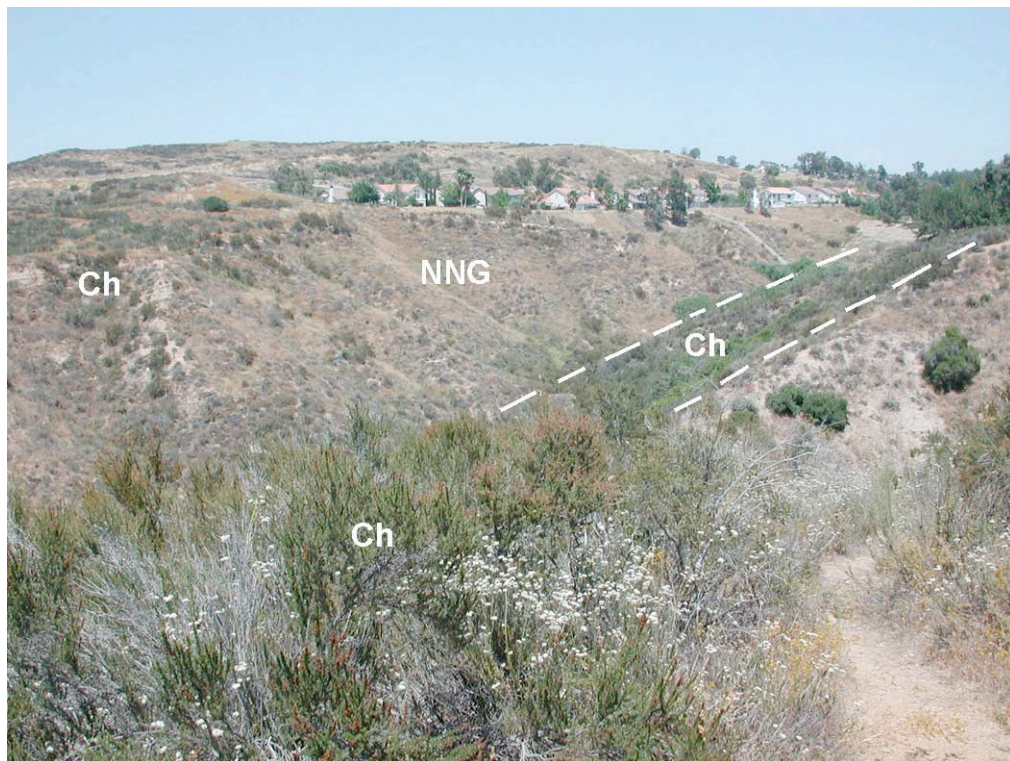
- (1) Vesting Tentative Tract No. 060258 (VTTN 060258).**
- (2) Three off-site roadways: Streets “A” & “B” & Golden Valley Road.**
- (3) A 200-foot wide “strip” around the boundaries of VTTN 060258 and Streets “A” and “B” and a 200-foot wide “strip” along the alignment of Golden Valley Road.**

SANTA CLARITA, CALIFORNIA

PHOTO PLATE NO. 1



- 1a. Northeasterly view of off-site houses built along Huffy Street, Lewendo Court and Kesley Street. The northeastern portion of the biological assessment study area is vegetated with a dense growth of Buckwheat Scrub (BS) and Non-native Grassland (NNG) habitat (photo date - 06/29/03).



- 1b. Northerly view of the Chaparral (Ch) and NNG cover vegetating the north central portion of Vesting Tentative Tract No. 060258 [VTTN 060258] (photo date - 06/29/03).

PHOTO PLATE NO. 2-1

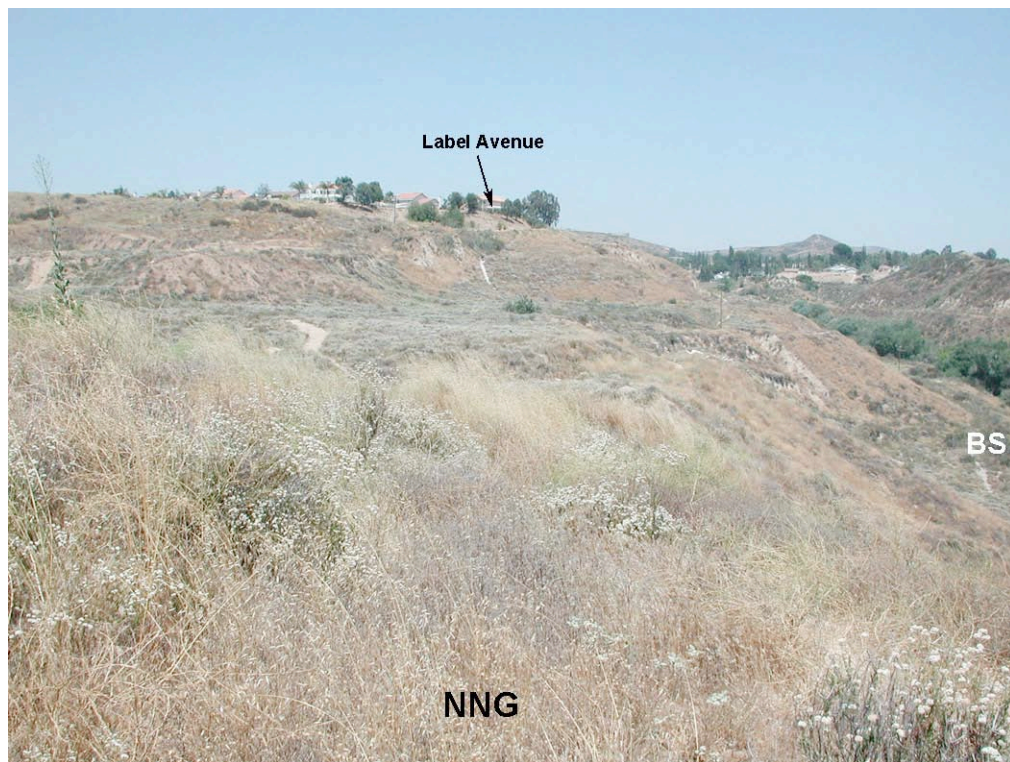


- 2a. Easterly view, toward an adjacent off-site residential development, built along Ermine Street. This is one of the access sites to VTTN 060258. The northeastern portion of the 2005 (and 2003) protocol CAGN survey area is vegetated with a dense growth of a Buckwheat Scrub (BS) and Non-native Grassland (NNG) habitat. The predominant plants visible in this photograph are California Buckwheat (*Eriogonum fasciculatum*) and California Goldfields (*Lasthenia californica*) (photo date - 04/09/05).



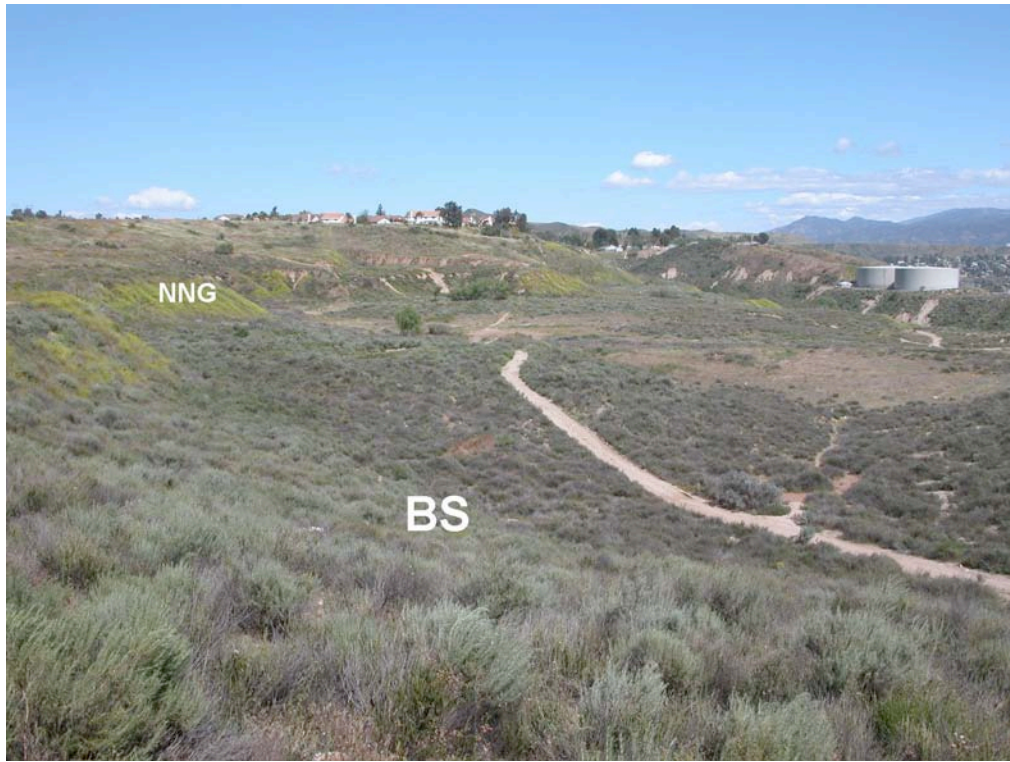
- 2b. Westerly view of the Non-native Grassland (NNG) habitat, in the vicinity of the future alignment of Golden Valley Road. A dense growth of Non-native Grassland (NNG) habitat vegetates this portion of VTTN 060258 in 2005 (photo date - 06/29/03).

PHOTO PLATE NO. 2-2



- 2c. Southeasterly view across the east central portion of VTTN 060258. The off-site homes visible in the distance were built along Label Avenue. This portion of the tract is vegetated by a dense cover of Buckwheat Scrub (BS) and Non-native Grassland (NNG) habitat. The predominant plants of the habitat visible in this photograph are Slender Wild Oat (*Avena barbata*) (photo date - 06/29/03).

PHOTO PLATE NO. 3



- 3a. Southwesterly view, across Lot Nos. 99 and 111 of VTTN 060258. A moderately dense growth of highly disturbed Non-native Grassland (NNG) and Buckwheat Scrub (BS) habitat covered this portion of the tract (photo date - 04/09/05).



- 3b. Northerly view, across Lots 98 and 99, showing a close-up view of the moderately dense growth of NNG and BS habitat vegetating this portion of Lot Nos. 98 and 99 (photo date - 06/29/03).

PHOTO PLATE NO. 4



Southwesterly view, across the south central portion of VTTN 060258. The Santa Clara River traverses the southernmost portion of the tract. The portions of Southern Cottonwood Willow Riparian Forest riparian habitat visible in this photograph will be preserved in undeveloped open space Lot Nos. 120 and 121 (photo date - 06/29/03).

PHOTO PLATE NO. 5

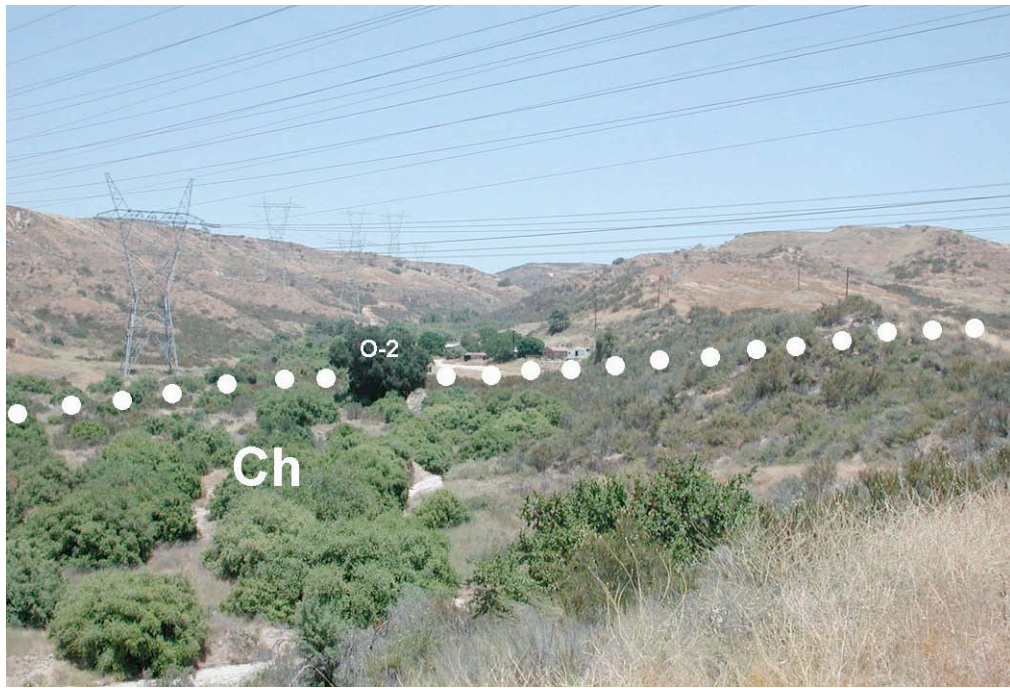


- 5a. Westerly view, across the southwestern corner of the study area, toward the western boundary of VTTN 060258 (dashed line). A sparse to dense mosaic of “weedy” non-native herbs and grasses grow randomly across this corner of the tract. The high voltage transmission towers/lines visible in the background are located off-site to the east in a Department of Water and Power (DWP) easement (photo date - 06/29/03).

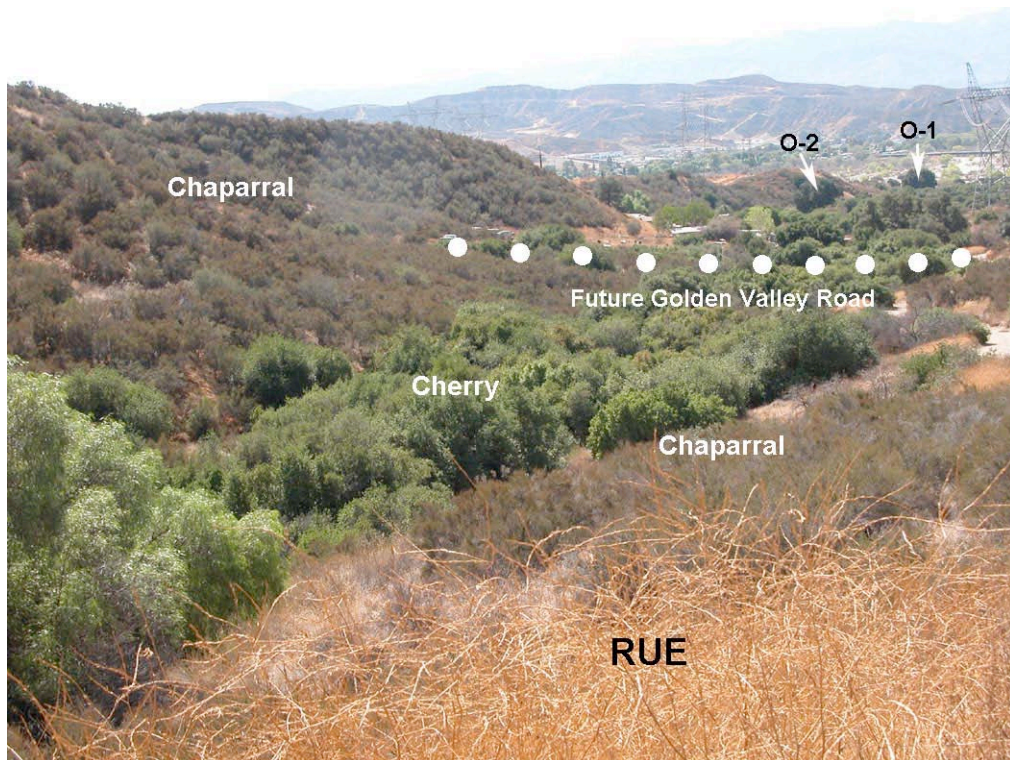


- 5b. Southerly view toward the Santa Clara River (SCR). The commercial/industrial buildings visible in this photograph are situated off-site, south of the SCR, along the north side of Santa Clara Street. In 2003 the southwestern portion of the study area is bare dirt with a scatter of non-native “weedy” herbs and grasses (photo date - 06/29/03).

PHOTO PLATE NO. 6

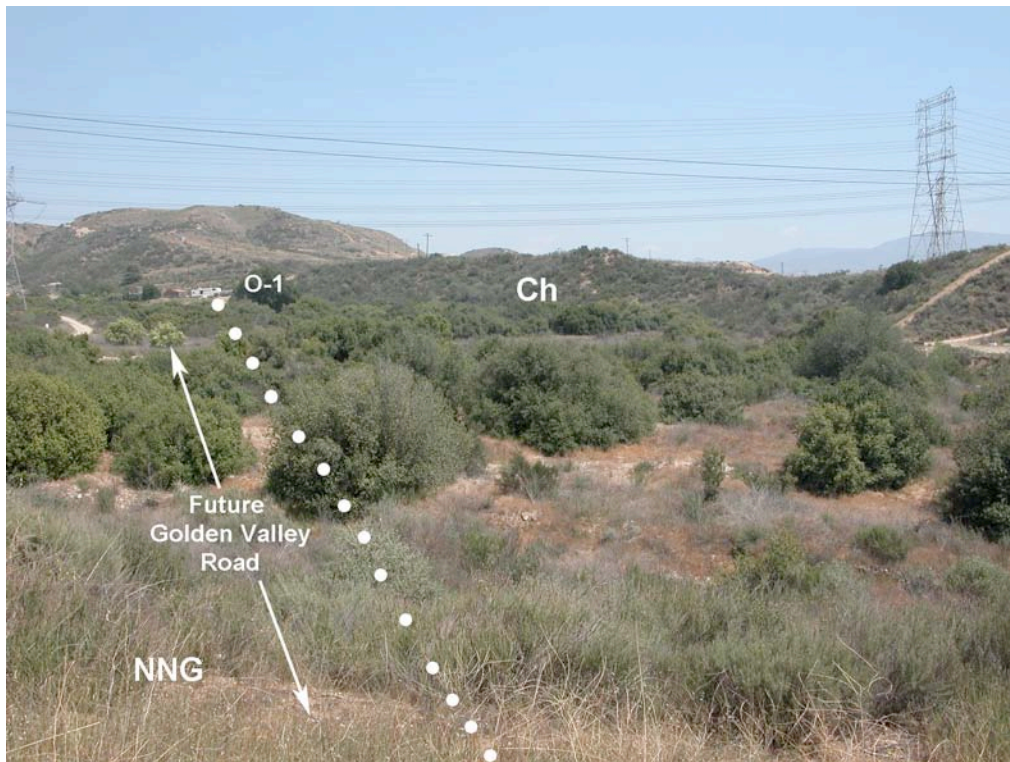


- 6a. Southwesterly view of a deep canyon situated in Lot Nos. 99, 11 and 123. A dense growth of Chaparral (Ch) habitat grows along the stream course valley visible in this photograph. One of the Coast Live Oak (*Quercus agrifolia*) trees of the study area, Oak # 2 (O-2) is visible in this photograph. The oak will be impacted by construction of Golden Valley Road through this area [dotted line] (photo date - 06/29/03).

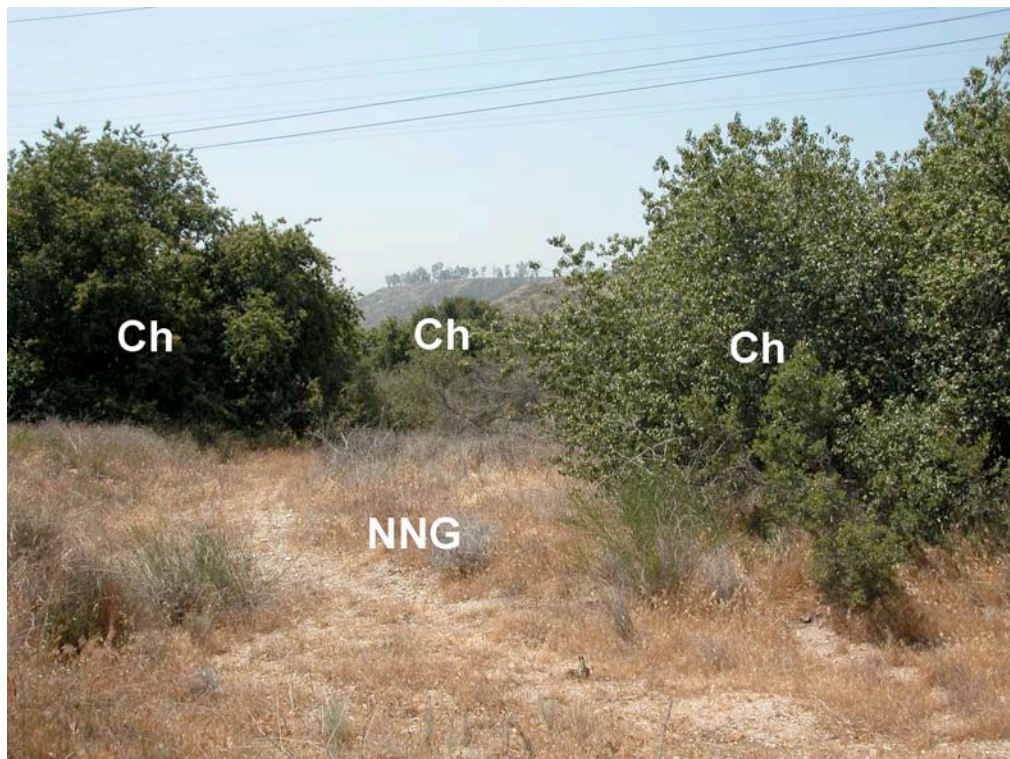


- 6b. Southwesterly view down a non-blueline stream course running southwesterly through Lot 104. Dense Chaparral habitat grows along the bottom of the stream course valley visible in this photograph. A stand of Holly-leaf Cherry (*Prunus ilicifolia*), a plant component of Chaparral habitat, grows along the stream course. The cherry plants do not represent cherry woodland. Two Coast Live Oak trees, identified as O-1 and O-2 in this photograph (also see O-1 and O-2 on Figure 4), are situated along the southeasterly side of the future off-site alignment of Golden Valley Road (photo date - 10/17/03).

PHOTO PLATE NO. 7-1

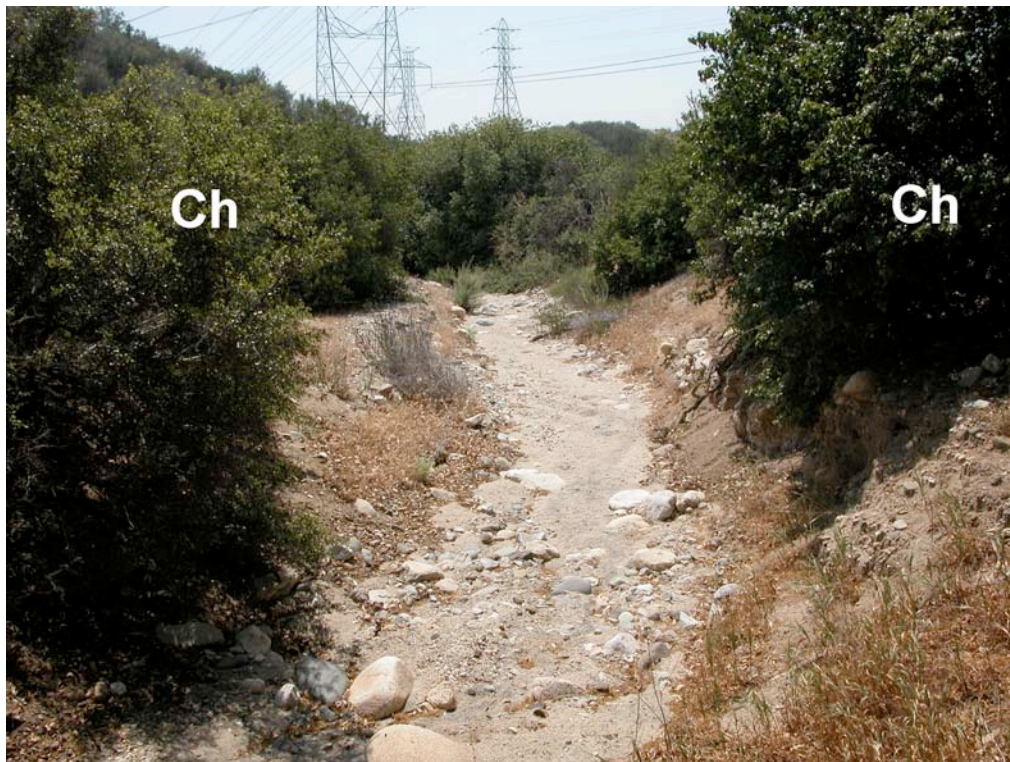


- 7a. Northeasterly view along the approximate area where Golden Valley Road (GVR) will be extended off-site southwesterly from VTTN 060258 to intersect with the future alignment of Newhall Ranch Road. The off-site portion of GVR will be constructed through Chaparral (Ch) and Non-native Grassland (NNG) habitat. Two Coast Live Oak (*Quercus agrifolia*) trees (O-1 and O-2) are situated along the southeastern side of Golden Valley Road. Oak tree O-1 is visible in this photograph. This oak will not be impacted (photo date - 04/09/04).



- 7b. Close-up view of the Chaparral (Ch) and Non-native Grassland (NNG) habitat that grows along the future alignment of the off-site portion of Golden Valley Road between the western boundary of VTTN 060258 and the future alignment of Newhall Ranch Road (photo date - 04/09/04).

PHOTO PLATE NO. 7-2

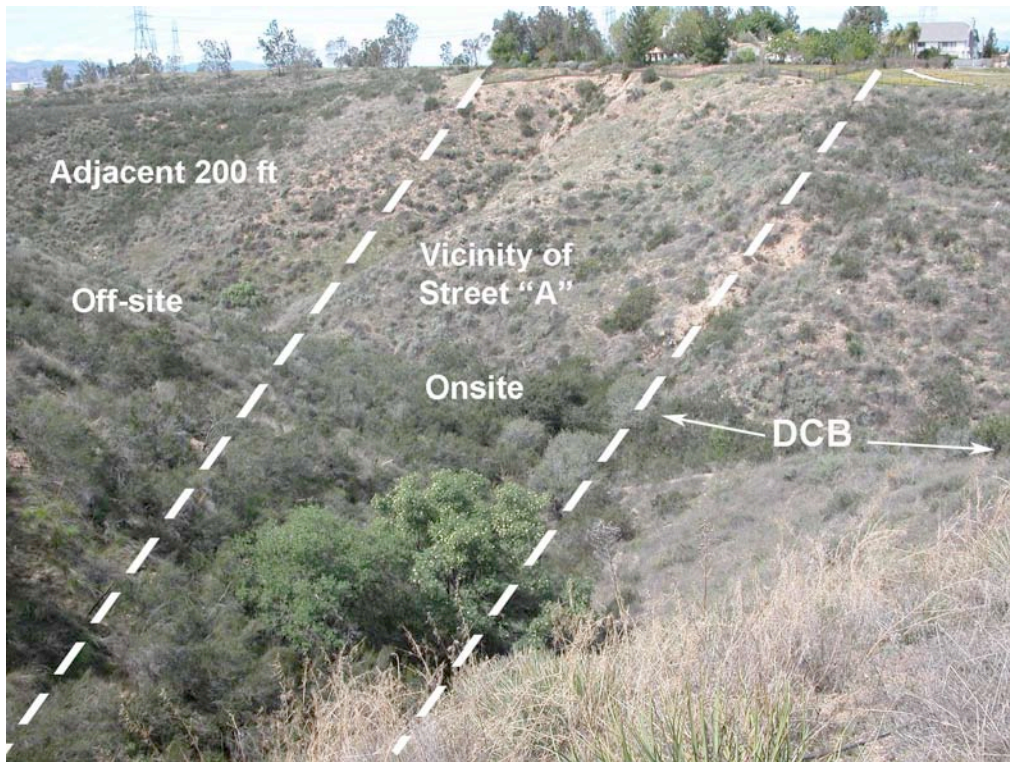


- 7c. When constructed, Golden Valley Road will cross the northeast-southwest oriented blue-line stream course visible in this photograph. The stream course, bordered by Chaparral habitat (Ch), is identified by the delineation report prepared by the Vandermost Consulting Service as "Drainage A" [VCS, 2003] (photo date - 04/09/04).



- 7d. Close-up view of Holy-leaf Cherry (*Prunus ilicifolia*) shrubs growing in Chaparral habitat. This photograph shows dense understory, **not characteristic** of Mainland Cherry Forest (photo date - 04/09/05).

PHOTO PLATE NO. 8



Easterly view of the vicinity of the approximate proposed alignment of Street "A." Street "A" will be constructed upon a fill that will be placed over Chaparral and Buckwheat Scrub habitat, and across tributaries of Drainage Complex B (DCB) [see Vandermost's 2003, revised 2005 delineation map] (photo date - 03/26/04).

PHOTO PLATE NO. 9-1



- 9a. Southeasterly view along the future alignment of "B" Street. "B" Street will provide access to the northwestern portions of VTTN 060258 (photo date - 10/17/03).



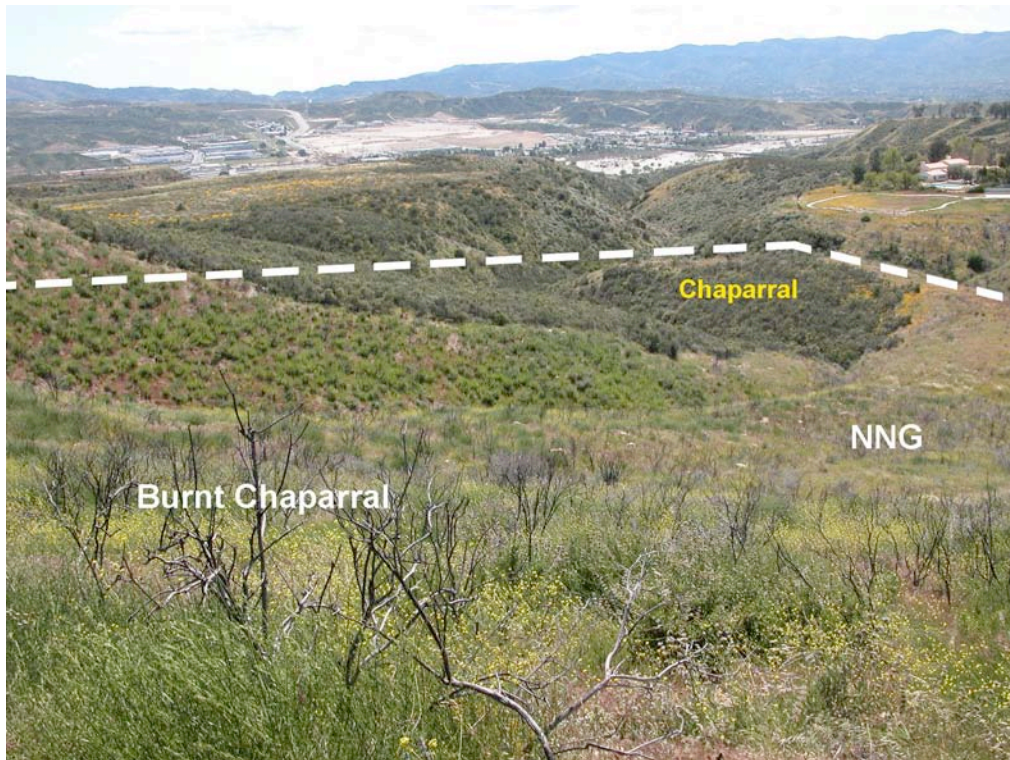
- 9b. Northwesterly view along the future alignment of "B" Street. "B" Street will provide access to the northwestern portions of VTTN 060258 (photo date - 10/17/03).

PHOTO PLATE NO. 9-2

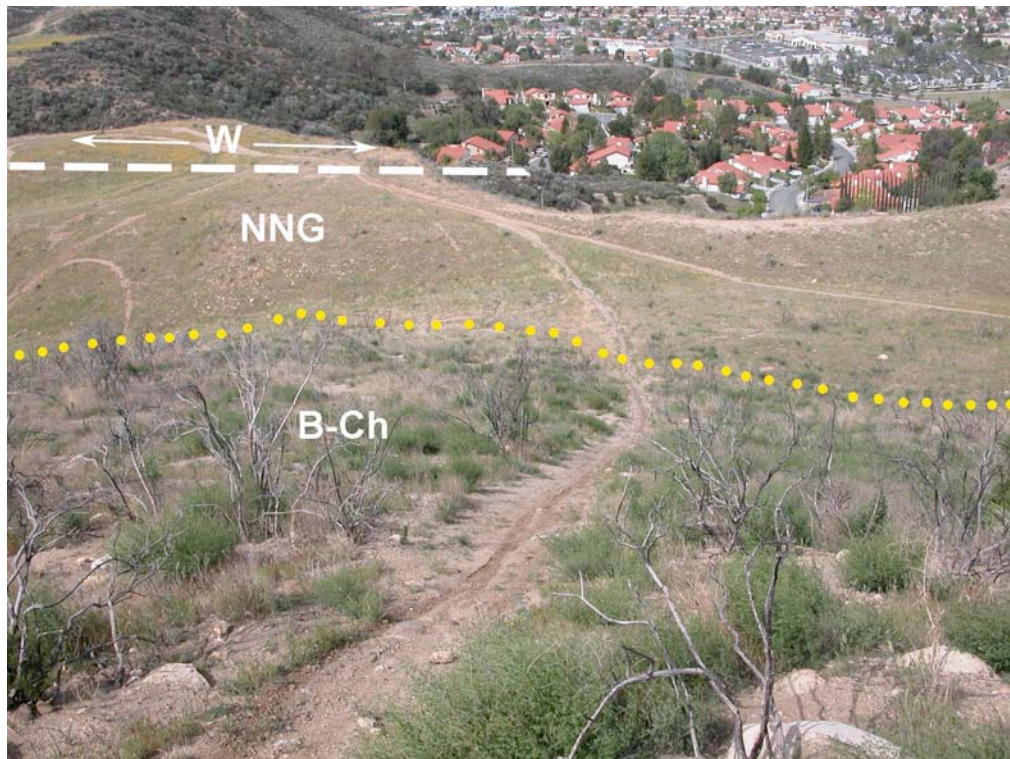


- 9c. Close-up view of the dry rocky bottom of ephemeral stream course complex "B" (VCS, 2003) in the vicinity where "B" Street will be constructed. The stream course is bordered by upland chaparral habitat. All of the plant species growing along the stream course lack wetland indicator status (photo date - 10/17/03).

PHOTO PLATE NO. 10-1

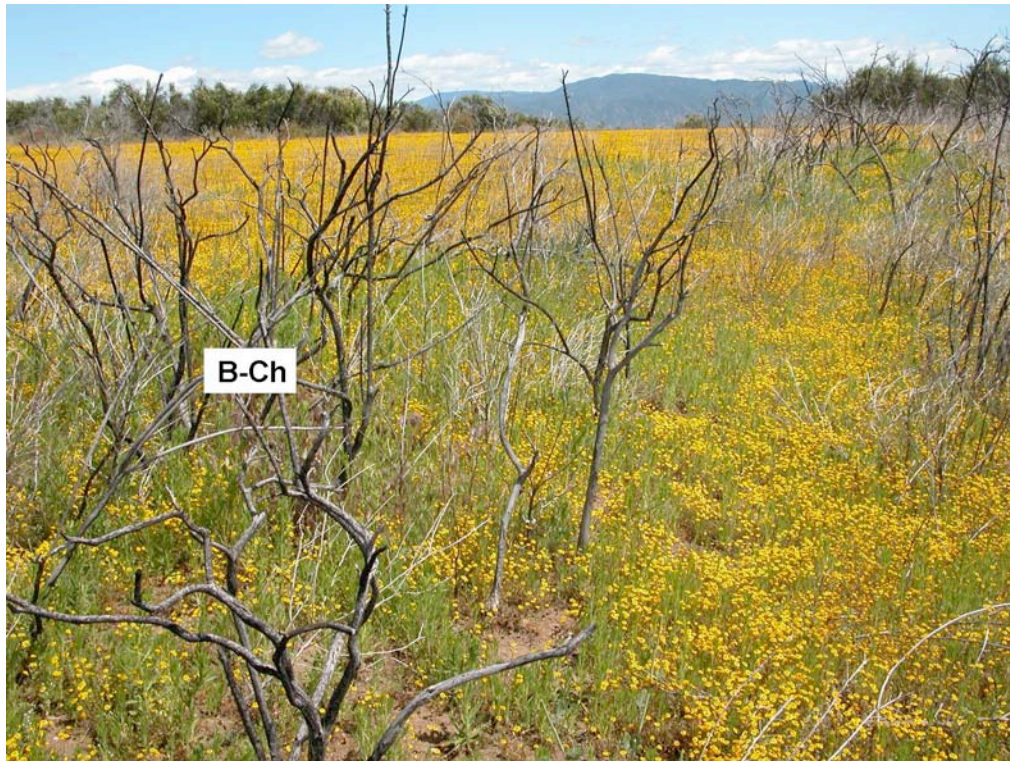


- 10a. Southeasterly view, across the western portion of APN 2812-009-003, from the northwestern corner of the 36.6-acre parcel comprising the northwestern portion of the study area. The dashed lines show the approximate southern and western parcel boundaries. The dotted line shows the boundary between burnt chaparral (B-Ch) and unburned chaparral habitat (Ch). A portion of Non-Native Grassland (NNG) situated in the NW corner of the parcel is visible at the right of this photograph (photo date - 04/09/05).



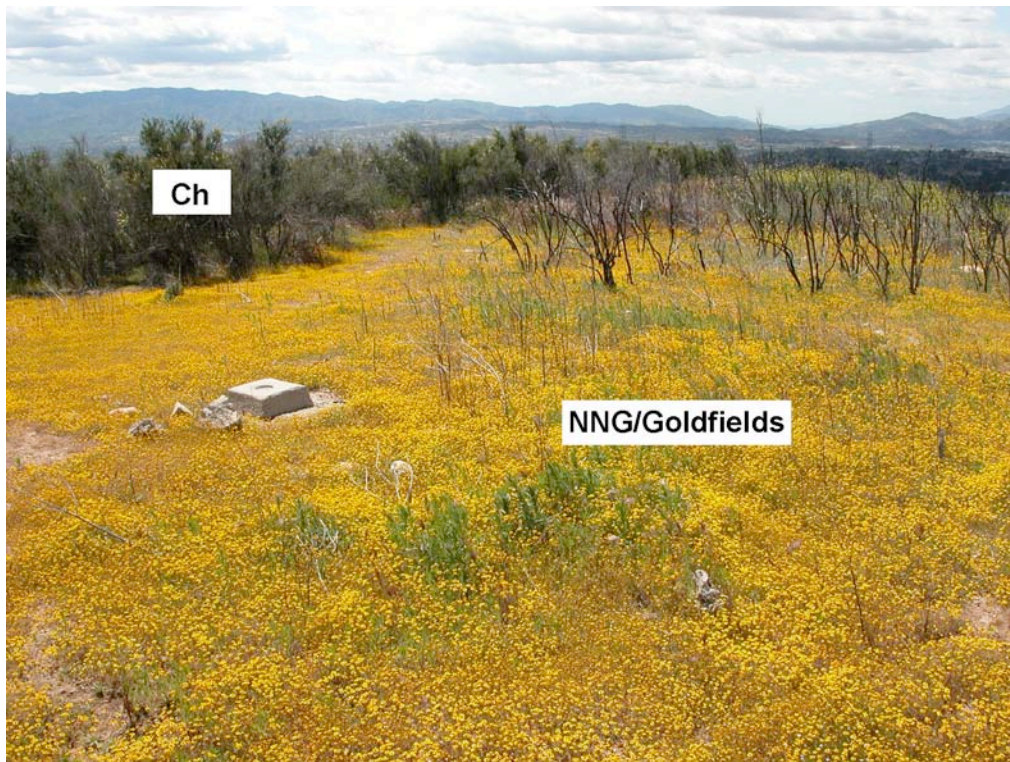
- 10b. Northwesterly view, of the northwestern corner of APN 2812-009-003 showing the NNG and burnt chaparral (B-Ch) observed on March 26, 2004. The dashed line indicates the approximate location of the west (W) parcel boundary (photo date - 03/26/04).

PHOTO PLATE NO. 10-2



- 10c. Close-up view, of the burnt chaparral habitat (B-Ch) observed in the northwestern and north-central portion of APN 2812-009-003 on April 9, 2005. A dense grass/herb understory, dominated by the yellow-flowered Common Goldfields (*Lasthenia californica*), covered the majority of the parcel on April 9, 2005 (photo date – 04/09/05).

PHOTO PLATE NO. 11

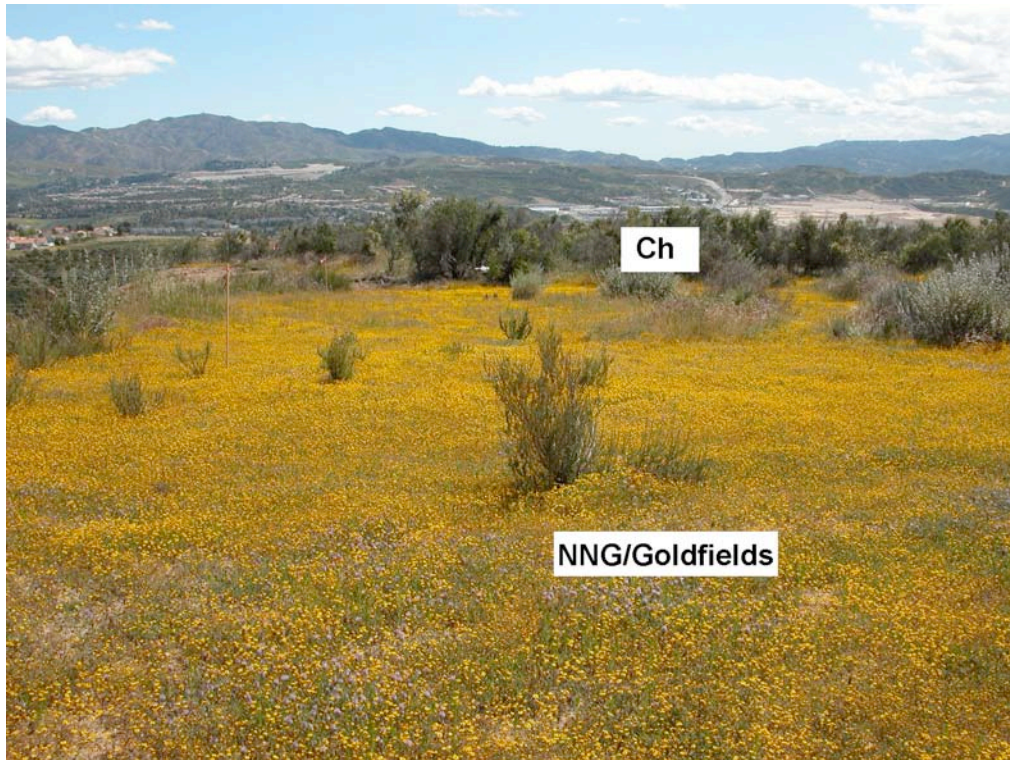


- 11a. Westerly view, across the northern portion of APN 2812-009-003, from the northeastern corner of the parcel. Non-Native Grassland (NNG) and chaparral (Ch) habitat of the parcel are visible in this photograph. The yellow-flowered plants are Common Goldfields (photo date - 04/09/05).



- 11b. Westerly view, along the northern boundary of APN 2812-009-003 (dashed line), and an adjacent 200± feet wide area bordering the northern parcel boundary (photo date - 03/26/04).

PHOTO PLATE NO. 12



- 12a. Southerly view, of the Non-Native Grassland (NNG) and chaparral (Ch) habitat, observed on APN 2812-009-003 on March 26, 2004. The dashed line indicates the approximate location of the eastern boundary of the parcel (photo date – 04/09/05).



- 12b. Northerly view, of open Buckwheat Scrub (BS) habitat and a dense growth of California Goldfields that dominates the grass/herb understory on April 9, 2005. Chaparral (Ch) habitat vegetated the south facing slopes of the hills visible beyond the BS habitat (photo date - 04/09/05).

PHOTO PLATE NO. 13



Eastern view, down the barbed-wire fence situated along the southern boundary of APN 2812-009-003, and an adjacent 200± feet wide area, bordering the southern property boundary. The few large plants observed, along the southern parcel boundary, were Blue Elderberry (*Sambucus mexicana*; Sm) shrubs (photo date - 04/09/05).

PHOTO PLATE NO. 14



Close-up view, of one of the few specimens of *non-sensitive* Beavertail (*Opuntia basilaris* var. *basilaris*) cactus that have been observed within the study area. Although, state records of the unlisted but sensitive Short-joint Beavertail (*Opuntia basilaris* var. *brachyclada*) are recorded 2.67± miles south of the center of VTTN 060258, *none* were observed onsite during twenty-four field surveys performed between June 7, 2003 and May 7, 2005. The inset photo (© 2002 Dean Wm. Taylor) shows the unlisted, special-status Short-joint Beavertail (*Opuntia basilaris* var. *brachyclada*). Note the cylindrical shape of the uncommon Short-joint Beavertail's stem segments compared to the flat stem segments of the common Beavertail species (photo date - 04/09/04)

PHOTO PLATE NO. 15

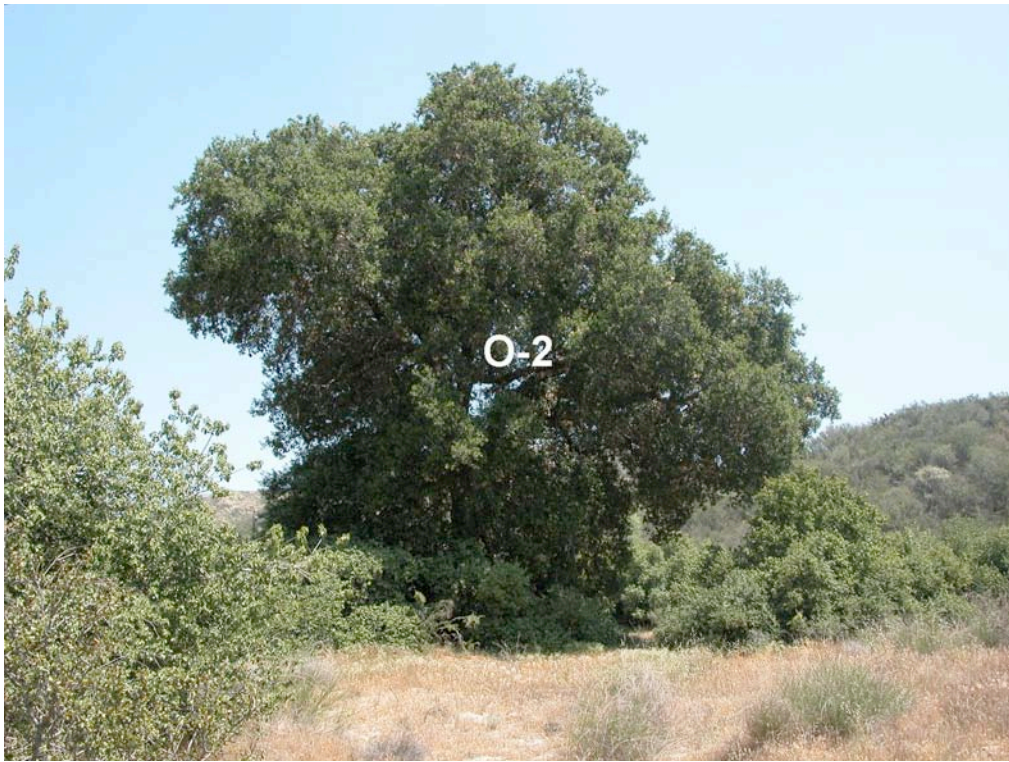


- 15a. Easterly view of a Coast Live Oak (*Quercus agrifolia*) tree situated 600± feet westerly of the southwest corner 135± feet southeasterly of the centerline of Golden Valley Road. The approximate location of this oak is identified as O-1 on Figure 4 of this report (photo date - 04/09/04).

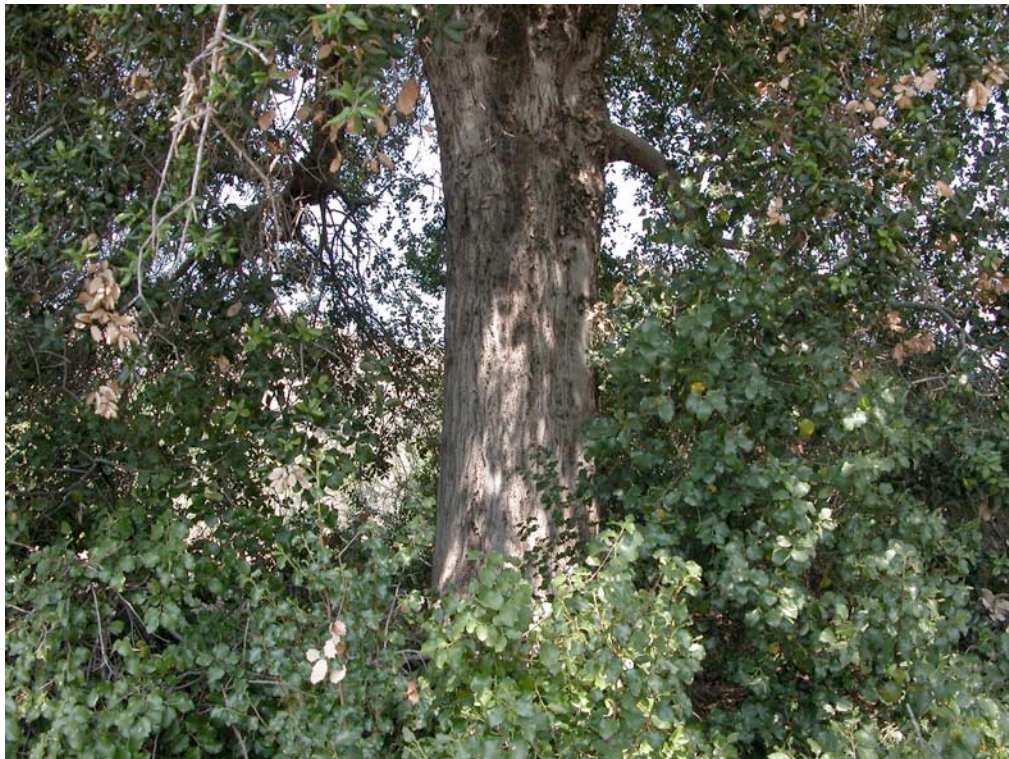


- 15b. Close-up view of circular aluminum disk #79, attached to the Coast Live Oak tree shown in 15a above, by an aluminum nail. This indicates this oak was part of a previous off-site oak tree assessment study (photo date - 04/09/04).

PHOTO PLATE NO. 16



- 16a. Northeasterly view, of a Coast Live Oak (*Quercus agrifolia*) tree observed 300± feet west of the southwest corner of VTTN 060258 along the southeast side of the future alignment of Golden Valley Road. The approximate location of this oak tree is identified as O-2 on Figure 4 of this report (photo date - 03/26/04).



- 16b. Close-up view of the trunk of O-2. Using a DBH tape, the tree trunk was measured to be 101.5 inches in diameter (photo date - 03/26/04).

APPENDIX E

STATEMENT OF QUALIFICATIONS:

Resumes

and

Copies of Federal 10 (A) Permits

and

*State Memorandum of Understanding for
the Following TLC Biologists:*

- 1. Thomas A. Leslie, BS/MS Biology**
- 2. Nadya V. Leslie, MS Biology**
- 3. Gilberto B. Ruiz, MA Planning**

THOMAS A LESLIE, BIOLOGIST

Mr. Leslie is a certified consulting and research biologist and presently is the President of Thomas Leslie Corporation (TLC). His professional and academic experiences include professional biological consulting and scholarly work throughout the western United States (Great Basin, Mojave Desert, northern and southern California, etc.) and Baja and mainland Mexico. He has multi-disciplinary expertise in the areas of sensitive wildlife species surveys, performance of protocol zoological and ornithological surveys, sensitive habitat, sensitive plant species surveys, desert biology, paleontology, botany, 401/404/1601-1603 regulatory delineations/permitting, resources management, wetland ecology, etc. In the course of his professional experiences he has also conducted and managed numerous environmental resources projects involving baseline resource inventories, environmental impact assessments, reports, statements, CEQA mitigation program design/implementation and CEQA 5-year monitoring and reporting program development and implementation, pre-construction paleontological resource assessment, surveys and biological and paleontological construction grading mitigation monitoring, quarrying, salvage and taxonomic identification of paleontological resources. He also co-authored *The Baja Highway, A Field Guide to the Biology and Geology of Baja CA, Mexico*.

CREDENTIALS

- Federal FWS Threatened & Endangered Species Permit No. TE-781384-4 and State CDFG MOU for California Gnatcatcher, Southwestern Willow Flycatcher and Southern Rubber Boa.
- State Scientific Collector's Permit No. 801039-02, CA Dept. of Fish and Game (expires 04/08/07).
- Consulting Biologist: Counties of Riverside, LA, Orange, San Bernardino, San Diego and Ventura.
- National Forest Service Collector's Permit: San Bernardino National Forest.
- National Forest Service Collector's Permit: Angeles National Forest.

PROFESSIONAL HISTORY (Professional Biological Consultant/Business Owner since 1977)

- Thomas Leslie Corporation - 2/1999 to present: President/Owner.
- Thomas Leslie Associates - 1997 to 2/1999: Principal.
- John Minch & Asociados, S.C., Recursos Naturales & Ambientales - 1992-1995: Presidente.
- Michael Brandman Associates, Inc. - 1996-1997: Principal/Director of Resources Management.
- L&L Environmental, Inc.: Principal: 12/1995-9/1996.
- John Minch & Associates, - 11/90-12/95: Principal/Co-owner of Corporation.
- Michael Brandman Associates, Inc. - 1/90-11/90: Section Mgr., Resources Management.
- South Counties Consultants - Principal: 1977 - 1989.
- Saddleback College, 1975-1993: Full Professor of Botany, Vertebrate Zoology & Ornithology.

EDUCATION

- M.S., Botany (extensive course work in Ornithology, Paleontology)
- B.S., Zoology/Botany/Ecology

RECENT PROFESSIONAL TRAINING

- The Western Section of the Wildlife Society, Mohave Ground Squirrel Workshop, April 16-17, 2005, Ridgecrest, CA.
- Desert Tortoise Council, 13th Annual Surveying, Monitoring and Handling Techniques Workshop, Ridgecrest, CA, 2004.
- Botany Classes: Family Dynamics: An Informal Botany Review (Malvaceae, Asclepiadaceae and Lamiaceae), Rancho Santa Ana Botanical Garden, 2004
- Botany Classes: Grass Family Dynamics, Identification and Morphology, Rancho Santa Ana Botanical Garden, 2004
- Sensitive Butterflies Workshop, San Diego, December 2003
- Wetland Course, Richard Chinn Environmental Training, Inc., San Francisco, 2003.
- Sensitive Butterflies Workshop, San Diego, December 2002
- CLE International, California Wetlands Conference, 2002.
- SW Willow Flycatcher Sierra Research Station's Workshop, 2001
- Branchiopod Taxonomy Course, Fairy Shrimp ecology and species identification classes from Dr. Denton Belk, 1997.
- SW Willow Flycatcher Workshop, 1995
- SW Willow Flycatcher Workshop, Fed. Fish & Wildlife Serv., San Diego Natural Hist. Museum.
- Conference of the ecology, conservation and management of vernal pool ecosystems, 1996
- Wetland Delineation: Atypical & Problem Areas, Wetland Training Institute, Poolesville, MD.
- Wetland Delineation: Based On US Army Corps Of Engineer's 1987 Manual, WTI.



DEPARTMENT OF FISH AND GAME

http://www.dfg.ca.gov
1416 Ninth Street
Sacramento, CA 95814
(916) 653-4875



April 28, 2003

Mr. Thomas A. Leslie, President
Thomas Leslie Corporation
Post Office Box 2229
Temecula, California 92593

Dear Mr. Leslie:

At your written request, the Department of Fish and Game (Department) is authorizing Thomas Leslie Corporation (TLC) to conduct surveys of the southwestern willow flycatcher (*Empidonax traillii*) (flycatcher) and California gnatcatcher (*Polioptila californica*) (gnatcatcher). The flycatcher is a State-listed endangered species, and the Department considers the gnatcatcher to be a California species of special concern. Currently, you have temporary authorization from the Department for surveys of the gnatcatcher.

