City of Calabasas

Safran Senior Affordable Housing Project

Final

Initial Study / Mitigated Negative Declaration

December 2007

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Initial Study/
Mitigated Negative Declaration

Prepared by:

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INITIAL STUDY

Project Title: Safran Senior Affordable Housing Project

Lead Agency: City of Calabasas
26135 Mureau Road
Calabasas, California 91302
Phone: (818) 878-4225/Fax: (818) 878-4205

Contact Person: Talyn Mirzakhanian, Planner

Project Location: The project site, Assessor's Parcel Number 2068-004-016, is located in the City of Calabasas within western Los Angeles County, California. The site encompasses approximately 0.968 acres on a single parcel at 4803 El Canon Avenue, south of Calabasas Road near Old Town Calabasas. Figure 1 shows the location of the project site within the greater Los Angeles region. Figure 2 shows the location of the project site within the City of Calabasas. Figure 3 shows photos of the existing site conditions. Figure 4 shows photos of surrounding land uses.

Project Sponsor's Name and Address: Thomas Safran & Associates
11812 San Vicente Boulevard, Suite 600
Los Angeles, California 90049

Existing Land Use: Currently, the project site is developed with one abandoned primary residential structure and two accessory structures that appear to have been secondary residential structures, or guest houses, as well as a few storage/shed structures. The remainder of the site is generally covered with vegetation, a driveway, an empty above-ground pool, and some fencing. Photos of the site can be seen on Figure 3.

General Plan and Zoning: The project site is zoned Commercial, Old Town (CT) and designated in the General Plan as Business – Old Town (B-OT).

Surrounding Land Uses: The project site is bordered on the east by El Canon Avenue, across which is the Motion Picture and Television Hospital complex. The project site is bordered on the west by Calabasas Creek, across which are two- to three-story multi-family residences. Immediately south of the project site are three-story multi-family residences. To the north is a Las Virgenes Municipal Water District sewage lift station, and commercial retail and restaurant development. Photos of surrounding land uses can be seen on Figure 4.

DESCRIPTION OF PROJECT

The proposed project involves the construction of 75 units of affordable senior housing on a 42,176 square foot (0.96 acres) parcel at 4803 El Canon Avenue in the City of Calabasas. Project development would include the construction of two, three-story buildings. The proposed site plan can be seen in Figure 5 and the ground floor plan is shown in Figure 6. The buildings would be connected by a network of landscaped walkways, as shown in Figure 6, with a subterranean parking garage providing 74 standard spaces, two handicapped spaces, including one van accessible space, and 83 bicycle spaces situated beneath the development. See Figure 7 for garage plan. As shown in Table 1, of the 75 senior dwelling units proposed, 74 would be one bedroom units ranging from approximately 550 square feet to approximately 650 square feet. One unit would have two bedrooms and approximately 1,124 square feet, and is intended to house the onsite complex manager.

Table 1
Proposed Units Characteristics

Unit Type	Proposed Number of Units By Type	Number of Bedrooms per Unit	Size (square feet)
A	44	1	560
B	28	1	550
C	2	1	650
D*	1	2	1,124

Source: John Cotton FAIA Architects, 7-31-2007
**Manager's Unit*

Upon completion of construction, the footprint of the residential structures would cover approximately 20,509 square feet and the driveway would cover an additional 363 square feet. Thus, total site coverage would be approximately 20,872 square feet, or about 53% of the net site area. Total proposed residential building area would be approximately 52,825 square feet.

The proposed project would require the demolition of one existing primary residential structure and two accessory structures that appear to have been used as secondary residential structures, as well as the removal of multiple storage sheds, some fencing and an above ground pool. Demolition would be followed by site grading and excavation for the subterranean parking garage and building foundations.

In accordance with Chapter 17.22 of the Calabasas Municipal Code, by proposing affordable senior housing, the applicant is eligible for a density bonus to allow a 35% density increase over the 1.0 maximum floor-to-area ratio (FAR) otherwise allowed by the Code. Thus, the allowable FAR would be 1.35. Further, the applicant is requesting approval of the following exceptions to the Code in accordance with State Bill 1818:

- *Increase slope on subterranean garage ramp to 20% (8% max allowed by code)*
- *Decrease pervious surface provided to 22% (28% required by code)*

- *Decrease in common open space provided to 21,304 square feet (30,000 square feet required by code) and private open space to 60 square feet/unit (150 square feet/2 bedroom and 75 square feet/1 bedroom required by code).*

PUBLIC AGENCIES WHOSE APPROVAL MAY BE REQUIRED FOR SUBSEQUENT ACTION:

None. The City of Calabasas is the only agency with discretionary approval authority over the proposed project. However, the project is of particular interest to the adjacent jurisdiction of the City of Los Angeles because of property within their jurisdiction with street frontage on El Canon Ave. Although the City of LA has no discretionary approval authority over the proposed project, they will review this environmental document.

General Plan Consistency Review

Applicable General Plan Policies	Consistency Analysis	Consistent/Not Consistent
General Plan Consistency Review Program **Air Quality**		
1. Because multi-family densities can support transit, multi-family developments should be located along primary roadways, ideally within 1/8 mile of an existing or potential future transit stop.	The proposed project would be located on El Canon avenue in the Old Town Calabasas area. The Calabasas Trolley provides service to the Old Town area, and stops approximately 0.08 miles from the project site on Calabasas Road.	Consistent
Resource Performance Standards		
1. To meet the City's overall water conservation performance objective, projects will be reviewed to assess their compliance with the following: • Incorporation of drought tolerant and low water using plants; maximize preservation of natural vegetation. • Incorporation of water conservation techniques into the design of the irrigation system through such techniques as mulching, installation of drip irrigation systems, landscape design to group plants of similar water demand, rain sensors and automatic irrigation systems. • Clustering of landscaped areas to maximize the efficiency of the irrigation system; design of irrigation systems to eliminate watering of impervious surfaces. • Installation of water conserving kitchen and bathroom fixtures and appliances, installation of thermostatically controlled mixing valves for baths and showers, and insulation of hot water lines. • As part of developments subject to Water Resources Performance Standards, proposed development projects shall prepare a "Runoff Mitigation Plan" that illustrates Best Management Practices that will be employed to prevent pollutants and sediments from running off the built project. The plan shall be designed to ensure that no new sediments or pollutants will wash off the site during rainfall event. If the project site is over 5 acres in size, a Storm Water Pollution Prevention Plan as prepared for the NPDES may be acceptable to	Mitigation Measure UTL-1 in the *Utilities and Service Systems* section, along with standard water quality measures in the *Hydrology and Water Quality* section of the Initial Study would require compliance with the City's water conservation performance objective and prevent pollutants and sediment from entering the watershed.	Consistent by virtue of the state density bonus statute.

General Plan Consistency Review

Applicable General Plan Policies	Consistency Analysis	Consistent/Not Consistent
the City in place of the Runoff Mitigation Plan. • To slow runoff and maximize infiltration, at least seventy (28%) percent of the proposed development site must either be landscaped or constructed with pervious paving materials. • Swales, berms, green filter strips, infiltration pits, and/or sediment traps shall be provided, where feasible, as part of site stormwater runoff management systems to slow runoff and direct runoff to permeable or landscaped areas, thereby reducing pollutant loading in area waterways.		
Erosion Control Performance Standards		
1. Concurrent with submittal of a grading plan, submittal of water erosion and dust control plans to the city are required. Erosion control plans will be reviewed concurrently with the grading plan. • Erosion control plans shall be prepared and shall cover all areas impacted by proposed grading. • The erosion control plans shall address methods of control (e.g., detention basins, check dams, sandbagging), and interim storm drain construction if required. • Grading plans shall include appropriate and feasible measures to minimize dust. • Erosion control measures shall be in place prior to the rainy season. • Erosion control measures shall be implemented as soon as grading operations commence, and shall remain in operation until improvement construction has begun within the controlled area.	Recommendations in the Geotechnical Report, standard City-required grading techniques, and construction Best Management Practices (BMPs) would reduce impacts associated with dust and erosion to a less than significant level.	Consistent
2. New development should balance onsite cut and fill, so as to minimize the transporting of soils on- or off-site.	Onsite cut and fill material are balanced to the maximum extent feasible.	Consistent
3. The physical extent of graded areas shall be minimized. Cleared areas are to be landscaped with temporary groundcover as soon as it is feasible after grading. Such measures are to remain in place until permanent landscaping can be	Standard City-required grading permits, techniques and construction Best Management Practices (BMPs) would minimize grading and implement erosion control measures.	Consistent

General Plan Consistency Review

Applicable General Plan Policies	Consistency Analysis	Consistent/Not Consistent
installed.		
Solid Waste Management		
1. All new development projects within Calabasas are to be consistent with the provisions of the City's Source Reduction and Recycling Element.	As discussed under the *Utilities and Service Systems* section, the proposed project would comply with the applicable requirements of the City's Source Reduction and Recycling Element.	Consistent
Seismic and Geologic Hazards		
1. The design of all new structures shall comply with the latest International Building Code seismic design standards, as well as such supplemental design criteria that the City may adopt to ensure that buildings are designed so as to avoid structural collapse.	A site/project specific geotechnical study was conducted and submitted to the City for review and approval. Recommendations within the geotechnical report shall be implemented to ensure that buildings are designed so as to avoid structural collapse.	Consistent
Stormwater Management and Flooding		
1. The incremental increase in stormwater runoff that will be created by a proposed development is to be retained or detained onsite unless adequate discharge downstream capacity is available.	As discussed in the *Water Quality and Hydrology* section of the initial study, the proposed project design would include detention and infiltration on site of all increased runoff.	Consistent
Fire Hazard Management Performance Standards		
1. Roadways and internal circulation systems shall be designed to accommodate fire suppression equipment with adequate turn-around areas as determined by the Los Angeles County Consolidated Fire Districts. Where necessary, existing fire hydrants are to be tested to confirm adequate fire flows.	Site plans and building plans would be submitted to the Los Angeles County Consolidated Fire Districts for review.	Consistent
2. Fire hydrants are to be provided as required by the Los Angeles County Consolidated Fire Districts, as shall "blue dots" to identify fire hydrants.	Site plans and building plans would be submitted to the Los Angeles County Consolidated Fire Districts for review.	Consistent
3. Proposals for new development will be referred to the Los Angeles Consolidated Fire Districts to determine projected response times to the project site to provide appropriate fire hazard management recommendations for inclusion by the City as project conditions of approval.	Site plans and building plans would be submitted to the Los Angeles County Consolidated Fire Districts for review.	Consistent

ENVIRONMENTAL FACTORS AFFECTED

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

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

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 the mitigation measures described on an attached sheet have been added to the project. 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 significant effect(s) 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, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because all potential significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.

Thomas W. Bartlett — 10-29-07

Tom Bartlett
City of Calabasas
City Planner

Date

Environmental Checklist

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

a. The project site is located in the urbanized Old Town Calabasas area, on a relatively flat site currently developed with residential buildings. No panoramic scenic vistas exist from, through or to the site. The surrounding trees and development, including the three-story multi-family residential structures immediately adjacent to the site, inhibit views of the regional hillsides. Existing views are already restricted by the presence of structures and large trees. Therefore, impacts to scenic vistas as a result of the project would be **less than significant**.

b, c. There is no state scenic highway within the vicinity of the project site. However, native oak trees play a significant role in the Calabasas landscape (City of Calabasas General Plan FEIR, 1995). Section 17.26.070 of the City of Calabasas Municipal Code requires that an Oak Tree Permit be obtained for the alteration of any healthy oak tree greater than 2 inches in diameter. According to the Oak Tree Survey performed by LSA Associates, Inc. and dated October 4, 2007, 14 coast live oak (*Quercus agrifolia*) trees are currently located on the project site, seven of which would need to be removed to accommodate the proposed project, one of which has a diameter of less than two inches and therefore does not require a permit. An Oak Tree Permit would be required for the removal of the other six oak trees.

The removal of six native oak trees would damage the onsite visual resources and would degrade the existing visual character of the site afforded by the presence of healthy mature native oak trees. Therefore, impacts relating to the existing visual character of the site and onsite scenic resources would be **potentially significant**. Recommendations made by LSA Associates and the City Oak Tree Consultant, along with Mitigation Measures BIO-1 through BIO-13 would reduce potential impacts to oak trees to a less than significant level.

The project site is located in the Old Town Calabasas area, for which a Master Plan and Design Guidelines (1994) have been adopted. The design guidelines contain goals and policies intended to facilitate development and redevelopment that would preserve and enhance the "Old West" character and style of the Old Town region. Policies pertaining to architectural elements, site planning, signage, landscaping, and utility placement are applicable to any proposed development within the master plan area. As shown in the proposed elevations on Figure 8, the design of the proposed project incorporates the "early western" architectural theme as outlined in the guidelines. This includes varying the wall planes with the use of balconies, canopies and overhangs, as well as facades using traditional base, body and cap functions with typical Old West style articulation and materials. The design also includes the use of wood framed doors and windows, as well as wood siding in the traditional old west style. The proposed project would include landscaping around the entire property, as well as siting one building so it abuts the front property line as detailed in the guidelines.

The removal of vacant single-family residential structures and subsequent construction of senior apartments onsite would alter the existing visual character of the site; however, adherence to the policies within the Old Town Master Plan and Design Guidelines (1994) would ensure compatibility with the site surroundings. Policies include but are not limited to: arranging plants in groups and spacing so as to allow them to develop into massings, plants shall compliment and soften structural edges of buildings, and all landscaped areas shall be maintained to ensure proper plant health, growth and appearance. Adherence to the policies and guidelines contained within the Old Town Master Plan would ensure the alteration of the existing visual character would result in a **less than significant impact**.

d. The proposed project would introduce new lighting where some currently exists. The onsite residential development included indoor and outdoor lighting, also street lights on El Canon Avenue as well the surrounding commercial and residential development all produce light that can be observed onsite. Furthermore, any onsite lighting proposed in association with the project would be subject to the requirements of the City of Calabasas Dark Skies and Lighting Ordinance (Municipal Code §17.27). Therefore, impacts associated with lighting would be **less than significant.**

Mitigation Measures

Mitigation measures BIO-1 through BIO-13, would reduce impacts to visual resources to a less than significant level.

Significance After Mitigation

Implementation of mitigation measures BIO-1 through BIO-13 would reduce impacts to aesthetic resources to a less than significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
II. AGRICULTURAL RESOURCES -- Would the project:				
a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	■

a. According to the California Department of Conservation Farmland Mapping and Monitoring Program (2002), the project site is designated as Other Land, and is not designated as prime or unique farmland, or farmland of statewide importance. Therefore, **no impact** to important farmland would occur.

b. The project area is not zoned for agricultural use; the project area is zoned as Commercial – Old Town (C-T). The Williamson Act does not apply to the project site and **no impact** would occur.

c. No farming activity occurs at or adjacent to the site. Therefore, **no impact** related to the conversion of farmland to non-agricultural use would occur.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. AIR QUALITY – Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	■	☐
c) Result in a cumulatively considerable				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. AIR QUALITY – Would the project:				
net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	■	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

The project site is located within the South Coast Air Basin and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The South Coast Air Basin is currently in non-attainment status of state regulatory standards for ozone (O_3) and fine particulate matter (PM_{10}), and is currently designated as a non-attainment area for federal regulatory standards for O_3, PM_{10}, and carbon monoxide (CO). A project's impact to air quality is significant if it exceeds any of the thresholds for criteria pollutants shown in Table 2.

Table 2
Air Quality Thresholds

Pollutant	Construction	Operation
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: SCAQMD CEQA Air Quality Handbook, 1993.

a. The proposed project involves the development of two buildings containing 75 senior housing units and a subterranean garage. In 2005 there were an estimated 7,593 households in the City of Calabasas and the estimated number of households in 2010 is 8,043 (Southern California Association of Governments, 2007). The 75 proposed affordable housing units would account for approximately 15% of the estimated increase in households from 2005 to 2010. The increase in the City's population as a result of the proposed project would not exceed

population forecasts of the South Coast Air Quality Management Plan (AQMP) for the City of Calabasas. Therefore, **no impact** would occur with respect to regional air quality management plans.

b, c. Project implementation would generate temporary air pollutant emissions during construction and long-term emissions due to vehicle traffic and energy use. Each of these is discussed below.

Construction Emissions. Construction vehicles and equipment traveling along unpaved roads, grading, trenching, and stockpiled soils have the potential to generate fugitive dust (PM_{10}) through the exposure of soil to wind erosion and dust entrainment. In addition, exhaust emissions associated with heavy construction equipment would potentially degrade air quality. PM_{10} and exhaust emissions associated with construction activities are considered temporary air quality impacts.

Temporary construction emissions were estimated using the URBEMIS 2007 v.9.2.2 computer model (see Appendix A for air quality data). The number and type of equipment to be used during construction were estimated based on URBEMIS default amounts for similar construction projects. During project site preparation and excavation, the soils that underlie portions of the site would be turned over and pushed around, exposing the soil to wind erosion and dust entrainment by onsite operating equipment. The majority of emissions associated with construction activities on site come from off-road vehicles such as cranes and backhoes, but some emissions are also associated with construction worker trips and the application of architectural coatings, which release volatile or reactive organic gases (ROG) during the drying phase. Table 3 shows the estimated maximum daily construction emissions.

Table 3
Maximum Daily Construction Emissions
(pounds per day)

Emission Source	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Grading	3.48	29.81	15.45	6.50	2.42
Building	49.67	13.71	19.89	1.18	1.08
Threshold (peak day)	*75*	*100*	*550*	*150*	*55*

Note: Grading and building do not occur simultaneously.
Source: URBEMIS 2007 v.9.2.2. See Appendix A for modeling results.

As indicated in Table 3, construction emissions are below SCAQMD thresholds (grading and building construction do not occur simultaneously, but rather in separate phases) for ROG, NOx, CO, PM_{10} and $PM_{2.5}$. Rule 403 of the SCAQMD Handbook requires minimization of particulate emissions for all dust generating activity during construction. Therefore, although construction emissions are below SCAQMD thresholds, construction activity would need to be performed in conformance with the requirements of Rule 403.

Operational Emissions. Long-term emissions associated with the proposed project, were estimated using the California Air Resources Board's (ARB's) URBEMIS 2007 v.9.2.2 computer model. Operational emissions were determined based on the proposed 75 affordable housing units. Project emissions estimates as determined in the modeling analysis are presented in Table 4. Mobile emissions are those associated with vehicle trips, while the use of natural gas and landscaping maintenance equipment are included in the area emissions.

Table 4
Operational Emissions

Emission Source	Emissions (lbs/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Mobile Emissions	3.24	3.90	33.35	4.58	0.91
Area Emissions	4.97	1.27	5.60	0.01	0.01
Total	**8.21**	**5.17**	**38.95**	**4.59**	**0.92**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*55*

Source: URBEMIS 2007 v.8.7 (See Appendix A for model assumptions and results).

As shown, the emissions generated by the proposed project would not exceed the SCAQMD's daily operational thresholds for any pollutant and would not significantly affect regional air quality. Thus, the project's long-term impact to regional air quality would be **less than significant** and no mitigation is required.

d. Certain population groups are considered more sensitive to air pollution than others. Children, the elderly and chronically ill persons, especially those with cardio-respiratory diseases, are particularly vulnerable. Sensitive land uses include those locations where such individuals are concentrated, such as hospitals, schools, and residences. Sensitive receptors in the vicinity of the project site include the private residences located approximately 25 feet south and west of the site boundary and a hospital approximately 100 feet east of the site boundary. However, as shown in Table 4, the emissions generated by the proposed project would not exceed the SCAQMD's daily operational thresholds for any pollutant. Therefore, impacts to sensitive receptors would be **less than significant**.

e. The proposed project would be used for residential purposes and would not generate objectionable odors. **No impact** related to odors would occur.

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

LSA Associates, Inc. completed a biological resource assessment and an oak tree report for the project site on September 22, 2006, and July 10, 2007 (updated October 4, 2007), respectively. These reports are incorporated by reference and included in their entirety in Appendix B.

a, d. The project site encompasses an area of approximately 42,176 square feet (0.96 acres). The proposed development would cover approximately 20,872 sf, or 53% of the net project site area. The remainder would be open space. The project site is not located in a designated environmentally sensitive area and is not known to serve as a wildlife corridor (Calabasas Environmentally Sensitive Areas Map, 2005). Therefore, the proposed project would not substantially impede the movement of wildlife in the area. LSA Associates, Inc. concluded that no candidate or protected species are known to be present on the project site. Impacts would be **less than significant.**

b, c. The project site is not located in an area containing sensitive biological resources (City of Calabasas General Plan FEIR, 1995) and is not subject to an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Neither riparian habitat nor wetlands would be adversely affected as a result of project development. Impacts would be **less than significant.**

e. As discussed in Section I, *Aesthetics*, native oak trees play a significant role in the Calabasas landscape (City of Calabasas General Plan FEIR, 1995). Section 17.26.070 of the City of Calabasas Municipal Code requires that an Oak Tree Permit be obtained for the alteration of any healthy oak tree greater than 2 inches in diameter. According to the Oak Tree Report performed by LSA (dated July 10, 2007), approximately 14 coast live oak trees were inventoried and evaluated onsite (see Appendix B for report and photographs of trees). All the oak trees were determined to be healthy specimens. Seven of the oak trees are growing along a perennial drainage (Calabasas Creek) at the sites western boundary and may be considered oak riparian habitat by the California Department of Fish and Game (CDFG). Current project design would not affect the trees along Calabasas Creek. However, based upon the current site plan, up to six or less of the oak trees onsite would be removed for the construction and development of the proposed project, for which an oak tree permit would be required. Furthermore, these trees may provide habitat for protected native bird species. Therefore, the removal of the trees would be a **significant impact**.

f. Please see discussion under items b and c.

Mitigation Measures

Implementation of the following mitigation measures in conjunction with the requirements of an oak tree permit would reduce impacts to locally protected native oak trees and native bird species that may utilize the trees, to a less than significant level.

BIO-1 **Oak Tree Permit Conditions.** The City's oak tree permit conditions require that a mitigation program be developed for proposed impacts. Several options are available to offset the loss of oak tree inventory on the site. A loss in oak tree inventory on the site shall be described in terms of species, total inches of diameter aggregate loss, and the magnitude of the impacts. The City may attach the following conditions, or a combination thereof, on an oak tree permit that may include the following:

- A cash fee paid to the oak tree mitigation fund, which shall include maintenance and monitoring costs. The determination of the dollar value, cost or loss shall be calculated in accordance with the most current

mitigation schedule established by the City Council. The Council shall review and approve such fees at least once every three years. The City may accept appropriate dedication of land in lieu of cash.

- One inch of oak tree diameter shall be planted for each inch of tree removed. Locations appropriate for new replacement plantings may be proposed by the applicant and approved by the City arborist prior to the granting of a permit based on the potential for long-term viability.
- Replacement or placement of additional oak trees, associated hardwood canopy, land, or wildlife habitat to proportionally offset the impacts associated with the loss of oak trees, limbs, roots, or potential long-term adverse impacts due to alterations or encroachment within the protected zone. Locations appropriate to such new plantings may be proposed by the applicant and must be approved by City staff prior to the granting of a permit based on the potential for long-term viability.
- Relocation of oak trees over 10 inches in diameter shall not be considered as mitigation.
- Restrictions on construction activities within the protected zone of oak trees.
- Remedial maintenance programs to improve the health of existing oak trees.
- Monitoring shall be conducted during all grading and construction activities at intervals warranted by the site conditions and level of activity. The monitoring program shall consist of quantitative and qualitative observations useful in identifying stress-related responses of oak trees. Monitoring activities shall be performed in accordance with the procedures adopted in the guidelines. Following construction, annual monitoring shall be performed for a minimum of five years as warranted by site conditions, to ensure continued health of the trees and habitat areas. A City-qualified arborist shall conduct all monitoring. Costs shall be borne by the applicant. Restitution or remediation shall be required, should a project fail to comply with the desired establishment goals. Information provided by monitoring shall be used in establishing realistic mitigation measures and to ensure the future of oak resources throughout the City. Criteria for evaluating the success of oak tree preservation and establishing associated vegetation shall be specified in the permit conditions. Remediation shall be required as necessary to enable a site to meet the establishment criteria.
- Registration. All replacement oak trees shall be registered with the City in accordance with the guidelines.
- Maintenance. All oak trees shall be maintained in accordance with the guidelines.
- Bond. The City may require adequate security to ensure performance, correct construction procedures, reforestation, monitoring and maintenance, in an amount to be determined by the City.
- Recordation. As deemed necessary by the City or as set forth in the City's Municipal Code, conditions of approval for an oak tree permit shall be recorded. The specific wording of the recorded permit shall be subject to the approval of the director.

BIO-2 **Retained Oak Trees.** For any oak tree whose removal can be avoided, the following guidelines shall be followed to avoid impacts to the retained oak trees:

- No construction activities or placement of structures shall occur within the protected zone of any retained oak tree.
- Landscaping, trenching or irrigation systems shall not be installed within the oak tree protected zone.
- Activities that cause excessive compaction within the protected zone shall not be permitted.
- Manufactured cut slopes shall not begin their downward cut within the protected zone.
- Manufactured fill slopes shall not extend within the protected zone.
- On-slope retaining structures, if required, shall be designed to protect the root system of retained oak trees by preserving the natural grade within the protected zone.
- Sedimentation and siltation shall be controlled to avoid filling around bases of oak trees.
- Construction fence shall be erected along the protected zone of retained oak trees to prevent encroachment into the protected area.

BIO-3 **Monitoring Removed Oak Trees.** Monitoring activities for removal of oak trees shall consist of the following:

- The applicant shall provide verification of the location of each tree that is proposed for removal.
- All oak trees designated to be removed shall be flagged prior to removal, and located using a hand held tape measure. Measuring along the south property line with off sets to the north. With the verified location of each tree, status shall be rechecked (i.e. remove, save, etc).
- All oak tree removal shall be verified to check for damage to any retained oak trees growing close association to the removed tree.
- Mitigation may be required for damage to any retained oak tree.

BIO-4 **Mitigation Planting.** The impacts to any oak trees as a result of this project shall be mitigated by planting container-grown oak trees. To the greatest extent practicable, replacement trees will be planted on site. The balance of the replacement trees will be planted within the City. The proper planting locations should be determined by a qualified arborist or landscape contractor. Irrigation for the planted oak trees should be available for the first two to three years to increase the survival rate. The planted trees should be monitored for soil moisture level, pest/disease infestation, and herbivory.

BIO-5 **Ivy Removal.** All ivy should be removed from retained trees by a qualified landscape contractor. Ivy removal must be done carefully, taking great care to avoid damaging oak bark or branches. Use of a selective herbicide may be possible; a qualified pest control advisor should be consulted regarding any pesticide.

BIO-6 **Notice.** The applicant shall provide a forty-eight (48) hour notice to the City and the applicant's oak tree consultant prior to the start of any approved work within the protected zone of any oak tree.

BIO-7 **Protected Zone Fencing.** Prior to start of construction, all oak trees shall be fenced at the edge of the protected zone to the extent possible in accordance with the Oak Tree Preservation and Protection Guidelines.

BIO-8 **Qualified Arborist.** All approved pruning shall be performed by a qualified arborist under the direction of the applicant's oak tree consultant. The arborist shall use the Pruning ANSI A300 Standards adopted by the Western Chapter of the International Society of Arboriculture. The same arborist shall, at the direction of the City Arborist, remove the ivy that is growing into the branch structure of the oaks as identified in BIO-5.

BIO-9 **Protected Zone.** All approved excavation within the protected zone of any oak tree shall be performed with hand tools under the direction of the applicant's oak tree consultant. No construction materials, debris or vehicles shall be stored within the protected zone of any oak tree at any time.

BIO-10 **Irrigation and Drainage.** Unless specifically approved by the City, no planting or irrigation shall be placed within the protected zone of any oak tree. All future drainage shall be directed away from the drip line of oak trees. The area beneath the drip lines shall remain dry at all times.

BIO-11 **Mulch.** At the completion of construction, the applicant shall place three inches (3") of an approved mulch throughout the drip line of each oak tree.

BIO-12 **Written Certification.** Within ten (10) days of the completion of work, the applicant's oak tree consultant shall submit written certification to the Planning Division. This certification shall describe all work performed and whether such work was performed in accordance with the mitigation measures and permit conditions required.

BIO-13 **Removal and Replacement.** All oak removal shall be replaced on an inch for inch basis with at least 50% of the replacement trees of the species *Quercus lobata* (Valley Oak). The oak tree consultant shall be on-site and monitoring the removal of any oak trees. Further, they should be present whenever any work is performed with the protected zone of any oak tree.

BIO-14 **Native Bird Avoidance.** (a)Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA).

(b)Proposed project activities (including disturbances to native and non-native vegetation, structures and substrates) should take place outside of the breeding bird season which generally runs from March 1- August 31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86).

(c)If avoidance of the breeding bird season is not feasible, the Department recommends that beginning thirty days prior to the disturbance of suitable nesting habitat the project proponent should arrange for weekly bird surveys to detect protected native birds occurring in the habitat that is to be removed and any other such habitat within 300 feet of the construction work area (within 500 feet for raptors) as access to adjacent areas allows. The surveys should be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys should continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work. If a protected native bird is found, the project proponent should delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, must be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing marking the protected area 300 feet (or 500 feet) from the nest. Construction personnel should be instructed on the sensitivity of the area. The project proponent should record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds.

Significance After Mitigation

Implementation of the above mitigation measures would reduce impacts to protected native oak trees and native bird species to a less than significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	■	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	■
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

a. The project site is currently developed with one abandoned primary residential structure and two accessory structures which appear to have been secondary residential structures, or guest houses, as well as a few storage shed structures, an above ground pool, a driveway, some fencing and vegetation. Historical aerial photographs indicate the structures were developed between the 1940's and the 1970's (California Environmental, 2006). The structures are currently dilapidated and in poor condition, and do not represent any known historical figures or events. There are no known historical resources on the project site or in the site vicinity. **No impact** would occur.

b. Ground disturbance within the project area would involve grading and excavation. No cultural resources are known to exist within the project area and the project site is not within an area of potential archaeological sensitivity (City of Calabasas General Plan FEIR, 2003). However, as with any ground-disturbing activity, project grading and excavation would have the potential to adversely affect undiscovered cultural resources and impacts could be **potentially significant**.

c. Construction of the proposed project would result in no impacts, either directly or indirectly, to a unique paleontological resource or site of unique geologic features because none are known to exist at the project site. **No impact** would occur.

d. As discussed above, development of the proposed project would involve grading and excavation. Such activities would have the potential to adversely affect undiscovered human remains. Impacts would be **potentially significant.**

Mitigation Measures

The following measures would reduce impacts relating to the possible discovery of as yet undetected cultural and human remains during grading to a less than significant level.

CR-1 **Resource Recovery Procedures.** If unanticipated cultural resource remains are encountered during construction or land modification activities, the developer

shall follow the applicable procedures established by the Advisory Council on Historic Preservation concerning protection and preservation of Historic and Cultural Properties (36 CFR 8700). In this event, the developer/construction contractor shall cease work until the nature, extent, and possible significance of any cultural remains can be assessed and, if necessary, remediated. Such assessment and remediation shall be implemented by the developer and shall be subject to review and approval by the Deputy Director/City Planner prior to commencement with onsite construction/grading activities. If remediation is needed, possible techniques include removal, documentation, or avoidance of the resource, depending upon the nature of the find.

CR-2 **Human Remains Recovery Procedures.** In the event that human remains are discovered during construction or land modification activities, the developer shall follow the procedures in Section 7050.5 of the California Health and Safety Code. These procedures require notification of the County coroner and the Native American Heritage Commission if the coroner determines the remains to be those of Native American ancestry. Onsite construction/grading shall not commence until evidence has been presented to the City manager that the developer has adhered to these procedures.

Significance After Mitigation

Implementation of Mitigation Measures CR-1 and CR-2 would reduce impacts to unknown cultural resources and human remains to a less than significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	■	☐
ii) Strong seismic ground shaking?	☐	☐	■	☐
iii) Seismic-related ground failure, including liquefaction?	☐	■	☐	☐
iv) Landslides?	☐	☐	■	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VI. GEOLOGY AND SOILS – Would the project:				
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c) Be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	■	☐	☐
d) Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	■	☐	☐
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?	☐	☐	☐	■

A Geotechnical Engineering Investigation was prepared for the site by Geotechnologies, Inc. The report, dated October 4, 2006, was used in part for analysis of the project's impacts related to Geology and Soils. The report is contained in Appendix C.

a(i-ii). The project site does not lie within an Earthquake Fault Studies Zone and is not known to be underlain by active or potentially active faults. The potential for substantial adverse effects related to fault rupture is low. Like most of Southern California, the proximity of active faults is such that the site has experienced and will continue to experience strong seismically induced ground motion. However, development would be subject to the International Building Code (IBC) as referenced by the California Building Code (CBC)with Los Angeles amendments, and would be required to adhere to recommendations in the approved site-specific soils and geotechnical engineering reports (as appropriate). As such, the design and construction of new structures would be engineered to withstand the expected ground acceleration and seismic shaking that may occur onsite. Therefore, impacts would be **less than significant**.

a(iii). Liquefaction describes the phenomenon in which ground shaking works cohesionless soil particles into a tighter packing which induces excess pore pressure. These soils may acquire a high degree of mobility that can lead to structurally damaging deformations. Liquefaction begins below the water table, but after liquefaction has developed, the groundwater table rises and causes the overlying soil to mobilize. Liquefaction typically occurs in areas where the groundwater is less than 50 feet from the surface and where the soils are composed of poorly consolidated fine to medium sand. According to the geotechnical study prepared for the proposed project, groundwater was encountered during soil exploration at depths of approximately 13 to 14 feet. Therefore, liquefaction hazards would be **potentially significant**.

(iv). The geologic character of an area determines its potential for landslides. Steep slopes, the extent of erosion, and the rock composition of a hillside all contribute to the potential for slope failure and landslide events. In order to fail, unstable slopes need to be disturbed. Common triggering mechanisms of slope failure include undercutting slopes by erosion or grading, saturation of marginally stable slopes by rainfall or irrigation, and shaking of marginally stable slopes during earthquakes. The probability of seismically-induced landslides affecting the proposed development is considered remote due to the relatively flat nature of the project site and surrounding areas. In addition, the project site is not located within a State of California Seismic Hazard Zone for landslides. Therefore, impacts relating to landslide hazards would be **less than significant**.

b. The project site is underlain by the Modelo Formation bedrock. Artificial fill occurs throughout the site at depths between 2 and 7 feet below the site grade from previous earthwork. The artificial fill typically consists of silty sand to silty clay. Native alluvial soils occur beneath the artificial fill material. The native soils range from silty clay to clayey silt. The bedrock and native soils encountered are typical within this area of Calabasas.

Construction activities would include the excavation and grading of the site, which would cause the disruption and displacement of onsite soils. Although the potential for onsite erosion is not high, construction activities could result in increased erosion and offsite sedimentation. Implementation of all appropriate recommendations in the approved Geotechnical Reports, standard City-required erosion control techniques and construction Best Management Practices (BMPs) would reduce soil erosion effects to a **less than significant** level.

c. As previously discussed, the project site is not located in an area susceptible to landslides. However, liquefaction and lateral spreading could occur. Impacts related to liquefaction and lateral spreading would be **potentially significant**.

d. Expansive soils expand or swell when wetted, and contract or shrink when dried. Expansive soils can cause damage to structure foundations. A representative sample of onsite soils was found to be in the moderately expansive range. Therefore, impacts relating to expansive soils would be **potentially significant**.

e. The proposed project would utilize connection to the City sewer system. A septic system would not be installed in association with the proposed project. **No impact** would occur.

Mitigation Measure

Implementation of Mitigation Measures GEO-1 would reduce impacts relating to liquefaction, lateral spreading and expansive soils to a less than significant level.

GEO-1 **Ground Improvement.** Ground improvement shall be determined by a specialty firm in order to mitigate the potential for liquefaction and lateral spreading and to densify the soils for the support of the building foundation(s).

Suitable measures to reduce impacts from liquefaction and lateral spreading could include one or more of the following techniques, as determined by a qualified geotechnical engineer:

- *Specialized design of foundations by a structural engineer;*
- *Removal or treatment of liquefiable soils to reduce the potential for liquefaction;*
- *Drainage to lower the groundwater table to below the level of liquefiable soil;*
- *In-situ densification of soils or other alterations to the ground characteristics; or*
- *Other alterations to the ground characteristics.*

Suitable measures to reduce impacts from expansive soils could include one or more of the following techniques, as determined by a qualified geotechnical engineer:

- *Excavation of existing soils and importation of non-expansive soils; and*
- *Foundation design to accommodate certain amounts of differential expansion such as posttensional slab and/or ribbed foundations designed in accordance with Chapter 18, Division III of the UBC.*

The following measures shall be preformed by the firm that oversees ground improvement work:

- *The Geotechnical Engineer shall review the plans and specifications for the proposed ground improvement method.*
- *After review of the proposed ground improvement plans and specifications, the Geotechnical Engineer shall prepare a supplemental report indicating their concurrence with the proposed ground improvement plans and specifications. The report shall also provide quality control and quality assurance criteria to provide a means of confirming that mitigation of the potential for liquefaction, lateral spreading and soil densification has been accomplished.*
- *A representative of the Geotechnical Engineer shall monitor and document the construction/installation of the ground improvement components.*
- *After completion of the ground improvement work, testing shall be preformed under the direction of the Geotechnical Engineer, as appropriate, to confirm the suitability of the ground improvement(s) performed.*
- *The Geotechnical Engineer shall prepare a report summarizing the results of the post-ground improvement testing. The report shall include a statement that the ground improvement has mitigated the potential for liquefaction and later spreading at the site and will provide suitable support for foundations.*

Significance After Mitigation

Implementation of Mitigation Measure GEO-1 would reduce impacts related to liquefaction, lateral spreading and expansive soils to a less than significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	■
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	■	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	☐	■
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 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?	☐	☐	☐	■
f) For a project in the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the area?	☐	☐	☐	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences	☐	☐	■	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact

VII. HAZARDS AND HAZARDOUS MATERIALS - Would the project:
are intermixed with wildlands?

The following hazards and hazardous materials analysis is based upon an Environmental Site Assessment conducted by California Environmental Geologists and Engineers, Inc. in April 2006; a pre-demolition asbestos survey conducted by Gale/Jordan Associates, Inc. in September 2006; and a lead-containing materials survey conducted by Gale/Jordan Associates, Inc. in October 2006. All three of these reports are included in Appendix D.

a. The proposed project involves the development of two buildings containing 75 senior housing units and a subterranean garage. The project would not involve the storage, use, or disposal of any hazardous substances or materials. The project would not create a significant hazard to the public or the environment from such. **No impact** related to the use, storage, transportation, storage or emissions of hazardous materials would occur.

b. Development of the proposed project would require the demolition of all onsite structures. The existing onsite structures were constructed during the 1930s and 1970s. In the pre-demolition asbestos survey conducted by Gale/Jordan, Inc., fourteen materials were identified as asbestos-containing materials (ACM): wall plaster, ceiling tiles, flooring materials, cement board and pipe, drywall and roofing materials. All ACM have the potential to release asbestos fibers into the air if they are disturbed or damaged. In addition, hazardous lead-based paint was encountered during Gale/Jordan, Inc.'s lead-paint survey. Therefore, demolition activities could expose workers to asbestos and lead. Impacts related to the release of hazardous materials into the environment would be **potentially significant.**

c. The nearest school, Calabash Street Elementary School, is located approximately 0.5 miles to the east. This school would not be affected by any emissions, materials, substances or waste from the project. **No impact** would occur.

d. The nearest listed contaminated site is the Motion Picture and Television Hospital located beyond El Canon Avenue approximately 70 feet to the east-northeast. This offsite property reported a release of gasoline from an underground tank in 1986. The case was issued closure in 1998. The depth to groundwater is approximately 10 feet below ground surface. Regional groundwater flow is towards the northeast. It is considered unlikely that the groundwater beneath the project site is adversely affected from the offsite property. **No impact** would occur.

e, f. The project site is not in the vicinity of an airstrip. The closest airport is the Van Nuys Airport, located approximately 10 miles northeast of the site. **No impact** would occur.

g. The proposed residential development would not interfere with an emergency response/evacuation plan. **No impact** would occur.

h. The entire City of Calabasas is located in Fire Zone IV, which is characterized by watershed lands that contain native growth and vegetation (City of Calabasas General Plan, Community Profile, 1993). However, the project site is not within 500 feet of native vegetation and is within the 5-minute emergency response time; therefore, impacts related to wildland fire would be **less than significant.**

Mitigation Measures

The following measures are required to mitigate potential impacts relating to the release of asbestos and lead during building demolition.

HAZ-1 **Asbestos Removal.** When work is performed in the vicinity of ACM, the workers shall be informed that the materials contain asbestos. Removal of ACM shall be performed by a licensed (Contractor's State License Board) and registered (Cal/OSHA) asbestos abatement contractor under the supervision of a Cal/OSHA certified Asbestos Consultant and asbestos shall be removed and disposed of in compliance with applicable State laws. Regardless of whether asbestos is identified in the building, prior to demolition of the existing structure, the South Coast Air Quality Management District (SCAQMD) shall be notified and an SCAQMD Asbestos Demolition and Renovation Compliance Checklist shall be submitted to both SCAQMD and the City of Calabasas.