The new authorization is contained in this letter of agreement (agreement), which serves in lieu of a Memorandum of Understanding between TLC and the Department. For purposes of the agreement, we consider you to be the principal investigator. Unless ended sooner by either TLC or the Department, the agreement expires on May 31, 2005. However, we may, at our sole discretion, end the agreement by providing written notice to TLC. The Department shall incur no fiscal obligation under this agreement, which supersedes the temporary authorization for work on the gnatcatcher.

We enclose a copy of this letter. If you concur with the terms of the agreement, please sign and date both letters in the provided spaces. Retain one letter for TLC's records and as a master for making the required copies for certain field personnel. Please return the other letter to Dr. John Gustafson, Habitat Conservation Planning Branch, at the letterhead address. He is the Department's representative on matters relating to the agreement.

TLC shall conduct surveys for the gnatcatcher according to the following: 1) the terms of federal recovery permit TE-781384-4 issued to you by the U.S. Fish and Wildlife Service (Service) on May 10, 2002 and any subsequent amendments, and 2) the provisions in the following paragraphs. The agreement does not authorize TLC to play tapes of the vocalizations of State-listed or special-concern species other than the flycatcher and gnatcatcher.

TLC may designate persons to work under the agreement as field investigators or field assistants, if approved by the Department. We permit the principal investigator to work independently under terms of the agreement and permit a field investigator to work without the on-site supervision of the principal investigator. We permit a field assistant to work only with the on-site supervision of the principal investigator or a field investigator named in the List of Authorized Individuals (LAI), which is part of the agreement. An on-site supervisor conducts

Conserving California's Wildlife Since 1870



Mr. Thomas A. Leslie
April 28, 2003
Page Two

authorized activities in close proximity to persons under his/her direction, to provide training. The Department names field investigators and field assistants, if any, in the attached LAI.

The Department permits only persons named in the LAI to conduct activities under the agreement. The LAI appears on Department letterhead and may identify special conditions or circumstances under which the Department allows an individual to conduct these activities. To request changes to the LAI, TLC shall submit a request to the Department's representative by surface mail or signed facsimile copy identified as the original communication at least 30 calendar days before the requested effective date. TLC shall include a résumé or similar statement of experience and qualifications for each individual to be added to the list. The résumé or statement shall provide details of the individual's experience with the gnatcatcher and flycatcher, or with similar species, and with the type of activity for which TLC is requesting authorization.

The Department shall send all formal correspondence (surface mail or signed facsimile copy identified as the original communication) on the agreement to you as TLC's executive signatory. We also may communicate by informal means (e-mail or telephone) with you. TLC shall send all correspondence, both formal and informal, regarding the agreement to the Department's representative. Only you shall submit requests for renewing or amending the agreement or for changing the LAI.

The agreement may be amended by mutual consent of TLC and the Department's representative. TLC shall submit requests for amendment to the representative by surface mail or signed facsimile copy identified as the original communication. TLC shall allow up to 60 calendar days after receipt for him to consider and respond by surface mail to the TLC's request for an amendment. A change to the LAI is not an amendment.

TLC shall provide to the Department's representative by surface mail a written report of activities and results by October 31 of each year, beginning in 2003, and shall provide a final report within 60 days after expiration of the agreement. Each report, for the period since the previous report was due, shall provide the following information *for each study site*:

- a) township, range, and quarter section, b) the name of the specific U.S. Geological Survey (USGS) quadrangle, c) Global Positioning System (GPS) and/or Universal Transverse Mercator (UTM) coordinates, d) the dates of field work and names of all workers by date, e) a description of the vegetative-community type(s), f) the number of detected territorial males of the flycatcher and gnatcatcher, g) a description, to the extent that data are available and this agreement allows, of each observed nest of the gnatcatcher and flycatcher, including placement and height above ground, h) a description of the number and causes of observed mortalities of the gnatcatcher and flycatcher, and i) the name of the repository of each salvable dead specimen of the gnatcatcher

Mr. Thomas A. Leslie
April 28, 2003
Page Three

and flycatcher. In the first report, TLC shall include information, as described above, for the period of the firm's temporary authorization for the gnatcatcher.

As a part of each annual or final report defined in the preceding paragraph, but not as a substitute for the report, TLC shall provide to the Department's representative the following items: a) a copy of any periodic, annual, or final report that TLC prepared or assisted in preparing for a client, the Service, or other third party or for TLC's own use; b) a reprint of any published article or paper; and c) a copy of the abstract of any oral presentation, if information presented in the report, article, paper, or abstract on the presence, absence, or biology of the flycatcher and gnatcatcher was obtained under authority of this agreement. If a person not employed by TLC prepares such a report, article, paper, or abstract on these authorized studies, TLC shall arrange to have a copy sent to the Department's representative. TLC shall acknowledge the agreement by naming the parties hereto and giving inclusive dates of its term in any report, article, paper, or presentation described in this paragraph.

As a part of each annual or final report, TLC shall send to the Department's representative the original of a California Native Species Field Survey Form that provides information on each site at which TLC detected, or observed a nest of, the gnatcatcher or flycatcher during the reporting period. The enclosed single form may be photocopied as necessary. Each form shall have an accompanying 8½ x11-inch, USGS-scale map of the site and shall provide the following minimum information for *a single species only*: a) township, range, and quarter section, b) name of 7.5' or 15' USGS quadrangle, c) GPS and/or UTM coordinates, d) the number of nests and individuals that TLC observed, e) a description of the habitat by vegetative-community type, and f) inclusive dates (day, month, year) of field work. In addition, TLC shall complete and send forms providing information as provided in this paragraph for observations of individuals and/or nests of the following State-listed and special-concern species: western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), elf owl (*Micrathene whitneyi*), Gila woodpecker (*Melanerpes uropygialis*), gilded northern flicker (*Colaptes auratus chrysoides*), least Bell's vireo (*Vireo bellii pusillus*), Arizona Bell's vireo (*V. b. arizonae*), San Diego cactus wren (*Campylorhynchus bruenneicapillus*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens*), summer tanager (*Piranga rubra*), Bell's sage sparrow (*Amphispiza belli belli*), and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*).

Each person named in the LAI shall possess a valid State Scientific Collecting Permit which allows taking birds, whenever the person is conducting authorized activities. The principal investigator and each field investigator shall possess a photocopy of this fully-signed letter, including the LAI, and any letters of amendment and renewal, whenever the investigator is conducting authorized activities. TLC or the principal investigator shall maintain, during any period in which work is done under terms of the agreement, any federal permit(s) required to

Mr. Thomas A. Leslie
April 28, 2003
Page Four

conduct these activities. The agreement is invalid, if the Service has not issued the appropriate federal permit(s) to TLC or the principal investigator. Within 30 calendar days after receiving each new amendment or change to a list of authorized individuals for a federal permit, the principal investigator shall mail a copy to the Department's representative.

TLC shall obtain permission of the landowner or agent before entering a public or private property to conduct authorized activities. To work in a State ecological reserve, wildlife area, or other property owned or managed by the Department, TLC shall obtain written permission from the appropriate Regional Manager, Department of Fish and Game, as follows: a) for Santa Barbara, Ventura, Los Angeles, Orange, and San Diego counties - 4949 View Ridge Avenue, San Diego, California 92123, or b) for Inyo, San Bernardino, Riverside, and Imperial counties - 4775 Bird Farm Road, Chino Hills, California 91709.

At the discretion of the Department and after reasonable notice to TLC, the Department's representative or another appropriate Department employee may accompany TLC's personnel during any field activity authorized herein.


The agreement is subject to renewal with the approval of both TLC and the Department's representative. TLC shall request renewal of the agreement no earlier than 60 calendar days before the expiration date, by surface-mailing a written request to the representative. If he receives the request for renewal from TLC *within 60 days before expiration*, the agreement shall remain in effect at its pre-expiration terms until the representative takes written action to renew the agreement or to deny the request.

Although it is not a requirement of the agreement, the Department requests that TLC provide copies of reports prepared to describe its field work in prior years. In addition to the reports, we ask that TLC complete California Native Species Field Survey Forms describing observations of the flycatcher and gnatcatcher. Please mail the reports and forms to Dr. Gustafson. Thank you for this courtesy.

Mr. Thomas A. Leslie
April 28, 2003
Page Five

If there are questions about the agreement or about the Department's request for reports, please contact Dr. Gustafson by e-mail at JGustafs@dfg.ca.gov or by telephone at (916) 654-4260.

Sincerely,



Dale T. Steele, Supervisor
Species Conservation and Recovery Program
Habitat Conservation Planning Branch



Thomas A. Leslie

Date: 05-07-03

Enclosures

cc: Dr. John Gustafson
Department of Fish and Game
Sacramento, California



DEPARTMENT OF FISH AND GAME

http://www.dfg.ca.gov
1416 Ninth Street
Sacramento, CA 95814



April 28, 2003

LIST OF AUTHORIZED INDIVIDUALS

for

Letter of Agreement

(effective on April 28, 2003; expires on May 31, 2005)

with

Thomas Leslie Corporation

(Post Office Box 2229; Temecula, California 92593-2229)

regarding studies of

southwestern willow flycatcher and California gnatcatcher

1. The Department of Fish and Game (Department) authorizes the persons named herein to conduct only those studies that Thomas Leslie Corporation has agreed verbally or in writing to undertake.
2. The Department concurs that Mr. Thomas A. Leslie is the principal investigator for studies permitted by the letter of agreement.
3. The Department authorizes no field investigators, as defined by the letter of agreement.
4. The Department authorizes the following persons to work as field assistants, as defined by the letter of agreement: Mr. Brian Drake, Mr. William S. La Haye, Ms. Nadya V. Leslie, Ms. Shelley A. Sugino, and Mr. Philippe J. Vergne.

John R. Gustafson
Department Representative for Letter of Agreement
and
Endangered Bird and Mammal Specialist
Habitat Conservation Planning Branch

telephone: (916) 654-4260
fax: (916) 653-2588
e-mail: JGustafs@dfg.ca.gov

Conserving California's Wildlife Since 1870





State of California—The Resource Agency
 DEPARTMENT OF FISH AND GAME
 2005 SCIENTIFIC COLLECTING PERMIT ATTACHMENT

CHECK APPLICABLE BOX(ES):

- TAKE OF STANDARD EXCEPTIONS
(Specify subspecies in "A", on reverse)
- AMEND EXISTING PERMIT
(Must attach copy of current permit)
- TAKE OF COMMON SPECIES BUT USE OF MARKING
 LETHAL TAKE, REMOVE FROM WILD, ETC.

DFG USE ONLY

THIS PERMIT IS VALID: FROM **4/8/2005** THROUGH **4/8/2007** PE NUMBER **SC-1584**

INSTRUCTIONS: Read instructions on the back of this application. Complete all portions of the application. Use this form to describe the purpose of your work or to request an amendment to an existing SCP. Return the attachment with your completed application and authorizations and approvals forms. If the DFG returns this attachment, it becomes part of your permit and must be attached to your permit. Type or print clearly.

FIRST NAME **Thomas** A LAST NAME **Leslie** DATE OF BIRTH

AFFILIATION Check here if you want future correspondence mailed to your affiliation. TITLE

PERMITTEE'S MAILING ADDRESS DAY TELEPHONE () FAX NUMBER ()

CITY STATE ZIP CODE + 4 F MAIL ADDRESS

AFFILIATION'S MAILING ADDRESS CITY STATE ZIP CODE + 4

JUSTIFICATION: (Include species and numbers to be collected, collection locations, methods/technique, purpose for collecting, disposition of specimens) DO NOT attach lengthy, detailed study proposal unless requested to do so by DFG during the application/attachment review process.

Conditions and stipulations for conducting SRB surveys:

1. Shall notify the Ontario DFG Habitat Conservation biologist 10 days in advance of any SRB survey activity by email and mail.
2. Shall immediately notify Ontario DFG Office Hab. Con. biologist by telephone, of any SRB located.
3. Shall not remove or relocate any SRB encountered from locality in which it was found.
4. Shall submit a biological findings report of any survey for SRB no later than 30 days from last day of survey.
5. The biological report to DFG Habitat Conservation Program shall include a photographic record of survey, including but not limited to; the general project site, any SRB habitat, wet or ephemeral stream courses, springs, wet meadow or fern habitat, downed logs, brush and/or log piles (stacks), rock piles, and rocky out-crops. The report shall also include a listing of all survey personnel, weather conditions, and survey dates and times.

Failure to act on or follow any of the above conditions shall be reason for suspension of permit.

Take of southern rubber boa as described above is authorized.

Brian Ehler
 Digitally signed by Brian Ehler
 DN: cn = Brian Ehler, c =
 US, o = DFG, ou = HCPB
 Date: 2005.05.25 09:24:17 -
 0700

5/6/2005

I certify that I have read, understand, and agree to abide by, all conditions of this permit, the applicable provisions of the FGC, and the regulations promulgated thereon. I certify that I am not currently under any Fish and Game license or permit revocation or suspension, and that there are no other legal or administrative proceedings pending that would disqualify me from obtaining this permit. I agree that if I make any false statement as to any fact required as a prerequisite to the issuance of this permit, the permit is void and will be surrendered when purchased, and I understand that I may be subject to prosecution pursuant to FGC Section 1054 or to other administrative actions pursuant to Section 746, Title 14, of the CCR.

SIGNATURE

DATE

X
 FOR DEPARTMENT OF FISH AND GAME USE ONLY

REVIEWED BY/DATE ISSUED BY/DATE

le 05/25/2005

LRB Routed TO/DATE:

1	2	3
4	5	6

DOCUMENT(S) AVAILABLE IF NOT SCANNED



FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

THOMAS A. LESLIE
P.O. BOX 2229
TEMECULA, CA 95593-2229
U.S.A.

2. AUTHORITY-STATUTES

16 USC 1539(A)

16 USC 703-712

REGULATIONS (Attached)

50 CFR 17.22

50 CFR 17.32

50 CFR 21.23

50 CFR 21.27

3. NUMBER

TE781384-4

AMENDMENT

4. RENEWABLE

YES

NO

5. MAY COPY

YES

NO

6. EFFECTIVE

05/10/2002

7. EXPIRES

05/09/2005

8. NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)

9. TYPE OF PERMIT

THREATENED AND ENDANGERED SPECIES

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

ON LANDS SPECIFIED WITHIN THE ATTACHED SPECIAL TERMS AND CONDITIONS

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.
- C. VALID FOR USE BY PERMITTEE NAMED ABOVE.
- D. Further conditions of authorization are contained in the attached Special Terms and Conditions.

ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12. REPORTING REQUIREMENTS

ANNUAL REPORTS DUE: 1/31

See permit conditions for further requirements.

ISSUED BY

TITLE

CHIEF - ENDANGERED SPECIES

DATE

05/10/2002



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

911 NE. 11th Avenue
Portland, Oregon 97232-4181

LIST OF AUTHORIZED INDIVIDUALS TE-781384-4

1. Individual authorized to independently conduct activities pursuant to this permit:

Thomas Leslie.
2. Individual authorized to conduct activities pursuant to this permit under the supervision of the individual in number 1:

Nadya Shubinskaya-Leslie.

Supervised individuals, whose names must first be added to this list, may conduct activities pursuant to this permit only under the direct on-site supervision of the individual authorized to independently conduct activities listed above. "On-site supervision" is defined as an unauthorized individual conducting activities within 3 meters (9.8 feet) of the authorized individual.

5/10/02
Date

Sarah B. Hill
for Chief, Endangered Species

NADYA V. LESLIE, BIOLOGIST

Ms. Leslie is a consulting biologist and a Director/Secretary of Thomas Leslie Corporation (TLC). Her professional and academic experiences include consulting work in southern California and scholarly and performance of professional work in the Tver region of Russia. She has multi-disciplinary academic and practical experience in the areas of sensitive plant species surveys, botany, plant and invertebrate species taxonomy, ornithology, wetland ecology, habitat classification, desert biology, soil science, cytology, ecology and zoology. In the course of her professional experiences, she has performed numerous biological field surveys, plant species and plant habitat inventories. In addition she has written and co-authored reports concerning taxonomic identification of biological resources and scientific articles regarding conservation of botanical resources. Most recently, she co-authored *The Index of seeds and spores collected in 2000 from Tver State University Botanical Garden and in Tver Region of Russia*. Ms. Leslie is listed on Mr. Leslie's 10(a)(1)(A) recovery permit as a "authorized individual" and is therefore may conduct activities pursuant to permit TE-781384-4 under the direct onsite supervision of Mr. Leslie.

CREDENTIALS

- National Forest Service Botanical Collector's Permit: San Bernardino National Forest.
- National Forest Service Botanical Collector's Permit: Angeles National Forest.
- California Department of Fish and Game Scientific Collector's Permit No. 801280-05.
- Federal Fish and Wildlife Service Threatened & Endangered Species Permit (expires 05/09/05) and State CDFG MOU for California Gnatcatcher, Southwestern Willow Flycatcher and Southern Rubber Boa. Listed as an *authorized individual* to perform presence/absence protocol surveys under Permit No. TE-781384-4.

PROFESSIONAL HISTORY

- Thomas Leslie Corporation – 3/20/01 to present
- Tver State University - 2/1997 – 3/2001: Head of the Herbarium Department.

EDUCATION

- Tver State University - 9/1993 – 6/1998: MS (equivalent) in biology.

RECENT PROFESSIONAL TRAINING

- The Western Section of the Wildlife Society, Mohave Ground Squirrel Workshop, April 16-17, 2005, Ridgecrest, CA.

- Desert Tortoise Council, 13th Annual Surveying, Monitoring and Handling Techniques Workshop, Ridgecrest, CA, 2004.
- Botany Classes: Family Dynamics: An Informal Botany Review (Malvaceae, Asclepiadaceae and Lamiaceae), Rancho Santa Ana Botanical Garden, 2004
- Botany Classes: Grass Family Dynamics, Identification and Morphology, Rancho Santa Ana Botanical Garden, 2004
- Sensitive Butterflies Workshop, San Diego, December 2003
- Wetland Course, Richard Chinn Environmental Training, Inc., San Francisco, 2003.
- Sensitive Butterflies Workshop, San Diego, December 2002
- CLE International, California Wetlands Conference, 2002.
- SW Willow Flycatcher Sierra Research Station's Workshop, 2001

Scientific Collecting Permit Amendment

Nadya Leslie

SCP #6317

5/25/2005

You are authorized to survey for southern rubber boa under the following conditions:

Conditions and stipulations for conducting SRB surveys:

1. Shall notify the Ontario DFG Habitat Conservation biologist 10 days in advance of any SRB survey activity by email and mail.
 2. Shall immediately notify Ontario DFG Office Hab. Con. biologist by telephone, of any SRB located.
 3. Shall not remove or relocate any SRB encountered from locality in which it was found.
 4. Shall submit a biological findings report of any survey for SRB no later than 30 days from last day of survey.
 5. The biological report to DFG Habitat Conservation Program shall include a photographic record of survey, including but not limited to; the general project site, any SRB habitat, wet or ephemeral stream courses, springs, wet meadow or fern habitat, downed logs, brush and/or log piles (stacks), rock piles, and rocky out-crops. The report shall also include a listing of all survey personnel, weather conditions, and survey dates and times.
- Failure to act on or follow any of the above conditions shall be reason for suspension of permit.



5/25/2005

GILBERTO B. RUIZ
P.O. Box 1514
Santa Monica, California 90406

EDUCATION

M.A. Urban and Regional Planning
University of California, Los Angeles (UCLA)

B.A. Spanish Literature
UCLA

QUALIFICATIONS

Mr. Ruiz has worked extensively within Southern California ecosystems including coastal sage scrub, chaparral and transitional desert scrub environments and is familiar with the flora and fauna of these habitats. With over 10 years experience in the preparation of biological assessments and field biology, Mr. Ruiz is keenly aware of habitat requirements and indicators for many of the rare, threatened and endangered species found within this region of California. He is also an endangered species permit holder for the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino* - QCB) and federally threatened coastal California gnatcatcher (*Polioptila californica californica* - CAGN) and has considerable experience in protocol survey performance, sighting documentation and survey report writing. Mr. Ruiz is also an expert in federal and state Endangered Species Act (ESA) compliance. Moreover, his knowledge of the natural environment and urban land use planning experience have provided him with important skills in addressing issues involving ESA and land use conflicts. Most notably, Mr. Ruiz was asked to prepare an Environmental Assessment (EA) for the U.S. Fish and Wildlife Service's California Condor Recovery Program in order to address such issues.

Professionally, Mr. Ruiz is actively involved in a wide variety of organizations and societies. These affiliations include the California Native Plant Society (CNPS), Lorquin Entomological Society (LES), American Ornithologists' Union (AOU), American Birding Association (ABA), Western Bird Banding Association (WBBA), and National Audubon Society (NAS). He is also an advisory panel member for a number of national public/private organizations including the Association for Biodiversity Information (ABI), National Science Academies (NSA) and California Legacy Project. He was also the Southern California Association of Governments (SCAG) representative on the California Biodiversity Council (CBC).

Endangered Species Studies

As noted above, Mr. Ruiz is a valid endangered species permit holder for the Quino checkerspot butterfly and coastal California gnatcatcher and has prepared numerous presence/absence surveys for these species. He is extensively familiar with protocol survey requirements, sighting notification guidelines and report writing. Gilberto is also familiar with key habitat indicators for these species and their life cycles. He has performed surveys and prepared survey documentation annually for the QCB and CGN since 1998 and 2002, respectively.

Biological Assessments/Studies

Mr. Ruiz has prepared numerous biological assessments within a wide variety of cismontane Southern California environments including coastal sage scrub, chaparral and desert transitional scrub. He has also been responsible for preparing constraints analysis for both high quality and atypical environments. Mr. Ruiz's careful observation and characterization skills are readily apparent in the documentation for which he has been responsible for preparing. This approach has facilitated the preparation of Biological Assessments/Studies that carefully and accurately describe vegetation components, important habitat attributes and corresponding species location/identification information. Moreover, this approach allows for accurate predictive and direct observation results. Representative assessments for which Mr. Ruiz has prepared include the *Wind Wolves Preserve Biological Assessment*, *Devil's Gate Dam Biological Assessment*, *Rye Canyon Biological Assessment* and *Pepperdine University Biological Assessment*.

Vegetation Mapping/Habitat Restoration

Mr. Ruiz has considerable experience in vegetation mapping and habitat restoration for both upland and riparian environments. Utilizing aerial photography, series specific vegetation classification systems and knowledge of Southern California vegetation components, Mr. Ruiz is able to prepare detailed and highly accurate vegetation maps. His mapping experience and familiarity with coastal sage scrub, chaparral and desert scrub transitional environments is reflected in his ability to identify subtle ecotones within complex vegetation systems. Additionally, his knowledge of Southern California vegetation communities, field biology experience and interest in restoration biology provide him with a unique understanding of the key elements needed in order to ensure successful habitat restoration strategies. Representative vegetation mapping and habitat restoration programs for which Mr. Ruiz has been responsible for include *Sennet Canyon Restoration Program*, *Saddler Road Restoration Program* and *San Emigdio Canyon Riparian Enhancement Program*.

Bird Banding

Mr. Ruiz is a member of the Western Bird Banding Association (WBBA) and is an active participant in Dr. Walter Sakai's bird banding station located in Zuma Canyon, Malibu, California. He is also familiar with the North American Bird Banding Manual and associated banding protocol.

PROFESSIONAL AFFILIATIONS

- American Ornithologists' Union
- Western Bird Banding Association
- American Birding Association
- National Audubon Society
- Santa Monica College Bird Banding Station
- (Zuma Canyon, Malibu, California)
- Lorquin Entomological Society
- California Native Plant Society



FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

GILBERTO B. RUIZ
P.O. BOX 1514
SANTA MONICA, CA 90406
U.S.A.

2. AUTHORITY-STATUTES

16 USC 1539(a)
16 USC 1533(d)
16 USC 703-712

REGULATIONS (Attached)

50 CFR 17.22
50 CFR 17.32
50 CFR 21.23 & 21.27
50 CFR 13

3. NUMBER

TE840036-3

AMENDMENT

4. RENEWABLE

YES
 NO

5. MAY COPY

YES
 NO

6. EFFECTIVE

07/29/2004

7. EXPIRES

07/28/2007

8. NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)

9. TYPE OF PERMIT

THREATENED AND ENDANGERED SPECIES

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

ON LANDS SPECIFIED WITHIN THE ATTACHED SPECIAL TERMS AND CONDITIONS

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.
- C. VALID FOR USE BY PERMITTEE NAMED ABOVE.
- D. Further conditions of authorization are contained in the attached Special Terms and Conditions.

ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12. REPORTING REQUIREMENTS

ANNUAL REPORT DUE: 1/31
See permit conditions for further reporting requirements.

ISSUED BY

Sarah B. Hall

TITLE

CHIEF - ENDANGERED SPECIES

DATE

07/29/2004



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

911 NE. 11th Avenue
Portland, Oregon 97232-4181

LIST OF AUTHORIZED INDIVIDUALS TE-840036-3

1. Individual authorized to independently conduct activities with the Quino checkerspot butterfly and the coastal California gnatcatcher pursuant to this permit:

Gilberto B. Ruiz.

Supervised individuals, whose names must first be added to this List, may conduct activities pursuant to this permit only under the direct, on-site supervision of Mr. Ruiz. "On-site supervision" is defined as a supervised individual conducting activities within 3 meters (9.8 feet) of an independently authorized individual.

7/29/04

Date

Sarah B. Hall
for Chief, Endangered Species

This List is only valid if it is dated on or after the permit issuance date.

ADVISORY PANELS/COUNCILS

- Association for Biodiversity Information (ABI)
- National Science Academies (NSA)
- California Biodiversity Council (CBC)
- California Legacy Project

Thomas Leslie Corporation (TLC), February 21, 2005b; Draft Biological Assessment of Vesting Tentative Tract No. 060258 and Associated Roadway Improvements, Santa Clarita, California

Thomas Leslie Corporation (TLC), April 14, 2004a, Oak Tree Report, Vesting Tentative Tract No. 060258 and Associated Roadway Improvements Santa Clarita, California.

Thomas Leslie Corporation (TLC), March 16, 2004b, Vesting Tentative Tract No. 060258 (VTTN 060258; Ermine Road)- Expanded Oak Tree Report.

Thomas Leslie Corporation (TLC), May 29, 2003a, Pre-survey Notification to the Ventura, California US Fish and Wildlife Service Office Regarding Performance of California Gnatcatcher Protocol Surveys on VTTN 060258.

Thomas Leslie Corporation (TLC), October 10, 2003b, Results of Protocol California Gnatcatcher Surveys.

Thomas Leslie Corporation (TLC), October 17, 2003c, Oak Tree Report, Vesting Tentative Tract No. 060258, Santa Clarita, California.

Thomas Leslie Corporation (TLC), December 30, 2003d, Biological Assessment of Vesting Tentative Tract No. 060258, Santa Clarita, California.

Thomas Leslie Corporation (TLC), October 17, 2003e; Revised January 3, 2005, Oak Assessment Report for Vesting Tentative Tract No. 060258 and Three Associated but off-site Roadway Construction Projects Located in Santa Clarita, California

United States Department of Agriculture (USDA), Natural Resources Conservation Service, June 1967, Revised December 1969, Reviewed 2002, Report and General Soil Map, Los Angeles County, California.

United States Department of the Interior Fish and Wildlife Service (FWS), Carlsbad, California, May 1, 2003, Coastal California Gnatcatcher Proposed Critical Habitat.

United States Department of the Interior Fish and Wildlife Service (FWS), Carlsbad, California, October 18, 2000, Map: Coastal California Gnatcatcher (designated) Critical Habitat.

United States Department of the Interior Geological Survey (USGS), 1995, State of California Department of Water Resources, Mint Canyon, CA, 7.5 Minute Series (Quadrangle Topographic).

United States Department of the Interior Geological Survey (USGS), 1995, State of California Department of Water Resources, Newhall, CA, 7.5 Minute Series (Quadrangle Topographic).

Vandermost Consulting Services, Inc. (VCS), December 1, 2003, Revised January 21, 2005, Preliminary Jurisdictional Delineation of the Ermine Street/Tract 060258 (site), Santa Clarita, California.

Vandermost Consulting Services, Inc. (VCS), December 1, 2003, Preliminary Jurisdictional Delineation of the Ermine Street Site, Santa Clarita, California.

Warencya, D., January 20, 2005, Personal telecommunication (Tel. #: 916-322-7307) with Ms. Warencya, a CNDDDB biologist, to ascertain the nearest Southwestern Pond Turtle (SPT) location to Vesting Tentative Tract No. 060258. She stated that the nearest state SPT occurrence record is *off-site* 5± miles west of VTTN 060258 in the Newhall, Calif. USGS quadrangle. The exact location of the SPT record was not provided.

APPENDIX 3-B

**Oak Assessment Report for Vesting Tentative Tract No. 060258 and Three Associated But
Off-Site Roadway Construction Projects Located in Santa Clarita, California, Thomas
Leslie Corporation (January 3, 2005)**

**OAK ASSESSMENT REPORT
FOR VESTING TENTATIVE
TRACT NO. 060258 AND THREE ASSOCIATED
BUT OFF-SITE ROADWAY CONSTRUCTION PROJECTS
LOCATED IN
SANTA CLARITA, CALIFORNIA**

Prepared for:

City of Santa Clarita
23920 Valencia Boulevard, Suite 300
Santa Clarita, California 91355

Prepared by:

Thomas Leslie Corporation
P.O. Box 2229
Temecula, CA 92593-2229
(909) 296-6232

Contact Person:

Thomas Leslie
President B.S.-M.S./Biologist

October 17, 2003
Revised January 3, 2005

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INTRODUCTION

This Oak Assessment Report was prepared in accordance with the City of Santa Clarita's Oak Tree Preservation Ordinance (OTPO; 2000). In addition, it addresses review comments provided by Mr. Wayne Smith of the City's Urban Forestry Division (City, 2004).

This report also provides a summary of assessment findings (I), information on project location (II), a brief discussion of the OTPO and its application/requirements (III), oak assessment methodologies (IV) and results (V) and mitigation measures (VI).

I. SUMMARY OF OAK ASSESSMENT

- Eight oaks (7 trees and one shrub) were identified and assessed on Vesting Tentative Tract No. 060258 (VTTN 060258).
- One heritage oak, Oak # 7, occurs onsite in Open Space Lot # 121. This oak will be preserved *in situ*, undisturbed onsite in Open Space Lot # 121.
- 3 oaks (2 trees and 1 shrub) will be removed during development of VTTN 060258.
- At the direction of the City, mitigation for removed trees will consist of (a) planting three 36-inch-box oaks (*Quercus john-tuckeri*, *Q. kelloggii*, *Q. chrysolepis*) to replace the one shrub being lost and (b) purchase of \$35,700.00 worth of 60-inch and 36-inch box Coast Live Oak specimens.
- Permanent protective chain-link fencing will be erected around the five oaks within VTTN 060258, not being impacted by development.
- A map, showing the surveyed location of each oak, its dripline and protected zone (dripline + 5 feet) plotted on grading plan, must be prepared by the project engineer and submitted to the City.
- A map showing specific location, of the areas where mitigation replacement oak plantings will be installed, must be provided by the applicant's engineer and/or landscape architect to the City.
- A mitigation monitoring and reporting plan (MMRP) must be prepared by the project landscape architect, and submitted to the City for review and approval, to ensure oak mitigations plantings survive for at least five years after installation. The MMRP must specify measurable objective success criteria and a detailed monitoring and reporting schedule.

II. LOCATION OF THE OAK ASSESSMENT AREA

- **Figure 1** illustrates the boundaries of the oak assessment area on the *Thomas Brothers Los Angeles and Ventura Counties Street Guide and Directory* on detail map page 4461, map coordinates C-7 and D-7 and on detail map page 4551, map coordinates C-1, D-1 and C-2.
- **Figure 2** plots the boundaries of the oak assessment area in Sections 7 and 18, Township 4 North, Range 15 West, of the 1995 Newhall, CA and 1995 Mint Canyon, CA, USGS quadrangles.

The **OAK ASSESSMENT AREA**, illustrated on Figures 1 and 2, included the following elements:

- VTTN 060258,
- Two off-site roadway construction projects: proposed Streets "A" and "B,"
- A 200-foot wide "strip" around the boundaries of VTTN 060258 and future Streets "A" and "B" and
- The future Golden Valley Road construction project and a 200-foot wide "strip" along the off-site alignment of the future Golden Valley Road.

As Figure 1 illustrates, the oak assessment area is located in the City of Santa Clarita. The Antelope Valley Freeway (State Highway 14; Hwy. 14) provides regional access to the oak assessment area. More specifically, as the numbers “1,” “2” and “3” on Figure 1 of this report indicate, the oak assessment area can be accessed by the three routes described below.

Access Route # 1: Exit Hwy. 14 at Via Princessa. Once on Via Princessa, proceed 1.3± miles northwesterly to Whites Canyon Road. Turn right onto Whites Canyon Road and continue 0.5± miles to Soledad Canyon Road. Turn left (west) onto Soledad Canyon Road and drive westerly 1.8± miles to Oak Avenue. Turn right onto Oak Avenue and drive 0.4± miles to Santa Clara Street. A narrow strip north-south oriented strip of land, fronting Santa Clara Street, provides access to the southern portion of the oak assessment area north of Santa Clara River.

Access Route # 2: The northeastern portion of the oak assessment area can be accessed by taking Via Princessa exit off Hwy. 14 and driving 1.3± miles northwesterly to Whites Canyon Road. Turn right onto Whites Canyon Road and proceed 2.3± miles to Steinway Street. Turn left onto Steinway Street and proceed 0.5± miles to and turn left onto Langside Avenue and make first right turn onto Ermine Street. Continue 0.6± miles on Ermine Street to the dead end of the roadway and access the assessment area by foot.

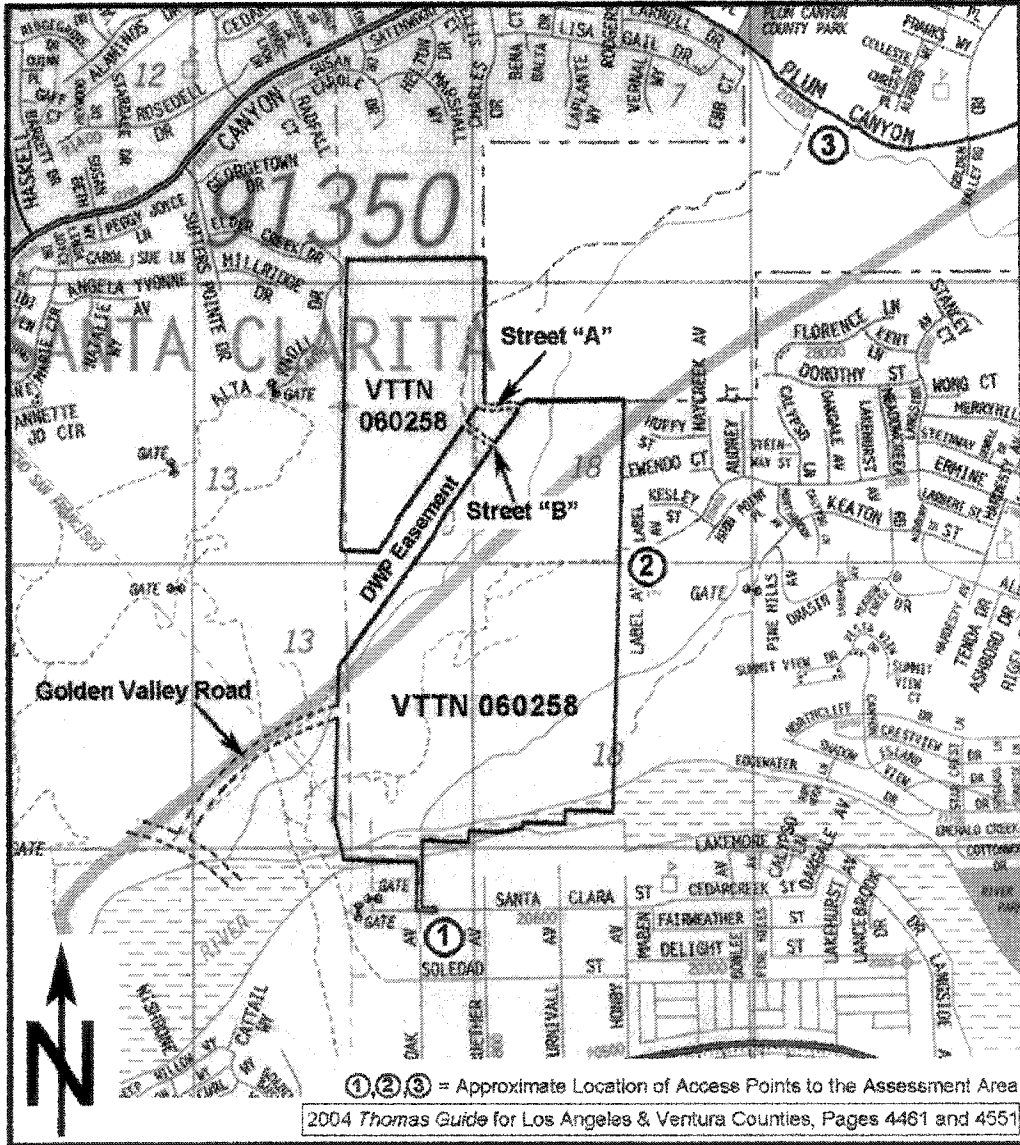
Access Route # 3: The northwestern portion of the oak assessment area (Lot Nos. 1-96; 112, 113, 116 and 117) can be accessed by taking the Magic Mountain Parkway (State Highway 126) exit off Golden State Freeway (Interstate 5) and driving 2.6± miles southeasterly to Bouquet Canyon Road. Turn left onto Bouquet Canyon Road and continue 3.9± miles to Plum Canyon Road. Turn right onto Plum Canyon Road and drive 0.7± miles to a gated dirt road on the right (southwest) side of Plum Canyon Road providing access to the oak assessment area. Once on the dirt road, proceed 0.7± miles uphill southwesterly to the oak assessment area.

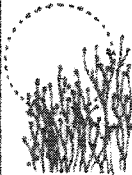
III. BACKGROUND OF CITY OF SANTA CLARITA OAK TREE PRESERVATION ORDINANCE (OTPO)

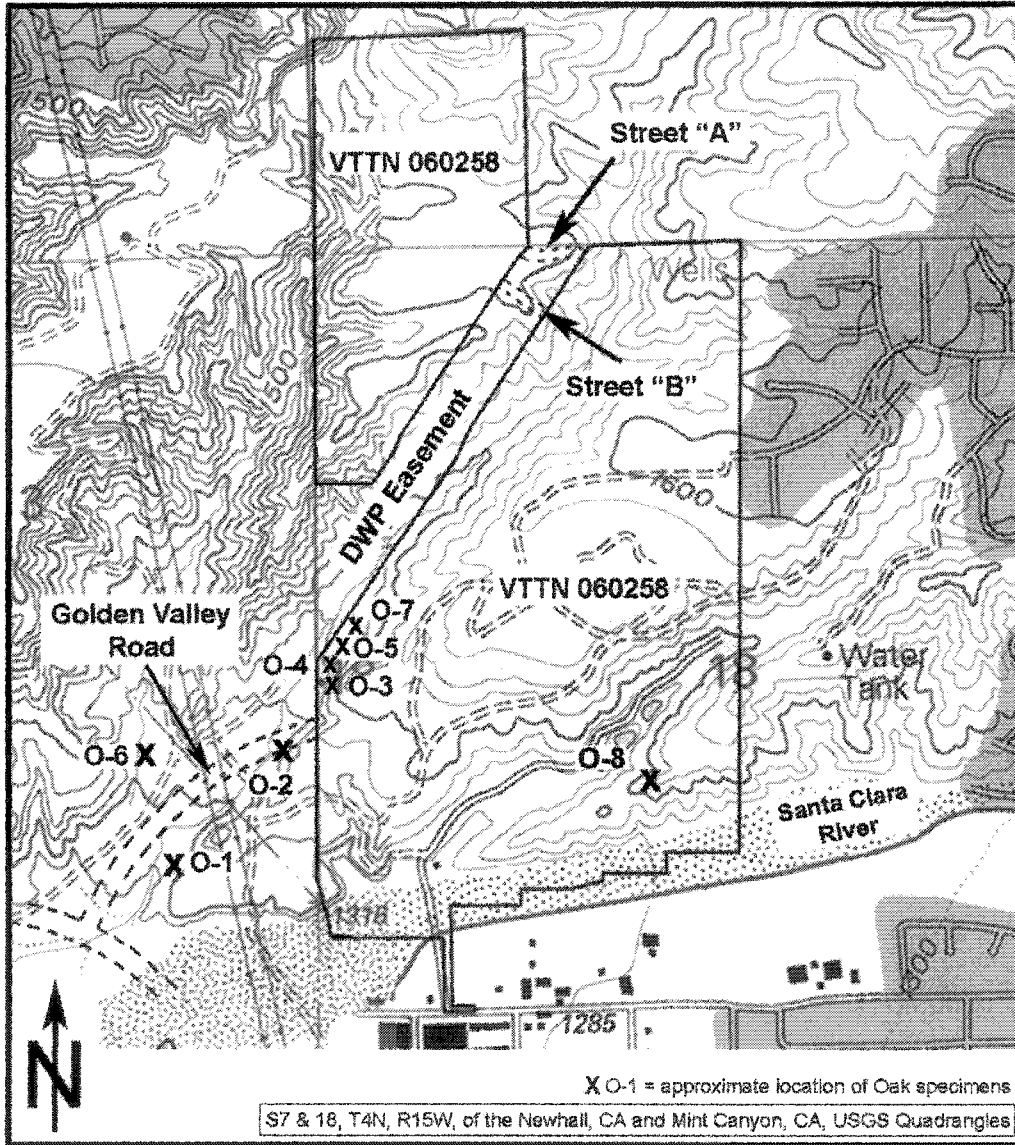
The oak trees and shrubs covered by the OTPO include, but are not limited to, valley oak (*Quercus lobata*), California live-oak (*Quercus agrifolia*), canyon oak (*Quercus chrysolepis*), interior live oak (*Quercus wislizeni*) and scrub oak (*Quercus dumosa*; now *Q. berberidifolia*). The ordinance, available at <http://www.santa-clarita.com/cityhall/field/oaktree/oaktree.asp>, was developed to protect and preserve oaks in the City and to provide regulatory measures designed to accomplish this purpose.

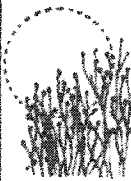
The City's OTPO requires the preservation of all healthy oak specimens (trees and shrubs) unless compelling reasons justify the removal of such trees. The policy applies to the removal, pruning, cutting and/or encroachment into the protected zone of any oak specimen.

More specifically, the OTPO prohibits the cutting, pruning, removal, relocation, endangerment, damage or encroachment into the protected zone of any oak specimen on any public or private property within the City except in accordance with the conditions of a valid oak permit issued by the City. Section 17.17.090, Item I *Conditions* of the City's OTPO requires “placement of additional trees on the subject property” to mitigate loss of oaks removed during development (City, 2000).



 <p><i>Thomas Leslie Corporation</i> BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING</p>	<p>Figure 1 Location of Oak Assessment Area: (1) Vesting Tentative Tract No. 060258 and (2) three off-site roadway construction projects: Streets "A," "B" and Golden Valley Road Illustrated on the Thomas Guide Map</p>
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 <p><i>Thomas Leslie Corporation</i> BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING</p>	<p>Figure 2 Location of Oak Assessment Area: (1) Vesting Tentative Tract No. 060258 and (2) three off-site roadway construction projects: Streets "A," "B" and Golden Valley Road Illustrated on USGS Quadrangle Maps</p>
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IV. METHODOLOGY

A. Number of Surveys

A total of seven (7) oak assessment field surveys, were conducted within the oak assessment area (VTTN 060258) on October 11 and 17, 2003 and March 14 and 26, April 9 and 26 and October 13, 2004.

B. Oak Assessment Area

The *entirety* of VTTN 060258, the oak assessment area, was surveyed during two 2003 and five 2004 oak assessment field surveys. In addition, three off-site roadway construction projects (proposed Streets "A" and "B" and Golden Valley Road), and a 200-foot buffer around the boundaries of VTTN 060258 and the three associated offsite future roadways, were also surveyed.

C. Survey Conditions

Weather conditions during the seven oak tree field surveys were warm (80-90 degrees Fahrenheit in 2003 and 65-82 degrees Fahrenheit in 2004) with clear skies and mild intermittent breezes. However, the weather conditions would not have affected the oak assessment field surveys.

D. Surveyors

TLC field biologists Thomas A. Leslie (MS/BS Biology), Nadya V. Leslie (MS Botany) and Gilberto B. Ruiz conducted the seven oak assessment field surveys on foot throughout the oak assessment area (see "B" above).

E. Methodologies of the Oak Assessment Surveys

Each oak of the oak assessment area, meeting the OTPO criteria was measured and mapped* and the condition of each oak was evaluated. Measurements included measuring oak trunk diameter and canopy spread in eight directions (north, south, east, west, northeast, northwest, southeast and southwest).

***NOTE:** The Appendix A maps indicate only oak locations. They do not plot the dripline or protected zone of each oak specimen. A map, showing the surveyed location of each oak, its dripline and protected zone (dripline + 5 feet) plotted on grading plan, must be prepared by the project engineer and submitted to the City.

The oak assessment also included an evaluation of the eight oaks identified within the assessment area to determine physical conditions and aesthetic attributes including health and vigor, structure and form. Table 1 summarizes the oak assessment data collected during the seven oak assessment field surveys.

All areas of the property were accessible during each of the seven oak assessment field surveys. Searches for all species of oaks trees regardless of size were included in the oak assessment surveys.

Table 1: Oak Assessment Field Work Form

Tree Number	Genus and Species	Health: A-D (1)	Aesthetic Assessment: A-D (2)	Evidence of Disease	Identification of insect pests (galls, twig girdler, borers, termites, etc.)	Canopy Diameter in feet (3)	Trunk diameter in inches	The Oak is an Ordinance "Heritage oak tree" (4)	Appraised Value (5)
1	<i>Quercus agrifolia</i>	C	B	None observed	Borers	72	90.8	No*	\$37,300.00
2	<i>Quercus agrifolia</i>	B	B	None observed	Galls	62	29	No	\$13,800.00
3	<i>Quercus agrifolia</i>	B	C	None observed	None observed	21	11.7	No	\$1,890.00
4	<i>Quercus agrifolia</i>	A	B	None observed	None observed	17	6.4	No	\$1,180.00
5	<i>Quercus agrifolia</i>	A	B	None observed	None observed	12	14	No	\$3,340.00
6	<i>Quercus agrifolia</i>	D	C	Heart Rot	Galls, Borers	53	66.4	No*	\$21,900.00
7	<i>Quercus agrifolia</i>	D	C	None observed	Borers	79	107.6	Yes	\$17,000.00
8	<i>Quercus john-tuckeri</i>	D	C	None observed	Galls	52	32	No	\$2,200.00

- (1) = Evaluation of the health (e.g., new tip grows, leaf color, abnormal bark, dead wood, thinning of crown), expressed as a letter grade: "A" for outstanding "B" for good, "C" for average, "D" for below average.
- (2) = Aesthetic assessment (consider such factors as symmetry, broken branches, unbalanced crown, excessive horizontal branching) expressed as a letter grade: "A" for outstanding "B" for good, "C" for average, "D" for below average.
- (3) = Canopy diameter is based on eight radius measurements: north, south, northeast, southwest, east, west, southeast and northwest. The schematic representation of the canopy shape, of each of the eight assessment oaks, is provided in Appendix C.
- (4) = According to the OTO, a "Heritage Oak" is **single trunk** specimen measuring 108 inches or more in circumference (34 inches or more in diameter) or a **multiple trunk** oak, having two or more trunks measuring 72 inches each or greater in circumference (23 inches or more in diameter).
- (5) = The *Trunk Formula Method Work Sheets*, calculating the Appraised Value of each oak of the assessment, are provided in Appendix D.
- * = Oak #s 1 and 6 are not heritage trees because these trees have multiple trunks, each less than 23 inches in diameter.

V. RESULTS OF THE OAK ASSESSMENT

Findings:

- **Oaks Observed:** The eight (8) oak specimens listed below were observed within the boundaries of the oak assessment survey area:
 - a. Seven (7) Coast Live Oak (*Quercus agrifolia*) trees.
 - b. One (1) Tucker's (scrub) Oak (*Quercus john-tuckeri*) shrub.
- **Oaks Being Removed During Construction:** A review of the development activities proposed by VTTN 060258 shows that three oaks will be removed during construction:
 - a. Oak tree #s O-2 and O-6 will be removed by construction of the off-site extension of Golden Valley Road to Newhall Ranch Road.
 - b. Oak # O-8 will be removed during grading of a slope Lot No. 115.
- **Oaks Being Preserved:** Tree #s O-1, O-3, O-4, O-5, and O-7 are situated outside any proposed construction area. That is, all five of these oaks will be preserved *in situ* in open space areas not proposed for development.

Figure 2 illustrates the approximate location of each of the eight oak specimens observed within the oak assessment area. The exact surveyed locations of the eight oaks of the assessment area are illustrated on the five 1 inch = 50 feet scale Appendix A maps prepared by SIKAND Engineering. A SIKAND field crew surveyed the exact locations of the eight oaks on April 9, 2004. The Appendix A maps indicate only oak locations. They do not plot the dripline or protected zone of each oak specimen. A map, showing the surveyed location of each oak, its dripline and protected zone (dripline + 5 feet) plotted on grading plan, must be prepared by the project engineer and submitted to the City.

Photo Plate Nos. 1-8, located in Appendix B, provide representative views of the eight oaks observed within the oak assessment area. The estimated height and crown structure of each of the eight oaks assessed are briefly described below.

O-1: As Photo Plate Nos. 1a, 1b and 1c show, this 30± feet tall mature Coast Live Oak tree grows along the southeastern side of the proposed alignment of Golden Valley Road. This tree has five trunks, measuring 15.2, 19.2, 22.8, 16.8 and 16.8 inches in diameter. Therefore, this oak is not heritage tree according to the OTO because none of the separate trunks measure more than 23 inches in diameter. The crown of this tree is spherical. As evidenced by the aluminum tag attached to the trunk of this tree (see Photo Plate No. 1b), this tree was part of a previous oak tree assessment study. This mature oak tree was assessed to be in fair condition due to exposure of roots by natural stream course erosion and presence of borers.

O-2: As Photo Plate Nos. 2a and 2b show, this 45± feet tall mature Coast Live Oak tree grows along the southeastern side of the proposed alignment of Golden Valley Road. The crown is slightly asymmetrical. This mature oak tree was assessed to be in moderate condition.

O-3: As Photo Plate No. 3 shows, this 10± feet tall Coast Live Oak tree grows near a river rock wall constructed between a garage and a mobile home trailer. The crown is slightly asymmetrical and appears to have been pruned. This young oak tree was assessed to be in moderate condition due to unprofessional pruning.

O-4: As Photo Plate Nos. 4a and 4b show, this 20± feet tall Coast Live Oak tree grows near the back of metal shed between a shed and an "outhouse" (toilet). The crown of this oak is slightly asymmetrical. This young oak tree was assessed to be in excellent condition.

O-5: As Photo Plate No. 5 shows, this 15± feet tall Coast Live Oak tree grows by the side of old abandoned white van. The crown of this oak is conical (“Christmas tree”) shaped. This young oak tree was assessed to be in excellent condition.

O-6: As Photo Plate Nos. 6a, 6b, 6c and 6d show, this 33± feet tall senescent (“old”) Coast Live Oak tree grows off-site, 200± feet northwest of the center line of the proposed Golden Valley Road (between Newhall Ranch Road and western boundary of VTTN 060258). This tree has two trunks, measuring 48 and 18.4 inches in diameter. Therefore, this oak is not heritage tree according to the OTO because only one of the two trunks measured more than 23 inches in diameter; the second trunk was only 18.4 inches in diameter. The crown of this tree is asymmetrical. This old, diseased, structurally weakened oak tree was assessed to be in fair condition due to extensive trunk degradation caused by heart rot and borers.

O-7: As Photo Plate Nos. 7a, 7b, 7c and 7d show, this 30± feet tall senescent (“old”) Coast Live Oak tree grows northeasterly of a rubbish area. This tree has three trunks measuring 46.3, 40.0 and 21.3 inches in diameter. Therefore, according to the OTO, this oak is a “heritage oak tree.” This tree will not be impacted during development. Instead, it will be preserved *in situ* onsite in Open Space Lot # 121. The crown of this tree is asymmetrical. This old tree was assessed to be in a poor condition due to the presence of borers and unsound trunk structure (see Photo Plate Nos. 7c and 7d).

O-8: As Photo Plate Nos. 8a, 8b and 8c show, the 12± feet tall Tucker’s (scrub) Oak (*Quercus john-tuckeri*) specimen grows near the toe of a steep northwest facing slope in school site Lot No. 115. The crown of this oak is irregularly shaped. This mature scrub oak was assessed to be in poor condition due to degraded/weakened root structure and extensive areas of dead branches and leaves.

Oak Specimen Appraisal Results

At the request of the City’s Arborist, Mr. Wayne Smith, the value of the each of the eight oaks of the assessment was appraised using the 9th Edition of the Guide (WC-ISA, 2000). The trunk formula method, described in the International Society of Arboriculture (ISA), 2000 *Workbook Guide for Plant Appraisal*, was used to appraise the value of the each of the eight oaks of the assessment. Copies of the *Trunk Formula Method Work Sheets*, showing the appraisal calculation, for each of the eight oaks of the assessment, are provided in Appendix D. The methods for “filling out” the Appendix D appraisal work sheets, and for determining the appraised value of the eight oaks of the assessment, are described below.

Item No. 1: Species

The scientific genus and species names are provided for all eight oaks of VTTN 060258. Oak identifications were primarily based on Hickman, 1993 and Pavlik et al, 1991. The scientific and common names are both listed on the eight Appendix D *Trunk Formula Method Work Sheets*.

Item No. 2: Condition

In the *Guide for Plant Appraisal* (9th Edition), the condition of a tree depends on its *Structural Integrity* (is the oak specimen safe?) and *Health* (is the value of the oak specimen seriously affected by diseases or injury?).

In judging the condition of the eight oaks identified on VTTN 060258 the *Structural Integrity* and *Health* of the following tree structures were assessed when possible and as appropriate:

- roots (structure and health; rated from 2 to 8),

- trunk (structure and health; rated from 2 to 8),
- scaffold branches (structure and health; rated from 2 to 8),
- smaller branches (health only; rated from 1 to 4), and
- foliage (health only; rated from 1 to 4).

Each factor (structure and health) was rated on scale from 1 (poor condition, extreme problems) to 4 (excellent condition, no apparent problems). Total points were divided by 32 (total points possible) and multiplied by 100 to obtain **Condition Rating**. Table 2 provides condition rating field data for each of the eight oaks assessed. In addition, as required by the City's *Oak Tree Preservation Ordinance*, the health of each oak specimen appraised was also assigned a value of A-D: "A" for outstanding "B" for good, "C" for average and "D" for below average. The details of these ratings are documented on Table 1. As shown on Table 1, oaks O-1, O-6, O-7 and O-8 received average and below average ratings due to such factors as infestation with borer beetles and galls, the presence of extensive heart rot, etc.

Item No. 3: Trunk Circumference/Diameter

For the purpose of appraisal, the size of an oak is most commonly expressed by its trunk diameter (caliper) in inches. Trunk diameter is used to compute the cross-sectional trunk area of the oak specimen, assuming the trunk perimeter to be circular. The height at which the trunk diameter is measured depends on its size. Tree trunk diameters were measured at an appropriate distance above grade with a 10m Forestry Suppliers, Inc. metric steel diameter tape calibrated in inches and meters.

NOTE: As recommended by the 2000 *Workbook Guide for Plant Appraisal* the **dbh** (4.5± feet above ground) of the Coast Live Oak trees were measured along the center of the trunk axis of the trunk so the height is the average of the shortest and longest sides of the trunk.

Item No. 4: Location

The location rating of a tree considers the *Site* of a property, the tree's functional and aesthetic *Contributions* and the *Placement* of the tree in the landscape of the property it grows on. The location rating is made up by calculating the average of the value of each of the following three factors:

- site,
- contribution, and
- placement.

The rating for each of these three factors ranges from 10 to 100% and the three factors were averaged together to determine the overall *Location Rating*. In appraising the value of the onsite trees, the standard methods established by the *Council of Tree and Landscape Appraisers* (CTLA, 1986) dictate that the current use of the property be considered in the evaluation.