HAZ-2 **Lead Removal.** Workers shall utilize respiratory protection during the removal of lead-based paint until air monitoring results indicate that worker exposure is below the Federal OSHA Action Level of 30 ug/m^3. Due to the amount of lead encountered, additional analysis, such as a California Wet-Test, shall be performed prior to disposal to determine disposal options.

Significance After Mitigation

With implementation of the above mitigation measures, impacts related to the release/exposure of asbestos containing material and lead based paint would be reduced to a less than significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	■	☐
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 or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	■	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation?	☐	☐	■	☐
d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	■	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	■	☐
f) Otherwise substantially degrade water quality?	☐	☐	■	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	■	☐	☐
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	■	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
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?	☐	■	☐	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

Hydrology and Hydraulic Studies were prepared for the site by JSA, and dated September 21, 2007 and May 11, 2007 respectively. The studies were used in part for analysis of the project's impacts related to Hydrology and Water Quality. The reports are contained in Appendix E.

a. Section 303 of the federal Clean Water Act requires states to develop water quality standards to protect the beneficial uses of receiving waters. In accordance with California's Porter/Cologne Act, the Regional Water Quality Control Boards (RWQCBs) of the State Water Resources Control Board (SWRCB) are required to develop water quality objectives that ensure their region meets the requirements of Section 303 of the Clean Water Act. Calabasas is within the jurisdiction of the Los Angeles RWQCB. The Los Angeles RWQCB adopted water quality objectives in its Stormwater Quality Management Plan (SQMP). This SQMP is designed to ensure that stormwater generated by a development does not exceed the limitations of receiving waters, and thus does not exceed water quality standards. Section 402 of the Clean Water Act ensures compliance with the SQMP. Under this section, municipalities are required to obtain permits for the water pollution generated by stormwater in their jurisdiction. These permits are part of the National Pollutant Discharge Elimination System (NPDES) permit program, and are known as Municipal Separate Storm Sewer Systems (MS4) permits. Under this MS4, each permitted municipality is required to implement the SQMP. In accordance with the Countywide MS4 permit, all new developments must comply with the SQMP. Since the proposed project involves the construction of between 10 and 99 housing units, a Standard Urban Stormwater Mitigation Plan (SUSMP) would be required. In addition, as required by the MS4 permit, the City of Calabasas has adopted a City Runoff Mitigation Plan (RMP) ordinance to ensure new developments comply with SQMP. The City's RMP ordinance requires new developments to implement Best Management Practices (BMPs) that reduce water quality impacts, including erosion and siltation, to the maximum extent practicable. This ordinance also requires new developments to submit a plan to the City Engineer that demonstrates how the project will comply with the City's RMP and identifies the project-specific BMPs that will be implemented. Compliance with standard City and County requirements would reduce impacts to surface water quality to a **less than significant level.**

b. At buildout of the proposed project, impervious surfaces would cover approximately 30,814 square feet, or about 73% of the gross site area, leaving the remaining 27% of the site with pervious ground cover. Chapter 17.56.030 of the City of Calabasas Municipal Code requires that at least 28% of site coverage be pervious for new development in the Commercial Old

Town zone. However, in accordance with State Bill 1818, the applicant is requesting that the City approve the reduced pervious surface area. The proposed project would not adversely affect groundwater recharge as the City of Calabasas does not contain any groundwater recharge areas (City of Calabasas General Plan FEIR 1995). Impacts to groundwater recharge would be **less than significant.**

c,d. Existing onsite runoff flows into the Calabasas Creek, which eventually empties into the Pacific Ocean. Upon completion of the proposed project, runoff would continue to flow into the Calabasas Creek. The City of Calabasas requires that new development does not increase runoff over existing onsite flows. JSA determined that, although there would be an increase in impervious surface area as a result of the proposed project, there would be adequate onsite storage so that proposed project would not cause an increase in the volume of runoff. Development of the proposed subterranean garage may require temporary or permanent dewatering of ground water; treatment and discharge of this water would be subject to the requirements of the NPDES permit and regulated by the RWQCB. The proposed project would be subject to the requirements of the Los Angeles County Stormwater Ordinance and the City's RMP ordinance. Because the proposed project would contribute to increased runoff and hazards of potential flooding through proposed site development, increased onsite impervious surface, and potential dewatering activities, impacts would be **potentially significant unless mitigation incorporated**.

e. As discussed above, the proposed project would increase the amount of onsite impervious surface area. As such, an increase in pollutant loads is likely to occur. Grading activities would be subject to the City's RMP ordinance and implementation of standard erosion control BMPs, as described in Calabasas Municipal Code Chapter 17.54, would reduce water quality impacts. Calabasas/McCoy Creek is one of the headwater of the Los Angeles River. The owners shall be responsible to meet all safety requirements and EPA approved measures to keep the water clean. All Total Maximum Daily loads (TMDL) applicable to Los Angeles River are applicable to McCoy/Calabasas Creek and thus a responsibility of the property owner(s). The design must consider all TMDLs applicable to the area to ensure the site would not exceed targets adopted by the EPA or State Water Resource Control Board. Adherence to all applicable regulations and requirements would reduce impacts to water quality to the maximum extent practicable and impacts would be **less than significant.**

f. The proposed project would not otherwise substantially degrade water quality. Compliance with standard City and County requirements would reduce impacts to surface water quality to a **less than significant level.**

g-i. Although the project site is located adjacent to Calabasas Creek, it is not located within a 100-year flood hazard area (City of Calabasas General Plan FEIR, 1995). A report prepared by JSA (May 11, 2007) identified the project site as potentially subject to shallow flooding (depths of less than one foot) from the adjacent McCoy/Calabasas Creek during 50-year storm flows. Therefore impacts from flood hazards and risks associated with flood would be **potentially significant unless mitigation incorporated.**

j. Inundation by a seiche, tsunami or mudflow is not expected to occur, as there are no major bodies of water in the vicinity of the project site and project site is generally flat. **No impact** would occur.

Mitigation Measures

The following measures are required to mitigate potential impacts relating to increased surface runoff, potential downstream flooding, and onsite flood hazards.

HWQ-1 **Rain Gutters.** Install rain gutters and orient them towards permeable surfaces rather than driveways or non-permeable surfaces so that runoff would penetrate into the ground instead of flowing off-site.

HWQ-2 **Grades.** Modify grades of property to divert flow to permeable areas and to minimize the amount of storm water leaving the property.

HWQ-3 **Sediment Traps.** Use sediment traps to intercept runoff from drainage areas and hold or slowly release the runoff, with sediments held in the trap for later removal.

HWQ-4 **Retention.** Use retention structures or design rooftops to store runoff. Utilize subsurface areas for storm runoff either for reuse or to enable release of runoff at predetermined times or rates to minimize the peak discharge into storm drains. Cisterns are also a possible storage mechanism for reuse.

HWQ-5 **Site Design.** Design curbs, berms or the like so as to avoid isolation of permeable or landscaped areas. Implement the use of pervious asphalt, grassy swales and berms near the creek to the maximum extent feasible.

HWQ-6 **Structural Design.** Elevation of the lowest habitable floor shall be situated above levels of potential shallow flooding during 50-year storm flows. Floodproofing shall be incorporated into the design of the subterranean garage which shall be submitted to City engineer for review and approval.

Significance After Mitigation

With implementation of the above mitigation measures, impacts related to the increased surface runoff, downstream flooding, and onsite flood hazard would be reduced to a less than significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX. LAND USE AND PLANNING - Would the proposal:				
a) Physically divide an established community?	☐	☐	☐	■
b) Conflict with any applicable land use				

plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■
c) Conflict with an applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■

a. Currently, the project site is developed with one abandoned primary residential structure and two accessory structures which appear to have been secondary residential structures, or guest houses, as well as a few storage/shed structures. The remainder of the site is generally covered with vegetation, a driveway, an empty above ground pool, and some fencing. Project development would include the construction of two, three-story buildings containing 75 units of affordable senior housing. The proposed project would not physically divide an established community. **No impact** would occur.

b. The project site is zoned Commercial, Old Town (CT) and designated as Business – Old Town (B-OT) (City of Calabasas General Plan, 1993). The proposed affordable housing complex is an allowed use within the CT zone. **No impact** would occur.

c. The proposed project would not conflict with any habitat conservation plan or natural community conservation plan as the project site is not located in an area where these plans exist. **No impact** would occur.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
X. ENERGY AND MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	■	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	■	☐

a-b. The project site is located in an area classified as Mineral Resource Zone 3 (MRZ-3) (City of Calabasas General Plan, 1993). MRZ-3 areas contain mineral deposits for which the significance cannot be evaluated from available data and are not protected by the City or the State (City of Calabasas General Plan, 1993). The proposed project would not result in the loss of availability

of a mineral resource of local, regional, or statewide importance. Impacts to mineral resources would be **less than significant.**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c) A substantial permanent increase in ambient noise levels above levels existing without the project?	☐	☐	■	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	■	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 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?	☐	☐	☐	■
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?	☐	☐	☐	■

a. Noise levels associated with existing and future traffic along El Canon Avenue were calculated using the Caltrans California Vehicle Noise Emission Levels (CALVENO) and standard noise modeling equations adapted from the Federal Highway Administration noise prediction model (Noise Modeling Data sheets can be viewed in Appendix F of this document). For traffic-related noise, impacts are considered significant if project-generated traffic results in exposure of sensitive receptors to unacceptable noise levels. The Federal Interagency Committee on Noise (FICON) recommendations were used to determine whether or not increases in roadway noise would be considered significant. Table 5 shows the significance thresholds for increases in traffic related noise levels caused either by the project alone or by cumulative development.

Table 5
Significance of Changes in
Operational Roadway Noise Exposure

Ambient Noise Level Without Project (Ldn or CNEL)	Significant Impact
< 60 dB	+ 5.0 dB or more
60 – 65 dB	+ 3.0 dB or more
> 65 dB	+ 1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON), August 1993

The proposed 75-unit senior housing complex would generate an estimated 261 average daily vehicle trips (see section XV, *Transportation / Traffic*). The estimated project generated traffic would result in an increase of approximately 0.4 dBA CNEL from 58.6 dBA existing to 59.0 dBA with project-added traffic (see Appendix F for model results). Therefore, the noise level increase associated with project-generated traffic would not be significant.

The project site is located adjacent to a Las Virgenes Municipal Water District sewage lift pump station. The pump station operates one to three pumps depending on the flow volume and is the primary noise source in the project area. Two weekday 20-minute noise measurements were taken using an ANSI Type II integrating sound level meter onsite on October 3, 2007. One measurement was taken while two pumps were running (average) to capture the average ambient noise levels onsite. The measurement result indicated an average ambient noise level onsite of 60 dBA (see Appendix F for measurement results), which is within the 50 to 65 dBA normally acceptable range for multi-family residential development identified in the Calabasas General Plan (1993). The second measurement was taken with the pump house doors open and the auxiliary generator running in order to capture the maximum noise level generated by the pump house. The auxiliary generator is only run during power outages, and operates on a time delay to fire up when power is out for two to five minutes. On average, rolling "brown outs" or "black outs" result in power outages about once a month during the summer season (John Stangle, personal communication, 2007). Thus, noise levels associated with the auxiliary generator are intermittent in nature and generally occur only 3-8 times during the summer season. The maximum noise level measured while the auxiliary generator was running with the doors open was 85.1 dBA (see Appendix F for measurement results). Therefore, residents of the proposed project would be subject to intermittent noise levels exceeding the acceptable thresholds identified in the Calabasas General Plan. However, as discussed above, the levels are only reached during power outages which generally occur during summer time, and would not result in prolonged exposure to noise levels exceeding thresholds identified in the General Plan. Therefore impacts related to noise level exposure would be **less than significant**.

b. Construction of the proposed project would entail site grading, clearing, and building activities. Construction-related activities associated with the project have the potential to create temporary noise and groundborne vibration in the immediate vicinity for adjacent residences, which are considered sensitive receptors. Typical noise levels associated with the use of heavy equipment at construction sites can range from about 78 to 88 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and phase of construction (USEPA, 1971). The closest residences are about 20 feet from the project site where

maximum construction-related noise levels could exceed 88 dBA, exceeding the 65 dBA normally acceptable and the 70 dBA conditionally acceptable for multi-family residences as identified in the land compatibility matrix with the City of Calabasas General Plan (Community Profile, 1993). The Motion Picture and Television Hospital located across El Canon Ave from the project site is approximately 45 feet from the site and thus would be subject to construction noise levels below those experienced by the adjacent residences. However, construction-related impacts are considered **less than significant** because they are temporary in nature. Mitigation Measure N-1 would further reduce impacts from construction noise.

c. Please see discussion under item a.

d. Please see discussion under item b.

e, f. The proposed project would not expose people to excessive noise levels generated by air traffic as there is no airport or private airstrip in the City of Calabasas. The closest airport is the Van Nuys Airport, located approximately 10 miles northeast of the project site. **No impact** would occur.

Mitigation Measures

Although construction impacts would not be significant due to their temporary nature, the following measures are recommended to minimize construction impacts at night, when people are more sensitive to noise and to reduce daytime construction noise to the extent feasible.

N-1 **Hours of Construction Activity**. Construction activity for site preparation and development shall be limited to the hours between 7:00 a.m. and 6:00 p.m., Monday through Friday and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays. No construction shall occur on State holidays (e.g., Thanksgiving, Labor Day). Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities, such as interior painting, are not subject to these restrictions.

N-2 **Stationary Construction Equipment**. Stationary construction equipment that generates noise which exceeds 65 dBA at the project boundaries shall be shielded and located as far away from residences and other noise sensitive uses to the maximum extent feasible.

Significance after Mitigation

Although construction related noise impacts would be less than significant, the mitigation measures listed above would further reduce impacts.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact

XII. POPULATION AND HOUSING — Would the project:

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	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)?	☐	☐	■	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. The proposed project involves the construction of 75 affordable housing units for seniors on a parcel that is zoned Commercial, Old Town (CT) (City of Calabasas General Plan, 1993). The project would not require substantial infrastructure improvements as the site has been previously developed and existing development surrounds the project site. The proposed project would not generate new permanent employment opportunities that would induce population growth. It is expected that the proposed affordable senior housing development would serve the City's existing population and would not draw a substantial number of people to move to Calabasas. Impacts related to population growth would be **less than significant.**

b-c. An abandoned single-family residence and support structures currently occupy the project site. The proposed project would displace one housing unit, but would result in a net increase of 74 units. It would not displace any people. **No impact** would occur.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	■	☐
ii) Police protection?	☐	☐	■	☐
iii) Schools?	☐	☐	■	☐
iv) Parks?	☐	☐	■	☐
v) Other public facilities?	☐	☐	■	☐

a (i). The closest fire station to the project site is Station #68 which is located at 24130 Calabasas Road. Station #68 is part of the Los Angeles County Fire Department. An increase in population would incrementally increase demand for fire services. However, the proposed project is not expected to cause a strain on existing fire protection service and improvements to fire protection infrastructure would not be required. Impacts to fire protection service would be **less than significant.**

a (ii). The Los Angeles County Sheriffs Department provides police service to residents of Calabasas. An increase in population would incrementally increase demand for police service. However, the proposed affordable senior housing development would not cause a strain on the Los Angeles County Sheriffs Department service and improvements to police protection infrastructure would not be required. Impacts to police protection service would be **less than significant.**

a (iii). The proposed project involves the development of 75 affordable senior housing units. As senior citizens generally do not have school-aged children, the project would not directly or indirectly generate a substantial increase in new students in the area, result in any adverse physical impacts, or impede performance objectives for any of local schools. Impacts would be **less than significant.**

a (iv). The proposed project involves the development of 75 affordable senior housing units and would include 21,304 sf of open space onsite. Calabasas Creek Park is located approximately 0.11 miles northwest of the project site and Alizondo Drive Park is located approximately 1.5 miles southeast of the project site. The proposed project is expected to serve the City's existing

population and would not induce substantial growth in the project area. The project would not directly affect any existing parks or impede performance objectives for any of local parks. Impacts would be **less than significant.**

a (v). The proposed project is not expected to have a significant impact on any other public facilities. Impacts would be **less than significant.**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. RECREATION —				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	■	☐

a. The proposed project involves the development of 75 affordable senior housing units. Calabasas Creek Park is located approximately 0.11 miles northwest of the project site and Alizondo Drive Park is located approximately 1.5 miles southeast of the project site. As the proposed project is expected to serve the City's existing population, the project is not expected to induce substantial growth in the project area. As such, the proposed project would not directly or indirectly affect existing neighborhood or regional parks/recreation facilities. Impacts would be **less than significant.**

b. Project development would incrementally increase demand for park space in the area. However, as discussed above, parks are present in the area. The construction or expansion of existing recreational facilities would not be warranted. Impacts would be **less than significant.**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XV. TRANSPORTATION / TRAFFIC — Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	■	☐	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	■	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible use (e.g. farm equipment)?	☐	☐	■	☐
e) Result in inadequate emergency access?	☐	☐	■	☐
f) Result in inadequate parking capacity?	☐	■	☐	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	■	☐

The following traffic analysis is based upon a traffic study conducted by Kunzman Associates and dated September 14, 2007, which is attached to this document as Appendix G.

Regional access to the project site is provided primarily by the Ventura Freeway (U.S. 101). The nearest access to U.S. 101 is via the northbound on- and off-ramps at Long Valley Road and the southbound on- and off-ramps at Calabasas Road, which are approximately 800 feet and 1,500 feet northeast of the project site, respectively. Study area roadways that would be utilized by travelers to and from the proposed project include Calabasas Road to the north and El Canon Road to the west.

a, b. The traffic study examined the intersection of Calabasas Road and El Canon Road.

Current Levels of Service. Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum acceptable level of service in urban areas. The analyzed intersection is stop-controlled (unsignalized).

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method. To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

The delay during the peak hour for the existing traffic conditions have been calculated and are shown in Table 6. Existing delays are based upon manual monitoring of evening peak hour intersections movements made for Kunzman Associates in July 2007. Figures 5 and 6 of the traffic study show morning and evening peak hour traffic turning movement volumes.

Table 6
Existing Levels of Service

Intersection	Peak Hour	Existing Conditions	
		Delay*	LOS
1. El Canon Avenue & Calabasas Road	AM	20.3	C
	PM	50.8	F

** Average stopped delay per vehicle in seconds.*
Source: Kunzman Associates, 2007

As indicated in Table 5, the study area intersection currently operates at a LOS C during the morning peak hour and an LOS F during the evening peak hour.

Significance Thresholds. The City of Calabasas has adopted a level of service threshold of LOS C (V/C ratio 0.80) or better as the minimum standard for intersection operations. Projects that degrade roadways and/or intersections below LOS C must provide measures to mitigate their impacts. Significant transportation impacts are determined based on the criteria shown in Table 7.

Table 7
City of Calabasas Traffic Impact Standards

Allowable Project Related Traffic Increases Where Intersection Performance Standards Are or Will Be Exceeded (Urban Areas)		
Existing or Future	**V/C**	**Maximum Peak Hour Increase**
LOS D	0.81-0.90	0.0100

Table 7
City of Calabasas Traffic Impact Standards

Allowable Project Related Traffic Increases Where Intersection Performance Standards Are or Will Be Exceeded (Urban Areas)		
Existing or Future	**V/C**	**Maximum Peak Hour Increase**
LOS E	0.91-1.00	0.0060
LOS F	>1.00	0.0030

Source: City of Calabasas General Plan, Transportation Element

Project Trip Generation. The trip generation estimates for the proposed project were prepared using trip generation rates from the Institute of Transportation Engineers' *Trip Generation, 7th Edition*.

Table 8 presents the trip generation rates and estimates for the proposed project. Figure 7 of the traffic study shows the distribution of project generated traffic and Figure 8 of the traffic study shows the traffic volumes added by the proposed project at the analyzed intersection.

Table 8
Trip Generation Rates and Estimates

Land Use	Rate/Size	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates								
Senior Attached Housing	Dwelling unit	3.48	0.04	0.04	0.08	0.07	0.04	0.11
Trip Generation Estimates								
Senior Attached Housing	Dwelling unit	261	3	3	6	5	3	8
Net New Trips		**261**	**3**	**3**	**6**	**5**	**3**	**8**

Sources: Institute of Transportation Engineers (ITE). Trip Generation, Seventh Edition, 2003; Kunzman Associates, 2007.

The proposed 75-unit affordable senior housing project would generate an estimated 261 daily vehicle trips, including 6 weekday AM peak hour and 8 weekday PM peak hour trips.

Cumulative Base Intersection Traffic Conditions. Table 9 summarizes the future level of service at the El Canon Avenue/Calabasas Road intersection in 2009 with and without project-generated traffic. The intersection is projected to operate at LOS C during the weekday AM peak period and LOS F during the PM peak periods in year 2009 without the proposed project (Cumulative Base condition).

Table 9
Intersection Levels of Service Future Conditions (Year 2009)

Intersection	Peak Hour	Cumulative Base		Cumulative + Project		Delay Increase
		Delay*	LOS	Delay*	LOS	
El Canon Avenue & Calabasas Road	AM	24.5	C	26.1	D	1.6
	PM	90.9	F	99.9	F	9.0

** Average stopped delay per vehicle, in seconds.*
Source: Kunzman Associates, 2007

Project Impacts. Table 9 summarizes the future levels of service with project-generated traffic (Cumulative + Project) and compares these service levels to the baseline (Cumulative Base) condition. Project-generated traffic would increase the delay during the AM peak hour by an estimated 1.6 seconds and would increase the delay during the PM peak hour by an estimated 9.0 seconds. Figures 21 and 22 of the traffic study show the cumulative base traffic volumes at the study intersection and Figures 23 and 24 of the traffic study show the cumulative base plus project traffic volumes at the study intersection.

As shown in Table 10, the project-generated traffic would account for an estimated 3.1% of the cumulative plus project added traffic at the intersection. Using the City of Calabasas's significance criteria (see Table 7), the results indicate that traffic generated by the proposed project would have a significant impact to the intersection of El Canon Avenue and Calabasas Road because the 3.1% increase in traffic exceeds the 0.003 V/C threshold. Therefore impacts would be **potentially significant unless mitigation incorporated**.

Table 10
Project Traffic Contribution

Intersection	Existing Traffic	Existing + Cumulative + Project	Project Traffic	% Increase From Project*
El Canon Avenue & Calabasas Road	2,500	2,759	8	3.1%

**Based on the increase over existing traffic volume as a result of cumulative + project traffic*
Source: City of Calabasas General Plan, Transportation Element

c. The proposed project involves the development of a two, three-story buildings with 75 affordable housing units for seniors. The proposed structure would be similar in height to surrounding structures. The project would not affect air traffic or result in a change of air traffic patterns, or otherwise include a change in air traffic locations that would result in a substantial safety risk. **No impact** would occur.

d. The proposed project involves the construction of affordable senior housings in an urbanized part of Calabasas. The proposed housing development would be compatible with surrounding

land uses and would not increase circulation hazards. Therefore, impacts relating to onsite circulation hazards would be **less than significant**.

e. The proposed project would not result in inadequate emergency access as the Fire Department would review site plans, site construction, and the actual structures prior to occupancy. As part of the review, the Fire Department would ensure that required fire protection safety features, including adequate emergency access, are implemented. Impacts to emergency access would be **less than significant.**

f. The proposed subterranean parking garage would provide 76 parking spaces (74 standard spaces, two handicapped spaces, including one van accessible space, and 83 bicycle spaces). Figure 7 shows the proposed parking garage. The California State Planning and Zoning Law, Chapter 4.3, Section 65915(p) establishes the maximum required parking spaces for affordable projects. As shown in Table 11, the 76 proposed parking spaces would meet the State parking requirement for affordable housing projects. However, current garage design could result in visibility hazards during ingress and egress. Therefore, parking-related impacts would be **potentially significant unless mitigation incorporated.**

Table 11
Parking Requirements for Affordable Housing Projects

No. of Bedrooms	Quantity	Requirement	Required Parking
0-1	74 bedrooms	1 space/room	74
2	1 bedroom	2 spaces/room	2
		Total	**76**

Note: Parking requirements based on the California State Planning and Zoning Law, Chapter 4.3, Section 65915(p)

g. The project site is in an area that is well-served by local and regional transit. It is also within walking distance of a variety of services that site residents may utilize. The proposed project would not conflict with any programs, policies or plans supporting alternative transportation. Impacts would be **less than significant**.

Mitigation Measures

The following measures would reduce traffic-related impacts to a less than significant level.

T-1 **Intersection Improvement.** "Keep Clear" shall be painted in the eastbound lane of Calabasas Road at the intersection of El Canon Avenue so that the northbound left turn can be made from El Canon Avenue.

T-2 **Traffic Analysis/Traffic Signal.** Approximately one year after project occupancy, a traffic analysis shall be performed to determine whether the

Calabasas Road/El Canon Avenue intersection is functioning at an acceptable level of service. If the traffic analysis determines that the level of service is unacceptable, a traffic signal shall be installed. The project applicant shall contribute a fair share toward funding of this traffic signal.

T-3 **Registered Traffic Engineer Consideration.** Have a registered traffic engineer consider the following safety issues and propose solutions that will be fair yet effective:

- The current design has the driveway ingress aligned with the internal egress movement. This exposes a potential for head on collisions at the transition.
- The northern driveway wall into the substructure will block the visibility of vehicles maneuvering within the parking spaces immediately to the north. Cars exiting this area will not be visible to entering vehicles.
- Since the parking structure is subterranean, visibility upon ingress during daylight hours will decrease unless the transition area is well lit.

Significance After Mitigation

Implementation of Mitigation Measures T-1 through T-3 would reduce traffic and transportation related impacts to a less than significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS — Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	■	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources,				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS — Would the project:				
or are new or expanded entitlements needed?	☐	■	☐	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	■	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	■	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐

a, b. The proposed project involves construction of 75 attached, affordable senior housing units. Wastewater generated by the City of Calabasas is treated at the Tapia Water Reclamation Facility, operated by Las Virgenes Municipal Water District (LVMWD). The Tapia Water Reclamation Facility has a capacity of 16 million gallons per day (mgd) and treats an average of 9.5 mgd (LVMWD, 2005). Therefore, there is a surplus capacity of 6.5 mgd. According to the Calabasas General Plan FEIR, the wastewater generation factor for a multi-family residential unit is 260 gallons per day. Based on this generation factor, the proposed project would generate approximately 19,500 gallons per day or 0.0195 mgd (City of Calabasas General Plan FEIR, 1995). Wastewater generated by the proposed project would account for approximately 0.3% of the Tapia Water Reclamation Facility's surplus treatment capacity. Therefore, no expansion of the Reclamation Facility would be needed and impacts to wastewater treatment systems would be **less than significant.**

c. Project development would decrease onsite pervious surface area from the current 38,671 sf to an estimated 11,362 sf. At buildout of the project, approximately 27% of the project site would be pervious. Chapter 17.56.030 of the City of Calabasas Municipal Code requires that at least 28% of site coverage be pervious for new development in the Commercial Old Town zone. However, the applicant is requesting exceptions to the code in accordance with State Bill 1818, including a reduced percentage of pervious area onsite. As discussed under Section VIII e., *Hydrology and Water Quality,* inflow into the SUSMP filter box would be restricted to the maximum pre-project flow to limit the outflow from the project site to the pre-project amount. Therefore, the proposed development would not result in an increase of offsite stormwater flow requiring new or expanded stormwater drainage or treatment facilities. Furthermore, implementation of the requirements of the Los Angeles County Stormwater Ordinance, the

NPDES permit, and the City's RMP (Runoff Mitigation Plan) ordinance would reduce impacts to a **less than significant** level.

d. The multi-family residential development water use factor is 436 gallons per day (gpd) per residential unit (City of Calabasas General Plan FEIR 1995). Therefore, the proposed project would increase water demand by approximately 32,700 gpd.

The City of Calabasas obtains water service from the Las Virgenes Municipal Water District (LVMWD). According to the LVMWD's 2005 Urban Water Management Plan, LVMWD estimates their water supply in 2010 to be approximately 36,590 acre feet per year (approximately 100 acre feet per day). The proposed project would result in an increase in water demand of approximately 0.01 acre feet per day. Thus, the project demand would represent 0.01% of estimated water supply. The project's anticipated water demand would not result in a significant impact to the water supply of the City of Calabasas. However, because the project does not incorporate the City's water conservation performance objectives, impacts to water conservation are considered **potentially significant.**

e. Please see discussion under items a and b.

f, g. The Calabasas Landfill, located adjacent to the Ventura Freeway on Lost Hills Road, would receive the solid waste generated by the proposed project. The total capacity of the Calabasas Landfill is 29.9 million tons and its remaining capacity is 8 million tons. Currently the Calabasas Landfill has a daily capacity of 3,500 tons/day and the average daily intake is 1,800 tons/day (CIWMB). Therefore, there are about 1,700 tons/day of available capacity. Based on current intake rates, the Calabasas Landfill is expected to reach capacity in 2028. An increase in the population of the City of Calabasas would incrementally reduce the available capacity at the Calabasas Landfill. However, the solid waste generated by the proposed multi-family residence would result in an estimated 0.45 tons/day (City of Los Angeles CEQA Thresholds Guide 12.23 lb/household/day), which is less than 0.03% of the remaining daily capacity. Furthermore, the proposed project would be required to comply with applicable provisions of the City's Source Reduction and Recycling Element, including providing recycling and waste storage areas in order to achieve 50% diversion of solid waste, preventing recyclable materials from entering the landfill. Thus, solid waste generation from the proposed project would have a **less than significant** impact on the permitted remaining capacity of the Calabasas Landfill.

Mitigation Measures

The following mitigation measure would reduce impacts to water conservation to a less than significant level.

U-1 **Water Conservation Techniques.** In order to meet the City's water conservation performance objectives, the following techniques shall be included:

- *Incorporation of drought tolerant and low water using plants; maximize preservation of natural vegetation.*
- *Incorporation of water conservation techniques into the design of the irrigation system through such techniques as mulching, installation of drip irrigation*

systems, landscape design to group plants of similar water demand, rain sensors and automatic irrigation systems.

- *Clustering of landscaped areas to maximize the efficiency of the irrigation system; design of irrigation systems to eliminate watering of impervious surfaces.*
- *Installation of water conserving kitchen and bathroom fixtures and appliances, installation of thermostatically controlled mixing valves for baths and showers, and insulation of hot water circulating systems.*

Significance After Mitigation

Implementation of the above mitigation measure would ensure impacts related to water use and conservation would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	■	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, and the effects of probable future projects)?	☐	☐	■	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

a. The proposed project would not have the potential to significantly degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or

eliminate important examples of the major periods of California history or prehistory. The proposed project has the potential to adversely affect as-yet undiscovered cultural resources and human remains if they are found to exist within the project area. The proposed project would result in impacts to protected native oak trees through the removal or six protected coast live oaks. These impacts are reduced to a less than significant level through incorporation of mitigation measures CR-1 through CR-2, and BIO-1 through BIO-13. Please refer to *Biological Resources* and *Cultural Resources* sections of this document for additional information that supports this finding.

b. The proposed project involves the construction of 75 units of affordable senior housing in the City of Calabasas. Impacts related to the development of the proposed project would be mitigated to a less than significant level through the implementation of mitigation measures contained in this document. As such, the project would not contribute to cumulative impacts.

c. The proposed project has significant but mitigable environmental effects associated with geology and hazards, as discussed in Sections VI and VII, respectively. These effects can be mitigated to levels of insignificance through incorporation of mitigation measures GEO-1, HAZ-1 and HAZ-2. Refer to the discussions under each of these sections for additional information that supports this finding. No significant residual effects would occur after implementing the recommended mitigation.

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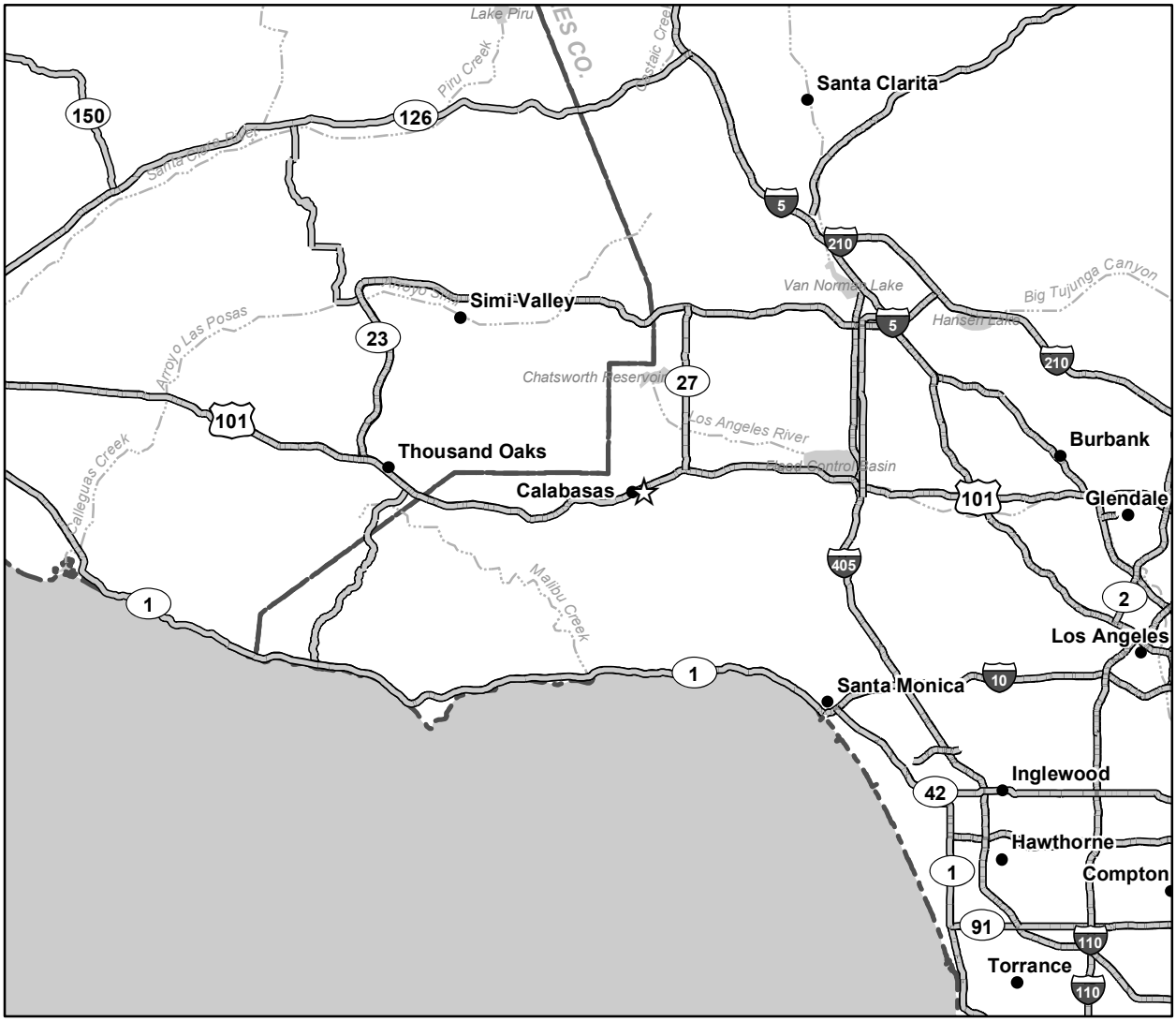
Figures



Source: US Bureau of the Census TIGER 2000 data.

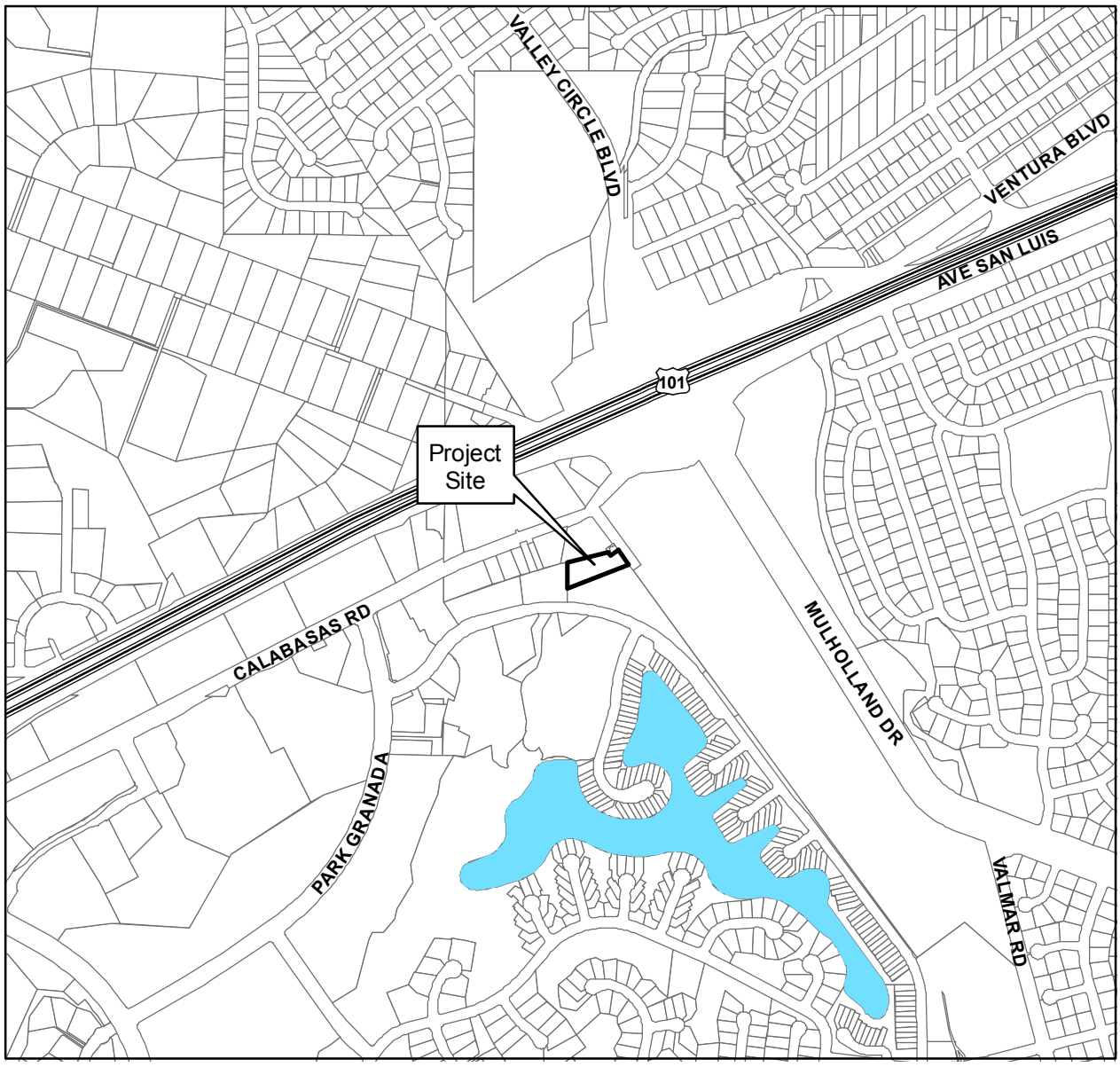
N

0 10 20 Miles

☆ Project Location

Regional Location

Figure 1



Source: Rincon Consultants, Inc., 2007 and City of Calabasas, 2007.

Project Boundary

N

0 1,000 2,000 Feet

Project Location

Figure 2

Photo 1 - Abandoned main structure.

Photo 2 - Smaller of two abandoned secondary residential structures onsite.

Photo 3 - Larger of two abandoned secondary residential structures onsite.

Photo 4 - View of yard and existing sheds onsite.

Source: Rincon Consultants, Inc., September, 2007

Current Site Conditions

Figure 3

Photo 1 - Mulit-family residences immediately adjacent to the south of the project site.

Photo 2 - Las Virgenes Municipal Water District immediately adjacent to the north of the project site.

Photo 3 - Calabasas Creek and multi-family residences immediatey adjacent to the west of the project site.

Surrounding Land Uses

Rincon Consultants, Inc., September 2007

Figure 4a

City of Calabasas

Photo 4 - Motion Picture and Television Hopsital complex across El Canon to the east of the project site.

Photo 5 - Banzai restaurant adjacent to north of the project site.