The average *Location Rating* was determined to be 40% for Oak O-6; 47% for Oaks O-3, O-4, O-5, O-7 and O-8 and 73% for Oaks O-1 and O-2.

The reasons for the assignment of a low *Location Rating* are detailed below.

Site

The value of a Site is expressed by relative market value within the area in which the site is located. The relative site value of VTTN 060258 is estimated to be high (80%) due to the high value of the properties in the vicinity.

Table 2: Condition Rating Field Data

Oak Number	Oak Species	roots: structure (1-4)	roots: health (1-4)	trunk structure (1-4)	trunk: health (1-4)	scaffold branches: structure (1-4)	scaffold branches: health (1-4)	small branches and twigs: health (1-4)	foliage and/or buds: health (1-4)	CONDITION RATING*
1	<i>Quercus agrifolia</i>	1	2	3	3	3	3	2	2	59%
2	<i>Quercus agrifolia</i>	3	3	3	3	4	4	3	2	78%
3	<i>Quercus agrifolia</i>	3	3	3	3	3	3	3	3	75%
4	<i>Quercus agrifolia</i>	4	4	4	4	4	4	4	4	100%
5	<i>Quercus agrifolia</i>	4	4	4	4	4	4	4	4	100%
6	<i>Quercus agrifolia</i>	3	3	1	1	3	2	2	2	53%
7	<i>Quercus agrifolia</i>	1	1	2	2	1	1	2	2	38%
8	<i>Quercus john-tuckeri</i>	2	2	1	2	1	1	1	2	38%

* = Total points were divided by 32 (total points possible) and multiplied by 100 to obtain **Condition Rating**: 0-69% = fair; 70-79% = moderate; 80-89% = good; 90-100% = excellent.

Contribution

Functional and aesthetic contributions of a plant influence its contribution value.

Contribution value was determined to be very low (20%, oak O-6 and 30%, oaks O-3, O-4, O-5, O-7 and O-8) and average (70% for Oaks O-1 and O-2).

In addition, to Contribution Rating, as required by the City's *Tree Preservation Ordinance*, the aesthetic quality of each tree appraised was also assigned a value of A-D: "A" for outstanding "B" for good, "C" for average and "D" for below average. This rating is documented on Table 1 of this report.

Placement

The placement of the tree on a parcel determines how effective it is in providing its functional and aesthetic attributes. The placement rating was determined to be average (80%) for naturally distributed/grown Oaks O-1, O-2, O-6 and O-8 and very low (50%) for oaks O-3, O-4 and O-5. Although, naturally distributed/grown, O-7 was also rated at 50% since it has been impacted and modified by past land uses (see Photo Plate Nos. 7-1 and 7-2).

Item No. 5: Species Rating

A *species rating factor* is only used in the "Trunk Formula Method." Most trees are almost the same price in the same size box, but they vary in how large they are in the same size box. The WC-ISA has provided a *species rating factor* in Table 12 (Western Chapter-ISA Species Classification) of their 1992 booklet entitled *Species Classification and Group Assignment*. The *species rating factor* equates to a median percentage for that species in the area in which the specimen is being evaluated. It is left to the appraiser to raise or lower the *species rating factor* by 10% if he/she feels that is justified. When provided in the *Species Classification and Group Assignment* booklet the *species rating factor* for each of the two oak species present on VTTN 060258 was provided under Item No. 5 of *Trunk Formula Work Sheet*.

Table 12, of the *Species Classifications and Group Assignment* booklet, did not provide a species rating factor for Tucker's Oak. Therefore, because this oak is a shrub, we assigned the lowest of species rating factor listed for another species of oaks and decreased that value by 10%.

The *species rating factor* was used to adjust the *Basic Value* of each assessment oak.

Item No. 6: Replacement Tree Size (Diameter)

The Replacement Tree Size (TA_R) is the trunk area of the commonly available transplantable tree. The replacement tree size provided on Table 12 of the *Species Classifications and Group Assignment* booklet was used to calculate TA_R .

Item No. 7: Replacement Tree Cost

The Replacement Tree Cost is the cost of a tree of replacement size.

Item No. 8: Installation Cost

The Installation Cost is a cost to install a tree of Replacement Tree Size.

Item No. 9: Installed Tree Cost

The Installed Tree Cost is the sum of Replacement Tree Cost and Installation Cost.

Item No. 10: Unit Tree Cost

The Unit Tree Cost is the cost per unit square inch of a trunk area. The unit tree cost provided on Table 11 of the *Species Classifications and Group Assignment* booklet was used to determine the unit tree cost.

Item No. 11: Appraised Trunk Area

The value of a tree is based on trunk area. Area can be calculated from the trunk radius, diameter or circumference. Trunk diameters acquired from the oak specimens present on VTTN 060258 were obtained by measuring each oak at breast height: 4.5± feet above the ground. Trunk diameters were measured with a 10m Forestry Suppliers, Inc. metric steel diameter tape that enabled procurement of the circumference of each tree as a diameter. The trunk area was calculated in square inches.

Trees Less Than 30 Inches in Trunk Diameter

For specimens less than 30 inches in diameter the Trunk Area was computed using the following formula: Trunk Area (TA) = 0.785d²

Trees Larger Than 30 Inches in Trunk Diameter

For trees larger than 30 inches in diameter the *Adjusted Trunk Area* was used instead of the trunk area: ATA = -0.335 d² + 69.3d -1087.

Item No. 12: Appraised Tree Trunk Increase

To obtain the Appraised Tree Trunk Increase, Replacement Tree Size (Item No. 6) was subtracted from Appraised Trunk Area (Item No. 11).

Item No. 13: Basic Tree Cost

To obtain Basic Tree Cost, Appraised Tree Trunk Increase (Item No. 12) was multiplied by Unit Tree Cost (Item No. 10) and Installed Tree Cost (Item No. 9) was added to the result.

Item No. 14: Appraised Value

The Basic Tree Cost (Item No. 13) was adjusted by Species rating (Item No. 5), Condition rating (Item No. 2) and Location rating (Item No. 4) to obtain Appraised Value of the oak specimen.

Item No. 15

Appraised Value obtained in Item No. 14 was rounded up to the nearest \$100 if appraised value is \$5,000 or more, and rounded up to the nearest \$10 if the appraised value is less than \$5,000.00.

Item No. 16: Appraised Value

Listing of "final" rounded up appraised value of oak specimen.

VI. MITIGATION MEASURES

Based on the results of the Oak assessment of VTTN 060258, it was determined that two Coast Live Oak trees (O-2 and O-6), and one Tucker's (scrub) oak (O-8), will be removed during development of the property. The appraised value of the two Coast Live Oak trees totals \$35,700.00 (\$13,800.00 + \$21,900.00); the appraised value of the Tucker's Oak is \$2,200.00 due to its poor condition rating.

Section 17.17.090, Item I *Conditions* of the City's OTPO requires mitigation for removed trees by "placement of additional trees on the subject property" (City, 2000). Since no replacement ratio, or replacement box size is stipulated by the City's Oak Tree Preservation Ordinance (City, 2000), Mr. Wayne Smith of the City's Urban Forestry Division was contacted on October 26, 2004, to determine what mitigation would be required by the City of Santa Clarita.

According to Mr. Smith (Smith, 2004, pers.comm.), the mitigation for the loss of three oak specimens will involve the following:

- a. **Loss of Two Coast Live Oak Trees:** Purchase \$35,700.00 of Coast Live Oak tree specimens.
The \$27,800.00 could be used to purchase a few large oak trees from a native plant nursery (e.g., Valley Crest Tree Company) and used as street trees and to landscape one or two entry points on the property. The entry point replacement trees should be a combination of 60-inch box or 36-inch box Coast Live Oak trees. The remaining portions of \$35,700.00 must be used to purchase 36-inch box

trees that can be used as street trees, incorporated into any landscape area on VTTN 060258 or Streets "A," "B" and Golden Valley Road, any natural passive open spaces or park that will never be developed, etc. **NOTE:** At least 150 square feet will be required for each replacement oak tree planted.

- b. **Loss of One Scrub Oak:** The single Tucker's (scrub) Oak will be replaced with three 24-inch box scrub oaks. According to Mr. Smith, the replacement scrub oak plants can be comprised of any one, or any combination of the following oaks: *Q. kellogii*, *Q. chrysolepis* and *Q. john-tuckeri*. TLC recommends that the scrub oaks replacement plantings will be installed in the area from which O-8 was removed: slope Lot No. 115. At least 100 square feet will be required for each replacement oak planted.
- c. **Five Oaks Being Retained in Open Space Lot No. 121 of VTTN 060258:** Permanent 5-foot high protective chain-link fencing must be erected around the remaining five Coast Live Oak trees that will not be impacted by development of VTTN 060258. Two or three 4± foot wide openings should be left in the protective fencing to provide access to each tree during performance of any future oak evaluation investigations, if any.
- d. **Dripline and Protected Zone Map:** A map, showing the surveyed location of each oak, its dripline and protected zone (dripline + 5 feet) plotted on grading plan, must be prepared by the project engineer and submitted to the City.
- e. **Map Showing Location of Replacement Plantings:** A map showing specific location, of the areas where mitigation replacement oak plantings will be installed, must be provided by the applicant's engineer and/or landscape architect to the City.
- f. **Mitigation Monitoring and Reporting Plan (MMRP):** An MMRP must be prepared by the project landscape architect and submitted to the City for review and approval to ensure oak mitigations plantings survive for at least five years after installation. The MMRP must specify measurable objective success criteria and a detailed monitoring and reporting schedule.

VII. REFERENCES

- City of Santa Clarita, July 22, 2004, Master Case 03-358, The Keystone Project, Preliminary Comments/Draft Conditions.
- City of Santa Clarita, February 8, 2000, Oak Tree Preservation Ordinance (OTPO).
- Pavlik, Bruce M., Muick, Pamela C., Johnson, Sharon G., Popper, Marjorie, Oaks of California, 1991.
- Roberts, Fred M., Jr., Illustrated Guide to the Oaks of the Southern California Floristic Province, 1995.
- SIKAND Engineering, Planning, Surveying, April 1, 2004, 1 Inch = 100 Feet Scale Map: Vesting Tentative Tract No. 060258, in the City of Santa Clarita, State of California.
- Smith, Wayne, City of Santa Clarita, Urban Forestry Department, October 26, 2004, Personal Communication Regarding City Required Mitigation For Removal of Oak Specimens on VTTN 060258.
- Thomas Leslie Corporation (TLC), April 14, 2004, (Expanded Oak Tree Assessment For) Vesting Tentative Tract No. 060258 (VTTN 060258; Ermine Road).
- Western Chapter-International Society of Arboriculture (WC-ISA), Council of Tree Landscape Appraisers, 2000, Guide for Plant Appraisal, 9th Edition.

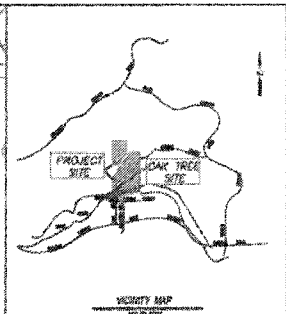
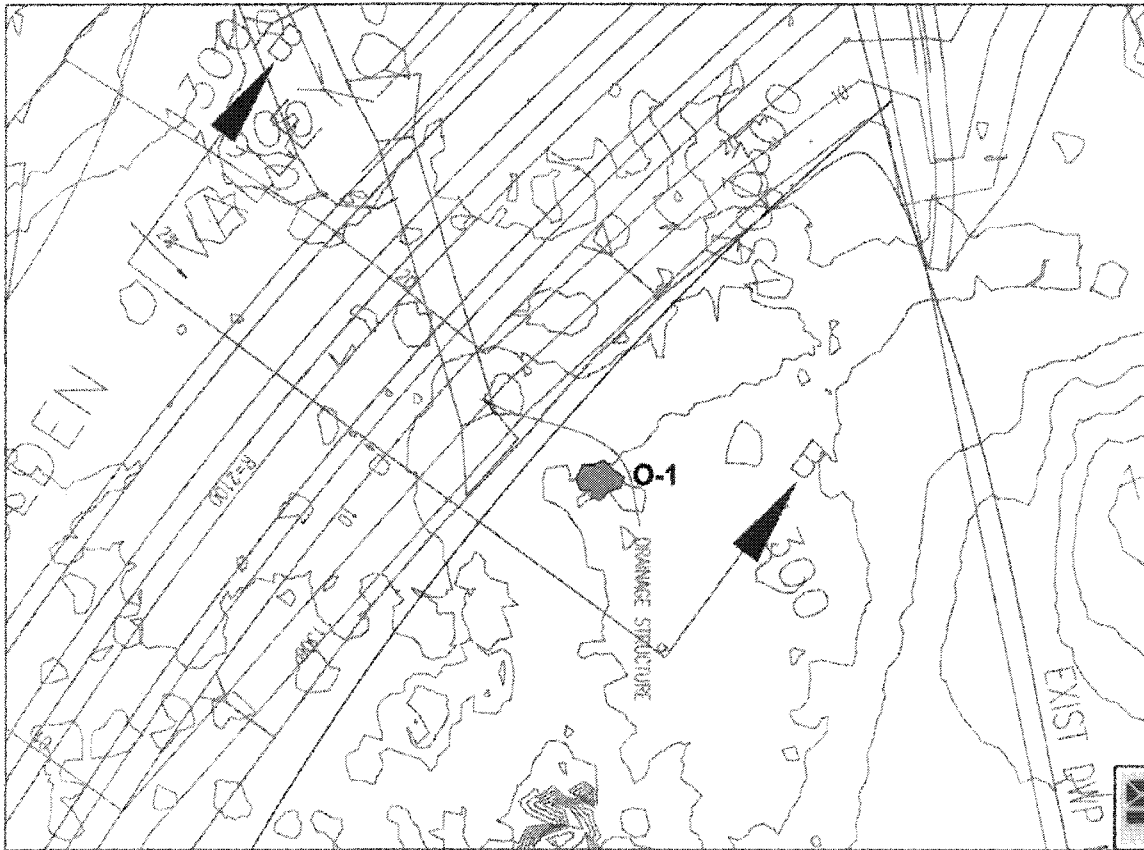
APPENDIX A

OAK TREE LOCATION MAPS

FOR THE OAK TREE ASSESSMENT STUDY AREA INCLUDING

- (1) Vesting Tentative Tract No. 060258 (VTTN 060258).**
- (2) Two off-site roadway construction projects: Streets “A” & “B.”**
- (3) A 200-foot wide “strip” around the boundaries of VTTN 060258 and Streets “A” and “B.”**
- (4) The Golden Valley Road construction project and a 200-foot wide “strip” along the alignment of the future Golden Valley Road.**

SANTA CLARITA, CALIFORNIA

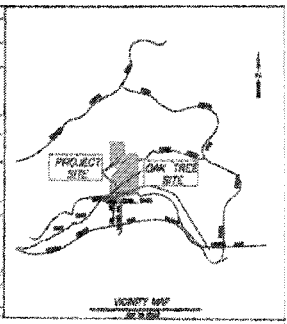
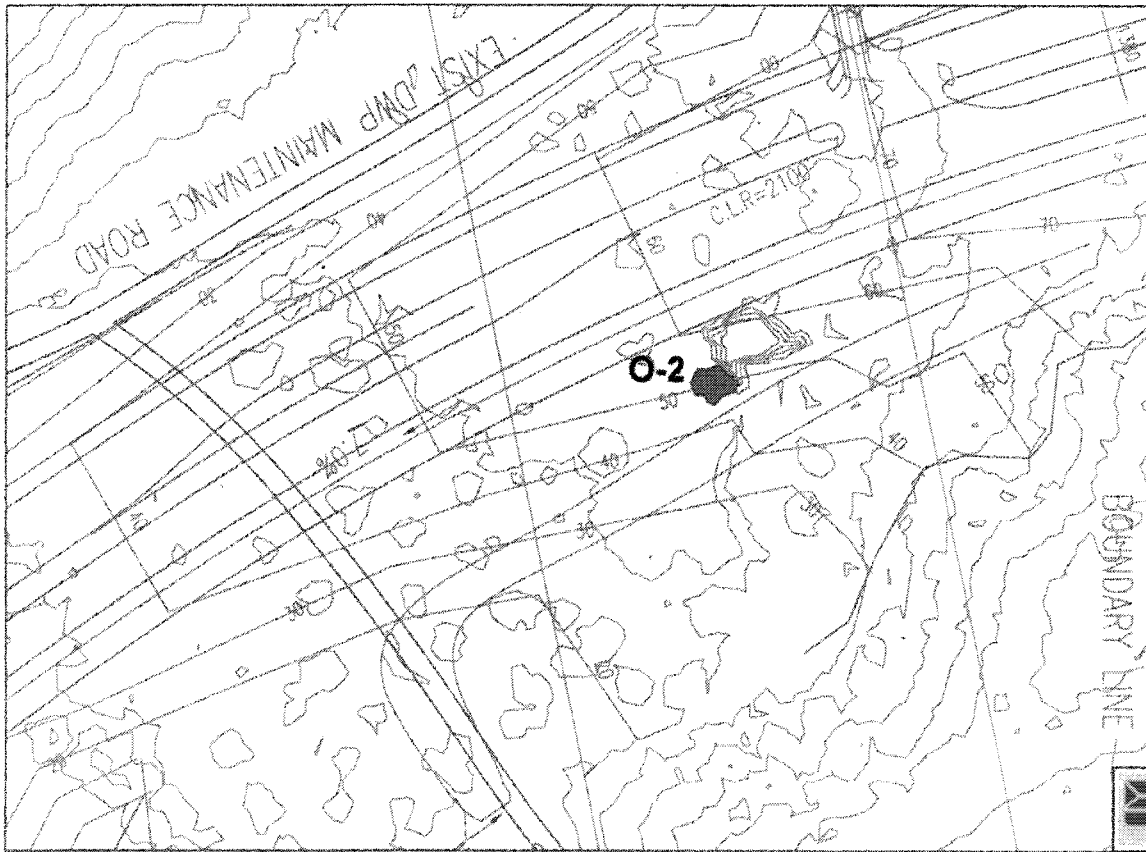


MAP A-1:
Location of
Oak O-1

Color Code:
 Green = No Impact
 (O-1)

SCALE: 1"=50'

10220 Burbank Blvd.
 Van Nuys, CA 91411
 Tel: (818) 787-8500
 Fax: (818) 951-7401
 info@sikand.com

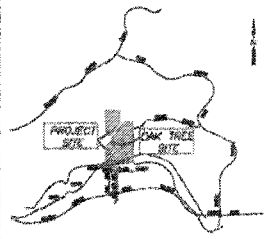
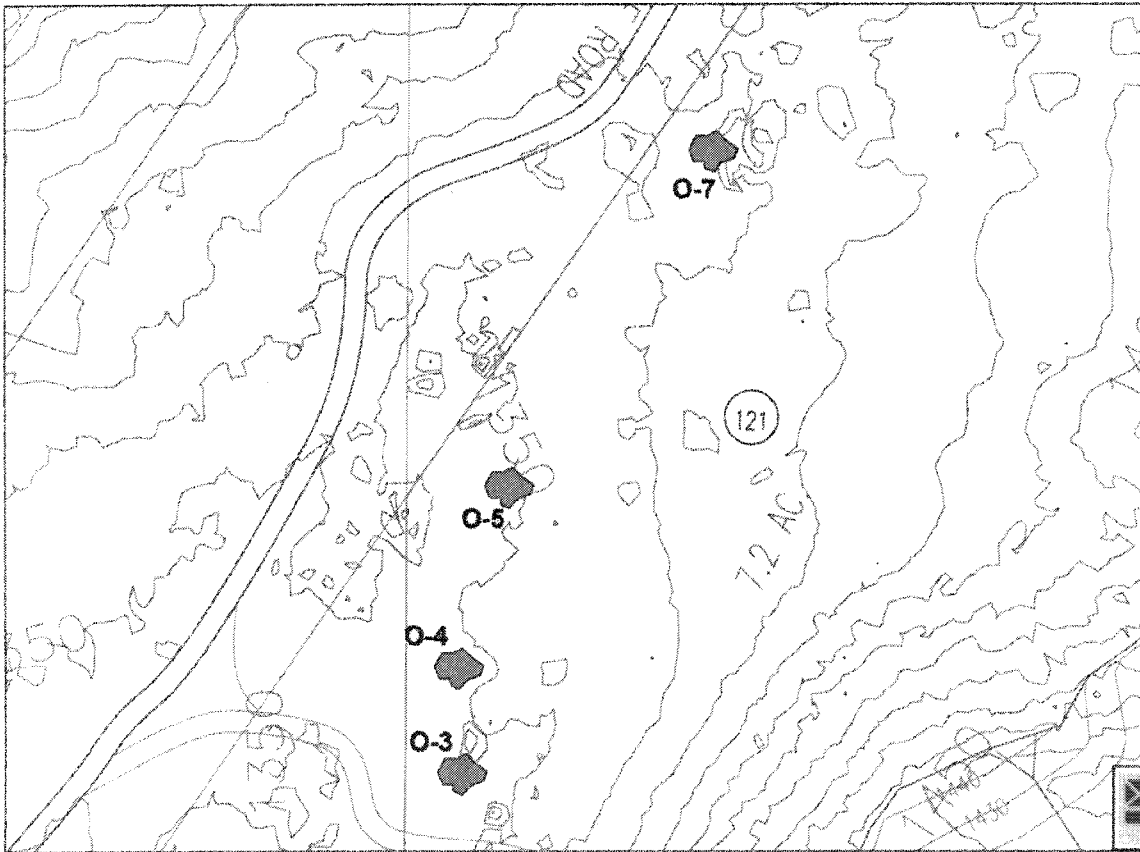


MAP A-2:
Location of
Oak O-2

Color Code:
 Red= Remove
 (O-2)

SCALE: 1"=50'

SIKAND
 15250 Burbank Blvd.
 San Diego, CA 92141
 Tel: (619) 727-9950
 Fax: (619) 901-7451
 info@sikand.com



VICINITY MAP
2012.08.02

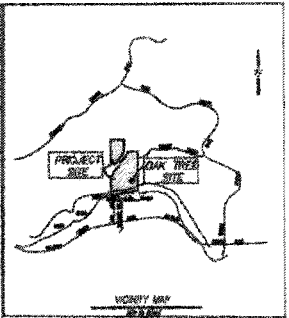
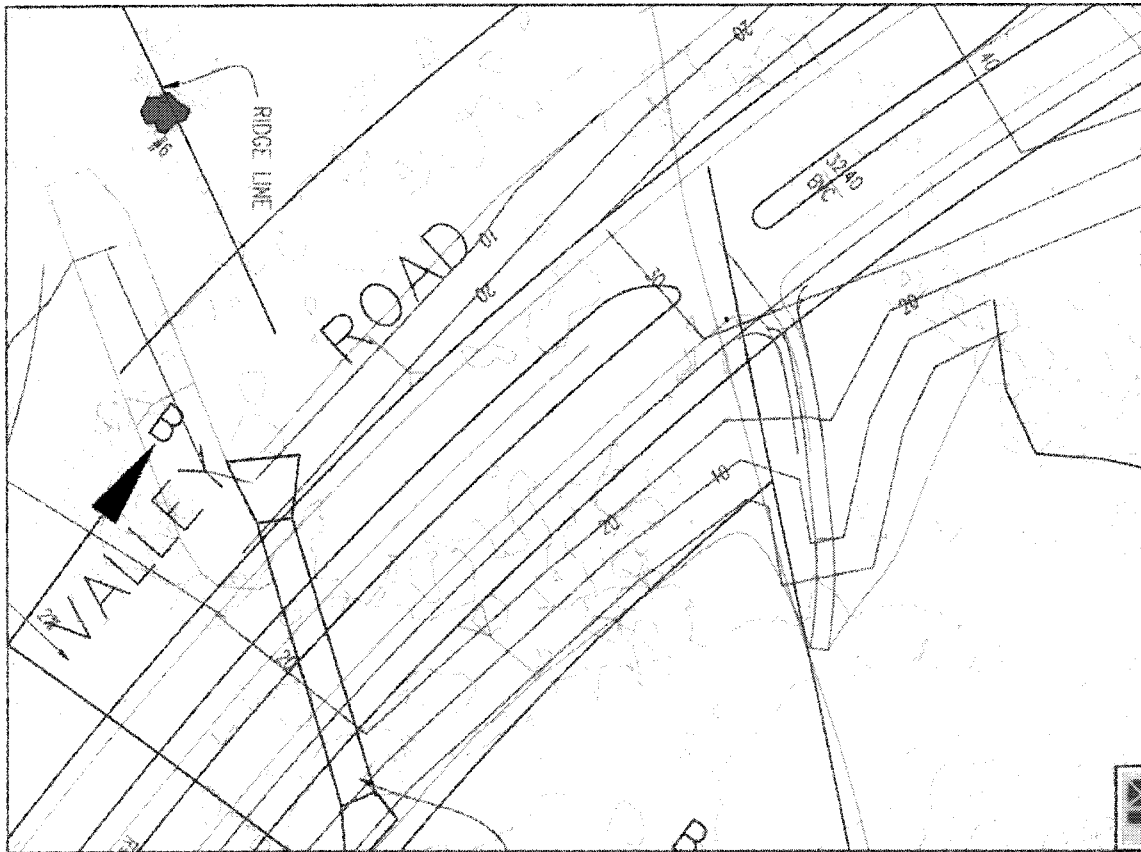
MAP A-3:
Location of
Oaks O-3, O-4
O-5 and O-7

Color Code:
 Green = No Impact
 (O-3, O-4, O-5, O-7):
 Trees being Retained
 in an Open Space

SCALE: 1"=50'

SIKAND
 ENGINEERS ARCHITECTS

13320 Burbank Blvd.
 Fort Worth, TX 76141
 Tel: (817) 707-8800
 Fax: (817) 901-7801
 info@sikane.com



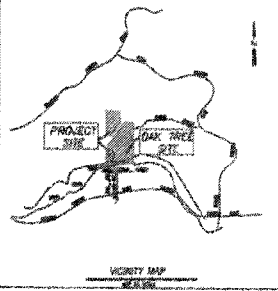
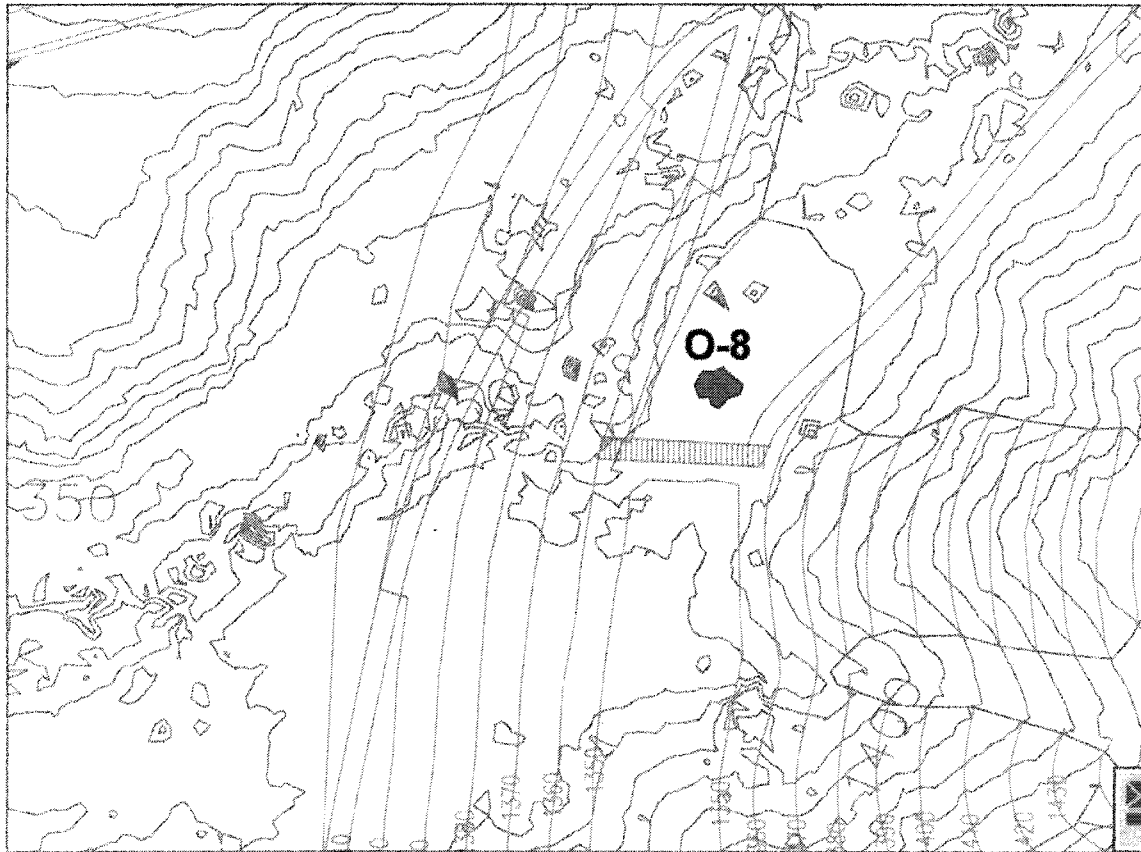
MAP A-4:
Location of
Oak O-6

Color Code:
 Red= Removal
 (O-6)

SCALE: 1"=50'

SIKAND
 CONSULTING ENGINEERS

15280 Sherman Blvd.
 San Diego, CA 92141
 Tel: (619) 597-8880
 Fax: (619) 501-7451
 info@sikand.com



**MAP A-5:
Location of
Oak O-8**

**Color Code:
Red= Remove
(O-8)**

SCALE: 1"=50'

 **SIKAND**
10250 Burbank Blvd
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7461
www.sikand.com

APPENDIX B

PHOTO PLATE NOS. 1-8

FOR THE OAK TREE ASSESSMENT STUDY AREA INCLUDING

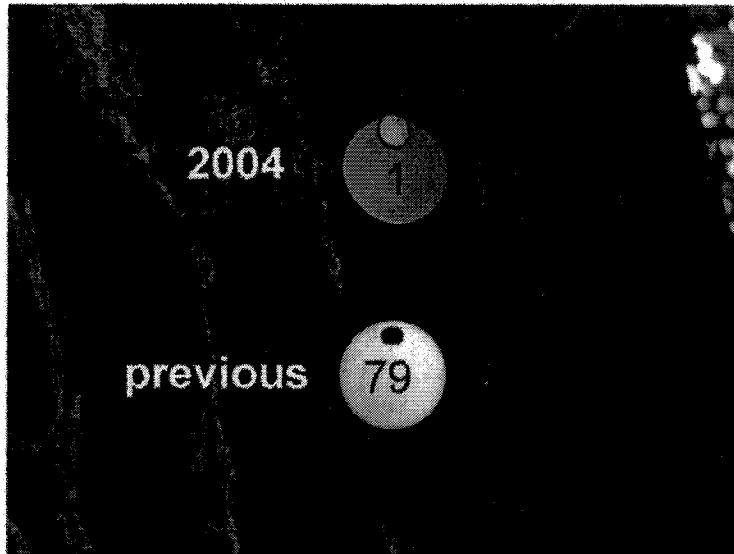
- (1) Vesting Tentative Tract No. 060258 (VTTN 060258).**
- (2) Two off-site roadway construction projects: Streets “A” & “B.”**
- (3) A 200-foot wide “strip” around the boundaries of VTTN 060258 and Streets “A” and “B.”**
- (4) The Golden Valley Road construction project and a 200-foot wide “strip” along the alignment of the future Golden Valley Road.**

SANTA CLARITA, CALIFORNIA

PHOTO PLATE NO. 1-1



- 1a. Easterly view of a Coast Live Oak (*Quercus agrifolia*) tree situated 1,100± feet westerly of the southwest corner of VTTN 060258 and 135± feet southeasterly of the centerline of Golden Valley Road. The approximate location of this oak is identified as O-1 on Figure 2 of this report. A review of the Appendix A Sikand Engineering drawing for the construction of Golden Valley Road shows that O-1 will not be removed by road construction(10/13/04).



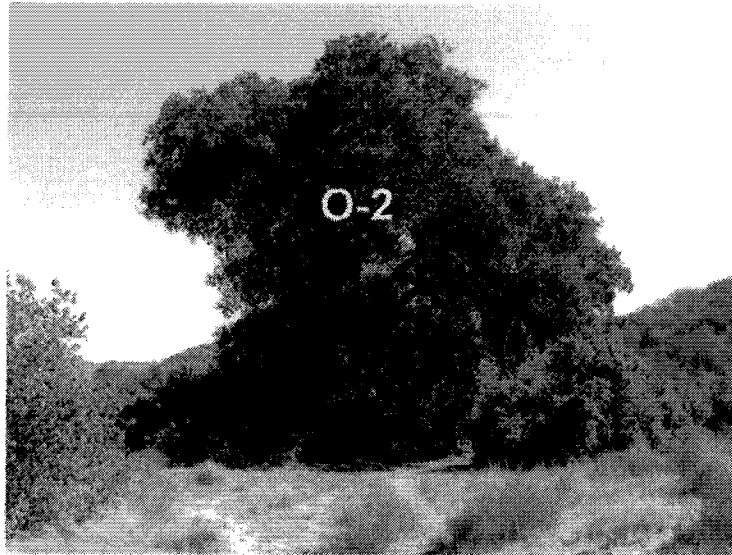
- 1b. Close-up view, of two circular aluminum tags. Tag #79, attached by a galvanized nail, indicates O-1 was part of a previous off-site oak tree assessment study. The bluish aluminum tag #1 was attached to O-1 by TLC biologists on April 9, 2004 (10/13/04).

PHOTO PLATE NO. 1-2



- 1c. Close-up view, of the roots of O-1 that have been exposed by stream erosion. The root structure of O-1 is poor due to extent of root exposure (10/13/04).

PHOTO PLATE NO. 2

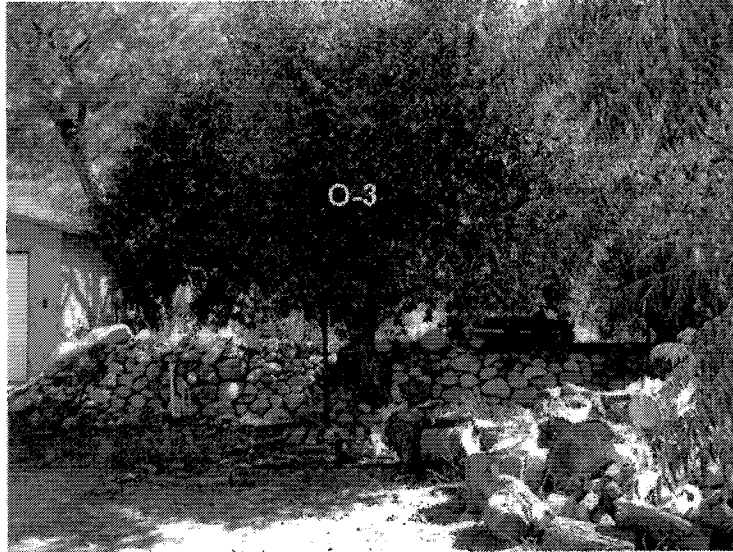


- 2a. Northeasterly view, of a Coast Live Oak tree observed 1,200± feet northwest of the southwest corner of VTTN 060258 and 275± feet west of the western property boundary, along the southeast side of the future alignment of Golden Valley Road. O-2 will be removed by construction of Golden Valley Road. The location of this oak tree is identified as O-2 on Figure 2 and on Appendix A Map A-2 of this report (10/13/04).



- 2b. Close-up view, of the trunk of O-2. Using a DBH tape, the tree trunk was measured to be 29 inches in diameter (10/13/04).

PHOTO PLATE NO. 3



Easterly view, of Coast Live Oak tree #3 (O-3). This tree will not be removed by development activities proposed by Vesting Tentative Tract No. 060258 or construction of Golden Valley Road. The tree has been previously unprofessionally pruned (10/13/04).

PHOTO PLATE NO. 4



4a. Northwesterly view, of Coast Live Oak tree #4 (O-4). This tree will not be removed by construction activities (10/13/04).



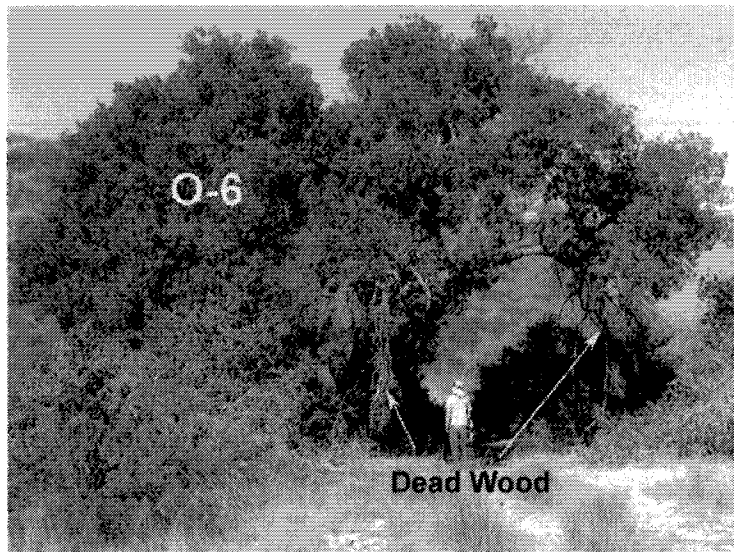
4b. Close-up view, of the trunk of Coast Live Oak tree #4 (O-4). The pink surveyor's tape is near "breast height" of this specimen (10/13/04).

PHOTO PLATE NO. 5

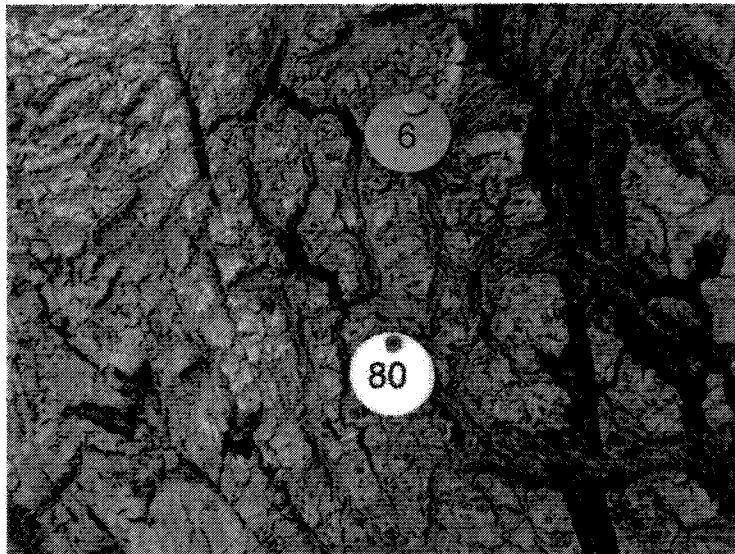


Northwesterly view, of Coast Live Oak tree #5 (O-5). This tree will not be removed by construction activities (10/13/04).

PHOTO PLATE NO. 6-1

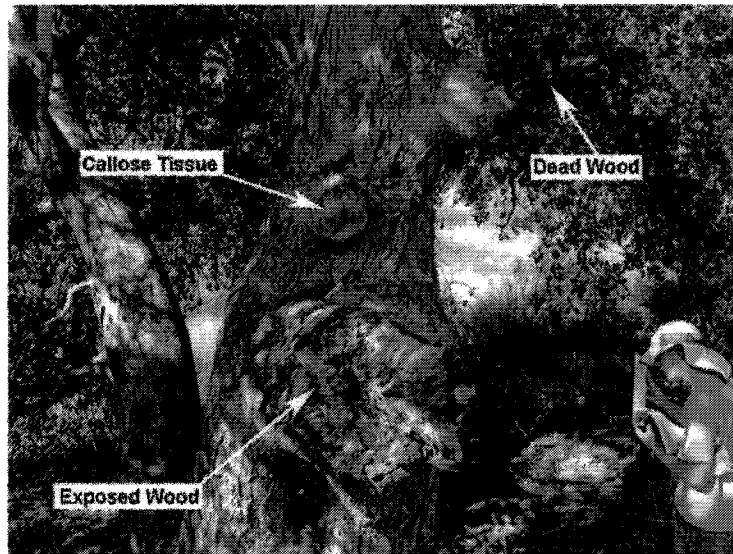


- 6a. Northwesterly view, of Coast Live Oak tree O-6 (see Figure 2). O-6 is situated approximately 1,500± feet northwesterly of the southwestern corner of VTTN 060225, 200± feet northwest of the centerline of Golden Valley Road. A review of the Appendix A Sikand Engineering Map A-4 for the construction of Golden Valley Road shows that this tree will be removed by road construction (10/13/04).

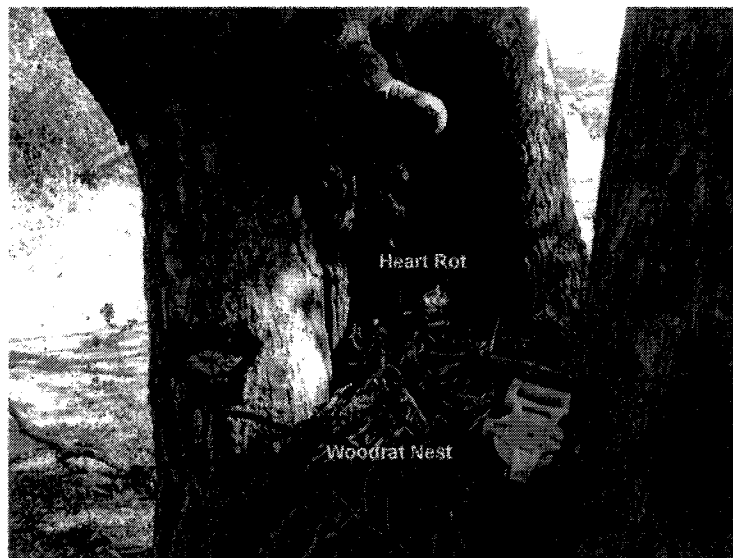


- 6b. Close-up view, of two circular aluminum tags. Tag #80, attached by a galvanized nail, indicates O-6 was part of a previous off-site oak tree assessment study. The bluish aluminum tag #6 was attached to O-6 by TLC biologists on April 9, 2004 (10/13/04).

PHOTO PLATE NO. 6-2

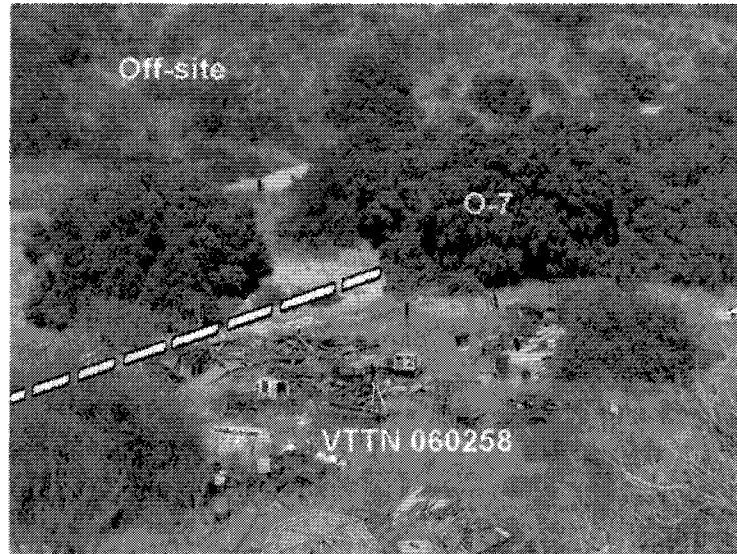


- 6c. Close-up view of the interior wood of oak O-6, exposed by a branch breaking off. The dead wood and callose tissue observed on this tree identify the points where other branches have fallen off recently and in the past. The structure of O-6 is very poor (10/13/04).



- 6d. Close-up view, of the extensive heart rot that has degraded the trunk of O-6. In addition, this photograph also shows a Dusky-footed Woodrat (*Neotoma fuscipes*) nest situated at the junction of the large branches of O-6 (10/13/04).

PHOTO PLATE NO. 7-1



- 7a. Northwesterly view, of Coast Live Oak tree #7 (O-7). The dashed line on this photograph indicates the western boundary of VTTN 060258. This tree will not be removed by construction activities (10/13/04).



- 7b. Close-up view of the base of the three trunks of Coast Live Oak tree O-7. This photograph documents, the presence of bark abnormalities such as cracks, swollen and sunken areas, mechanical injury, etc. (10/13/04).

PHOTO PLATE NO. 7-2



7c. Southeasterly view, of a large lateral trunk of O-7 being supported by a railroad tie. The structure of this lateral trunk is unsound (10/13/04).

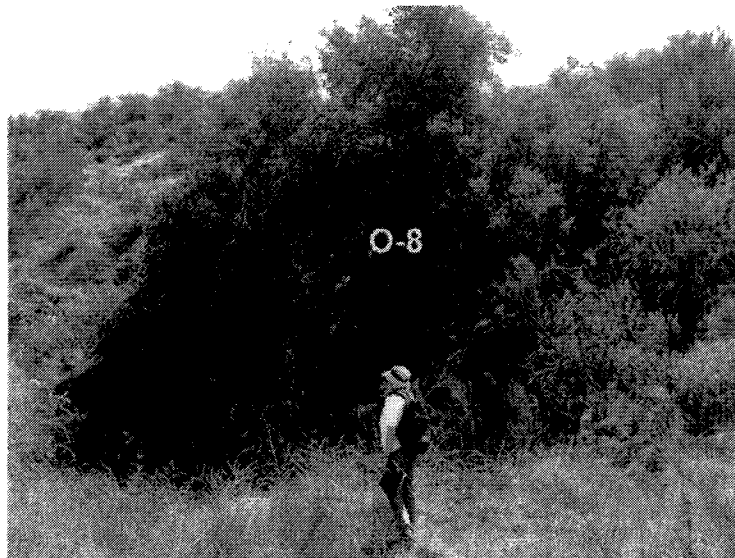


7d. Northeasterly view of another large lateral trunk of O-7 being supported by a railroad tie. The structure of this trunk is also unsound (10/13/04).

PHOTO PLATE NO. 8-1



8a. Southern view, of a Tucker's (scrub) Oak (*Quercus john-tuckeri*) specimen identified as O-8. This is the only scrub oak identified on VTTN 060258 (10/13/04).



8b. Close-up view of scrub oak O-8 pictured above in 8a. A review of the development site plan proposed by VTTN 060258 shows that this scrub oak will be removed during grading of Slope Lot No. 115 (10/13/04).

PHOTO PLATE NO. 8-2



- 8c. Close-up view, of the multi-trunk of the only Scrub Oak growing on VTTN 060258: O-8. The roots of this shrub have been exposed and degraded/weakened by burrow excavation activities of the California Ground Squirrel (*Spermophilus beecheyi*). In addition, this photograph documents the presence of extensive dead branches and leaves (10/13/04).

APPENDIX C

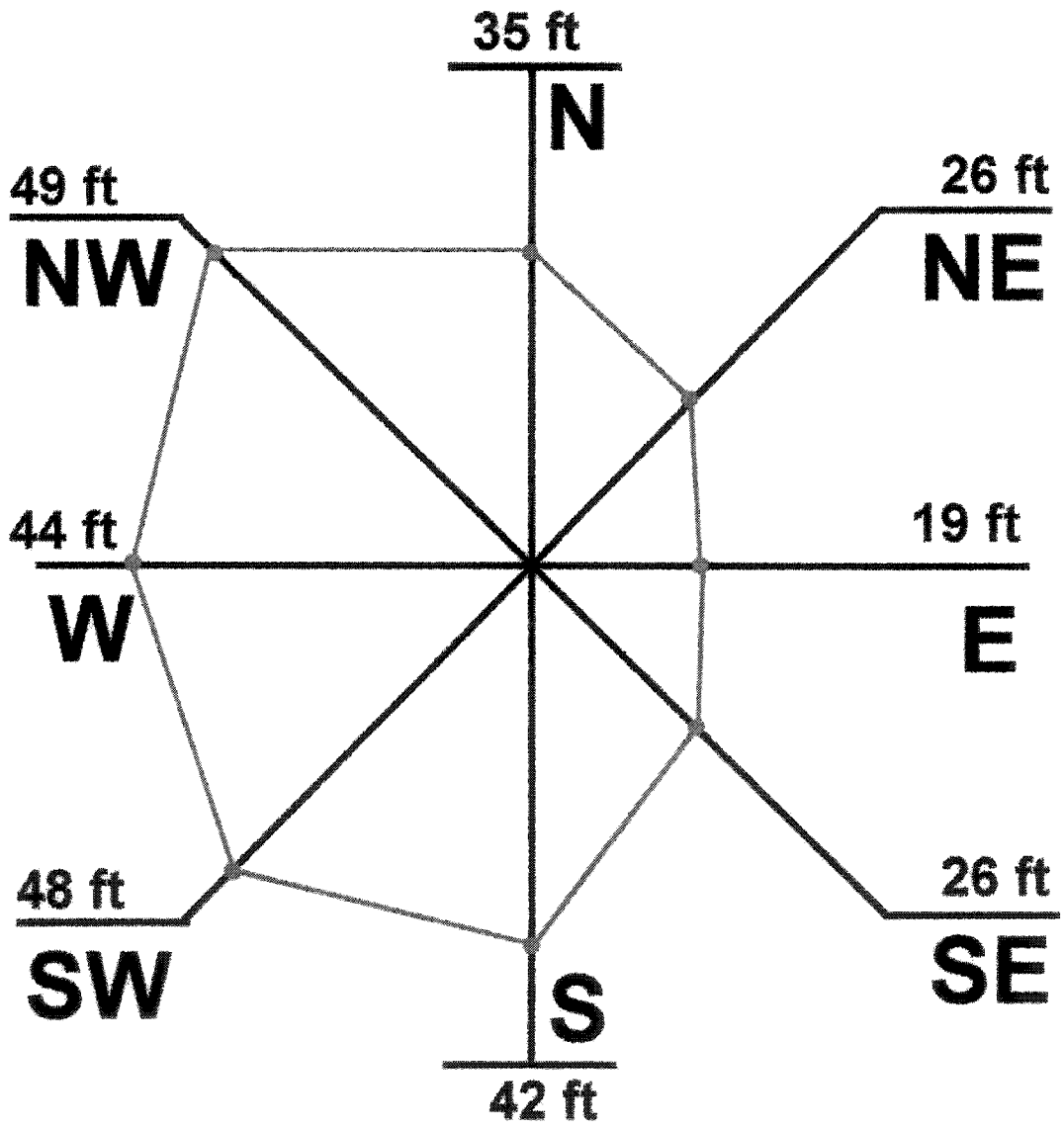
SCHEMATIC REPRESENTATION OF OAK CANOPY SHAPE OF THE EIGHT ASSESSED OAKS

FOR THE OAK TREE ASSESSMENT STUDY AREA INCLUDING

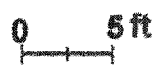
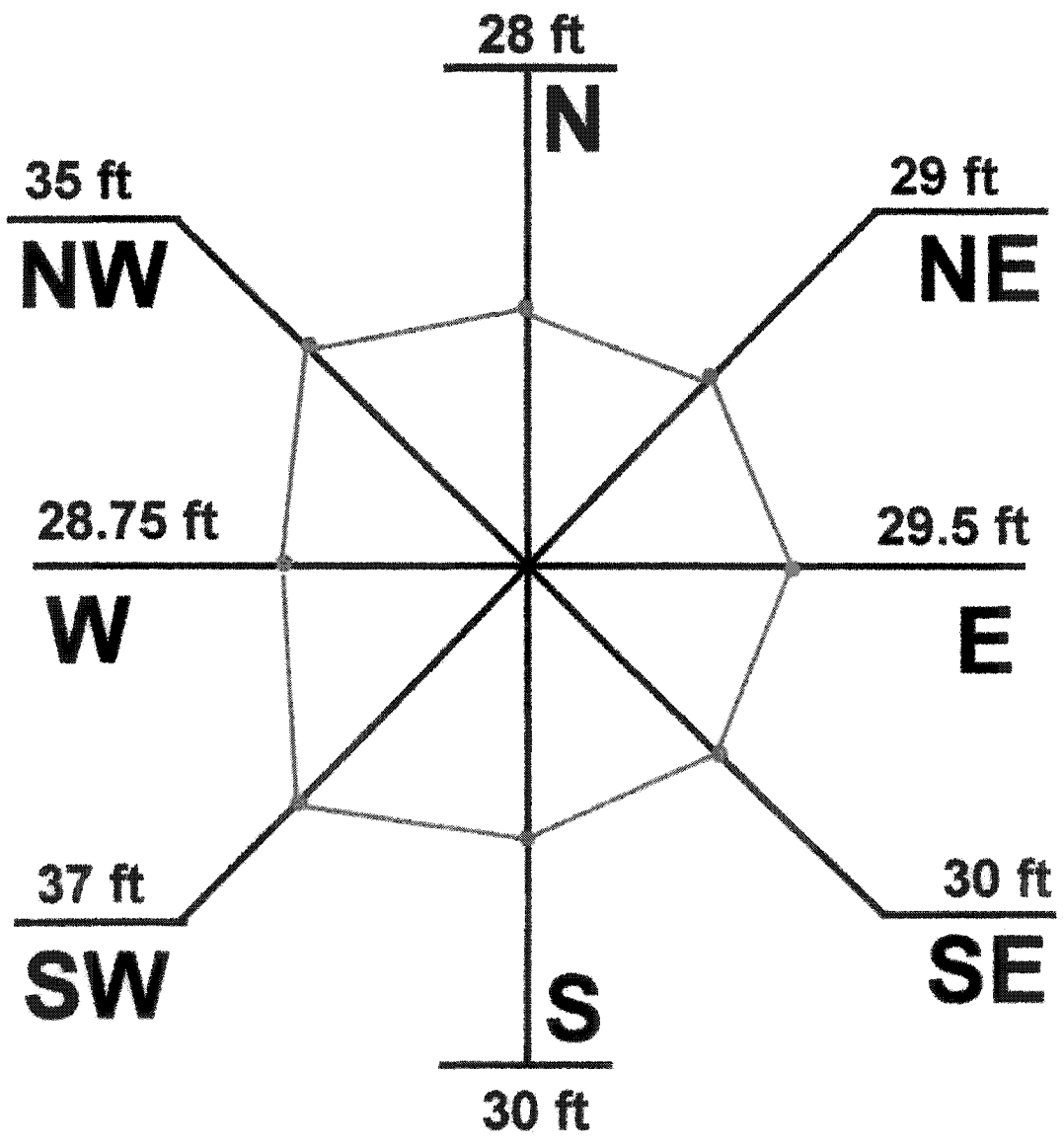
- (1) Vesting Tentative Tract No. 060258 (VTTN 060258).**
- (2) Two off-site roadway construction projects: Streets "A" & "B."**
- (3) A 200-foot wide "strip" around the boundaries of VTTN 060258 and Streets "A" and "B."**
- (4) The Golden Valley Road construction project and a 200-foot wide "strip" along the alignment of the future Golden Valley Road.**

SANTA CLARITA, CALIFORNIA

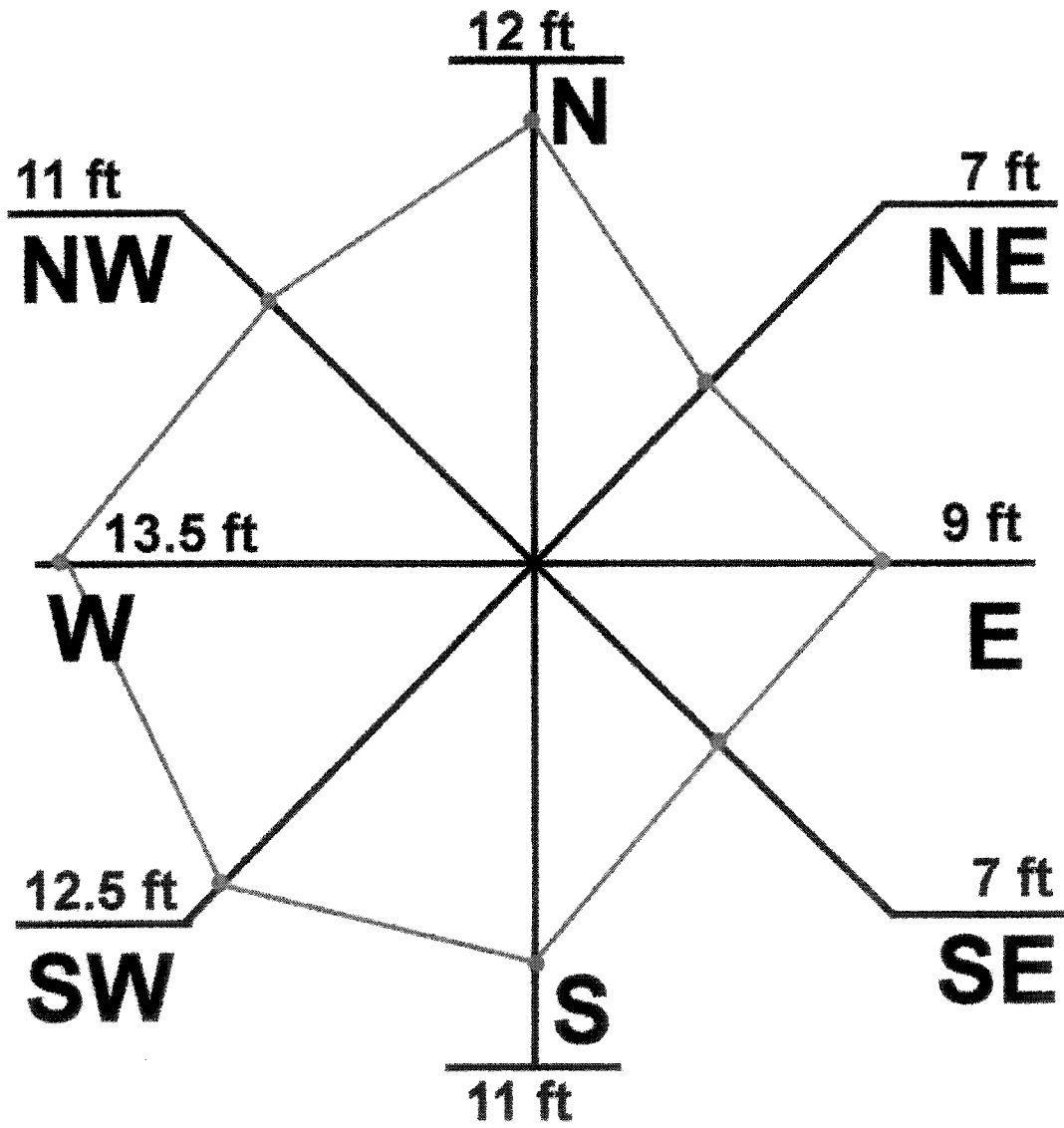
#1



#2

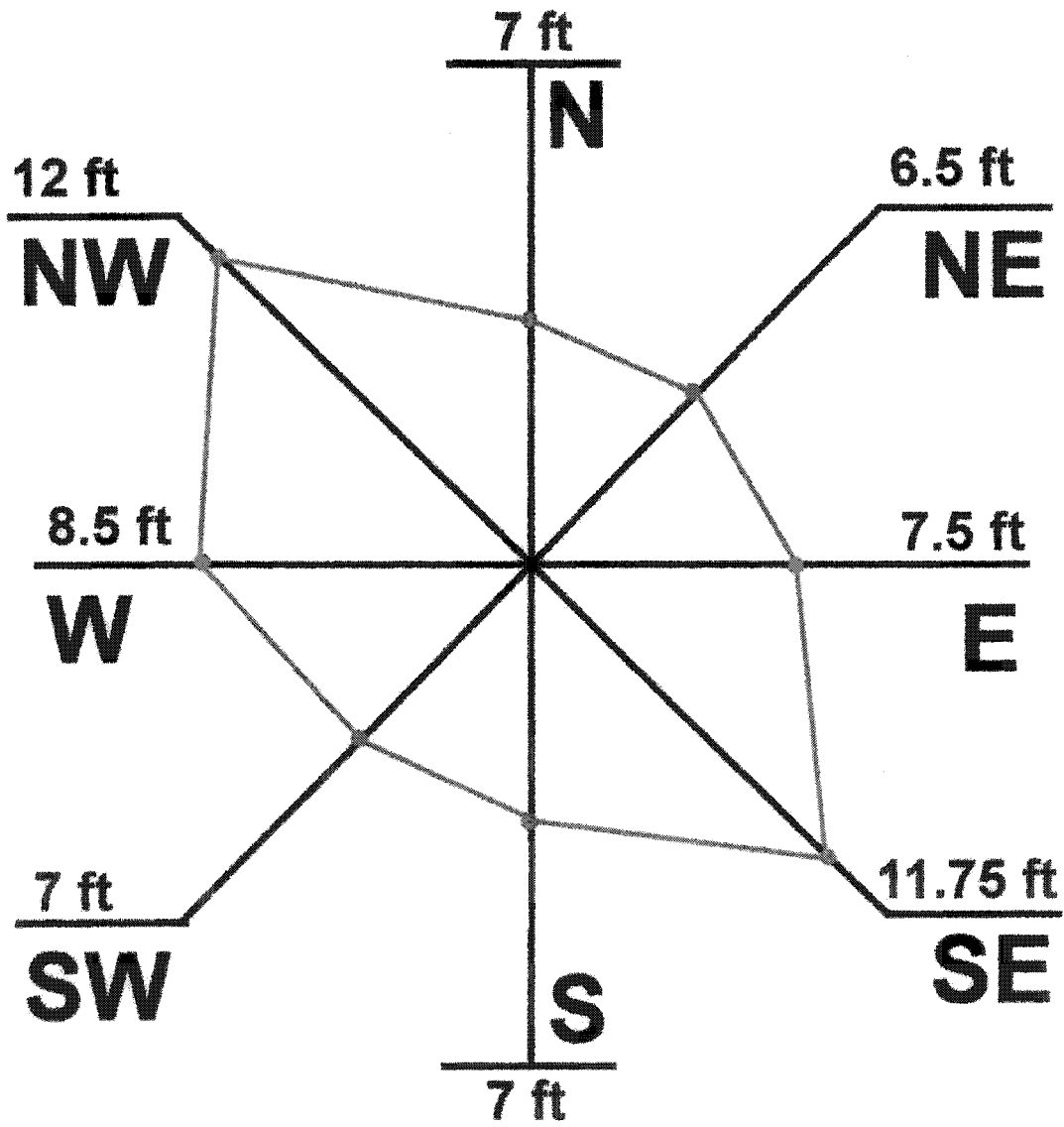


#3



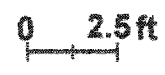
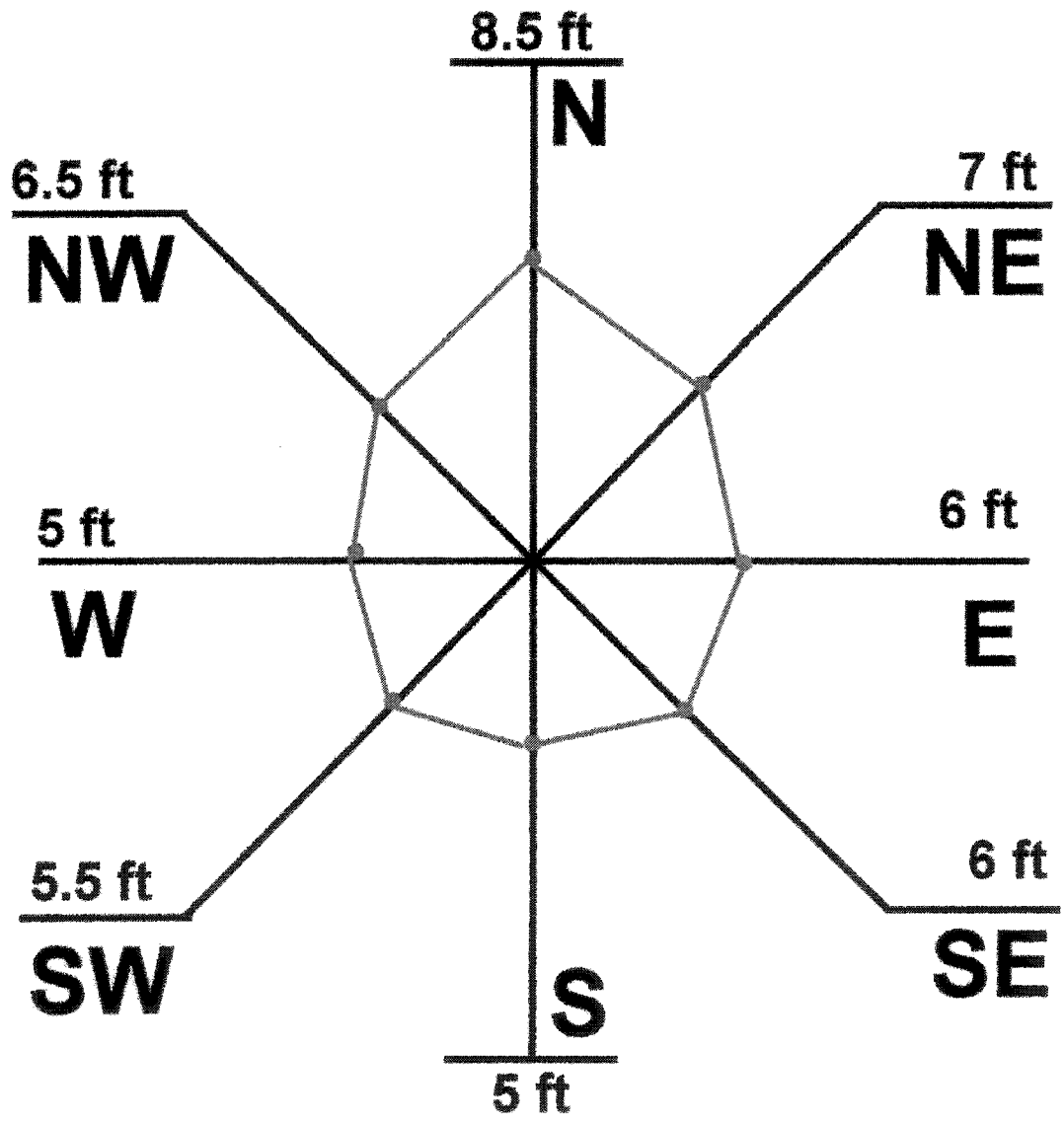
0 2.5 ft

#4

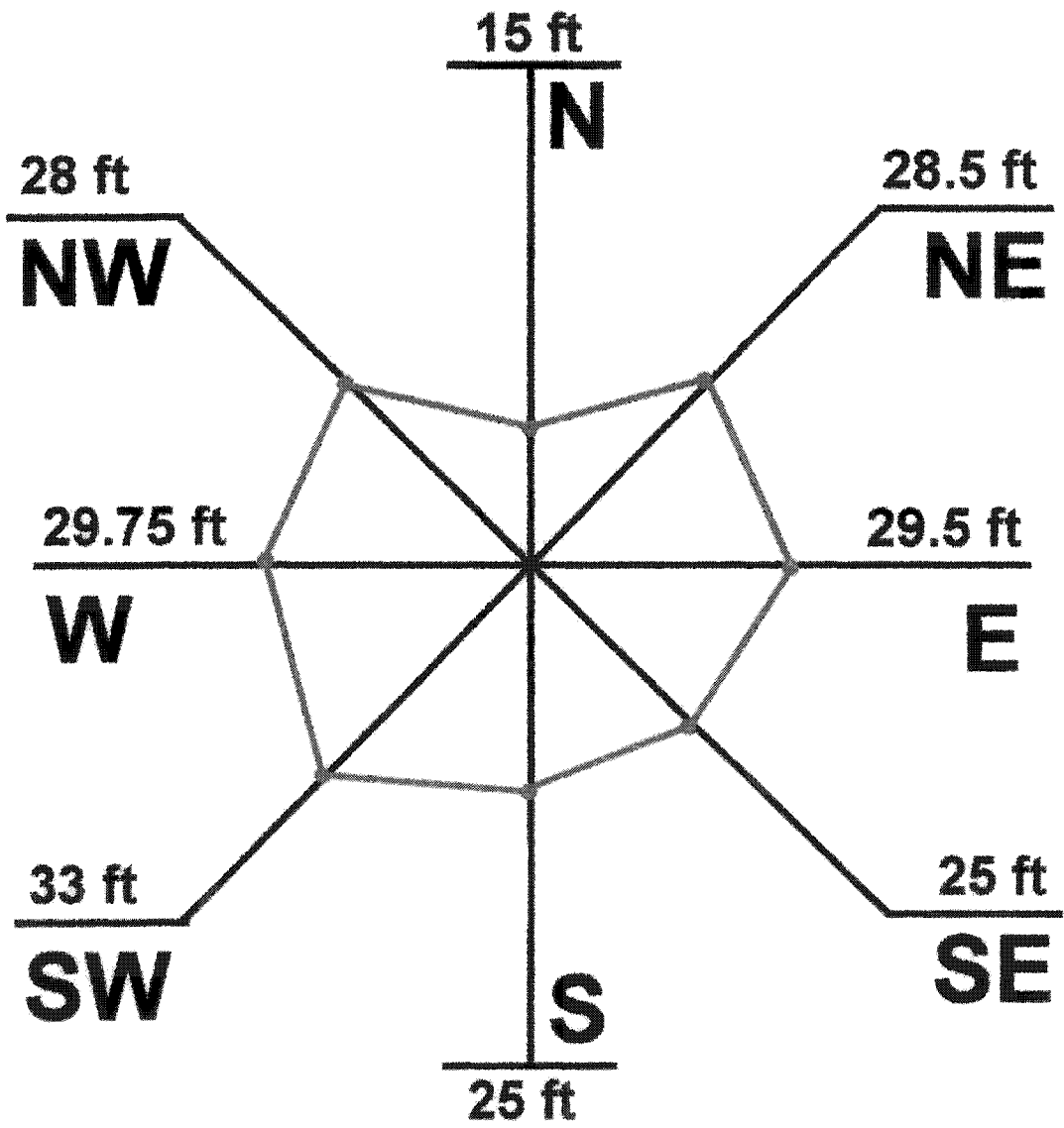


0 2.5 ft

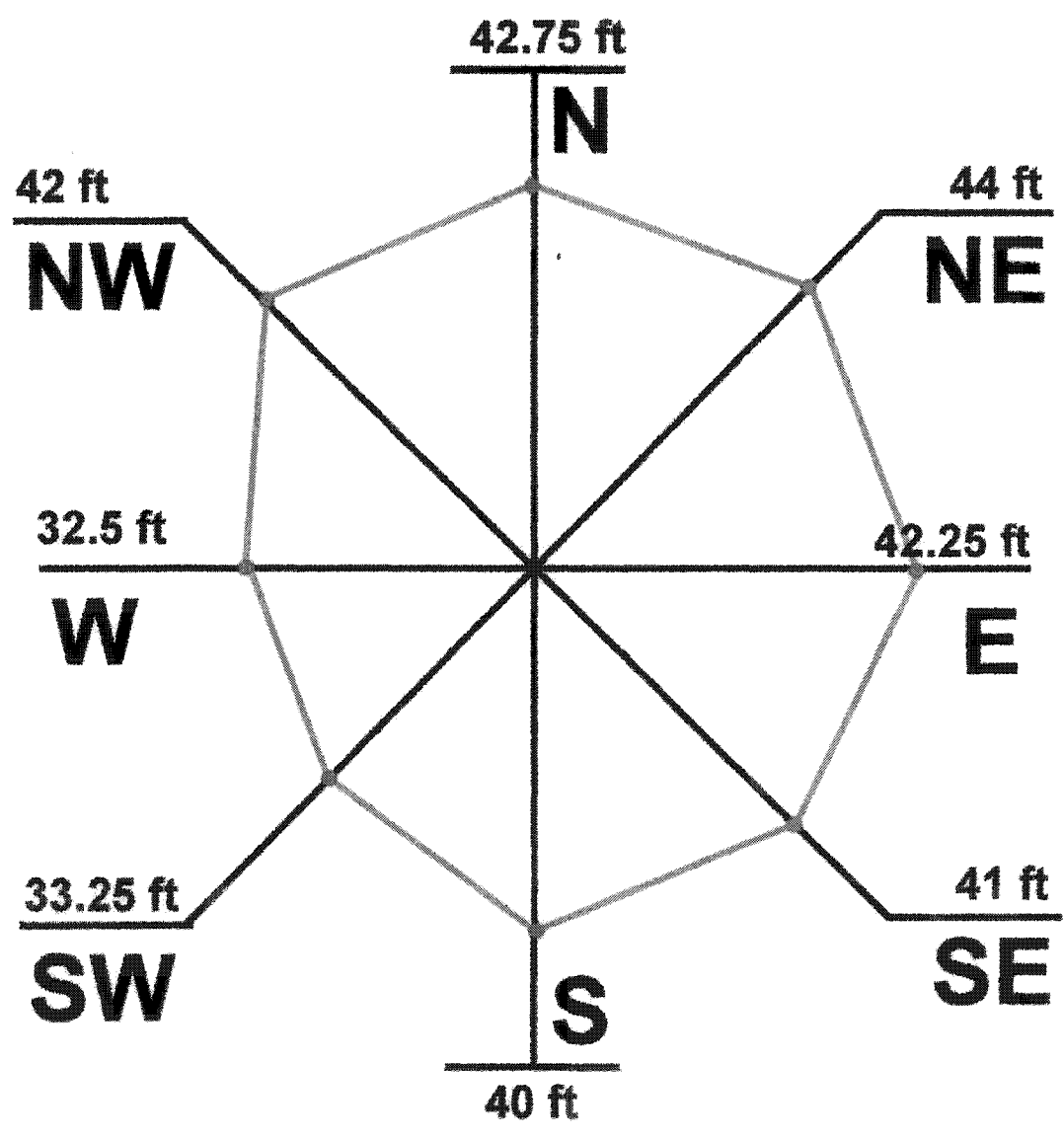
#5



#6

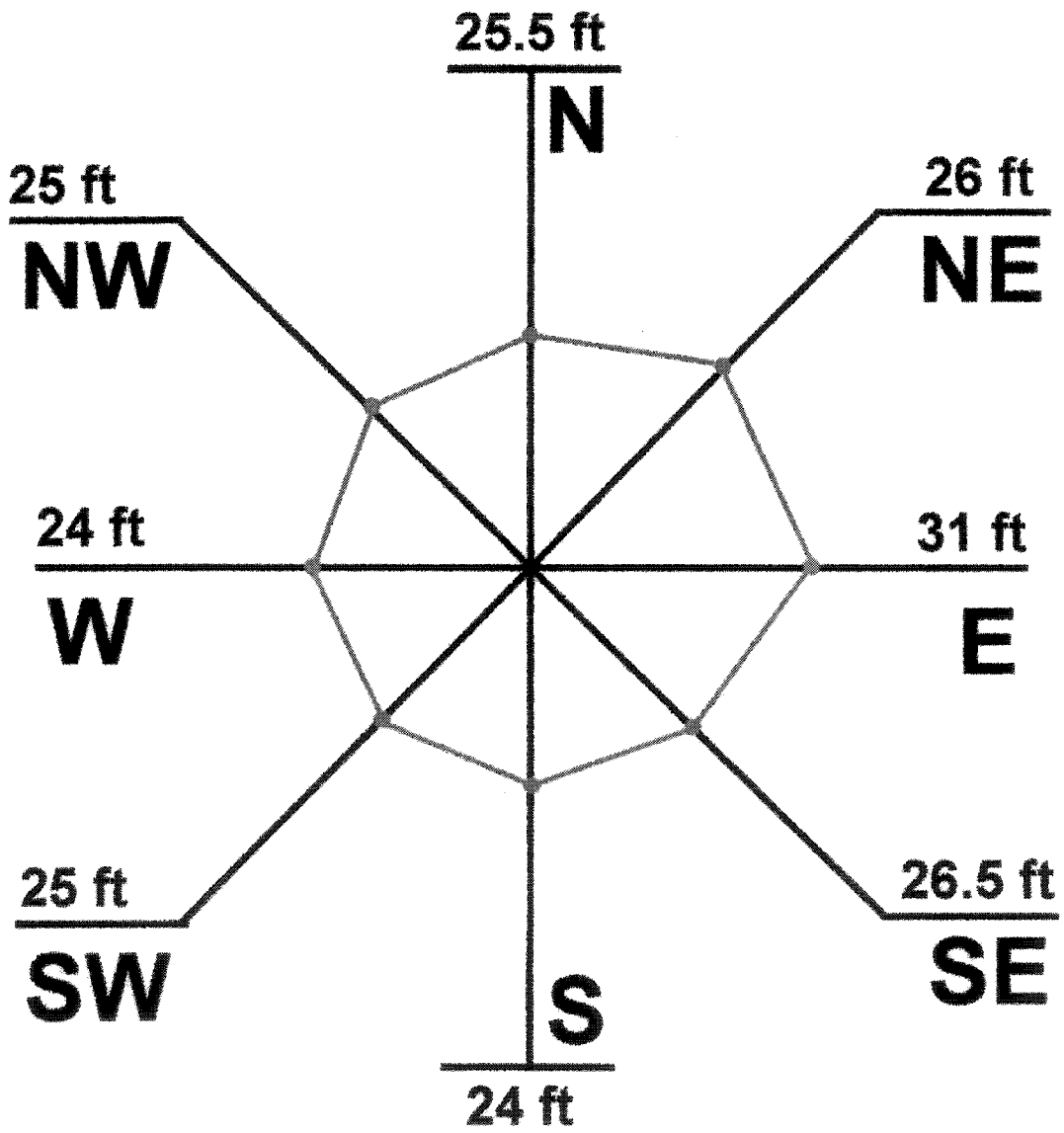


#7



0 ——— 10 ft

#8



0 ——— 10ft

APPENDIX D

TRUNK FORMULA METHOD WORK SHEETS

FOR THE OAK TREE ASSESSMENT STUDY AREA INCLUDING

- (1) Vesting Tentative Tract No. 060258 (VTTN 060258).**
- (2) Two off-site roadway construction projects: Streets “A” & “B.”**
- (3) A 200-foot wide “strip” around the boundaries of VTTN 060258 and Streets “A” and “B.”**
- (4) The Golden Valley Road construction project and a 200-foot wide “strip” along the alignment of the future Golden Valley Road.**

SANTA CLARITA, CALIFORNIA

Trunk Formula Method Work Sheet
For Oak # O-1

Case # _____ Property VTTN 060258 Date October 13, 2004
 Appraiser Tom Leslie

Field Observations

1 . Species Quercus agrifolia
 2 . Condition 59 *%
 3 . Trunk Circumference _____ in/cm Diameter 90.8 in/cm
 4 . Location% = [Site 80 % + Contribution 70 % + Placement 80 %]
 /3 = 77 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

5 . Species rating 90 %
 6 . Replacement Tree Size (diameter) 4.25 in/cm
 (Trunk Area) 14.6 in²/cm² Tar
 7 . Replacement Tree Cost \$ 540.00
 (see Regional Information to use Cost selected)
 8 . Installation Cost \$ 1,265.00
 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
 10 . Unit Tree Cost \$ 37.00 per in²/cm²
 (see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

11 . Appraised Trunk Area:
 (TAa or ATAA; use Tables 4.4-4.7)
 or c2 (#3) _____ x 0.08 _____ in²/cm²
 or d2 (#3) _____ x 0.785 2,443 in²/cm²
 12 . Appraised Tree Trunk Increase (TAincr) =
 TAa or ATAA 2,443 in²/cm² (#11) - Tar 14.6 in²/cm² (#6) = \$ 2428.8856
 13 . Basic Tree Cost = TAincr (#12) 2,429 in²/cm² x Unit Tree Cost (#10) \$ 37.00 per in²/cm²
 + Installed Tree Cost (#9) \$ 1,805.00 = \$ 91,673.77
 14 . Appraised Value = Basic Tree Cost (#13) \$ 91,673.77
 x Species Rating (#5) 90 % x Condition (#2) 59 % x Location (#4) 77 % = \$ 37,320.39
 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
 16 . Appraised Value = (#14) \$ 37,300.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

* = Low condition rating is due to extensive root erosion, borer damage to trunk and branches, etc. (see Table 2 and Photo Plate No. 1c)

Trunk Formula Method Work Sheet
For Oak # O-2

Case # _____ Property VTTN 060258 Date October 13, 2004
 Appraiser Tom Leslie

Field Observations

- 1 . Species Quercus agrifolia
 2 . Condition 78 %
 3 . Trunk Circumference _____ in/cm Diameter 29 in/cm
 4 . Location% = [Site 80 % + Contribution 70 % + Placement 80 %]
 /3 = 77 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

- 5 . Species rating 90 %
 6 . Replacement Tree Size (diameter) 4.25 in/cm
 (Trunk Area) 14.6 in²/cm² Tar
 7 . Replacement Tree Cost \$ 540.00
 (see Regional Information to use Cost selected)
 8 . Installation Cost \$ 1,265.00
 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
 10 . Unit Tree Cost \$ 37.00 per in²/cm²
 (see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

- 11 . Appraised Trunk Area:
 (TAa or ATAA; use Tables 4.4-4.7)
 or c2 (#3) _____ x 0.08 _____ in²/cm²
 or d2 (#3) _____ x 0.785 _____ 660 in²/cm²
 12 . Appraised Tree Trunk Increase (TAincr) =
 TAa or ATAA 660 in²/cm² (#11) - Tar 14.6 in²/cm² (#6) = \$ 645.585
 13 . Basic Tree Cost = TAincr (#12) 646 in²/cm² x Unit Tree Cost (#10) \$ 37.00 per in²/cm²
 + Installed Tree Cost (#9) \$ 1,805.00 = \$ 25,691.65
 14 . Appraised Value = Basic Tree Cost (#13) \$ 25,691.65
 x Species Rating (#5) 90 % x Condition (#2) 78 % x Location (#4) 77 % = \$ 13,827.24
 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
 16 . Appraised Value = (#14) \$ 13,800.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

Trunk Formula Method Work Sheet
For Oak # O-3

Case # _____ Property VTTN 060258 Date October 13, 2004
 Appraiser Tom Leslie

Field Observations

- 1 . Species Quercus agrifolia
 2 . Condition 75 %
 3 . Trunk Circumference _____ in/cm Diameter 11.7 in/cm
 4 . Location% = [Site 80 % + Contribution 30 % + Placement 50 %]
 /3 = 53 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

- 5 . Species rating 90 %
 6 . Replacement Tree Size (diameter) 4.25 in/cm
 (Trunk Area) 14.6 in²/cm² Tar
 7 . Replacement Tree Cost \$ 540.00
 (see Regional Information to use Cost selected)
 8 . Installation Cost \$ 1,265.00
 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
 10 . Unit Tree Cost \$ 37.00 per in²/cm²
 (see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

- 11 . Appraised Trunk Area:
 (TAa or ATAA; use Tables 4.4-4.7)
 or c2 (#3) _____ x 0.08 _____ in²/cm²
 or d2 (#3) _____ x 0.785 _____ 107 in²/cm²
 12 . Appraised Tree Trunk Increase (TAincr) =
 TAa or ATAA 107 in²/cm² (#11) - Tar 14.6 in²/cm² (#6) = \$ 92.85865
 13 . Basic Tree Cost = TAincr (#12) 93 in²/cm² x Unit Tree Cost (#10) \$ 37.00 per in²/cm²
 + Installed Tree Cost (#9) \$ 1,805.00 = \$ 5,240.77
 14 . Appraised Value = Basic Tree Cost (#13) \$ 5,240.77
 x Species Rating (#5) 90 % x Condition (#2) 75 % x Location (#4) 53 % = \$ 1,886.68
 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
 16 . Appraised Value = (#14) \$ 1,890.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

Trunk Formula Method Work Sheet
For Oak # O-4

Case # _____ Property VTTN 060258 Date October 13, 2004
 Appraiser Tom Leslie

Field Observations

- 1 . Species Quercus agrifolia
 2 . Condition 100 %
 3 . Trunk Circumference _____ in/cm Diameter 6.4 in/cm
 4 . Location% = [Site 80 % + Contribution 30 % + Placement 50 %]
 /3 = 53 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

- 5 . Species rating 90 %
 6 . Replacement Tree Size (diameter) 4.25 in/cm
 (Trunk Area) 14.6 in²/cm² Tar
 7 . Replacement Tree Cost \$ 540.00
 (see Regional Information to use Cost selected)
 8 . Installation Cost \$ 1,265.00
 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
 10 . Unit Tree Cost \$ 37.00 per in²/cm²
 (see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

- 11 . Appraised Trunk Area:
 (TAa or ATAA; use Tables 4.4-4.7)
 or c2 (#3) _____ x 0.08 _____ in²/cm²
 or d2 (#3) _____ x 0.785 _____ 32 in²/cm²
 12 . Appraised Tree Trunk Increase (TAincr) =
 TAa or ATAA 32 in²/cm² (#11) - Tar 14.6 in²/cm² (#6) = \$ 17,5536
 13 . Basic Tree Cost = TAincr (#12) 18 in²/cm² x Unit Tree Cost (#10) \$ 37.00 per in²/cm²
 + Installed Tree Cost (#9) \$ 1,805.00 = \$ 2,454.48
 14 . Appraised Value = Basic Tree Cost (#13) \$ 2,454.48
 x Species Rating (#5) 90 % x Condition (#2) 100 % x Location (#4) 53 % = \$ 1,178.15
 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
 16 . Appraised Value = (#14) \$ 1,180.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

Trunk Formula Method Work Sheet
For Oak # O-5

Case # _____ Property VTTN 060258 Date October 13, 2004
 Appraiser Tom Leslie

Field Observations

- 1 . Species Quercus agrifolia
 2 . Condition 100 %
 3 . Trunk Circumference _____ in/cm Diameter 14 in/cm
 4 . Location% = [Site 80 % + Contribution 30 % + Placement 50 %]
 /3 = 53 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

- 5 . Species rating 90 %
 6 . Replacement Tree Size (diameter) 4.25 in/cm
 (Trunk Area) 14.6 in²/cm² Tar
 7 . Replacement Tree Cost \$ 540.00
 (see Regional Information to use Cost selected)
 8 . Installation Cost \$ 1,265.00
 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
 10 . Unit Tree Cost \$ 37.00 per in²/cm²
 (see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

- 11 . Appraised Trunk Area:
 (TAa or ATAA; use Tables 4.4-4.7)
 or c2 (#3) _____ x 0.08 _____ in²/cm²
 or d2 (#3) _____ x 0.785 _____ 154 in²/cm²
 12 . Appraised Tree Trunk Increase (TAincr) =
 TAa or ATAA 154 in²/cm² (#11) - Tar 14.6 in²/cm² (#6) = \$ 139.26
 13 . Basic Tree Cost = TAincr (#12) _____ 139 in²/cm² x Unit Tree Cost (#10) \$ 37.00 per in²/cm²
 + Installed Tree Cost (#9) \$ 1,805.00 = \$ 6,957.62
 14 . Appraised Value = Basic Tree Cost (#13) \$ 6,957.62
 x Species Rating (#5) 90 % x Condition (#2) 100 % x Location (#4) 53 % = \$ 3,339.66
 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
 16 . Appraised Value = (#14) \$ 3,340.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

Trunk Formula Method Work Sheet

For Oak # O-6

Case # _____ Property VTTN 060258 Date October 13, 2004
 Appraiser Tom Leslie

Field Observations

- 1 . Species Quercus agrifolia
 2 . Condition 53 *%
 3 . Trunk Circumference _____ in/cm Diameter 66.4 in/cm
 4 . Location% = [Site 80 % + Contribution 20 % + Placement _____ %]
 /3 = 60 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

- 5 . Species rating 90 %
 6 . Replacement Tree Size (diameter) 4.25 in/cm
 (Trunk Area) 14.6 in²/cm² Tar
 7 . Replacement Tree Cost \$ 540.00
 (see Regional Information to use Cost selected)
 8 . Installation Cost \$ 1,265.00
 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
 10 . Unit Tree Cost \$ 37.00 per in²/cm²
 (see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

- 11 . Appraised Trunk Area:
 (TAa or ATAA; use Tables 4.4-4.7)
 or c2 (#3) _____ x 0.08 _____ in²/cm²
 or d2 (#3) _____ x 0.785 2,038 in²/cm²
 12 . Appraised Tree Trunk Increase (TAincr) =
 TAa or ATAA 2,038 in²/cm² (#11) - Tar _____ 14.6 in²/cm² (#6) = \$ 2022.9184
 13 . Basic Tree Cost = TAincr (#12) 2,023 in²/cm² x Unit Tree Cost (#10) \$ 37.00 per in²/cm²
 + Installed Tree Cost (#9) \$ 1,805.00 = \$ 76,652.98
 14 . Appraised Value = Basic Tree Cost (#13) \$ 76,652.98
 x Species Rating (#5) 90 % x Condition (#2) 53 % x Location (#4) 60 % = \$ 21,938.08
 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
 16 . Appraised Value = (#14) \$ 21,900.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

* = Low condition rating is due to the presence of heart rot, dead wood, extensive borer damage to trunk and branches, etc. (see Table 2 & Photo Plate No. 6)

Trunk Formula Method Work Sheet
For Oak # O-7

Case # _____ Property VTTN 060258 Date October 13, 2004
 Appraiser Tom Leslie

Field Observations

1 . Species Quercus agrifolia
 2 . Condition 38 *%
 3 . Trunk Circumference _____ in/cm Diameter 107.6 in/cm
 4 . Location% = [Site 80 % + Contribution 30 % + Placement 50 %]
 /3 = 53 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

5 . Species rating 90 %
 6 . Replacement Tree Size (diameter) 4.25 in/cm
 (Trunk Area) 14.6 in²/cm² Tar
 7 . Replacement Tree Cost \$ 540.00
 (see Regional Information to use Cost selected)
 8 . Installation Cost \$ 1,265.00
 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
 10 . Unit Tree Cost \$ 37.00 per in²/cm²
 (see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

11 . Appraised Trunk Area:
 (TAa or ATAA; use Tables 4.4-4.7)
 or c2 (#3) _____ x 0.08 _____ in²/cm²
 or d2 (#3) _____ x 0.785 _____ 2,491 in²/cm²
 12 . Appraised Tree Trunk Increase (TAincr) = _____
 TAa or ATAA 2,491 in²/cm² (#11) - Tar 14.6 in²/cm² (#6) = \$ 2476.5304
 13 . Basic Tree Cost = TAincr (#12) 2,477 in²/cm² x Unit Tree Cost (#10) \$ 37.00 per in²/cm²
 + Installed Tree Cost (#9) \$ 1,805.00 = \$ 93,436.62
 14 . Appraised Value = Basic Tree Cost (#13) \$ 93,436.62
 x Species Rating (#5) 90 % x Condition (#2) 38 % x Location (#4) 53 % = \$ 17,042.84
 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
 16 . Appraised Value = (#14) \$ 17,000.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

* = Low condition rating is due to unsound trunk structure, extensive borer damage to trunk and branches, etc. (see Table 2 & Photo Plate No. 7)

Trunk Formula Method Work Sheet

For Oak # O-8

Case # _____ Property VTTN 060258 Date October 13, 2004
Appraiser Tom Leslie

Field Observations

- 1 . Species Quercus john-tuckerii
- 2 . Condition 38 *%
- 3 . Trunk Circumference _____ in/cm Diameter 32 in/cm
- 4 . Location% = [Site 80 % + Contribution 30 % + Placement 80 %]
/3 = 63 %

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

- 5 . Species rating 40 %
- 6 . Replacement Tree Size (diameter) 5.0 in/cm
(Trunk Area) 19.6 in²/cm² Tar
- 7 . Replacement Tree Cost \$ 540.00
(see Regional Information to use Cost selected)
- 8 . Installation Cost \$ 1,265.00
- 9 . Installed Tree Cost (#7 + #8) \$ 1,805.00
- 10 . Unit Tree Cost \$ 27.50 per in²/cm²
(see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional Information

- 11 . Appraised Trunk Area:
(TAa or ATAA; use Tables 4.4-4.7)
or c2 (#3) _____ x 0.08 _____ in²/cm²
or d2 (#3) _____ x 0.785 _____ 788 in²/cm²
- 12 . Appraised Tree Trunk Increase (TAincr) =
TAa or ATAA 788 in²/cm² (#11) - Tar 19.6 in²/cm² (#6) = \$ 767.96
- 13 . Basic Tree Cost = TAincr (#12) 768 in²/cm² x Unit Tree Cost (#10) \$ 27.50 per in²/cm²
+ Installed Tree Cost (#9) \$ 1,805.00 = \$ 22,923.90
- 14 . Appraised Value = Basic Tree Cost (#13) \$ 22,923.90
x Species Rating (#5) 40 % x Condition (#2) 38 % x Location (#4) 63 % = \$ 2,206.81
- 15 . If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
- 16 . Appraised Value = (#14) \$ 2,200.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

* = Low condition rating due to degraded root structure, dead leaves and branches, etc. (see Table 2 and Photo Plate No. 8)

APPENDIX 3-C

Preliminary Jurisdictional Delineation of the Ermine Street Site/Tract 60258 (site), Santa Clarita, California (January 21, 2005)



VANDERMOST CONSULTING SERVICES, INC.
Government Affairs • Community Relations • Regulatory Assistance

December 1, 2003
Revised January 21, 2005

Mr. Rick Doremus
Synergy
19200 Von Karman, 6th Floor
Irvine, CA 92612

SUBJECT: Preliminary Jurisdictional Delineation of the Ermine Street Site/Tract 60258 (site), Santa Clarita, California

Dear Mr. Doremus:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game (CDFG) jurisdictions for the Ermine Street site.

The site comprises approximately 250 acres, located north of the merger of Interstate 5 (I-5) and the Antelope Valley Freeway (SR-14). The site is bordered to the north by undeveloped land, to the south by the Santa Clara River and light industrial development along Santa Clara Street, to the west by undeveloped land, and to the east by residential development and Ermine Street. Site access is taken from the Antelope Valley Freeway (SR-14) and Soledad Canyon Road. Regional and local vicinity maps are attached as Figures 1 and 2 respectively. The U.S. Geological Survey (USGS) 7.5-Minute Mint Canyon quadrangle map is attached as Figure 3.

On November 5th and 6th 2003, representatives of Vandermost Consulting Services, Inc. (VCS) examined the project site to determine the limits of Corps and RWQCB jurisdiction pursuant to Section 401 and 404 of the Clean Water Act respectively, and the limits of CDFG jurisdiction pursuant to Section 1600 of the California Fish and Game Code. An additional site visit occurred on April 21, 2004 to examine a 35-acre parcel added to the project. A 200-scale topographic map depicting the areas of Corps, RWQCB, and CDFG jurisdiction, is attached as Figure 4. Photographs of the current topography, vegetative communities, and general widths of the "waters of the U.S. and State" are provided as Exhibits 1-4.

The delineation includes both on-site and off-site areas that could be impacted by the proposed development of Tract 60258. Based on the delineation results, the site contains approximately 11.69 acres of Corps jurisdictional waters, of which 0.33 acre is man-made wetland waters, and 11.36 acres are ephemeral waters. CDFG jurisdiction on-site totals 16.74 acres.

I. METHODOLOGY

Prior to beginning the field delineation, a 200-scale topographic map and 200-scale aerial map of the property were examined to determine the locations of potential areas of Corps, RWQCB, and CDFG jurisdiction. In addition, the USGS map was examined to determine the presence of historical blue-line drainages on-site. Potential jurisdictional areas within and adjacent to the project footprint were field checked for the presence of definable channels and/or wetland vegetation, soils, and hydrology. Upon confirmation of jurisdiction, drainages were measured for length and width and recorded onto the topographic map using visible landmarks for guidance.

II. JURISDICTION

U.S. Army Corps of Engineers (Corps)

A. Definition of "Waters of the U.S."

Pursuant to Section 404 of the Clean Water Act (CWA), the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined at 33 CFR part 328 to include: 1) all navigable waters (including all waters subject to the ebb and flow of the tide), 2) all interstate waters and wetlands, 3) all other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, 4) all impoundments of waters mentioned above, 5) all tributaries to waters mentioned above, 6) the territorial seas, and 7) all wetlands adjacent to waters mentioned above.

The definition of "waters of the U.S." was altered by the January 2001 U.S. Supreme Court Decision, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers et al (SWANCC)*. In the SWANCC decision, the Supreme Court held that the Corps exceeded its authority by asserting CWA jurisdiction over an abandoned sand and gravel pit, solely because it provided habitat for migratory birds. The SWANCC rule is limited to waters that are non-navigable, isolated and intrastate and clarified that the Corps staff should no longer rely on the use of waters by migratory birds as the sole basis for asserting jurisdiction.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extends to the ordinary high water mark (OHWM), which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Non-wetland waters are classified as either ephemeral, intermittent or perennial waters, as defined in the January 15, 2002 Federal Register notice:

Ephemeral Stream- "An ephemeral stream has flowing water only during and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow."

Intermittent Stream- "An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow."

Perennial Stream- "A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow."

Wetlands are defined at 33 CFR 328.3(b) as *"those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support ...a prevalence of vegetation typically adapted for life in saturated soil conditions."*

The methodology set forth in the 1987 Wetlands Delineation Manual generally requires that in order to be considered a wetland, the vegetation, soils and hydrology of an area must exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

1. Hydrophytic Vegetation: More than fifty percent of the dominant plant species at the site must be typical of wetlands (i.e. rated as facultative, facultative wetland, or obligate wetland plants in the U.S. Fish and Wildlife Service *National List of Plant Species that Occur in Wetlands: California (Region 0)*, May 1988).

2. Hydric Soils: Soils must exhibit physical and or chemical characteristics indicative of permanent or periodic saturation (for example, a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and,
3. Hydrology: Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least five-percent of the growing season during a normal rainfall year. For most of low-lying southern California, five-percent of the growing season is equivalent to 18 days.

B. Corps Permit Mechanisms

There are two distinct permit categories under the Section 404 process, the Nationwide Permit (NWP) and the Individual Permit (IP). The NWPs are previously authorized permits for specific categories of activities. A NWP is issued to cover those activities with minimal impacts on aquatic resources. The project applicant must demonstrate compliance with the conditions set forth by the NWP program in order to qualify.

Generally, an IP is required if over 0.50 acre of jurisdictional "waters of the U.S." will be impacted by a proposed project, or if over 300 linear feet of jurisdictional non-ephemeral waters are impacted. IP applications are much more complex and the processing time is generally longer. In accordance with Section 404(b)(1) of the Clean Water Act, impacts to special aquatic sites (i.e. wetlands), must overcome the presumption that a less damaging practicable alternative is available through an on-site and an off-site alternatives analysis. As such, preparing and processing an IP application takes considerably longer than a NWP application.

Pursuant to the Corps Section 404 permitting process, an applicant must first avoid and minimize impacts to jurisdictional "waters of the U.S." to the largest extent practicable. When these actions have been accomplished, mitigation may be proposed to offset impacts to jurisdictional areas and ensure no net-loss of "waters of the U.S."

Regional Water Quality Control Board (RWQCB)

Pursuant to Section 401 of the Clean Water Act, the RWQCB regulates "waters of the U.S. and State" with similar jurisdiction as the Corps. The RWQCB focuses on the effects of a project on downstream water quality conditions and beneficial uses. To obtain a Section 401 Water Quality Certification, the project must be in compliance with the California Environmental Quality Act (CEQA). To file a 401 permit application a base fee of \$500 is required per project in addition to a discharge fee based on either linear foot of impact (\$5/ft) or acreage of impact (\$2,250/ac), whichever is greatest.

California Department of Fish and Game (CDFG)

The State of California regulates water resources under Sections 1600-1616 of the California Fish and Game Code. Section 1602 applies to state or local government /public utility projects and private projects. Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Game Code, CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. Section 1602 states the following:

...an entity may not substantially divert or obstruct the natural flow or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into a river, stream, or lake, unless....The department receives written notification regarding the activity in the manner prescribed by the department.

CDFG considers most drainages to be “streambeds” unless it can be demonstrated otherwise. A stream (which includes creeks and rivers) is defined as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” Additionally, CDFG defines “lake” to include “natural lakes or man-made reservoirs.” CDFG jurisdiction includes ephemeral, intermittent, and perennial watercourses and extends to the limit of riparian habitat located contiguous to the water resource that functions as part of the watercourse system. The California Fish and Game Code defines “riparian habitat” as “... lands which contain habitat which grows close to and which depends on soil moisture from a nearby freshwater source.” CDFG may also assert jurisdiction over isolated drainages pursuant to the Fish and Game Code of California.

To obtain a CDFG Section 1602 Streambed Alteration Agreement (SAA), the project must comply with CEQA as documented by the submittal of a certified CEQA document, a Notice of Determination (NOD), and proof of NOD filing fees. Due to recent revisions to Section 1602 of the California Fish and Game Code, fees associated with the SAA application may soon increase, not to exceed \$5,000 per agreement. Until the new fees are officially enacted, the current fee schedule remains as follows:

For projects costing:	The fee is:
Less than \$25,000	\$132.00
From \$25,000 to \$500,000	\$772.75
Greater than \$500,000	\$1,390.50

III. DELINEATION RESULTS

Based on the delineation results, the site contains approximately 11.69 acres of Corps jurisdictional waters, of which 0.33 acre is man-made wetland waters, and 11.36 acres are ephemeral waters. CDFG jurisdiction on-site totals 16.74 acres. These acreage calculations include both on-site areas and off-site areas proposed for impacts. The areas of "waters of the U.S. and State" are shown on the jurisdictional delineation map attached as Figure 4. Photographs of the drainages are provided as Exhibits 1-4.

The central portion of the site is bisected by an easement for existing electricity transformers. The majority of the site is undisturbed, with the exception of dirt roads, evidence of motocross activities, existing residences, and trash. In addition, there appears to be an encampment in one on-site drainage. There are four main drainages on-site as described in detail below and summarized in the following Tables 1 and 2:

Drainage Complex	Ephemeral	Wetland	TOTAL
A	0.27	0	0.27
B	1.09	0.0003	1.09
C	0.04	0.33	0.37
D	0.01	0	0.01
Santa Clara River	9.95	0	9.95
Total	11.36 acres	0.33 acres	11.69 acres

Drainage Complex	Acreage
A	0.43
B	3.26
C	3.09
D	0.01
Santa Clara River	9.95
Total	16.74 acres

Drainage Complex A

Drainage Complex A is located in the northwest portion of the site and consists of Drainage A and several tributaries, A1 through A5A. The majority of Drainage A is located off-site, although the tributaries are located on-site in the northwestern portion of the property. In addition, a portion of the off-site downstream confluence of Drainage A with Drainage B, was delineated due to potential impacts from the proposed construction of Golden Valley Road. Although the entire reach of Drainage A is shown on the delineation graphic (Figure 4), only the on-site areas and off-site potential impact areas discussed above were included in the field delineation.

Tributaries to Drainage A, Drainages A1 through A5A, are located on-site northwest of an electrical easement. Drainages A1 through A5A are characterized by incised channels with a predominately cobble bottom. The tributaries are vegetated with chaparral species and do not contain any riparian vegetation. Corps ordinary high water mark in the Drainage A complex ranges from 1 to 5 feet in width and CDFG bed and bank ranges from 1 to 8 feet in width. The Drainage A Complex is considered ephemeral, non-wetland waters. Jurisdiction associated with the Drainage A Complex totals 0.27 acre of Corps and RWQCB jurisdiction and 0.43 acre of CDFG jurisdiction.

Drainage Complex B

Drainage B is located in the central portion of the site. The drainage originates off-site to the northeast, flows through the site and is tributary to the Santa Clara River to the south. The delineation includes both on and off-site portions of the drainage complex due to proposed road improvements. Drainage B has several tributaries originating from slopes located to the east and west of the drainage. Drainage B and its tributaries are primarily vegetated with chaparral and sage scrub species with sandy, cobble bottoms. Drainage B is also vegetated with willow, Coast Live oak and pepper tree but is dominated by Holly-leaved cherry. The central portion of Drainage B contains a high proliferation of trash, including an abandoned house, old cars and broken concrete. In addition, an occupied residence is located in this portion of the site. Off-site, in the southern portion of Drainage B, there is a concrete drop structure located immediately upstream from the confluence of Drainage B and the downstream portion of Drainage A. South of the drop structure, two metal pipes are exposed and capped. One pipe is leaking water and has created a small 4'x4' area vegetated with one willow and one cottonwood. This area has gleyed soils and is considered a created wetland. The remainder of the drainage and its tributaries are considered ephemeral, non-wetland waters. The Corps ordinary high water mark in Drainage B ranges from 4 to 10 feet in width and the CDFG bed and bank ranges from 16 to 40 feet in width.

Drainage B and its tributaries total 1.09 acres of Corps and RWQCB jurisdiction, of which 0.0003 acre is man-made wetland waters. CDFG jurisdiction in Drainage Complex B totals 3.26 acres. The acreage calculations include off-site portions of Drainage B, which may be impacted by the proposed extension of Golden Valley Road to the proposed Newhall Ranch Road to the south and off-site grading to the north.

Drainage Complex C

The Drainage Complex C is located in the southern portion of the site. Drainage C originates off-site to the east and is tributary to the Santa Clara River to the south. At the confluence of Drainage C with the Santa Clara River there is a small homeless encampment. Drainage C originates off-site at the outlet of storm drain pipes from the adjacent residential development to the east. The storm drains appear to provide a constant supply of flowing water to Drainage C. Drainage C contains dense, mature riparian habitat

including, willow, mulefat, cottonwood, and sycamore. Additional vegetation includes palm trees. Due to the presence of flowing water, a high proliferation of riparian habitat, and lack of an obligate plant understory, Drainage C is considered a man-made/created wetland. The Corps ordinary high water mark in Drainage C averages 6 feet in width and CDFG canopy ranges from 15 to 100 feet in width. There is one tributary to Drainage C, Drainage C-1, which originates in the northern hillside and is highly incised. Drainage C-1 is an ephemeral non-wetland water.

Drainage C and its tributaries total 0.37 acre of Corps and RWQCB jurisdiction, of which 0.33 acre is man-made wetland waters. CDFG jurisdiction in Drainage Complex C totals 3.09 acres.

Santa Clara River (Drainage D Complex)

The southern boundary of the site is located in the Santa Clara River. This portion of the River is very sandy and contains limited vegetation. The jurisdictional boundary of the Santa Clara River is clearly defined by a change in topography along the northern bank of the River. The portion of the Santa Clara River on-site is within CDFG jurisdiction. The limits of Corps jurisdiction in the Santa Clara River on-site is difficult to discern due to the uniform nature of the channel bottom. For the purposes of this report, Corps and CDFG jurisdiction is assumed to be the same. At this time the project does not propose any impacts to the Santa Clara River. If impacts are proposed within the Santa Clara River, it may be necessary to use hydrology analysis to determine the limits of Corps jurisdiction.

Three small drainages (D1 –D3), located in the southeast corner of the site, are tributary to the River. Drainages D1, D2, and D3 are incised ephemeral non-wetland waters. Corps and CDFG jurisdiction associated with these drainages is approximately one foot in width.

The Santa Clara River and its tributaries total 9.95 acres of Corps and RWQCB jurisdiction and 9.95 acres of CDFG jurisdiction.

V. CONCLUSION

Permitting Requirements

As currently proposed, the project will impact “waters of the U.S. and State.” The acreage of impacts was determined based on our review of the tentative map dated December 16, 2004. Impacts to jurisdictional waters total approximately 1.23 acres of Corps and RWQCB jurisdiction and 4.71 acres of CDFG jurisdiction. The impact calculation includes on and off-site areas impacted by the project as shown in the following table:

Table: 3 Impacts to Corps Jurisdiction				
Drainage Complex	Total Jurisdiction	On-Site Impacts	Off-Site Impacts	Total Impacts
A	0.27	0.18	0.05	0.23
B	1.09	0.48	0.25	0.73
C	0.37	0.26	N/A	0.26
D	0.01	0.01	N/A	0.01
Santa Clara River	9.95	0	N/A	0
Total	11.69 acres	0.93 acre	0.30 acre	1.23 acres

Table: 4 Impacts to CDFG Jurisdiction				
Drainage Complex	Total Jurisdiction	On-Site Impacts	Off-Site Impacts	Total Impacts
A	0.43	0.33	0.05	0.38
B	3.26	1.14	0.74	1.88
C	3.09	2.44	N/A	2.44
D	0.01	0.01	N/A	0.01
Santa Clara River	9.95	0	N/A	0
Total	16.74 acres	3.92 acres	0.79 acre	4.71 acres

Based on the delineation results and the proposed project footprint, a Corps Section 404 Individual Permit, a CDFG Section 1602 Streambed Alteration Agreement, and a RWQCB Section 401 Certification will be required.

Mitigation

Typically, the mitigation ratio for impacts to jurisdictional non-wetland “waters of the U.S. and State” is less than the ratio for mitigation to jurisdictional wetland “waters of the U.S. and State.” A minimum mitigation ratio of 1:1 is required per the “no net loss” policy, which the Corps is mandated to uphold. The regulatory agencies are at liberty to request reasonably higher mitigation ratios to compensate for the temporary loss of the function and value of the drainage habitat that occurs between the time the existing habitat is impacted and the time the mitigation area is established. CDFG in this region has required a 3:1 ratio for impacts to streambeds. Typically, mitigation is based on the acreage of impact compared to the acreage of preservation. If the project design can significantly avoid and minimize impacts to jurisdictional waters, the mitigation ratio for unavoidable impacts may be adjusted accordingly.

Mitigation typically consists of the creation of waters on-site but could include off-site opportunities. Mitigation will involve the submittal and approval of a Habitat Mitigation and Monitoring Plan, which outlines the location of the mitigation area, type and quantity of plants, success criteria, and the 5-year monitoring and reporting requirements.

Mr. Rick Doremus
December 1, 2003, Revised January 21, 2005
Page 10

Threatened or Endangered Species

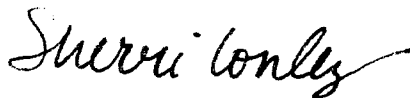
The entire project site is located within the U.S. Fish and Wildlife Service (USFWS) adopted and proposed critical habitat designations for the coastal California gnatcatcher. It is our understanding that Thomas Leslie Corporation has conducted surveys on-site, and the site does not contain any listed threatened or endangered plant or animal species. Although the gnatcatcher is not present on-site, consultation with the USFWS is expected for impacts to the sage scrub habitat proposed for critical habitat. Since the project will require a Corps Section 404 permit, coordination for impacts to critical habitat will occur in the form of a Section 7 consultation. The Section 7 consultation is initiated by the Corps and processed by the USFWS. The Section 7 consultation involves the preparation of a Biological Assessment (BA) by the applicant describing the effect of the permitted action on federally listed species existing on-site. The Biological Opinion (BO), prepared by the USFWS, may contain alternatives and/or mitigation measures intended to minimize the effects to the species. The Corps may adopt these alternatives and/or mitigation measures as special conditions to the permit. Once initiated by the Corps and deemed complete by the USFWS, the Section 7 consultation has a 135-day time clock.

NEXT STEPS

We recommend that the next steps include submitting a request for a Jurisdictional Determination (JD) from the Corps and CDFG. The JD is a confirmation of the delineation and is useful in confirming limits of jurisdiction and the proposed project's impacts for future negotiations with the regulatory agencies.

If you have any questions or comments regarding this report, please call me at (949) 489-2700, extension 206.