Surrounding Land Uses

Rincon Consultants, Inc., September 2007

Figure 4b

City of Calabasas

PROJECT INFORMATION
42,176 SQ.FT. = GROSS SITE AREA (0.96 ACRES)
39,164 SQ.FT. = NET SITE AREA

52,871 SQ.FT. = ALLOWABLE F.A.R. (1.35)
52,825 SQ.FT. = ACTUAL F.A.R. (1.35)
11,725 SQ.FT = PERVIOUS SURFACE AREA (30%)

PROPOSED
BUILDING FOOTPRINT: 20,509 SQ.FT.
DRIVEWAY: 363 SQ.FT.
TOTAL SITE COVERAGE: 20,872 SQ.FT.
% PROPOSED SITE COVERAGE: 53%

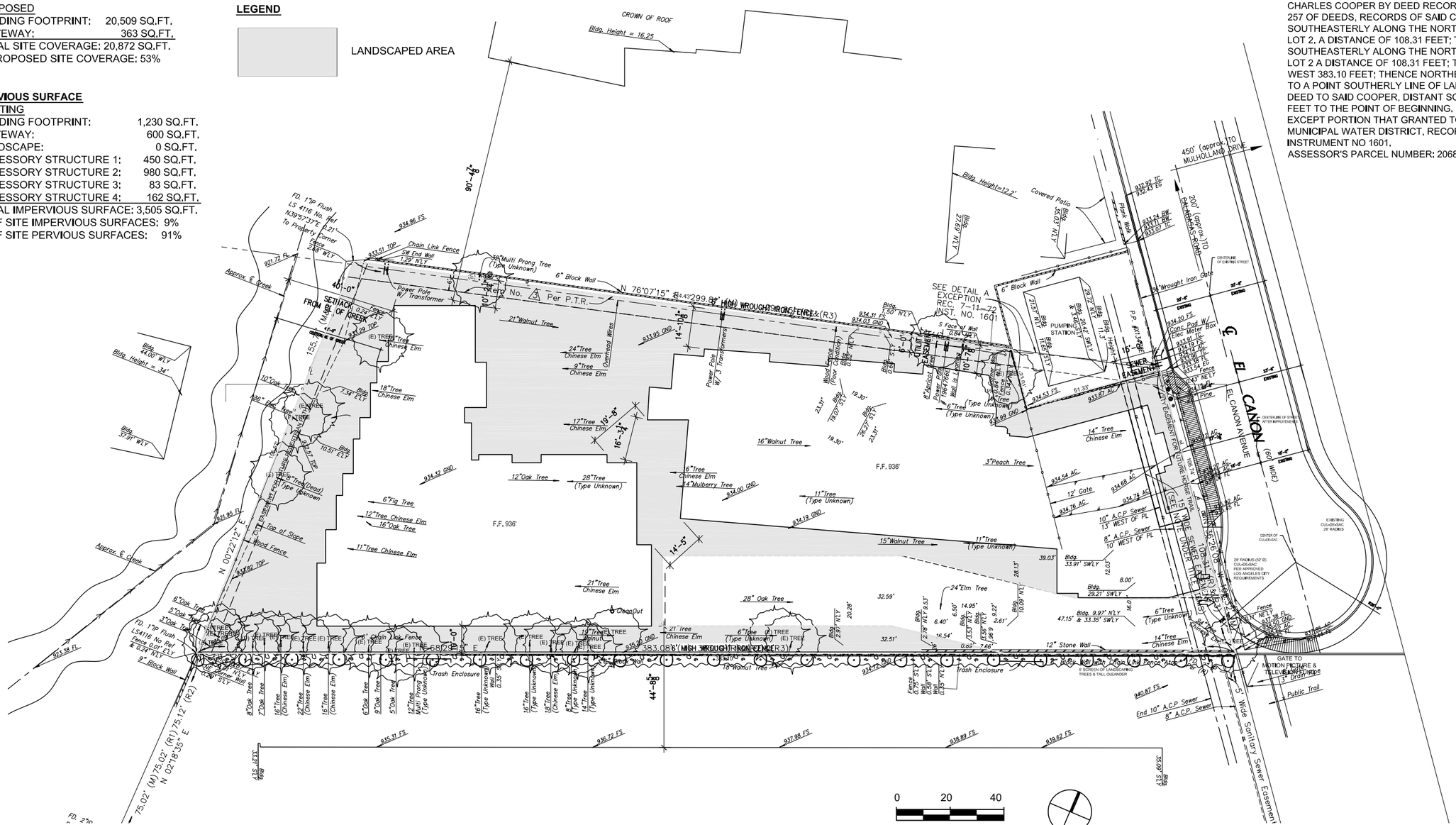
PERVIOUS SURFACE
EXISTING
BUILDING FOOTPRINT: 1,230 SQ.FT.
DRIVEWAY: 600 SQ.FT.
HARDSCAPE: 0 SQ.FT.
ACCESSORY STRUCTURE 1: 450 SQ.FT.
ACCESSORY STRUCTURE 2: 980 SQ.FT.
ACCESSORY STRUCTURE 3: 83 SQ.FT.
ACCESSORY STRUCTURE 4: 162 SQ.FT.
TOTAL IMPERVIOUS SURFACE: 3,505 SQ.FT.
% OF SITE IMPERVIOUS SURFACES: 9%
% OF SITE PERVIOUS SURFACES: 91%

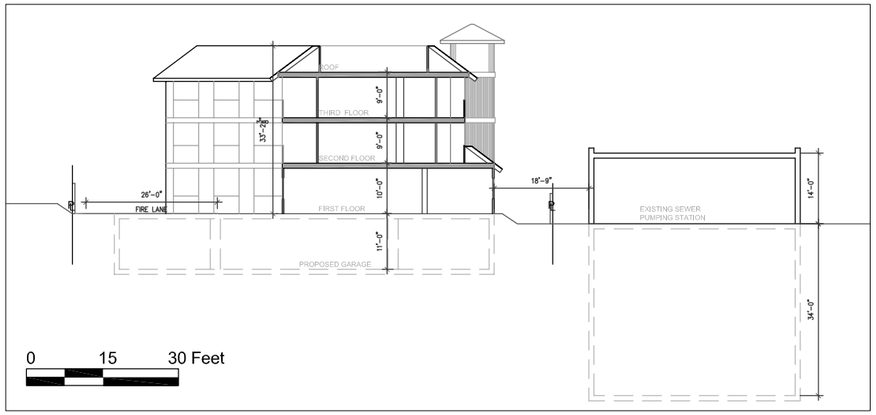
PROPOSED
BUILDING FOOTPRINT: 20,509 SQ.FT.
DRIVEWAY: 363 SQ.FT.
HARDSCAPE: 9,942 SQ.FT.
TOTAL IMPERVIOUS SURFACE: 30,814 SQ.FT.
% OF SITE IMPERVIOUS SURFACES: 73%
% OF SITE PERVIOUS SURFACES: 27%

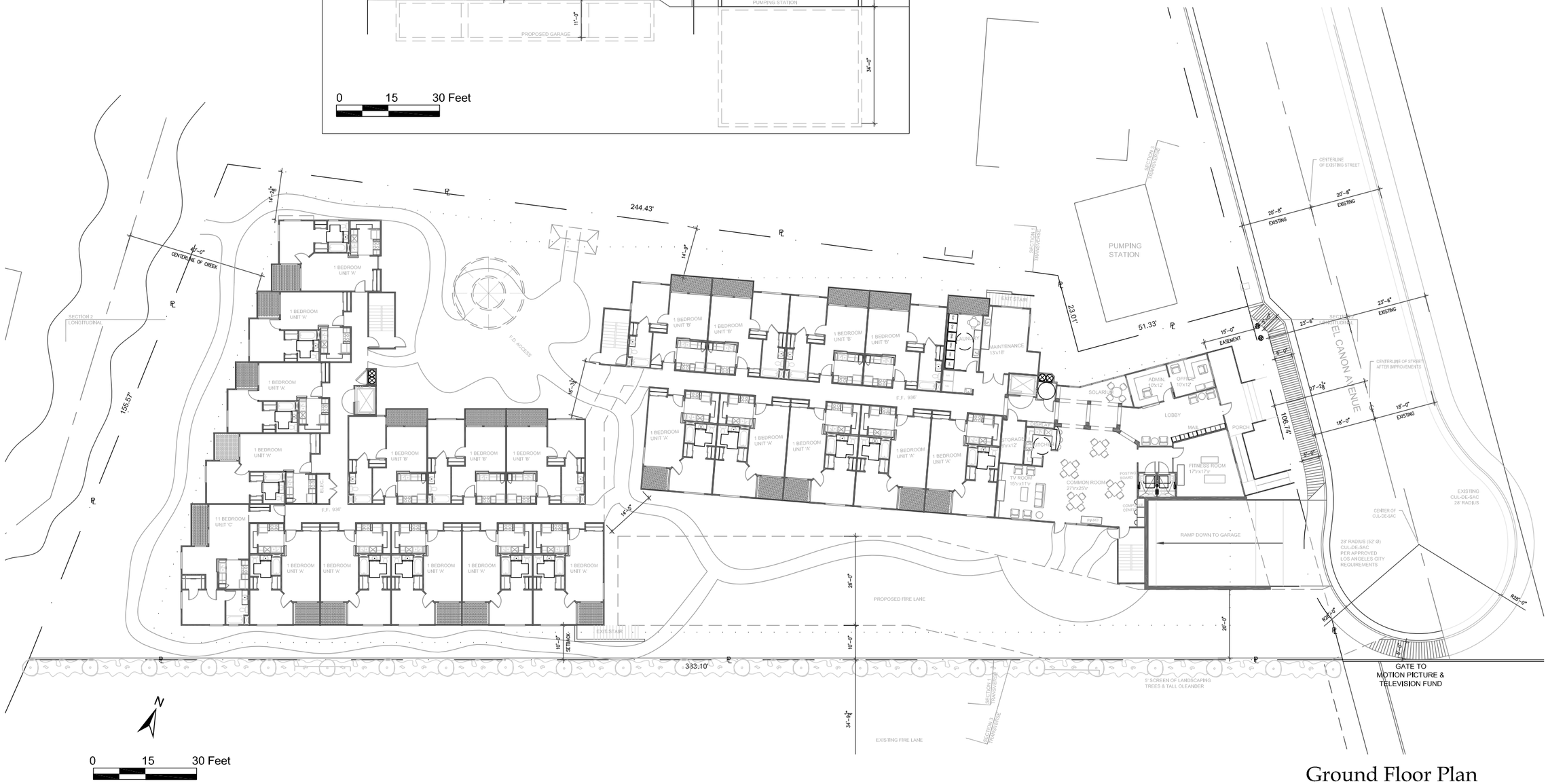
LEGEND

LANDSCAPED AREA

LEGAL DESCRIPTION:
ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:
THAT PORTION OF LOT 2 IN FRACTIONAL SECTION 23, IN TOWNSHIP 1 NORTH, RANGE 17, WEST, S.B.B.&M., IN THE CITY OF CALABASAS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS: BEGINNING AT THE MOST EASTERLY CORNER OF THE LAND CONVEYED TO CHARLES COOPER BY DEED RECORDED IN BOOK 5731, PAGE 257 OF DEEDS, RECORDS OF SAID COUNTY; THENCE SOUTHEASTERLY ALONG THE NORTHEASTERLY LINE OF SAID LOT 2, A DISTANCE OF 108.31 FEET; THENCE SOUTHEASTERLY ALONG THE NORTHEASTERLY LINE OF SAID LOT 2 A DISTANCE OF 108.31 FEET; THENCE SOUTH 68°26'30" WEST 383.10 FEET; THENCE NORTHERLY IN A STRAIGHT LINE TO A POINT SOUTHERLY LINE OF LAND DESCRIBED IN SAID DEED TO SAID COOPER, DISTANT SOUTHWESTERLY 299.85 FEET TO THE POINT OF BEGINNING,
EXCEPT PORTION THAT GRANTED TO LAS VIRGENES MUNICIPAL WATER DISTRICT, RECORDED 7-11-1972 INSTRUMENT NO 1601,
ASSESSOR'S PARCEL NUMBER: 2068-004-016


CROWN OF ROOF
Bldg. Height = 16.25
90'-8"
FD. 17"IP Flush LS 4116 No Ref N39°37'37"E 0.21' To Property Corner Fence 2.68' W'LY
934.96 FS.
933.51 TOP
Chain Link Fence
SW End Wall 1.29' N'LY
921.72 FL
Approx. E. Creek
40'-0"
10'-0"
Power Pole W/ Transformer
Kern No. 5 Per P.T.R.
N 76°07'15" E 299.86'
6' HIGH WROUGHT IRON FENCE & (R3)
SETBACK FROM TOP OF CREEK BANK
934.43
934.31
934.03 GND
S Face of Wall 0.84' S'LY
Bldg. 0.50' N'LY
Bldg. 0.50' S'LY
Bldg. 0.54' S'LY
Bldg. 0.54' N'LY
Bldg. 11.3'
Bldg. Height = 15'
Bldg. 21.50' N'LY
Bldg. 21.50' S'LY
Bldg. 79.72' N'LY
Bldg. 3.00' S'LY
Bldg. 44.00' W'LY
Bldg. Height = 34'
Bldg. 32.91' W'LY
155.
10" Oak Tree
36" Tree (E) TREE
Bldg. 7.34' E'LY
Bldg. 10.51' E'LY
18" Tree Chinese Elm
24" Tree Chinese Elm
9" Tree Chinese Elm
Overhead Wires
933.95 GND
21" Walnut Tree
14'-10"
Power Pole W/ 3 Transformers
Wood Deck Floor Elevation 0.54' E'LY
8" Retaining Wall
Bldg. 0.50' S'LY
Bldg. 0.50' N'LY
Bldg. 0.54' N'LY
Bldg. 0.54' S'LY
10'-8"
6" Block Wall
Bldg. Height=12.2'
Covered Patio
Bldg. 21.50' N'LY
Bldg. 21.50' S'LY
SEE DETAIL A EXCEPTION REC. 7-11-72 INST. NO. 1601
PUMPING STATION
934.20 FS
Pump Pad W/ Elec Meter Box
934.53 FS.
51.33'
933.87 AC.
933.99 GND
6" Tree (Type Unknown)
6" Tree (Type Unknown)
15' SEWER EASEMENT
P.P. #13 TYPE
450' (approx.) TO MULHOLLAND DRIVE
200' (approx.) TO MULHOLLAND DRIVE
932.09 TC
932.43 EG
Piers
933.24 BW
933.11 BW
933.07 TC
CENTERLINE OF EXISTING STREET
16'-0"
CENTER
16'-0"
CENTER
16'-0"
CENTER

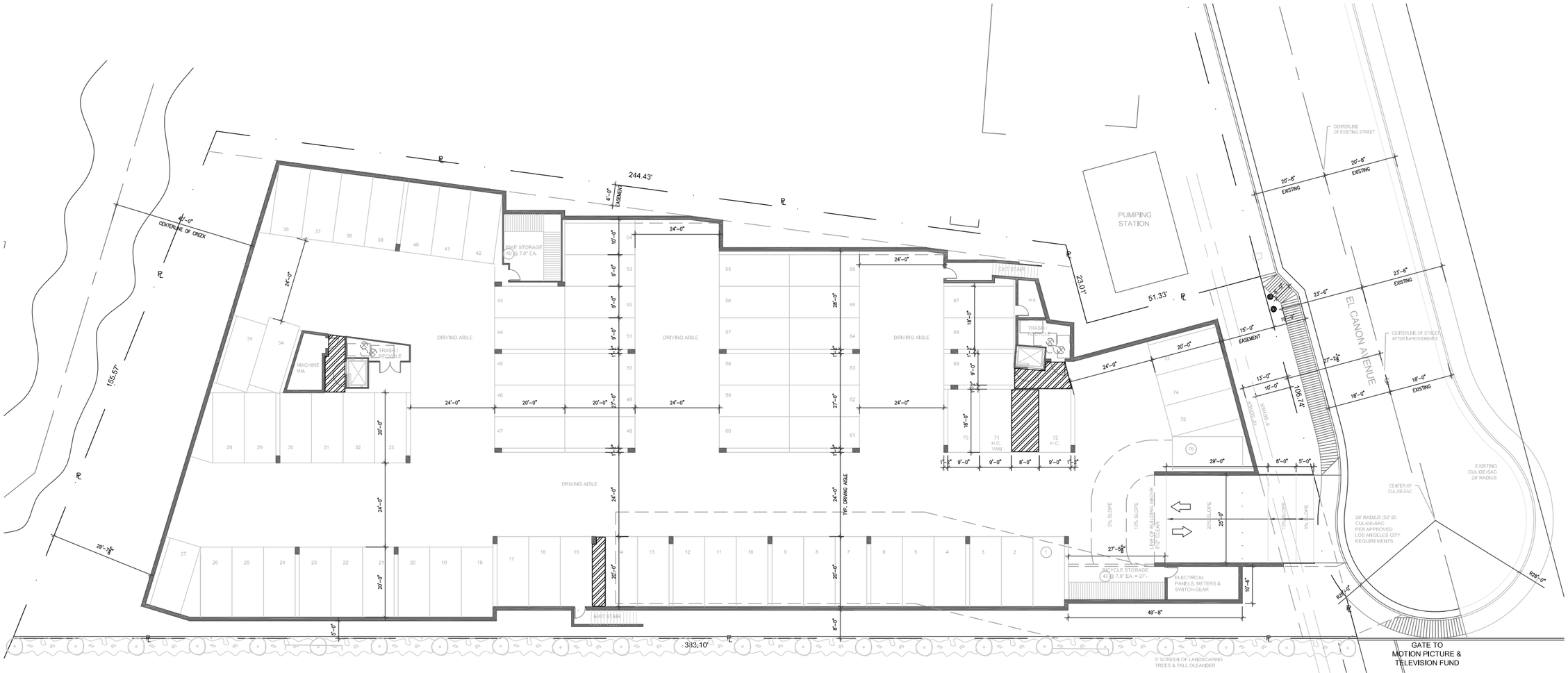




Ground Floor Plan

Source: John Cotton FAIA Architects, September, 2007.

Figure 6



PER CALIFORNIA STATE PLANNING
AND ZONING LAW
CHAPTER 4.3, SECTION 65915 (P)

74 SPACES @ 1.0 X 74
02 SPACES @ 2.0 X 01
76 PARKING SPACES REQUIRED

74 STANDARD PARKING SPACES
02 ADA PARKING SPACES
76 TOTAL RESIDENT PARKING SPACES PROVIDED

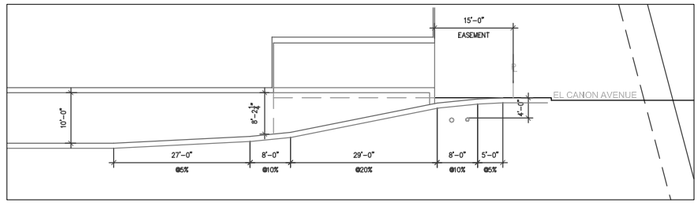
75 RESIDENT BICYCLE SPACES @ 1:1 UNITS
7.5 GUEST BICYCLE SPACES @ 1:10 UNITS
82.5 BICYCLE SPACES REQUIRED

83 BICYCLE SPACES PROVIDED

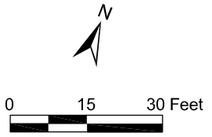
GARAGE AREA: 29,730 SQ.FT.

20% ENTRANCE RAMP
PER CALABASAS MUNICIPAL CODE
SECTION 17.28.080 (D)
SECTION 17.28.080 (E) FIG.3-15
SECTION 17.20.130 (E)2

NOTE:
A RAMP SLOPE OF 8% WOULD REQUIRE THE LOSS OF NINE (9) CARS MINIMUM FROM THE GARAGE



GARAGE RAMP SECTION



Subterranean Parking Garage Plan

Figure 7

Source: John Cotton FAIA Architects, September, 2007.

Source: Thomas Safran & Associates, 2007.

Proposed Project Elevations

Figure 8

Appendix A

Air Quality Analysis

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Urbemis 2007 Version 9.2.2

Summary Report for Summer Emissions (Pounds/Day)

File Name: L:\ESP\LA Co\Calabasas\07-61560 Calabasas Safran Sr Hsg ISMND\Other\Safran Senior Housing Project.urb9

Project Name: Safran Senior Housing

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	3.48	29.81	19.89	0.02	5.01	1.49	6.50	1.05	1.37	2.42	2,590.44
2009 TOTALS (lbs/day unmitigated)	49.67	12.61	18.70	0.02	0.08	0.76	0.83	0.03	0.69	0.72	2,589.85

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	4.97	1.27	5.60	0.00	0.01	0.01	1,567.71

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.24	2.42	20.70	0.02	2.84	0.56	1,714.31

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	7.21	3.69	26.30	0.02	2.85	0.57	3,282.02

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: L:\ESP\LA Co\Calabasas\07-61560 Calabasas Safran Sr Hsg ISMND\Other\Safran Senior Housing Project.urb9

Project Name: Safran Senior Housing

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	3.48	29.81	19.89	0.02	5.01	1.49	6.50	1.05	1.37	2.42	2,590.44
2009 TOTALS (lbs/day unmitigated)	49.67	12.61	18.70	0.02	0.08	0.76	0.83	0.03	0.69	0.72	2,589.85

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	4.97	1.27	5.60	0.00	0.01	0.01	1,567.71

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.24	2.42	20.70	0.02	2.84	0.56	1,714.31

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	7.21	3.69	26.30	0.02	2.85	0.57	3,282.02

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 3/3/2008-3/21/2008 Active Days: 15	1.45	10.04	6.62	0.00	1.08	0.74	1.81	0.23	0.68	0.90	974.01
Demolition 03/03/2008-03/21/2008	1.45	10.04	6.62	0.00	1.08	0.74	1.81	0.23	0.68	0.90	974.01
Fugitive Dust	0.00	0.00	0.00	0.00	1.06	0.00	1.06	0.22	0.00	0.22	0.00
Demo Off Road Diesel	1.31	8.68	4.91	0.00	0.00	0.68	0.68	0.00	0.62	0.62	700.30
Demo On Road Diesel	0.10	1.28	0.50	0.00	0.00	0.06	0.06	0.00	0.05	0.05	149.23
Demo Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 3/24/2008-6/20/2008 Active Days: 65	3.48	**29.81**	15.45	0.00	**5.01**	**1.49**	**6.50**	**1.05**	**1.37**	**2.42**	2,573.94
Mass Grading 03/24/2008-06/20/2008	3.48	29.81	15.45	0.00	5.01	1.49	6.50	1.05	1.37	2.42	2,573.94
Mass Grading Dust	0.00	0.00	0.00	0.00	5.00	0.00	5.00	1.04	0.00	1.04	0.00
Mass Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Mass Grading On Road Diesel	0.13	1.74	0.68	0.00	0.01	0.08	0.08	0.00	0.07	0.07	202.14
Mass Grading Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 6/23/2008-8/1/2008 Active Days: 30	3.35	28.07	14.77	0.00	4.81	1.41	6.22	1.00	1.30	2.31	2,371.80
Fine Grading 06/23/2008-08/01/2008	3.35	28.07	14.77	0.00	4.81	1.41	6.22	1.00	1.30	2.31	2,371.80
Fine Grading Dust	0.00	0.00	0.00	0.00	4.80	0.00	4.80	1.00	0.00	1.00	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 8/4/2008-8/15/2008 Active Days: 10	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching 08/04/2008-08/15/2008	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49

Time Slice 8/18/2008-8/29/2008 Active Days: 10	2.38	13.71	9.39	0.00	0.01	1.17	1.18	0.00	1.07	1.08	1,233.59
Asphalt 08/18/2008-08/29/2008	2.38	13.71	9.39	0.00	0.01	1.17	1.18	0.00	1.07	1.08	1,233.59
Paving Off-Gas	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.22	13.27	7.15	0.00	0.00	1.15	1.15	0.00	1.06	1.06	979.23
Paving On Road Diesel	0.02	0.31	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	36.51
Paving Worker Trips	0.07	0.13	2.12	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.85
Time Slice 9/1/2008-12/31/2008 Active Days: 88	2.01	13.50	**19.89**	**0.02**	0.08	0.80	0.87	0.03	0.73	0.76	**2,590.44**
Building 09/01/2008-04/24/2009	2.01	13.50	19.89	0.02	0.08	0.80	0.87	0.03	0.73	0.76	2,590.44
Building Off Road Diesel	1.39	10.47	5.09	0.00	0.00	0.67	0.67	0.00	0.61	0.61	893.39
Building Vendor Trips	0.19	2.23	1.70	0.00	0.01	0.10	0.11	0.00	0.09	0.09	352.60
Building Worker Trips	0.43	0.80	13.10	0.01	0.06	0.03	0.10	0.02	0.03	0.05	1,344.45
Time Slice 1/1/2009-4/24/2009 Active Days: 82	1.87	12.61	18.70	**0.02**	0.08	0.76	0.83	0.03	0.69	0.72	2,589.85
Building 09/01/2008-04/24/2009	1.87	12.61	18.70	0.02	0.08	0.76	0.83	0.03	0.69	0.72	2,589.85
Building Off Road Diesel	1.30	9.79	4.94	0.00	0.00	0.63	0.63	0.00	0.58	0.58	893.39
Building Vendor Trips	0.18	2.10	1.59	0.00	0.01	0.09	0.10	0.00	0.08	0.09	352.61
Building Worker Trips	0.39	0.73	12.17	0.01	0.06	0.04	0.10	0.02	0.03	0.05	1,343.85
Time Slice 4/27/2009-5/22/2009 Active Days: 20	**49.67**	0.15	2.57	0.00	0.01	0.01	0.02	0.00	0.01	0.01	283.47
Coating 04/27/2009-05/22/2009	49.67	0.15	2.57	0.00	0.01	0.01	0.02	0.00	0.01	0.01	283.47
Architectural Coating	49.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.57	0.00	0.01	0.01	0.02	0.00	0.01	0.01	283.47

Phase Assumptions

Phase: Demolition 3/3/2008 - 3/21/2008 - Default Demolition Description

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Building Volume Total (cubic feet): 43200

Building Volume Daily (cubic feet): 2535

On Road Truck Travel (VMT): 35.21

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/23/2008 - 8/1/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 0.97

Maximum Daily Acreage Disturbed: 0.24

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 3/24/2008 - 6/20/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0.96

Maximum Daily Acreage Disturbed: 0.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 47.69

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/4/2008 - 8/15/2008 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/18/2008 - 8/29/2008 - Default Paving Description

Acres to be Paved: 0.24

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 9/1/2008 - 4/24/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 4/27/2009 - 5/22/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.09	1.22	0.52	0.00	0.00	0.00	1,559.61
Hearth - No Summer Emissions							
Landscape	0.76	0.05	5.08	0.00	0.01	0.01	8.10
Consumer Products	3.85						
Architectural Coatings	0.27						
TOTALS (lbs/day, unmitigated)	4.97	1.27	5.60	0.00	0.01	0.01	1,567.71

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Retirement community	2.24	2.42	20.70	0.02	2.84	0.56	1,714.31
TOTALS (lbs/day, unmitigated)	2.24	2.42	20.70	0.02	2.84	0.56	1,714.31

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 80 Season: Summer

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Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Retirement community	0.97	2.16	dwelling units	75.00	162.00	1,636.65
					162.00	1,636.65

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Appendix B

Biological Assessment / Oak Tree Report

LSA

LSA ASSOCIATES, INC.
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949.553.8076 FAX

BERKELEY CARLSBAD COLMA FORT COLLINS PALM SPRINGS POINT RICHMOND RIVERSIDE ROCKLIN SAN LUIS OBISPO

Environmental file 241

JOHN COTTON
SEP 25 2006
ARCHITECTS

September 22, 2006

Mr. John Cotton
John Cotton Architects
3816 Main Street
Culver City, CA 90232

Subject: Biological Resource Assessment Letter Summary Report for the Proposed Senior Apartments Calabasas Development Project Site

Dear Mr. Cotton:

This letter summary report documents the findings of the biological resources assessment conducted by LSA Associates, Inc. (LSA) for the purpose of identifying biological resources within the 100-foot protective zone setback from the top of the bank of Calabasas Creek in the footprint of the proposed Senior Apartments Calabasas Development project site as required by Calabasas Municipal Code Sections 17.54.090 and 17.52.050 (A)(2). Based on the results of the field assessment, it is concluded that as currently designed, the proposed project will impact at least two mature coast live oak trees *(Quercus agrifolia)* located within the 100-foot protection zone setback extending from the top of the bank of Calabasas Creek.

STUDY AREA

LSA was retained by John Cotton Architects to prepare a biological resource assessment letter summary report of the approximately 0.96-acre proposed senior apartment development project site (Assessor Parcel Number 2068-004-026) located at 4803 El Canon Avenue in the city of Calabasas, in Los Angeles County. Specifically, the project area is mapped within the northwest quarter of Section 23 of Township 1 North, Range 17 West, of the *Calabasas, California* 7.5' USGS quadrangle map.

METHODS

An on-site survey was conducted on August 25, 2006, by LSA senior biologist Leo Simone, in which the entire project area within the footprint of the 100-foot protection zone extending from the top of the bank of Calabasas Creek was surveyed on foot, and the biological resources were assessed and documented.

DISCUSSION

The northern-most portion of the project site is currently developed with four residential-type structures consisting of one single-family detached house, two studio units, and a garage. Most of the northern third of the site is paved with asphalt. In addition to ornamental landscaping throughout the entire site, numerous large, mature trees are situated throughout, of which two species are native to Southern California: the coast live oak and California walnut *(Juglans californica)*. Adjacent land uses are primarily residential.

The city of Calabasas has an oak tree preservation program in place (Calabasas Municipal Code Section 17.26.070), which requires an Oak Tree Permit for the alteration of any oak tree on any real property within the city. Two oak trees were identified in the 100-foot protective zone setback from the top of the bank of Calabasas Creek and the footprint of the proposed Senior Apartments Calabasas Development project site. This will require the preparation of an oak tree report by a city approved-certified arborist.

No federal or State-listed species were observed or expected to occur on the proposed project site. The proposed project is not located within any U.S. Fish and Wildlife Service (USFWS) designated critical habitats. With the exception of the above-mentioned oak trees, no other nonlisted sensitive species or California Species of Special Concern were observed on the project site during the biological survey.

Local Ordinances and Policies

Three local ordinances are applicable to biological resources occurring on the proposed project site: Calabasas Municipal Code Sections 17.54.090 (D), 17.52.050 (A)(2), and 17.26.070.

- Section 17.54.090 (D) – Setbacks for cut and fill slopes: No grading shall occur within 100 feet of an environmentally sensitive habitat area, or from the top of the bank of a watercourse as determined by the city engineer, unless the grading is approved as a discretionary project in compliance with Section 17.52.050 (A)(2).
- 17.52.050 (A)(2) – Grading permit approval and issuance: Discretionary projects are those grading projects that are not ministerial or categorically exempt and may be approved only when the city engineer determines that the proposed grading conforms with all applicable provisions of the General Plan and applicable development codes. The extent and nature of the proposed grading must be appropriate to the proposed use and will not create site disturbance greater than that required for the use. Proposed grading cannot result in erosion, stream sediment, or other adverse off-site effects or hazards to life or property. Additionally, the proposed grading cannot create substantial adverse long-term visual effects visible from off site.
- 17.26.070 – Oak trees; oak tree permit: Any person or entity that owns, controls, or has custody or possession of any real property in the city must maintain all oak trees in good health in accordance with the most current Oak Tree Preservation and Protection Guidelines (Guidelines) adopted by council Resolution 91-36. An oak tree permit is required for the alteration of any oak tree on any real property within the city pursuant to the provisions of the city oak tree ordinance and the Guidelines. Permit processing requires that the applicant submit all information required by the Guidelines and pay appropriate filing fees to the city.

An oak tree permit may be approved by the city based on at least one of the following findings: (1) The request to remove an oak tree is warranted to enable reasonable and conforming use of the subject property, which would otherwise be prevented by the presence of the oak tree(s) in question;(2) the request to alter or encroach within the protected zone of an oak tree habitat is warranted to enable reasonable and conforming use of the property, which would otherwise be prevented by the presence of the oak tree habitat; (3) the condition or location of the oak tree habitat requires altering to maintain or aid its health, balance, or structure; (4) the condition or location of the oak tree habitat warrants removal due to disease, dangerous condition, proximity to existing structures, high pedestrian traffic

areas when such conditions are deemed unsafe and cannot be remedied through reasonable preservation and/or prevention measures; and (5) removal or altering of the oak tree(s) will have minimal impact on the total hardwood canopy with special emphasis on associated tree growth and their natural regeneration, wildlife habitat and heritage oak trees.

The city also requires that the applicant submit an oak tree report, prepared by a city-qualified arborist. The report should at a minimum include: (1) An inventory of the individual oak trees associated with the project; (2) an oak tree location map indicating the current topography and proposed grading plan, the tag number, exact trunk location, dripline, and protected zone of each oak tree within the project area; (3) all proposed site development activities including, but not limited to, excavation for foundations, utilities corridors and construction access routes; (4) analysis of the potential impacts of the proposed development activities upon the oak trees; and (5) a mitigation program for proposed impacts as outlined in the Calabasas Municipal Code.

Wildlife

Evidence of wildlife common to urban areas was observed. Wildlife identified on site included American crow *(Corvus brachyrhynchos)*, Anna's hummingbird *(Calypte anna)*, acorn woodpecker *(Melanerpes formicivorus)*, northern mockingbird *(Mimus polyglottos)*, bushtit (*Psaltriparus minimus*), rock (feral) pigeon (*Columba livia)*, mourning dove *(Zenaida macroura)*, European starling *(Sturnus vulgaris)*, and house finch *(Carpodacus mexicanus)*. A red-tailed hawk *(Buteo jamaicensis)* was observed perched within a eucalyptus tree on the adjacent parcel near the northwest corner of the proposed project site. No raptor or other migratory bird nests were observed on site during the survey.

Nesting Birds

Large ornamental trees and oak trees such as those found on site may provide foraging, roosting, and nesting habitat for raptors such as hawks and owls, among other resident and migratory bird species. Under Sections 3503 and 3503.5 of the Migratory Bird Treaty Act, it is unlawful to take, possess, or destroy any bird of prey or the nests or eggs of any native bird species. Disturbance of any active bird nest during the breeding season, including active owl burrows, would be prohibited by law. The bird nesting season is typically between February and August. Consequently, it would be prudent to do any vegetation removal outside this period or conduct nesting bird surveys prior to vegetation removal.

Vegetation

The northern portion of the project site is currently developed as residential housing. Vegetation on the site is dominated by ornamental vegetation and nonnative turf grass. However, at least ten coast live oak trees were observed on the southern portion of the site. Most of the oak trees are located within the Calabasas Creek 40-foot vegetation zone identified in the Old Town Master Plan, which extends from the centerline of the creek. However, at least two of the oak trees are located within 100 feet of the top of the bank of Calabasas Creek. Development restrictions that may be associated with the existence of oak trees on site are discussed in detail below under Sensitive Species.

Among the ornamental tree and shrub species observed on the site are eucalyptus (*Eucalyptus* sp.), Modesto ash (*Fraxinus velutina)*, Lombardy poplar *(Populus nigra 'Italica')*, Plumb (*Prunus* sp.), Fig

(*Ficus* sp.), crape myrtle *(Lagerstroemia indica)*, oleander *(Nerium oleander)*, bougainvillea *(Bougainvillea* sp.), Algerian ivy *(Hedera canariensis)* and belladonna lily *(Amaryllis belladonna)*.

Sensitive Species

No sensitive animals were found on the project site. Several oak trees are located on the proposed project site, at least two of which are within the 100-foot protective zone setback from the top of the bank of Calabasas Creek, but more than 40 feet from the centerline of the creek. An oak tree permit will be required to remove or alter the existing oak trees on site. No other sensitive plant species were observed or are expected to occur on site. The project site is not located within designated critical habitat for any federally listed species.

Jurisdictional Waters

No jurisdictional waters regulated by the U.S. Army Corps of Engineers (Corps), California Department of Fish and Game (CDFG), or the Regional Water Quality Control Board (RWQCB) are present on site. However, Calabasas Creek, a perennial creek, flows adjacent to the southern boundary of the project site. Project-related impacts to the creek or the riparian vegetation associated with the creek would require authorization from the appropriate regulatory agencies.

CONCLUSIONS AND RECOMMENDATIONS

At least two oak trees would be affected by the project design as currently proposed. No other sensitive biological resources are known to occur on site. It is recommended that the current project design be modified where practicable in order to avoid on-site oak tree habitat. If the oak trees cannot be avoided, alteration of any oak tree habitat on site will require an oak tree permit, which will require the preparation of an oak tree report, including a mitigation and monitoring plan. LSA has a certified arborist on staff who can prepare the oak tree report.

Numerous large trees are present on site that may provide nesting habitat for raptors and other migratory birds protected under the Migratory Bird Treaty Act. Consequently, it would be prudent to do any vegetation removal outside the avian nesting period, which typically extends between February and August, or conduct nesting bird surveys prior to vegetation removal.

Please contact me at (949) 553-0666 if you have any questions about this biological resource assessment letter summary report.

Sincerely,

LSA ASSOCIATES, INC.

Leo Simone
Senior Biologist

LSA

LSA ASSOCIATES, INC.
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FT. COLLINS
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ROCKLIN

July 10, 2007

Mr. John Cotton
John Cotton Architects
3816 Main Street
Culver City, CA 90232

Subject: Oak Tree Report for the Proposed Senior Apartments, Calabasas Development, 4803 El Canon Avenue Project Site – LSA Project No. JCT0602

Dear Mr. Cotton:

This Oak Tree Report documents the findings of the on-site oak tree assessment conducted by LSA Associates, Inc. (LSA) for the purpose of identifying all oak trees within the property limits of the proposed Senior Apartments, Calabasas Development, at 4803 El Canon Avenue (the project site). Within the boundaries of the proposed project site, LSA located 14 coast live oak trees *(Quercus agrifolia)*, of which 13 had a diameter at breast height (DBH) of at least 2 inches. One of these trees is considered a heritage oak, with a diameter of 28 inches DBH. Based on the results of the field assessment, it is concluded that as currently designed, the proposed project will impact 14 coast live oak trees, including one heritage oak, located within the project footprint. In addition, there are 13 oak trees on the property immediately adjacent to the project site.

BACKGROUND

The City of Calabasas (City) Municipal Code Oak Tree Ordinance, Section 17.26070 states that "any person or entity that owns, controls, or has custody or possession of any real property in the city must maintain all oak trees in good health in accordance with the most current Oak Tree Preservation and Protection Guidelines (Guidelines) adopted by council Resolution 91-36. An oak tree permit is required for the alteration of any oak tree on any real property within the city pursuant to the provisions of the city oak tree ordinance and the Guidelines. Permit processing requires that the applicant submit all information required by the Guidelines and pay appropriate filing fees to the city."

Therefore, an oak tree inventory was conducted to comply with the requirements of the City Municipal Code Oak Tree Ordinance, Section 17.26070, which requires that an Oak Tree Report be completed by a City-qualified arborist. The inventory was conducted to locate oak trees within the project site that could potentially be impacted by project construction, analyze potential impacts of the proposed development activities upon the oak trees, and provide a mitigation program for the proposed impacts.

STUDY AREA

LSA was retained by John Cotton Architects to prepare an Oak Tree Report of the approximately 0.96-acre proposed Senior Apartment Development project site (Assessor's Parcel Number 2068-004-026) located at 4803 El Canon Avenue in the City of Calabasas, Los Angeles County. Specifically, the project area is mapped within the northwest quarter of Section 23 of Township 1 North, Range 17 West, of the *Calabasas, California* 7.5′ USGS quadrangle map (Figure 1, attached).

METHODS

An on-site oak tree inventory survey was conducted on November 3, 2006, by LSA biologists Blake Selna (ISA Certified Arborist WE-7397A) and Leo Simone. The entire project site was surveyed on foot, and all coast live oak trees were inventoried, assigned a number, and evaluated for the following attributes:

- Location (using a global positioning system [GPS])
- Diameter at 4.5 feet above average natural grade (DBH)
- Diameter of the canopy drip line
- Tree height
- Canopy dimensions, eight compass points
- Percent canopy cover
- Condition/health

DISCUSSION

A total of 14 coast live oak trees were inventoried and evaluated. Figure 2 shows the location of the inventoried trees within the proposed project limits as well as the approximate location and canopy of oak trees on adjacent property. Figures 3–7 show photographs of the trees. Because of intertwined canopies and limited vantage points, the individual trees were difficult to photograph in some cases. The locations were determined by GPS and confirmed using survey data provided by the Mollenhauer Group. The majority of these trees are located along the southern and western boundaries of the project site, adjacent to Calabasas Creek and the adjacent apartment building. The diameters ranged from 1.5 to 28.0 inches DBH, the canopy drip lines ranged from 7 to 54 feet in diameter, and the heights ranged from 9 to 53 feet. Tables A and B, attached, summarize the inventory results and relevant data for the oak trees located on the proposed project site. Table A contains the DBH, canopy dimensions, and vertical elevation of grade-to-branch structure. Table B contains the approximate Production Replacement Cost for the trees that will be removed. Production replacement cost (PRC) values were calculated based on the Guidelines and estimates from Valley Crest Nursery in Fillmore, California.

All of the oak trees were healthy and vigorous at the time of the survey and did not exhibit signs of infestation or disease. Trees 1 through 6 and 8 through 10 have ivy growing on them, which can be detrimental to the health and structural integrity of the trees if it goes unchecked. All of the oak trees

except number 13 have relatively poor growth form due to other adjacent trees and/or structures on the site (e.g., chain-link fence, outbuildings).

Besides the 14 coast live oak trees identified on site, an additional 47 nonnative, mostly ornamental trees were observed on site. Among the tree species most frequently found on site were Chinese evergreen elm *(Ulmus parvifolia)*, ash (*Fraxinus* spp.), and crape myrtle *(Lagerstroemia indica)*.

Oak trees 1 through 6 and 14 are growing along a perennial drainage (Calabasas Creek) and may be considered oak riparian habitat by the California Department of Fish and Game (CDFG). The trees on the west side of the fence would definitely be under CDFG jurisdiction. If the trees are to be impacted by the proposed project, the CDFG will require a 1602 Notice of Streambed Alteration for those impacts, including a document addressing the requirements of the California Environmental Quality Act (CEQA).