Sincerely,



Sherri Conley
Senior Project Manager

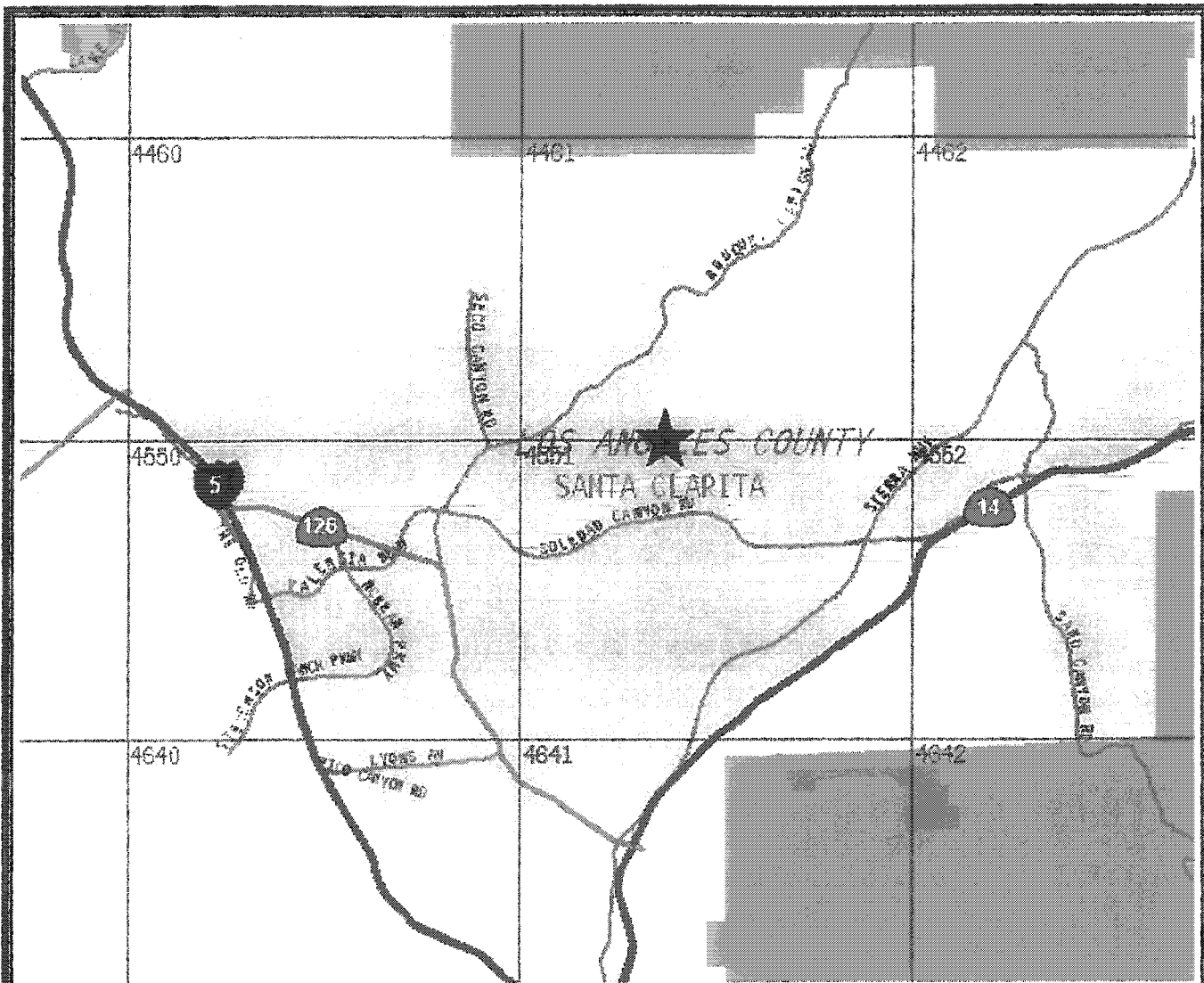
cc: Thomas Leslie, Thomas Leslie Corporation
Ron Horn, Sikand
Heather Waldstein, City of Santa Clarita

Mr. Rick Doremus
December 1, 2003, Revised January 21, 2005
Page 11

ATTACHMENTS:

Figure 1 – Regional Location Map
Figure 2 – Local Site Vicinity Map
Figure 3 – USGS Quadrangle Map
Figure 4 – 200-Scale Delineation Map

Exhibit 1 – Photographs of Drainage A Complex
Exhibit 2 – Photographs of Drainage B Complex
Exhibit 3 – Photographs of Drainage C Complex
Exhibit 4 – Photographs of Drainage D Complex



ERMINE STREET SITE

REGIONAL MAP

★ *approximate project location*

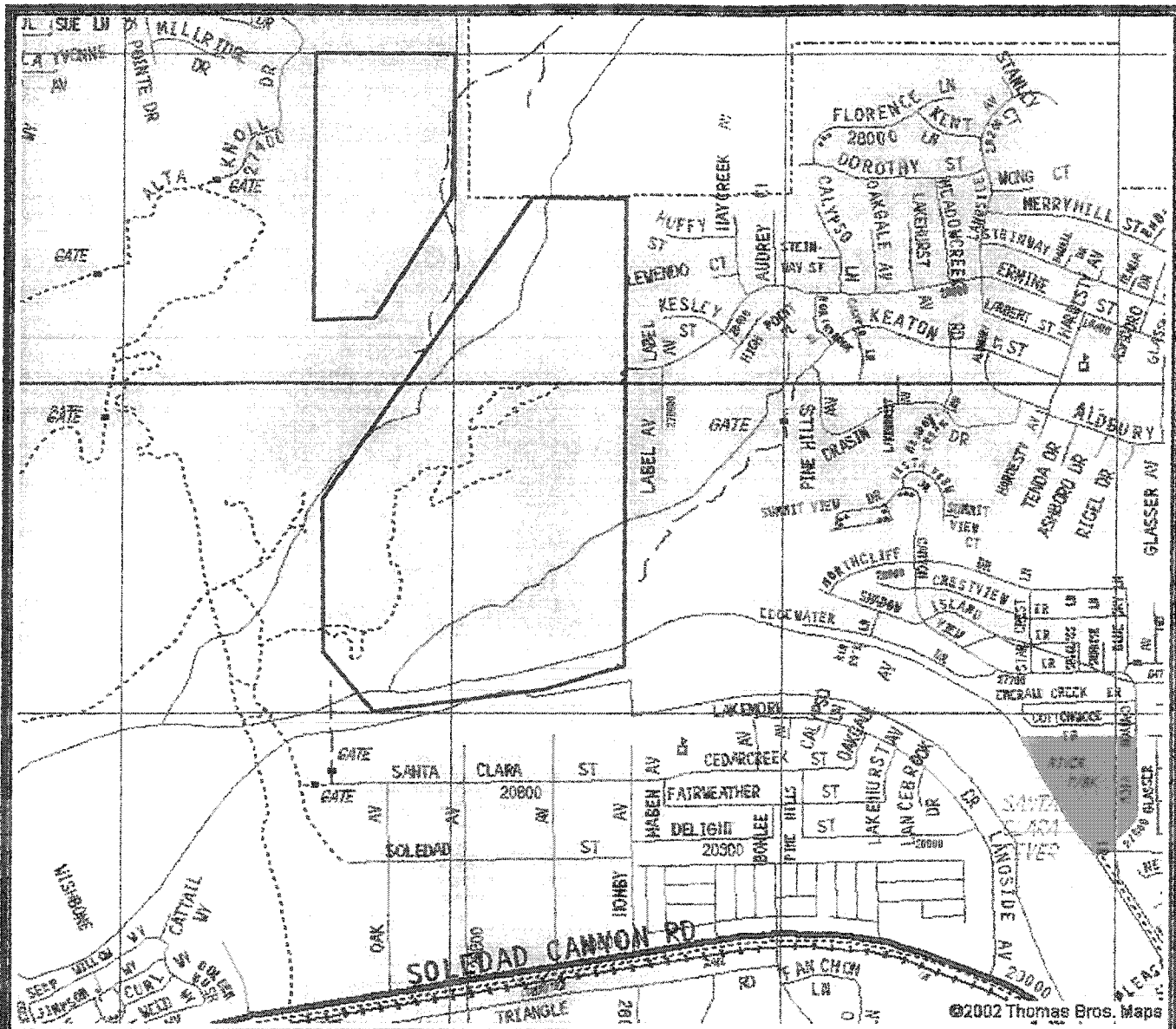


VANDERMOST CONSULTING SERVICES, INC.

27312 Calle Arroyo
 San Juan Capistrano, CA 92675
 (949) 489-2700
 fax (949) 489-0309



FIGURE 1



ERMINE STREET SITE

LOCATION MAP



approximate project boundary

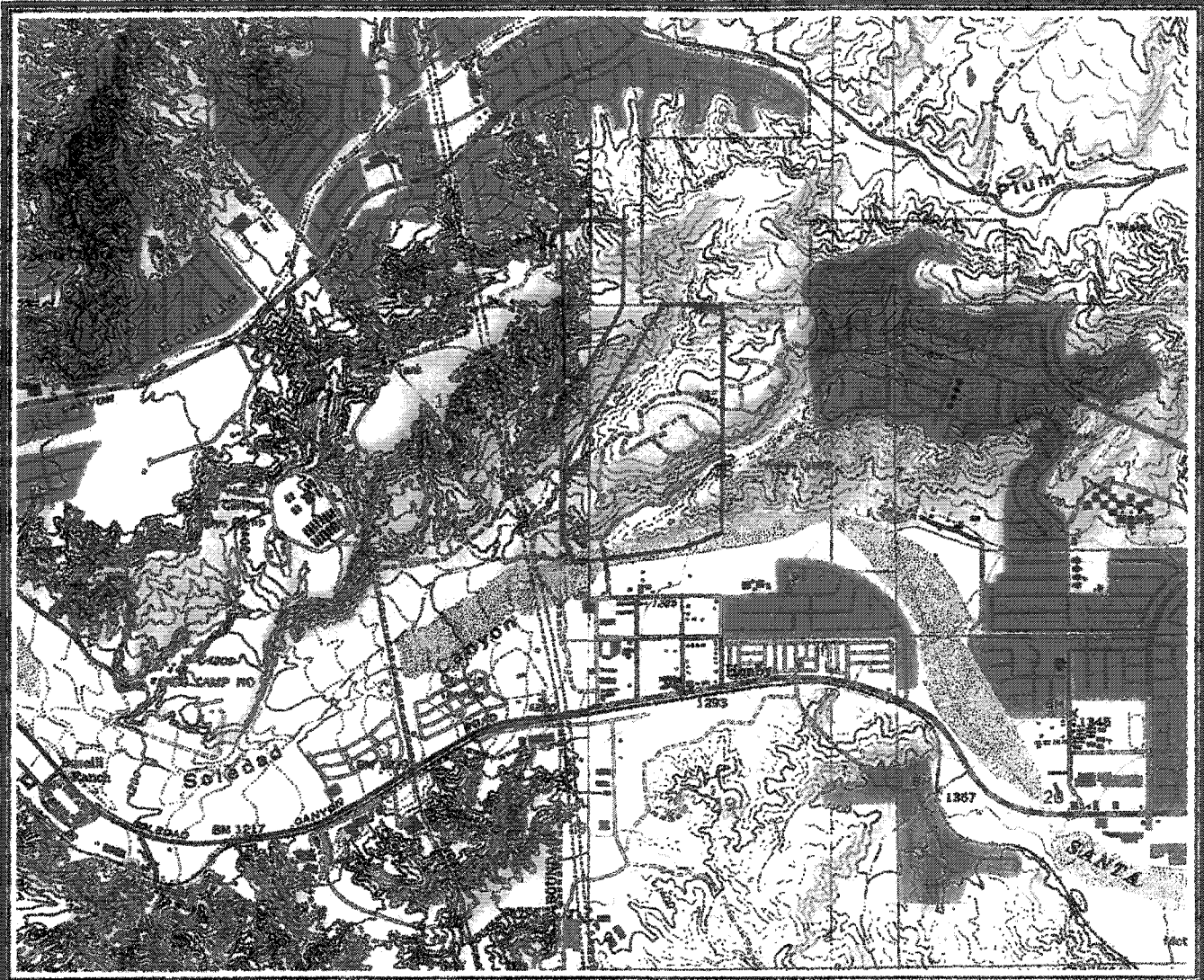


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 fax (949) 489-0309



FIGURE 2



ERMINE STREET SITE

U.S.G.S. 7.5 Minute Quadrangle Map
Mint Canyon Quadrangle, Current as of 1995



approximate project boundary


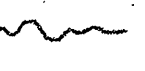






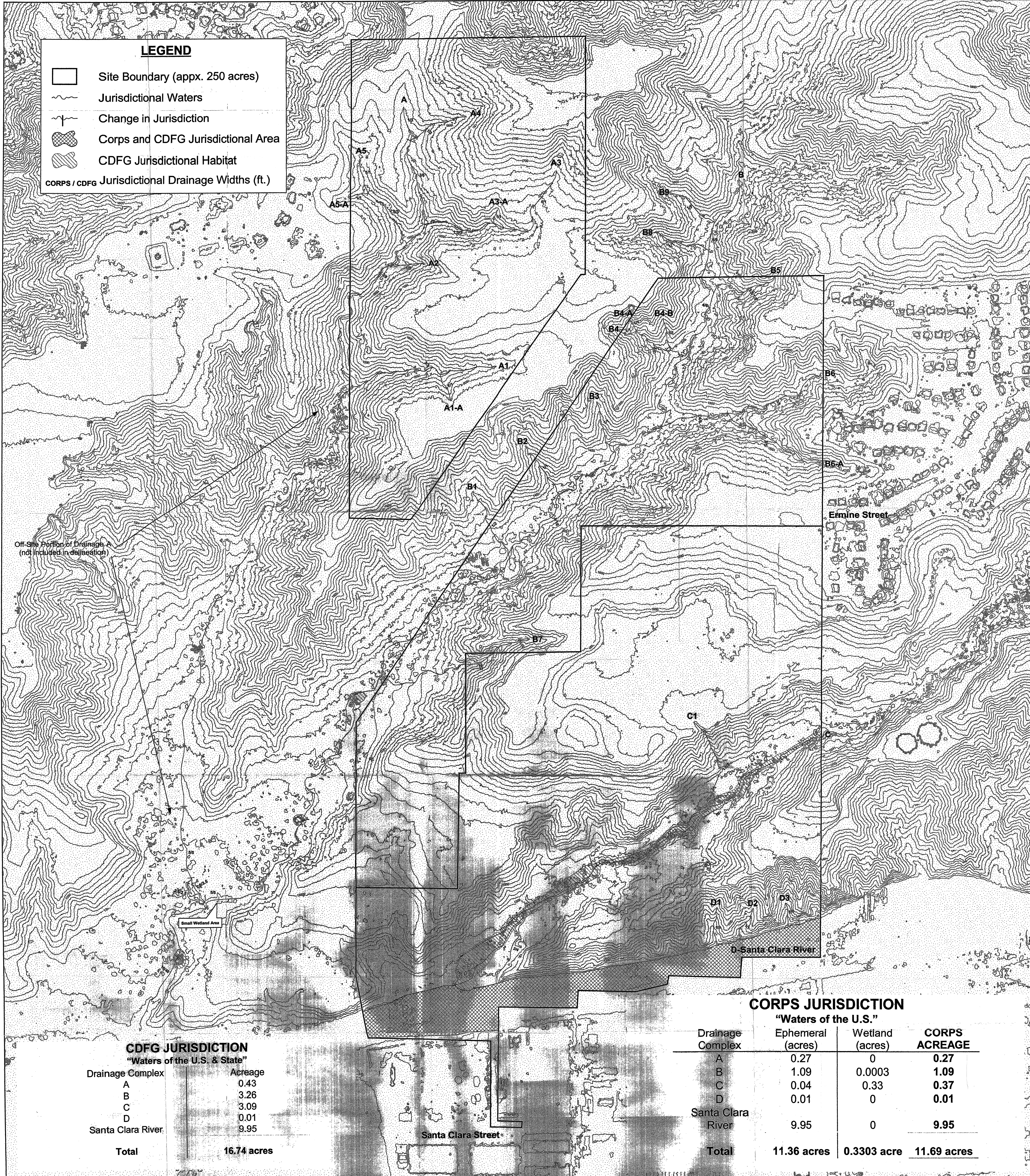
VANDERMOST CONSULTING SERVICES, INC.
 27312 Calle Arroyo
 San Juan Capistrano, CA 92675
 (949) 489-2700
 Fax (949) 489-0309



FIGURE 3

LEGEND

-  Site Boundary (appx. 250 acres)
-  Jurisdictional Waters
-  Change in Jurisdiction
-  Corps and CDFG Jurisdictional Area
-  CDFG Jurisdictional Habitat
-  CORPS / CDFG Jurisdictional Drainage Widths (ft.)



Off-Site Portion of Drainage A
(not included in delineation)

Small Wetland Area

Ermine Street

D-Santa Clara River

Santa Clara Street

CDFG JURISDICTION
"Waters of the U.S. & State"

Drainage Complex	Acreage
A	0.43
B	3.26
C	3.09
D	0.01
Santa Clara River	9.95
Total	16.74 acres

CORPS JURISDICTION
"Waters of the U.S."

Drainage Complex	Ephemeral (acres)	Wetland (acres)	CORPS ACREAGE
A	0.27	0	0.27
B	1.09	0.0003	1.09
C	0.04	0.33	0.37
D	0.01	0	0.01
Santa Clara River	9.95	0	9.95
Total	11.36 acres	0.3303 acre	11.69 acres

Notes:
This map was created utilizing field data gathered by representatives of VCS on November 5 & 6, 2003, and April 21, 2004.
Base topography supplied by Skidart Engineering.
The site is located southwesterly of Ermine Street in the City of Santa Clara, Los Angeles County, California

ERMINE STREET SITE DELINEATION MAP

GIS by:
Vandermost Consulting Services, Inc (VCS)
27312 Calle Arroyo
San Juan Capistrano, CA 92675
949-488-2700
Map Revised on January 19, 2005

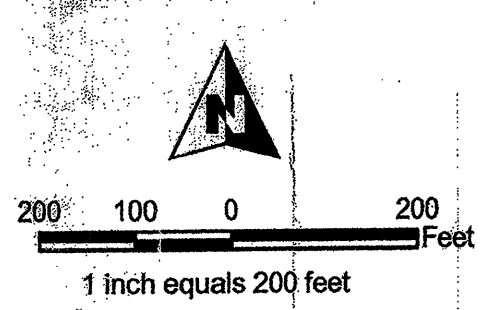


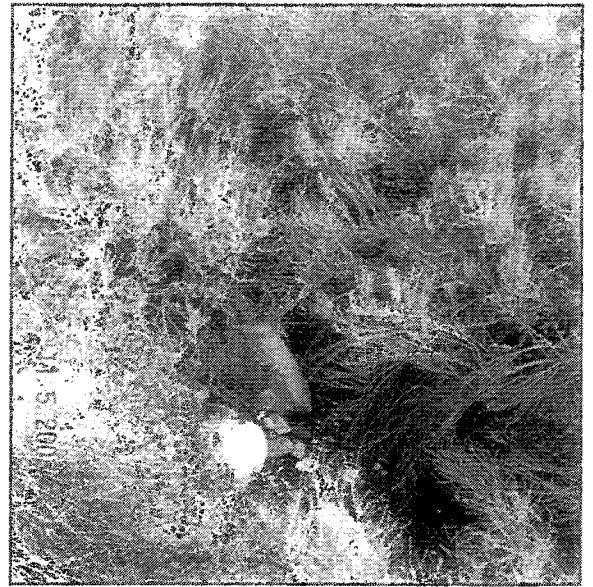
EXHIBIT 1

Photographs of Drainage A Complex

ERMINE STREET SITE/DRAINAGE COMPLEX A



Drainage A1 – Downstream view of confluence with Drainage A



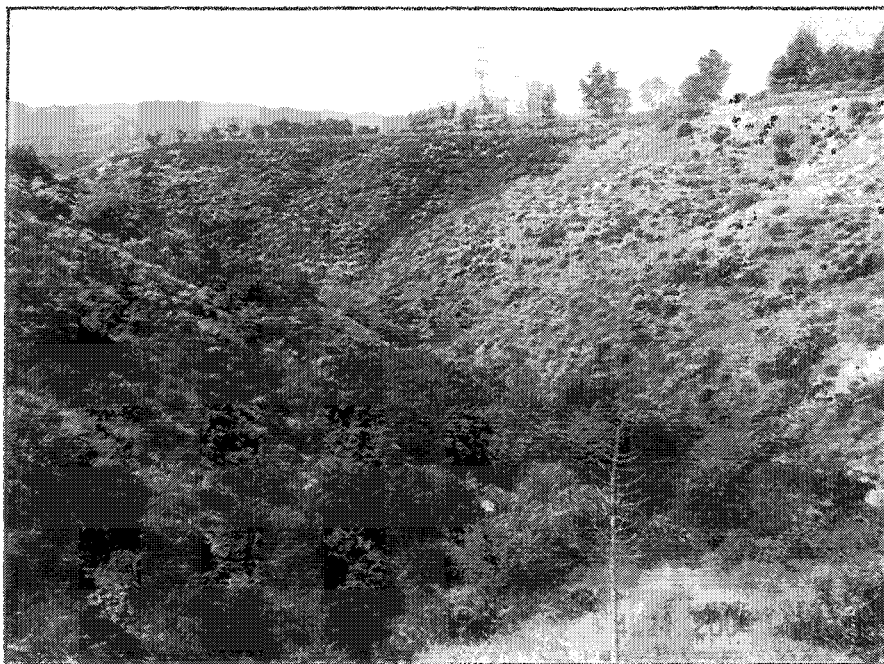
Drainage A1 – Upstream view of channel near A1-A confluence



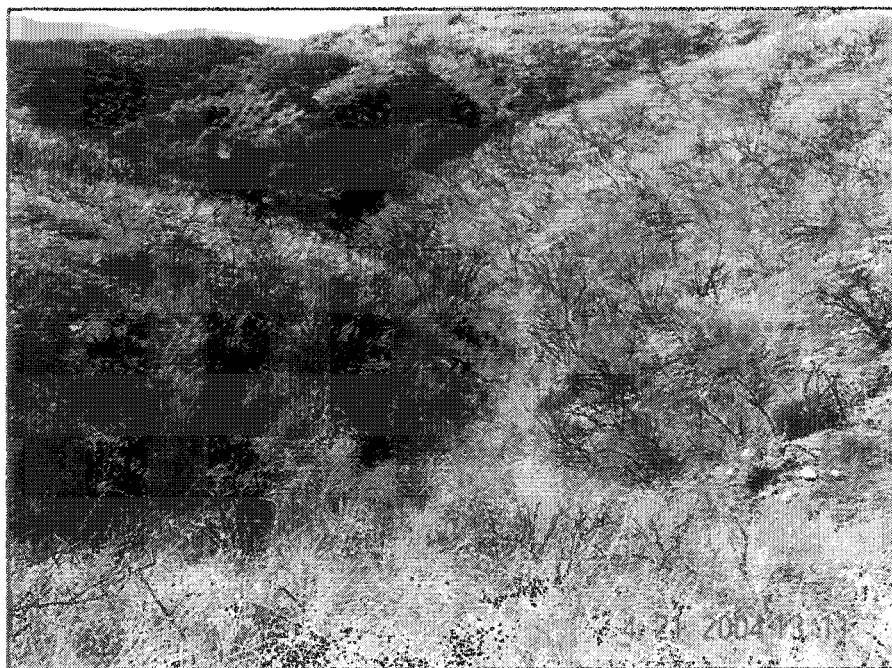
Lower Drainage A- Upstream view



ERMINE STREET SITE/DRAINAGE COMPLEX A



Drainage A3



Drainage A4





Drainage B – Downstream view of headwaters near northern site boundary



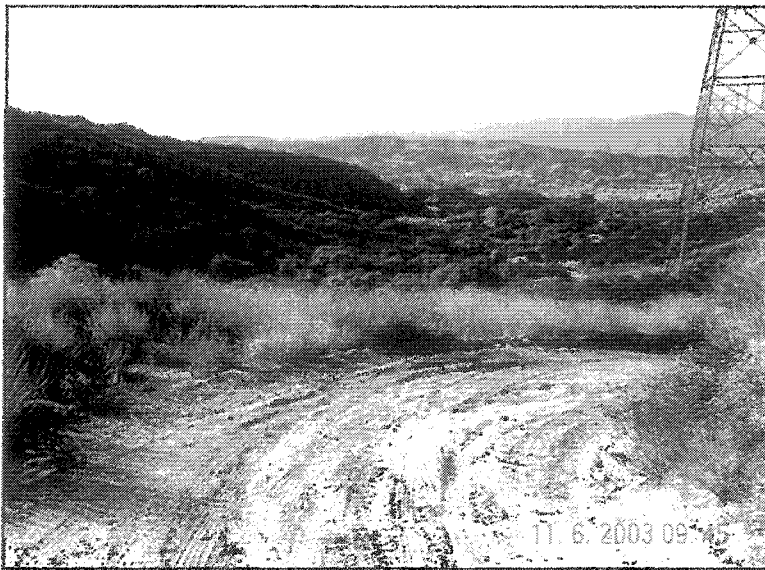
Drainage B6 – Downstream view of Drainage B6 with Drainage B in background



ERMINE STREET SITE/DRAINAGE COMPLEX B



Drainage B7 – Downstream view of drainage with Drainage B and existing rural residences in background



Drainage B – Downstream view of southern portion of Drainage B





Drainage B – Upstream view of off-site existing drop structure

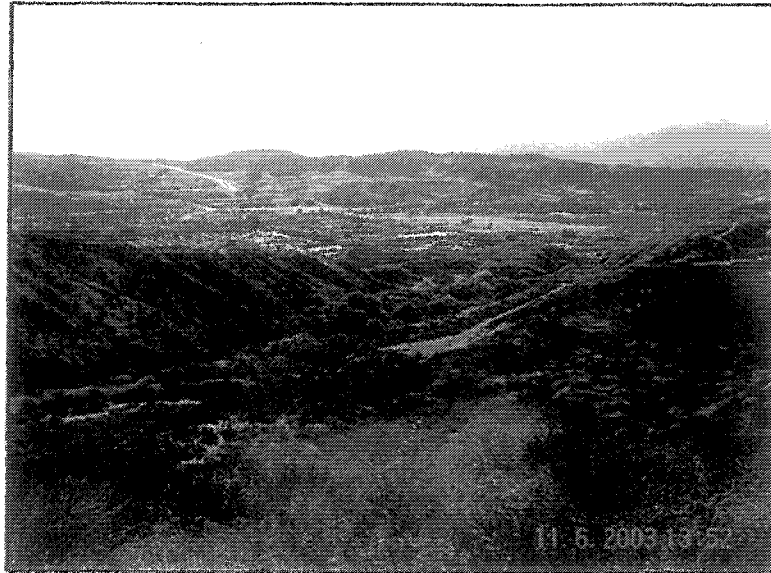


Drainage B – View of leaking pipe and 4' x 4' created wetland near drop structure

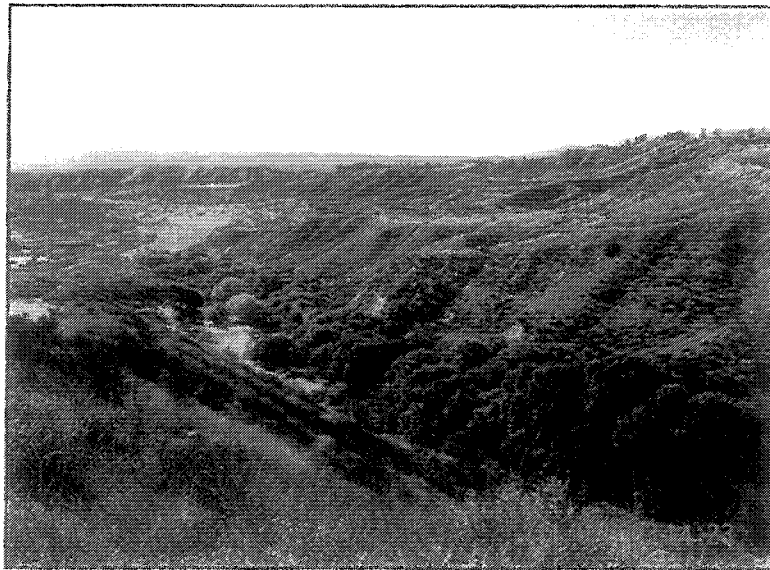


EXHIBIT 3

Photographs of Drainage C Complex



Drainage C – Downstream view of Drainage
Complex C



Drainage C – Downstream view of lower Drainage
Complex C



ERMINE STREET SITE/DRAINAGE COMPLEX C



Drainage C – Downstream view of upper Drainage C channel

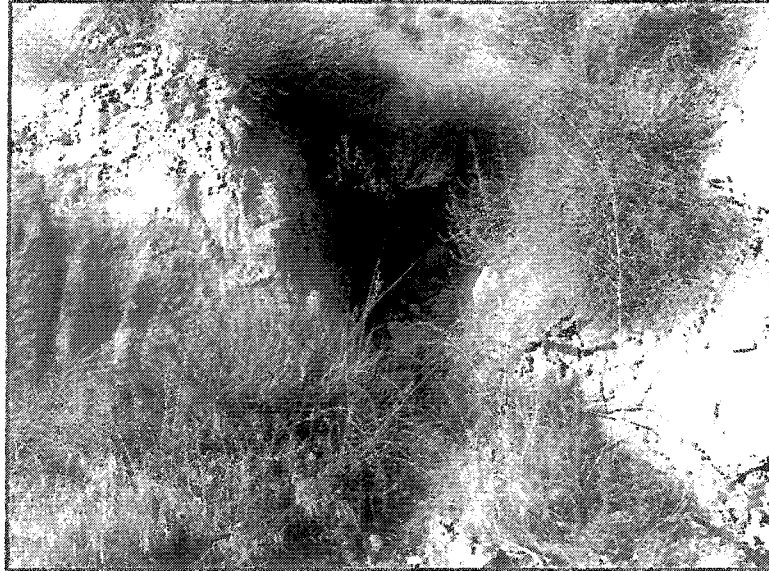


Drainage C – View of outlet into Santa Clara River with homeless encampment in background



EXHIBIT 4

Photographs of Drainage D Complex



Drainage D2 – Drainage outlet into Santa Clara River



North Bank of Santa Clara River – View of Drainage C outlet



APPENDIX 3-D

**Update to the Preliminary Jurisdictional Delineation of the Ermine Street Project/Tract
60258 (site), Santa Clarita, California, April 28, 2005**



VANDERMOST CONSULTING SERVICES, INC.

Government Affairs • Community Relations • Regulatory Assistance

DATE: April 28, 2005

TO: Rick Doremus, Synergy

FROM: Sherri Conley

SUBJECT: Update to the Preliminary Jurisdictional Delineation of the Ermine Street Project/Tract 60258 (site), Santa Clarita, California

On January 21, 2004 Vandermost Consulting Services, Inc. (VCS) submitted a revised Preliminary Jurisdictional Delineation report (Report) for the Ermine Street Project (Project). The Report assessed drainage impacts resulting from the development of the Project. Impact calculations were derived from the December 14, 2004 Tentative Tract Map provided by Sikand Engineering. On April 13, 2005 VCS reviewed the revised Tentative Tract Map dated March 21, 2005 provided by Sikand Engineering and conducted an updated impacts analysis. Modifications to the Tentative Tract Map consist of a reduction in grading along the southern boundary of the school site, thereby decreasing impacts to Drainage Complex C and D. In addition, small changes to the Project design resulted in a slight decrease in impacts to Drainage Complex B and a slight increase in impacts to Drainage Complex A. Tables 1 and 2 provide a summary of the previous and current impacts to Corps and CDFG jurisdiction.

TABLE 1: IMPACTS TO CORPS JURISDICTION

Drainage Complex	Total Jurisdiction	Previous Impacts	Current Impacts
A	0.27	0.23	0.24
B	1.09	0.73	0.72
C	0.37	0.26	0.25
D	0.01	0.01	0.007
Santa Clara River	9.95	0	0
Total	11.69 acres	1.23 acre	1.22 acre

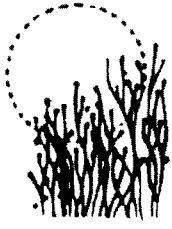
TABLE 2: IMPACTS TO CDFG JURISDICTION

Drainage Complex	Total Jurisdiction	Previous Impacts	Current Impacts
A	0.43	0.38	0.38
B	3.26	1.88	1.87
C	3.09	2.44	2.00
D	0.01	0.01	0.007
Santa Clara River	9.95	0	0
Total	16.74 acres	4.71 acres	4.26 acres

Please let this memo serve as a follow-up to our January 21, 2005 jurisdictional delineation report. If you have any questions, please do not hesitate to contact me at (949) 489-2700, extension 206.

APPENDIX 3-E

Results of Six 2005 California Gnatcatcher Protocol Surveys Performed on Vesting Tentative Tract No. 060258, June 8, 2005



Thomas Leslie Corporation

Biological and Cultural Investigations & Monitoring
Mr. Rick Farris, Division Chief
United States Fish & Wildlife Service
Ventura Office
2493 Portola Road, Suite B
Ventura, California 93003

June 8, 2005

Subject: Results of Six 2005 California Gnatcatcher Protocol Surveys Performed on Vesting Tentative Tract No. 060258

Dear Mr. Farris:

Thomas Leslie Corporation (TLC) was retained to determine the presence or absence of the California gnatcatcher (*Poliophtila californica*; CAGN) within the boundaries of Vesting Tentative Tract No. 060258 (VTTN 060258), a 246-acre City of Santa Clarita, California property.

This *report-of-findings* summarizes the methodologies and findings of protocol presence/absence surveys conducted for the federally listed threatened CAGN during six protocol surveys performed between March 25 and April 29, 2005.

A. SUMMARY OF 2005 PROTOCOL SURVEYS RESULTS

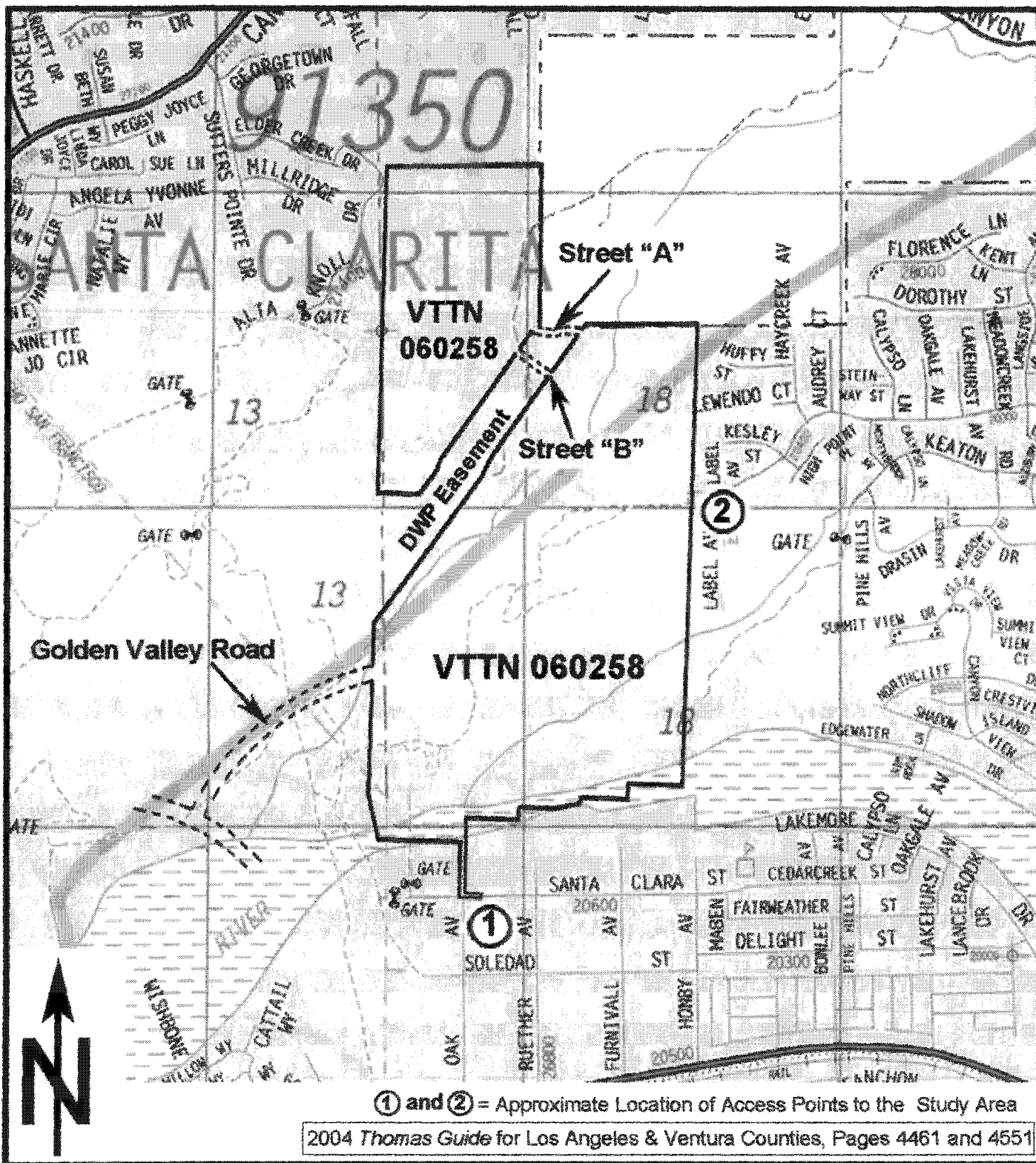
- *No* CAGN were observed within the boundaries of VTTN 060258 during six 2005 protocol breeding season CAGN surveys.
- *None* were observed during nine protocol CAGN surveys performed between June 7 and September 6, 2003 (TLC, 2003).
- *No* state CAGN occurrences are recorded on VTTN 060258. *None* are recorded within entire Newhall, CA and Mint Canyon, CA, USGS quadrangles (CNDDDB, 2005a, b, c, d).
- *No* Brown-headed Cowbirds (*Molothrus ater*) were observed within the boundaries of VTTN 060258 in 2005 or 2003.

B. PROPERTY LOCATION AND RELATION TO CRITICAL CAGN HABITAT

B-1. Location of the Property

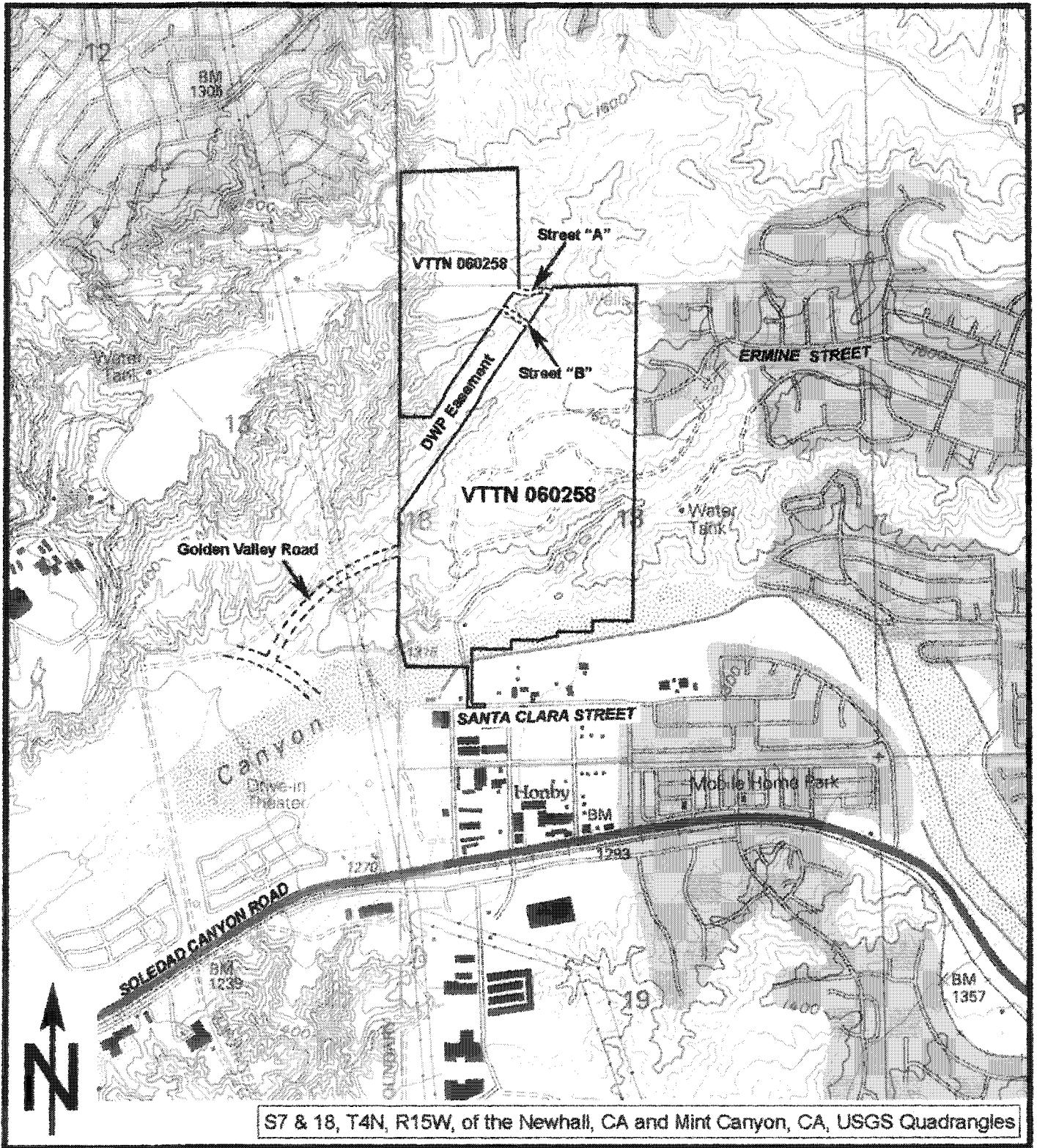
- **Figure 1** illustrates the boundaries of VTTN 060258 on the *Thomas Brothers Los Angeles and Ventura Counties Street Guide and Directory* on detail map page 4461, map coordinates C-7 and D-7 and on detail map page 4551, map coordinates C-1, D-1 and C-2.
- **Figure 2** plots the boundaries of the property in Section 18, Township 4 North, Range 15 West, of the 1995 Newhall, CA and 1995 Mint Canyon, CA, USGS quadrangles.

As Figure 1 illustrates, VTTN 060258 is located in the City of Santa Clarita. The Antelope Valley Freeway (State Highway 14; Hwy. 14) provides regional access to the property. More specifically, as the numbers "1" and "2" on Figure 1 of this report indicate, presently VTTN 060258 can be accessed by the two routes described below.

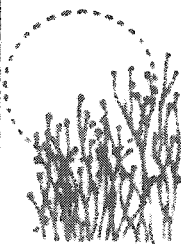


Thomas Leslie Corporation
 BIOLOGICAL & CULTURAL
 INVESTIGATIONS & MONITORING

Figure 1
 Location of CAGN Study Area:
 (1) Vesting Tentative Tract No. 060258
 and (2) three off-site roadways
 Illustrated on the Thomas Guide Map



S7 & 18, T4N, R15W, of the Newhall, CA and Mint Canyon, CA, USGS Quadrangles

 <p><i>Thomas Leslie Corporation</i> BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING</p>	<h2 style="text-align: center;">Figure 2</h2> <p style="text-align: center;">Location of CAGN Survey Area (1) Vesting Tentative Tract No. 060258 and (2) three off-site roadways Illustrated on USGS Quadrangle Maps</p>
---	--

Access Route # 1: One way to access VTTN 060258 is to exit Hwy. 14 at Via Princesa. Once on Via Princesa, proceed 1.3± miles northwesterly to Whites Canyon Road. Turn right onto Whites Canyon Road and continue 0.5± miles to Soledad Canyon Road. Turn left (west) onto Soledad Canyon Road and drive westerly 1.8± miles to Oak Avenue. Turn right onto Oak Avenue and drive 0.4± miles to Santa Clara Street. A narrow north-south oriented strip of land, fronting Santa Clara Street, provides access to the southern portion of VTTN 060258 north of Santa Clara River.

Access Route # 2: The northeastern portion of the study area can also be accessed by taking Via Princesa exit off Hwy. 14 and driving 1.3± miles northwesterly to Whites Canyon Road. Turn right onto Whites Canyon Road and proceed 2.3± miles to Steinway Street. Turn left onto Steinway Street and proceed 0.5± miles to and turn left onto Langside Avenue and make first right turn onto Ermine Street. Continue 0.6± miles on Ermine Street to the dead end of the roadway. Access to the study area is by foot from the terminus of Ermine Street (see Photo Plate No 1b).

B-2. Relation of VTTN 060258 to Federal Critical CAGN Habitat

The entirety of VTTN 060258 is located *inside* an area mapped by the USFWS as 2000 designated critical CAGN habitat, and *inside* the 2003 *proposed* CAGN critical habitat (FWS, 2000; FWS, 2003).

C. METHODOLOGIES OF THE 2005 PROTOCOL SURVEYS

C-1. Survey Protocols

The **six** protocol breeding season CAGN surveys were performed in accordance with the Service's survey guidelines which require the following: "from March 15 through June 30, a minimum of six [6] surveys shall be conducted at least one week apart."

In accordance with the survey guidelines, the surveys were "conducted between 6:00 a.m. and 12:00 p.m." The Service was given a pre-survey notification on March 1, 2005, that focused protocol CAGN surveys would be conducted on the property starting after March 15 and ending in late-April 2005 (TLC, 2005).

The conditions of each survey day, including the temperature, weather, and wind speed, were recorded in hand written field notes. The hand written field notes were subsequently transcribed to a computerized project file and used to prepare this *report-of-findings*. Table 1 summarizes the conditions of each survey day.

Appendix B **Photo Plate Nos. 1a, 1b and 1c** document the existing conditions of VTTN 060258.

C-2. Survey Personnel

The protocol CAGN surveys were performed by TLC biologist Mr. Gilberto Ruiz, under the authorization of his current U.S. Fish and Wildlife Service (Service) 10(a)(1)(A) recovery permit for threatened and endangered species (TE-840036-3; expires 07/28/07).

C-3. Potentially Suitable CAGN Habitat

As Figure 3 shows, 100.07 acres of Buckwheat Scrub is present within the boundaries of VTTN 060258. However, less than 80 acres were considered to be potentially suitable CAGN habitat. The majority of Buckwheat Scrub has been highly disturbed by past and ongoing land uses.

The protocol CAGN surveys were performed within suitable CAGN habitat, on each survey day, by walking slowly and methodically through each disturbed habitat patch. A combination of taped CAGN vocalizations and "pishing" sounds were used during the surveys.

TABLE 1: Summary of Survey Dates, Hours, Field Conditions and Survey Personnel

Survey Dates and Surveyors Hours (36 Hours Total)	Survey Hours		WEATHER CONDITIONS				Surveyor
			Temperature In Degrees Fahrenheit		Average Wind Speed In Miles Per Hour*		
	Start	End	Start	End	Start	End	
1. March 25, 2005 (6.0 person hrs.)	0600	1200	43.0	71.0	0.0	6.0	GBR
2. April 1, 2005 (6.0 person hrs.)	0600	1200	45.0	76.0	0.0	5.0	GBR
3. April 8, 2005 (6.0 person hrs.)	0600	1200	42.0	73.0	0.0	12.0	GBR
4. April 15, 2005 (6.0 person hrs.)	0600	1200	41.0	76.0	0.0	8.0	GBR
5. April 22, 2005 (6.0 person hrs.)	0600	1200	48.0	69.0	0.0	7.0	GBR
6. April 29, 2005 (6.0 person hrs.)	0600	1200	53.0	66.0	0.0	4.0	GBR

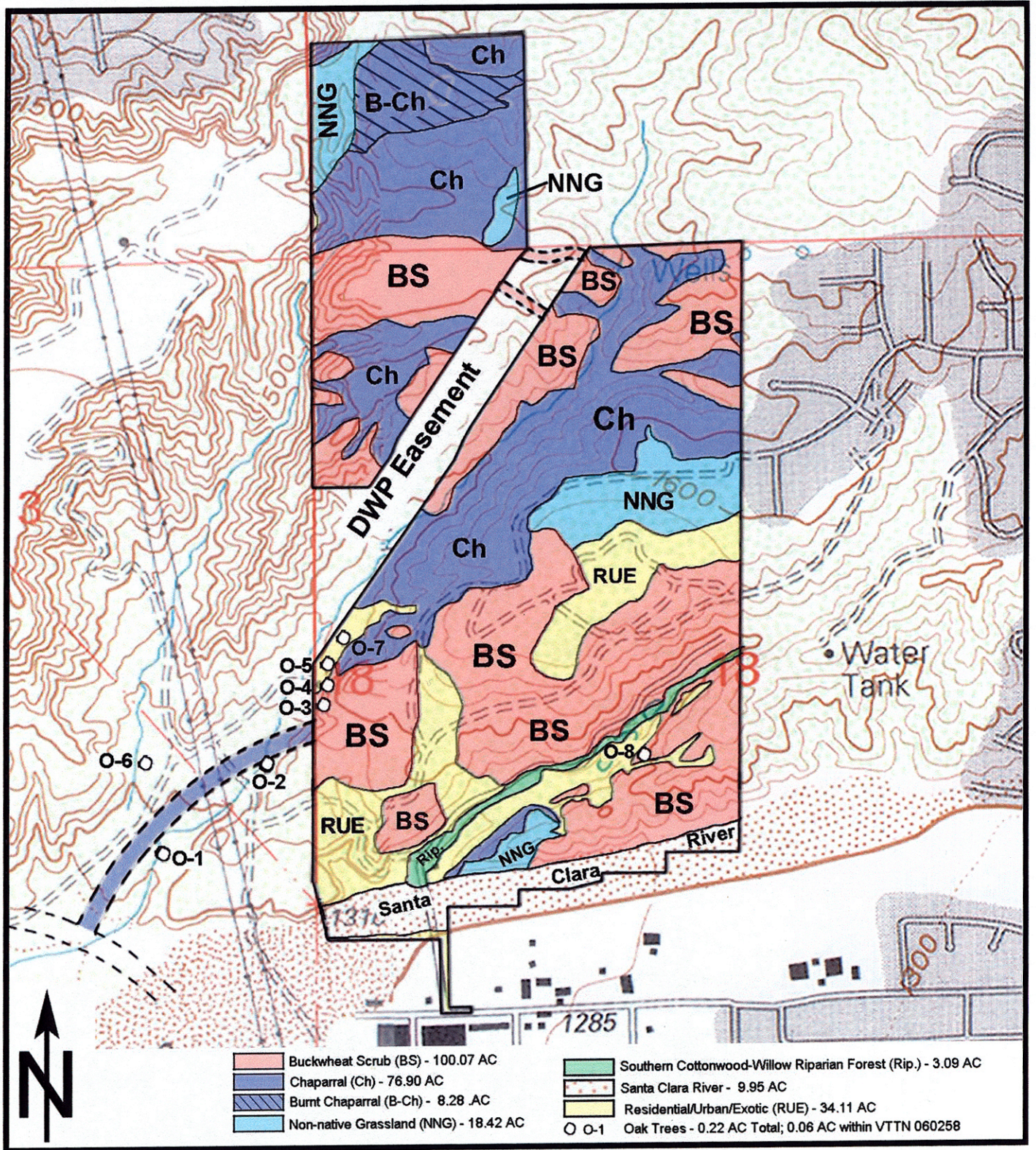
* = Although the weather conditions during the surveys varied, they were conducive to reasonable levels of bird activity. Temperatures and wind speed were measured with a *Kestrel 3000 Pocket Weather Station*.

D. PLANT COMMUNITIES OF VTTN 060258

As Figure 3 illustrates, the following habitat types and non-habitat vegetational associations grow within the boundaries of VTTN 060258:

- Buckwheat Scrub habitat
- Chamise Chaparral habitat
- Non-native Grassland habitat
- Southern Cottonwood-Willow Riparian Forest
- Residential/Urban/Exotic disturbed habitat

Each vegetational type is briefly discussed on Table 2.



Thomas Leslie Corporation
 BIOLOGICAL & CULTURAL
 INVESTIGATIONS & MONITORING

Figure 3
Schematic
Vegetational Types Map
of the CAGN Study Area

Table 2: Vegetational Types Identified within the Boundaries of VTTN 060258

Vegetational Type	Predominate Plant Species Field Identified Onsite	Habitat Quality
Buckwheat Scrub habitat	<i>Eriogonum fasciculatum</i> , <i>Bromus madritensis</i> ssp. <i>rubens</i> , <i>Schismus barbatus</i> , <i>Avena barbata</i> .	Low due to past and previous disturbances (e.g., disking of firebreaks, heavy off-road vehicle use, hiking, fires, etc.)
Chamise Chaparral habitat	<i>Adenostoma fasciculatum</i> , <i>Salvia leucophylla</i> , <i>Prunus ilicifolia</i> , <i>Bromus madritensis</i> ssp. <i>rubens</i> , <i>Quercus berberidifolia</i> .	Low due to past and previous disturbances (e.g., disking of firebreaks, heavy off-road vehicle use, hiking, fires, etc.)
Non-native Grassland habitat	<i>Avena barbata</i> , <i>Hemizonia fasciculata</i> .	Low due to past and previous disturbances (e.g., disking of firebreaks, heavy off-road vehicle use, hiking, fires, etc.)
Southern Cottonwood-Willow Riparian Forest	<i>Populus fremontii</i> , <i>Salix gooddingii</i> , <i>Salix lasiolepis</i> .	Low due to past and previous disturbances (e.g., disking of firebreaks, heavy off-road vehicle use, hiking, fires, etc.)
Residential/Urban/Exotic non-habitat vegetational association	<i>Hirschfeldia incana</i> , <i>Erodium cicutarium</i> , <i>Schismus barbatus</i> .	Not applicable since neither Holland (1986) nor Sawyer and Keeler-Wolf (1995) describe Residential/ Urban/Exotic as a habitat type.

E. RESULTS OF SIX 2005 PROTOCOL CAGN SURVEYS

- **No** CAGN were observed within the boundaries of the property areas during six protocol CAGN presence/absence surveys performed between March 25 and April 29, 2005. **None** were observed during nine protocol CAGN surveys performed between June 7 and September 6, 2003 (TLC, 2003).
- Appendix B provides list of the 43 bird species observed onsite during performance of 2005 and 2003 protocol CAGN surveys.
- **No** state CAGN occurrences are recorded on VTTN 060258. **None** are recorded within entire Newhall, CA and Mint Canyon, CA, USGS quadrangles (CNDDDB, 2005a, b, c, d).
- **No** Brown-headed Cowbirds (*Molothrus ater*) were observed within the boundaries of the property.

F. CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.



06-08-05

Date

Gilberto Ruiz
Surveying Biologist
Permit TE -840036-3



06-08-05

Date

Thomas Leslie
President/Biologist
Report Author
Permit TE-781384-4

REFERENCES CITED

California Department of Fish and Game (CDFG), April 6, 2005a, Natural Diversity Data Base (CNDDDB) Rare Find Record Search Results for the 1995 Mint Canyon, CA, USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), June 7, 2005b, Natural Diversity Data Base (CNDDDB) Rare Find Record Search Results for the 1995 Newhall, CA, USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), January 31, 2005c, Natural Diversity Data Base (CNDDDB) Quadrangle Velum Overlay No. 34118D4 for the 1995 Mint Canyon, CA, USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), January 31, 2005d, Natural Diversity Data Base (CNDDDB) Quadrangle Velum Overlay No. 34118D5 for the 1995 Newhall, CA, USGS 7.5 Minute Topographic Quadrangle.

Holland, R. F., October 1986, State of California, the Resources Agency, California Department of Fish and Game: Preliminary Descriptions of the Terrestrial Natural Communities of California.

Sawyer, J. And T. Keeler-Wolf, 1995, A Manual of California Vegetation, Sacramento, California.

Thomas Leslie Corporation (TLC), March 1, 2005, Pre-Survey Notification Regarding Performance of Six California Gnatcatcher Protocol Surveys.

Thomas Leslie Corporation (TLC), October 10, 2003, Results of Nine Protocol California Gnatcatcher Surveys.

United States Department of the Interior Fish and Wildlife Service (FWS), Carlsbad, California, May 1, 2003, Coastal California Gnatcatcher Proposed Critical Habitat.

United States Department of the Interior Fish and Wildlife Service (FWS), Carlsbad, California, October 18, 2000, (Designated) Coastal California Gnatcatcher Critical Habitat.