Based on the grading plans, it appears that six of the inventoried oaks (Nos. 7, 8, 9, 10, 12, and 13) will be removed for the construction of the proposed building and/or underground parking garage. The trees to be removed are outside of the likely CDFG jurisdictional limits.

No impacts within the protected zone of trees 1–6 and 14 are proposed; therefore, no cross-sectional analysis is provided as part of this report.

MITIGATION PROGRAM

The City's oak tree permit conditions require that a mitigation program be developed for proposed impacts. Several options are available to offset the loss of oak tree inventory on the site. A loss in oak tree inventory on the site shall be described in terms of species, total inches of diameter aggregate loss, and the magnitude of the impacts. The City may attach the following conditions, or a combination thereof, on an oak tree permit that may include the following:

1. A cash fee paid to the oak tree mitigation fund, which shall include maintenance and monitoring costs. The determination of the dollar value, cost or loss shall be calculated in accordance with the most current mitigation schedule established by the City Council. The Council shall review and approve such fees at least once every three years. The City may accept appropriate dedication of land in lieu of cash.
2. One inch of oak tree diameter shall be planted for each inch of tree removed. Locations appropriate for new replacement plantings may be proposed by the applicant and approved by the City arborist prior to the granting of a permit based on the potential for long-term viability.
3. Replacement or placement of additional oak trees, associated hardwood canopy, land, or wildlife habitat to proportionally offset the impacts associated with the loss of oak trees, limbs, roots, or potential long-term adverse impacts due to alterations or encroachment within the protected zone. Locations appropriate to such new plantings may be proposed by the applicant and must be approved by City staff prior to the granting of a permit based on the potential for long-term viability.
4. Relocation of oak trees over 10 inches in diameter shall not be considered as mitigation.
5. Restrictions on construction activities within the protected zone of oak trees.

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11. Recordation. As deemed necessary by the City or as set forth in the City's Municipal Code, conditions of approval for an oak tree permit shall be recorded. The specific wording of the recorded permit shall be subject to the approval of the director.

Mitigation for Retained Oak Trees

For any oak tree whose removal can be avoided, the following guidelines shall be followed to avoid impacts to the retained oak trees:

1. No construction activities or placement of structures shall occur within the drip line of any retained oak tree.
2. Landscaping, trenching or irrigation systems shall not be installed within the oak tree drip line.
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7. Sedimentation and siltation shall be controlled to avoid filling around bases of oak trees.
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Monitoring Removed Oak Trees

9. Monitoring activities for removal of oak trees shall consist of the following:

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11. All oak tree removals will be verified to check for damage to any retained oak trees growing in close association to the removed tree.

12. Mitigation may be required for damage to any retained oak tree.

Mitigation Planting

The impacts to any oak trees as a result of this project shall be mitigated by planting container-grown oak trees. To the greatest extent practicable, replacement trees will be planted on site. The balance of the replacement trees will be planted within the City. The proper planting locations should be determined by a qualified arborist or landscape contractor. Irrigation for the planted oak trees should be available for the first two to three years to increase the survival rate. The planted trees should be monitored for soil moisture level, pest/disease infestation, and herbivory.

CONCLUSIONS AND RECOMMENDATIONS

Based on the current grading plan, because six oak trees would be affected by the project design, an oak tree permit will be required. One oak tree with a 28-inch DBH is considered a heritage oak by the City and may require special consideration. The total combined DBH for the trees proposed for removal is 82.5 inches. Mitigation is proposed through the planting of a cumulative DBH of 82.5 inches of container-grown trees on lands owned by the City or in otherwise preserved lands. Monitoring and bonding shall be provided per the Guidelines.

In addition to the mitigation measures for retained trees listed above, all ivy should be removed from retained trees by a qualified landscape contractor. Ivy removal must be done carefully, taking great care to avoid damaging oak bark or branches. Use of a selective herbicide may be possible; a qualified pest control advisor should be consulted regarding any pesticide.

In addition to the 14 oak trees, numerous large trees are present on site that may provide nesting habitat for raptors and other migratory birds protected under the federal Migratory Bird Treaty Act (MBTA). Consequently, it would be prudent to do any vegetation removal outside the avian nesting period, which typically extends between January and August, or conduct nesting bird surveys prior to vegetation removal. All vegetation removal should be monitored by a qualified biologist to ensure that no oaks are inadvertently damaged or removed and to ensure compliance with the MBTA.

Additionally, the oak trees are located along Calabasas Creek and would be considered oak riparian habitat by the CDFG. If the trees are to be impacted by the grading operation, the CDFG will require a 1602 Notice of Streambed Alteration for those impacts.

Please contact me at (949) 553-0666 if you have any questions about this oak tree report.

Sincerely,

LSA ASSOCIATES, INC.

Blake Selna
Senior Biologist
ISA Certified Arborist WE-7397-A

Attachments: Figures 1-7
Table A: Tree Attribute Table
Table B: PRC Values

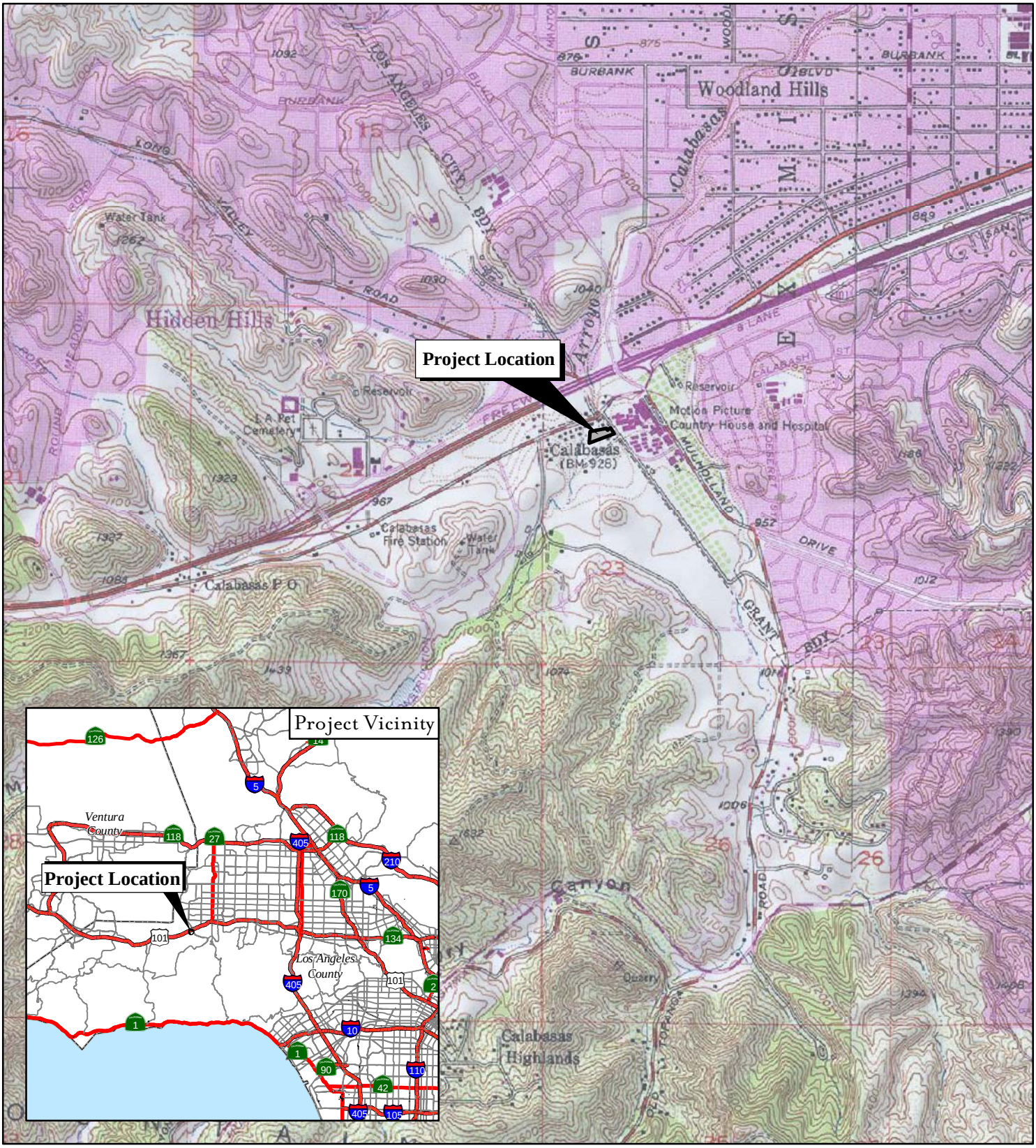

FIGURE 1

LSA

Project Location

0 1,000 2,000 Feet

Senior Apartments
4803 El Canon Ave

Project Location Map

SOURCE: USGS 7.5' QUAD - CALABASAS ('67), CANOGA PARK ('67); CALIF.
I:\JCT0601\GIS\Fig1.mxd (08/23/06)

LSA

FIGURE 2

Oak Tree Protection Fence
Proposed Grading Limits
Estimated Property Boundary**
Estimated Centerline of Calabasas Creek
40' Setback from Creek Centerline

Protected Zone
On-site Canopy Limits
Off-site Canopy Limits*

Oak Tree Trunk Location (with ID)
Tree to Remain (1-6, 14)
Tree to be Removed (7-13)

N
0 25 50 Feet

** Property boundary was derived from City of Calabasas dataviewer, GPS coordinates, and CAD plans

* Part of canopy is on property, but tree trunk is off of the property.

Senior Apartments
4803 El Canon Ave

Oak Tree Survey

SOURCE: Los Angeles County (2007); City of Calabasas parcel viewer (2006); Tree Canopy/Trunks: LSA (11/06 - GPS and field mapping); Mollenhauer Group (6/07); John Cotton FAIA Architects (6/07)

i:\jct0601\gis\Figure2_ProjectLocationMap.mxd (7/5/07)

Photo 1 - Trunks and canopy of trees 1 - 6 from approximately 25 feet north.

Photo 2 - Trunks of trees 1 - 4 from approximately 20 feet north of the trees.

LSA

FIGURE 3

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

Photo 3 - Trunks of trees 5 and 6 from approximately 15 feet north.

Photo 4 - Tree 7 from 45 feet east of the tree.

LSA

FIGURE 4

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

Photo 5 - Trees 8 - 10 from approximately 35 feet north of the trees.

Photo 6 - Tree 12 from 60 feet west of the tree.

LSA

FIGURE 5

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

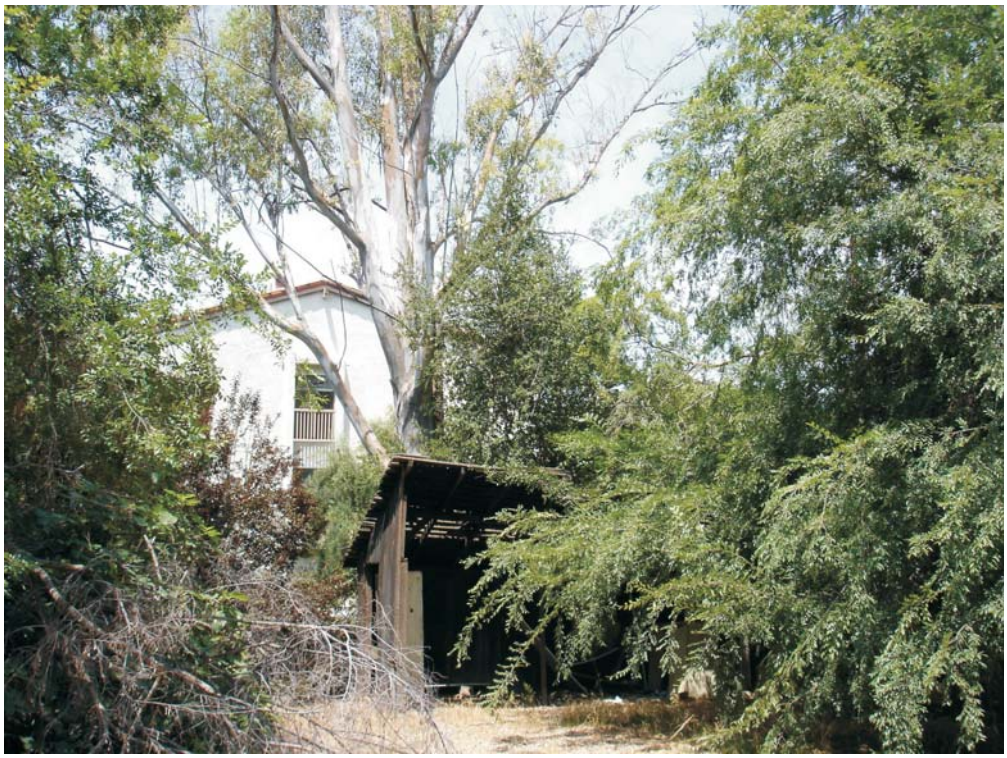

Photo 7 - Tree 14 from 50 feet east of the tree.

Photo 9 - Tree 13 from 60 feet northeast of the tree.

LSA

FIGURE 6

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

Photo 8 - The trunk of tree 14 from 8 feet north of the tree.

LSA

FIGURE 7

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

I:\JCT0602\G\Photos-e.cdr (7/9/07)

TABLE A: Tree Attribute Table

Tree Number	Species	DBH (inches)	Height (feet)	Canopy Dimensions (extension from trunk in feet)								Elevation of first branches (in feet)							
				N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	NW
1	*Quercus agrifolia*	2.5	30	4	3	5	4	6	7	5	2	10	10	6	8	6	10	10	10
2	*Quercus agrifolia*	4	30	21	21	12	7	7	10	10	15	10	10	10	10	8	10	10	10
3	*Quercus agrifolia*	5,2.5	35	15	18	12	7	2	4	6	15	8	8	8	8	8	8	8	8
4	*Quercus agrifolia*	3.5	35	3	3	7	10	10	9	5	3	14	14	14	14	14	14	14	14
5	*Quercus agrifolia*	7.5	40	10	10	6	6	8	8	10	9	7	7	7	7	7	7	7	7
6	*Quercus agrifolia*	6	39	18	6	3	0	0	0	10	18	12	12	12	12	12	12	12	12
7	*Quercus agrifolia*	11,10	28	9	6	15	15	21	24	30	18	9	9	9	9	9	9	9	9
8	*Quercus agrifolia*	5.5	36	9	17	21	17	14	11	3	6	12	12	12	12	12	12	12	12
9	*Quercus agrifolia*	9.5	30	2	8	15	20	24	16	8	2	8	8	8	8	8	8	8	8
10	*Quercus agrifolia*	4.5	30	1	9	15	12	12	7	3	3	12	12	12	12	12	12	12	12
11	*Quercus agrifolia*	1.5	9	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3
12	*Quercus agrifolia*	7,3,4	20	12	1	3	1	12	18	21	12	3	3	none	none	8	8	8	none
13	*Quercus agrifolia*	28	53	24	24	21	24	28	15	24	30	20	20	8	12	10	10	10	20
14	*Quercus agrifolia*	5.5, 5.5	34	12	11	10	11	12	11	12	10	5	5	5	5	5	5	5	5

NOTES

Tree Number	
1	Part of continuous canopy (mixed native and ornamental species) in southwest corner of site. 100% overall canopy; individual oaks range from 50–80% density.
2	
3	
4	
5	
6	
7	Canopy very unevenly distributed to the west and southwest. Growth form is poor due to adjacent ornamental trees and a chicken coop. Canopy 40–85% dense.
8	Trunk adjacent to chainlink fence. Leaning badly. Trunk forms an approximately 60 degree angle with the ground. Majority of canopy is overhanging adjacent to the parking lot to the south and east. North and west quadrant lack canopy. 50–80% shade on south and east.
9	Trunk adjacent to chainlink fence. Majority of canopy is overhanging adjacent to the parking lot to the south and east. North half lacks canopy. 40–60% shade on south half.
10	Adjacent to chainlink fence. Fence is wired to the tree. Canopy is leaning far to the east of the trunk. East half of canopy 50–75% shaded.
11	Less than 2 inch DBH.
12	Trunk is adjacent to a large poplar. All of the canopy leans far to the south and west. South, southwest, and west canopy quadrants are 80%+ dense. North and northeast, 20–40% dense. East and southeast lack canopy.
13	Very large spreading oak. Canopy density: N-70, NE-80, E-80, SE-80, S-45, SW-45, W-40, NW-70.
14	Between existing shed and fence. Canopy density: approximately 50%.

TABLE B: Production Replacement Cost (PRC) Value Table

Tree Number	Species	DBH (inches)	PRC Calculations	PRC Value
7	*Quercus agrifolia*	11,10	($4,700 + $2,700(21-7))(0.1)(0.80	$3,400
8	*Quercus agrifolia*	5.5	per quote from Valley Crest	$900
9	*Quercus agrifolia*	9.5	($4,700 + $2,700(9.5-7))(0.1)(0.8(	$916
10	*Quercus agrifolia*	4.5	per quote from Valley Crest	$900
12	*Quercus agrifolia*	7,3,4	($4,700 + $2,700(14-7))(0.1)(0.80	$1,888
13	*Quercus agrifolia*	28	($4,700 + $2,700(28-7))(0.1)(0.95	$5,833

LSA

LSA ASSOCIATES, INC.
20 EXECUTIVE PARK, SUITE 200
IRVINE, CALIFORNIA 92614

949.553.0666 TEL
949.553.8076 FAX

BERKELEY
CARLSBAD
COLMA
FORT COLLINS
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO

October 4, 2007

Mr. John Cotton
John Cotton Architects
3816 Main Street
Culver City, CA 90232

Subject: Oak Tree Report for the Proposed Senior Apartments, Calabasas Development, 4803 El Canon Avenue Project Site – LSA Project No. JCT0602

Dear Mr. Cotton:

This Oak Tree Report documents the findings of the on-site oak tree assessment conducted by LSA Associates, Inc. (LSA) for the purpose of identifying all oak trees within the property limits of the proposed Senior Apartments, Calabasas Development, at 4803 El Canon Avenue (the project site). Within the boundaries of the proposed project site, LSA located 14 coast live oak trees *(Quercus agrifolia)*, of which 13 had a diameter at breast height (DBH) of at least 2 inches. Tree number 11 has a DBH of 1.5 inches, which does not qualify for coverage under the City ordinance. One of these trees is considered a heritage oak, with a diameter of 28 inches DBH. Based on the results of the field assessment, it is concluded that as currently designed, the proposed project will impact 14 coast live oak trees, including one heritage oak, located within the project footprint. In addition, there are 13 oak trees on the property immediately adjacent to the project site.

BACKGROUND

The City of Calabasas (City) Municipal Code Oak Tree Ordinance, Section 17.26070 states that "any person or entity that owns, controls, or has custody or possession of any real property in the city must maintain all oak trees in good health in accordance with the most current Oak Tree Preservation and Protection Guidelines (Guidelines) adopted by council Resolution 91-36. An oak tree permit is required for the alteration of any oak tree on any real property within the city pursuant to the provisions of the city oak tree ordinance and the Guidelines. Permit processing requires that the applicant submit all information required by the Guidelines and pay appropriate filing fees to the city."

Therefore, an oak tree inventory was conducted to comply with the requirements of the City Municipal Code Oak Tree Ordinance, Section 17.26070, which requires that an Oak Tree Report be completed by a City-qualified arborist. The inventory was conducted to locate oak trees within the project site that could potentially be impacted by project construction, analyze potential impacts of the proposed development activities upon the oak trees, and provide a mitigation program for the proposed impacts.

STUDY AREA

LSA was retained by John Cotton Architects to prepare an Oak Tree Report of the approximately 0.96-acre proposed Senior Apartment Development project site (Assessor's Parcel Number 2068-004-026) located at 4803 El Canon Avenue in the City of Calabasas, Los Angeles County. Specifically, the project area is mapped within the northwest quarter of Section 23 of Township 1 North, Range 17 West, of the *Calabasas, California* 7.5' USGS quadrangle map (Figure 1, attached).

METHODS

An on-site oak tree inventory survey was conducted on November 3, 2006, by LSA biologists Blake Selna (ISA Certified Arborist WE-7397A) and Leo Simone. The entire project site was surveyed on foot, and all coast live oak trees were inventoried, assigned a number, and evaluated for the following attributes:

- Location (using a global positioning system [GPS])
- Diameter at 4.5 feet above average natural grade (DBH)
- Diameter of the canopy drip line
- Tree height
- Canopy dimensions, eight compass points
- Percent canopy cover
- Condition/health
- Trees were tagged with numbered aluminum tags attached to the trees on their north sides

DISCUSSION

A total of 14 coast live oak trees were inventoried and evaluated. Figure 2 shows the location of the qualifying, inventoried trees within the proposed project limits as well as the location and canopy of oak trees on adjacent property. Tree number 11 is not shown on the exhibits because it does not satisfy the size criterion for coverage under the ordinance. On Figures 2 and 2a, the trunk locations, represented by the numbered icons, are displayed in the actual location within the canopy. Figure 2 shows the aerial photograph, the property boundary, creek setback, and the tree locations at a scale of 1"=50'. Figure 2a shows the location of proposed improvements and the tree locations at a scale of 1"=20'. The measured dripline (pink) and the protected zone (green hatching) are also displayed. The trunk locations were verified using the civil survey data provided by the Mollenhauer Group. The canopy data were collected by LSA using a Trimble GeoXH GPS unit as well as physical measurements taken during the field visit. Data were post-processed to sub-meter accuracy. Figures 3–7 show photographs of the trees. Because of intertwined canopies and limited vantage points, the individual trees were difficult to photograph in some cases.

The majority of these trees are located along the southern and western boundaries of the project site, adjacent to Calabasas Creek and the adjacent apartment building. The diameters ranged from 1.5 to 28.0 inches DBH, the canopy drip lines ranged from 7 to 54 feet in diameter, and the heights ranged from 9 to 53 feet. Tables A and B, attached, summarize the inventory results and relevant data for the

oak trees located on the proposed project site. Table A contains the DBH, canopy dimensions, and vertical elevation of grade-to-branch structure. Table B contains the approximate Production Replacement Cost for the trees that will be removed. Production replacement cost (PRC) values were calculated based on the Guidelines and estimates from Valley Crest Nursery in Fillmore, California.

All of the oak trees were healthy and vigorous at the time of the survey and did not exhibit signs of infestation or disease. Trees 1 through 6 and 8 through 10 have ivy growing on them, which can be detrimental to the health and structural integrity of the trees if it goes unchecked. All of the oak trees except number 13 have relatively poor growth form due to other adjacent trees and/or structures on the site (e.g., chain-link fence, outbuildings).

Besides the 14 coast live oak trees identified on site, an additional 47 nonnative, mostly ornamental trees were observed on site. Among the tree species most frequently found on site were Chinese evergreen elm *(Ulmus parvifolia)*, ash (*Fraxinus* spp.), and crape myrtle *(Lagerstroemia indica)*.

Oak trees 1 through 6 and 14 are growing along a perennial drainage (Calabasas Creek) and may be considered oak riparian habitat by the California Department of Fish and Game (CDFG). The trees on the west side of the fence would definitely be under CDFG jurisdiction. If the trees are to be impacted by the proposed project, the CDFG will require a 1602 Notice of Streambed Alteration for those impacts, including a document addressing the requirements of the California Environmental Quality Act (CEQA).

Based on the grading plans, it appears that sevem of the inventoried oaks (Nos. 7, 8, 9, 10, 11, 12, and 13) will be removed for the construction of the proposed building and/or underground parking garage. Because tree number 11 has a DBH of 1.5 inches, no permit or mitigation is required for that particular tree. The trees to be removed are outside of the likely CDFG jurisdictional limits.

No impacts within the protected zone of trees 1–6 and 14 are proposed; therefore, no cross-sectional analysis is provided as part of this report.

MITIGATION PROGRAM

The City's oak tree permit conditions require that a mitigation program be developed for proposed impacts. Several options are available to offset the loss of oak tree inventory on the site. A loss in oak tree inventory on the site shall be described in terms of species, total inches of diameter aggregate loss, and the magnitude of the impacts. The City may attach the following conditions, or a combination thereof, on an oak tree permit that may include the following:

1. A cash fee paid to the oak tree mitigation fund, which shall include maintenance and monitoring costs. The determination of the dollar value, cost or loss shall be calculated in accordance with the most current mitigation schedule established by the City Council. The Council shall review and approve such fees at least once every three years. The City may accept appropriate dedication of land in lieu of cash.
2. One inch of oak tree diameter shall be planted for each inch of tree removed. Locations appropriate for new replacement plantings may be proposed by the applicant and approved by the City arborist prior to the granting of a permit based on the potential for long-term viability.

3. Replacement or placement of additional oak trees, associated hardwood canopy, land, or wildlife habitat to proportionally offset the impacts associated with the loss of oak trees, limbs, roots, or potential long-term adverse impacts due to alterations or encroachment within the protected zone. Locations appropriate to such new plantings may be proposed by the applicant and must be approved by City staff prior to the granting of a permit based on the potential for long-term viability.
4. Relocation of oak trees over 10 inches in diameter shall not be considered as mitigation.
5. Restrictions on construction activities within the protected zone of oak trees.
6. Remedial maintenance programs to improve the health of existing oak trees.
7. Monitoring shall be conducted during all grading and construction activities at intervals warranted by the site conditions and level of activity. The monitoring program shall consist of quantitative and qualitative observations useful in identifying stress-related responses of oak trees. Monitoring activities shall be performed in accordance with the procedures adopted in the guidelines. Following construction, annual monitoring shall be performed for a minimum of five years as warranted by site conditions, to ensure continued health of the trees and habitat areas. A City-qualified arborist shall conduct all monitoring. Costs shall be borne by the applicant. Restitution or remediation shall be required, should a project fail to comply with the desired establishment goals. Information provided by monitoring shall be used in establishing realistic mitigation measures and to ensure the future of oak resources throughout the City. Criteria for evaluating the success of oak tree preservation and establishing associated vegetation shall be specified in the permit conditions. Remediation shall be required as necessary to enable a site to meet the establishment criteria.
8. Registration. All replacement oak trees shall be registered with the City in accordance with the guidelines.
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10. Bond. The City may require adequate security to ensure performance, correct construction procedures, reforestation, monitoring and maintenance, in an amount to be determined by the City.
11. Recordation. As deemed necessary by the City or as set forth in the City's Municipal Code, conditions of approval for an oak tree permit shall be recorded. The specific wording of the recorded permit shall be subject to the approval of the director.

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7. Sedimentation and siltation shall be controlled to avoid filling around bases of oak trees.
8. Construction fence shall be erected along the protected zone of retained oak trees to prevent encroachment into the protected area.

Monitoring Removed Oak Trees

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CONCLUSIONS AND RECOMMENDATIONS

Based on the current grading plan, because six oak trees would be affected by the project design, an oak tree permit will be required. One oak tree with a 28-inch DBH is considered a heritage oak by the City and may require special consideration. The total combined DBH for the trees proposed for removal is 82.5 inches. Mitigation is proposed through the planting of a cumulative DBH of 82.5 inches of container-grown trees on lands owned by the City or in otherwise preserved lands. Monitoring and bonding shall be provided per the Guidelines.

In addition to the mitigation measures for retained trees listed above, all ivy should be removed from retained trees by a qualified landscape contractor. Ivy removal must be done carefully, taking great care to avoid damaging oak bark or branches. Use of a selective herbicide may be possible; a qualified pest control advisor should be consulted regarding any pesticide.

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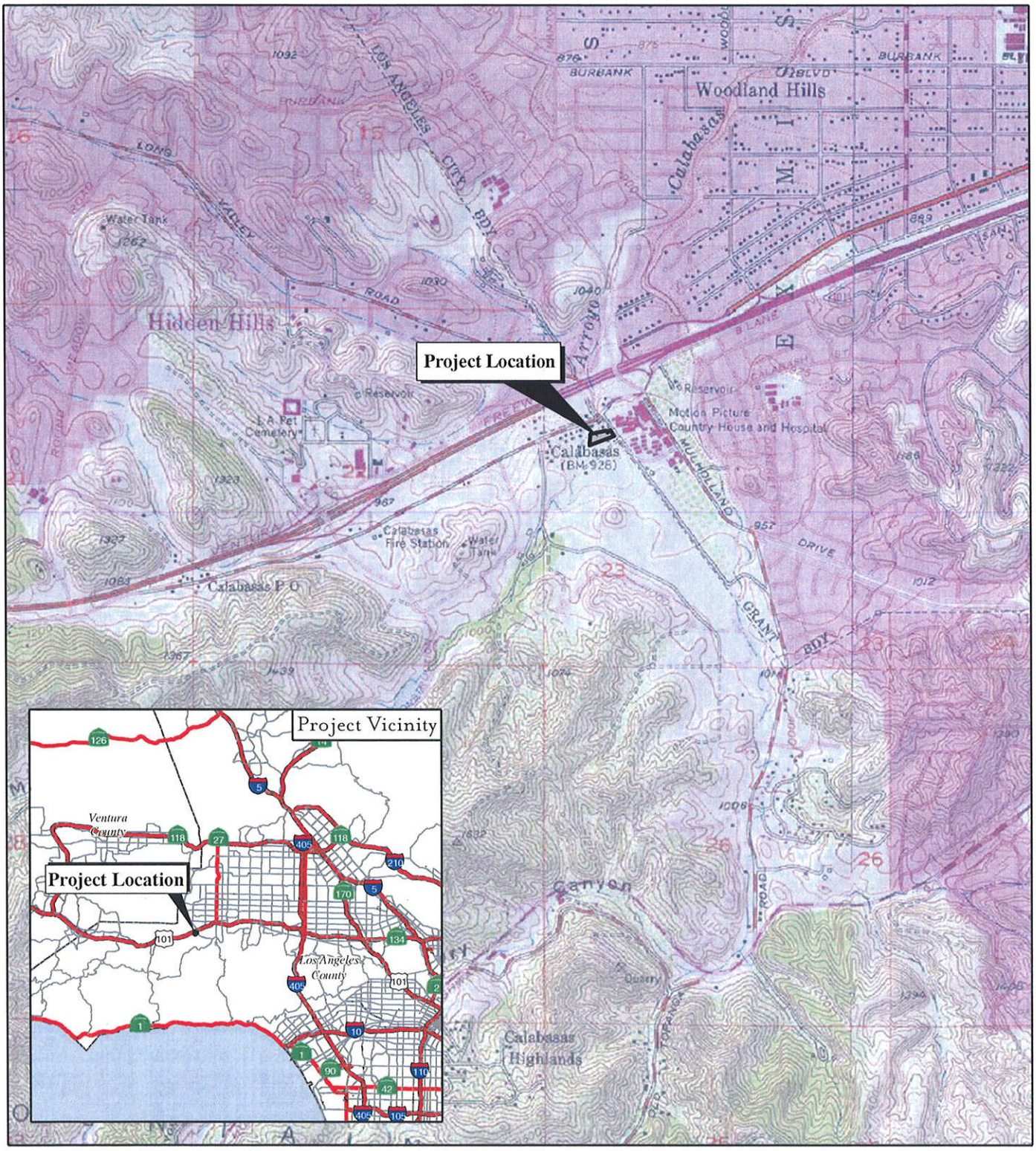

LSA

FIGURE 1

Senior Apartments
4803 El Canon Ave

Project Location Map

SOURCE: USGS 7.5' QUAD - CALABASAS ('67), CANOGA PARK ('67); CALIF.
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LSA

Oak Tree Protection Fence
Proposed Grading Limits
Estimated Property Boundary**
Estimated Centerline of Calabasas Creek
= = 40' Setback from Creek Centerline

Protected Zone
On-site Canopy Limits
Off-site Canopy Limits*

Oak Tree Trunk Location (with ID)
Tree to Remain (1-6, 14)
Tree to be Removed (7-13)

FIGURE 2

N

0 25 50 Feet

** Property boundary was derived from City of Calabasas dataviewer, GPS coordinates, and CAD plans

* Part of canopy is on property, but tree trunk is off of the property.

Senior Apartments
4803 El Canon Ave

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Photo 1 - Trunks and canopy of trees 1 - 6 from approximately 25 feet north.

Photo 2 - Trunks of trees 1 - 4 from approximately 20 feet north of the trees.

LSA

FIGURE 3

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

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Photo 3 - Trunks of trees 5 and 6 from approximately 15 feet north.

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Senior Apartments
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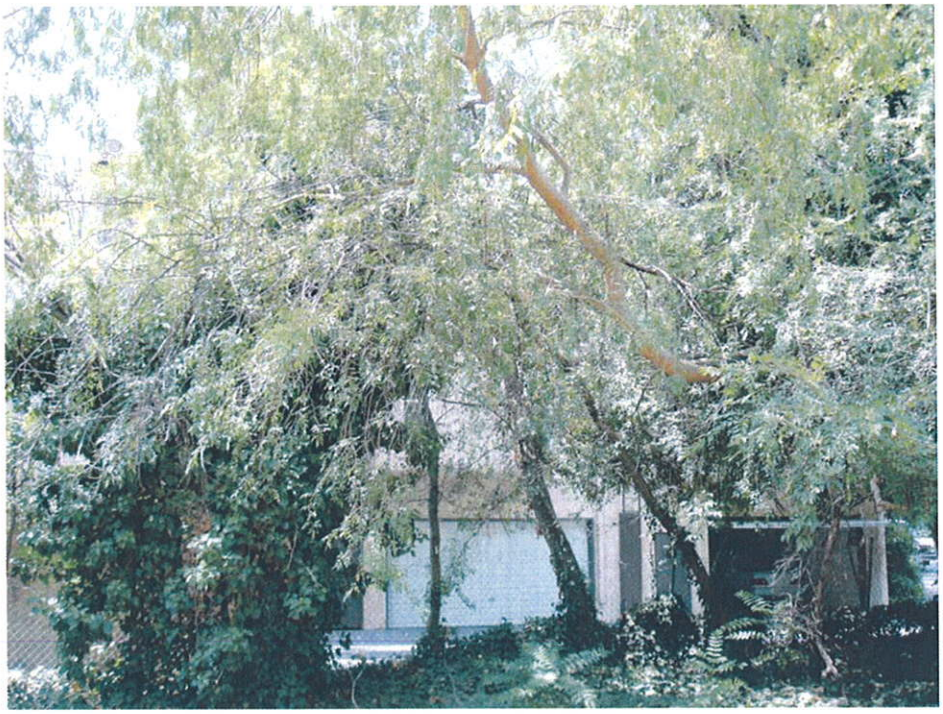

Photo 5 - Trees 8 - 10 from approximately 35 feet north of the trees.

Photo 6 - Tree 12 from 60 feet west of the tree.

LSA

FIGURE 5

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

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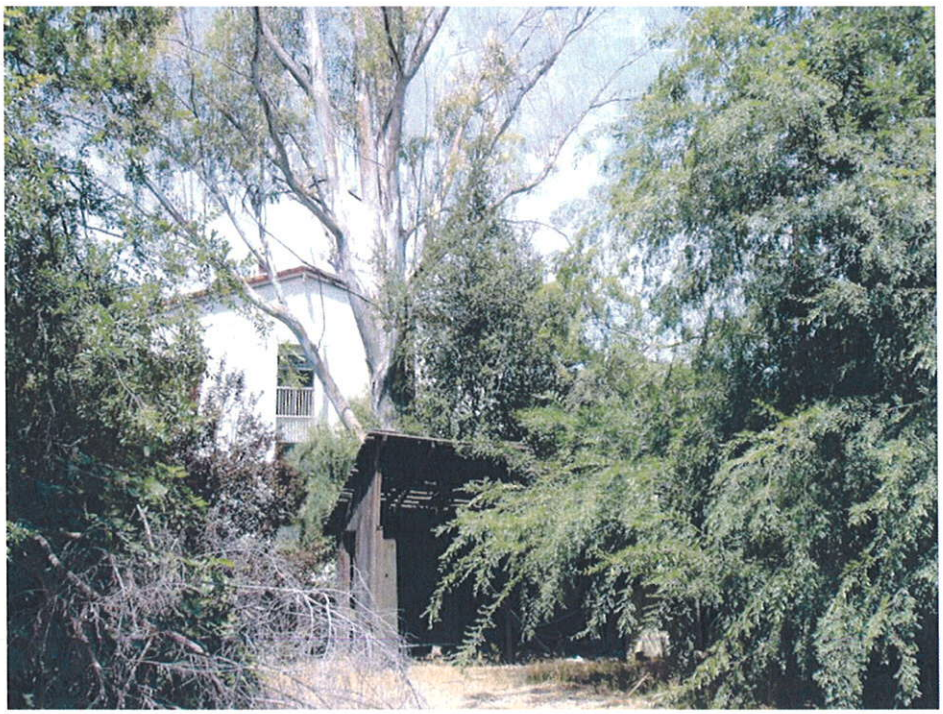

Photo 7 - Tree 14 from 50 feet east of the tree.

Photo 9 - Tree 13 from 60 feet northeast of the tree.

LSA

FIGURE 6

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

I:\JCT0602\G\Photos-d.cdr (7/9/07)

Photo 8 - The trunk of tree 14 from 8 feet north of the tree.

LSA

FIGURE 7

Senior Apartments
4803 El Canon Ave
Oak Tree Survey
Tree Photos

I:\JCT0602\G\Photos-e.cdr (7/9/07)

TABLE A: Tree Attribute Table

Tree Number	Species	DBH (inches)	Height (feet)	Canopy Dimensions (extension from trunk in feet)								Elevation of first branches (in feet)							
				N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	NW
1	*Quercus agrifolia*	2.5	30	4	3	5	4	6	7	5	2	10	10	6	8	6	10	10	10
2	*Quercus agrifolia*	4	30	21	21	12	7	7	10	10	15	10	10	10	10	8	10	10	10
3	*Quercus agrifolia*	5,2.5	35	15	18	12	7	2	4	6	15	8	8	8	8	8	8	8	8
4	*Quercus agrifolia*	3.5	35	3	3	7	10	10	9	5	3	14	14	14	14	14	14	14	14
5	*Quercus agrifolia*	7.5	40	10	10	6	6	8	8	10	9	7	7	7	7	7	7	7	7
6	*Quercus agrifolia*	6	39	18	6	3	0	0	0	10	18	12	12	12	12	12	12	12	12
7	*Quercus agrifolia*	11,10	28	9	6	15	15	21	24	30	18	9	9	9	9	9	9	9	9
8	*Quercus agrifolia*	5.5	36	9	17	21	17	14	11	3	6	12	12	12	12	12	12	12	12
9	*Quercus agrifolia*	9.5	30	2	8	15	20	24	16	8	2	8	8	8	8	8	8	8	8
10	*Quercus agrifolia*	4.5	30	1	9	15	12	12	7	3	3	12	12	12	12	12	12	12	12
11	*Quercus agrifolia*	1.5	9	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3
12	*Quercus agrifolia*	7,3,4	20	12	1	3	1	12	18	21	12	3	3	none	none	8	8	8	none
13	*Quercus agrifolia*	28	53	24	24	21	24	28	15	24	30	20	20	8	12	10	10	10	20
14	*Quercus agrifolia*	5.5, 5.5	34	12	11	10	11	12	11	12	10	5	5	5	5	5	5	5	5

NOTES

Tree Number	
1	Part of continuous canopy (mixed native and ornamental species) in southwest corner of site. 100% overall canopy; individual oaks range from 50–80% density.
2	
3	
4	
5	
6	
7	Canopy very unevenly distributed to the west and southwest. Growth form is poor due to adjacent ornamental trees and a chicken coop. Canopy 40–85% dense.
8	Trunk adjacent to chainlink fence. Leaning badly. Trunk forms an approximately 60 degree angle with the ground. Majority of canopy is overhanging adjacent to the parking lot to the south and east. North and west quadrant lack canopy. 50–80% shade on south and east.
9	Trunk adjacent to chainlink fence. Majority of canopy is overhanging adjacent to the parking lot to the south and east. North half lacks canopy. 40–60% shade on south half.
10	Adjacent to chainlink fence. Fence is wired to the tree. Canopy is leaning far to the east of the trunk. East half of canopy 50–75% shaded.
11	Less than 2 inch DBH.
12	Trunk is adjacent to a large poplar. All of the canopy leans far to the south and west. South, southwest, and west canopy quadrants are 80%+ dense. North and northeast, 20–40% dense. East and southeast lack canopy.
13	Very large spreading oak. Canopy density: N-70, NE-80, E-80, SE-80, S-45, SW-45, W-40, NW-70.
14	Between existing shed and fence. Canopy density: approximately 50%.

TABLE B: Production Replacement Cost (PRC) Value Table

Tree Number	Species	DBH (inches)	PRC Calculations	PRC Value
7	*Quercus agrifolia*	11,10	($4,700 + $2,700(21-7))(0.1)(0.80	$3,400
8	*Quercus agrifolia*	5.5	per quote from Valley Crest	$900
9	*Quercus agrifolia*	9.5	($4,700 + $2,700(9.5-7))(0.1)(0.8(	$916
10	*Quercus agrifolia*	4.5	per quote from Valley Crest	$900
12	*Quercus agrifolia*	7,3,4	($4,700 + $2,700(14-7))(0.1)(0.80	$1,888
13	*Quercus agrifolia*	28	($4,700 + $2,700(28-7))(0.1)(0.95	$5,833

Appendix C

Geotechnical Engineering Investigation

GEOTECHNICAL

ENGINEERING

INVESTIGATION

FILE NO. 19166

October 4, 2006

Geotechnologies, Inc.
Consulting Geotechnical Engineers

439 Western Avenue
Glendale, California 91201-2837
818.240.9600 • Fax 818.240.9675

October 4, 2006
File No. 19166

Thomas Safran and Associates
11812 San Vicente Boulevard, Suite 600
Los Angeles, California 90049

Attention: Thomas Safran

Subject: Geotechnical Engineering Investigation
Proposed Affordable Housing Development
4803 El Canon Avenue, Calabasas, California

Dear Mr. Safran:

This letter transmits the Geotechnical Engineering Investigation for the subject property prepared by Geotechnologies, Inc. This report provides geotechnical recommendations for the development of the site, including earthwork, seismic design, retaining walls, excavations, shoring and foundation design. In addition, a seismic hazard evaluation of the site was performed. Engineering for the proposed project should not begin until approval of the geotechnical investigation is granted by the local building official. Significant changes in the geotechnical recommendations may result due to the building department review process.

The validity of the recommendations presented herein is dependant upon review of the geotechnical aspects of the project during construction by this firm. The subsurface conditions described herein have been projected from limited subsurface exploration and laboratory testing. The exploration and testing presented in this report should in no way be construed to reflect any variations which may occur between the exploration locations or which may result from changes in subsurface conditions.

Should you have any questions, please feel free to contact the undersigned.

Respectfully submitted,
GEOTECHNOLOGIES, INC.

REGISTERED PROFESSIONAL ENGINEER
SCOTT W. MOORE
No. 2560
Exp. 12/31/06
GEOTECHNICAL
STATE OF CALIFORNIA

SCOTT W. MOORE
G.E. 2560

SWM:km

Distribution: (7) Addressee

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GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED AFFORDABLE HOUSING DEVELOPMENT

4803 EL CANON AVENUE

CALABASAS, CALIFORNIA

INTRODUCTION

This report presents the results of the geotechnical engineering investigation performed on the subject property. The purpose of this investigation was to evaluate the nature of the soils underlying the site, to ascertain their engineering properties, and to provide recommendations for site preparation, grading, foundation design, retaining wall design, expansive soils, resistance to lateral loading, floor slabs, temporary excavations and shoring. In addition, an evaluation of potential seismic hazards was performed.

This investigation included the excavation of ten exploratory borings and nine cone penetration test (CPT) soundings, collection of representative samples, laboratory testing, engineering analysis, review of available geotechnical engineering information and the preparation of this report. The boring and CPT locations are shown on the enclosed Plot Plan. The results of the exploration and the laboratory tests are shown in the Appendix of this report.

PROPOSED DEVELOPMENT

Information provided to this office concerning the proposed development was furnished by the client, and consisted of a survey of the subject site. The proposed development will consist of a four-story affordable housing building over a single level subterranean parking garage. Plans of the proposed structure are not yet available, but it will be assumed that the proposed subterranean garage will be approximately 10 feet below the existing site grade. The distance of proposed excavations from the property lines is unknown. Column loads are expected to be a maximum of approximately 200 to 300 kips, and wall loads are expected to be a maximum of approximately 4 to 6 kips per foot. These loads reflect the dead plus live load, of which the dead load is estimated to be approximately 75 percent. Grading will consist of excavations for the proposed subterranean parking garage, and wall backfilling.

Any changes in the design or location of the proposed structure, as outlined in this report, should be reviewed by this office. The recommendations contained herein should not be considered valid until reviewed, and modified or reaffirmed subsequent to such review.

SITE CONDITIONS

The subject property is located at 4803 El Canon Avenue, in the city of Calabasas, California. The site is bounded by an existing restaurant to the north, by El Canon Avenue to the east, by an asphalt driveway and two story apartments over at-grade parking to the south, and by two story apartments over an at-grade parking garage to the west.

At the time of exploration, the site was occupied by three single story residential structures. The site is roughly level, with no pronounced highs or lows. There is a creek channel located adjacent to the west end of the site. The flow line of the creek channel is a maximum of approximately 12 feet below the existing site grade, and is as close as approximately 15 feet from the property line.

Drainage is by sheetflow along the existing contours. Vegetation on the site consists of grasses, shrubs and trees.

EXPLORATION AND TESTING

The site was explored on April 12, May 1 and August 18, 2005, by drilling ten exploratory borings, and performing nine Cone Penetration Test (CPT) soundings. The borings were excavated with the aid of a truck mounted hollow stem auger drilling machine, and were approximately 8 inches in

diameter. The borings were excavated to depths between 27 and 42.5 feet below the existing ground surface. The CPT soundings were pushed to depths between approximately 24.5 and 34.5 feet below the ground surface. The boring and CPT locations are shown on the enclosed Plot Plan, and the soils encountered in the borings are logged on Plates A-1 through A-10. Printouts of the CPT sounding soil interpretations are also attached.

Samples of the soils encountered in the borings were collected and transported to the laboratory. The results of the laboratory tests are included in the Appendix of this report.

EARTH MATERIALS

Fill materials were encountered in the borings to depths between 2 and 7 feet below the existing site grade. The fill consists of silty sand and silty clay, which range from yellowish-brown to brown to dark gray, and are slightly moist to moist, and medium dense to stiff, fine grained, and contain varying amounts of gravel.

Native alluvial soils were encountered below the fill material in all borings. The native soils underlying the site range from silty clay, to clayey and silty sand, to sand, and are generally slightly moist and moist, grading to very moist, and then generally wet near and below groundwater level.

The native soils range from yellowish-brown to gray to orange-brown, and are medium dense to stiff and very dense, fine to coarse grained, and contain varying amounts of gravel and bedrock fragments.

Bedrock was encountered in nine of the ten borings at depths between approximately 17.5 and 32.5 feet below the ground surface. The bedrock consists of siltstone of the Modelo formation, and is gray to orange-brown to dark gray, moist, and very stiff to hard. The depth to bedrock generally increases towards the north and west.

The native soils and bedrock encountered are typical to this area of Calabasas. More detailed profiles of the earth materials encountered may be obtained from the individual boring logs, and CPT soundings.

GROUNDWATER

Groundwater was encountered during exploration predominantly at depths of approximately 13 to 14 feet below the existing ground surface. In Boring B5, excavated in the extreme northwest corner of the site, groundwater was encountered at a depth of 15.5 feet. According to the Seismic Hazard Evaluation Report of the Calabasas Quadrangle, by the State of California, Department of Conservation, Division of Mines and Geology, the historic high groundwater level in the vicinity of the site was about 10 feet below the ground surface.

Fluctuations in the level of groundwater may occur due to variations in rainfall, temperature, and other factors not evident at the time of the measurements reported herein. Fluctuations also may occur across the site. High groundwater levels can result in changed conditions.

CAVING

The borings were excavated utilizing 8-inch diameter, hollow-stem auger drilling equipment, in which the borings are cased by the augers, and caving is not possible. Unusually difficult drilling conditions were not encountered within the fill and native soils, but relatively difficult drilling conditions were encountered within some layers of bedrock.

REGIONAL GEOLOGY AND SEISMICITY

LOCAL AND REGIONAL SETTING

The subject site is located in the southwestern portion of the San Fernando Valley, within a narrow valley which drains in a northeasterly direction out of the northern portion of the Santa Monica Mountains. The site is underlain by alluvial sediments and bedrock. These sediments are typical to this area of Calabasas.

The subject site is located within the southern portion of the Transverse Ranges Geomorphic Province, and just north of the Peninsular Ranges Geomorphic Province. The Transverse Ranges are dominated by east-west trending, reverse and thrust faults. The Peninsular Ranges are dominated by northwest-trending, strike-slip faults. Tectonics of this region are controlled by the relative motion of the Pacific and North American crustal plates. The east-west trending structure of the Transverse Ranges province is believed to be a consequence of compression between the Pacific and North American plates and rotation of the province around the "Big Bend" in the San Andreas Fault system which is north of the Tejon Pass.

FAULTING AND SEISMICITY

Based on criteria established by the California Division of Mines and Geology (CDMG), faults may be categorized as active, potentially active or inactive (Jennings, 1994). Active faults are those which show evidence of surface displacement within the last 11,000 years (Holocene-age). Potentially-active faults are those that show evidence of last displacement within the last 1.6 million years (Quaternary-age). Faults showing no evidence of displacement within the last 1.6 million years may be considered inactive for most purposes, except for some critical structures.

Fault Rupture-Earthquake Fault Zones

In 1972, the Alquist-Priolo Special Studies Zones Act (now known as the Alquist-Priolo Earthquake Fault Zoning Act) was passed into law. The Act defines "active" and "potentially active" faults utilizing the same aging criteria as that used by the CDMG, indicated above. However, the established policy is to zone only those potentially active faults that have a relatively high potential for ground rupture. Therefore, not all faults termed "potentially active" by the CDMG are zoned under the Alquist-Priolo Act.

The subject site is not located within a State of California Earthquake Fault Zone, and no other known surface fault traces cross the subject site. Therefore, in the opinion of this firm, the possibility of surface fault rupture affecting the subject site should be considered remote.

Fault Locations

The computer program EQFAULT (Blake, 2000), was utilized to determine the location of faults within 60 miles of the subject site. This program utilizes the digitized CDMG fault location database. This data is presented on the attached Table I. The closest fault to the site, according to Blake (2000), is the Malibu Coast Fault, which is located 7.7 miles from the site. The other fault within 10 miles of the site according to the computer program EQFAULT (Blake, 2000) is the Santa Monica

Fault, located 9.5 miles from the site. A list of faults and fault segments within a 60-mile radius of the site and their distances to the site is presented in Table I in the Appendix, as compiled by the computer program EQFAULT (Blake, 2000).

HISTORIC SEISMICITY

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 within a radius of 60 miles of the site are shown on the attached Table II and Figure II. The computer program EQSEARCH (Blake, 2000) was used to compile this data. The historic seismic record indicates that 73 earthquakes of magnitude 5.0 and greater have occurred within 60 miles of the site between the years 1800 and 2006. Larger, more distant earthquakes, such as the 1857 Fort Tejon earthquake on the San Andreas Fault may have also affected the site.

GROUND MOTION

The seismic exposure of the site may be investigated in two ways. The deterministic method assigns a maximum earthquake to a fault derived from formulas which correlate the length of the fault trace to the theoretical maximum magnitude earthquake. The probabilistic method considers the

probability of exceedence of various levels of ground motion, and is calculated by consideration of risk contributions from regional faults.

Deterministic Method

Table I in the Appendix presents the deterministic site parameters, and was obtained utilizing the computer program EQFAULT (Blake, 2000). This program utilizes a "maximum" earthquake for each fault or fault segment. This "maximum" earthquake assigned to a fault is derived from formulas which correlate the length of the fault trace to the theoretical maximum magnitude earthquake. The "maximum" earthquake is the theoretical maximum event which could occur along a particular fault or fault segment. This "maximum" earthquake is also sometimes referred to as the "maximum credible" earthquake.

The ground motions resulting from this "maximum" earthquake were attenuated to the site utilizing the attenuation relation of Campbell and Bozorgnia, and modeling the soil underlying the site as an alluvium. The resulting peak horizontal accelerations are shown on Table I in the Appendix. These values are the mean plus one standard deviation.

Using the deterministic analysis, the "maximum" earthquake resulting in the highest peak horizontal accelerations at the site would be a magnitude 7.5 event on the Anacapa-Dume Fault. Such an event would be expected to generate a peak horizontal acceleration at the site on the order of 0.59g.

Probabilistic Method

The probabilistic method uses earthquake activity levels, earthquake magnitude distributions, fault lengths, and other parameters estimated for regional faults. The probability of exceedence of various levels of ground motion is calculated by summing the risk contributions of all of the regional faults to obtain values for the site.

For this study, 42 regional faults and fault segments were used. These 42 are within the specified search radius of 60 miles from the site. The typical ground motions used for design are those with 10 and 50 percent probability of exceedence in a 50 year period.

The computer program FRISKSP (Blake, 2000) was utilized to make these calculations, utilizing the attenuation relation of Campbell and Bozorgnia, and modeling the soils underlying the site as an alluvium. The ground motions with 10 and 50 percent probability of exceedence in a 50 year period at the subject site are 0.40g and 0.24g respectively.

SECONDARY SEISMIC EFFECTS

In addition to possible strong ground motions at the site, other secondary effects of a strong nearby earthquake were considered. These include liquefaction, landsliding, flooding and earthquake-induced settlement.

Liquefaction

Liquefaction involves a sudden loss in strength of a saturated, cohesionless soil which is caused by shock or strain and results in temporary transformation of the soil to a fluid mass. The surface effects of liquefaction typically take the form of sand boils, differential ground settlement, or lateral spreading.

Liquefaction typically occurs in areas where the groundwater is less than 50 feet from the surface, and where the soils are composed of poorly consolidated, fine to medium-grained sand. In addition to the necessary soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to initiate liquefaction.

The State of California Seismic Hazard Zone Map of the Calabasas quadrangle indicates that the site is within a potentially liquefiable area. This determination is based on groundwater depth records,

soil type and distance to a fault capable of producing a substantial earthquake. Groundwater was encountered in the borings predominantly at a depth of approximately 13 to 14 feet below the existing site grade, however, the liquefaction analysis of the site was performed by conservatively assuming a potential high groundwater level at the historic high level of 10 feet below the existing site grade.

Liquefaction analysis was performed on CPT 2 and 3, which were performed at the western end of the site, where the alluvium was the deepest. The CPT data was analyzed utilizing a spreadsheet program developed based on the published article, "Evaluating Cyclic Liquefaction Potential Using the Cone Penetration Test", by P.K. Robertson and C.E. Wride (1998), to estimate the grain characteristics directly from the CPT data and to incorporate the interpreted results into evaluating the resistance to cyclic loading.

It should be noted that variable Standard Penetration Test blow counts were obtained in some borings excavated in relatively close proximity. This would seem to indicate highly variable soil conditions, and/or possible variations in drilling equipment and operator procedures. For these reasons, liquefaction analysis was performed utilizing the CPT data.

As provided in the Seismic Hazard Zone Report by CDMG, a peak ground acceleration of 0.45g (the peak ground acceleration that would have a 10 percent probability of exceedance in 50 years) is

utilized in the enclosed liquefaction analyses. In addition, a Magnitude Scaling Factor of 7.3 was also utilized.

The results of the liquefaction analysis performed based on the CPT soundings, which provide a continuous profiling of the underlying earth materials based on correlations between cone tip resistance and friction ratio, indicate that factor of safeties (the ratio of the cyclic stress ratio to cause liquefaction to the earthquake-induced cyclic stress ratio) of some soil layers underlying the site are below 1.25, and are, therefore, considered to be potentially liquefiable. These potentially liquefiable layers range from a few inches to as much as approximately 3-1/2 feet in thickness.

Settlement analysis indicates that the total settlement due to liquefaction in the two CPT's analyzed may range from approximately 1-1/4 to 2-1/4 inches. Less settlement would be expected in areas where the alluvium is shallower. The potential differential settlement due to liquefaction is typically taken as 2/3 of the total settlement on sites where the soils conditions are highly variable, such as on the subject site. Therefore, up to 1.5 inches of differential settlement may occur.

The results of the liquefaction analysis also indicate that the soils underlying the site are subject to potential lateral spread. Lateral spread is a phenomenon in which a mass of earth moves laterally above a layer of soil which has liquefied. The direction of movement can either be in a direction

towards the downward topographic gradient, towards an open face, such as the stream channel at the west end of the site, or in a direction corresponding to downward sloping layers of liquefied soils.

Landsliding

The probability of seismically-induced landslides affecting the subject development is considered to be remote, due to the relatively flat nature of the site and surrounding areas. In addition, the subject site is not located within a State of California Seismic Hazard Zone for landslides.

Earthquake-Induced Flooding

The subject site is high enough and far enough from the ocean and any lakes to preclude potential flooding from a tsunami or seiche. Review of the County of Los Angeles Flood and Inundation Hazards Map (Leighton, 1990), indicates that the site does not lies within the potential inundation boundaries of any dams which may fail during a seismic event.

Seismically-Induced Dry Settlement

Dynamic compaction of dry and loose sands may occur during a major earthquake. The bottom of foundation system is expected to be at or near the groundwater level. Therefore, the proposed structure would not be considered prone to dynamic dry settlement.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the exploration, laboratory testing, and research, it is the finding of this firm that construction of the proposed affordable housing development is considered feasible from a geotechnical engineering standpoint, provided the advice and recommendations presented herein are followed and implemented during construction.

Analysis of boring and Cone Penetration Test data indicates that the site is prone to liquefaction. In addition, the site is also prone to lateral spread, which can be a secondary effect of liquefaction. When the potential for lateral spread is present, the use of ground improvement methods is typically necessary, and will be required on the subject site. Ground improvement is utilized to either densify potentially liquefiable layers, and/or provide drainage to eliminate the potential buildup of excess pore pressures which can cause liquefaction. In order to allow construction on the subject site, the potential for liquefaction and lateral spread will need to be mitigated.

There are numerous forms of ground improvement. A determination of the most appropriate ground improvement method for the given site conditions is typically determined by specialty firms with expertise in this field. Such specialty firms are typically design-build contractors who design and also implement ground improvement methods. Some typical ground improvement methods are discussed in a following section of this report.

On very large sites, the mitigation of lateral spread is sometimes accomplished by limited ground improvement well outside the perimeter of any proposed structures, in the direction or directions of potential lateral spread. On the subject site, however, implementing this technique will not be possible due to a lack of sufficient space.

Due to the relatively soft nature of the native soils at the proposed subterranean garage level, the highly variable depth to bedrock, and the high groundwater level, the use of piles for support of the proposed structure would have been required if the potential for lateral spread was not present. Due to the potential for lateral spread, and the necessity to utilize ground improvement techniques, it is recommended that ground improvement be extended to below the entire footprint of the structure, which would then allow construction on a mat foundation. It is also possible that the ground improvement could be implemented to a degree sufficient to allow construction on conventional spread footings. A determination of this possibility would be made after the appropriate ground improvement methods required to mitigate liquefaction and lateral spread have been determined.

Plans of the proposed structure are not yet available, but it will be assumed that the proposed subterranean garage will be approximately 10 feet below the existing site grade, and may extend to the property lines in at least some areas. Where the proposed excavations are a sufficient distance from the property lines, temporary sloped embankments may be utilized. Where there is insufficient space between the excavations and property lines, shoring will be required.

Groundwater was encountered at depths as shallow as approximately 13 feet below the existing site grade. Excavations for the proposed subterranean level and foundations are anticipated to be at least 12 to 13 feet below the existing grade. Therefore, it is recommended that a program of pre-construction dewatering be implemented in order to allow the excavation and construction of the proposed subterranean garage. It is recommended that a qualified dewatering consultant be employed to determine the most effective means and methods of dewatering the site, and anticipated pumping volumes. Due to the anticipated proximity of the proposed subterranean garage level to groundwater, a permanent dewatering system will also be required. This permanent dewatering system is described in a later section of this report.

Due to the existing soil conditions and high groundwater level, it is anticipated that 'pumping' of the materials underlying the site will be encountered during the excavation of the garage, and at the proposed garage subgrade level. Therefore, the use of particular equipment and/or techniques will be required to more readily achieve the required excavation, and to operate equipment at the

proposed subgrade level during the excavation of footings, etc. These special techniques and equipment may include the use of small, track-mounted equipment as opposed to equipment which utilizes rubber tires, the use of an excavator placed at the existing grade level to make the required excavations, and the staging of trucks also at the current grade level. The use of a gravel blanket at the subgrade level may also be required in order to allow the operation of some types of equipment at the bottom of the excavation.

The validity of the conclusions and design recommendations presented herein is dependant upon review of the geotechnical aspects of the proposed construction by this firm. The subsurface conditions described herein have been projected from subsurface exploration on the site as indicated, and should not be construed to reflect any variations which may occur between the borings and CPT soundings, or which may result from changes in subsurface conditions.

BUILDING CODE SEISMIC DESIGN CONSIDERATIONS

Based on the Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada (ICBO, 1998), the closest fault to the subject site is the Malibu Coast Fault, which is located just over 10 kilometers from the subject site. Therefore, based on the seismic design provisions of the Los Angeles County Building Code, Near-Source Factors of N_a=1.0 and N_v=1.0

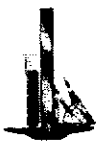
may be utilized in the design. Based on the nature of the alluvial soils underlying the site, a Soil Profile Type S_D should be utilized in the design.

FILL SOILS

The maximum depth of fill encountered on the subject site was 7 feet. This existing fill material is expected to be removed during the excavation of the proposed subterranean garage. Prior to placing any exterior concrete or asphalt, it is recommended that at least the upper 12 inches of existing fill material be removed and recompacted to a minimum of 90 percent of the maximum density.

EXPANSIVE SOILS

A representative sample of the onsite soils was found to be in the moderate expansion range. Special considerations for expansive soils are therefore required, as recommended in the "Miscellaneous Foundation Design," and "Exterior Concrete Paving" sections of this report. Expansion test results are provided on the attached Plate D.



SOIL CORROSIVITY

Soil corrosivity testing was performed on four representative samples of the onsite soils by the laboratory of Schiff Associates. The reader is referred to the attached report by their office for complete results, discussion of results and recommended mitigating measures.

Briefly, the results of the corrosivity testing indicate that the electrical resistivities of the soils are in the mildly corrosive and corrosive categories at field moisture conditions, and in the corrosive to severely corrosive categories when saturated. Soil pH values of the samples range between 6.8 and 7.4, indicating neutral to mildly alkaline conditions. The soluble salt content was low to moderate. Nitrate was detected in low concentrations. The detected ammonium concentration was high enough to be deleterious to copper. In summary, the soil is classified as severely corrosive to ferrous metals and aggressive to copper.

DEWATERING

In order to construct the proposed subterranean garage, it is recommended that a pre-construction dewatering program be implemented, and that the dewatering be continued throughout the duration of the project. It is recommended that a qualified dewatering consultant be employed to determine the most effective means and methods of dewatering the site. It is anticipated that the dewatering system may consist of the installation of wellpoints around the perimeter of the site, although the use

of interior sumps and gravel-filled trenches may be sufficient. Pumping of the wells should begin sufficiently in advance of construction to allow drawdown of the water level to at least 2 feet below the level of the required excavations. The exact extent and nature of the dewatering program which will be required, and anticipated pumping volumes, are typically determined by the dewatering consultant after the installation and pumping of test wells at the site.

The permanent dewatering system would consist of an underslab drainage system, combined with the retaining wall subdrain system, which is described in the "Retaining Wall Design" section of this report. The underslab drainage system should consist of a 1-foot thick layer of ¾-inch gravel underlying the entire floor slab (or in this case mat foundation), which would be drained by subdrain pipes placed in gravel-filled drainage trenches leading to a sump pump. The drain lines should consist of 4-inch perforated pipe, perforations down, placed in trenches approximately 1 foot wide and 1 foot deep. The pipes would then be covered with ¾-inch gravel, and the entire gravel and pipe system within the trenches would be wrapped in filter fabric. The gravel filled drainage trenches should be spaced approximately 40 feet apart, but may vary depending on the final foundation plan layout.

It is expected that the temporary dewatering effort will intercept a majority of the water impacting the project, however, it should be realized that minor amounts of water will likely still be contained within some isolated zones. To handle this water, gravel-filled trenches and pump-equipped sumps may be required to collect local water and pump it out of the interior of the excavation.

GRADING GUIDELINES

The following guidelines are provided for any miscellaneous compaction that may be required, such as for retaining wall backfill, footing backfill, subgrade preparation, etc.

Site Preparation

All vegetation, existing fill, and soft or disturbed earth materials should be removed from the area to receive controlled fill. The excavated areas shall be carefully observed by the geotechnical engineer prior to placing compacted fill.

Any vegetation or associated root system located within the area to be graded should be removed during grading. Any existing or abandoned utilities located within the area to be graded should be removed or relocated as appropriate. All fill materials and disturbed earth materials resulting from grading operations should be removed and properly recompacted prior to foundation excavation.

Subsequent to the indicated removals, the exposed grade shall be scarified to a depth of six inches, moistened to optimum moisture content, and recompacted in excess of the minimum required comparative density.

Compaction

Fill, consisting of soil approved by a representative of this firm shall be placed in loose lifts not more than 8 inches in thickness. The loose materials shall be compacted with suitable compaction equipment. Once a layer has been adequately compacted, the next loose lift may be placed.

Fill materials shall be moisture conditioned to within 3 percent of optimum moisture content and sufficiently blended prior to placement as controlled fill. Materials larger than six inches in maximum dimension shall not be used in the fill.

All fill shall be compacted to at least 90 percent of the maximum laboratory density for the materials used. The maximum density shall be determined by the laboratory operated by Geotechnologies, Inc. using test method ASTM D 1557-02 or equivalent. Compaction tests should be performed by representatives of this firm in accordance with ASTM D-1556-00 (sand cone test) or ASTM D 2922-01 (nuclear density test).

Field observation and testing shall be performed by a representative of the geotechnical engineer during grading to assist the contractor in obtaining the required degree of compaction and the proper moisture content. Where compaction is less than required, additional compactive effort shall be made

with adjustment of the moisture content, as necessary, until a minimum of 90 percent compaction is obtained.

Acceptable Materials

The excavated onsite materials are considered satisfactory for reuse in the controlled fills as long as any debris and/or organic matter is removed.

Any imported materials shall be observed and tested by the representative of the geotechnical engineer prior to use in fill areas. Imported materials should contain sufficient fines so as to be relatively impermeable and result in a stable subgrade when compacted. Any required import materials should have an expansion index equal to or less than the onsite soils. The water-soluble sulfate content of the import materials should be less than 0.1% percentage by weight.

Imported materials should be free from chemical or organic substances which could affect the proposed development. A competent professional should be retained in order to test imported materials and address environmental issues and organic substances which might affect the proposed development.

Utility Trench Backfill

Utility trenches should be backfilled with controlled fill. The utility should be bedded with clean sands at least 1 foot over the crown. The remainder of the backfill may be onsite soil compacted to 90 percent of the laboratory maximum density. Utility trench backfill should be tested by representatives of this firm in accordance with ASTM D-1556-00 (sand cone test) or ASTM D 2922-01 (nuclear density test).

Weather Related Grading Considerations

When rain is forecast, all fill that has been spread and awaits compaction shall be properly compacted prior to stopping work for the day or prior to stopping due to inclement weather. These fills, once compacted, shall have the surface sloped to drain to an area where water can be removed.

Temporary drainage devices should be installed to collect and transfer excess water to the street in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. Drainage should not be allowed to flow uncontrolled over any descending slope.

Work may start again, after a period of rainfall, once the site has been reviewed by a representative of this office. Any soils saturated by the rain shall be removed and aerated so that the moisture content will fall within three percent of the optimum moisture content.

Surface materials previously compacted before the rain shall be scarified, brought to the proper moisture content and recompacted prior to placing additional fill, if considered necessary by a representative of this firm.

Abandoned Seepage Pits

No abandoned seepage pits were encountered during exploration. In addition, none are known to exist on the site. Should such a structure be encountered during grading, options to permanently abandon seepage pits include complete removal and backfill of the excavation with compacted fill, or drilling out the loose materials and backfilling to 5 feet below bottom of footings with slurry, followed by a compacted fill cap.

If the subsurface structures are to be removed by grading, the entire structure should be demolished. The resulting void may be refilled with compacted soil. Concrete and brick generated during the seepage pit removal may be reused in the fill as long as all fragments are less than 6 inches in longest

dimension and the debris comprises less than 15 percent of the fill by volume. All grading should comply with the recommendations of this report.

Where the seepage pit structure is to be left in place, the seepage pits should be cleaned of all soil and debris. This may be accomplished by drilling. The pits should be filled with minimum 1½ sack concrete slurry to within 5 feet of the bottom of the proposed foundations. In order to provide a more uniform foundation condition, the remainder of the void should be filled with controlled fill.

Geotechnical Observations and Testing During Grading

Geotechnical observations and testing during grading are considered to be a continuation of the geotechnical investigation. It is critical that the geotechnical aspects of the project be reviewed by this firm during the construction process. Compliance with the design concepts, specifications or recommendations during construction requires review by this firm during the course of construction. Any fill which is placed should be observed, tested, and verified if used for engineered purposes. Please advise this office at least twenty-four hours prior to any required site visit.

GROUND IMPROVEMENT

The implementation of ground improvement techniques is recommended to mitigate the effects of liquefaction and lateral spread, and to sufficiently densify the soils to allow construction on a mat foundation. The most suitable method of ground improvement depends on the particular soil conditions present at any given building site, and the particular soil problem or problems to be mitigated. The most suitable ground improvement program for any given site, as well as the potential economic feasibility of various methods, is typically determined with significant input from the engineering staff of specialty design-build contractors experienced in ground improvement.

It is recommended that a specialty design-build firm, or other qualified consultant experienced in ground improvement techniques be retained in order to recommend the most appropriate ground improvement method.

FOUNDATION DESIGN

It is recommended that the program of ground improvement which will be implemented to mitigate the effects of liquefaction and lateral spread also be utilized to provide sufficient support for a mat foundation.

Mat Foundation Design

A mat foundation bearing on the improved ground at the proposed subterranean garage level may be utilized for foundation support. Typically, a 4-inch waste slab is placed over undisturbed native soils at the subgrade level prior to the placement of steel reinforcing for a mat foundation. In this case, however, it is anticipated that the subgrade will become disturbed during the implementation of ground improvement, unless ground improvement is implemented at the existing grade level prior to excavation of the subterranean garage. In addition, a layer of gravel will be required below the mat as part of the permanent dewatering system. Any disturbed soils at the proposed mat subgrade level should be properly compacted prior to placement of the gravel dewatering system, overlain by the 4-inch thick mud slab. It is critical to the performance of the mat foundation that the gravel, mud slab and mat foundation be placed on a firm subgrade.

A modulus of subgrade reaction of 50 kips per cubic foot may be initially assumed in the design of the mat foundation. This value may require modification, depending on the nature and degree of ground improvement implemented.

In the analysis of the mat foundation, a one third increase may be utilized for short duration loading, which includes the effects of wind or seismic forces. The weight of concrete in the mat may be taken

as 50 pounds per cubic foot, and the weight of any required soil backfill may be neglected when determining the downward load on the footings.

The subgrade below the gravel, mat foundation and mud slab should be observed by personnel of this firm to verify that any loose or disturbed soils have been properly compacted. Any required backfill should be mechanically compacted. Flooding of backfill is not permitted.

Miscellaneous Foundations

Conventional foundations for structures such as privacy walls or trash enclosures which will not be rigidly connected to the proposed structure may bear in native soils or newly placed compacted fill. Continuous footings may be designed for a bearing value of 1,000 pounds per square foot, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 18 inches into the recommended bearing material. No bearing value increases are recommended.

Due to a moderate expansion potential for the onsite earth materials, all miscellaneous foundations should be reinforced with a minimum of four #4 steel bars. Two should be placed near the top of the foundation, and two should be placed near the bottom.

Lateral Design

Resistance to lateral loading may be provided by friction acting at the base of foundations and by passive earth pressure. An allowable coefficient of friction of 0.3 may be used with the dead load forces. Passive earth pressure for the sides of foundations poured against undisturbed or recompacted soil may be computed as an equivalent fluid having a density of 250 pounds per cubic foot, with a maximum earth pressure of 2,500 pounds per square foot.

When combining passive and friction for lateral resistance, the passive component should be reduced by one third. A one-third increase in the passive value may be used for wind or seismic loads.

Foundation Settlement

Settlement of the mat foundation system is expected to occur on initial application of loading. The maximum settlement is not expected to exceed ½ inch, and will occur below the heaviest loaded foundation elements. Differential settlement is not expected to exceed ¼ inch.

RETAINING WALL DESIGN

It is estimated that the proposed perimeter subterranean garage retaining walls, and interior ramp walls will retain approximately 10 feet. Retaining wall foundations may be designed in accordance with the provisions of the "Foundation Design" section of this report.

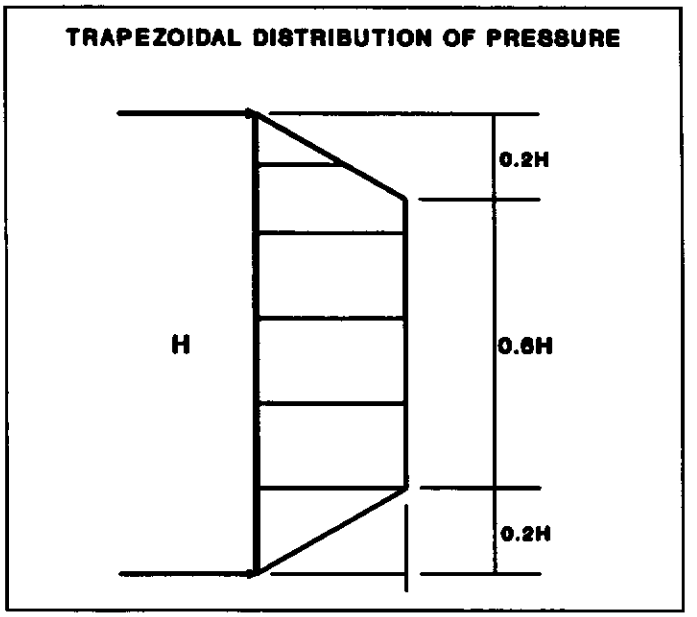
Cantilevered and restrained retaining walls may be designed for the lateral pressures provided in the following sections. Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures. For vehicular traffic, the upper 10 feet of the retaining wall adjacent to streets, driveways or parking areas should be designed to resist a uniform lateral pressure of 100 pounds per square foot, acting as a result of an assumed 300 pounds per square foot vehicular surcharge. If the traffic is kept back at least 10 feet from the retaining walls, the traffic surcharge may be neglected.

Cantilever Retaining Walls

Cantilever retaining walls supporting a level backslope may be designed utilizing a triangular distribution of pressure, and an equivalent fluid pressure of 30 pounds per square foot per foot of depth.

Restrained Retaining Walls

Restrained retaining walls may be designed to resist a trapezoidal pressure distribution of lateral earth pressure as indicated in the diagram below.



Design walls for 24H psf
Where H is the height of the walls in feet

Retaining Wall Backfill and Drainage

Retaining walls should be provided with a subdrain or weepholes covered with a minimum of 12 inches of gravel, and a compacted fill blanket or other seal at the surface. Any required backfill should be mechanically compacted in layers not more than 8 inches thick, to at least 90 percent of the

maximum density, as described in the 'Grading' section of this report. Flooding should not be permitted. Proper compaction of the backfill will be necessary to reduce settlement of the backfill, and to reduce settlement of any overlying walks, paving or walls. Cold joints should be provided wherever pavements or landscaping walls span from the wall backfill onto the top of the garage wall. Some settlement of required backfill should be anticipated, and any utilities supported therein, or flatwork or small walls spanning across the backfill onto subterranean walls should be designed to accept differential settlement. The onsite soils are suitable for use as retaining wall backfill.

Waterproofing

Moisture affecting retaining walls is one of the most common post- construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence deposits or water seepage through the wall. Efflorescence is a process in which a white, powdery substance is produced on the surface of the concrete by the evaporation of water. The white powder usually consists of soluble salts such as gypsum, calcite, or common salt.

It is recommended that retaining walls be waterproofed. Waterproofing design and inspection of its installation is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend products and methods which would provide appropriate protection to retaining walls.

Where sloped embankments are utilized, the tops of the slopes should be barricaded to prevent vehicles and storage loads within a 1:1 line drawn upward from the bottom of the excavation. If the temporary construction embankments are to be maintained during the rainy season, or where adverse drainage conditions exist, berms or other appropriate drainage measures are suggested along the tops of the slopes or shored embankments where necessary to prevent runoff from entering the excavation and eroding the excavation faces. The soils exposed in the excavations should be inspected during excavation by personnel from this office, so that modifications of the slopes can be made if variations in the soil conditions occur. All temporary excavations should be stabilized within 30 days of initial excavation.

Shoring

The following information on the design and installation of the shoring is as complete as possible at this time. It is suggested that a review of the final shoring plans and specifications be made by this office prior to bidding or negotiating with a shoring contractor.

One method of shoring would consist of using steel soldier piles, placed in drilled holes and backfilled with concrete. It is anticipated that the soldier piles will be designed as cantilevers, due to the relatively small retained height.

Sump Pump Design

The purpose of the recommended retaining wall backdrainage system is to relieve hydrostatic pressure. Groundwater was encountered during exploration predominantly at a depth of approximately 13 to 14 feet below the existing site grade, and the historic high groundwater level is at a depth of approximately 10 feet. It is recommended that a qualified dewatering consultant be retained to recommend a volume that the sump pump system should be designed for to accommodate the groundwater which will be intercepted by the retaining wall and underslab drainage systems.

EXCAVATIONS

It is anticipated that excavations up to a maximum of approximately 12 to 13 feet in vertical height will be required during the excavation of the proposed subterranean garage, assuming a foundation depth of approximately 2 to 3 feet below the lowest subterranean garage floor slab (or top of mat) level. The excavations are expected to expose fill and native soils, which are suitable for vertical excavations up to 5 feet where not surcharged by adjacent traffic or structures. Unsurcharged excavations over 5 feet in height should be made at a uniform 1:1 gradient, with no vertical component. Where there is insufficient space to excavate at a uniform 1:1 gradient, or where the excavations will be surcharged by adjacent traffic or structures, the excavations should be shored.

Soldier Piles

Drilled cast-in-place soldier piles should be placed no closer than 2-1/2 diameters on center. The minimum diameter of the piles is 18 inches. Structural concrete should be used for the soldier piles below the excavation, and lean-mix concrete may be employed above that level. As an alternative, lean-mix concrete may be used throughout the pile where the reinforcing consists of a wide flange section. The slurry must be of sufficient strength to impart the lateral bearing pressure developed by the wide flange section to the earth materials. For design purposes, an allowable passive value for the earth materials below the bottom plane of excavation, may be assumed to be 250 pounds per square foot per foot, up to a maximum of 3,750 pounds per square foot. These values include the 100 percent increase allowed for isolated piles. It should be realized that these values are relatively low, due to the fact that the soldier pile toes are below the groundwater level, and the necessity to utilize the buoyant weight of the soils in the calculations. To develop the full lateral value, provisions should be implemented to assure firm contact between the soldier piles and the undisturbed earth materials.

Groundwater was encountered during exploration at depths as shallow as 13 feet below grade. The piles will, therefore, encounter water. Piles placed below the water level require the use of a tremie to place the concrete into the bottom of the hole. A tremie shall consist of a water-tight tube having a diameter of not less than 4 inches with a hopper at the top. The tube shall be equipped with a

device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie shall be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end shall be closed at the start of the work to prevent water entering the tube and shall be entirely sealed at all times, except when the concrete is being placed. The tremie tube shall be kept full of concrete. The flow shall be continuous until the work is completed and the resulting concrete seal shall be monolithic and homogeneous. The tip of the tremie tube shall always be kept about 5 feet below the surface of the concrete, and definite steps and safeguards should be taken to insure that the tip of the tremie tube is never raised above the surface of the concrete.

A special concrete mix should be used for concrete to be placed below water. The design shall provide for concrete with a strength of 1000 p.s.i. over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste shall be included. The slump shall be commensurate to any research report for the admixture, provided that it shall also be the minimum for a reasonable consistency for placing when water is present.

Casing may be required should caving be experienced in the saturated and granular earth materials. If casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of

the casing be less than 5 feet. In cases of extreme caving, which may occur on the subject site, the use of drilling mud may be required to maintain an open excavation.

Lagging

If the clear spacing between soldier piles does not exceed 4 feet, lagging between soldier piles could be omitted within the cohesive earth materials. In the less cohesive earth materials, lagging would be necessary. It is recommended that the exposed earth materials be observed by the geotechnical engineer to verify the cohesive nature of the earth materials and the area where lagging may be omitted.

Soldier piles should be designed for the full anticipated pressures. Due to arching in the earth materials, the pressure on the lagging will be less. It is recommended that the lagging be designed for the full design pressure but be limited to a maximum of 400 pounds per square foot.

Lateral Pressures

Cantilevered shoring supporting a level backslope may be designed utilizing a triangular distribution of pressure, and an equivalent fluid pressure of 25 pounds per cubic foot. Where a combination of sloped embankment and shoring is utilized, the pressure will be greater and must be determined for

each combination. Additional active pressure should be applied where the shoring will be surcharged by adjacent traffic or structures. Where a combination of sloped embankment and shoring is utilized, the pressure will be greater and must be determined for each combination.

Deflection

It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. It is estimated that the deflection could be on the order of one inch at the top of the shored embankment. If greater deflection occurs during construction, additional bracing may be necessary to minimize settlement of adjacent buildings and utilities in adjacent streets and alleys. If desired to reduce the deflection, a greater active pressure could be used in the shoring design.

Monitoring

Because of the depth of the excavation, some means of monitoring the performance of the shoring system is suggested. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all soldier piles and the lateral movement along the entire lengths of selected soldier piles.

Some movement of the shored embankments should be anticipated. It is recommended that photographs of the existing buildings and improvements on the adjacent properties be made during construction to record any movements for use in the event of a dispute.

SLABS ON GRADE

It is anticipated that the top of the proposed mat foundation will function as the slab on grade. The necessity for waterproofing the mat foundation should be discussed with a qualified waterproofing consultant.