APPENDIX A

2005 and 2003 BIRD SPECIES LIST

***FOR
VESTING TENTATIVE TRACT
NO. 060258***

SANTA CLARITA, CALIFORNIA

SCIENTIFIC NAMES	COMMON NAMES (44)	2005 CAGN Surveys	2003 CAGN surveys
	# of species:	31	40
CLASS AVES	BIRDS		
FAMILY CATHARTIDAE	NEW WORLD VULTURES		
<i>Cathartes aura</i>	Turkey Vulture	X	X
FAMILY ACCIPITRIDAE	BUTEOS, KITES, HARRIERS		
<i>Accipiter cooperii</i>	Cooper's Hawk	---	X
<i>Buteo jamaicensis</i>	Red-tailed Hawk	X	X
FAMILY ODONTOPHORIDAE	NEW WORLD QUAILS		
<i>Callipepla californica</i>	California Quail	X	X
FAMILY COLUMBIDAE	PIGEON AND DOVES		
<i>Columba livia</i>	Rock Dove	X	---
<i>Zenaida macroura</i>	Mourning Dove	X	X
FAMILY CUCULIDAE	CUCKOOS, ANIS, AND ROADRUNNERS		
<i>Geococcyx californianus</i>	Road-runner	---	X
FAMILY TROCHILIDAE	HUMMINGBIRDS		
<i>Calypte anna</i>	Anna's Hummingbird	X	X
<i>Calypte costae</i>	Costa's Hummingbird	X	X
FAMILY PICIDAE	WOODPECKERS		
<i>Picoides nuttallii</i>	Nuttall's Woodpecker	---	X
FAMILY TYRANNIDAE	TYRANT FLYCATCHERS		
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher	X	X
<i>Sayornis nigricans</i>	Black Phoebe	X	X
<i>Tyrannus verticalis</i>	Western Kingbird	X	X
FAMILY HIRUNDINIDAE	SWALLOWS		
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	---	X
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	---	X
FAMILY CORVIDAE	JAYS, MAGPIES, AND CROWS		
<i>Aphelocoma californica</i>	Western Scrub-jay	X	X
<i>Corvus brachyrhynchos</i>	American Crow	X	X
<i>Corvus corax</i>	Common Raven	X	X
FAMILY AEGITHALIDAE	BUSHTITS		
<i>Psaltriparus minimus</i>	Bushtit	X	X

SCIENTIFIC NAMES	COMMON NAMES (44)	2005 CAGN Surveys	2003 CAGN surveys
FAMILY TIMALIIDAE	WRENTITS		
<i>Chamaea fasciata</i>	Wrentit	X	X
FAMILY TROGLODYTIDAE	WRENS		
<i>Thryomanes bewickii</i>	Bewick's Wren	X	X
FAMILY MIMIDAE	MOCKINGBIRDS AND THRASHERS		
<i>Mimus polyglottos</i>	Northern Mockingbird	X	X
<i>Toxostoma redivivum</i>	California Thrasher	X	X
FAMILY TURDIDAE	THRUSHES, SOLITAIRES AND BLUEBIRDS		
<i>Sialia mexicana</i>	Western Bluebird	---	X
FAMILY PTILOGONATIDAE	SILKY FLYCATCHERS		
<i>Phainopepla nitens</i>	Phainopepla	---	X
FAMILY LANIIDAE	SHRIKES		
<i>Lanius ludovicianus</i>	Loggerhead Shrike	---	X
FAMILY PARULIDAE	WOOD WARBLERS		
<i>Dendroica coronata</i>	Yellow-rumped Warbler	X	---
<i>Dendroica petechia</i>	Yellow Warbler	X	X
<i>Icteria virens</i>	Yellow-breasted Chat	---	X
FAMILY ICTERIDAE	BLACKBIRDS AND ORIOLES		
<i>Icterus bullockii</i>	Bullock's Oriole	X	X
<i>Icterus cucullatus</i>	Hooded Oriole		
FAMILY CARDINALIDAE	CARDINALS		
<i>Passerina amoena</i>	Lazuli Bunting	---	X
<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak	X	X
FAMILY FRINGILLIDAE	FINCHES		
<i>Carduelis psaltria</i>	Lesser Goldfinch	---	X
<i>Carduelis tristis</i>	American Goldfinch	---	X
<i>Carpodacus mexicanus</i>	House Finch	X	X
<i>Carpodacus purpureus</i>	Purple Finch	X	X
FAMILY EMBERIZIDAE	SPARROWS		
<i>Amphispiza belli</i>	Bell's Sage Sparrow	X	X
<i>Chondestes grammacus</i>	Lark Sparrow	X	X
<i>Melospiza melodia</i>	Song Sparrow	X	X
<i>Passerella iliaca</i>	Fox Sparrow	X	X
<i>Pipilo crissalis</i>	California Towhee	X	X
<i>Pipilo maculatus</i>	Spotted Towhee	X	X
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	X	---

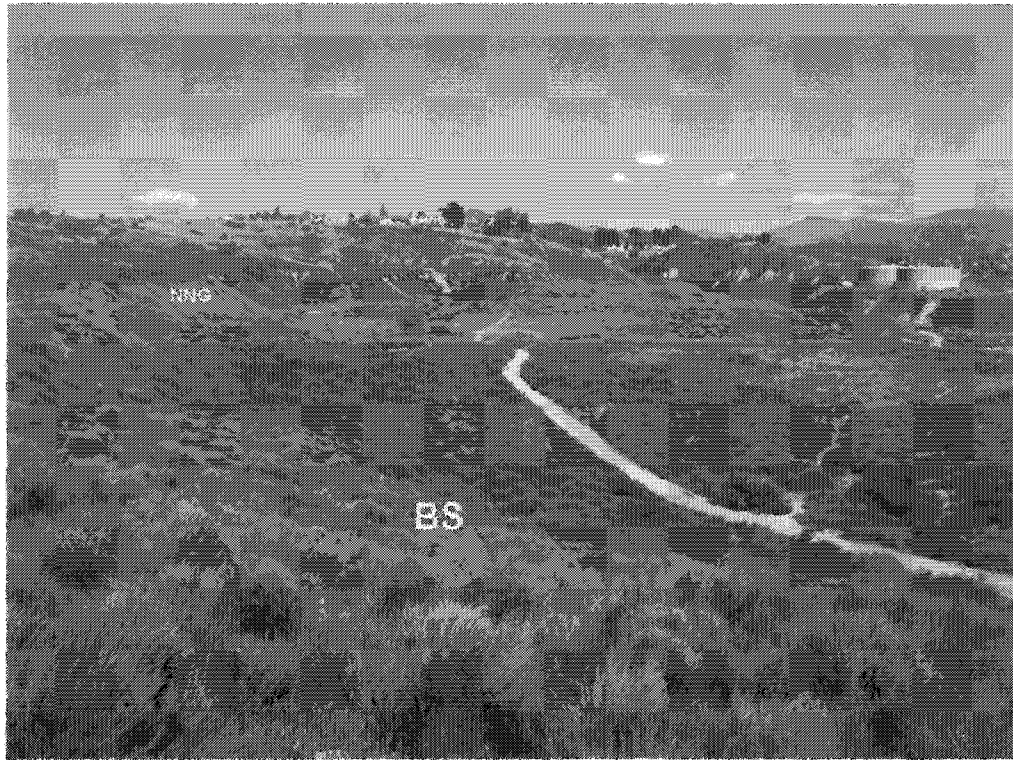
APPENDIX B

***2005
PHOTO PLATE NO. 1***

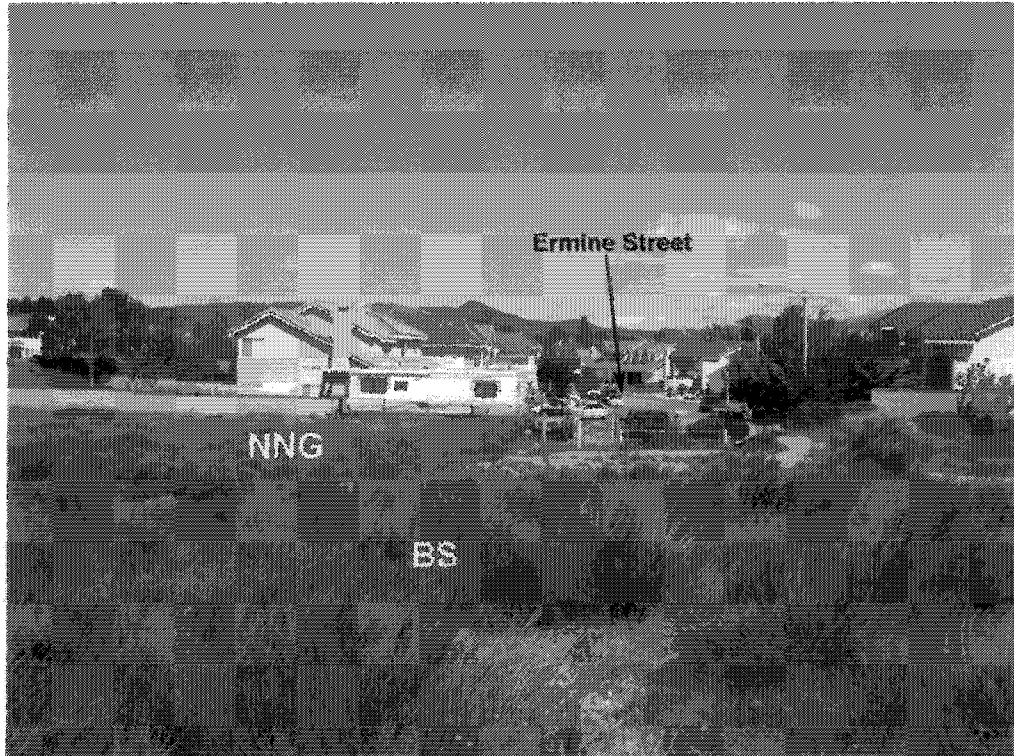
***FOR
VESTING TENTATIVE TRACT
NO. 060258***

SANTA CLARITA, CALIFORNIA

PHOTO PLATE NO. 1-1

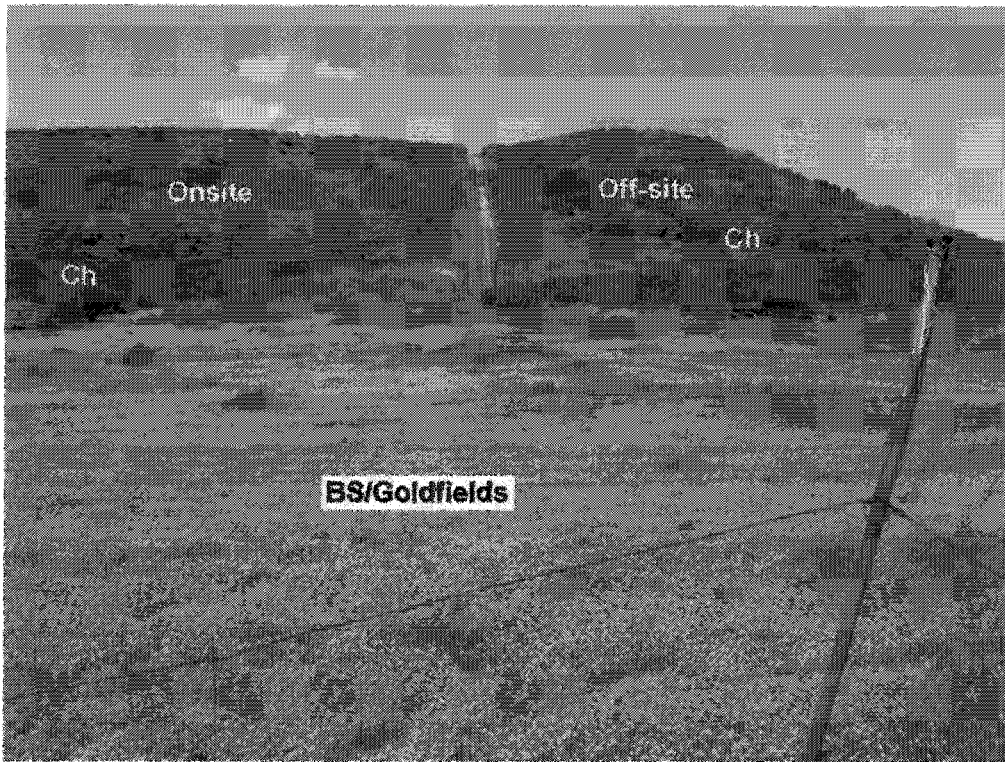


- 1a. Southwesterly view across Lot Nos. 99 and 111 of Vesting Tentative Tract No. 060258 (VTTN 060258). A moderately dense mixture of highly disturbed Non-native Grassland (NNG) and Buckwheat Scrub (BS) habitat grows across this portion of the tract (photo date - 04/09/05).



- 1b. Easterly view, toward an adjacent off-site residential development, built along Ermine Street. This is one of the access sites to VTTN 060258. The northeastern portion of the CAGN survey area is vegetated with a dense mixture of a Buckwheat Scrub (BS) and Non-native Grassland (NNG) habitat mixture. The predominant plants visible in this photograph are California Buckwheat (*Eriogonum fasciculatum*) and California Goldfields (*Lasthenia californica*) (photo date - 04/09/05).

PHOTO PLATE NO. 1-2



- 1c. Northerly view, of open Buckwheat Scrub (BS) habitat and a dense growth of California Goldfields that dominates the grass/herb understory on April 9, 2005. Chaparral (Ch) habitat vegetated the south facing slopes of the hills visible beyond the BS habitat (photo date - 04/09/05).

APPENDIX 4

Cultural Resources

APPENDIX 4-A

A Phase 1 Cultural Resources Investigation, McKenna et al (2004)

A PHASE I CULTURAL RESOURCES
INVESTIGATION OF THE KEYSTONE
PROJECT AREA IN THE SANTA
CLARITA AREA OF LOS
ANGELES COUNTY,
CALIFORNIA

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A PHASE I CULTURAL RESOURCES INVESTIGATION OF THE KEYSTONE PROJECT AREA IN THE SANTA CLARITA AREA OF LOS ANGELES COUNTY, CALIFORNIA

by,

Jeanette A. McKenna, Principal, M.A./RPA
McKenna et al., Whittier CA

INTRODUCTION

McKenna et al. initiated the Phase I cultural resources investigations of the Keystone project area in the Santa Clarita area of Los Angeles County at the request of Curtis Zacuto of Christopher A. Joseph and Associates, Westlake Village, California. The property consists of approximately 240 acres of relatively unimproved land on the north side of the Santa Clara River and within Soledad Canyon. The proposed action involves the subdivision and subsequent development of the property as a residential community with some commercial frontage. The proposed development requires compliance with the California Environmental Quality Act (CEQA), as amended, and the California Subdivision Map Act.

LOCATION AND SETTING

The current project area lies in the northwestern portion of Los Angeles County - in an area known as Soledad Canyon and/or Santa Clarita (Figure 1). Specifically, the project location is within Township 4 North, Range 15 West, Section 18 (Figure 2). The parcel consists of approximately 240 acres of undeveloped land in two distinct parcels (Figure 3). The property is located north of the Santa Clara River and north of Soledad Canyon Road. The property is accessed from Ermine Street (from the northeast) and Santa Clara Street (from the south). The extension of Santa Clara Street (Honby Ave.) crosses the Santa Clara River and enters the property from the south. One structure and three ponds are identified within the project area on the current USGS quadrangles (see Figure 2).
Insert figure 1

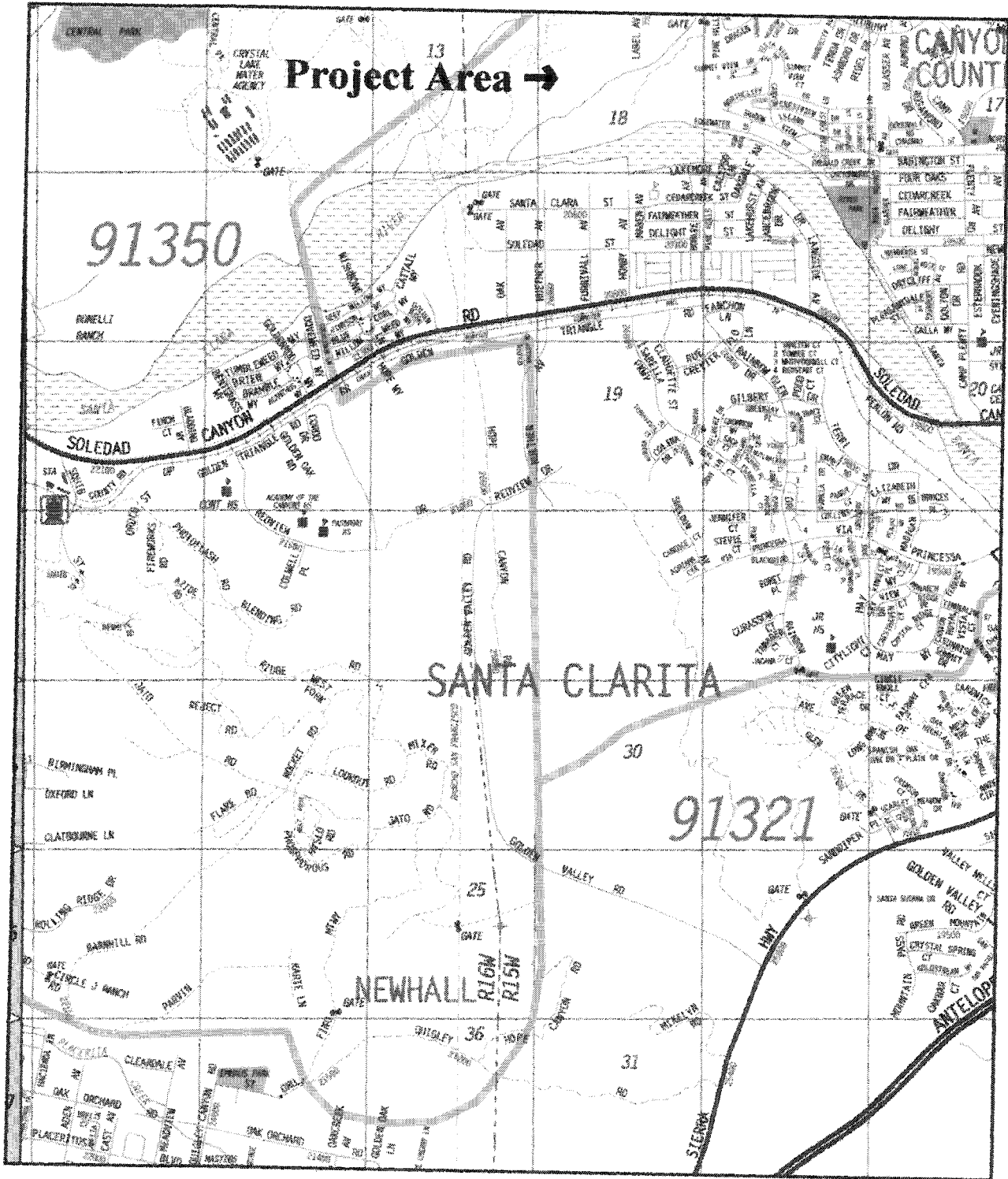


Figure 1. General Location of the Project Area.

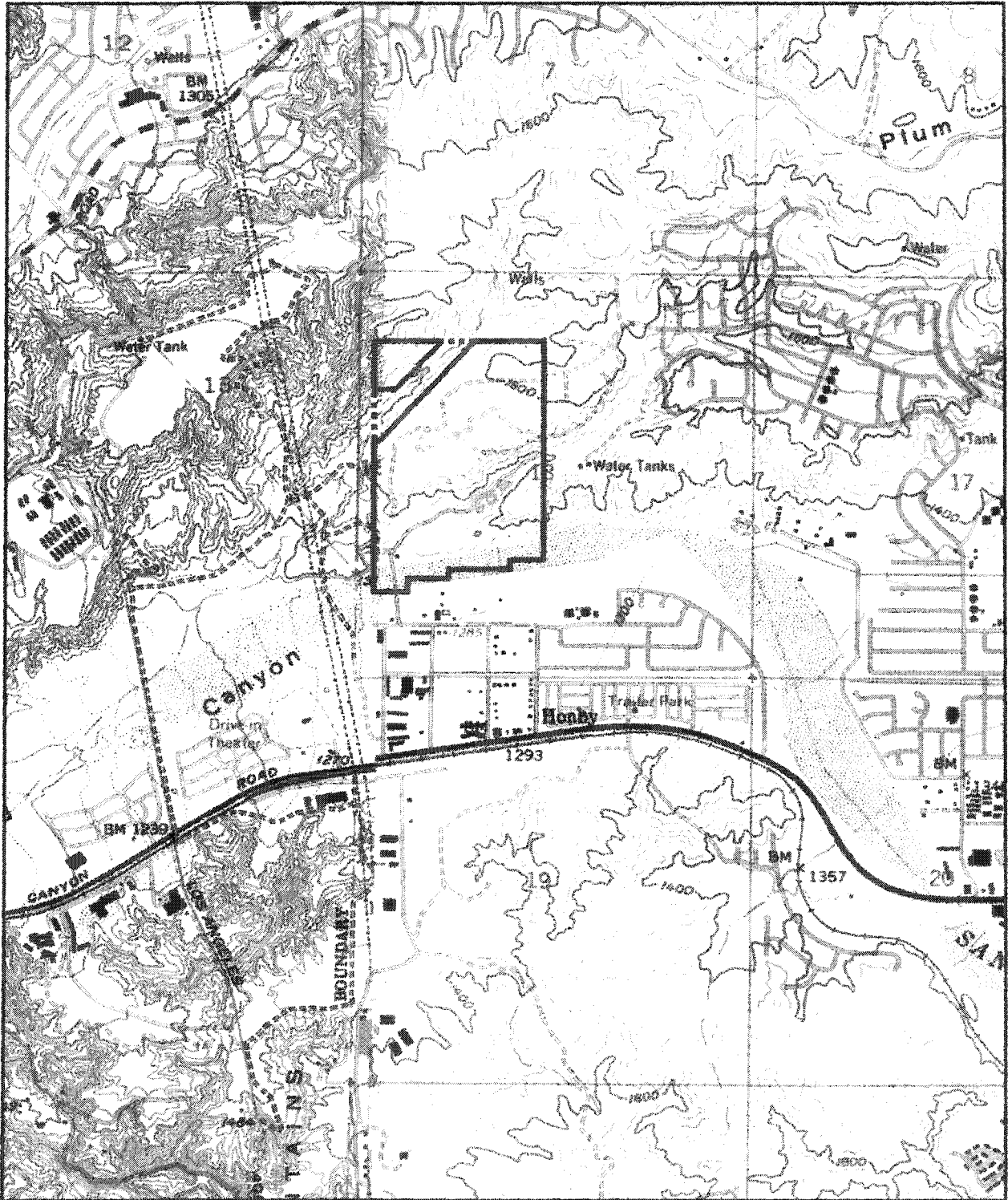


Figure 2. Specific Location of the Project Area (USGS Newhall (west) and Mint Canyon (east) Quadrangles).

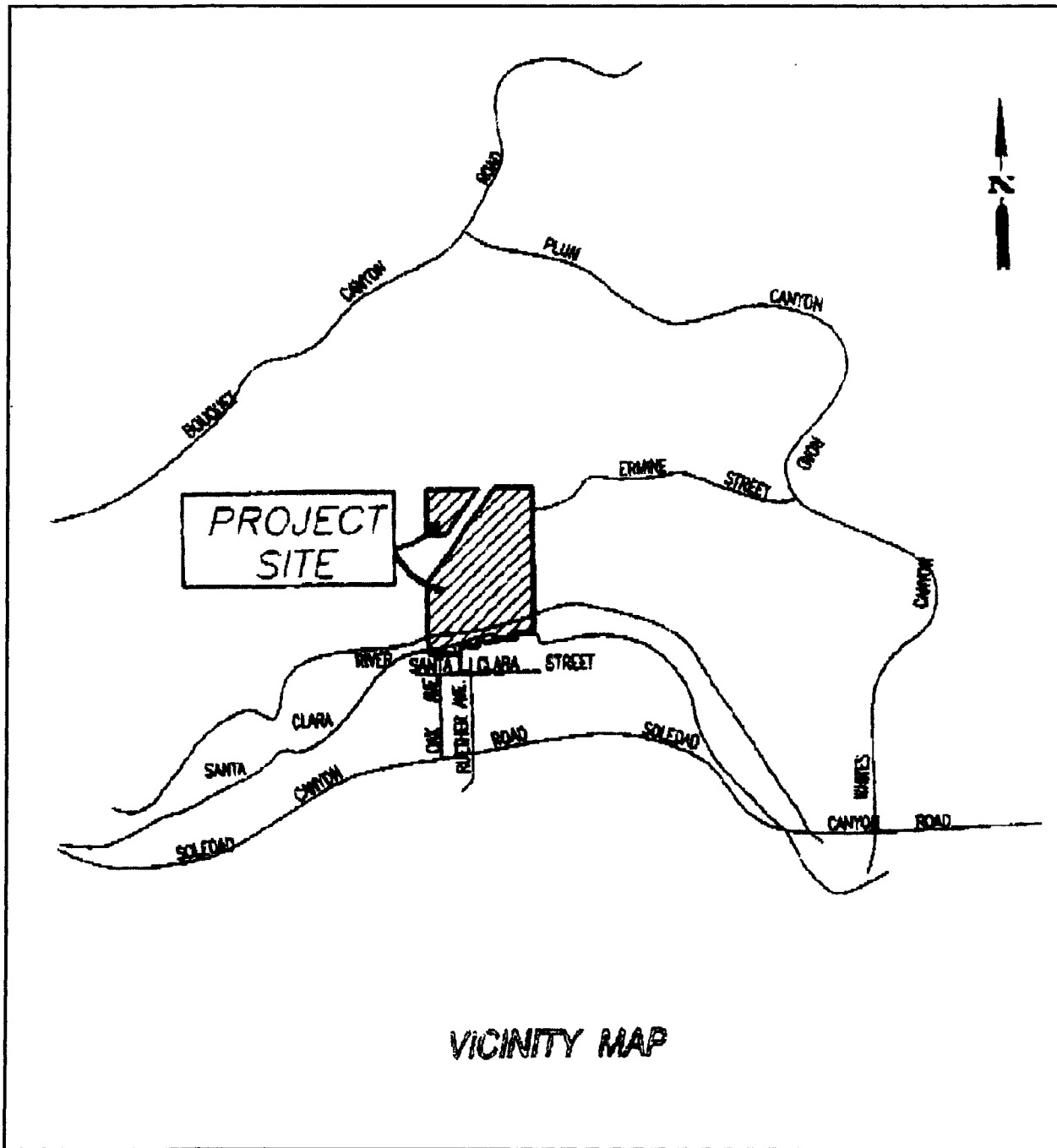


Figure 3. Vicinity Map as Defined by the Proponent.

These areas are within Soledad Canyon and near the San Gabriel Mountains - Soledad Canyon representing the link between the San Gabriel Mountain area and the southwestern extent of the Mojave Desert. McCorkle-Apple and Lilburn (1992:1) characterizes this particular area as:

... Formed by late Tertiary and Quaternary extensional faulting, these mountains are comprised of crystalline rocks of pre-Tertiary age; sedimentary and volcanic rocks of Tertiary age; and sediments and local basalt flows of Quaternary age (Dibblee 1967). Most of these mountain ranges are separated by basins or valleys that lack external drainages resulting in the formation of dry lakes or playas. Seasonal precipitation drains toward the alluvial basins, but is usually absorbed into the ground prior to reaching them (Wright and Frey 1965:289) ...

The Mojave Desert region (to the northeast) is geologically a great wedge-shaped fault block. It is bounded by the San Andreas and Garlock fault zones on the southwest and north, respectively, but has no definite natural eastern limits. Mountain ranges separate the Mojave Desert from the coastal area to the southwest, and from the Basin and Range province to the north. The desert itself is characterized by north-south trending mountain ranges which enclose expanses of arid valleys and low-lying basins or sinks (Harry 1992). Lithic resources are restricted to the buttes and ridges which rise above the unconsolidated alluvium. Because few systematic archaeological surveys have been conducted in the area, it is unknown how widespread are lithic materials suitable for prehistoric tool production (Harry 1992).

The climate of the area is described as sub-arid, transitional between the relatively colder climate of the nearby Great Basin and the subtropical climate of the Sonoran Desert (McCorkle-Apple and Lilburn 1992:2; Axelrod 1979). Seasonal temperatures vary, as do levels of rain, general humidity, and wind. Temperatures can range from below 60° Fahrenheit to over 100° Fahrenheit. Sparse precipitation and high temperatures create a situation where evaporation exceeds precipitation, particularly in those areas lying below 5,000 feet above mean sea level (AMSL) in elevation (Warren and Crabtree 1986:183). Reliable water sources are currently available only along major rivers, inter-mittent streams and springs, and seasonal claypans.

During the early Holocene (10,500 to 8,000 B.P.) climatic fluctuations have been recorded. During this time, there was a trend towards warming and drying characterized by the disappearance of lakes and a reduction in the number of springs. The area became wetter in the middle Holocene (ca. 5,100 B.P.) and warmer and drier again post-2,000 B.P. Citing Weide (1982), the last 2,000 years have been characterized by considerable "climatic oscillations" ranging from extreme droughts and massive flooding.

The effects of changing paleoclimatic conditions on the hydrological, floral and faunal patterns of the western Mojave Desert and adjacent mountain areas are only partially understood. The flora and fauna of this area adjusted to the changing conditions and sparse fresh water sources. Flora is dominated by the presence of creosote bush scrub (*Larrea divaricata*) and salt bush (*Atriplex*

confertifolia). Citing Barbour and Major (1977), creosote is drought-tolerant and salt bush is often found near dry playas. Blackbrush (*Coleogyne ramosissima*) and various species of cacti are also common.

Local fauna includes a variety of reptiles, rodents, small carnivores, and birds. Species of reptiles include the desert tortoise (*Gopherus Agassizi*), chuckawalla (*Sauromalus obesus*), rattlesnakes (*Crotalus*), shovelnose snake (*Chionactis occipitalis*) and several species of lizards. Carnivores include coyotes (*Canis latrans*), badger (*Taxidea taxus*), desert kit fox (*Vulpes macrotis*), and bobcat (*Felis rufus*). The small mammals include blacktailed jackrabbits (*Lepus californicus*), woodrat (*Neotoms* sp.), ground squirrels (*Spermophilus* sp.), and cottontail jackrabbits (*Sylvilagus audobonii*). Large herbivores, though not common, include the desert bighorn sheep (*Ovis canadensis*) and mule deer (*Odocoileus hemionus*) - at higher elevations. Avifauna include the LeConte thrasher (*Toxostoma lecontei*), sage thrasher (*Oreoscoptes montanus*), cactus wren (*Heleodytes brunneicapillus*), raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*) turkey vulture (*Cathartes aura*), various ducks (*Anas*), and the American coot (*Fulica americana*).

CULTURE HISTORY BACKGROUND

Grenda, in Becker (1999:7-14), presents a summary of the culture history background for Southern California. Cited here:

Of the many cultural sequences of southern California, three main regional syntheses are commonly used in modern archaeological interpretation. The first, advanced by Wallace in 1955, defines four cultural horizons, each with local variations: Early Man, Millingstone, Intermediate, and Late Prehistoric. Wallace's (1978) revision divides the sequence into three broader periods: Period I, hunting; Period II, food collecting; and Period III, diversified subsistence. Between Wallace's (1955) original synthesis and his revision (1978), Warren (1968) proposed his regional synthesis. Employing a more ecological approach, Warren defined five traditions in southern California. Three of the five traditions are represented in the project region: San Dieguito, Encinitas, and Campbell. In addition to the Colorado River and interior desert regions, San Dieguito was later incorporated into the larger Western Pluvial Lakes tradition that extends from northeastern California to the Mojave Desert and the San Diego coastal area (Bedwell 1970).

An earlier report associated with the William J. Fox Airfield summarized the culture history background for the nearby Antelope Valley by citing the chronologies presented in Glennan (1971) and Sutton (1981), but relying on the coastal chronology of Wallace (1955). McKenna et al. suggests the coastal chronology is not applicable here and, in contrast, suggests the project area is more directly associated with the Western Mojave Desert and/or Great Basin populations than those of the coast. Citing McCorkle and Lilburn (1992:6):

While much is known about the prehistory of the Mojave Desert, relatively few formal archaeological investigations have been conducted in the southern portion of the central Mojave. As a result, little specific regional information on prehistory is known. General summaries can be found in Stickel and Weinman-Roberts (1980), Warren (1980, 1984), and Warren and Crabtree (1986).

Chronological Framework

The earliest generally accepted evidence for human occupation of the Mojave desert dates from around 12,000 B.P. Claims have been made for much earlier dates (e.g. Simpson 1958), but as Warren and Crabtree (1986:184) note, these are controversial and bear little relationship to later cultural developments in the region.

Sites dating to the Lake Mojave period (12,000 to 7,000 B.P.) serve as the basis for our understanding of the earliest undisputed occupation of the Mojave Desert. Sometimes considered a Paleo-Indian assemblage, the Lake Mojave complex is thought by some researchers to be directly ancestral to the subsequent early Archaic cultures (Warren and Crabtree 1986). Lake Mojave period sites are usually open air sites and are limited to the surface, although sites with substantial subsurface deposits have been recently identified in the central Mojave (Jenkins 1985).

Since sites of the Lake Mojave period are often found in association with Late Pleistocene/Early Holocene lake stands and outwash drainages, some researchers have suggested that lacustrine resources were a subsistence focus. Others argue that grasslands suitable for the grazing of Late Pleistocene mega-fauna would have surrounded the terminal Pleistocene lakes, and that this was the main subsistence focus of the Lake Mojave cultural groups (Warren and Crabtree 1986). Regrettably, few sites dating to the early part of the Lake Mojave period have been excavated and little direct evidence of subsistence practices has been reported. Recent excavations of sites dated to the latter part of the period have revealed an unexpectedly high incidence of small mammal bone relative to large mammal bone. This suggests that we may need to refine our ideas about the subsistence focus of Lake Mojave cultures, or at least grant that substantial subsistence change occurred during the period.

Artifacts typical of the period include leaf-shaped points and long-stemmed, narrow-shouldered points of the Lake Mojave series and the short-bladed, shouldered points of the Silver Lake series. A variety of large scrapers and flaked stone crescents are also considered diagnostic of the period. Milling equipment is thought to be rare or absent (Amsden 1937). Fluted points are sometimes found in possible association with Lake Mojave sites, but their cultural and chronological relationship to the stemmed point series remains questionable.

Relatively little material from the Lake Mojave period has been documented in the southern Mojave. Some of the earliest widely accepted finds come from the Black

Butte site (CA-SBR-1554). This site is located on the south side of Black Butte, a volcanic plug approximately 6km west of the Troy Lake portion of Lake Manix. The site assemblage is dominated by later period Pinto points but also contains a Lake Mojave point, a Silver Lake point and two items tentatively identified as crescents (Lord 1987).

The next identifiable period in the Mojave Desert is that associated with Pinto series points (Warren and Crabtree 1986). Although period markers, some questions remain concerning their placement in time. Two scenarios exist, both of which are tied to the transition to arid conditions in the middle Holocene. Some archaeologists (Donnan 1964; Kowta 1969; Wallace 1962) have proposed by the desert was essentially abandoned between 7,000 and 5,000 B.P. Other researchers (Susia 1964; Tuohy 1974; Warren 1980) argue that no evidence of an occupational hiatus of any great magnitude exists within the archaeological record. Central to this debate are the de-finition and dating of Pinto points (Warren and Crabtree 1986). The problem is complicated by the fact that points morphologically similar to Pinto points occur generally later in time in the central and eastern Great Basin than do true Pinto points in the Mojave (Thomas 1981; Vaughan and Warren 1986).

Like sites of the preceding period, Pinto sites are typically found in open settings in relatively well-watered locales. Early Pinto sites have been found in close association with late Lake Mojave sites, lending support to Warren and Crabtree's suggestion that the Pinto cultures developed directly from the preceding Lake Mojave ones. The Pinto period signals the beginning of cultural adaptation to the desert, an adaptation to the more arid conditions. Grinding tools were incorporated into the artifact assemblage, suggesting that the processing of hard seeds became more important in the subsistence system. It is, however, generally thought that Pinto peoples main-tained a mobile subsistence strategy, focused primarily on hunting large mammals.

A time of greater effective moisture in the Mojave dates to approximately 4,000 B.P. This time period, sometimes referred to as the Little Pluvial (Warren 1980), also corresponds to a new era in Mojave Desert prehistory. It was during this time, the Gypsum Period (4,000 to 1,500 B.P.), that more favorable environmental conditions allowed an increase in the population (Elston 1982). Ritual items such as zoomorphic rock art and split-twig figures are thought to indicate a continued emphasis on hunting, while the increased importance of processing of plant foods is indicated by an increase in the frequency and diversity of groundstone implements (Warren and Crabtree 1986). Open sites are in evidence, along with rock shelters and caves. Such sites have yielded perishable goods including basketry and atlatls from the Gypsum period. Habitation sites with well developed middens are found in association with water and near resource areas. During this period shell beads from coastal California are found in the desert for the first time. Trade activity appears to have been greater in many parts of the Great Basin during the Gypsum period

(Bennyhoff and Hughes 1987).

West of the project area and just south of Troy Lake is Newberry Cave. This Gypsum period site contained a number of Elko and Gypsum points, along with perishable items. The collection from Newberry Cave is notable for the number of apparent ritual items, including split twig figures, painted stones, quartz crystals, a sheep dung pendant and pictographs.

Eastgate and Rose Spring points began to dominate artifact assemblages in the Mojave sometime after 2,000 B.P. (Lyneis 1982:176). In the chronology presented by Warren and Crabtree (1986) these are assigned to the Saratoga Springs period (1,500 B.P. to 750 B.P.). This time period was marked by an increase in regional differences, except in the northwestern Mojave where sociocultural continuity seems to have occurred (Whitley 1988).

Basketmaker III and Anasazi developments occurred along the tributaries of the Colorado River. Anasazi "influence" in the form of painted ceramics extended well into the eastern Mojave. Although the exact nature of this influence is not completely understood (Lyneis 1982), it seems probable that the increased distribution of these painted ceramics resulted from exchange rather than by Anasazi attempts to greatly expand their territory. Different influences were felt in the southern Mojave. Here Hakatayan (or Yuman) ceramics similar to those originating in the lower Colorado River occur, along with Cottonwood points. This interaction is most evident along the Mojave River, supporting the widely held conclusion that the Mojave River served as a major trade corridor connecting the coastal portion of California with regions to the east (Warren and Crabtree 1986).

The Oro Grande site in the western Mojave may be a key site in understanding varying cultural influences during the Saratoga Springs period. Situated on the Mojave River near Victorville, this site contains a midden deposit dated to the period between 1,100 and 650 B.P. (Rector 1979). Cottonwood series points dominate the point assemblage. Significantly, no ceramics were recovered. Other materials at the site, however, were similar to those found in other sites along the river. The more gradual development of Lower Colorado River influences may account for the lack of pottery at Oro Grande although Warren (1984) considers the absence of ceramics to be strong evidence for the presence of Rogers' (1945) "nonceramic Yuman" pattern. The Oro Grande complex would then be the "initial phase" of the Hakataya influence in the upper Mojave. Warren (1984:403) proposes that the complex may not have developed in the Mojave Sinks, because the Anasazi influence may have persisted there until it was replaced by fully developed Hakatayan cultures.

The next period, the Protohistoric period (750 B.P. to contact), was marked by the presence of Desert Side-notched projectile points. The Numic influence during this period is identified with the presence of brownware, considered typical of the Paiute and Shoshone. Based on the distribution of this brownware, the contact between the

Numic and the Lower Colorado (Patayan or Hakatayan) traditions was located north of Soda Lake and Cronise Lake basins (Warren 1984:425). Recent work in the region appears to support this conclusion (Schneider 1988; Jenkins 1986; York 1989). Protohistoric period sites include habitation sites with developed middens, located near reliable water sources. Temporary camps and a variety of resource procurement and processing stations also occur.

Earlier, in the late 1770's, Francisco Garces first encountered the Chemehuevi and then the Kawaiisu peoples when he traversed the Fort Irwin area during his exploratory expeditions of the desert regions of southern California (Coombs 1982; Cultural Systems Research, Inc. 1987; Zigmond 1986). Approximately 50 years after Garces' trips, Jedediah Smith's expedition encountered the Chemehuevi approximately 8 miles up the Mojave River from Soda Lake (Cultural Systems Research, Inc. 1987). Other exploratory expeditions in the 1850's that crossed the Mojave Desert reported Indian settlements marked by the presence of brush huts, empty tortoise shells, melon and squash rinds, and some rock art (Coombs 1982). John C. Fremont's expedition in 1844 was one of the most important early surveys of the Mojave; it firmly established a knowledge of the major geographic, botanic and geologic features of the region (Greenwood and McIntyre 1980).

Soledad Canyon was discovered by Williamson in 1853 and originally known as New Pass. Later, the pass was renamed Williamson Pass, but by 1859, known as Le Soledad Pass (Gudde 1969:316), after an Indian Village in the area. "*Agua Dulce*" is the Spanish form of "*Sweet Water*", originally a reference to a fresh water source in Riverside County (Mendenhall 1983:80). The current project area is located in Soledad Canyon, describes by Gudde (1969:316) as:

The Spanish word for "solitude" ... The pass was discovered by Williamson in 1853 ... Blake renamed it Williamson's Pass, in honor of the discoverer ... the Land Office map of 1859 relabels it La Soledad Pass, after an Indian village so named, shown on the *diseno* of Rancho San Francisco, 1838.

METHODOLOGY

To adequately address the CEQA requirements for compliance, McKenna et al. completed the following tasks.

1. Archaeological Records Check: McKenna et al. completed a standard archaeological records check through the California State University, Fullerton, South Central Coastal Information Center (Appendix B). This research was designed to provide baseline information on studies completed within the area (one mile radius), site forms for recorded resources, and data pertaining to significant or listed properties in the area. This data was used to place the proposed project area within a context for the preliminary identification

and evaluation in accordance with CEQA criteria.

2. Native American Consultation: McKenna et al. conducted the Native American consultation by contacting the Native American Heritage Commission in Sacramento and inquiring into the presence/absence of significant sites in the general area. McKenna et al. also obtained a listing of Native Americans within Los Angeles County that may have information regarding the area. These communications have resulted in no written comments and no specific concerns with respect to archaeological resources (Appendix C).
3. Supplemental Research: In addition to the standard archaeological records check, McKenna et al. reviewed previous completed reports, obtained information on the historic development of the area, and assessed the relative level of sensitivity for the project area to yield historic or prehistoric resources.
4. Paleontological Overview: A paleontological overview was prepared by Dr. Samuel McLeod of the Los Angeles County Museum of Natural History (Appendix D).
5. Field Survey: McKenna et al. surveyors, Richard S. Denniston, B.A., and Elizabeth Stoffers, B.A., surveyed the project area on March 6, 2004. The intensive field survey was accomplished by walking paralleling transects across the property at intervals averaging 15 meters apart. All accessible areas of the property were examined. The field survey was supplemented by general field notes and a photographic record (Appendix E) and the surveyor carried a Magellan GPS hand-held system to record any locational data necessary to relocate a specific artifact or geographical location.
6. Analysis of the Data Compiled: Upon completion of the field studies and research, McKenna et al. had at least two major data sets available for analysis: 1) the previous research data; and 2) the recently compiled data. McKenna et al. used these two sets of data to address the sensitivity of this area to yield significant cultural resources.
7. Report Preparation: This technical report was prepared in a format and with data contents dictated by the state guidelines and slightly adapted this format to address the issues particular to this property and project. All pertinent data has been included for review and comment.

PREVIOUS RESEARCH

An archaeological records search was conducted on March 25, 2004, at the South Central Coastal Information Center, for the above referenced project (see Appendix B). This search included a review of all recorded historic and prehistoric archaeological sites within a one mile radius of the project area as well as a review of all known cultural resource reports. In addition, the file of historic maps, the California Points of Historical Interest (PHI), the listing of California Historical Landmarks (CHL), the California Register of Historic Resources Inventory (HRI) have been checked for the referenced project.

The project area is split across two quadrangles (Mint Canyon and Newhall). That portion of the project area illustrated on the Mint Canyon Quadrangle was surveyed in part (Romani and Greenwood 1991; Wlodarski 1996; and Valentine-Maki 1993), each survey being a linear survey. The project area was surrounded by nine other surveys (see Appendix B). One prehistoric archaeological site (CA-LAN-0295) and five historic archaeological sites (CA-LAN-2040 through -2044) have been recorded within one mile of the project area, but not within the project area. None will be impacted by the proposed project.

With respect to that portion of the project area being illustrated on the Newhall Quadrangle (a very small portion of the project area), a total of fourteen studies have been completed within one mile, four of which involve portions of the project area (the three studies listed above and Whitley and Simon 1994). Despite the extent of coverage in this area, only two prehistoric isolates and two historic archaeological sites (CA-LAN-2105 and CA-LAN-2132) have been recorded. None are within the project area and none will be impacted by the proposed project.

No listed properties have been recorded in the area. As a result of these investigations, McKenna et al. has determined that the project area may be moderately sensitive for historic resources and less sensitive for prehistoric resources.

RESULTS OF THE INVESTIGATIONS

The specific area identified as the Keystone project area is located north of the Santa Clara River and within Soledad Canyon. The project area dominates the western half of Section 18. Research through the Bureau of Land Management General Land Office records has shown that this area was subdivided and owned relatively early. Some owners in the western half of Section 18 include:

Walter W. Varner (1897) - 153.99 acres
 Frank G. Teachout (1895) - 153.57 acres
 Belle B. Long (1923) - 113.57 acres [p/o Teachout acres]
 Dayton M. Furnivall (1917) - 146.99 acres
 Joseph W. Furnivall (1917) - 158.54 acres [p/o Varner acres]

In each case, these were homestead records, suggesting there should be some evidence of improvements to the property(ies). The 1900 San Fernando Quadrangle illustrates a single structure in the western half of Section 18 - on the southern boundary of the Section (outside the project area). It also illustrates a road within the Section, a road that is also south of the current study area. The 1940 San Fernando Quadrangle illustrates a significant amount of development to the south of the project area (but also still within Section 18. A dirt road is illustrated in Section 18, crossing the project area from southwest to northeast. This road is also illustrated on the current USGS Mint Canyon Quadrangle, along with other dirt and improved roads. The current USGS Quadrangle (revised

1988) illustrates a single structure in the southwestern corner of the property (accessed by an improved road) and the presence of at least three ponds. Other improvements are illustrated within the Section, but outside the project area. Based on the color-coding of the USGS maps, the structure illustrated in Section 18 also pre-dates 1960.

The project area is located near the Santa Clara River and rises from south to north. Within the project area, the terrain undulated considerably and include a blue line stream in the northern half of the tract and some flat expanses of open land. Despite the changes in elevation, the property is easily accessed and readily available for visual inspection. The soils were generally sandy - more so near the river and drainage. Visibility was good. The hillsides showed exposed bedrock in some areas and modern/recent debris (e.g. broken concrete and other building materials) have been illegally dumped along the access roads. The property has been impacted by all terrain vehicles and these areas were void of vegetation, providing opportunities for additional visual inspection (see Appendix E).

The survey was completed by walking paralleling transects at intervals between 10 and 15 meters apart, when possible. Areas of denser vegetation (small clumps identified throughout the area) were considered to represent relatively stable surfaces that may yield evidence of prehistoric or historic remains and, therefore, checked more carefully. In the more steep areas, emphasis was placed on the ridges and ravines rather than the slopes (those greater than 45 degrees).

Areas exhibiting relatively small areas of undisturbed desert pavements (areas of concentrated pebbles or small cobbles) were also checked for evidence of prehistoric or historic remains. Despite the intensive surveying techniques, no evidence of prehistoric or historic cultural remains were identified within the project area. No standing structures were identified and the ponds were not evident. They were apparently removed after the completion of the 1988 USGS map. As a result of these negative findings, McKenna et al. has concluded that this particular property is clear of any potentially significant resources and not likely to yield buried deposits. Neither the Native American Heritage Commission or any of the local Native American representatives had information to suggest this area was sensitive for prehistoric cultural resources.

The paleontological overview prepared by Dr. McLeod (Appendix D) notes that there are areas within the project area that are likely to yield fossil specimens, especially if development will require extensive excavations. The more sensitive areas are in the northern half of the property - upslope and away from the river. Extensive excavations with the property should be monitored for paleontological specimens and, if uncovered, recovered, analyzed, and curated in accordance with County guidelines.

SUMMARY AND RECOMMENDATIONS

Based on the recent investigations, McKenna et al. has determined that the project area is clear of any significant archaeological resources and the proposed project will not adversely impact any such resources. There is no need to have an archaeological monitor on site for ground altering activities. However, should previously unidentified resources be uncovered as a result of a proposed

development, archaeological testing/evaluation of the identified resource(s) must be completed and the monitoring recommendations may be modified. McKenna et al. recommends that the proponent have an archaeological consultant on-call and prepared to respond to any materials unearthed during future ground altering activities.

Paleontological resources are likely to be identified within the project area and, therefore, McKenna et al. recommends that a paleontological monitor be on-site during the grading of this property. This will be especially necessary during any work in the northern half of the property, although such resources may be found anywhere within the property. The monitor must have the authority to halt activities seen to be adversely impacting potentially significant specimens and must be afforded the time and funding necessary to adequately recover, analyze, and curate any specimens uncovered. The extent and duration of the monitoring program can be determined once the actual grading plans are developed.

Any changes to this report will require the written authorization of the author, Jeanette A. McKenna, Principal Investigator for McKenna et al.

Jeanette A. McKenna, Principal, McKenna et al.

Date

REFERENCES

- Altschul, Jeffrey H.
 1991 The Deep Creek Site Revisited. In *Proceedings of the Society for California Archaeology, Vol. 4.*, edited by Martin D. Rosen, Lynne E. Christenson, and G. Timothy Gross, pp. 1-10.
- Altschul, Jeffrey H., William C. Johnson and Matthew A. Sterner
 1989 The Deep Creek Site (CA-SBR-176): A Late Prehistoric Base Camp in the Mojave River Forks Region, San Bernardino County, California. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.
- Altschul, Jeffrey H., Martin R. Rose and Michael K. Lerch
 1985 Cultural Resources Investigations in the Mojave River Forks Reservoir, San Bernardino County, California. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.
- Amsden, Charles
 1937 The Lake Mojave Artifacts. In *The Archaeology of Pleistocene Lake Mojave: A Symposium*, by E.W. Campbell, W.H. Campbell, E. Antevs, C.A. Amsden, J.A. Barbieri and F.A. Bode, pp. 51-93. Southwest Museum Papers 11, Los Angeles, California.
- Anonymous
 1993 "William J. Fox, 95, A War Hero, Engineer, Stunt Man and Cowboy" (Obituary). New York Times, April 17, 1993.
- Apple, Rebecca McCorkle and Lori Lilburn
 1992 Cultural Resources Survey for the Fort Cady Boric Acid Mining and Processing Facility, Newberry Springs, California. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.
- Axelrod, D.I.
 1979 Age and Origin of Sonoran Desert Vegetation. Occasional Papers of the California Academy of Science No. 132.
- Bailey, Harry P.
 1975 Weather of Southern California. California Natural History Guide: 17. University of

California Press.

Barbour, M.G. and J. Major, Editors

1977 Terrestrial Vegetation of California. California Native Plant Society, Davis.

Becker, Kenneth

1999 Boundary Definition at Tujunga Village (CA-LAN-167), Hansen Dam Flood Control Basin, Los Angeles County, California. *Statistical Research, Inc. Technical Series 99-59*. Tucson, Arizona.

Bedwell, S.F.

1970 Prehistory and Environment of the Pluvial Fort Rock Lake Area, South-Central Oregon. Unpublished Ph.D. dissertation. Department of Anthropology, University of Oregon, Eugene, Oregon.

Bennyhoff, James A. and Richard E. Hughes

1987 Shell Bead and Ornament Exchange Networks Between California and the Western Great Basin. *Anthropological Papers of the American Museum of Natural History* 64(2): 79-175.

City of Lancaster

2002 City of Lancaster Web Site. www.cityoflancasterca.org/history.html

Coombs, G.

1982 A Cultural Resources Overview and Inventory Plan for the China Lake – Fort Irwin Joint Land Use Area. On File, Far Western Anthropological Research Group, Davis, CA.

Cultural Systems Research, Inc.

1987 California Low Level Radioactive Waste Disposal Project, Cultural Resources Surveying: Ethnographic Resources, Candidate Site Selection Phase. On File, Cultural Systems Research, Inc., Menlo Park, CA.

Davis, C.A. and G.A. Smith

1981 Newberry Cave. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.

Dibblee, W., Jr.

1967 Areal Geology of the Western Mojave Desert, California. U.S. Geological Survey Professional Paper 522.

Donnan, Christopher B.

1964 A Suggested Culture Sequence for the Providence Mountains (Eastern Mojave Desert). University of California Archaeological Survey Annual Report, Pp 1-26. On File, University of California, Los Angeles.

Eckhardt, William and M. Jay Hatley

- 1982 The Archaeology of Owl Canyon and Stoddard Valley, Mojave Desert, California. Bureau of Land Management Publication. On File, McKenna et al, Whittier, CA.

Elston, (unk.)

- 1982 Cited in McCorkle-Apple and Lilburn 1992.

Gerry, Robert

- 1988 Cultural Resource Assessment of the Proposed California State Prison, Lancaster, Los Angeles County, California. On File, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Glennan, W.S.

- 1971 A Glimpse at the Prehistory of the Antelope Valley: Archaeological Investigations at the Sweetser Site (KER-302). Kern-Antelope Historical Society, Lancaster, California.

Gordon, (unk.)

- 1992 Personal Communication.

Greenwood, Roberta S. and Michael J. McIntyre

- 1980 Cultural Resources Overview for Edwards Air Force Base, Volume I. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.

Gudde, Erwin

- 1968 California Place Names. University of California Press, Berkeley, California.

Harry, (unk.)

- 1992 Cited in Becker (1999).

Jenkins, Dennis L.

- 1985 Rogers Ridge (4-SBR-5250): A Fossil Spring Site of the Lake Mojave and Pinto Periods – Phase 2 Test Excavations and Site Evaluation. Fort Irwin Archaeological Project Research Report 18. On File, Dames & Moore, San Diego, California.

- 1986 Ceramics. In *Flood, Sweat and Spears in the Valley of Death: Site Survey and Evaluation in Tiefert Basin, Fort Irwin, California*, by Dennis L. Jenkins. Fort Irwin Archaeological Project Research Report Number 17, pp. 332-337. On File, United States Department of the Interior, National Park Services, San Francisco, California.

Kowta, Makoto

- 1969 The Sayles Complex: A Late Milling Stone Assemblage from Cajon Pass and the Ecological Implications of its Scraper Planes. University of California Publications in

Anthropology 6. On File, University of California, Berkeley.

Lord, Martin A.

- 1987 The Surface Archaeology of CA-SBR-1554, Black Butte, Mojave Desert, California. In *Coyote Press Archives of California Prehistory* No. 10, edited by Mark Q. Sutton, pp. 3-51. Coyote Press, Salinas, California.

Lyneis, Margaret M. (coordinator)

- 1982 An Archaeological Element for the Nevada Historic Preservation Plan. On File, Nevada Division of Historic Preservation and Archaeology, Carson City, Nevada.

McCorkle-Apple, Rebecca and Lori Lilburn

- 1992 Cultural Resources Survey for the Fort Cady Boric Acid Mining and Processing Facility, Newberry Springs, California. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.

McLeod, Samuel

- 2003 Paleontological Overview. On file, McKenna et al., Whittier, California.

Mendenhall, W.C.

- 1983 320 Desert Watering Places in Southeastern California and Southwestern Nevada. Nevada Publications, Las Vegas, Nevada.

Motts, W.S., Editor

- 1970 Geology and Hydrology of Selected Playas in the Western United States. On File, Air Force Research Laboratories, Bedford.

Neal, J.T., Editor

- 1975 Playas and Dried Lakes. On File, Dowden, Hutchinson and Ross, Inc., Strousberg.

Rector, Carol

- 1979 Summary and Conclusions. In C. Rector, J.D. Swanson and P.J. Wilke, *Archaeological Studies at Oro Grande, Mojave Desert, California.* On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.

Rogers, Malcolm

- 1945 Cited in McCorkle-Apple and Lilburn 1992).

Romani, John F. and Roberta S. Greenwood

- 1991 Historic Property Survey and Archaeological Survey Report and Historic Architectural Survey Report for the Route 126 Location Study ((Eastern Extension) from Interstate 5 to State 14, Santa Clara Valley, Los Angeles County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Schneider, Joan S.

- 1988 Late Prehistoric Times in the Central Mojave Desert: Some Problems. *Pacific Coast Archaeological Society Quarterly* 24(1): 30-44.

Scientific Resources Surveys

- 1993 Cultural Resources Assessment of the General William J. Fox Airfield Runway Extension Project, Lancaster, Los Angeles County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Simpson, Ruth D.

- 1958 The Manix Lake Archaeological Survey. *The Masterkey* 32(1):4-10.