EXTERIOR CONCRETE PAVING

Prior to placing exterior concrete paving, the existing grade should be scarified to a depth of 12 inches, moistened as required to obtain optimum moisture content, and properly recompacted. The client should be aware that removal of all existing fill in the area of new exterior paving is not required, however, concrete pavement constructed over uncertified fill may have a shorter design life and increased maintenance costs.

Exterior concrete pavement should be a minimum of 6 inches thick, and should be reinforced with a minimum of #3 steel bars at 18 inches on center each way.

Outdoor Flatwork

Complete removal of the existing fill soils beneath outdoor flatwork such as walkways or patio areas, is not required, however, due to the rigid nature of concrete, some cracking, a shorter design life and increased maintenance costs should be anticipated. In order to provide more uniform support beneath the flatwork it is recommended that a minimum of 12 inches of the exposed subgrade beneath the flatwork be scarified and recompacted to 90 percent relative compaction.

Outdoor flatwork not subject to vehicular traffic should be a minimum of 4 inches in thickness, and should be reinforced with a minimum of #3 steel bars on 18-inch centers each way.

SITE DRAINAGE

Proper surface drainage is critical to the future performance of the project. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. Proper site drainage should be maintained at all times.

All site drainage should be collected and transferred to the street in non-erosive drainage devices. The proposed structure should be provided with roof drainage. Discharge from downspouts, roof drains and scuppers should not be permitted on unprotected soils within five feet of the building

perimeter. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. Drainage should not be allowed to flow uncontrolled over any descending slope. Planters which are located within retaining wall backfill should be sealed to prevent moisture intrusion into the backfill.

DESIGN REVIEW

Engineering of the proposed project should not begin until approval of the geotechnical report by the Building Official is obtained in writing. Significant changes in the geotechnical recommendations may result during the building department review process.

It is recommended that the geotechnical aspects of the project be reviewed by this firm during the design process. This review provides assistance to the design team by providing specific recommendations for particular cases, as well as review of the proposed construction to evaluate whether the intent of the recommendations presented herein are satisfied.

CONSTRUCTION COMPLIANCE

Compliance with the design concepts, specifications or recommendations during construction requires review by this firm during the course of construction. It is critical that all foundations be observed

by a representative of this firm prior to placing concrete or steel. In addition, the installation of soldier piles, and the installation and testing of tie-backs should be continuously observed by a representative of this office. Any fill which is placed should be observed, tested, and verified if used for engineered purposes. Please advise this office at least twenty-four hours prior to any required site visit.

The entire length of subdrain behind retaining walls should be observed by a representative of this firm. In addition, the subdrain pipe must be checked by a representative of this firm to see that it is an approved grade.

If conditions encountered during construction appear to differ from those disclosed herein, notify this office immediately so the need for modifications may be considered in a timely manner.

CLOSURE AND LIMITATIONS

The purpose of this report is to aid in the design and completion of the described project. Implementation of the advice presented in this report is intended to reduce certain risks associated with construction projects. The professional opinions and geotechnical advice contained in this report are sought because of special skill in engineering and geology and were prepared in accordance with generally accepted geotechnical engineering practice. Geotechnologies, Inc. has a duty to exercise

the ordinary skill and competence of members of the engineering profession. Those who hire Geotechnologies, Inc. are not justified in expecting infallibility, but can expect reasonable professional care and competence.

The scope of the geotechnical services provided did not include any environmental site assessment for the presence or absence of organic substances, hazardous/toxic materials in the soil, surface water, groundwater, or atmosphere, or the presence of wetlands.

Proper compaction is necessary to reduce settlement of overlying improvements. Some settlement of compacted fill should be anticipated. Any utilities supported therein should be designed to accept differential settlement. Differential settlement should also be considered at the points of entry to the structure.

GEOTECHNICAL TESTING

Classification and Sampling

The soil is continuously logged by a representative of this firm and classified by visual examination in accordance with the Unified Soil Classification system. The field classification is verified in the laboratory, also in accordance with the Unified Soil Classification System. Laboratory classification

may include visual examination, Atterberg Limit Tests and grain size distribution. The final classification is shown on the boring logs.

Samples of the earth materials encountered in the borings were collected and transported to the laboratory. Undisturbed samples of soil are obtained at frequent intervals. Unless noted on the boring logs as an SPT sample, samples acquired while utilizing a hollow-stem auger drill rig are obtained by driving a thin-walled, Modified California Sampler with successive 30-inch drops of a 140-pound hammer. Samples from bucket-auger drilling are obtained utilizing a Modified California Sampler with successive 12-inch drops of a kelly bar, whose weight is noted on the boring logs. The soil is retained in brass rings of 2.50 inches inside diameter and 1.00 inches in height. The central portion of the samples are stored in close fitting, waterproof containers for transportation to the laboratory. Samples noted on the boring logs as SPT samples are obtained in accordance with ASTM D 1586-99. Samples are retained for 30 days after the date of the geotechnical report.

Grain Size Distribution

These tests cover the quantitative determination of the distribution of particle sizes in soils. Sieve analysis is used to determine the grain size distribution of the soil larger than the Number 200 sieve. ASTM D 422-63 is used to determine particle sizes smaller than the Number 200 sieve. A

hydrometer is used to determine the distribution of particle sizes by a sedimentation process. The grain size distributions are plotted on the E-Plates presented in the Appendix of this report.

Moisture and Density Relationships

The field moisture content and dry unit weight are determined for each of the undisturbed soil samples, and the moisture content is determined for SPT samples by ASTM D 4959-00 or ASTM D 4643-00. This information is useful in providing a gross picture of the soil consistency between borings and any local variations. The dry unit weight is determined in pounds per cubic foot and shown on the "Boring Logs," A-Plates. The field moisture content is determined as a percentage of the dry unit weight.

Direct Shear Testing

Shear tests are performed by ASTM D 3080-03 with a strain controlled, direct shear machine manufactured by Geomatic, Inc. The rate of deformation is approximately 0.025 inches per minute. Each sample is sheared under varying confining pressures in order to determine the Mohr-Coulomb shear strength parameters of the cohesion intercept and the angle of internal friction. Samples are generally tested in an artificially saturated condition. Depending upon the sample location and future

site conditions, samples may be tested at field moisture content. The results are plotted on the "Shear Test Diagram," B-Plates.

Consolidation Testing

Settlement predictions of the soil's behavior under load are made on the basis of the consolidation tests ASTM D 2435-03. The consolidation apparatus is designed to receive a single one-inch high ring. Loads are applied in several increments in a geometric progression, and the resulting deformations are recorded at selected time intervals. Porous stones are placed in contact with the top and bottom of each specimen to permit addition and release of pore fluid. Samples are generally tested at increased moisture content to determine the effects of water on the bearing soil. The normal pressure at which the water is added is noted on the drawing. Results are plotted on the "Consolidation Test," C-Plates.

Expansion Index Testing

In order to determine the expansiveness of the soil ASTM D 4829-03 is utilized. The soil is compacted into a ring so that the degree of saturation is between 40 and 60%. The soil filled ring is placed in a consolidometer. A vertical confining pressure of 1 pound per square inch is applied to the soil and the soil is inundated with water. The deformation of the sample is recorded for 24 hours

or until the rate of deformation becomes less than 0.002 inches per hour whichever comes first. A minimum recording time of three hours is required.

Laboratory Compaction Characteristics

The maximum dry unit weight and optimum moisture content of a soil are determined by use of ASTM D 1557-02. A soil at a selected moisture content is placed in five layers into a mold of given dimensions, with each layer compacted by 25 blows of a 10 pound hammer dropped from a distance of 18 inches. The resulting dry unit weight is determined. The procedure is repeated for a sufficient number of moisture contents to establish a relationship between the dry unit weight and the water content of the soil. The data when plotted, represent a curvilinear relationship know as the compaction curve. The values of optimum moisture content and modified maximum dry unit weight are determined from the compaction curve.

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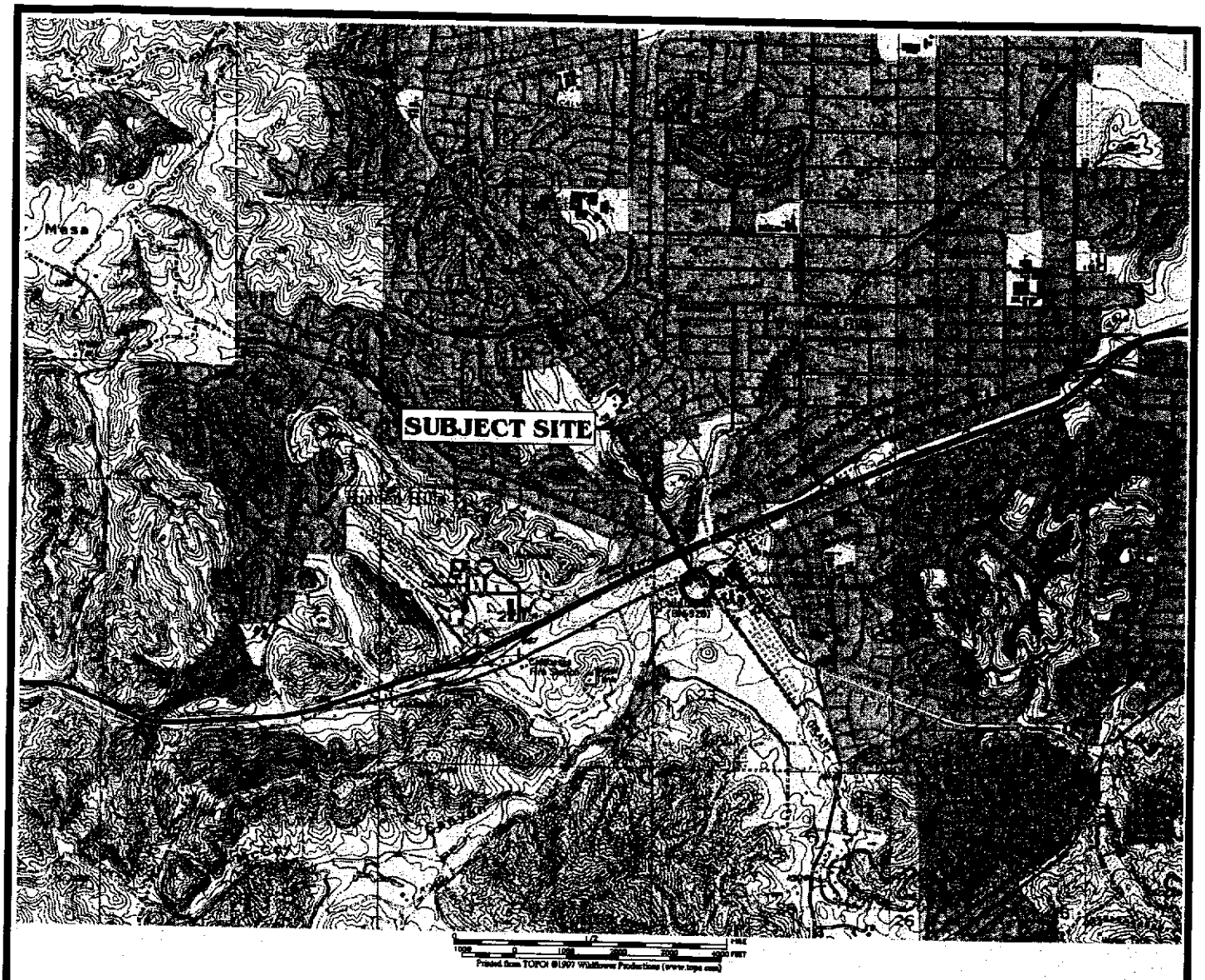


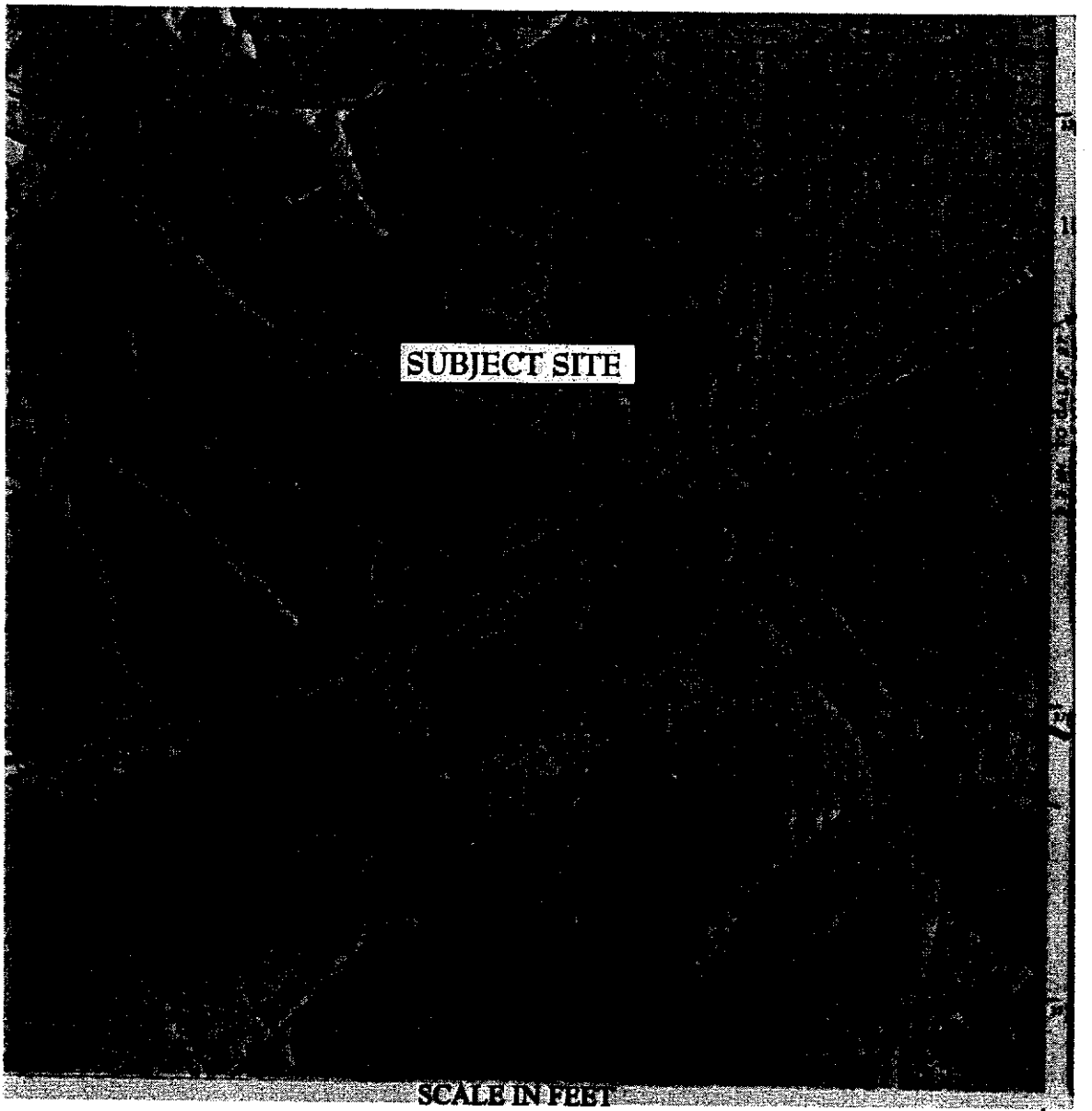
REFERENCE: U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES,
CALABASAS, CA QUADRANGLE

VICINITY MAP

Geotechnologies, Inc.
Consulting Geotechnical Engineers

THOMAS SAFRAN & ASSOCIATES

FILE NO. 19166



LEGEND

Qa: Surficial Sediments-Alluvium, Gravel, Sand, Silt, and Clay
Tm: Monterey Formation-Gray-brown, white weathering siliceous shale
Tush: Unnamed Shale and Sandstone-Light gray claystone and siltstone
Tuss: Unnamed Shale and Sandstone-Light gray to tan sandstone, friable

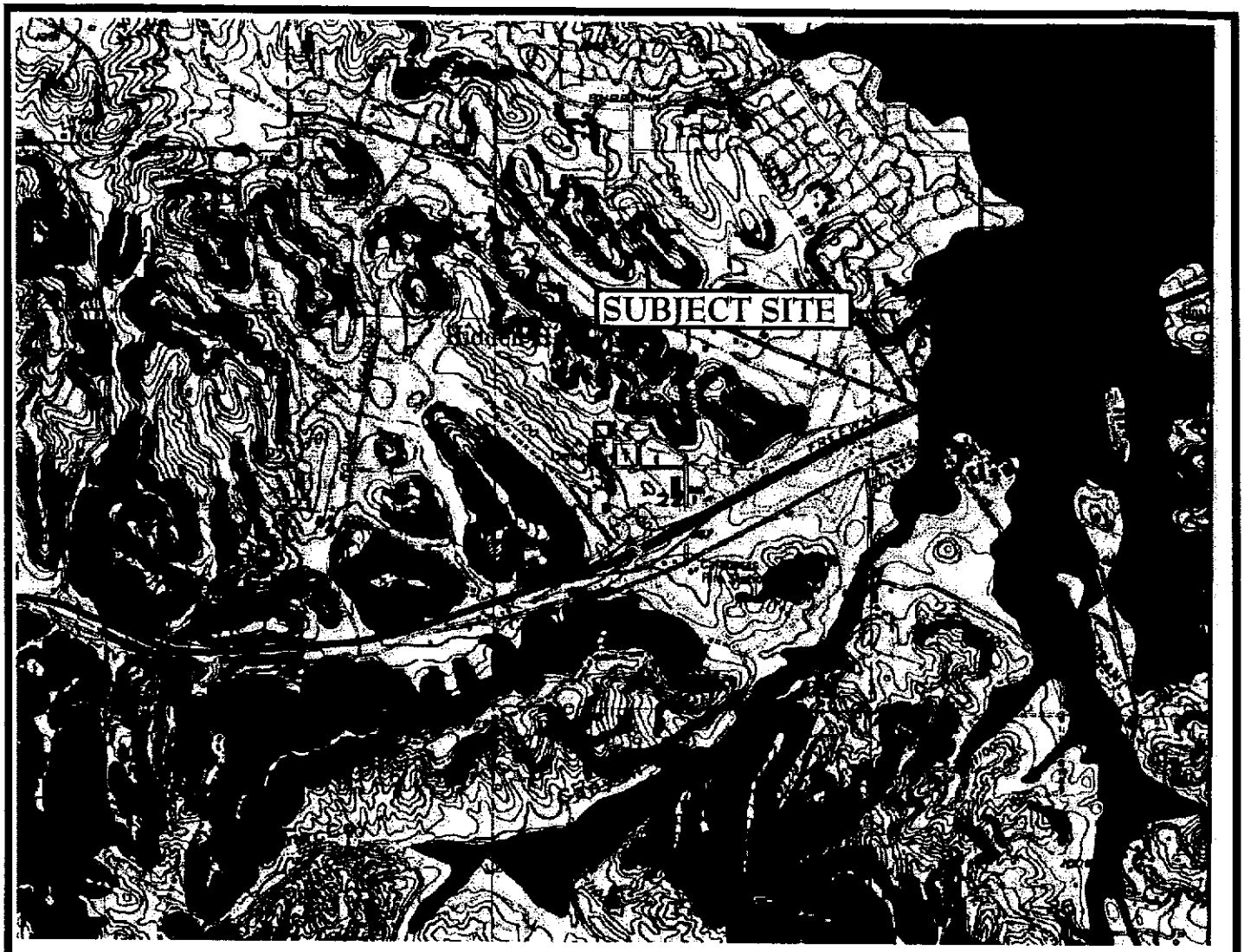
REFERENCE: DIBBLEE T.W., 1992, GEOLOGIC MAP OF THE CALABASAS QUADRANGLE, #DF-37

LOCAL GEOLOGIC MAP

GEOTECHNOLOGIES, INC.
CONSULTING GEOTECHNICAL ENGINEERS

THOMAS SAFRAN & ASSOCIATES

FILE NO. 19166



SCALE 1:24,000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

LIQUEFACTION AREA

REFERENCE: SEISMIC HAZARD ZONE MAP, CALABASAS QUADRANGLE, 1997, DIVISION OF MINES AND GEOLOGY

SEISMIC HAZARD ZONE MAP

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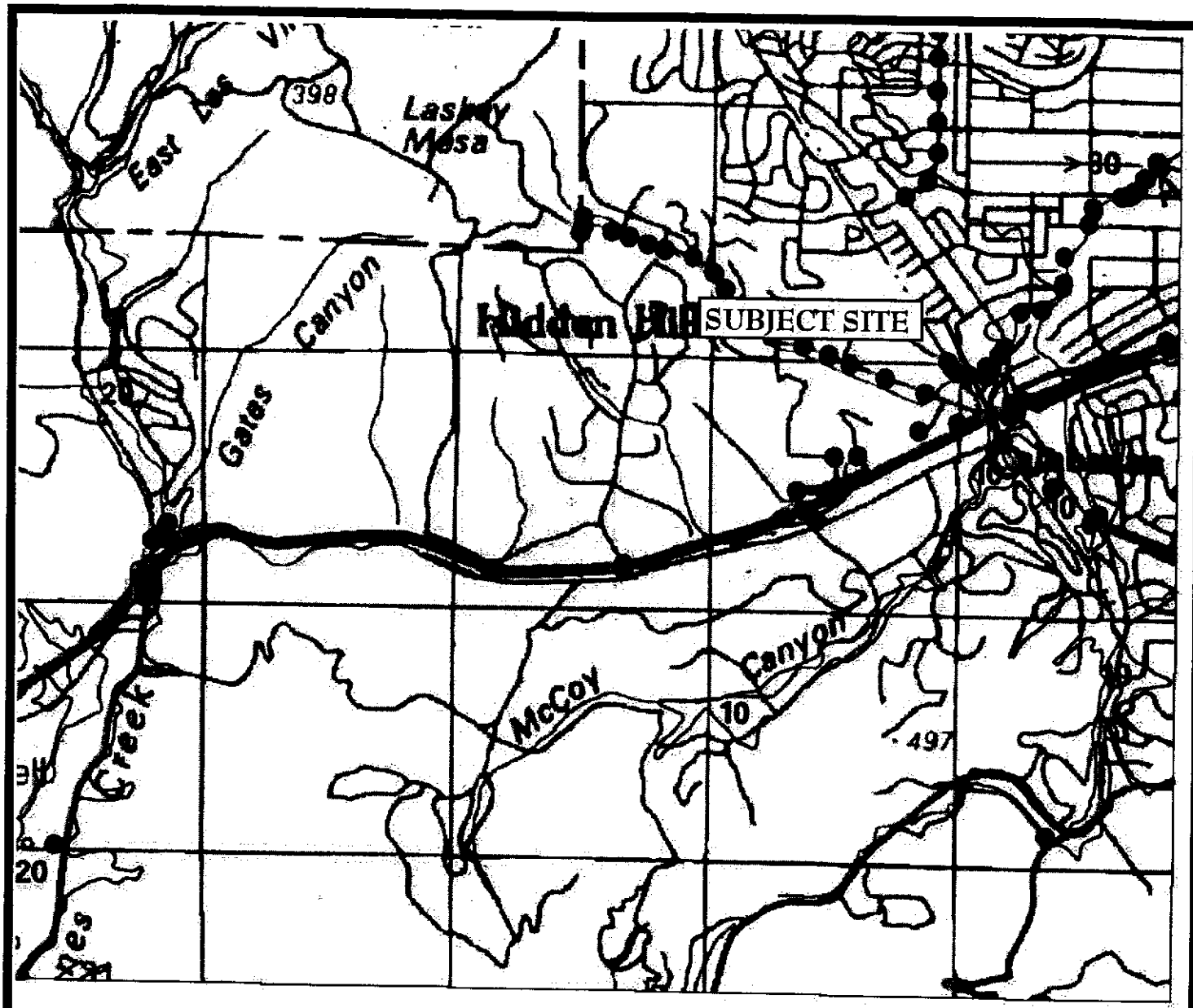
THOMAS SAFRAN & ASSOCIATES

FILE NO. 19166



REFERENCE: PLATE 1.2, GROUNDWATER MAP, SEISMIC HAZARD EVALUATION REPORT, SHZR-006
7.5 MINUTE QUADRANGLES, CALABASAS, CA QUADRANGLE

HISTORICALLY HIGHEST GROUNDWATER LEVELS

Geotechnologies, Inc.
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THOMAS SAFRAN & ASSOCIATES

FILE NO. 19166

BORING LOG NUMBER 1

Drilling Date: 4/12/06 **Elevation: 934.5'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: 3-inch Asphalt - Poor Condition, 2-inch Base
				0		FILL: Silty Sand, brownish-gray, moist, medium dense, fine grained, some gravel
				1		
2	10	25.3	99.7	2		Silty Clay, brownish-gray, moist, medium stiff, few gravel
				3		
4	28	23.0	101.6	4		grayish-orange brown, no gravel
				5		
				6		
7	32	16.6	113.7	7	SC	Clayey Sand, grayish-orange brown, gray mottling, moist, medium dense, fine grained, some gravel
				8		
				9		
10	29	17.3	111.8	10		
				11		
				12		
12.5	19	7.5	109.8	13	SM	Silty Sand, orange-brown, moist, medium dense, fine grained
				14		
15	32	12.2	106.3	15	SW	Sand with Gravel, gray, yellowish-brown, moist, medium dense, fine to coarse grained
				16		
				17		
17.5	36	41.9	87.1	18	SC	Clayey Sand, gray, orange-brown mottling, wet, medium dense, fine grained, some gravel, bedrock fragments
				19		
20	72	43.4	76.5	20		BEDROCK (MODELO FORMATION): Siltstone, gray, orange - brown mottling, moist, very stiff
				21		brownish-gray, orange-brown mottling, hard
				22		
				23		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				24		
25	50/6"	44.3	75.1	25		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted
				26		
				27		SPT=Standard Penetration Test
				28		
				29		
30	50/6"	42.5	82.3	30		
						Total depth: 30 feet; Water at 13 feet; Fill to 7 feet

BORING LOG NUMBER 2

Drilling Date: 4/12/06 **Elevation: 934'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: 2-inch Asphalt - Poor Condition, No Base
				0		FILL: Silty Sand, grayish-brown, moist, medium dense, fine grained, some gravel
1	17	15.2	110.4	1		dark gray, few gravel, roots
				2		
3	19	18.9	107.7	3		grayish-brown, dark gray
				4		
5	21	17.3	110.5	5		
				6	SC	Clayey Sand, grayish-orange brown, moist, medium dense, fine grained, few gravel
7	22	22.0	97.8	7		gray, yellowish-brown, some gravel
				8		
				9		
10	16	22.7	94.4	10		
				11		
				12		
12.5	12	24.9	99.2	13		
				14		
15	13	21.9	102.9	15		
				16	SM	Silty Sand, gray, yellowish-brown, wet, medium dense, fine grained, few gravel
				17		
17.5	23	13.8	107.7	18	SP	Sand, gray, yellowish-brown, wet, medium dense, fine grained, some gravel
				19		
20	22/6" 50/5"	49.0	79.1	20	SP/SW	Sand to Sand with Gravel, gray, yellowish-brown, wet, medium dense, fine to coarse grained
				21	SP	Sand, gray, yellowish-brown, very moist, very dense, fine grained, some gravel
				22		BEDROCK (MODELO FORMATION): Siltstone, brownish-gray, orange-brown mottling, moist, hard
				23		
				24		
25	75/6"	31.7	88.4	25		brownish-gray, gray, orange-brown mottling
				26		
				27		
				28		
				29		dark gray
30	16/6" 50/3"	30.8	85.7	30		Total depth: 30 feet; Water at 13 feet; Fill to 5 feet

BORING LOG NUMBER 3

Drilling Date: 4/12/06 **Elevation: 934'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Area
				0		FILL: Silty Clay, dark gray, moist, medium stiff
				1		
2	22	21.4	102.2	2		
				3		dark gray, grayish-brown mottling, stiff
4	14	21.0	100.8	4		
				5	CL	Silty Clay, grayish-brown, moist, medium stiff, roots
				6		
7	23	19.4	107.1	7		
				8		stiff
				9	SC	Clayey Sand, grayish-brown, moist, medium dense, fine grained, caliche
10	25	19.0	108.2	10		
				11		no caliche, rootlets
				12		
				13		
				14		
15	35	17.8	Disturbed	15		
				16	SP	Sand, gray, yellowish-brown, very moist, medium dense, fine grained, some gravel
				17		
				18		
				19		
20	40	19.1	104.8	20		
				21	SW	Sand with Gravel, grayish-brown, very moist, medium dense, fine to coarse grained
				22		
				23		
				24		
25	63	26.7	Disturbed	25		
				26		
				27		
				28		BEDROCK (MODELO FORMATION): Siltstone, gray, orange-brown mottling, moist, hard
				29		
30	24/6" 50/3"	50.5	72.2	30		brownish-gray, orange-brown mottling
						Total depth: 30 feet; Water at 13 feet; Fill to 4 feet

BORING LOG NUMBER 4

Drilling Date: 4/12/06 **Elevation: 935'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Area
				0		FILL: Silty Clay, dark gray, moist, medium stiff
1	25	22.0	102.1	1		dark gray, grayish-brown, stiff, rootlets
				2		
3	25	16.2	91.2	3		grayish-brown, gray, yellowish-brown
				4		
					CL	Silty Clay, grayish-brown, moist, medium stiff, fine grained
5	16	14.1	SPT	5		grayish-brown, gray, yellowish-brown mottling, caliche
				6		
				7		
7.5	36	19.3	104.5	8		grayish-brown, some caliche
				9		gray, yellowish-brown, no caliche
10	14	17.8	SPT	10		grayish-orange brown, some gravel
				11		moist to very moist
				12		
12.5	24	26.9	97.2	13	SC	Clayey Sand, orange-brown, gray mottling, very moist to wet, fine grained, few gravel
				14		
15	16	No Recovery	SPT	15		
				16		
				17		
17.5	85	19.5	96.6	18		BEDROCK (MODELO FORMATION): Siltstone, brownish-gray, orange-brown mottling, moist, hard
				19		
20	80	41.8	114.2	20		brownish-gray, gray, orange-brown mottling
				21		
				22		
				23		
				24		
25	75/6"	41.6	85.1	25		brownish-gray, orange-brown mottling
				26		
				27		
				28		Total depth: 27 feet Water at 13 feet Fill to 3½ feet
				29		
				30		

BORING LOG NUMBER 5

Drilling Date: 4/12/06 **Elevation: 933.5'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Area
				0		FILL: Silty Clay, dark gray, moist, medium stiff
1	11	23.9	100.5	1		Silty Clay, dark brownish-gray, grayish-brown, moist, medium stiff, few gravel
				2		
3	20	24.1	97.0	3		grayish-brown, gray, yellowish-brown mottling
				4		
5	25	23.3	101.5	5	SC	Clayey Sand, grayish-brown, gray, yellowish-brown, moist, medium dense, fine grained, few gravel, caliche
				6		
7	32	22.2	98.2	7		
				8	CL	Silty Clay, gray, yellowish-brown, moist, stiff, caliche
				9	SC	Clayey Sand, gray, yellowish-brown, orange mottling, moist, medium dense, fine grained, few gravel
10	26	22.0	102.9	10		gray, yellowish-brown, moist to very moist, some gravel
				11		
				12		
				13		
				14		
15	20	20.8	107.9	15		wet, no gravel
				16		
				17		
				18		
				19		
20	28	16.8	117.0	20	SP	Sand, grayish-brown, very moist, medium dense, fine grained, some gravel
				21		
				22		
				23		
				24		
25	25	31.1	99.7	25	SC	Clayey Sand, grayish-brown, very moist to wet, medium dense, fine grained, some gravel
				26		
				27		
				28		
				29		
30	9/6" 50/3"	27.0	103.5	30	SP	Sand, grayish-brown, very moist, dense, fine grained, some gravel

BORING LOG NUMBER 5

Project: File No. 19166 **Thomas Safran & Associates**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31		BEDROCK (MODELO FORMATION): Siltstone, gray, light gray, moist, hard
				32		
				33		
				34		
35	100/6"	32.8	91.6	35		gray, orange-brown, yellow mottling, caliche
				36		Total depth: 35 feet Water at 15 feet 6 inches Fill to 4 feet
				37		
				38		
				39		
				40		
				41		
				42		
				43		
				44		
				45		
				46		
				47		
				48		
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				50		
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				57		
				58		
				59		
				60		

BORING LOG NUMBER 6

Drilling Date: 4/12/06 **Elevation: 934'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Area
				0		FILL: Silty Clay, dark brownish-gray, moist, stiff
				1		
2	24	25.3	99.4	2		
				3		dark brownish-gray, grayish-brown, rootlets
					CL	Silty Clay, grayish-brown, moist, stiff, rootlets
4	41	21.2	92.4	4	SC	Clayey Sand, grayish-brown, gray, yellowish-brown mottling, moist, hard, caliche, roots
				5		
				6		
7	48	18.3	102.8	7	CL/SC	Silty Clay to Sandy Clay, grayish-brown, moist, hard to medium dense, fine grained, caliche
				8		
				9		
10	28	27.8	93.8	10	ML	Clayey Silt, gray, yellowish-brown, very moist, stiff to medium dense, fine grained, few gravel
				11		
				12		
				13		
				14		
15	13	16.6	110.5	15	SC/SP	Clayey Sand to Sand, gray, yellowish-brown, wet, medium dense, fine grained, some gravel
				16		
				17		
				18		
				19		
20	10	18.0	112.1	20	SM/SP	Silty Sand, gray, yellowish-brown, wet, medium dense, fine grained, some gravel
				21		
				22		
				23		
				24		
25	16	16.7	115.3	25		
				26		
				27		
				28		
				29	SC	Clayey Sand, gray, yellowish-brown, moist, medium dense, fine grained
30	14	25.5	103.3	30		Total depth: 30 feet; Water at 13 feet; Fill to 2½ feet

BORING LOG NUMBER 7

Drilling Date: 8/18/06 **Elevation: 934'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Surface
				0		FILL: Silty Sand, light brown, slightly moist, medium dense, fine grained
				1		
2	52	14.1	109.8	2		yellowish-brown, slightly moist
				3		
4	67	12.9	112.9	4		
				5	SM	Silty Sand, yellowish-brown, dense, fine grained
				6		
7	38	14.4	108.7	7		slightly moist to moist
				8		
				9		
10	38	31.4	89.9	10		moist
				11		
				12		
				13		
				14		
15	21	22.6	96.9	15		wet
				16		
				17		
17.5	45	16.8	109.0	18		
				19		
20	44	19.8	102.0	20		
				21	SP	Sand, yellowish-brown, wet, medium dense, fine grained
				22		
22.5	27 50/6"	18.3	110.4	23		wet
				24		
25	31 50/6"	19.6	107.2	25		
				26		
				27		
27.5	100	49.4	71.0	28		BEDROCK (MODELO FORMATION): Siltstone, gray to orange-brown, moist, very stiff
				29		
30	20 50/2"	34.1	80.3	30		

BORING LOG NUMBER 7

Project: File No. 19166 **Thomas Safran & Associates**

ha

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31		
				32		
				33		
				34		
35	100/6"	21.9	104.5	35		
				36		
				37		
				38		
				39		
40	100/6"	28.3	90.5	40		
				41		Total depth: 40 feet Water at 14 feet Fill to 4 feet
				42		
				43		
				44		
				45		
				46		
				47		
				48		
				49		
				50		
				51		
				52		
				53		
				54		
				55		
				56		
				57		
				58		
				59		
				60		

BORING LOG NUMBER 8

Drilling Date: 8/18/06 **Elevation: 935'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Surface
				0		FILL: Silty Sand, yellowish-brown, medium dense, fine grained
				1		
2	26	11.4	105.8	2		
				3		
4	22	11.3	93.7	4		
				5	SM	Silty Sand, yellowish-brown, slightly moist, medium dense, fine grained
				6		
7	46	13.6	104.0	7		
				8	SC	Clayey Sand, slightly moist, medium dense, fine grained
				9		
10	29	16.3	110.8	10		
				11	SM	Silty Sand, yellowish-brown, very moist, medium dense, fine grained
				12		
				13		
				14		
15	18	19.4	105.5	15		
				16	SP	Sand, yellowish-brown with light gray mottling, wet, medium dense, fine grained
				17		
17.5	28 50/6"	21.1	103.4	18		BEDROCK (MODELO FORMATION): Siltstone, gray with orange mottling, moist, hard
				19		
				20		
				21		
				22		
22.5	35 50/5"	38.8	77.7	23		
				24		
				25		
				26		
				27		
27.5	100/6"	48.8	69.2	28		Total depth: 27½ feet Water at 14 feet Fill to 4 feet
				29		
				30		

BORING LOG NUMBER 9

Drilling Date: 8/18/06 **Elevation: 934'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Surface
				0		FILL: Silty Sand, yellowish-brown, moist, medium dense, fine grained
				1		
2	38	18.6	86.7	2		
				3	CL	Sandy Clay, yellowish-brown, moist, medium stiff
4	34	21.8	88.4	4		moist
				5		
				6		
7	34	19.7	101.5	7		
				8	SC	Clayey Sand, yellowish-brown, moist, medium dense, medium stiff
				9		
10	22	16.9	110.6	10		
				11	SM	Silty Sand, yellowish-brown, very moist, medium dense, fine grained
				12		
				13		
				14		
15	39	14.8	114.0	15		very moist
				16		
				17		
17.5	72	9.3	110.2	18	SP	Sand, yellowish-brown, wet, dense, fine to medium grained
				19		
20	30 50/6"	11.6	113.6	20		wet
				21		
				22		
22.5	74	15.3	116.0	23	SM	Silty Sand, yellowish-brown, wet, dense, fine grained
				24		
25	100/6"	31.5	84.7	25		gravel and bedrock fragments, very dense
				26		
				27		
				28		
				29		BEDROCK (MODELO FORMATION): Siltstone, gray to orange-brown, moist, hard
30	100/6"	29.9	SPT	30		Total depth: 30 feet; Water at 13 feet; Fill to 2 feet

BORING LOG NUMBER 10

Drilling Date: 8/18/06 **Elevation: 934'**

Project: File No. 19166 **Thomas Safran & Associates**

ba

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Lawn Surface
				0		FILL: Silty Sand, yellowish-brown, slightly moist, medium dense, fine grained
				1		
2	38	8.7	117.5	2		
				3		slightly moist
4	29	18.3	102.8	4		
				5	SC	Clayey Sand, yellowish-brown, minor caliche, moist, medium dense, fine grained, medium stiff
				6		
7	35	23.0	95.4	7		
				8	SC	Clayey Sand, yellowish-brown, moist, medium dense, fine grained
				9		
10	22	20.1	103.7	10		
				11		some interbedded sand
				12		
				13		
				14		
15	26	18.6	111.9	15		
				16		wet
				17		
17.5	42	19.0	102.8	18		
				19		
20	40 50/6"	17.7	99.9	20		
				21		some gravel
				22		
22.5	75	18.5	103.9	23	SM	Silty Sand, yellowish-brown, wet, dense, fine to medium grained
				24		
25	30 50/6"	16.6	104.5	25		
				26		
				27		
27.5	30 50/6"	16.2	109.1	28		
				29		
30	30 50/6"	12.9	116.7	30		

BORING LOG NUMBER 10

Project: File No. 19166 **Thomas Safran & Associates**

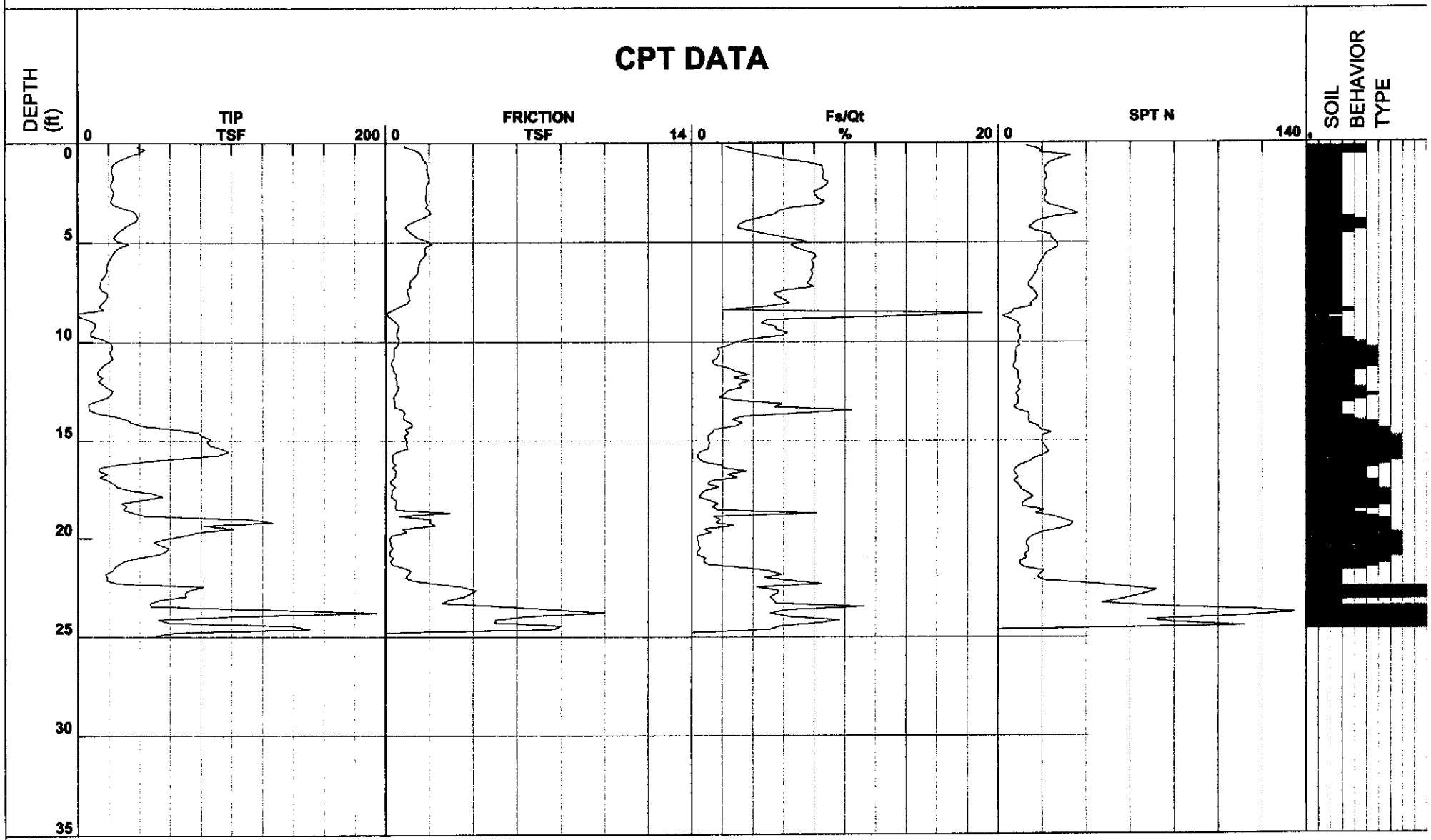
km

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				31		
				32		
32.5	100/6"	28.8	91.7	33		BEDROCK (MODELO FORMATION): Siltstone, gray to orange-brown, moist, hard
				34		
				35		
				36		
				37		
37.5	100/6"	24.1	98.0	38		
				39		
				40		
				41		
				42		
42.5	100/3"	21.8	87.3	43		Total depth: 42½ feet Water at 14 feet Fill to 4 feet
				44		
				45		
				46		
				47		
				48		
				49		
				50		
				51		
				52		
				53		
				54		
				55		
				56		
				57		
				58		
				59		
				60		

Geotechnologies, Inc

Location	4803 El Cannon Ave.	Operator	JH-VO	Filename	SDF(297).cpt
Job Number	19166	Cone Number	DSG0705	GPS	
Hole Number	CPT-01	Date and Time	5/1/2006 8:47:51 AM	Maximum Depth	24.93 ft
Water Table Depth		12.00 ft			

CPT DATA



- 1 - sensitive fine grained
- 2 - organic material
- 3 - clay
- 4 - silty clay to clay
- 5 - clayey silt to silty clay
- 6 - sandy silt to clayey silt
- 7 - silty sand to sandy silt
- 8 - sand to silty sand
- 9 - sand
- 10 - gravelly sand to sand
- 11 - very stiff fine grained (*)
- 12 - sand to clayey sand (*)

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(297).cpt
CPT Date: 5/1/2006 8:47:51 AM
GW During Test: 12 ft

Sounding ID: CPT-01
Project No: 19166
Cone/Rig: DSG0705

Depth ft	qc PS tsf	qc1n PS - *	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description *	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
0.33	43.8	70.2	148.3	1.3	0.0	3.0	silty SAND to sandy SILT	120	4.0	18	11	55	48	-	16
0.49	39.6	63.6	165.9	1.6	0.0	4.0	clayy SILT to silty CLAY	115	2.0	32	20	-	-	2.6	15
0.66	34.1	54.6	175.0	1.7	0.0	4.9	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.3	15
0.82	28.4	45.5	-	1.7	0.0	6.1	silty CLAY to CLAY	115	1.5	30	19	-	-	1.9	15
0.98	24.5	39.2	-	1.8	-0.1	7.5	silty CLAY to CLAY	115	1.5	26	16	-	-	1.6	15
1.15	22.7	36.4	-	1.9	-0.1	8.5	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
1.31	22.1	35.5	-	1.9	-0.1	8.6	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
1.48	22.2	35.7	-	1.9	0.0	8.7	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
1.64	22.9	36.7	-	2.0	0.0	8.6	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
1.80	23.4	37.5	-	2.0	0.0	8.6	silty CLAY to CLAY	115	1.5	25	16	-	-	1.6	15
1.97	22.4	35.9	-	2.0	0.0	9.0	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
2.13	21.5	34.5	-	1.9	0.0	8.8	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
2.30	22.1	35.4	-	1.9	0.0	8.5	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
2.46	23.6	37.9	-	1.9	0.0	8.0	silty CLAY to CLAY	115	1.5	25	16	-	-	1.6	15
2.62	23.1	37.1	-	1.9	0.0	8.1	silty CLAY to CLAY	115	1.5	25	15	-	-	1.5	15
2.79	22.4	36.0	-	1.8	0.0	8.3	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
2.95	21.4	34.4	-	1.9	0.0	8.8	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
3.12	23.2	37.2	-	1.9	0.0	8.4	silty CLAY to CLAY	115	1.5	25	15	-	-	1.5	15
3.28	28.8	46.1	-	1.8	0.0	6.5	silty CLAY to CLAY	115	1.5	31	19	-	-	1.9	15
3.45	36.0	57.8	-	2.0	0.0	5.7	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
3.61	38.0	60.9	196.6	2.1	-0.1	5.4	clayy SILT to silty CLAY	115	2.0	30	19	-	-	2.5	15
3.77	39.0	62.6	178.2	1.8	-0.1	4.5	clayy SILT to silty CLAY	115	2.0	31	20	-	-	2.6	15
3.94	38.3	61.5	154.4	1.4	-0.1	3.6	clayy SILT to silty CLAY	115	2.0	31	19	-	-	2.5	15
4.10	33.4	53.6	134.4	1.0	-0.1	3.1	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.2	15
4.27	30.1	48.3	126.5	0.9	-0.1	3.0	clayy SILT to silty CLAY	115	2.0	24	15	-	-	2.0	15
4.43	27.0	43.3	141.5	1.1	-0.1	4.0	clayy SILT to silty CLAY	115	2.0	22	14	-	-	1.8	15
4.59	24.6	39.5	-	1.3	-0.1	5.2	silty CLAY to CLAY	115	1.5	26	16	-	-	1.6	15
4.76	23.3	37.3	-	1.5	-0.1	6.3	silty CLAY to CLAY	115	1.5	25	16	-	-	1.5	15
4.92	26.0	41.7	-	1.9	-0.1	7.5	silty CLAY to CLAY	115	1.5	28	17	-	-	1.7	15
5.09	32.9	52.8	-	2.1	-0.1	6.5	silty CLAY to CLAY	115	1.5	35	22	-	-	2.2	15
5.25	26.9	43.1	-	1.8	-0.6	6.8	silty CLAY to CLAY	115	1.5	29	18	-	-	1.8	15
5.41	24.6	39.4	-	1.8	-0.8	7.5	silty CLAY to CLAY	115	1.5	26	16	-	-	1.6	15
5.58	23.0	36.9	-	1.8	-0.9	8.2	silty CLAY to CLAY	115	1.5	25	15	-	-	1.5	15
5.74	21.7	34.8	-	1.8	-0.9	8.2	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
5.91	20.6	33.0	-	1.6	-0.9	8.0	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
6.07	19.3	31.0	-	1.5	-0.9	8.1	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
6.23	18.9	30.3	-	1.5	-0.9	8.1	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
6.40	19.1	30.7	-	1.5	-0.9	8.0	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
6.56	18.2	29.2	-	1.4	-0.9	8.1	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
6.73	16.9	27.0	-	1.3	-0.9	8.0	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
6.89	15.0	24.1	-	1.2	-0.9	7.9	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
7.05	14.8	23.7	-	1.1	-0.9	7.8	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
7.22	14.3	22.9	-	1.1	-0.9	8.2	silty CLAY to CLAY	115	1.5	15	10	-	-	0.9	15
7.38	15.6	25.0	-	1.0	-0.9	6.4	silty CLAY to CLAY	115	1.5	17	10	-	-	1.0	15
7.55	19.2	30.9	-	1.0	-0.9	5.5	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
7.71	19.1	30.6	-	1.1	-0.9	5.7	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
7.87	17.9	28.8	-	1.1	-0.9	6.3	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
8.04	15.7	25.2	-	1.0	-0.9	6.6	silty CLAY to CLAY	115	1.5	17	10	-	-	1.0	15
8.20	13.8	22.2	-	0.7	-0.9	4.9	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
8.37	16.9	27.2	83.6	0.3	-0.9	2.0	clayy SILT to silty CLAY	115	2.0	14	8	-	-	1.1	15
8.53	1.1	0.5	-	0.1	-0.9	0.1	sensitive fine SOIL	115	2.0	0	1	-	-	0.0	15
8.69	1.0	1.6	-	0.1	-1.0	9.9	Organic SOILS - Peats	100	1.0	2	1	-	-	0.1	10
8.86	6.4	10.3	-	0.3	-1.0	5.4	silty CLAY to CLAY	115	1.5	7	4	-	-	0.4	15
9.02	11.2	17.9	-	0.5	-1.0	4.8	silty CLAY to CLAY	115	1.5	12	7	-	-	0.7	15
9.19	11.2	18.0	-	0.6	-1.0	5.7	silty CLAY to CLAY	115	1.5	12	7	-	-	0.7	15
9.35	10.3	16.5	-	0.6	-1.0	5.8	silty CLAY to CLAY	115	1.5	11	7	-	-	0.6	15
9.51	8.2	13.2	-	0.5	-1.0	6.7	silty CLAY to CLAY	115	1.5	9	5	-	-	0.5	15
9.68	8.5	13.7	-	0.5	-1.0	6.3	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
9.84	15.7	25.2	-	0.6	-1.0	3.9	clayy SILT to silty CLAY	115	2.0	13	8	-	-	1.0	15
10.01	20.9	30.3	-	0.6	-1.0	2.9	clayy SILT to silty CLAY	115	2.0	15	10	-	-	1.4	15
10.17	22.2	28.2	91.9	0.5	-1.0	2.4	clayy SILT to silty CLAY	115	2.0	14	11	-	-	1.4	15
10.34	22.4	28.2	76.9	0.4	-1.0	1.7	silty SAND to sandy SILT	120	4.0	7	6	25	35	-	16
10.50	20.7	25.9	78.5	0.4	-1.0	1.9	clayy SILT to silty CLAY	115	2.0	13	10	-	-	1.3	15
10.66	21.3	26.4	78.1	0.4	-1.0	1.8	clayy SILT to silty CLAY	115	2.0	13	11	-	-	1.4	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(297).cpt
CPT Date: 5/1/2006 8:47:51 AM
GW During Test: 12 ft

Sounding ID: CPT-01
Project No: 19166
Cone/Rig: DSG0705

Depth ft	qc PS tsf	qc1n PS -	qincs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
10.83	22.5	27.7	76.1	0.4	-1.0	1.7	silty SAND to sandy SILT	120	4.0	7	6	25	35	-	16
10.99	20.5	25.0	67.6	0.3	-1.0	1.4	silty SAND to sandy SILT	120	4.0	6	5	21	34	-	16
11.16	16.9	20.4	67.3	0.3	-1.0	1.6	clayy SILT to silty CLAY	115	2.0	10	8	-	-	1.1	15
11.32	14.9	22.9	-	0.4	-1.0	2.5	clayy SILT to silty CLAY	115	2.0	11	7	-	-	1.0	15
11.48	12.9	19.5	-	0.4	-1.0	3.0	clayy SILT to silty CLAY	115	2.0	10	6	-	-	0.8	15
11.65	12.9	19.2	-	0.5	-1.0	4.0	silty CLAY to CLAY	115	1.5	13	9	-	-	0.8	15
11.81	16.1	23.7	-	0.4	-1.0	2.9	clayy SILT to silty CLAY	115	2.0	12	8	-	-	1.0	15
11.98	13.1	19.0	-	0.5	-1.0	4.0	silty CLAY to CLAY	115	1.5	13	9	-	-	0.8	15
12.14	15.9	22.8	-	0.5	-1.0	3.2	clayy SILT to silty CLAY	115	2.0	11	8	-	-	1.0	15
12.30	18.8	26.9	-	0.6	-1.0	3.4	clayy SILT to silty CLAY	115	2.0	13	9	-	-	1.2	15
12.47	22.5	28.3	93.2	0.5	-1.0	2.5	clayy SILT to silty CLAY	115	2.0	14	11	-	-	1.5	15
12.63	21.6	27.1	86.9	0.5	-1.0	2.2	clayy SILT to silty CLAY	115	2.0	14	11	-	-	1.4	15
12.80	19.5	24.4	77.6	0.4	-1.0	1.9	clayy SILT to silty CLAY	115	2.0	12	10	-	-	1.3	15
12.96	13.4	18.8	-	0.4	-1.0	3.1	clayy SILT to silty CLAY	115	2.0	9	7	-	-	0.8	15
13.12	7.0	9.8	-	0.4	-1.0	6.6	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
13.29	7.1	9.9	-	0.4	-1.0	6.1	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
13.45	7.2	9.9	-	0.8	-1.0	9.9	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
13.62	12.4	16.9	-	0.9	-1.0	7.6	silty CLAY to CLAY	115	1.5	11	8	-	-	0.8	15
13.78	24.0	32.5	-	0.8	-1.0	3.5	clayy SILT to silty CLAY	115	2.0	16	12	-	-	1.5	15
13.94	31.6	35.6	106.0	0.8	-1.0	2.7	clayy SILT to silty CLAY	115	2.0	18	16	-	-	2.1	15
14.11	35.0	39.4	123.8	1.1	-1.0	3.4	clayy SILT to silty CLAY	115	2.0	20	18	-	-	2.3	15
14.27	42.2	47.3	123.6	1.2	-1.0	2.9	clayy SILT to silty CLAY	115	2.0	24	21	-	-	2.8	15
14.44	62.1	69.5	106.4	0.9	-1.0	1.4	silty SAND to sandy SILT	120	4.0	17	16	55	39	-	16
14.60	78.2	87.2	118.5	1.0	-1.0	1.3	silty SAND to sandy SILT	120	4.0	22	20	62	41	-	16
14.76	80.6	89.5	112.3	0.8	-1.0	1.0	clean SAND to silty SAND	125	5.0	18	16	63	41	-	16
14.93	85.9	95.2	118.3	0.9	-1.0	1.1	clean SAND to silty SAND	125	5.0	19	17	65	41	-	16
15.09	83.8	92.5	117.8	1.0	-1.0	1.1	clean SAND to silty SAND	125	5.0	19	17	64	41	-	16
15.26	86.1	94.7	118.8	0.9	-1.0	1.1	clean SAND to silty SAND	125	5.0	19	17	65	41	-	16
15.42	93.4	102.5	124.2	1.0	-1.0	1.1	clean SAND to silty SAND	125	5.0	20	19	68	41	-	16
15.58	97.7	106.8	112.4	0.5	-1.1	0.5	clean SAND to silty SAND	125	5.0	21	20	69	42	-	16
15.75	91.5	99.7	99.8	0.3	-1.1	0.3	clean SAND to silty SAND	125	5.0	20	18	67	41	-	16
15.91	63.4	68.9	80.4	0.3	-1.1	0.5	clean SAND to silty SAND	125	5.0	14	13	55	39	-	16
16.08	41.1	44.5	68.6	0.3	-1.1	0.8	silty SAND to sandy SILT	120	4.0	11	10	40	37	-	16
16.24	24.1	26.1	81.8	0.5	-1.1	2.0	clayy SILT to silty CLAY	115	2.0	13	12	-	-	1.6	15
16.40	14.3	17.5	-	0.3	-1.1	2.3	clayy SILT to silty CLAY	115	2.0	9	7	-	-	0.9	15
16.57	13.4	16.3	-	0.5	-1.1	3.9	silty CLAY to CLAY	115	1.5	11	9	-	-	0.8	15
16.73	19.2	23.4	-	0.4	-1.1	2.5	clayy SILT to silty CLAY	115	2.0	12	10	-	-	1.2	15
16.90	14.5	17.5	-	0.4	-1.1	3.2	silty CLAY to CLAY	115	1.5	12	10	-	-	0.9	15
17.06	19.9	21.2	63.1	0.2	-1.1	1.3	silty SAND to sandy SILT	120	4.0	5	5	16	32	-	16
17.23	23.3	24.8	61.4	0.2	-1.1	1.1	silty SAND to sandy SILT	120	4.0	6	6	21	33	-	16
17.39	25.2	26.7	79.6	0.4	-1.1	1.8	clayy SILT to silty CLAY	115	2.0	13	13	-	-	1.6	15
17.55	32.8	34.6	64.8	0.3	-1.1	0.9	silty SAND to sandy SILT	120	4.0	9	8	32	35	-	16
17.72	48.4	51.0	69.2	0.3	-1.1	0.6	clean SAND to silty SAND	125	5.0	10	10	45	37	-	16
17.88	55.0	57.8	70.7	0.3	-1.1	0.5	clean SAND to silty SAND	125	5.0	12	11	49	38	-	16
18.05	42.8	44.8	77.5	0.5	-1.1	1.1	silty SAND to sandy SILT	120	4.0	11	11	41	37	-	16
18.21	28.3	29.5	80.8	0.5	-1.1	1.8	silty SAND to sandy SILT	120	4.0	7	7	27	34	-	16
18.37	31.7	33.0	76.0	0.4	-1.1	1.4	silty SAND to sandy SILT	120	4.0	8	8	30	35	-	16
18.54	29.4	30.5	81.1	0.5	-1.1	1.7	silty SAND to sandy SILT	120	4.0	8	7	28	34	-	16
18.70	36.2	41.2	-	2.9	-1.2	8.4	silty CLAY to CLAY	115	1.5	27	24	-	-	2.4	15
18.87	43.8	45.2	86.8	0.6	-1.4	1.5	silty SAND to sandy SILT	120	4.0	11	11	41	37	-	16
19.03	112.1	115.6	159.1	2.1	-1.5	1.9	silty SAND to sandy SILT	120	4.0	29	28	72	42	-	16
19.19	126.6	130.1	164.5	2.0	-3.3	1.6	clean SAND to silty SAND	125	5.0	26	25	76	42	-	16
19.36	81.9	84.0	158.1	2.3	-3.5	2.8	silty SAND to sandy SILT	120	4.0	21	20	61	40	-	16
19.52	101.4	103.7	117.3	0.8	-3.5	0.8	clean SAND to silty SAND	125	5.0	21	20	68	41	-	16
19.69	77.9	79.4	109.7	1.0	-3.5	1.3	silty SAND to sandy SILT	120	4.0	20	19	59	40	-	16
19.85	70.3	71.5	80.5	0.3	-3.5	0.4	clean SAND to silty SAND	125	5.0	14	14	56	39	-	16
20.01	57.9	58.7	67.8	0.2	-3.5	0.3	clean SAND to silty SAND	125	5.0	12	12	49	38	-	16
20.18	49.7	50.3	64.8	0.2	-3.6	0.5	clean SAND to silty SAND	125	5.0	10	10	44	37	-	16
20.34	52.8	53.2	65.9	0.2	-3.6	0.4	clean SAND to silty SAND	125	5.0	11	11	46	37	-	16
20.51	59.2	59.5	74.7	0.3	-3.6	0.6	clean SAND to silty SAND	125	5.0	12	12	50	38	-	16
20.67	57.8	58.0	68.9	0.2	-3.7	0.4	clean SAND to silty SAND	125	5.0	12	12	49	38	-	16
20.83	52.8	52.8	62.9	0.2	-3.7	0.3	clean SAND to silty SAND	125	5.0	11	11	46	37	-	16
21.00	39.7	39.6	69.0	0.4	-3.7	0.9	silty SAND to sandy SILT	120	4.0	10	10	36	36	-	16
21.16	30.4	30.2	59.1	0.2	-3.8	0.8	silty SAND to sandy SILT	120	4.0	8	8	27	34	-	16
21.33	26.5	26.3	64.4	0.3	-4.7	1.1	silty SAND to sandy SILT	120	4.0	7	7	23	33	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(297).cpt
CPT Date: 5/1/2006 8:47:51 AM
GW During Test: 12 ft

Sounding ID: CPT-01
Project No: 19166
Cone/Rig: DSG0705

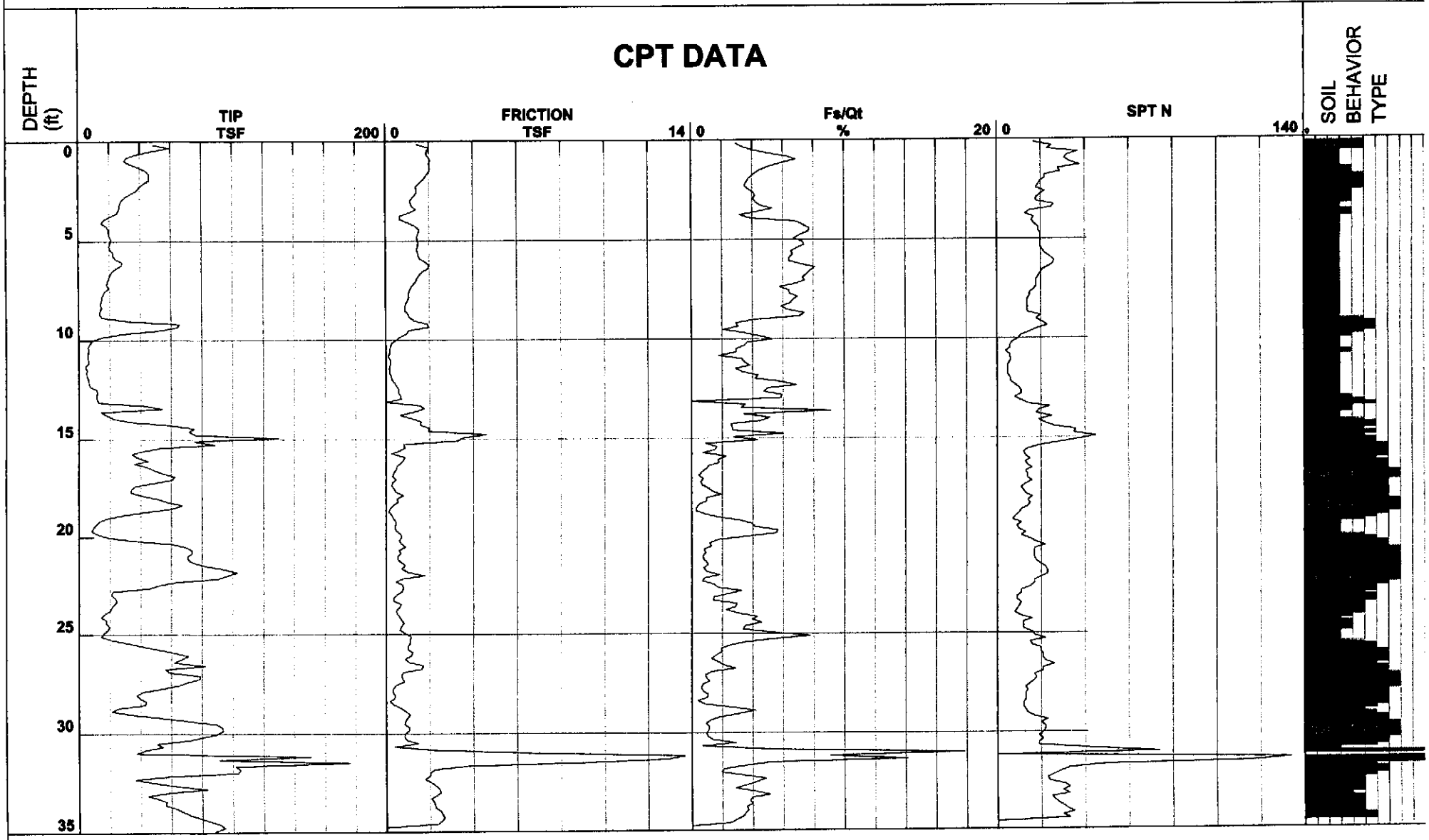
Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS - *	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description *	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
21.49	23.8	24.8	-	0.8	-4.7	3.5	clayy SILT to silty CLAY	115	2.0	12	12	-	-	1.5	15
21.65	22.8	23.6	-	1.1	-4.7	5.3	silty CLAY to CLAY	115	1.5	16	15	-	-	1.5	15
21.82	18.0	18.5	-	1.1	-4.7	6.3	silty CLAY to CLAY	115	1.5	12	12	-	-	1.1	15
21.98	19.3	19.8	-	0.9	-4.7	5.2	silty CLAY to CLAY	115	1.5	13	13	-	-	1.2	15
22.15	18.8	19.2	-	1.2	-4.7	7.0	silty CLAY to CLAY	115	1.5	13	13	-	-	1.2	15
22.31	26.9	27.3	-	2.3	-4.7	8.9	silty CLAY to CLAY	115	1.5	18	18	-	-	1.7	15
22.47	81.8	80.0	196.3	3.5	-4.7	4.3	clayy SILT to silty CLAY	115	2.0	40	41	-	-	5.4	15
22.64	72.7	70.9	221.2	4.1	-4.7	5.8	very stiff fine SOIL	120	2.0	35	36	56	39	-	30
22.80	69.6	67.7	213.9	3.9	-4.7	5.7	clayy SILT to silty CLAY	115	2.0	34	35	-	-	4.6	15
22.97	70.5	68.4	204.6	3.6	-4.7	5.2	clayy SILT to silty CLAY	115	2.0	34	35	-	-	4.6	15
23.13	53.7	53.4	-	2.9	-4.7	5.5	clayy SILT to silty CLAY	115	2.0	27	27	-	-	3.5	15
23.30	47.2	46.7	-	2.6	-4.7	5.7	silty CLAY to CLAY	115	1.5	31	31	-	-	3.1	15
23.46	47.4	46.8	-	5.3	-4.7	9.9	silty CLAY to CLAY	115	1.5	31	32	-	-	3.1	15
23.62	125.1	120.4	304.7	7.7	-4.7	6.2	very stiff fine SOIL	120	2.0	60	63	73	42	-	30
23.79	194.4	186.6	350.5	10.0	-4.7	5.2	very stiff fine SOIL	120	2.0	93	97	88	44	-	30
23.95	103.0	98.7	278.9	6.5	-4.7	6.4	very stiff fine SOIL	120	2.0	49	52	67	41	-	30
24.12	52.0	50.3	-	5.0	-4.7	9.9	silty CLAY to CLAY	115	1.5	34	35	-	-	3.4	15
24.28	59.4	57.3	-	5.0	-4.7	8.6	silty CLAY to CLAY	115	1.5	38	40	-	-	3.9	15
24.44	139.3	132.5	307.2	8.0	-4.7	5.8	very stiff fine SOIL	120	2.0	66	70	76	42	-	30
24.61	150.9	143.3	296.9	7.7	-4.7	5.1	very stiff fine SOIL	120	2.0	72	75	79	42	-	30

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	4803 El Cannon Ave.	Operator	JH-VO	Filename	SDF(298).cpt
Job Number	19166	Cone Number	DSG0705	GPS	
Hole Number	CPT-02	Date and Time	5/1/2006 9:16:36 AM	Maximum Depth	34.94 ft
Water Table Depth		12.00 ft			

CPT DATA



- 1 - sensitive fine grained
- 2 - organic material
- 3 - clay
- 4 - silty clay to clay
- 5 - clayey silt to silty clay
- 6 - sandy silt to clayey silt
- 7 - silty sand to sandy silt
- 8 - sand to silty sand
- 9 - sand
- 10 - gravelly sand to sand
- 11 - very stiff fine grained (*)
- 12 - sand to clayey sand (*)

Project ID: GEOTECHNOLOGIES, INC. Page: 1
Data File: SDF(298).cpt Sounding ID: CPT-02
CPT Date: 5/1/2006 9:16:36 AM Project No: 19166
GW During Test: 12 ft Cone/Rig: DSG0705

Depth ft	qc PS tsf	qcln * PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material * Behavior Description	Unit Wght pcf	Qc to N	SPT * R-N1 60%	SPT R-N 60%	Rel * Den %	Ftn * Ang deg	Und Shr tsf	Nk * - -
0.33	59.4	95.3	185.2	2.0	-0.2	3.4	silty SAND to sandy SILT	120	4.0	24	15	65	48	-	16
0.49	47.6	76.3	182.2	1.9	-0.2	4.0	clayy SILT to silty CLAY	115	2.0	38	24	-	-	3.2	15
0.66	38.0	60.9	185.8	1.9	-0.2	5.0	clayy SILT to silty CLAY	115	2.0	30	19	-	-	2.5	15
0.82	31.6	50.7	-	2.0	-0.2	6.3	silty CLAY to CLAY	115	1.5	34	21	-	-	2.1	15
0.98	30.1	48.3	-	2.1	-0.2	6.9	silty CLAY to CLAY	115	1.5	32	20	-	-	2.0	15
1.15	33.9	54.3	-	2.0	-0.2	6.0	silty CLAY to CLAY	115	1.5	36	23	-	-	2.3	15
1.31	39.8	63.9	194.4	2.1	-0.2	5.2	clayy SILT to silty CLAY	115	2.0	32	20	-	-	2.7	15
1.48	44.3	71.0	190.9	2.0	-0.2	4.6	clayy SILT to silty CLAY	115	2.0	36	22	-	-	2.9	15
1.64	46.0	73.8	185.4	2.0	-0.2	4.2	clayy SILT to silty CLAY	115	2.0	37	23	-	-	3.1	15
1.80	46.3	74.2	179.1	1.8	-0.3	4.0	clayy SILT to silty CLAY	115	2.0	37	23	-	-	3.1	15
1.97	46.1	73.9	172.9	1.7	-0.3	3.8	clayy SILT to silty CLAY	115	2.0	37	23	-	-	3.1	15
2.13	42.6	68.3	163.9	1.6	-0.3	3.7	clayy SILT to silty CLAY	115	2.0	34	21	-	-	2.8	15
2.30	39.6	63.5	155.1	1.4	-0.3	3.5	clayy SILT to silty CLAY	115	2.0	32	20	-	-	2.6	15
2.46	38.4	61.6	159.1	1.4	-0.2	3.8	clayy SILT to silty CLAY	115	2.0	31	19	-	-	2.5	15
2.62	34.7	55.7	159.5	1.4	-0.2	4.1	clayy SILT to silty CLAY	115	2.0	28	17	-	-	2.3	15
2.79	30.9	49.6	154.1	1.3	-0.2	4.2	clayy SILT to silty CLAY	115	2.0	25	15	-	-	2.1	15
2.95	28.3	45.4	145.5	1.2	-0.2	4.1	clayy SILT to silty CLAY	115	2.0	23	14	-	-	1.9	15
3.12	27.2	43.7	-	1.2	-0.3	4.3	clayy SILT to silty CLAY	115	2.0	22	14	-	-	1.8	15
3.28	26.8	43.0	-	1.2	-0.3	4.6	clayy SILT to silty CLAY	115	2.0	22	13	-	-	1.8	15
3.45	26.4	42.4	-	1.4	-0.3	5.4	silty CLAY to CLAY	115	1.5	28	18	-	-	1.7	15
3.61	25.2	40.4	-	1.1	-0.3	4.4	clayy SILT to silty CLAY	115	2.0	20	13	-	-	1.7	15
3.77	21.1	33.8	-	0.7	-0.3	3.2	clayy SILT to silty CLAY	115	2.0	17	11	-	-	1.4	15
3.94	17.0	27.2	-	0.7	-0.3	3.9	clayy SILT to silty CLAY	115	2.0	14	8	-	-	1.1	15
4.10	15.0	24.1	-	1.0	-0.3	7.0	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
4.27	18.5	29.7	-	1.4	-0.3	7.4	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
4.43	19.9	31.9	-	1.5	-0.3	7.9	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
4.59	19.6	31.5	-	1.5	-0.3	7.8	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
4.76	20.4	32.7	-	1.5	-0.3	7.2	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
4.92	21.5	34.5	-	1.4	-0.4	6.8	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
5.09	20.5	32.9	-	1.5	-0.4	7.4	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
5.25	20.0	32.1	-	1.5	-0.4	7.5	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
5.41	20.6	33.0	-	1.4	-0.4	7.0	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
5.58	22.6	36.2	-	1.5	-0.4	6.6	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
5.74	22.6	36.2	-	1.5	-0.4	6.8	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
5.91	24.2	38.9	-	1.6	-0.4	6.5	silty CLAY to CLAY	115	1.5	26	16	-	-	1.6	15
6.07	28.4	45.6	-	1.8	-0.4	6.5	silty CLAY to CLAY	115	1.5	30	19	-	-	1.9	15
6.23	28.0	44.9	-	2.0	-0.4	7.2	silty CLAY to CLAY	115	1.5	30	19	-	-	1.8	15
6.40	24.1	38.7	-	2.0	-0.4	8.2	silty CLAY to CLAY	115	1.5	26	16	-	-	1.6	15
6.56	21.7	34.9	-	1.7	-0.4	8.0	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
6.73	20.4	32.7	-	1.5	-0.4	7.7	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
6.89	19.7	31.7	-	1.4	-0.4	7.5	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
7.05	18.7	30.0	-	1.4	-0.4	7.6	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
7.22	18.5	29.6	-	1.3	-0.4	7.0	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
7.38	19.8	31.8	-	1.2	-0.4	5.9	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
7.55	17.0	27.3	-	1.1	-0.4	6.6	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
7.71	16.0	25.7	-	1.0	-0.4	6.6	silty CLAY to CLAY	115	1.5	17	11	-	-	1.0	15
7.87	15.2	24.3	-	1.1	-0.4	7.2	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
8.04	15.0	24.0	-	1.0	-0.4	6.9	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
8.20	14.2	22.8	-	0.9	-0.4	6.7	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
8.37	15.0	24.1	-	0.9	-0.4	6.1	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
8.53	14.0	22.5	-	0.9	-0.4	6.6	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
8.69	13.7	22.0	-	1.0	-0.4	7.7	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
8.86	15.3	24.6	-	1.1	-0.4	7.3	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
9.02	32.6	43.9	144.3	1.3	-0.4	4.1	clayy SILT to silty CLAY	115	2.0	22	16	-	-	2.1	15
9.19	65.7	87.8	165.2	1.9	-0.5	2.9	silty SAND to sandy SILT	120	4.0	22	16	63	42	-	16
9.35	63.8	84.3	167.0	2.0	-0.5	3.1	silty SAND to sandy SILT	120	4.0	21	16	61	41	-	16
9.51	50.9	66.8	121.8	1.1	-0.5	2.1	silty SAND to sandy SILT	120	4.0	17	13	54	40	-	16
9.68	28.2	41.7	129.2	1.0	-0.5	3.5	clayy SILT to silty CLAY	115	2.0	21	14	-	-	1.8	15
9.84	15.5	24.9	-	0.7	-0.5	4.6	silty CLAY to CLAY	115	1.5	17	10	-	-	1.0	15
10.01	9.0	14.5	-	0.5	-0.5	5.7	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
10.17	7.5	12.0	-	0.3	-0.5	4.0	silty CLAY to CLAY	115	1.5	8	5	-	-	0.5	15
10.34	6.1	9.9	-	0.2	-0.5	3.8	silty CLAY to CLAY	115	1.5	7	4	-	-	0.4	15
10.50	6.5	10.4	-	0.2	-0.5	3.2	silty CLAY to CLAY	115	1.5	7	4	-	-	0.4	15
10.66	6.3	10.1	-	0.2	-0.5	3.2	silty CLAY to CLAY	115	1.5	7	4	-	-	0.4	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(298).cpt
CPT Date: 5/1/2006 9:16:36 AM
GW During Test: 12 ft

Sounding ID: CPT-02
Project No: 19166
Cone/Rig: DSG0705

Depth ft	qc PS tsf	*qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	*Material Behavior Description	Unit Wght pcf	Qc to N	*SPT R-N1 60%	SPT R-N 60%	*Rel Den %	*Ftn Ang deg	Und Shr tsf	*Nk -
10.83	5.9	9.4	-	0.1	-0.5	2.0	silty CLAY to CLAY	115	1.5	6	4	-	-	0.3	15
10.99	6.4	10.1	-	0.2	-0.5	3.7	silty CLAY to CLAY	115	1.5	7	4	-	-	0.4	15
11.16	6.7	10.4	-	0.2	-0.6	3.9	silty CLAY to CLAY	115	1.5	7	4	-	-	0.4	15
11.32	4.5	6.9	-	0.2	-0.6	4.5	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
11.48	5.4	8.1	-	0.2	-0.7	3.3	silty CLAY to CLAY	115	1.5	5	4	-	-	0.3	15
11.65	5.2	7.8	-	0.2	-0.7	3.8	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
11.81	5.5	8.1	-	0.2	-0.7	5.0	silty CLAY to CLAY	115	1.5	5	4	-	-	0.3	15
11.98	6.4	9.3	-	0.3	-0.7	4.7	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
12.14	6.6	9.5	-	0.4	-0.7	6.6	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
12.30	7.2	10.3	-	0.5	-0.7	7.6	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
12.47	11.6	16.4	-	0.6	-0.7	5.3	silty CLAY to CLAY	115	1.5	11	8	-	-	0.7	15
12.63	12.1	17.1	-	0.6	-0.7	5.1	silty CLAY to CLAY	115	1.5	11	8	-	-	0.8	15
12.80	11.3	15.9	-	0.7	-0.7	6.3	silty CLAY to CLAY	115	1.5	11	8	-	-	0.7	15
12.96	11.9	16.6	-	0.7	-0.7	6.3	silty CLAY to CLAY	115	1.5	11	8	-	-	0.7	15
13.12	12.9	14.7	33.0	0.1	-0.7	0.1	silty SAND to sandy SILT	120	4.0	4	3	5	30	-	16
13.29	43.7	49.8	141.2	1.5	-1.2	3.6	clayy SILT to silty CLAY	115	2.0	25	22	-	-	2.9	15
13.45	54.4	61.8	148.9	1.8	-1.8	3.3	clayy SILT to silty CLAY	115	2.0	31	27	-	-	3.6	15
13.62	14.6	19.9	-	1.3	-1.8	9.6	silty CLAY to CLAY	115	1.5	13	10	-	-	0.9	15
13.78	18.7	25.3	-	0.6	-1.9	3.6	clayy SILT to silty CLAY	115	2.0	13	9	-	-	1.2	15
13.94	23.2	31.3	-	1.2	-2.0	5.3	silty CLAY to CLAY	115	1.5	21	15	-	-	1.5	15
14.11	35.5	47.5	-	1.6	-2.0	4.7	clayy SILT to silty CLAY	115	2.0	24	18	-	-	2.3	15
14.27	60.5	67.8	136.9	1.6	-2.0	2.6	silty SAND to sandy SILT	120	4.0	17	15	54	39	-	16
14.44	75.0	83.8	154.5	2.0	-2.0	2.7	silty SAND to sandy SILT	120	4.0	21	19	61	40	-	16
14.60	71.9	80.0	152.3	2.0	-2.0	2.7	silty SAND to sandy SILT	120	4.0	20	18	60	40	-	16
14.76	76.1	84.5	249.0	4.6	-2.0	6.1	very stiff fine SOIL	120	2.0	42	38	61	40	-	30
14.93	130.0	143.8	214.0	3.6	-2.0	2.8	silty SAND to sandy SILT	120	4.0	36	32	79	43	-	16
15.09	75.4	83.2	201.4	3.3	-2.0	4.4	clayy SILT to silty CLAY	115	2.0	42	38	-	-	5.0	15
15.26	88.5	97.4	115.7	0.8	-2.0	0.9	clean SAND to silty SAND	125	5.0	19	18	66	41	-	16
15.42	52.7	57.7	102.9	0.9	-2.0	1.7	silty SAND to sandy SILT	120	4.0	14	13	49	38	-	16
15.58	41.8	45.7	89.1	0.6	-2.0	1.5	silty SAND to sandy SILT	120	4.0	11	10	41	37	-	16
15.75	34.3	37.3	62.5	0.3	-2.0	0.8	silty SAND to sandy SILT	120	4.0	9	9	34	36	-	16
15.91	38.4	41.8	104.4	0.9	-1.9	2.3	silty SAND to sandy SILT	120	4.0	10	10	38	36	-	16
16.08	45.0	48.7	97.4	0.8	-2.0	1.8	silty SAND to sandy SILT	120	4.0	12	11	43	37	-	16
16.24	36.1	39.0	91.3	0.7	-2.0	1.9	silty SAND to sandy SILT	120	4.0	10	9	36	36	-	16
16.40	44.0	47.4	80.7	0.5	-2.0	1.2	silty SAND to sandy SILT	120	4.0	12	11	42	37	-	16
16.57	48.5	52.0	79.9	0.5	-2.0	1.0	silty SAND to sandy SILT	120	4.0	13	12	45	38	-	16
16.73	54.1	57.9	76.4	0.4	-2.0	0.7	clean SAND to silty SAND	125	5.0	12	11	49	38	-	16
16.90	62.4	66.6	78.2	0.3	-2.0	0.5	clean SAND to silty SAND	125	5.0	13	12	54	39	-	16
17.06	60.5	64.4	84.5	0.5	-2.0	0.8	clean SAND to silty SAND	125	5.0	13	12	52	39	-	16
17.23	49.1	52.1	69.4	0.3	-2.0	0.6	clean SAND to silty SAND	125	5.0	10	10	45	38	-	16
17.39	36.8	39.0	62.9	0.3	-1.9	0.7	silty SAND to sandy SILT	120	4.0	10	9	36	36	-	16
17.55	34.2	36.1	71.6	0.4	-1.9	1.1	silty SAND to sandy SILT	120	4.0	9	9	33	35	-	16
17.72	33.8	35.6	77.8	0.5	-1.9	1.4	silty SAND to sandy SILT	120	4.0	9	8	33	35	-	16
17.88	41.4	43.4	98.3	0.8	-1.9	2.0	silty SAND to sandy SILT	120	4.0	11	10	39	36	-	16
18.05	51.5	53.9	81.6	0.5	-1.9	1.0	silty SAND to sandy SILT	120	4.0	13	13	47	38	-	16
18.21	57.6	60.2	86.2	0.6	-1.9	1.0	silty SAND to sandy SILT	120	4.0	15	14	50	38	-	16
18.37	67.4	70.1	82.2	0.3	-1.9	0.5	clean SAND to silty SAND	125	5.0	14	13	55	39	-	16
18.54	60.5	62.8	71.1	0.2	-1.9	0.3	clean SAND to silty SAND	125	5.0	13	12	52	38	-	16
18.70	44.1	45.6	56.3	0.1	-1.9	0.3	clean SAND to silty SAND	125	5.0	9	9	41	37	-	16
18.87	28.9	29.8	62.2	0.3	-1.9	0.9	silty SAND to sandy SILT	120	4.0	7	7	27	34	-	16
19.03	18.0	20.2	-	0.3	-1.9	2.0	clayy SILT to silty CLAY	115	2.0	10	9	-	-	1.1	15
19.19	13.5	15.1	-	0.4	-1.9	3.5	silty CLAY to CLAY	115	1.5	10	9	-	-	0.8	15
19.36	11.4	12.7	-	0.4	-1.9	4.4	silty CLAY to CLAY	115	1.5	8	8	-	-	0.7	15
19.52	9.5	10.5	-	0.4	-1.9	4.7	silty CLAY to CLAY	115	1.5	7	6	-	-	0.6	15
19.69	8.4	9.3	-	0.5	-1.9	6.5	silty CLAY to CLAY	115	1.5	6	6	-	-	0.5	15
19.85	12.3	13.5	-	0.7	-2.0	6.1	silty CLAY to CLAY	115	1.5	9	8	-	-	0.8	15
20.01	19.4	21.1	-	0.7	-1.9	3.9	silty CLAY to CLAY	115	1.5	14	13	-	-	1.2	15
20.18	35.2	35.6	86.7	0.6	-1.9	1.8	silty SAND to sandy SILT	120	4.0	9	9	33	35	-	16
20.34	61.0	61.6	93.0	0.7	-1.9	1.2	silty SAND to sandy SILT	120	4.0	15	15	51	38	-	16
20.51	69.5	70.0	103.2	0.9	-1.9	1.3	silty SAND to sandy SILT	120	4.0	17	17	55	39	-	16
20.67	73.8	74.1	93.5	0.6	-1.9	0.8	clean SAND to silty SAND	125	5.0	15	15	57	39	-	16
20.83	73.4	73.5	96.1	0.7	-1.9	0.9	clean SAND to silty SAND	125	5.0	15	15	57	39	-	16
21.00	70.7	70.6	88.9	0.5	-1.9	0.8	clean SAND to silty SAND	125	5.0	14	14	56	39	-	16
21.16	71.1	70.8	89.4	0.5	-1.9	0.8	clean SAND to silty SAND	125	5.0	14	14	56	39	-	16
21.33	75.1	74.6	98.2	0.7	-1.9	1.0	clean SAND to silty SAND	125	5.0	15	15	57	39	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(298).cpt
CPT Date: 5/1/2006 9:16:36 AM
GW During Test: 12 ft