Stickel, E. Gary

- 1979 An Overview of the Cultural Resources of the Western Mojave Desert. On File, South Central Coastal Information Center, California State University, Fullerton, California.

Stickel, E. Gary and Lois Weinman-Roberts

- 1980 Cited in McCorkle-Apple and Lilburn 1992.

Stones, A.G.

- 1964 Antelope Valley, Mojave Desert, California: A Geographical Analysis. Unpublished Master's Thesis. On File, University of California, Los Angeles.

Susia, Margaret L.

- 1964 Tule Springs Archaeological Surface Survey. Nevada State Museum Anthropological Papers 12. On File, Nevada State Museum, Carson City, Nevada.

Sutton, Mark Q., Editor

- 1981 Archaeology of the Antelope Valley, Western Mojave Desert. Unpublished Manuscript. On file, McKenna et al., Whittier, California.

Thomas, (unk.)

- 1981 Cited in McCorkle-Apple and Lilburn 1992.

Tuohy, Donald R.

- 1974 A Comparative Study of Late Paleo-Indian Manifestations in the Western Great Basin. *Nevada Archaeological Survey Research Paper* 5. pp. 91-116.

Valentine-Maki, Mary

- 1993 Cultural Resources Survey for the Proposed Santa Clara River Horse and Bike Trail, Santa Clarita, Los Angeles County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Vasek, Frank C. and Michael G. Barbour

- 1977 Mojave Desert Scrub Vegetation. In *Terrestrial Vegetation of California*, edited by Michael G. Barbour and Jack Major, pp. 835-868. John Wiley and Sons, New York.

Vaughan, Sheila and Claude N. Warren

- 1986 Toward a Definition of Pinto Points. In *Test Excavation and Data Recovery at the Awl Site, a Pinto Site at Fort Irwin, San Bernardino County, California*, by Dennis L. Jenkins and Claude N. Warren. On File, Wirth Environmental Services, San Diego, California.

Wallace, William J.

- 1955 A Suggested Chronology for Southern California. *Southwestern Journal of Anthropology* 11.
- 1962 Prehistoric Cultural Developments in the Southern California Deserts. *American Antiquity* 28(2): 172-180.
- 1978 Post Pleistocene Archaeology, 9000 to 2000 B.C. In: Handbook of North American Indians, Vol. 8: California. Ed. by W.C. Sturtevant, pp. 25-36. Smithsonian Institution. Washington, D.C.

Waring, G.A.

- 1915 Springs of California. Geological Soil Survey 338. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.

Warren, Claude N.

- 1968 Cultural Traditions and Ecological Adaptation on the Southern California Coast. *Eastern New Mexico University Contributions in Anthropology* 1(3):1-14.
- 1980 The Archaeology and Archaeological Resources of the Amargosa-Mojave Basin Planning Units. Pp 1-134 in *A Cultural Resource Overview for the Amargosa-Mojave Basin Planning Units*, by C.N. Warren, M. Knack and E. von Till Warren. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.
- 1984 The Desert Region. In *California Archaeology*, edited by Michael J. Moratto, pp. 339-430. Academic Press, New York.

Warren, Claude N. and Robert H. Crabtree

- 1986 Prehistory of the Southwestern Area. In *Great Basin*, edited by Warren L. D'Azevedo, pp. 183-93. Handbook of North American Indians, Vol.11, William G. Sturtevant, general editor. On File, Smithsonian Institution, Washington D.C.

Weide, David L.

- 1982 Paleoeological Models in the Southern Great Basin: Methods and Measurements. In *Man and Environment in the Great Basin*, edited by David B. Madsen and James F. O'Connell, pp. 8-26. Society for American Archaeology Papers 2.

Whitley, David S.

- 1988 Final Report On An Archaeological Data Recovery Project, Site CA-SBR-3694, Midway Roadside Rest, Route 15 San Bernardino County, Post Mile 107.4 CalTrans District 8, San Bernardino, California. On File, McKenna et al, Whittier, CA.

Whitley, David S. and Joseph Simon

- 1994 Phase I Archaeological Survey and Cultural Resource Assessment for the 750 Acre Soledad Canyon Study Area, Los Angeles County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Wlodarski, Robert J.

- 1996 A Phase I Archaeological Survey: Santa Clarita Water Company Application 29892 for 13 Existing Well Site Locations, Los Angeles County, CA.. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Wright, H.E. and D.F. Frey, Editors

- 1965 The Quaternary of the United States. Princeton University Press, New Jersey.

York, Andrew

- 1989 Archaeological Investigations at CA-SBR-6017, 6018 and 128, Near East Cronise Lake, San Bernardino County, California. On File, San Bernardino County Museum, Archaeological Information Center, Redlands, CA.

Zigmond, M.

- 1986 Kawaiisu. In *Great Basin*, edited by Warren L. D'Azevedo, pp. 398-411. Handbook of North American Indians, Vol. 11, W.C. Sturtevant, general editor. On File, Smithsonian Institution, Washington D.C.

APPENDIX A:

Professional Qualifications

JEANETTE A. McKENNA

Owner and Principal Investigator

McKenna et al., Whittier CA

Ms. McKenna specializes in the field of Cultural Resource Management: prehistoric archaeology, historic archaeology, and history. She is a recent-past member of the Board of Directors for the Society of Professional Archaeologists (SOPA 1993-97) and is certified by the Registry of Professional Archaeologists (RPA) to conduct both prehistoric and historic archaeological studies. Ms. McKenna has 24 years of professional experience as an archaeologist and has served on over 500 projects. The majority of her work has been conducted as a Field Director, Project Manager, and/or Principal Investigator in California and Arizona.

TECHNICAL CAPABILITIES

- Vast experience in the greater Southwest, Great Basin, and Southern California regions. Familiar with the full range of cultural resource investigations and has completed projects within the public and private sectors, including environmental management firms, planning and engineering firms, and State and federal agencies.
- Active in the discipline of Cultural Resource Management since 1976 with over 18 years of experience in Southern California and another 5+ years in Arizona, Nevada and Central and Northern California.
- Particular interest in the desert regions of California and Arizona, with specializations in the Proto-historic and Historic Contact Periods.
- Considerable experience in dealing with prehistoric cultural remains (the majority of her career spent directly associated with Native American sites) and working directly with Native American groups in archaeological training programs (through Arizona State University and the Southern California Indian Center, Garden Grove).

EDUCATION AND AFFILIATIONS

B.A., Anthropology, 1977, CSU Fullerton
M.A., Anthropology, 1982, CSU Fullerton
Lambda Alpha Lambda Honors Society
Post Graduate Studies, Arizona State University, 1982-85
Post Graduate Studies, History Department
University of California, Riverside, 1991-92

Certification Program: CEQA, Land Use and Environmental Planning, University of California, Riverside, 1997-98

Society of Professional Archaeologists (SOPA) 1984-1997
Registry of Professional Archaeologists (RPA)(1997-2001
Board of Directors, SOPA 1993-1997

BLM California Permit No. CA-99-01-031
BLM Arizona State Permit No. AZ-000107

SELECTED PROJECT EXPERIENCE

- Historic Architectural Studies for Renovation and Restoration of the Greek Theatre, Los Angeles CA
- Principal Investigator/Project Manager, Historic Building Survey, South Pasadena Unified School District, South Pasadena, Los Angeles County, CA
- Evaluation of Cultural Resources within the Burbank and West Hollywood Redevelopment Project Areas, Los Angeles County, CA
- HABS Recordation of the Currier Complex, City of Industry, Los Angeles County, CA
- Archaeological Mitigation Program, The Phoenix Indian School Track Site Project. Arizona State University Office of Cultural Resource Management and the Bureau of Indian Affairs, Phoenix, AZ
- Historic Property Survey Reports: Warner Bros. Main Lot Ranch Lot Properties, Burbank, CA
- Historic Archaeological Investigations for L.A. County Sheriff's Facility, Lancaster, CA
- Historic Property Surveys (2) for the City of Redondo Beach, Los Angeles County, CA
- Preparation of the Historic Resources Element and Policies for the City of Highland, San Bernardino County, CA
- Historic Resource Survey for Portions of the Historic Community of Prescott, AZ
- Historic Building Evaluations, The McGrath Ranch Complex, Oxnard, Ventura County, CA
- Evaluation of Historic Archaeological Sites at the Montecito Ranch, Riverside County, CA
- Historic Artifact Inventory, Del Mar Sites, San Diego County, CA

APPENDIX B:

Archaeological Records Check

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
Reg. Professional Archaeologist

March 25, 2004

RE: Record Search for the Archaeological Survey in Los Angeles County, CA. on the Mint Canyon and Newhall 7.5' USGS Quadrangles (McKenna et al. Job 04.896)

A record search was conducted on March 25, 2004, at the South Central Coastal Information Center, for the above referenced project. This search includes a review of all recorded historic and prehistoric archaeological sites within a one mile radius of the project area as well as a review of all known cultural resource reports. In addition, the file of historic maps, the California Points of Historical Interest (PHI), the listing of California Historical Landmarks (CHL), the California Register of Historic Resources Inventory (HRI) have been checked for the referenced project. The following is a discussion of the findings for the project area.

Archaeological Resources:

Mint Canyon 7.5' USGS Quadrangle

One recorded prehistoric archaeological site (19-000295) has been identified within a one mile radius of the project area. Of which, it is not located within the project area. No prehistoric isolates have been identified within a one mile radius of the project area.

Five historic archaeological sites (19-002040, 19-002041, 19-002042, 19-002043 and 19-002044) have been identified within a one mile radius of the project area. Of which, they are not located within the project area. No historic isolates have been identified within a one mile radius of the project area.

Newhall 7.5' USGS Quadrangle

No recorded prehistoric archaeological sites have been identified within a one mile radius of the project area. Two prehistoric isolates (19-100133 and 19-100134) have been identified within a one mile radius. Of which, they are not located within the project area.

Two historic archaeological sites (19-002105 and 19-002132) have been identified within a one mile radius of the project area. Of which, they are not located within the project area. No historic isolates

have been identified within a one mile radius of the project area.

Historic Resources:

No recorded historic built environments have been identified within a one mile radius of the project area (see enclosed map).

A copy of the historic map - San Fernando (1900 and 1940) - has been copied for review.

The California Point of Historical Interest (1992) of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a one mile radius of the project area.

The California Historical Landmarks (1990) of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a one mile radius of the project area.

The California Register of Historic Places lists no properties within a one mile radius of the project area.

The National Register of Historic Places lists no properties within a one mile radius of the project area.

The California Historic Resources Inventory lists no properties that have been evaluated for historical significance within a one mile radius of the project area.

Previous Cultural Resources Investigations:

Mint Canyon 7.5' USGS Quadrangle

Twelve studies (LA54, LA209, LA571, LA1032, LA1114, LA1117, LA2170, LA2503*, LA2590, LA2996*, LA3690* and LA3840) have been conducted within a one mile radius of the project area. Of these, three are located within the project area. (* = Located within the project area).

Newhall 7.5' USGS Quadrangle

Fourteen studies (LA1032, LA1114, LA1775, LA1896, LA2170, LA2503*, LA2996*, LA3387, LA3690*, LA3913, LA4104, LA4506, LA5850 and LA6093) have been conducted within a one mile radius of the project area. Of these, three are located within the project area. (* = Located within the project area).

Bibliography: 04.896 - Mint Canyon 7.5' USGS Quad

IC ID#: LA209

DATE: 1976

PAGES: 12

AUTHOR: Home, Wiley

FIRM:

TITLE: Letter Report of archaeological Survey for Los Angeles County Sanitation Project Engineer
Report for Soledad Canyon Relief Trunk Sewer Section 4

AREA:

SITES: None

QUADNAME: Mint Canyon

MEMO:

IC ID#: LA2170

DATE: 1990

PAGES: 13

AUTHOR: Norwood, Richard H.

FIRM: RT FACTFINDERS

TITLE: Cultural Resource Survey for Tentative Tract Map No. 49688, 38
Acres in Santa Clarita, California

AREA:

SITES: None

QUADNAME: NEWHALL

MINT CANYON

MEMO:

Bibliography: 04.896 - Mint Canyon 7.5' USGS Quad

IC ID#: LA2503

DATE: 1991

PAGES: 92

AUTHOR: ROMANI, JOHN F. AND ROBERTA S. GREENWOOD

FIRM: Greenwood and Associates

TITLE: Historic Property Survey Report & Archaeological Survey Report & Historic Architectral
Survey Report for the Route 126 Location Study (Easterly Extension) From Interstate 5 To State
14, Santa Claita Valley, Los Angeles County, California
07-LA-126 R5.8/R12.7 07820-065710

AREA: 6 li mi

SITES: CA-LAN-351, LAN-1824, LAN-1829

QUADNAME: Mint Canyon

NEWHALL

MEMO:

IC ID#: LA2590

DATE: 1992

PAGES: 18

AUTHOR: RASSON, JUDITH AND ROBERTA S. GREENWOOD

FIRM: Greenwood and Associates

TITLE: An Archaeological Reconnaissance of Tract 31803, a 220 Acre
Parcel in Plum Canyon, Los Angeles County

AREA:

SITES: CA-LAN-2040H, LAN-2041H, LAN-2042H, LAN-2043H,
LAN-2044H

QUADNAME: Mint Canyon

MEMO:

Bibliography: 04.896 - Mint Canyon 7.5' USGS Quad

IC ID#: LA2996

DATE: 1993

PAGES: 33

AUTHOR: Valentine-Maki, Mary

FIRM: Fugro McClelland (West), Inc.

TITLE: Cultural Resources Survey for the Proposed Santa Clara River Horse and Bike Trail Santa Clarita, Los Angeles County, California

AREA: 3 li mi

SITES: CA-LAN-1829, LAN-1824, LAN-351, LAN-1077

QUADNAME: Mint Canyon
Newhall

MEMO:

IC ID#: LA3690

DATE: 1997

PAGES: 56

AUTHOR: Wlodarski, Robert J.

FIRM: Historical, Environmental, Archaeological, Research, Team

TITLE: Cultural Resources Evaluation City of Santa Clarita Circulation Element EIR

AREA: 36 li mi

SITES: 19-000951,19-000065

QUADNAME: Mint Canyon
Newhall

MEMO:

IC ID#: LA3840

DATE: 1996

PAGES: 39

AUTHOR: Wlodarski, Robert J.

FIRM: HEART

TITLE: A Phase I Archaeological Study: Santa Clarita Water Company Application 29898 for 13 Existing Well Site Locations, Los Angeles County, Ca.

AREA: 6.5 ac

SITES: None

QUADNAME: Newhall, Mint Canyon

MEMO:

Bibliography: 04.896 - Newhall 7.5' USGS Quad

IC ID#: LA1032

DATE: 1981

PAGES: 9

AUTHOR: Van Horn, David M.

FIRM: Archaeological Associates

TITLE: Archaeological Survey Report: A 285+ Acre Parcel Located Near Saugus and Newhall in an Unincorporated Portion of Los Angeles County, California

AREA: 285 ac

SITES: None

QUADNAME: Mint Canyon, Newhall

MEMO:

IC ID#: LA1114

DATE: 1976

PAGES: 15

AUTHOR: Toren, A. George

FIRM: Northridge Archaeological Research Center

TITLE: Assessment of the Archaeological Impact by the Proposed Development of Tract No. 32615 in Valencia, CA

AREA: 129 ac

SITES: CA-LAN-295

QUADNAME: Mint Canyon

Newhall

MEMO:

IC ID#: LA1775

DATE: 1989

PAGES: 23

AUTHOR: Love, Bruce

FIRM: PYRAMID ARCHAEOLOGY

TITLE: Cultural Resource Assessment for Three Postal Service Sites, Los Angeles County

AREA: 180 ac

SITES: Possible Historic Site

QUADNAME: Newhall

Val Verde

MEMO:

Bibliography: 04.896 - Newhall 7.5' USGS Quad

IC ID#: LA1896

DATE: 1989

PAGES: 19

AUTHOR: Van Voast, Judy

FIRM: SCIENTIFIC RESOURCE SURVEYS, INC.

TITLE: Cultural Resource Survey Report on the Proposed Bouquet Canyon
Treatment Plant Site Santa Clarita, Los Angeles County, California

AREA: 100 ac

SITES:

QUADNAME: NEWHALL

MEMO:

IC ID#: LA2170

DATE: 1990

PAGES: 13

AUTHOR: Norwood, Richard H.

FIRM: RT FACTFINDERS

TITLE: Cultural Resource Survey for Tentative Tract Map No. 49688, 38
Acres in Santa Clarita, California

AREA:

SITES: None

QUADNAME: NEWHALL

MINT CANYON

MEMO:

Bibliography: 04.896 - Newhall 7.5' USGS Quad

IC ID#: LA2503

DATE: 1991

PAGES: 92

AUTHOR: ROMANI, JOHN F. AND ROBERTA S. GREENWOOD

FIRM: Greenwood and Associates

TITLE: Historic Property Survey Report & Archaeological Survey Report & Historic Architectural Survey Report for the Route 126 Location Study (Easterly Extension) From Interstate 5 To State 14, Santa Claita Valley, Los Angeles County, California

07-LA-126 R5.8/R12.7 07820-065710

AREA: 6 li mi

SITES: CA-LAN-351, LAN-1824, LAN-1829

QUADNAME: Mint Canyon

NEWHALL

MEMO:

IC ID#: LA2996

DATE: 1993

PAGES: 33

AUTHOR: Valentine-Maki, Mary

FIRM: Fugro McClelland (West), Inc.

TITLE: Cultural Resources Survey for the Proposed Santa Clara River Horse and Bike Trail Santa Clarita, Los Angeles County, California

AREA: 3 li mi

SITES: CA-LAN-1829, LAN-1824, LAN-351, LAN-1077

QUADNAME: Mint Canyon

Newhall

MEMO:

Bibliography: 04.896 - Newhall 7.5' USGS Quad

IC ID#: LA3387

DATE: 1994

PAGES: 70

AUTHOR: Whitley, David, Joseph Simon

FIRM: W&S CONSULTANTS

TITLE: Phase 1 Archaeological Survey and Cultural Resource Assessment for the 750 Acre Soledad Canyon Study Area, Los Angeles County, California

AREA: 750 ac

SITES: CA-LAN-351,1824,1829,2105-H, 19-100133-4

QUADNAME: NEWHALL

MEMO:

IC ID#: LA3690

DATE: 1997

PAGES: 56

AUTHOR: Wlodarski, Robert J.

FIRM: Historical, Environmental, Archaeological, Research, Team

TITLE: Cultural Resources Evaluation City of Santa Clarita Circulation Element EIR

AREA: 36 li mi

SITES: 19-000951,19-000065

QUADNAME: Mint Canyon

Newhall

MEMO:

IC ID#: LA3913

DATE: 1997

PAGES: 35

AUTHOR: Unknown

FIRM: W & S Consultants

TITLE: Phase I Archaeological Survey and Cultural Resources Assessment of the Castaic Lake Water Agency Study Area, Los Angeles County, California

AREA: 475 ac

SITES: 19-002105H,19002131H

QUADNAME: Newhall

MEMO:

Bibliography: 04.896 - Newhall 7.5' USGS Quad

IC ID#: LA4104

DATE: 1993

PAGES: 36

AUTHOR: Mako, Michael E.

FIRM: Mako Archaeological Consulting

TITLE: Cultural Resource Evaluation of the LADWP Power Plant 1--Olive Line 1 Transmission Line Maintenance Project Los Angeles County, California

AREA: 5 ac

SITES: 19-100253,19-002132

QUADNAME: Green Valley, Newhall, Warm Springs Mtn.,Mint Canyon, San Fernando

MEMO:

IC ID#: LA4506

DATE: 1999

PAGES: 33

AUTHOR: Wlodarski, robert

FIRM: HEART

TITLE: A Phase I Archaeological Study: the Golden Valley Road-Soledad Canyon Road Interchange Project, Los Angeles County, California

AREA: 28 ac

SITES: 19-002132

QUADNAME: Newhall

MEMO:

IC ID#: LA5850

DATE: 1999

PAGES: 13

AUTHOR: Duke, Curt

FIRM: LSA

TITLE: Cultural Resource Assessment for the AT&T Wireless Services Facility Number C811.1, County of Los Angeles, California

AREA: 0.25

SITES: None

QUADNAME: Newhall

MEMO:

Bibliography: 04.896 - Newhall 7.5' USGS Quad

IC ID#: LA6093

DATE: 2002

PAGES: 11

AUTHOR: Duke, Curt

FIRM: LSA Associates, Inc.

TITLE: Cultural Resource Assessment AT & T Wireless Services Facility No. D339B Los Angeles
County, California

AREA: .25 ac

SITES: none

QUADNAME: Newhall

MEMO:

APPENDIX C:

Native American Consultation

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
Reg. Professional Archaeologist

March 3, 2004

Rob Wood, Program Analyst
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

RE: Park Vista, Tentative Tract Map 60258

Mr. Wood:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please forward me any information you may have on Sacred Sites for these areas and a copy of your referral listing for Native American Contacts within Riverside County.

Sincerely,

Jeanette A. McKenna, Principal
McKenna et al.

NATIVE AMERICAN HERITAGE COMMISSION

815 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 887-5390
Web Site www.nahc.ca.gov



March 23, 2004

Jeanette A. McKenna
McKenna et al.
6008 Friends Avenue
Whittier, CA 90601

Sent by Fax: 562-693-4059
Number of Pages: 2

RE: Proposed 208 acre Park Vista Project, City of Santa Clarita, Los Angeles County

Dear Ms. McKenna:

A record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

A handwritten signature in black ink that reads "Rob Wood".

Rob Wood
Environmental Specialist III

NABU
NATIVE AMERICAN CONTACTS
Los Angeles County
March 23, 2004

Charles Cooke
 32835 Santiago Road
 Acton , CA 93510
 (861) 269-1244

Chumash
 Fernandeno
 Tataviam
 Kitanemuk

Randy Guzman - Folkes
 3044 East Street
 Simi Valley , CA 93065-3929
 traditional75@hotmail.com
 (805) 579-9206
 (805) 797-5605 (cell)

Chumash
 Fernandeno
 Tataviam
 Shoshone Paiute
 Yaqui

Beverly Salazar Folkes
 1931 Shadybrook Drive
 Thousand Oaks , CA 91362
 805 492-7255

Chumash
 Tataviam
 Fernandeno

LA City/County Native American Indian Comm
Ron Andrade, Director
 3175 West 6th Street, Rm. 403
 Los Angeles , CA 90020
 (213) 351-5308
 (213) 386-3995 FAX

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
 P.O. Box 221838
 Newhall , CA 91322
 tsen2u2@men.com
 (661) 753-8833 Office
 (760) 885-0955 Cell
 (760) 949-2103 Home

Fernandeno
 Tataviam
 Serrano
 Vanyume
 Kitanemuk

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7060.5 of the Health and Safety Code, Section 8067.94 of the Public Resources Code and Section 8067.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the following proposed 208 acre Park Vista Project, City of Santa Clarita, Los Angeles County.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Ti' At Society
Cindi Alvitre
P.O. Box 1138
Avalon, California 90204

RE: Park Vista, Tentative Tract Map 60258

Ms. Alvitre:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

John Jeffredo
P.O. Box 669
San Marcus, California 92079

RE: Park Vista, Tentative Tract Map 60258

Mr. Jeffredo:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Jim Valasquez
5657 Arlington Avenue
Riverside, California 92703

RE: Park Vista, Tentative Tract Map 60258

Mr. Valasquez:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Samuel H. Dunlap
P.O. Box 1391
Temecula, California 92593

RE: Park Vista, Tentative Tract Map 60258

Mr. Dunlap:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Art Alvitre
1302 Camden Lane
Ventura, California 93001

RE: Park Vista, Tentative Tract Map 60258

Mr. Alvitre:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Gabrielino/Tongva Tribal Council
Ernest P. Salas
514 E. Main Street
San Gabriel, California 91776

RE: Park Vista, Tentative Tract Map 60258

Mr. Salas:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Gabrielino/Tongva Tribal Council
Attn: Anthony Morales
P.O. Box 693
San Gabrielino, California 91778

RE: Park Vista, Tentative Tract Map 60258

Mr. Morales:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Louise Jeffredo-Warden
160 Los Banos
Moss Beach, California 94038

RE: Park Vista, Tentative Tract Map 60258

Ms. Jeffredo-Warden:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Dwayne Vigil
909 N. Walnut Drive
Santa Maria, California 93454

RE: Park Vista, Tentative Tract Map 60258

Mr. Vigil:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Mark Steven Vigil
315 South Elm Street
Arroyo Grande, California 93420

RE: Park Vista, Tentative Tract Map 60258

Mr. Vigil:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Owl Clan
Qun-tan Shup
48825 Sapaque Road
Bradley, California 93426

RE: Park Vista, Tentative Tract Map 60258

Mr. Shup:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

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Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Diane Garcia Napoleone
1450 Camellia Circle
Carpenteria, California 93013

RE: Park Vista, Tentative Tract Map 60258

Ms. Napoleone:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

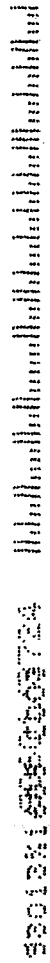
Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

c/o Jeanette A. McKenna
6008 Friends Avenue
Whittier, California 90601-3724



Diane Garcia Napoleone
1450 Camellia Circle
Carpenteria, California 93013



McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Owl Clan
Dr. Kote & Lin A'Lul'Koy Lotah
48825 Sapaque Road
Bradley, California 93426

RE: Park Vista, Tentative Tract Map 60258

Dr. Lotah:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Delia Dominguez
981 N. Virginia
Covina, California 91722

RE: Park Vista, Tentative Tract Map 60258

Ms. Dominguez:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Charles Cook
32835 Santiago Road
Acton, California 93510

RE: Park Vista, Tentative Tract Map 60258

Mr. Cook:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Beverly Salazar Ofilkes
1931 Shadybrook Drive
Thousand Oaks, California 91362

RE: Park Vista, Tentative Tract Map 60258

Ms. Ofilkes:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Melissa M. Para-Hernandez
119 North Balsam Street
Oxnard, California 93030

RE: Park Vista, Tentative Tract Map 60258

Ms. Para-Hernandez:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

San Fernando Mission Indians
Rudy Ortega
11640 Rincon Avenue
Sylmar, California 91342

RE: Park Vista, Tentative Tract Map 60258

Mr. Ortega:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
RPA Certified

March 3, 2004

Anwa Wilanii
P.O. Box 3241
Idyllwild, California 92549

RE: Park Vista, Tentative Tract Map 60258

Ms. Wilanii:

McKenna et al. is initiating an investigation of the proposed 208 acre Park Vista project, located in the city of Santa Clarita, Los Angeles County (Township Four North, Range Fifteen West, Section 18). Please review the enclosed map for approximate project boundaries.

Please inform me of any concerns of issues you may have regarding Native American resources in these areas and please respond in writing for my records. I appreciate your concerns regarding these non-renewable resources.

Sincerely,

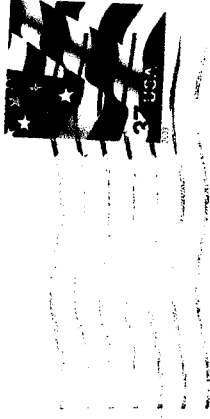
Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al.

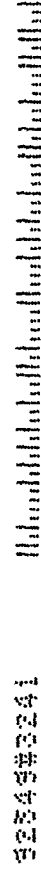
McKenna et al.
C/O Jeanette A. McKenna
6008 Friends Avenue
Whittier, California 90601-3724

March 3, 2004

Anwa Wilani
P.O. Box 3241
Idyllwild, California 92549



CMK



APPENDIX D:

Paleontological Overview

McKenna et al.

History/Archaeology/Architecture/Paleontology

Jeanette A. McKenna, M.A.
Owner and Principal Investigator
Reg. Professional Archaeologist

March 3, 2004

Dr. Samuel McLeod
Vertebrate Paleontology Section
Natural History Museum of Los Angeles County
900 Exposition Boulevard
Los Angeles, California 90007

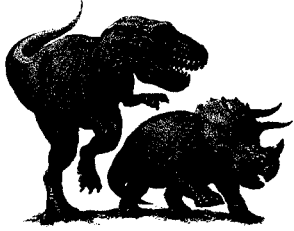
RE: Paleontological Overview.

Dear Dr. McLeod:

Please provide me with a standard paleontological overview for the area identified on the attached map. In this case, the project involves a 208 acre property in the City of Santa Clarita known as the Park Vista project. This project is also defined as Tentative Tract Map 60258. The property can be identified on both the Newhall and Mint Canyon, California, USGS quads. If you have any questions, please feel to call me at your convenience. Please send your billing to my address in Whittier (see above).

Sincerely,

Jeanette A. McKenna, Principal
McKenna et al.



NATURAL HISTORY MUSEUM
OF LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325
FAX: (213) 746-7431
e-mail: smcleod@nhm.org

8 March 2004

McKenna et al.
6008 Friends Avenue
Whittier, California 90601-3724

Attn: Jeanette A. McKenna

re: Paleontological resources for the proposed Park Vista 208 acre property in the City of Santa Clarita, Los Angeles County, project area

Dear Jeanette:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Park Vista 208 acre property in the City of Santa Clarita, Los Angeles County, project area as outlined on the section of the Newhall and Mint Canyon USGS topographic quadrangle maps that you sent to me on 3 March 2004. We do not have any vertebrate fossil localities directly within the proposed project area, but we do have localities within the same type and age sediments in the general vicinity.

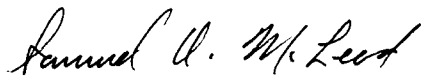
In the low lying southern portion of the proposed project area in Soledad Canyon, and in the two drainages trending southwest-northeast through the proposed project area from Soledad Canyon, there are surface deposits of Quaternary gravel and alluvium that are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. Older Quaternary sediments occur as surface deposits on top of the ridge between the two drainages. The underlying bedrock in the area, with exposures in the northern part of the proposed project area as well as between the drainages and the older Quaternary deposits on the ridge above them, is composed of the terrestrial Pliocene Saugus Formation. The older Quaternary sediments might contain extinct Late Pleistocene vertebrates similar to those found in the Rancho La Brea asphalt deposits. Our closest locality from these deposits is LACM 6803, discovered during excavation for a Metropolitan Water District tunnel in Saugus Formation rocks west-southwest of the proposed project area in Saugus, has produced fossil camel, Camelidae. Locality LACM 6871, between Castaic Creek and San Francisquito Canyon northwest of the proposed project area, produced fossil horse, *Equus*, and dog, Canidae, specimens also from the Saugus Formation.

Excavations into the older Quaternary deposits on the ridge in the center of the proposed project area might produce fossil vertebrate remains, but deeper excavations would likely expose significant fossil vertebrates in the older and poorly known Saugus Formation deposits. Any substantial subsurface excavation, therefore, should be monitored closely to quickly and

professionally recover any fossil remains while not impeding development. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

A handwritten signature in black ink that reads "Samuel A. McLeod". The signature is written in a cursive style with a large initial 'S' and 'M'.

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

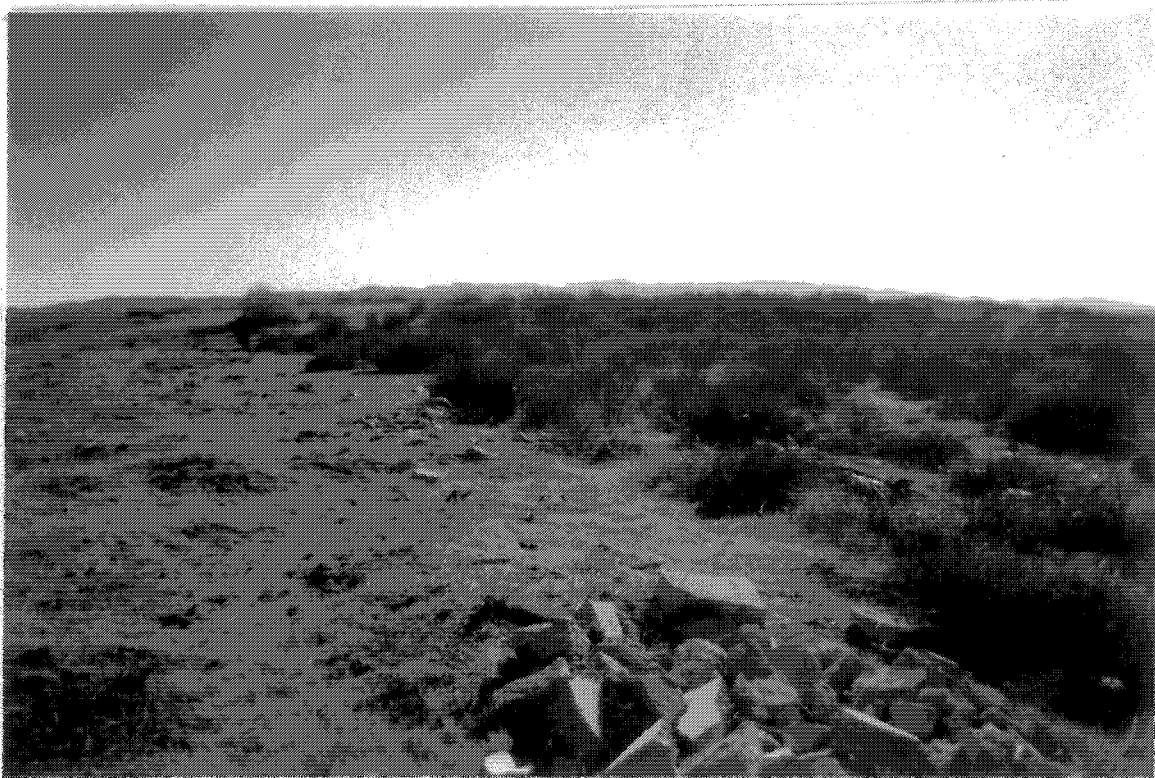
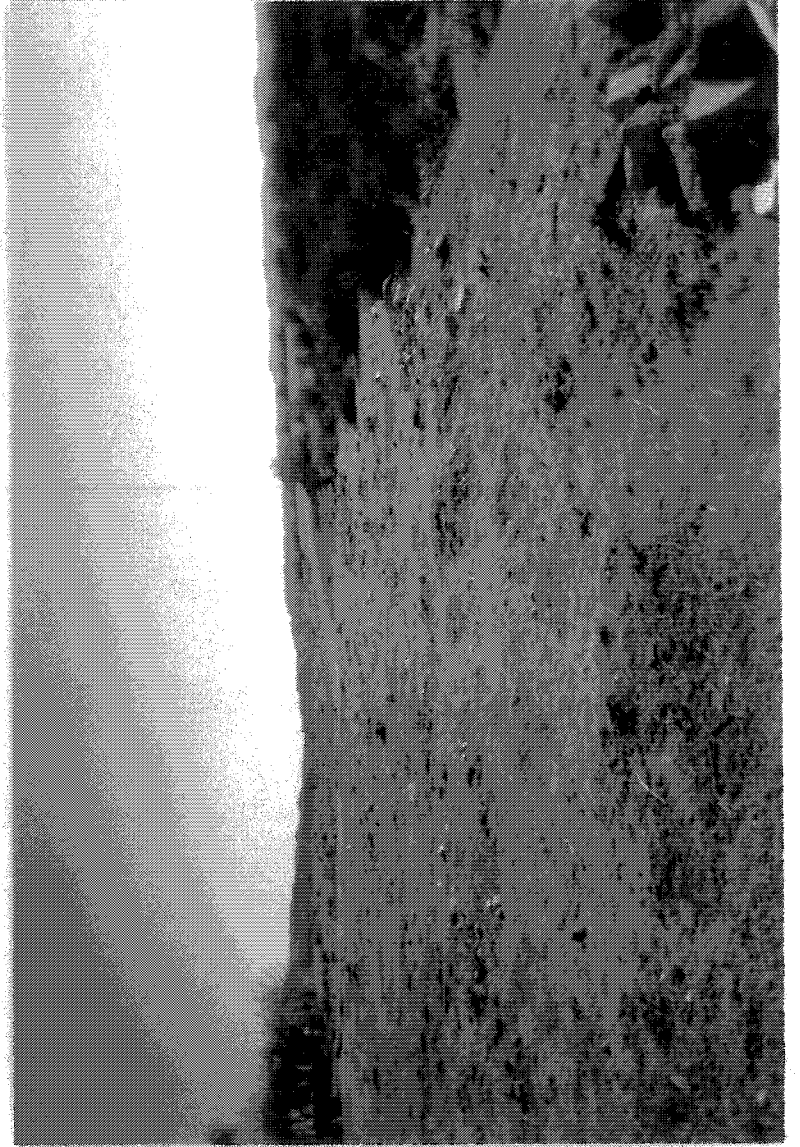
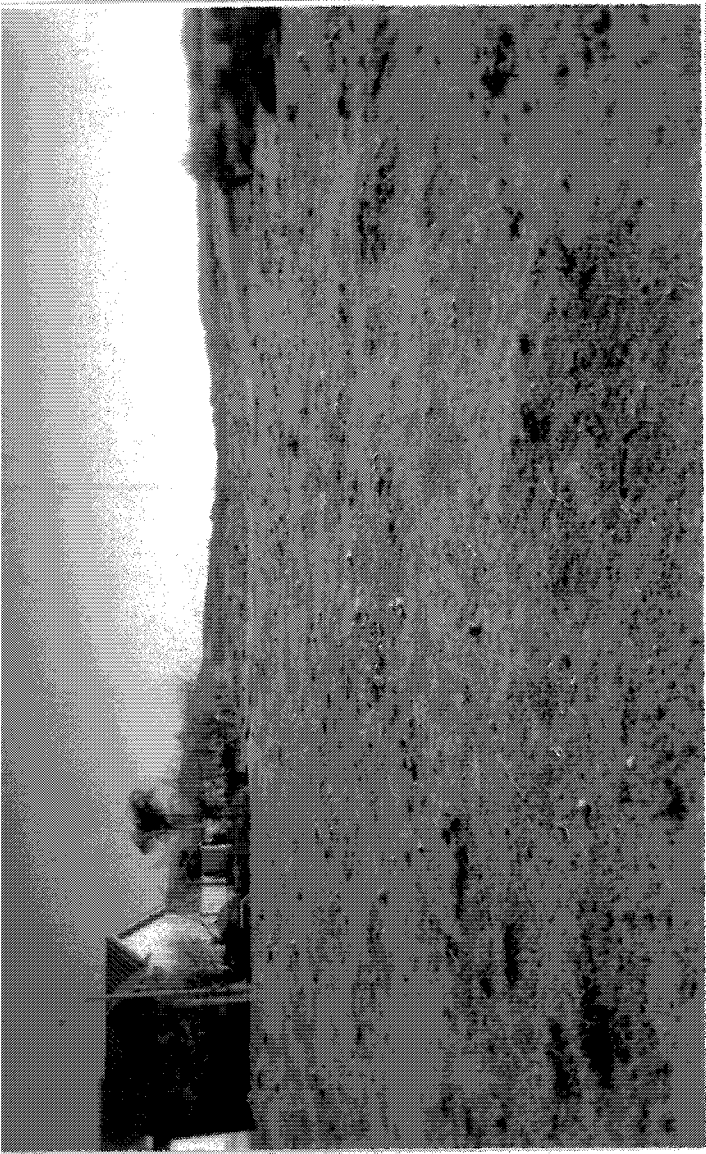
APPENDIX E:

Photographic Record

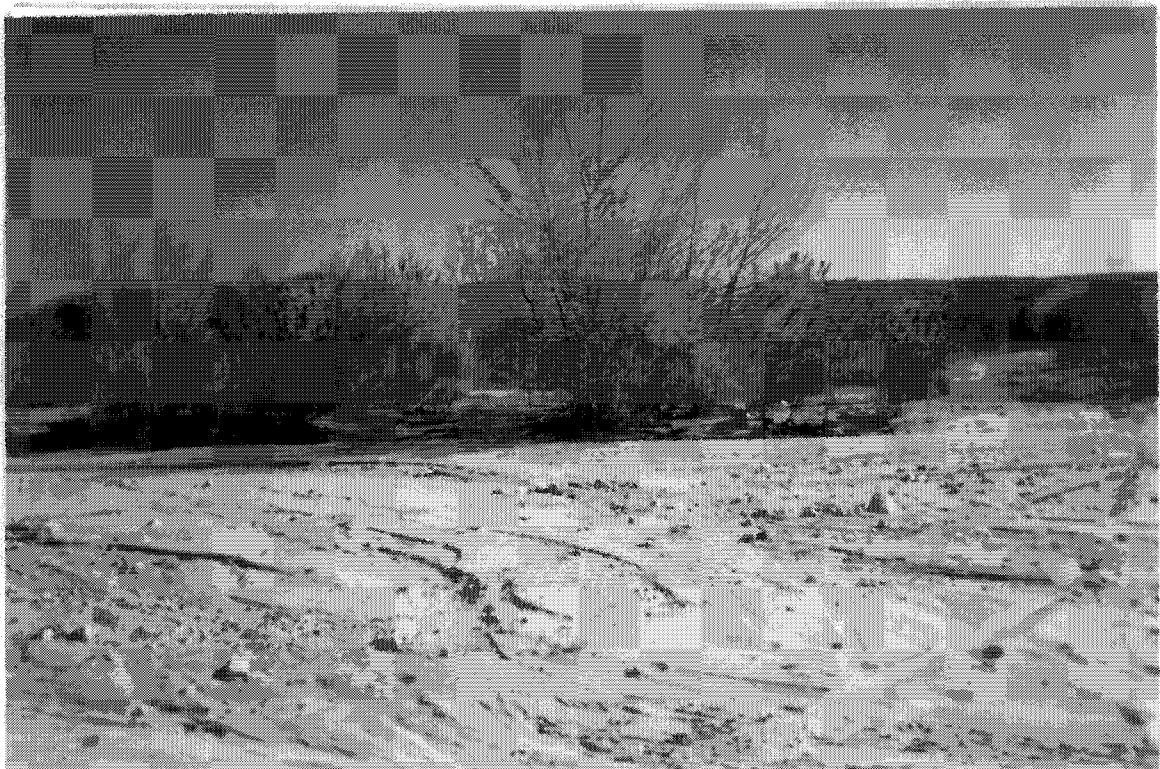
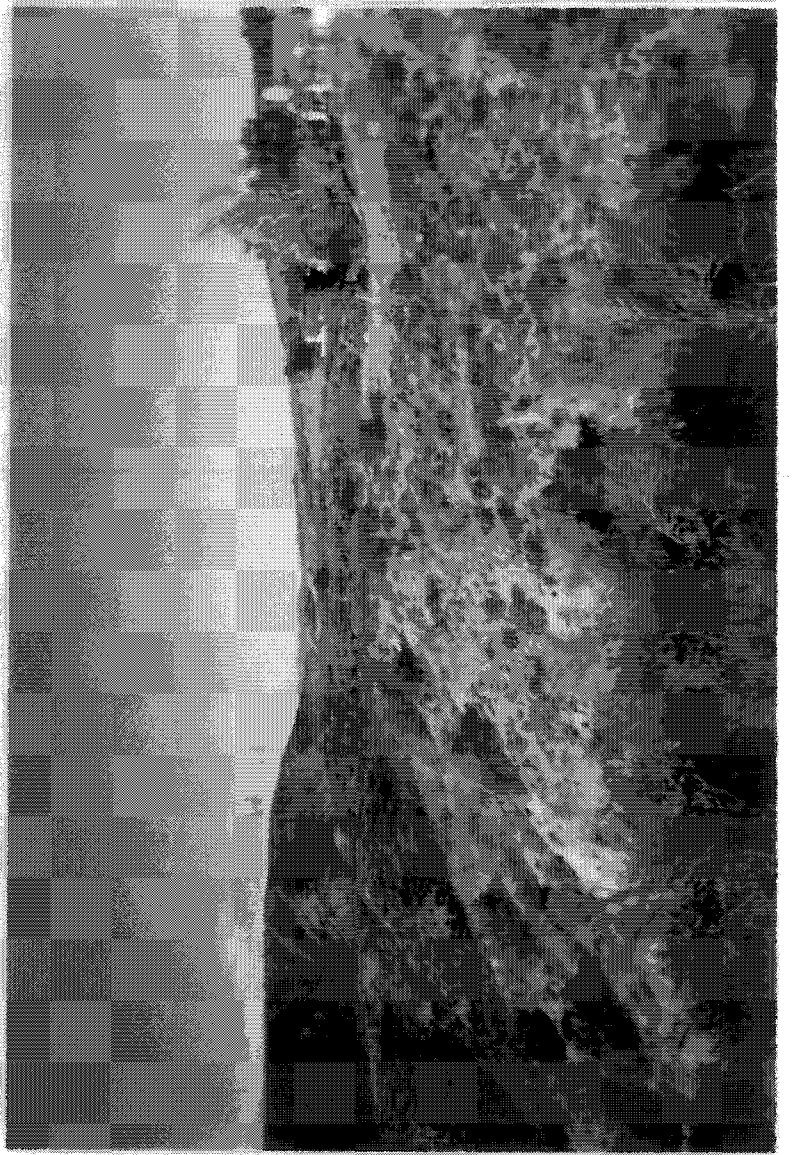
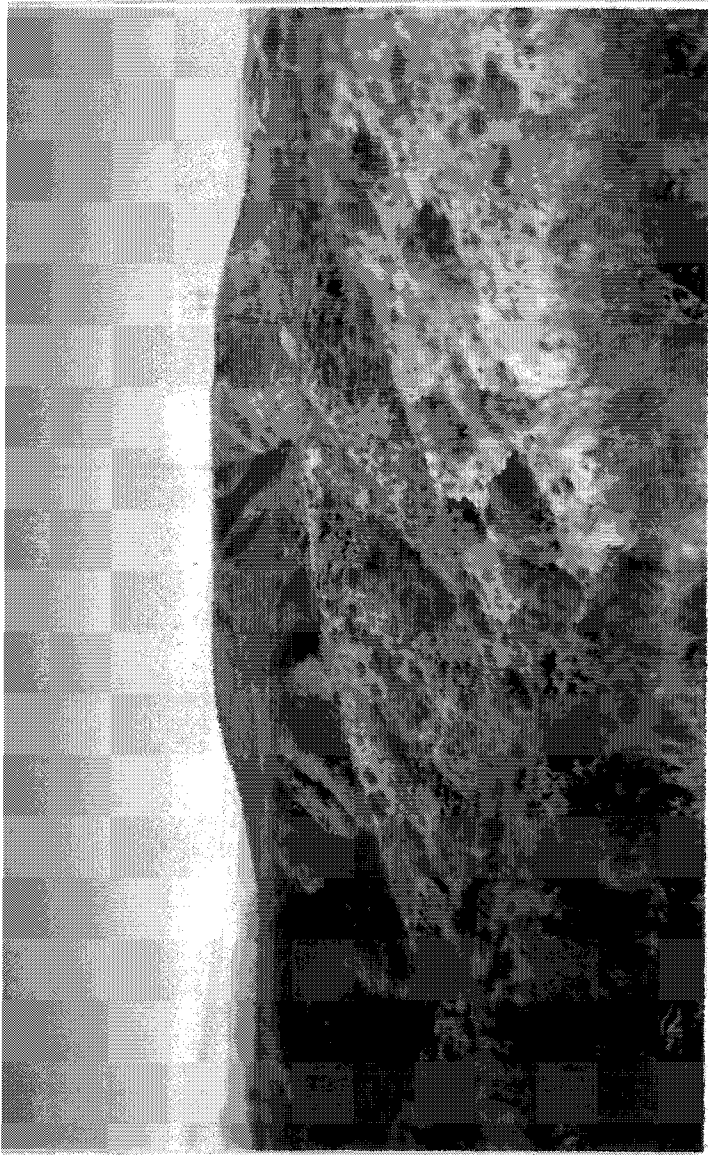
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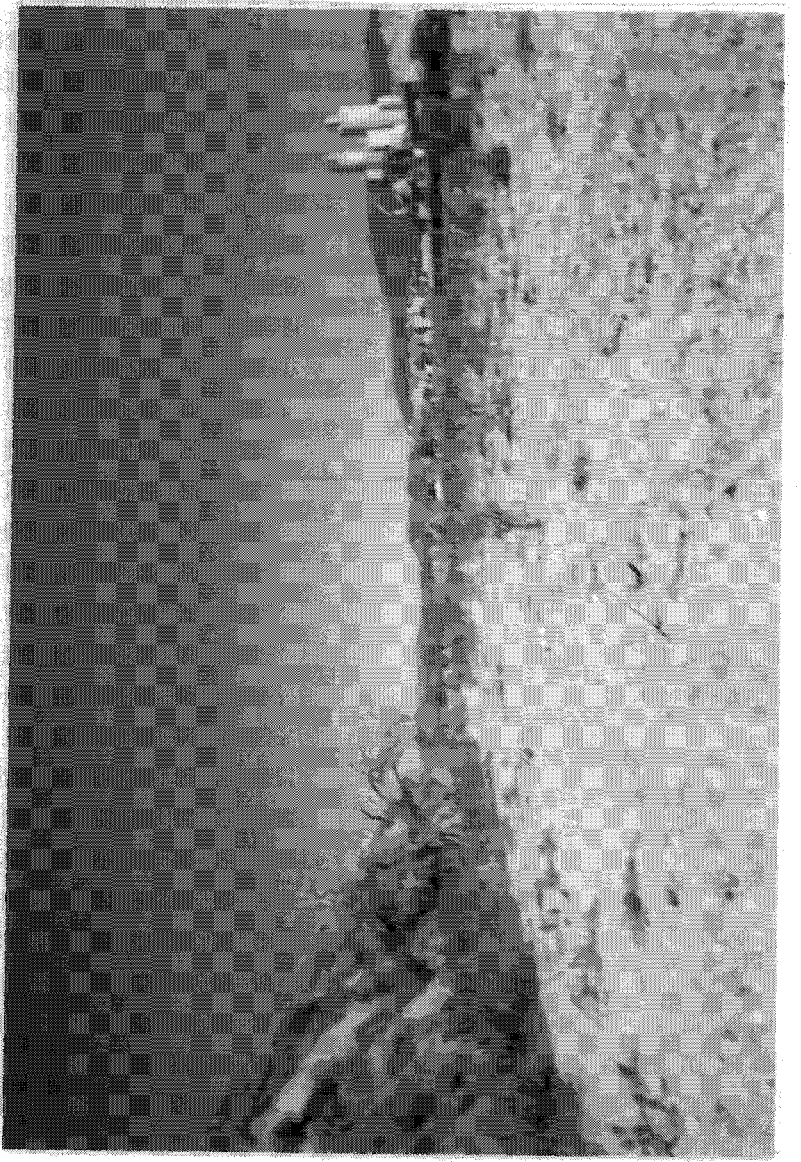
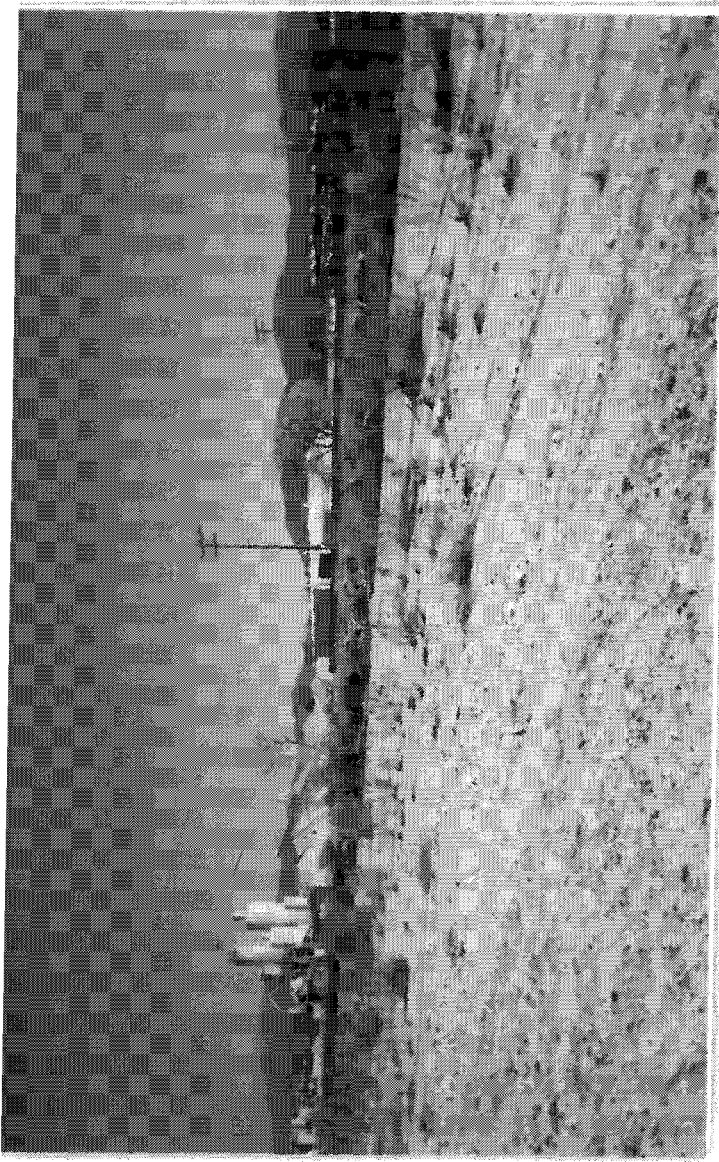
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3	6	AM	14	Overview of Santa Clara River bed, south portion	WSW	
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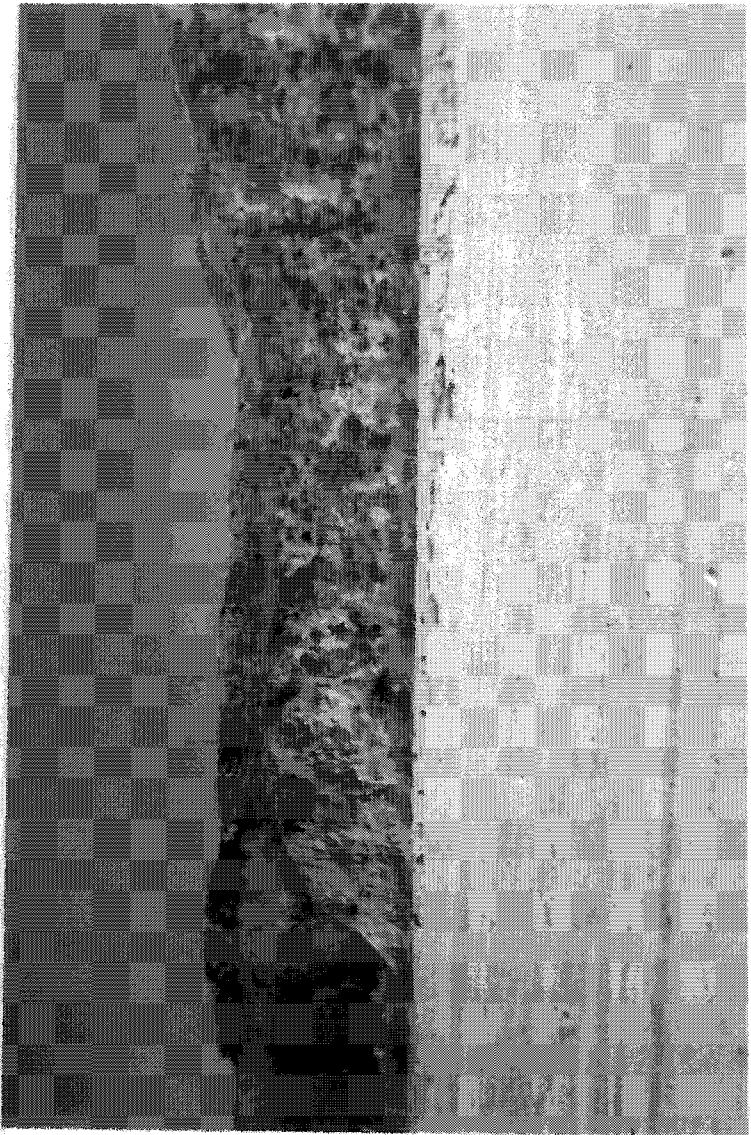
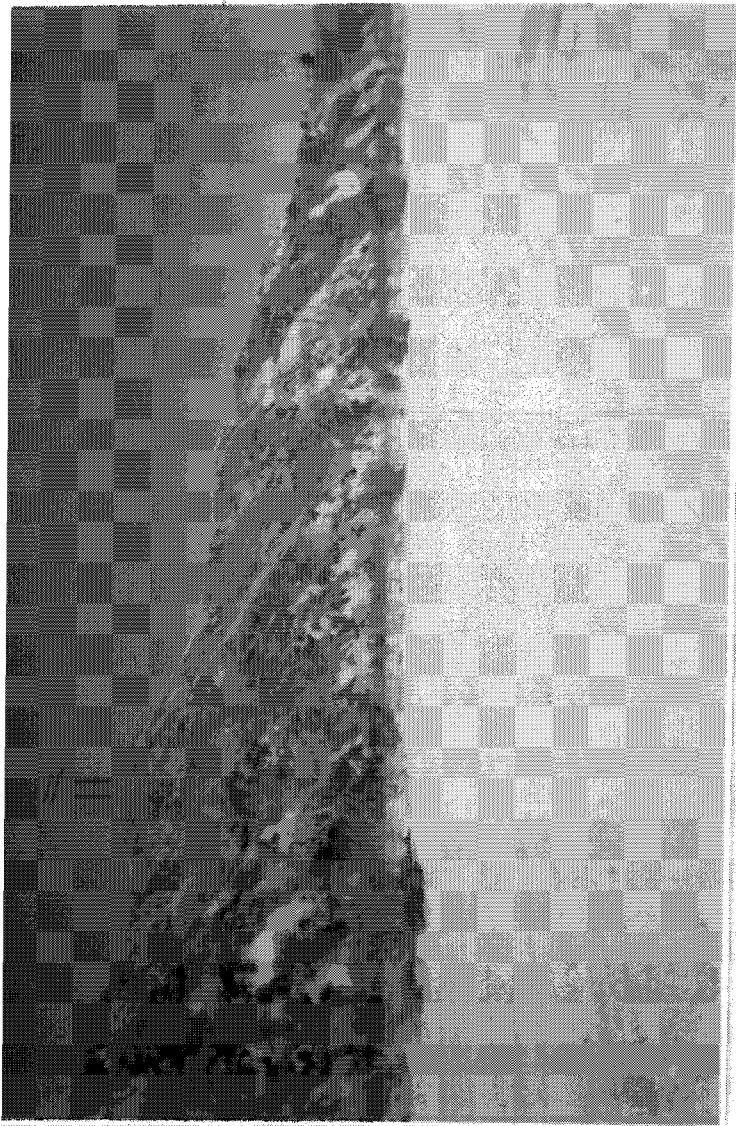














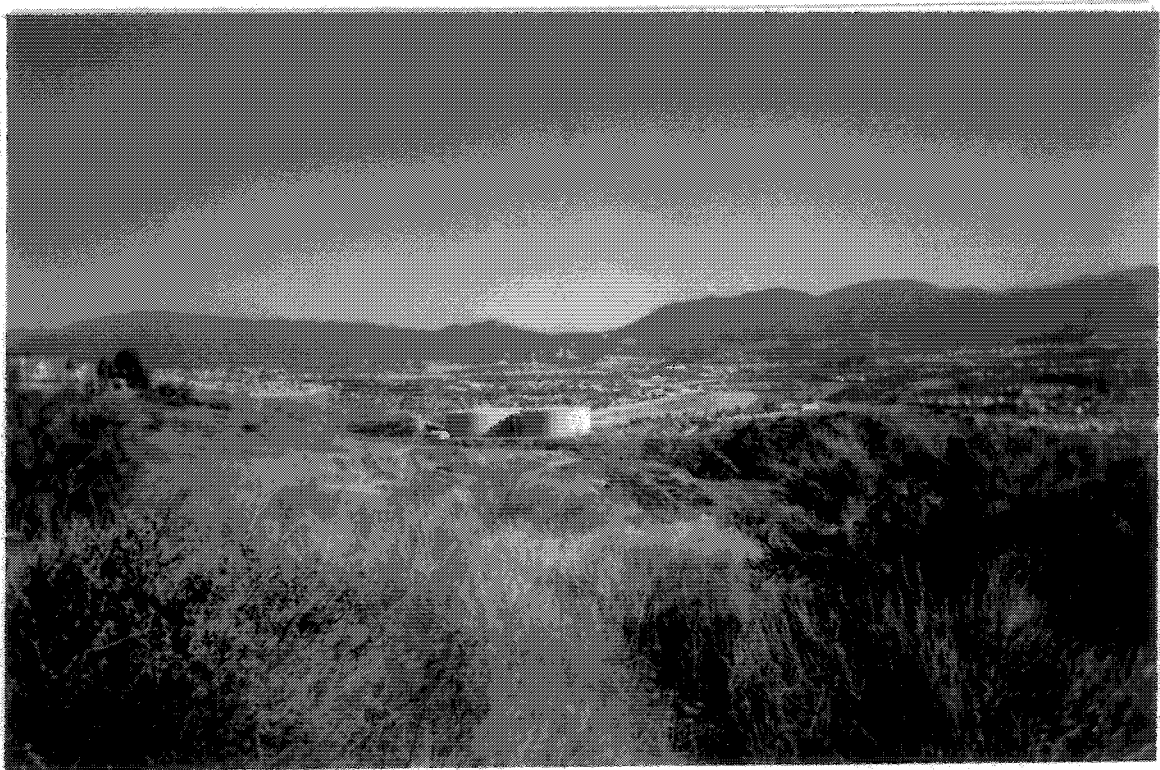
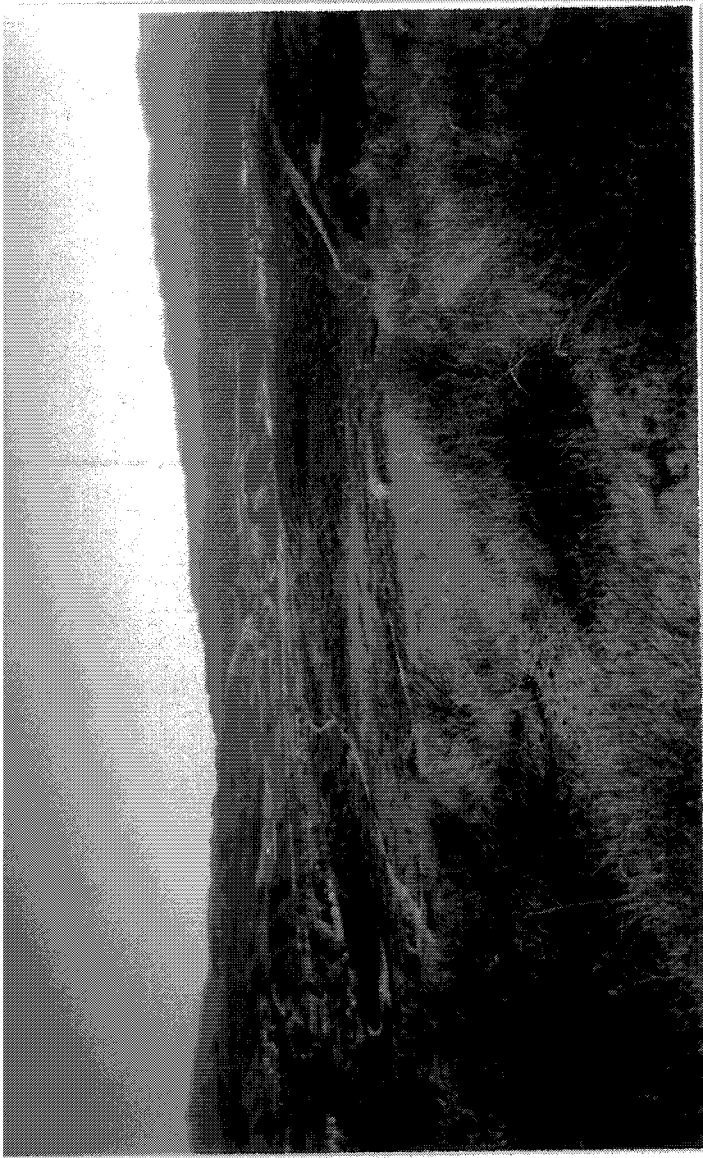
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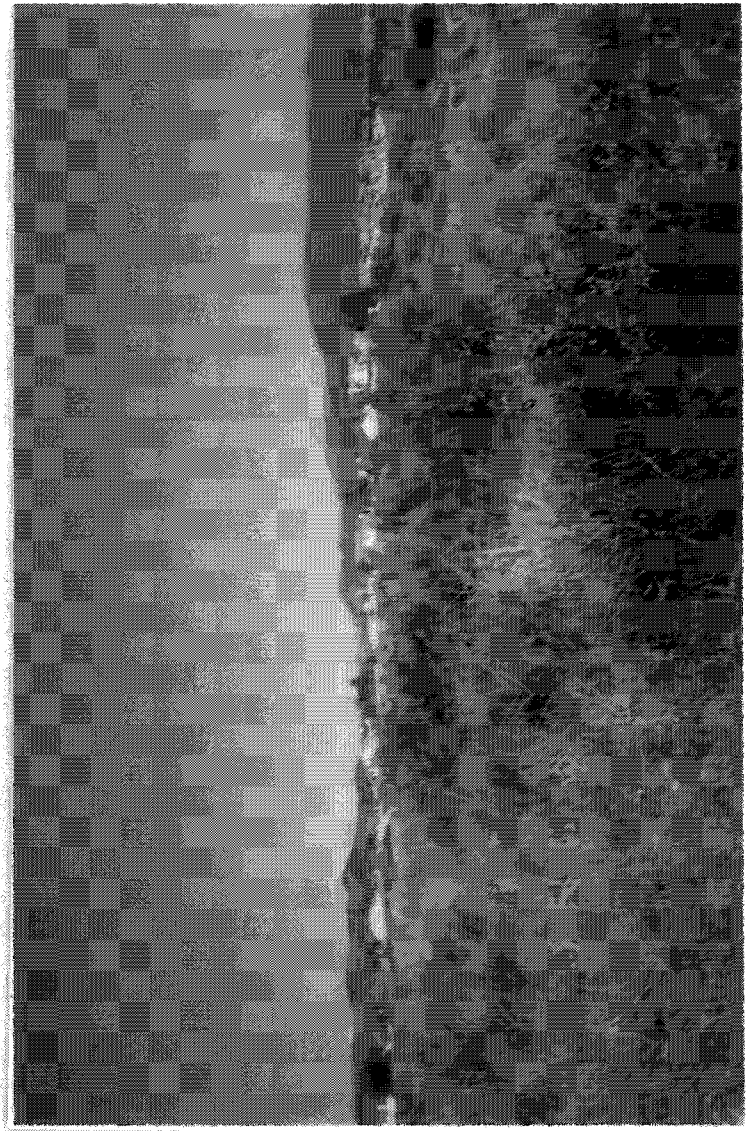
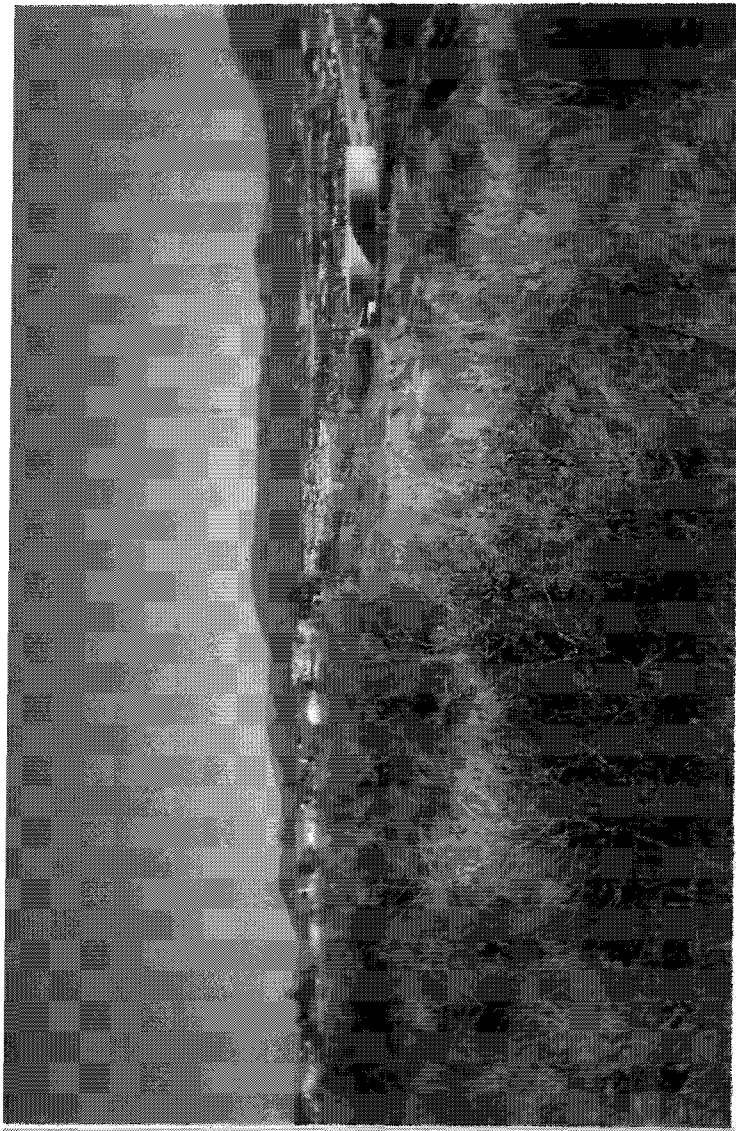
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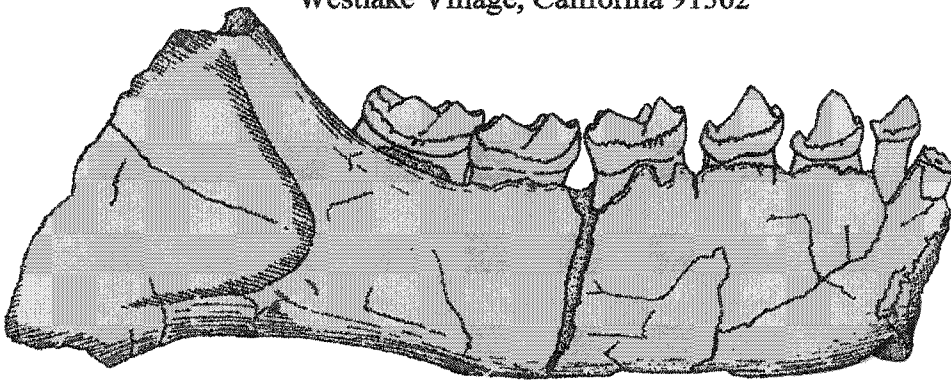
APPENDIX 4-B

**Paleontological Resources Inventory/Impact Assessment Technical Report, Paleo
Environmental Associates (July 2004)**

**PALEONTOLOGIC RESOURCE INVENTORY/
IMPACT ASSESSMENT TECHNICAL REPORT**
prepared in support of
PROPOSED KEYSTONE DEVELOPMENT
SANTA CLARITA, LOS ANGELES COUNTY, CALIFORNIA

Submitted to:

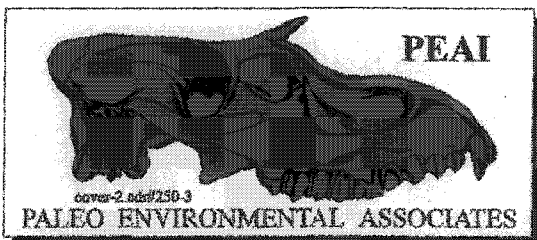
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July 2004

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PALEO ENVIRONMENTAL ASSOCIATES

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SECTION 1

INTRODUCTION

1.1 BACKGROUND

Paleontologic resources include fossil remains, fossil sites, associated specimen data and corresponding geologic and geographic site data, and the fossil-bearing strata. This technical report summarizes the results of the paleontologic resource inventory/impact assessment conducted by Paleo Environmental Associates, Inc. (PEAI), in support of the Keystone development project environmental impact report (EIR). The City of Santa Clarita, the CEQA lead agency for the development project, has required this inventory/impact assessment be conducted because of the potential for fossil sites and remains being encountered by earth-moving activities associated with development of the 247-acre Keystone parcel (City of Santa Clarita Vesting Tentative Tract No. 060258).

1.2 PERSONNEL

This technical report was prepared by Dr. E. Bruce Lander, a paleontologist with PEA, Altadena, California. Dr. Lander has a Ph.D. degree in paleontology and has conducted research, authored published scientific contributions, and prepared environmental impact review documents on the paleontologic resources of California in support of other major construction projects, including a number of major earth-moving projects in the Santa Clarita area. Dr. Lander conducted the literature review, archival search, and field survey for this report.

SECTION 2

ENVIRONMENTAL SETTING

The Keystone parcel lies in Santa Clarita, is bounded to the south by the Santa Clara River, and lies east of Bouquet Canyon, south of Plum Canyon, and west of Mint Canyon in west-central Los Angeles County (see Figure 1). The parcel occupies the eastern ½ of the northwestern ¼ and portions of the northwestern ¼ and the southwestern ¼ of Section 18 in Township 4 North, Range 15 West of the San Bernardino Base and Meridian. Topographic map coverage of the parcel is provided at a scale of 1:24,000 by the United States Geological Survey (USGS) Mint Canyon and Newhall Quadrangles, California, 7.5-Minute Series (Topographic) (1960, photorevised 1988; and 1952, photorevised 1988, respectively).

Paleontologic resources of the parcel include rock units that immediately underlie the surface and have a potential for yielding particular types of fossil remains because they have yielded similar fossil remains at previously recorded fossil sites near the parcel. Fossils, the remains or indications of once-living organisms, are a very important scientific resource because of their use in 1) documenting the evolution of particular groups of organisms, 2) reconstructing the environments in which they lived, 3) and in determining the ages of the strata in which they occur and of the geologic events that resulted in the deposition of the sediments constituting these strata.

2.1 METHODS

The following tasks were conducted to develop a baseline paleontologic resource inventory of the parcel by rock unit, and to assess the potential paleontologic productivity and the paleontologic/scientific importance of each rock unit, these assessments being based on the fossil remains previously recorded from the rock unit in the parcel vicinity. These tasks were completed in compliance with Society of Vertebrate Paleontology (SVP, 1995) guidelines for assessing the scientific importance of the paleontologic resources in an area of potential environmental effect.

2.1.1 Stratigraphic Inventory

Geologic maps and reports covering the surficial geology of the parcel were reviewed 1) to determine the rock units exposed in the parcel, particularly those rock units known to be fossiliferous, and 2) to delineate their respective areal distributions.

2.1.2 Paleontologic Resource Inventory

Published and unpublished geologic and paleontologic literature was reviewed to document the number and locations of previously recorded fossil sites in and near the parcel from each rock unit exposed in the parcel, and the types of fossil remains the rock unit has produced locally. The literature review was supplemented by an archival search conducted at the Natural History Museum of Los Angeles County Vertebrate Paleontology Department (LACMVP) for additional information regarding the occurrences of fossil sites and remains in and near the parcel. A field survey of the parcel was conducted 1) to determine the condition of any previously recorded site in the parcel, 2) to document the presence of any unrecorded fossil site, and 3) to substantiate the presence of strata suitable for containing fossil remains.

2.1.3 Paleontologic Resource Assessment Criteria

The paleontologic importance (high, moderate, low, none, undetermined) of a rock unit exposed in the parcel is the measure most amenable to assessing the scientific importance of the paleontologic resources of the parcel because the areal distribution of a rock unit can be delineated on a topographic map. The paleontologic importance of a rock unit reflects 1) its potential paleontologic productivity and 2) the scientific importance of the fossils it has produced locally.

The potential paleontologic productivity (high, moderate, low, none, undetermined) of a rock unit exposed in the parcel is based on the abundance/densities of fossil specimens and/or unrecorded/previously recorded fossil sites in exposures of the unit in and near the parcel. Exposures of a specific rock unit in the parcel are most likely to yield

fossil remains representing particular species in quantities or densities similar to those previously recorded from the unit in and near the parcel. The criteria for establishing the potential paleontologic productivity of a rock unit exposed in the parcel are described below.

- 1) High potential: rock unit contains comparatively high density of unrecorded/previously recorded fossil sites and has produced numerous fossil remains in and/or near parcel, and is very likely to yield additional similar remains in parcel.
- 2) Moderate potential: rock unit contains relatively moderate density of unrecorded/previously recorded fossil sites and has produced some fossil remains in and/or near parcel, and is somewhat likely to yield additional similar remains in parcel.
- 3) Low potential: rock unit contains no or comparatively low density of previously recorded fossil sites and has yielded very few or no fossil remains near parcel, and is not likely to yield any remains in parcel.
- 4) Undetermined potential: rock unit has limited or no exposure in parcel, is poorly studied, contains no previously recorded fossil site, and has produced no fossil remains near parcel. However, in parcel region, same or correlative and/or lithologically similar rock unit contains sufficient recorded fossil sites to suggest rock unit in parcel has at least a moderate potential for containing unrecorded fossil sites (note: elsewhere in California, exposures of rock units with few or no prior recorded fossil sites have recently proven abundantly fossiliferous during surveying, monitoring, or processing of fossiliferous rock samples as part of mitigation programs for other earth-moving projects).
- 5) No potential: unfossiliferous artificial fill and igneous and high-grade metamorphic rock units with no potential for containing any unrecorded fossil site or yielding any fossil remains.

A fossil specimen is considered scientifically highly important if it is 1) identifiable, 2) complete, 3) well preserved, 4) age diagnostic, 5) useful in environmental reconstruction, 6) a type or topotypic specimen, 7) a member of a rare species, 8) a species that is part of a diverse assemblage, and/or 9) a skeletal element different from, or a specimen more complete than those now available for its respective species. Identifiable fossil land mammal remains, for example, are considered scientifically highly important because of their potential use in providing very accurate age determinations and environmental reconstructions for the rock units in which they occur. The geologic age of some fossil mollusk and land mammal and plant remains can be determined by carbon-14 dating analysis. Moreover, land mammal and plant remains are comparatively rare in the fossil record.

Using the definitions presented above, the paleontologic or scientific importance of a rock unit exposed in the parcel would be assessed using the following criteria.

- 1) High importance: rock unit has comparatively high potential for containing unrecorded fossil sites and for yielding scientifically important fossil remains in parcel similar to those previously recorded from rock unit in and/or near parcel.
- 2) Moderate importance: rock unit has relatively moderate potential for containing unrecorded fossil sites and for yielding scientifically important fossil remains in parcel similar to those previously recorded from rock unit near parcel.
- 3) Low importance: rock unit has comparatively low potential for containing any unrecorded fossil site or for yielding any scientifically important fossil remains in parcel.
- 4) Undetermined importance: rock unit for which too few data are available from parcel and vicinity to allow an accurate assessment of its potential for containing any unrecorded fossil site or for yielding any scientifically important fossil remains in parcel.
- 5) No importance: unfossiliferous artificial fill and igneous and high-grade metamorphic rock units having no potential for containing any unrecorded fossil site or for yielding any fossil remains.

Note, however, that any fossil site containing identifiable fossil remains and the fossil-bearing strata are considered highly important paleontologically, regardless of the paleontologic or scientific importance of the rock unit in which the site and strata occur.

The following tasks were completed to establish the paleontologic importance of each rock unit exposed in the parcel.

- 1) The scientific importance of fossil remains recorded from a rock unit exposed in the parcel was assessed.
- 2) The potential paleontologic productivity of the rock unit was assessed, based on the density of fossil remains and/or previously recorded and newly documented fossil sites it contains in and/or near the parcel.
- 3) The paleontologic importance of the rock unit was assessed, based on its documented and/or potential fossil content in the parcel.

This method of resource assessment is the most appropriate for an areal paleontologic resource investigation of the parcel because discrete levels of paleontologic importance can be delineated on a topographic/geologic map.

2.2 RESULTS

2.2.1 Stratigraphic Inventory

The parcel lies near the eastern end of the late Cenozoic Ventura Basin, which, in turn, is situated in the western Transverse Ranges Province, where major linear geographic features (mountains, valleys) and the underlying geologic structures (faults, folds) trend in an east-west direction (see Jahns, 1954). The eastern end of the basin in the parcel vicinity is composed of stratigraphic or sedimentary rock units consisting of late Cenozoic marine and stratigraphically overlying nonmarine strata reflecting the final filling of the basin and its emergence above sea level.

Regional surficial geologic mapping of the parcel and vicinity is provided by Jennings and Strand (1969) at a scale of 1:250,000. Larger-scale (1:24,000) geologic mapping of the area by Dibblee (1996a, -b) and Winterer and Durham (1962) indicates that the parcel is underlain by three late Cenozoic, nonmarine rock units, including the Pliocene and Pleistocene Saugus Formation, which forms the lower slopes of the hills in the parcel; Pleistocene high terrace deposits and low terrace remnants), which cap the hills; Holocene younger alluvium, which floors the canyons and valleys; and Holocene stream channel deposits, which fill the modern active stream and river channels. A surficial geologic map of the parcel is presented at a scale of 1:12,000 in Figure 1.

2.2.2 Paleontologic Resource Inventory and Assessment by Rock Unit

An inventory of the paleontologic resources of the rock units exposed in the parcel is presented below, and the scientific importance of these resources is assessed. Although neither the literature review, the archival search, nor the field survey conducted for this inventory documented any previously recorded fossil site as occurring in the parcel, a number of previously recorded fossil sites were documented as occurring in areas mapped as being underlain by these rock units near the parcel. The fossil remains from some of these fossil sites were uncovered as a result of earth-moving activities associated with other major construction projects.

2.2.2.1 Saugus Formation.—Although no previously recorded fossil site is reported as occurring in the Saugus Formation in the parcel, fossilized bones and teeth representing extinct species of Pliocene to early or middle Pleistocene continental vertebrates assignable to the Blancan and/or Irvingtonian North American Land Mammal Age (NALMA) have been recovered from this formation near the parcel at LACMVP fossil sites 1293, 3774, 4134, 6062, 6063, 6803, and 6804, and California Institute of Technology fossil site 200 (see Lander, 1988, 1990, 1997, 2002; Pollard, 1958; Reynolds, 1987; Scott and others, 2004; Winterer and Durham, 1962, fossil sites V91 to V93). These sites occur in the hills north and south of the Santa Clara River, from near the mouth of San Martinez Chiquito Canyon and the head of Potrero Canyon, possibly as far eastward as the mouth of Bouquet Canyon. The species

represented at these sites are assignable to the Chelonia (turtles and tortoises), *Gerrhonotus* (alligator lizards), the Leporidae (rabbits), *Thomomys* (pocket gophers), *Perognathus* (pocket mice), the Proboscidea (elephants), *Pliohippus* (anomalously young record, if correctly identified) and *Equus* (horses), the Tayassuidae (peccaries), the Camelidae (camels), and the Cervidae (deer). *Thomomys*, in particular, is not recorded before the Blancan (see Korth 1992). Fine-grained strata suitable for containing fossil remains were observed during the field survey conducted in support of this assessment.

The occurrence of a number of previously recorded fossil sites near the parcel suggests that there probably is a high potential for additional similar, scientifically highly important fossil remains in the parcel being encountered by earth-moving activities at unrecorded fossil sites in the Saugus Formation. Identifiable fossil remains recovered from this rock unit in the parcel would be particularly important if they represented a new or rare species; geologic (temporal) and/or geographic range extension; new taxonomic record for the rock unit; age-diagnostic species; and/or a skeletal element different from, or a specimen more complete than those now available for its respective species. There is a potential for encountering land mammal remains representing species rarely if ever recorded from the rock unit or the immediate parcel vicinity. The recovery of remains representing age-diagnostic species would be critical in determining if the rock unit is assignable to the Blancan or Irvingtonian NALMA, while the remains of environmentally sensitive species would be critical in paleoenvironmental and habitat reconstruction. Moreover, the remains would contribute to a more comprehensive documentation of the diversity of animal life that existed in and near the parcel during the Pliocene to middle Pleistocene Epochs. Finally, land mammal remains also are scientifically highly important because such remains are comparatively rare in the fossil record.

2.2.2.2 High Terrace Deposits.—Although no previously recorded fossil site is reported as occurring in the high terrace deposits in the parcel, fossilized remains representing an extinct species of Pleistocene bison (*Bison*), which defines the beginning of the Rancholabrean NALMA (Savage, 1951), might have been recovered at a previously recorded fossil site in this rock unit near the parcel in the Castaic area (see Pollard, 1958; Winterer and Durham, 1962). However, this fossil site might also have been in the overlying low terrace remnants.

The possible occurrence of only one previously recorded fossil site near the parcel suggests that there is an undetermined (but probably no more than moderate) potential for additional similar, scientifically highly important fossil remains in the parcel being encountered by earth-moving activities at unrecorded fossil sites in the high terrace deposits. Identifiable fossil remains recovered from this rock unit in the parcel would be particularly important if they represented a new or rare species; geologic (temporal) and/or geographic range extension; new taxonomic record for the rock unit; age-diagnostic species; and/or a skeletal element different from, or a specimen more complete than those now available for its respective species. There is a potential for encountering land mammal remains representing species rarely if ever recorded from the rock unit or the immediate parcel vicinity. The recovery of remains representing age-diagnostic species would be critical in determining if the rock unit is assignable to the Rancholabrean NALMA, while the remains of environmentally sensitive species would be critical in paleoenvironmental and habitat reconstruction. Moreover, the remains would contribute to a more comprehensive documentation of the diversity of animal life that existed in and near the parcel during the Pleistocene Epoch. Finally, land mammal remains also are scientifically highly important because such remains are comparatively rare in the fossil record.

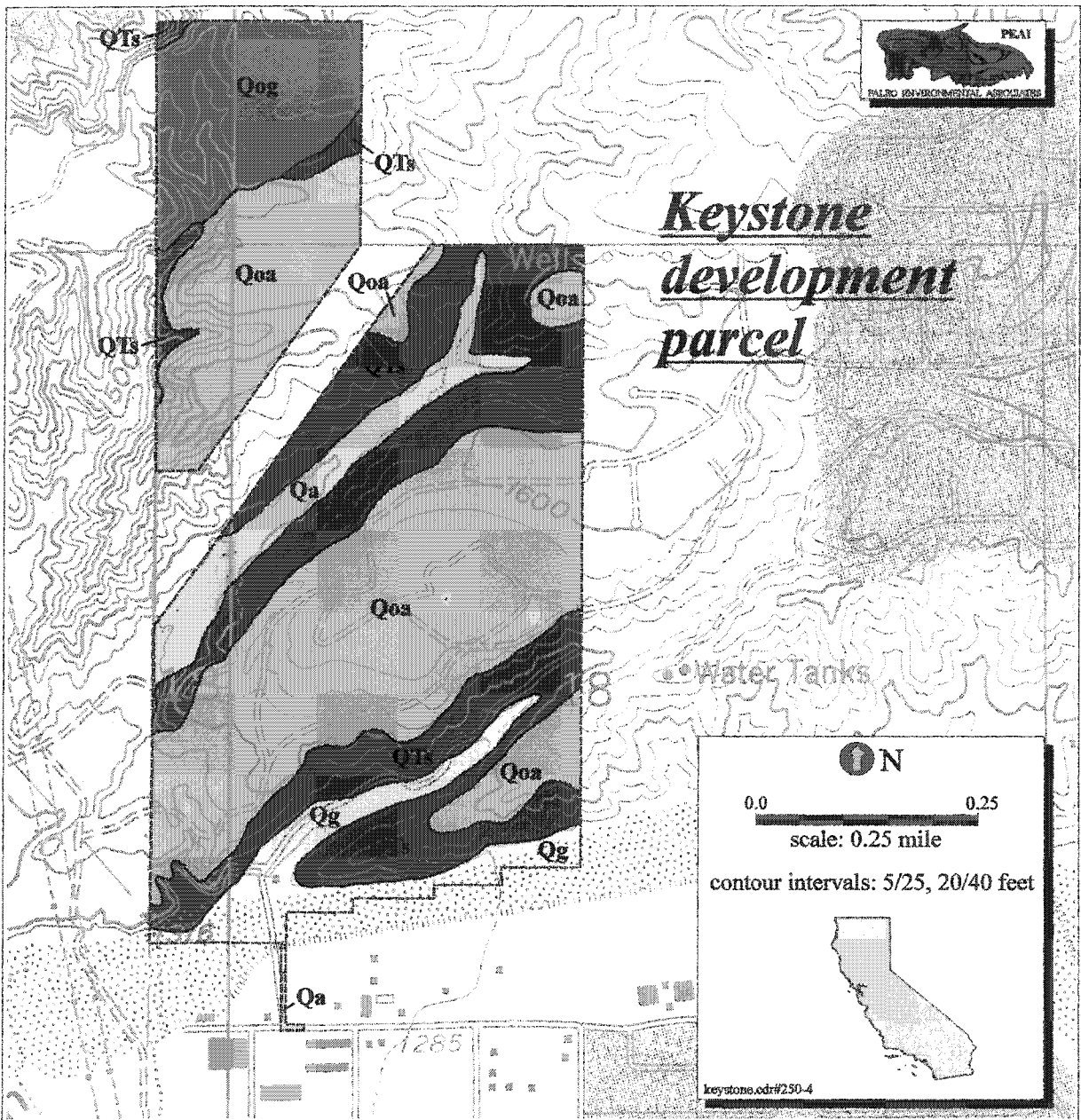
2.2.2.3 Low Terrace Remnants.—Although no previously recorded fossil site is reported as occurring in the low terrace remnants in the parcel, fossilized remains representing an extinct species of Pleistocene bison (*Bison*) were recovered at one or two previously recorded fossil sites in this rock unit near the parcel in the hills immediately northwest of the confluence of the Santa Clara River and Castaic Creek, and, if not in the underlying high terrace deposits, possibly near Castaic (see Lander, 1988, 1990; Pollard, 1958; Winterer and Durham, 1962, fossil site V94).

The occurrence of only one or two previously recorded fossil sites near the parcel suggests that there probably is no more than a moderate potential for additional similar, scientifically highly important fossil remains in the parcel being encountered by earth-moving activities at unrecorded fossil sites in the low terrace remnants. Identifiable fossil remains recovered from this rock unit in the parcel would be particularly important if they represented a new or rare species; geologic (temporal) and/or geographic range extension; new taxonomic record for the rock unit; age-diagnostic species; and/or a skeletal element different from, or a specimen more complete than those now available for its respective species. There is a potential for encountering land mammal remains representing species rarely if

ever recorded from the rock unit or the immediate parcel vicinity. The recovery of remains representing environmentally sensitive species would be critical in paleoenvironmental and habitat reconstruction. Moreover, the remains would contribute to a more comprehensive documentation of the diversity of animal life that existed in and near the parcel during the middle to late Pleistocene Epoch. Finally, land mammal remains also are scientifically highly important because such remains are comparatively rare in the fossil record.

2.2.2.4 Younger Alluvium.—At and near the surface, the younger alluvium probably is too young to contain remains old enough to be considered fossilized. For this reason, there probably is only a low potential for scientifically highly important fossil remains in the parcel being encountered by earth-moving activities at unrecorded fossil sites where the parcel is underlain by younger alluvium.

2.2.2.5 Stream Channel Deposits.—At and near the surface, the stream channel deposits probably are too young to contain remains old enough to be considered fossilized. For this reason, there probably is only a low potential for scientifically highly important fossil remains in the parcel being encountered by earth-moving activities at unrecorded fossil sites where the parcel is underlain by stream channel deposits.



EXPLANATION

Qg	stream channel deposits (Holocene, continental)	low sensitivity
Qu	younger alluvium (Holocene, continental)	low sensitivity
Qoa	low terrace remnants (Pleistocene, continental)	moderate sensitivity
Qog	high terrace deposits (Pleistocene, continental)	undetermined sensitivity
QTs	Saugus Formation (Pliocene to Pleistocene, continental)	high sensitivity
—	geologic contact	

Figure 1.—Topographic/surficial geologic/paleontologic resource sensitivity map, Keystone development parcel, Santa Clarita, Los Angeles County, California. Base map: USGS Mint Canyon and Newhall (California) Quadrangles 7.5-Minute Series (Topographic) (1960, photorevised 1988; and 1952, photorevised 1988, respectively). Geology after Dibblee (1996a, -b).

SECTION 3

ENVIRONMENTAL IMPACTS

3.1 DEVELOPMENT PHASE IMPACTS

Paleontologic resources, including an undetermined number of fossil remains and unrecorded fossil sites; associated specimen data and corresponding geologic and geographic site data; and the fossil-bearing strata, could be adversely affected by (i.e., would be sensitive to) the significant direct and indirect environmental impacts resulting from earth-moving activities associated with development of the parcel.

Direct impacts would result mostly from earth-moving activities (particularly grading) in previously undisturbed strata, but also would result from any earth-moving activity that buried previously undisturbed strata, making the strata and their paleontologic resources unavailable for future scientific investigation. Although earth-moving activities would be comparatively short term, the possible accompanying loss of some fossil remains, unrecorded fossil sites, associated specimen data and corresponding geologic and geographic site data, and the fossil-bearing strata is a potentially significant long-term adverse environmental impact.

Easier access to fresh exposures of fossiliferous strata and the accompanying potential for unauthorized fossil collecting by construction personnel, rock hounds, and amateur and commercial fossil collectors could result in the loss of some additional fossil remains, unrecorded fossil sites, and associated specimen data and corresponding geologic and geographic site data. The loss of these additional paleontologic resources is another potentially significant long-term environmental impact.

3.1.1 Significance Criteria

The following tasks were conducted in compliance with SVP (1995) guidelines for assessing the significance of construction-related adverse environmental impacts on paleontologic resources, or the paleontologic sensitivity of a particular rock unit to adverse impacts.

The paleontologic significance (high, moderate, low, none, undetermined) of the potential adverse impacts of earth-moving activities on the paleontologic resources of each rock unit in the parcel was assessed and reflects the paleontologic or scientific importance/impact sensitivity of the rock unit, which, in turn, primarily reflects the potential for fossil remains and fossil sites being encountered by these activities. Note, however, that any impact on a fossil site and the fossil-bearing strata would be considered highly significant paleontologically, regardless of the paleontologic importance of the rock unit in which the site and strata occur. For example, grading in an area underlain by a moderately important rock unit would have only a moderate potential for the disturbance or burial of fossil remains and sites (i.e., the rock unit would be moderately sensitive to adverse impacts). Although the accompanying loss of any fossil remains and site would be a highly significant impact paleontologically, the impact of grading would be considered only moderately significant because of the moderate potential for the loss of paleontologic resources. This method of impact assessment is most appropriate to an areal paleontologic resource investigation of the parcel because discrete levels of paleontologic impact sensitivity/significance can be delineated on a topographic/geologic map of the parcel.

A paleontologic resource impact sensitivity assessment of the parcel is presented below and on the geologic map of the parcel included as Figure 1.

3.1.2 Impact Assessment

3.1.2.1 Saugus Formation.—The Saugus Formation has yielded fossil remains at a number of previously recorded fossil sites near the parcel. For this reason, adverse environmental impacts on the paleontologic resources of the Saugus Formation that would result from earth-moving activities in the parcel would be considered to be of high paleontologic significance because there probably is a high potential for the loss of scientifically important fossil remains, unrecorded fossil sites, and associated specimen data and corresponding geologic and geographic site data as a result of these activities.

3.1.2.2 High Terrace Deposits.—The high terrace deposits possibly have yielded fossil remains at only one previously recorded fossil sites near the parcel. For this reason, adverse environmental impacts on the paleontologic resources of high terrace deposits that would result from earth-moving activities in the parcel would be considered to be of undetermined (but probably no more than moderate) paleontologic significance because the potential for the loss of scientifically important fossil remains, unrecorded fossil sites, and associated specimen data and corresponding geologic and geographic site data as a result of these activities is undetermined.

3.1.2.3 Low Terrace Remnants.—The low terrace remnants have yielded fossil remains at only one or two previously recorded fossil sites near the parcel. For this reason, adverse environmental impacts on the paleontologic resources of the low terrace remnants that would result from earth-moving activities in the parcel would be considered to be of only moderate paleontologic significance because the potential for the loss of scientifically important fossil remains, unrecorded fossil sites, and associated specimen data and corresponding geologic and geographic site data as a result of these activities is considered to be no more than moderate.

3.1.2.4 Younger Alluvium.—Any adverse environmental impact on the paleontologic resources of the younger alluvium that would result from earth-moving activities in the parcel probably would be considered to be of low significance because the younger alluvium probably is too young at and near the surface to contain remains old enough to be considered fossilized.

3.1.2.5 Stream Channel Deposits.—Any adverse environmental impact on the paleontologic resources of the stream channel deposits that would result from earth-moving activities in the parcel probably would be considered to be of low significance because the stream channel deposits probably are too young at and near the surface to contain remains old enough to be considered fossilized.

3.2 CUMULATIVE IMPACTS

Development of the parcel, in combination with other projects in the region where a parcel is underlain by the Saugus Formation or low terrace remnants might lead to the progressive loss of fossil-bearing strata in these rock units that could be prospected for fossil remains and unrecorded fossil sites. The loss of these additional paleontologic resources is another potentially significant long-term adverse environmental impact.

SECTION 4

MITIGATION MEASURES

4.1 DEVELOPMENT PHASE

The following measures comprise a paleontologic resource impact mitigation program that would reduce, to an insignificant level, the direct, indirect, and cumulative adverse environmental impacts on paleontologic resources that might accompany earth-moving activities (particularly grading) associated with development of the parcel. The program would allow for the recovery of some scientifically highly important fossil remains, should any be encountered by these activities, as well as associated specimen data and corresponding geologic and geographic site data; their preservation in a recognized museum repository; and their availability for future study by qualified scientific investigators. These specimens and data otherwise might have been lost to the earth-moving activities and unauthorized fossil collecting. Specimen recovery would be allowed under CEQA Appendix G (5.c).

4.1.1 Mitigation Program Design Criteria

The recommended level and type of mitigation effort in a particular area of the parcel reflects the paleontologic importance/impact sensitivity of the rock unit underlying the area and the corresponding potential for fossil remains being encountered by earth-moving activities in the parcel, the type of rock comprising the rock unit, and the types and magnitudes of the significant impacts that would occur in the area. For example, grading of an area underlain by a paleontologically highly important rock unit or of one containing a fossil site would require more intensive paleontologic construction monitoring than grading of an area underlain by a rock unit of moderate, low, or undetermined paleontologic importance. Monitoring would not be required in an area underlain by artificial fill or a rock unit of no paleontologic importance (unless a rock unit of higher importance would be encountered at depth), or one in which a rock unit of high, moderate, low, or undetermined importance would be buried, but not otherwise disturbed. No rock sample would be processed if the rock were too coarse grained or resistant to breaking down in water.

The discovery and subsequent recovery of fossil remains as part of the mitigation program might result in a slight delay of some earth-moving activities. However, the mitigation measures presented below have been designed to eliminate or reduce any delay to the greatest extent possible by 1) ensuring that a paleontologic construction monitor would be present when and where fossil remains were most likely to be uncovered by earth-moving activities; 2) allowing for the rapid recovery of fossil remains, should any be encountered by these activities, and associated specimen and site data; and 3), if necessary, diverting the activities temporarily around a newly discovered fossil site until the remains had been removed by the monitor and the activities allowed to proceed through the site. Similar paleontologic resource impact mitigation programs usually have resulted in no delay of earth-moving activities.

4.1.2 Beneficial Environmental Effects of Mitigation Program

If the paleontologic resource impact mitigation program recommended below were implemented, earth-moving activities in the parcel might produce some beneficial effects. The fresh exposure of fossil-bearing strata would allow for the discovery of an undetermined number of unrecorded fossil sites and the recovery of some scientifically highly important fossil remains that otherwise might not even have been exposed without these activities. Moreover, these remains and associated specimen data and corresponding geologic and geographic site data, instead of being lost to earth-moving activities or to unauthorized fossil collecting, would be preserved in a museum repository, where they would be made available to qualified scientific investigators for future study. There also is the potential that some of these remains might represent new or rare species; new geologic or geographic records; and/or skeletal elements different from, or specimens more complete than those now available for their respective species. Finally, these remains would provide a more comprehensive paleontologic resource inventory of the parcel and vicinity than is now available or would have been available without development of the parcel.

4.1.3 Qualifications of Paleontologist Conducting Mitigation Program

All mitigation measures presented below should be directed by a vertebrate paleontologist approved by the City of

Santa Clarita and LACMVP. The paleontologist should have substantial experience designing and conducting paleontologic resource impact mitigation programs in areas underlain by fossil-bearing strata. The paleontologic monitor and other paleontologic staff working under the direction of the paleontologist should have experience monitoring earth-moving activities, recovering vertebrate fossil remains, and recovering and processing large samples of fossiliferous rock.

4.1.4 Compliance with Lead Agency and Professional Society Guidelines

The mitigation measures recommended below would be in compliance with any City of Santa Clarita environmental guideline and with SVP (1995, 1996) standard guidelines for mitigating adverse construction-related impacts on paleontologic resources. The paleontologist would ensure implementation of these measures and verify the effectiveness of the measures. The results of the program would be reported in a final technical report of results and findings submitted to the City of Santa Clarita.

4.1.5 Mitigation Measures

The literature review, archival search, and field survey, as well as a review of the geologic maps covering the parcel, indicated that the parcel is underlain partly by paleontologically highly sensitive strata, in which earth-moving activities associated with development of the parcel would have a high potential for encountering fossil remains (see Figure 1). Mitigation measures that would be implemented in a particular area of the parcel are based on the sensitivity of the underlying rock unit and include paleontologic construction monitoring, which would be conducted in conjunction with other measures provided below.

4.1.5.1 Task 1—Retention of Paleontologist.—Prior to construction, the services of a qualified vertebrate paleontologist approved by the City of Santa Clarita and LACMVP will be retained to implement the mitigation program during earth-moving activities in the parcel.

4.1.5.2 Task 2—Museum Storage Agreement.—The paleontologist will develop a formal agreement with a recognized museum repository, such as the LACMVP, regarding final disposition and permanent storage and maintenance of any fossil remains and associated specimen data and corresponding geologic and geographic site data that might be recovered as a result of the mitigation program, and the level of treatment (preparation, identification, curation, cataloguing) of the remains that would be required before the entire mitigation program fossil collection would be accepted by the repository for storage.

4.1.5.3 Task 3—Pre-grading Survey.—Prior to the start of any earth-moving activity associated with development of the parcel, the paleontologist and/or monitor will conduct an intensive survey of the parcel, including those areas that will be buried but not otherwise disturbed by these activities. The survey, particularly with regard to areas of the parcel underlain by the Saugus Formation, will allow for the discovery of any unrecorded fossil site and the recovery the fossil remains, the recording of associated specimen data and corresponding geologic and geographic site data, and the recognition of fine-grained strata suitable for containing smaller vertebrate fossil remains. The recovery of fossil remains during the survey might reduce the potential for a delay in earth-moving activities.

4.1.5.4 Task 4—Pre-grading Coordination.—The paleontologist or monitor will coordinate with the appropriate grading contractor personnel to provide information regarding lead agency requirements for the protection of paleontologic resources. Contractor personnel also will be briefed on procedures to be followed in the event that a fossil site or remains are encountered by earth-moving activities, particularly when the monitor is not on site. The briefing will be presented to new contractor personnel as necessary. Names and telephone numbers of the monitor and other appropriate mitigation program personnel will be provided to the appropriate contractor personnel.

4.1.5.5 Task 5—Paleontologic Monitoring and Fossil/Sample Recovery.—Earth-moving activities will be monitored by the monitor only in those areas of the parcel where these activities will disturb previously undisturbed strata. Monitoring will be conducted on a full-time basis in areas underlain by Saugus Formation, half time where underlain by the low terrace remnants, and quarter time where underlain by the high terrace deposits, younger alluvium, and stream channel deposits (monitoring will not be conducted in areas underlain by younger alluvium or

stream channel deposits, unless and until these activities have reached a depth at least 5 feet below grade, or in areas where exposed strata will be buried, but not otherwise disturbed). If fossil remains are encountered by these activities, monitoring will be increased to full or half time, as appropriate, at least in the vicinity of the fossil site where the area is underlain by the fossil-bearing rock unit. With City of Santa Clarita approval, if no fossil remains are found once 50 percent of earth-moving activities have been completed in an area underlain by a particular rock unit, monitoring can be reduced or suspended in that area.

Monitoring will consist of visually inspecting debris piles and freshly exposed strata for larger fossil remains, and periodically dry test screening sediment, rock, and debris for smaller fossil remains. As soon as practicable, the monitor will recover all vertebrate fossil specimens, a representative sample of invertebrate or plant fossils, or any fossiliferous rock sample that can be recovered easily. If recovery of a large or unusually productive fossil occurrence is warranted, earth-moving activities will be diverted temporarily around the fossil site and a recovery crew will be mobilized as necessary to remove the occurrence as quickly as possible. If not on site when a fossil occurrence is uncovered by these activities, the activities will be diverted temporarily around the fossil site and the monitor called to the site to evaluate and, if warranted, remove the occurrence. If the fossil site is determined too unproductive or the fossil remains not worthy of recovery, no further action will be taken to preserve the fossil site or remains, and earth-moving activities will be allowed to proceed through the site immediately. The location and proper geologic context of any fossil occurrence will be documented, as appropriate. Any recovered rock sample will be processed to allow for the recovery of smaller fossil remains.

Rock samples will be processed to allow for the recovery of smaller fossil remains that normally are too small to be observed by the monitor. No more than 6,000 pounds (12,000 pounds total) of rock will be processed from either the Saugus Formation or the low terrace remnants.

4.1.5.6 Task 6—Final Laboratory Tasks.—All fossil specimens recovered from the parcel as a result of the mitigation program, including those recovered as the result of processing fossiliferous rock samples, will be treated (prepared, identified, curated, catalogued) in accordance with designated museum repository requirements. Rock samples from the Saugus Formation and older alluvium will be submitted to commercial laboratories for microfossil, pollen, or radiometric dating analysis.

4.1.5.7 Task 7—Reporting.—The monitor will maintain daily monitoring logs that include the particular tasks accomplished, the earth-moving activity monitored, the location where monitoring was conducted, the rock unit encountered, fossil specimens recovered, and associated specimen data and corresponding geologic and geographic site data. A final technical report of results and findings will be prepared by the paleontologist in accordance with any City of Santa Clarita requirement.

4.2 ENVIRONMENTAL COMPLIANCE

The project will comply with any applicable environmental law, ordinance, regulation, or standard regarding paleontologic resources during earth-moving activities associated with development of the parcel.

Paleontologic resources, including fossil remains, associated specimen data and corresponding geologic and geographic site data, fossil sites, and the fossil-bearing strata, are a limited, nonrenewable, and very sensitive scientific and educational resource and, particularly with regard to fossil sites, are afforded protection under the following state environmental legislation (see California Office of Historic Preservation, 1983).

California Environmental Quality Act of 1970 (CEQA) (Division 13, California Public Resources Code: 21000 et seq.).—Requires that a public agency or private interest identify the environmental consequences of its proposed project on any object or site of significance to the scientific annals of California (Division I, Public Resources Code: 5020.1 [b]).

Guidelines for the Implementation of CEQA, as amended May 10, 1980, and March 29, 1999 (Title 14, Chapter 3, California Administrative Code: 15000 et seq.).—Define procedures, types of activities, persons, and public agencies required to comply with CEQA, and include definitions of significant impacts on a fossil locality (Section 15023, Appendix G [5.c]).

California Public Resources Code, Section 5097.5 (Statute 1965, Chapter 1136, Paragraph 2792).—Defines any unauthorized disturbance or removal of a fossil locality or remains on public land as a misdemeanor.

California Public Resources Code, Section 30244.—Requires reasonable mitigation of adverse environmental impacts that result from development of public land and affect paleontologic resources.

In response to CEQA and subsequent acts, many regulatory agencies in California, including the City of Santa Clarita, also have developed environmental guidelines for protecting paleontologic resources in areas under their respective jurisdictions. Under its guidelines, a CEQA lead agency can require a paleontologic resource inventory/impact assessment of an area to be adversely impacted by a discretionary project deemed nonexempt under its guidelines. As part of such an assessment, the agency can require an inventory and the mapping of fossil-bearing rock units and previously recorded and newly documented fossil sites by a qualified paleontologist in the area to be affected, an evaluation of the scientific importance of these resources, a determination of the adverse environmental impacts that might arise from the project and an appraisal of their significance, and the formulation of measures to mitigate these impacts to an insignificant level. The City of Santa Clarita has required that such an assessment be conducted in support of the Keystone development project EIR because earth-moving activities associated with development of the parcel might result in the loss of unrecorded fossil sites and remains. This paleontologic resource assessment technical report, particularly with regard to the mitigation measures presented above, is in compliance with SVP (1995, 1996) standard measures for assessing the scientific importance of paleontologic resources in an area of potential environmental effect, developing measures to mitigate significant adverse construction-related environmental impacts on these resources, and with conditions for the acceptance of a paleontologic resource impact mitigation program fossil collection by a museum repository.

SECTION 5

ACRONYMS

CEQA	California Environmental Quality Act
EIR	environmental impact report
LACMVP	Natural History Museum of Los Angeles County Vertebrate Paleontology Department
NALMA	North American Land Mammal Age
PEAI	Paleo Environmental Associates, Inc.
SVP	Society of Vertebrate Paleontology
USGS	United States Geological Survey

SECTION 6

LITERATURE CITED

California Office of Historic Preservation. 1983. Summary of state laws protecting cultural resources.

Dibblee, T.W., Jr. 1996a. Geologic map of the Newhall Canyon Quadrangle, Los Angeles County, California. Dibblee Geological Foundation map DF-56.

Dibblee, T.W., Jr. 1996b. Geologic map of the Mint Canyon Quadrangle, Los Angeles and Ventura Counties, California. Dibblee Geological Foundation map DF-57.

Jahns, R.H. 1954. Investigations and problems of southern California geology. *In* Jahns, R.H., editor. Geology of southern California. California Division of Mines Bulletin 170(1:1):5-29.

Jennings, C.W., and Strand, R.G., compilers. 1969. Geologic map of California, Olaf P. Jenkins Edition—Los Angeles Sheet. California Division of Mines and Geology.

Korth, W.W. 1994b. The Tertiary record of rodents in North America. New York: Plenum Press.

Lander, E.B. 1988. Paleontologic resource assessment, North River Tract, Valencia, Los Angeles County, California. Engineering-Science, Inc. Prepared for Sikand Engineering Associates and Valencia Company.

Lander, E.B. 1990. Paleontologic resource assessment, Valencia Commerce Center Channelization Project, Valencia, Los Angeles County, California. Paleo Environmental Associates, Inc., project no. EBL 90-18. Prepared for Valencia Company.

Lander, E.B. 1997. Geology and vertebrate paleontology of the Cenozoic nonmarine rock units in Simi Valley. Chapter 10, pp. 303-319. *In* Havens, P., and Appleton, B., compilers. Simi Valley, a journey through time. Simi Valley Historical Society and Museum.

Lander, E.B. 2002. Paleontologic resource inventory/impact assessment technical report in support of proposed Chiquita Canyon Landfill expansion, Los Angeles County, California. Prepared for CH2M Hill.

Pollard, D.L. 1958. Geology of the Hasley Canyon area, Los Angeles County, California. University of California, Los Angeles. Unpublished Master's thesis. 74 pages.

Reynolds, R.E. 1987 Paleontologic assessment, Angeles Pipeline Project EIR/EIS. ERT. Prepared for California Department of Transportation.

Savage, D.E. 1951. Late Cenozoic vertebrates of the San Francisco Bay region. University of California Publications, Bulletin of the Department of Geological Sciences 28(10):215-314.

Scott, E., Springer, K., Manker, C., Maxwell, G., and Fluitt, S. 2004. Bakersfield to Los Angeles paleontologic resources technical evaluation. *In* California High-Speed Rail Authority, and U.S. Department of Transportation Federal Railroad Administration. California High-Speed Train Program Environmental Impact Report/Environmental Impact Statement. Prepared for Applied EarthWorks, Inc., and P&D Consultants, Inc.

Society of Vertebrate Paleontology. 1995. Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources: Standard guidelines. Society of Vertebrate Paleontology News Bulletin 163:22-27.

Society of Vertebrate Paleontology. 1996. Conditions of receivership for paleontologic salvage collections [final draft]. Society of Vertebrate Paleontology News Bulletin 166:31-32.

Winterer, E.L., and Durham, D.L. 1962. Geology of southeastern Ventura basin, Los Angeles County, California. *In*

Shorter Contributions to General Geology 1958. United States Geological Survey Professional Paper 334-H:275-366.