Sounding ID: CPT-02
Project No: 19166
Cone/Rig: DSG0705

Depth ft	qc PS tsf	*qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	*Material Behavior Description	Unit Wght pcf	Qc to N	*SPT R-N1 60%	SPT R-N 60%	*Rel Den %	*Ftn Ang deg	Und Shr tsf	*Nk -
21.49	81.4	80.6	106.4	0.9	-1.9	1.1	clean SAND to silty SAND	125	5.0	16	16	60	40	-	16
21.65	93.8	92.7	108.0	0.7	-1.9	0.8	clean SAND to silty SAND	125	5.0	19	19	64	40	-	16
21.82	103.0	101.5	121.7	1.0	-1.9	1.0	clean SAND to silty SAND	125	5.0	20	21	67	41	-	16
21.98	96.2	94.6	140.7	1.8	-1.9	1.9	silty SAND to sandy SILT	120	4.0	24	24	65	40	-	16
22.15	90.3	88.5	106.7	0.8	-1.9	0.9	clean SAND to silty SAND	125	5.0	18	18	63	40	-	16
22.31	64.4	63.0	81.2	0.4	-1.9	0.7	clean SAND to silty SAND	125	5.0	13	13	52	38	-	16
22.47	53.0	51.7	92.1	0.8	-1.9	1.5	silty SAND to sandy SILT	120	4.0	13	13	45	37	-	16
22.64	45.5	44.2	94.6	0.8	-1.9	1.8	silty SAND to sandy SILT	120	4.0	11	11	40	36	-	16
22.80	22.1	22.1	-	0.7	-1.9	3.5	clayy SILT to silty CLAY	115	2.0	11	11	-	-	1.4	15
22.97	21.0	20.9	-	0.5	-1.9	2.5	clayy SILT to silty CLAY	115	2.0	10	11	-	-	1.3	15
23.13	23.5	22.7	70.3	0.3	-1.9	1.5	clayy SILT to silty CLAY	115	2.0	11	12	-	-	1.5	15
23.30	24.7	23.9	70.7	0.4	-1.9	1.5	clayy SILT to silty CLAY	115	2.0	12	12	-	-	1.6	15
23.46	23.2	22.8	-	0.7	-1.9	3.2	clayy SILT to silty CLAY	115	2.0	11	12	-	-	1.5	15
23.62	21.3	20.8	-	0.6	-1.9	3.1	clayy SILT to silty CLAY	115	2.0	10	11	-	-	1.4	15
23.79	20.4	19.8	-	0.5	-1.9	2.4	clayy SILT to silty CLAY	115	2.0	10	10	-	-	1.3	15
23.95	17.0	16.4	-	0.5	-1.9	3.3	silty CLAY to CLAY	115	1.5	11	11	-	-	1.1	15
24.12	14.6	14.1	-	0.6	-1.9	4.8	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
24.28	18.0	17.3	-	0.7	-1.9	4.3	silty CLAY to CLAY	115	1.5	12	12	-	-	1.1	15
24.44	17.8	17.0	-	0.8	-1.9	5.0	silty CLAY to CLAY	115	1.5	11	12	-	-	1.1	15
24.61	19.9	19.0	-	0.7	-1.9	3.8	silty CLAY to CLAY	115	1.5	13	13	-	-	1.3	15
24.77	18.8	17.8	-	0.6	-1.9	3.7	silty CLAY to CLAY	115	1.5	12	13	-	-	1.2	15
24.94	16.2	15.4	-	0.9	-1.9	5.9	silty CLAY to CLAY	115	1.5	10	11	-	-	1.0	15
25.10	14.6	13.8	-	1.1	-1.9	8.6	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
25.26	21.1	19.8	-	1.1	-1.9	5.6	silty CLAY to CLAY	115	1.5	13	14	-	-	1.3	15
25.43	32.0	29.9	-	1.1	-1.9	3.6	clayy SILT to silty CLAY	115	2.0	15	16	-	-	2.1	15
25.59	41.6	39.0	106.6	1.0	-1.9	2.5	clayy SILT to silty CLAY	115	2.0	20	21	-	-	2.7	15
25.76	51.6	48.2	103.0	1.0	-1.9	2.0	silty SAND to sandy SILT	120	4.0	12	13	43	36	-	16
25.92	62.3	58.2	112.7	1.2	-1.9	2.0	silty SAND to sandy SILT	120	4.0	15	16	49	37	-	16
26.08	71.3	66.4	109.3	1.1	-1.9	1.6	silty SAND to sandy SILT	120	4.0	17	18	53	38	-	16
26.25	66.8	62.1	97.4	0.9	-1.9	1.3	silty SAND to sandy SILT	120	4.0	16	17	51	38	-	16
26.41	61.9	57.4	104.9	1.1	-1.9	1.8	silty SAND to sandy SILT	120	4.0	14	15	49	37	-	16
26.58	82.1	75.9	131.6	1.7	-1.9	2.1	silty SAND to sandy SILT	120	4.0	19	21	58	39	-	16
26.74	56.1	51.8	130.9	1.6	-1.9	3.0	clayy SILT to silty CLAY	115	2.0	26	28	-	-	3.7	15
26.90	59.2	54.5	91.8	0.8	-1.9	1.4	silty SAND to sandy SILT	120	4.0	14	15	47	37	-	16
27.07	78.8	72.5	94.5	0.7	-1.9	0.9	clean SAND to silty SAND	125	5.0	14	16	56	39	-	16
27.23	78.8	72.2	96.5	0.8	-1.9	1.0	clean SAND to silty SAND	125	5.0	14	16	56	39	-	16
27.40	71.4	65.3	96.2	0.8	-1.9	1.2	silty SAND to sandy SILT	120	4.0	16	18	53	38	-	16
27.56	65.4	59.7	79.4	0.5	-1.9	0.7	clean SAND to silty SAND	125	5.0	12	13	50	37	-	16
27.72	54.1	49.3	68.4	0.3	-1.9	0.6	clean SAND to silty SAND	125	5.0	10	11	44	36	-	16
27.89	41.6	37.8	63.4	0.3	-1.9	0.8	silty SAND to sandy SILT	120	4.0	9	10	35	35	-	16
28.05	37.6	34.1	70.4	0.4	-1.9	1.1	silty SAND to sandy SILT	120	4.0	9	9	31	34	-	16
28.22	40.0	36.3	69.6	0.4	-1.9	1.0	silty SAND to sandy SILT	120	4.0	9	10	34	34	-	16
28.38	43.8	39.6	55.1	0.2	-1.9	0.4	clean SAND to silty SAND	125	5.0	8	9	36	35	-	16
28.54	43.0	38.8	67.6	0.4	-1.9	0.9	silty SAND to sandy SILT	120	4.0	10	11	36	35	-	16
28.71	25.8	22.1	-	0.7	-1.9	2.8	clayy SILT to silty CLAY	115	2.0	11	13	-	-	1.6	15
28.87	21.4	18.3	-	0.9	-1.9	4.5	silty CLAY to CLAY	115	1.5	12	14	-	-	1.3	15
29.04	35.7	30.4	-	1.1	-1.9	3.3	clayy SILT to silty CLAY	115	2.0	15	18	-	-	2.3	15
29.20	54.0	48.3	101.6	1.0	-1.9	1.9	silty SAND to sandy SILT	120	4.0	12	14	43	36	-	16
29.36	71.3	63.7	97.8	0.9	-1.9	1.3	silty SAND to sandy SILT	120	4.0	16	18	52	38	-	16
29.53	89.9	80.1	102.3	0.8	-1.9	1.0	clean SAND to silty SAND	125	5.0	16	18	60	39	-	16
29.69	93.5	83.1	110.4	1.1	-1.9	1.2	clean SAND to silty SAND	125	5.0	17	19	61	39	-	16
29.86	93.7	83.2	109.8	1.1	-1.9	1.1	clean SAND to silty SAND	125	5.0	17	19	61	39	-	16
30.02	89.6	79.3	102.4	0.9	-1.9	1.0	clean SAND to silty SAND	125	5.0	16	18	59	39	-	16
30.19	79.7	70.4	97.7	0.8	-1.9	1.1	silty SAND to sandy SILT	120	4.0	18	20	55	38	-	16
30.35	70.9	62.6	99.6	1.0	-1.8	1.4	silty SAND to sandy SILT	120	4.0	16	18	52	38	-	16
30.51	50.9	44.8	123.5	1.5	-1.9	3.0	clayy SILT to silty CLAY	115	2.0	22	25	-	-	3.3	15
30.68	54.6	48.0	70.5	0.4	-1.9	0.7	silty SAND to sandy SILT	120	4.0	12	14	43	36	-	16
30.84	43.6	35.5	-	2.1	-1.9	5.1	silty CLAY to CLAY	115	1.5	24	29	-	-	2.8	15
31.01	37.6	30.6	-	6.7	-1.9	9.9	silty CLAY to CLAY	115	1.5	20	25	-	-	2.4	15
31.17	150.8	131.8	414.9	13.7	-1.8	9.2	very stiff fine SOIL	120	2.0	66	75	76	42	-	30
31.33	91.2	73.6	-	12.9	-1.9	9.9	very stiff fine SOIL	120	2.0	37	46	57	39	-	30
31.50	176.6	153.7	315.0	9.2	-1.9	5.3	very stiff fine SOIL	120	2.0	77	88	81	42	-	30
31.66	102.1	88.7	188.7	3.7	-1.8	3.7	clayy SILT to silty CLAY	115	2.0	44	51	-	-	6.7	15
31.83	105.1	91.2	146.4	2.2	-1.7	2.2	silty SAND to sandy SILT	120	4.0	23	26	64	40	-	16
31.99	103.5	89.6	139.5	2.0	-1.8	2.0	silty SAND to sandy SILT	120	4.0	22	26	63	39	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(298).cpt
CPT Date: 5/1/2006 9:16:36 AM
GW During Test: 12 ft

Sounding ID: CPT-02
Project No: 19166
Cone/Rig: DSG0705

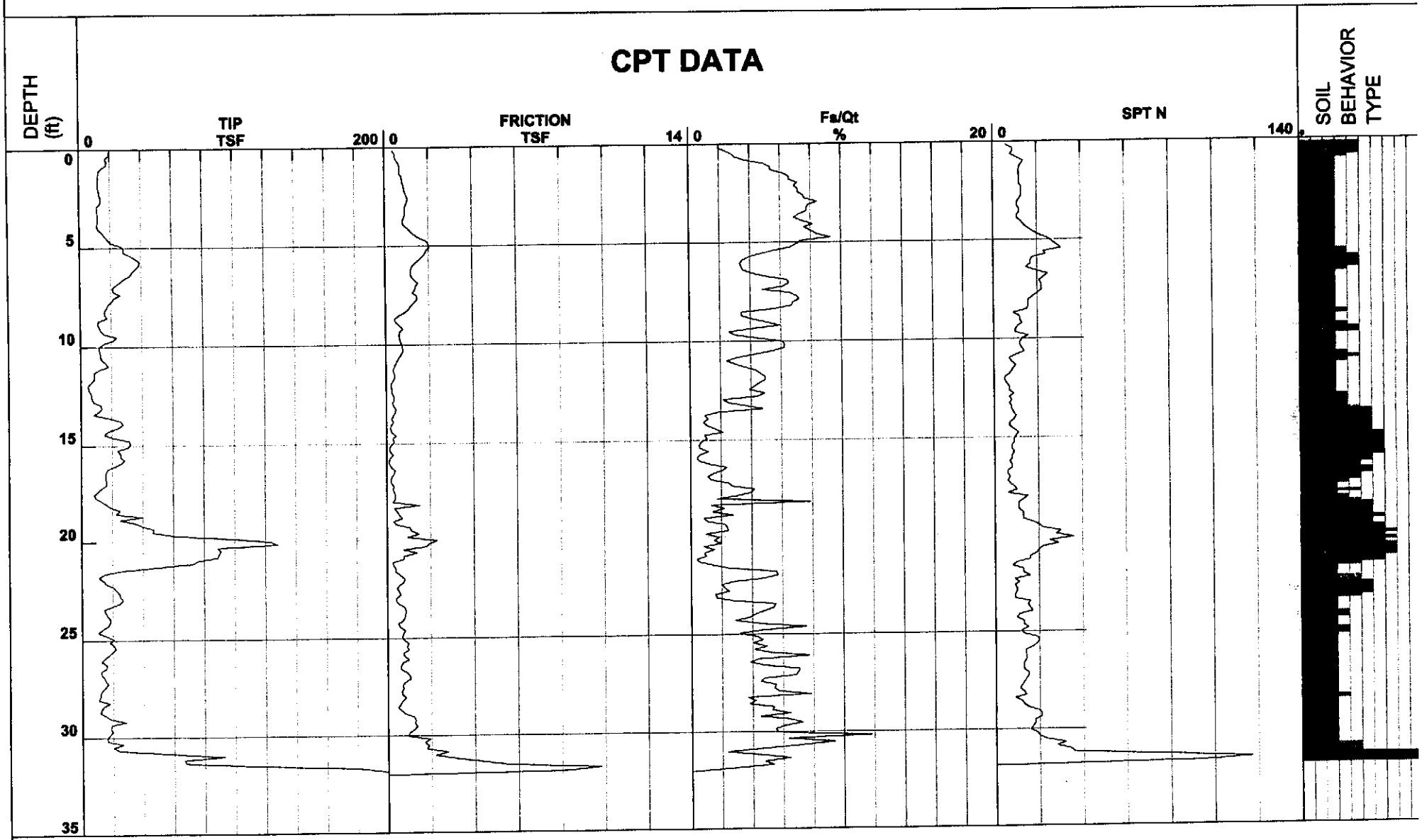
Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS - *	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
32.15	59.6	51.5	142.4	2.0	-1.8	3.5	clayy SILT to silty CLAY	115	2.0	26	30	-	-	3.9	15
32.32	36.7	28.9	-	1.8	-1.7	5.1	silty CLAY to CLAY	115	1.5	19	24	-	-	2.4	15
32.48	48.3	38.0	-	2.1	-1.7	4.5	clayy SILT to silty CLAY	115	2.0	19	24	-	-	3.1	15
32.65	62.6	53.8	151.5	2.3	-1.7	3.8	clayy SILT to silty CLAY	115	2.0	27	31	-	-	4.1	15
32.81	83.6	71.8	151.2	2.4	-1.7	3.0	silty SAND to sandy SILT	120	4.0	18	21	56	38	-	16
32.97	59.4	46.2	-	2.5	-1.7	4.4	clayy SILT to silty CLAY	115	2.0	23	30	-	-	3.9	15
33.14	44.9	34.8	-	2.3	-1.7	5.4	silty CLAY to CLAY	115	1.5	23	30	-	-	2.9	15
33.30	52.1	40.2	-	2.1	-1.7	4.1	clayy SILT to silty CLAY	115	2.0	20	26	-	-	3.4	15
33.47	57.0	48.6	149.3	2.2	-1.7	4.0	clayy SILT to silty CLAY	115	2.0	24	28	-	-	3.7	15
33.63	56.3	43.2	-	2.2	-1.7	4.1	clayy SILT to silty CLAY	115	2.0	22	28	-	-	3.7	15
33.79	63.1	53.6	150.5	2.3	-1.7	3.7	clayy SILT to silty CLAY	115	2.0	27	32	-	-	4.1	15
33.96	67.7	57.4	157.1	2.5	-1.7	3.8	clayy SILT to silty CLAY	115	2.0	29	34	-	-	4.4	15
34.12	72.4	61.3	157.3	2.6	-1.7	3.6	clayy SILT to silty CLAY	115	2.0	31	36	-	-	4.7	15
34.29	79.2	66.9	159.2	2.7	-1.7	3.5	clayy SILT to silty CLAY	115	2.0	33	40	-	-	5.2	15
34.45	86.0	72.6	153.4	2.5	-1.7	3.0	silty SAND to sandy SILT	120	4.0	18	22	56	38	-	16
34.61	92.2	77.7	147.5	2.4	-1.7	2.6	silty SAND to sandy SILT	120	4.0	19	23	59	38	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	4803 El Cannon Ave.	Operator	JH-VO	Filename	SDF(299).cpt
Job Number	19166	Cone Number	DSG0705	GPS	
Hole Number	CPT-03	Date and Time	5/1/2006 9:47:00 AM	Maximum Depth	32.15 ft
Water Table Depth		12.00 ft			

CPT DATA



- 1 - sensitive fine grained
- 2 - organic material
- 3 - clay
- 4 - silty clay to clay
- 5 - clayey silt to silty clay
- 6 - sandy silt to clayey silt
- 7 - silty sand to sandy silt
- 8 - sand to silty sand
- 9 - sand
- 10 - gravelly sand to sand
- 11 - very stiff fine grained (*)
- 12 - sand to clayey sand (*)

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(299).cpt
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GW During Test: 12 ft

Sounding ID: CPT-03
Project No: 19166
Cone/Rig: DSG0705

Depth ft	qc PS tsf	qcln PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
0.33	19.5	31.4	94.2	0.5	0.1	2.4	clayy SILT to silty CLAY	115	2.0	16	10	-	-	1.3	15
0.49	17.0	27.3	-	0.5	0.1	2.8	clayy SILT to silty CLAY	115	2.0	14	9	-	-	1.1	15
0.66	18.2	29.2	-	0.6	0.1	3.1	clayy SILT to silty CLAY	115	2.0	15	9	-	-	1.2	15
0.82	17.7	28.3	-	0.7	0.1	3.7	clayy SILT to silty CLAY	115	2.0	14	9	-	-	1.2	15
0.98	14.4	23.1	-	0.7	0.1	5.0	silty CLAY to CLAY	115	1.5	15	10	-	-	1.0	15
1.15	12.7	20.4	-	0.7	0.1	5.4	silty CLAY to CLAY	115	1.5	14	8	-	-	0.8	15
1.31	12.7	20.4	-	0.7	0.1	5.4	silty CLAY to CLAY	115	1.5	14	8	-	-	0.8	15
1.48	12.6	20.3	-	0.8	0.1	6.3	silty CLAY to CLAY	115	1.5	14	8	-	-	0.8	15
1.64	12.5	20.0	-	0.8	0.1	6.6	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
1.80	12.6	20.1	-	0.8	0.1	6.7	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
1.97	12.3	19.8	-	0.9	0.1	7.2	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
2.13	13.1	21.0	-	0.9	0.1	7.0	silty CLAY to CLAY	115	1.5	14	9	-	-	0.9	15
2.30	13.2	21.1	-	0.9	0.1	7.3	silty CLAY to CLAY	115	1.5	14	9	-	-	0.9	15
2.46	14.0	22.4	-	1.0	0.1	7.3	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
2.62	14.2	22.7	-	1.1	0.1	7.6	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
2.79	13.5	21.7	-	1.0	0.1	7.7	silty CLAY to CLAY	115	1.5	14	9	-	-	0.9	15
2.95	11.5	18.4	-	1.0	0.1	8.6	silty CLAY to CLAY	115	1.5	12	8	-	-	0.8	15
3.12	11.7	18.8	-	0.9	0.1	8.0	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
3.28	12.0	19.2	-	0.9	0.1	7.9	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
3.45	12.0	19.3	-	0.9	0.1	7.9	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
3.61	12.2	19.6	-	0.9	0.1	7.4	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
3.77	11.9	19.1	-	0.8	0.1	7.1	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
3.94	11.5	18.5	-	0.9	0.1	7.5	silty CLAY to CLAY	115	1.5	12	8	-	-	0.8	15
4.10	12.6	20.2	-	1.0	0.1	8.3	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
4.27	15.3	24.6	-	1.2	0.1	7.7	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
4.43	16.7	26.8	-	1.3	0.1	8.1	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
4.59	18.7	29.9	-	1.6	0.1	8.5	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
4.76	20.6	33.1	-	1.9	0.1	9.5	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
4.92	27.4	43.9	-	2.0	0.1	7.4	silty CLAY to CLAY	115	1.5	29	18	-	-	1.8	15
5.09	29.0	46.4	-	2.0	0.1	7.1	silty CLAY to CLAY	115	1.5	31	19	-	-	1.9	15
5.25	28.6	45.8	-	1.9	0.1	6.7	silty CLAY to CLAY	115	1.5	31	19	-	-	1.9	15
5.41	33.2	53.3	-	1.8	0.1	5.6	silty CLAY to CLAY	115	1.5	36	22	-	-	2.2	15
5.58	36.3	58.1	177.8	1.7	0.1	4.8	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
5.74	39.2	62.8	166.6	1.6	0.1	4.0	clayy SILT to silty CLAY	115	2.0	31	20	-	-	2.6	15
5.91	38.7	62.0	155.0	1.4	0.1	3.6	clayy SILT to silty CLAY	115	2.0	31	19	-	-	2.6	15
6.07	36.5	58.5	146.4	1.2	0.1	3.4	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
6.23	34.2	54.9	145.0	1.2	0.1	3.5	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.3	15
6.40	32.8	52.4	144.3	1.2	0.1	3.6	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.2	15
6.56	29.2	46.2	149.6	1.2	0.1	4.2	clayy SILT to silty CLAY	115	2.0	23	15	-	-	1.9	15
6.73	26.4	42.3	-	1.3	0.1	5.2	silty CLAY to CLAY	115	1.5	28	18	-	-	1.7	15
6.89	23.4	37.5	-	1.5	0.1	6.6	silty CLAY to CLAY	115	1.5	25	16	-	-	1.5	15
7.05	21.2	34.0	-	1.4	0.1	6.7	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
7.22	21.9	35.1	-	1.4	0.1	6.3	silty CLAY to CLAY	115	1.5	23	15	-	-	1.4	15
7.38	26.2	42.0	-	1.3	0.1	4.9	clayy SILT to silty CLAY	115	2.0	21	13	-	-	1.7	15
7.55	22.1	35.5	-	1.5	0.1	6.7	silty CLAY to CLAY	115	1.5	24	15	-	-	1.4	15
7.71	20.7	33.3	-	1.5	0.1	7.2	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
7.87	18.3	29.3	-	1.3	0.1	7.4	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
8.04	17.5	28.0	-	1.2	0.1	7.0	silty CLAY to CLAY	115	1.5	19	12	-	-	1.1	15
8.20	15.8	25.4	-	1.1	0.1	6.9	silty CLAY to CLAY	115	1.5	17	11	-	-	1.0	15
8.37	16.1	25.8	-	0.9	0.1	5.7	silty CLAY to CLAY	115	1.5	17	11	-	-	1.0	15
8.53	17.6	28.2	-	0.6	0.1	3.5	clayy SILT to silty CLAY	115	2.0	14	9	-	-	1.1	15
8.69	11.9	19.2	-	0.4	0.1	3.6	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
8.86	11.5	18.5	-	0.5	0.1	4.4	silty CLAY to CLAY	115	1.5	12	8	-	-	0.7	15
9.02	12.6	20.3	-	0.6	0.1	5.4	silty CLAY to CLAY	115	1.5	14	8	-	-	0.8	15
9.19	13.5	21.6	-	0.8	0.1	6.2	silty CLAY to CLAY	115	1.5	14	9	-	-	0.9	15
9.35	15.6	25.1	-	0.6	0.1	4.2	silty CLAY to CLAY	115	1.5	17	10	-	-	1.0	15
9.51	23.8	31.2	100.0	0.6	0.1	2.7	clayy SILT to silty CLAY	115	2.0	16	12	-	-	1.5	15
9.68	21.4	31.7	-	0.6	0.1	3.1	clayy SILT to silty CLAY	115	2.0	16	11	-	-	1.4	15
9.84	15.3	24.5	-	0.7	0.0	4.6	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
10.01	12.1	19.3	-	0.7	0.1	6.4	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
10.17	12.4	19.8	-	0.8	0.0	6.6	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
10.34	12.8	20.6	-	0.8	0.0	6.5	silty CLAY to CLAY	115	1.5	14	9	-	-	0.8	15
10.50	12.9	20.6	-	0.7	0.1	5.7	silty CLAY to CLAY	115	1.5	14	9	-	-	0.8	15
10.66	14.1	22.6	-	0.6	0.1	4.5	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(299).cpt
CPT Date: 5/1/2006 9:47:00 AM
GW During Test: 12 ft

Sounding ID: CPT-03
Project No: 19166
Cone/Rig: DSG0705

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
10.83	16.5	26.4	-	0.5	0.1	3.2	clayy SILT to silty CLAY	115	2.0	13	8	-	-	1.1	15
10.99	18.2	24.7	-	0.4	0.1	2.5	clayy SILT to silty CLAY	115	2.0	12	9	-	-	1.2	15
11.16	12.1	18.9	-	0.4	0.1	3.2	clayy SILT to silty CLAY	115	2.0	9	6	-	-	0.8	15
11.32	8.9	13.7	-	0.3	0.1	4.0	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
11.48	8.8	13.4	-	0.4	0.1	4.7	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
11.65	8.9	13.3	-	0.4	0.1	5.0	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
11.81	6.9	10.1	-	0.3	0.0	5.5	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
11.98	4.8	6.9	-	0.2	0.0	5.8	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
12.14	5.2	7.4	-	0.2	0.1	5.2	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
12.30	6.2	9.0	-	0.3	0.1	4.8	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
12.47	6.9	9.8	-	0.3	0.1	4.4	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
12.63	7.2	10.2	-	0.4	0.1	5.5	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
12.80	8.4	11.8	-	0.4	0.1	4.9	silty CLAY to CLAY	115	1.5	8	6	-	-	0.5	15
12.96	13.1	18.3	-	0.3	0.0	2.3	clayy SILT to silty CLAY	115	2.0	9	7	-	-	0.8	15
13.12	13.6	19.0	-	0.3	0.1	2.7	clayy SILT to silty CLAY	115	2.0	9	7	-	-	0.9	15
13.29	11.7	16.2	-	0.4	0.0	4.0	silty CLAY to CLAY	115	1.5	11	8	-	-	0.7	15
13.45	8.6	11.8	-	0.4	0.1	5.3	silty CLAY to CLAY	115	1.5	8	6	-	-	0.5	15
13.62	18.1	22.2	-	0.3	0.1	1.9	clayy SILT to silty CLAY	115	2.0	11	9	-	-	1.2	15
13.78	26.0	29.4	62.1	0.2	0.1	1.0	silty SAND to sandy SILT	120	4.0	7	6	27	34	-	16
13.94	27.3	30.8	68.9	0.3	0.1	1.2	silty SAND to sandy SILT	120	4.0	8	7	28	35	-	16
14.11	23.8	26.8	58.4	0.2	0.1	0.9	silty SAND to sandy SILT	120	4.0	7	6	24	34	-	16
14.27	17.5	19.7	58.9	0.2	0.1	1.2	silty SAND to sandy SILT	120	4.0	5	4	13	32	-	16
14.44	15.3	20.3	-	0.2	0.1	1.7	clayy SILT to silty CLAY	115	2.0	10	8	-	-	1.0	15
14.60	20.7	24.7	-	0.4	0.1	2.2	clayy SILT to silty CLAY	115	2.0	12	10	-	-	1.3	15
14.76	31.3	34.8	66.1	0.3	0.1	1.0	silty SAND to sandy SILT	120	4.0	9	8	32	35	-	16
14.93	32.1	35.6	70.6	0.4	0.1	1.1	silty SAND to sandy SILT	120	4.0	9	8	33	35	-	16
15.09	30.6	33.8	59.0	0.2	0.1	0.7	silty SAND to sandy SILT	120	4.0	8	8	31	35	-	16
15.26	23.7	26.1	50.3	0.1	0.1	0.6	silty SAND to sandy SILT	120	4.0	7	6	23	34	-	16
15.42	25.6	28.1	53.1	0.2	0.1	0.6	silty SAND to sandy SILT	120	4.0	7	6	25	34	-	16
15.58	25.7	28.1	67.3	0.3	0.1	1.2	silty SAND to sandy SILT	120	4.0	7	6	25	34	-	16
15.75	28.2	30.7	53.7	0.2	0.1	0.6	silty SAND to sandy SILT	120	4.0	8	7	28	34	-	16
15.91	26.3	28.6	47.9	0.1	0.1	0.4	silty SAND to sandy SILT	120	4.0	7	7	26	34	-	16
16.08	22.5	24.4	49.3	0.1	0.1	0.6	silty SAND to sandy SILT	120	4.0	6	6	20	33	-	16
16.24	17.4	19.9	64.1	0.2	0.1	1.4	clayy SILT to silty CLAY	115	2.0	10	9	-	-	1.1	15
16.40	16.3	20.1	-	0.4	0.1	2.5	clayy SILT to silty CLAY	115	2.0	10	8	-	-	1.0	15
16.57	16.0	19.7	-	0.3	0.1	2.2	clayy SILT to silty CLAY	115	2.0	10	8	-	-	1.0	15
16.73	16.1	19.6	-	0.2	0.1	1.6	clayy SILT to silty CLAY	115	2.0	10	8	-	-	1.0	15
16.90	16.5	17.6	58.3	0.2	0.1	1.2	clayy SILT to silty CLAY	115	2.0	9	8	-	-	1.0	15
17.06	16.4	18.4	-	0.2	0.1	1.4	clayy SILT to silty CLAY	115	2.0	9	8	-	-	1.0	15
17.23	12.9	15.6	-	0.3	0.1	2.7	clayy SILT to silty CLAY	115	2.0	8	6	-	-	0.8	15
17.39	10.9	13.0	-	0.3	0.1	3.0	silty CLAY to CLAY	115	1.5	9	7	-	-	0.7	15
17.55	8.5	10.1	-	0.4	0.1	4.8	silty CLAY to CLAY	115	1.5	7	6	-	-	0.5	15
17.72	9.6	11.4	-	0.4	0.1	4.5	silty CLAY to CLAY	115	1.5	8	6	-	-	0.6	15
17.88	13.1	15.5	-	0.4	0.1	3.3	silty CLAY to CLAY	115	1.5	10	9	-	-	0.8	15
18.05	16.1	18.9	-	0.3	0.1	1.9	clayy SILT to silty CLAY	115	2.0	9	8	-	-	1.0	15
18.21	19.2	22.3	-	1.5	0.1	8.3	silty CLAY to CLAY	115	1.5	15	13	-	-	1.2	15
18.37	25.3	26.5	70.2	0.3	0.1	1.4	silty SAND to sandy SILT	120	4.0	7	6	23	33	-	16
18.54	22.4	25.9	-	0.5	0.0	2.3	clayy SILT to silty CLAY	115	2.0	13	11	-	-	1.4	15
18.70	40.1	41.7	84.7	0.6	-0.1	1.5	silty SAND to sandy SILT	120	4.0	10	10	38	36	-	16
18.87	25.3	28.8	-	0.7	-0.1	2.9	clayy SILT to silty CLAY	115	2.0	14	13	-	-	1.6	15
19.03	35.8	37.1	66.1	0.3	-0.1	0.9	silty SAND to sandy SILT	120	4.0	9	9	34	35	-	16
19.19	40.1	41.4	75.7	0.4	-0.1	1.1	silty SAND to sandy SILT	120	4.0	10	10	38	36	-	16
19.36	46.9	48.3	110.2	1.0	-0.1	2.3	silty SAND to sandy SILT	120	4.0	12	12	43	37	-	16
19.52	46.7	47.9	114.1	1.1	-0.1	2.5	silty SAND to sandy SILT	120	4.0	12	12	43	37	-	16
19.69	59.9	61.3	127.5	1.5	-0.1	2.5	silty SAND to sandy SILT	120	4.0	15	15	51	38	-	16
19.85	95.9	98.0	118.4	0.9	-0.1	1.0	clean SAND to silty SAND	125	5.0	20	19	66	41	-	16
20.01	123.4	125.8	168.7	2.3	-0.1	1.9	silty SAND to sandy SILT	120	4.0	31	31	75	42	-	16
20.18	128.2	130.3	162.6	2.0	-0.1	1.5	clean SAND to silty SAND	125	5.0	26	26	76	42	-	16
20.34	89.0	90.1	141.1	1.8	-0.1	2.0	silty SAND to sandy SILT	120	4.0	23	22	64	40	-	16
20.51	91.1	92.0	109.3	0.8	0.0	0.8	clean SAND to silty SAND	125	5.0	18	18	64	40	-	16
20.67	89.9	90.6	127.5	1.4	0.0	1.6	silty SAND to sandy SILT	120	4.0	23	22	64	40	-	16
20.83	88.8	89.3	107.7	0.8	0.0	0.9	clean SAND to silty SAND	125	5.0	18	18	63	40	-	16
21.00	76.5	76.7	100.2	0.8	0.0	1.0	clean SAND to silty SAND	125	5.0	15	15	58	39	-	16
21.16	72.7	72.7	80.3	0.3	0.0	0.4	clean SAND to silty SAND	125	5.0	15	15	56	39	-	16
21.33	50.7	50.5	68.6	0.3	0.0	0.6	clean SAND to silty SAND	125	5.0	10	10	44	37	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: GEOTECHNOLOGIES, INC.
Data File: SDF(299).cpt
CPT Date: 5/1/2006 9:47:00 AM
GW During Test: 12 ft

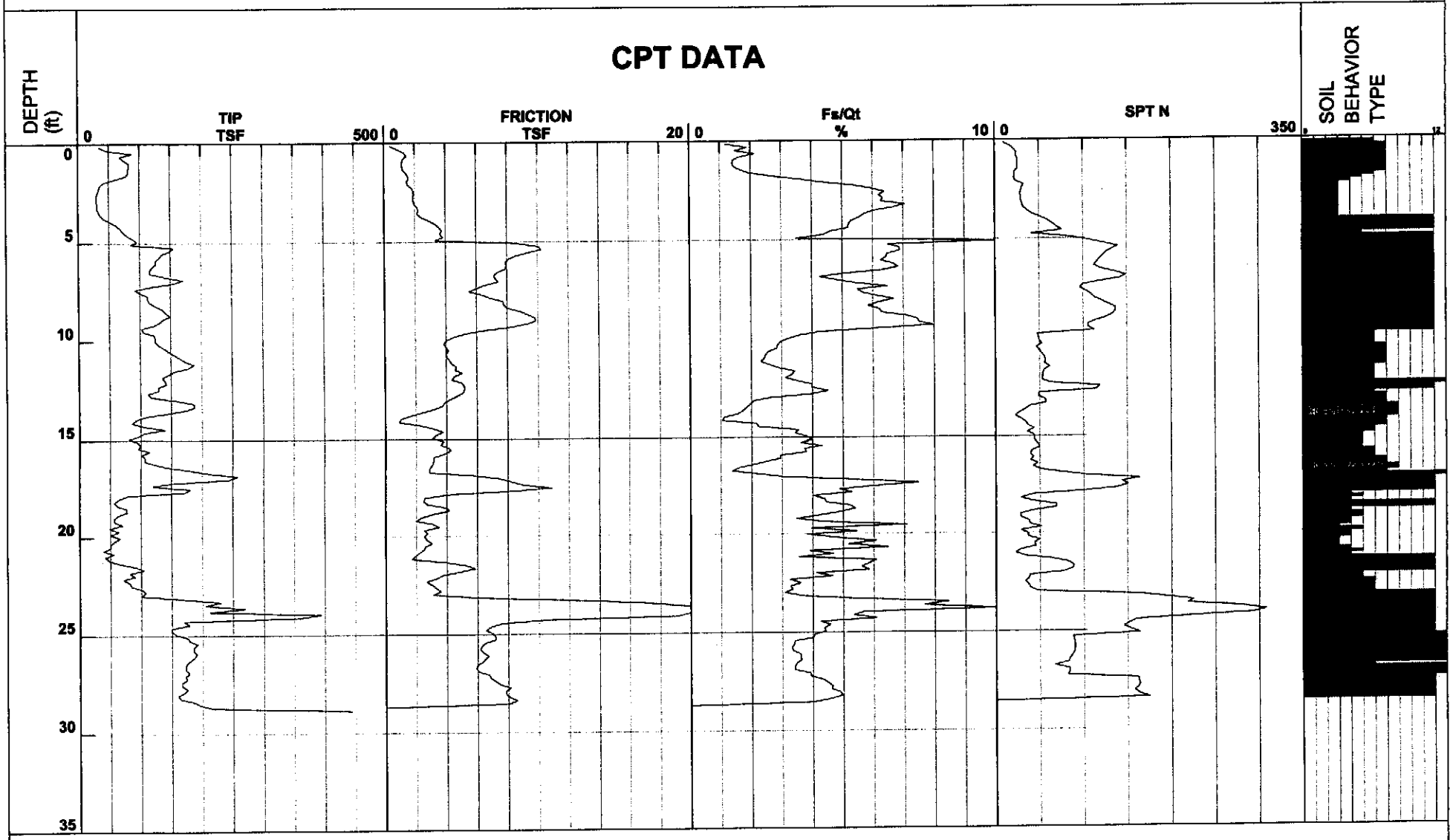
Sounding ID: CPT-03
Project No: 19166
Cone/Rig: DSG0705

Depth ft	qc PS tsf	qc1n PS *	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description *	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60% *	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
21.49	26.3	26.2	74.7	0.4	0.0	1.6	silty SAND to sandy SILT	120	4.0	7	7	23	33	-	16
21.65	15.2	15.8	-	0.4	0.0	2.8	silty CLAY to CLAY	115	1.5	11	10	-	-	0.9	15
21.82	11.3	11.7	-	0.6	0.0	6.3	silty CLAY to CLAY	115	1.5	8	8	-	-	0.7	15
21.98	14.2	14.6	-	0.8	0.0	6.3	silty CLAY to CLAY	115	1.5	10	9	-	-	0.9	15
22.15	16.2	16.6	-	0.8	-0.1	5.1	silty CLAY to CLAY	115	1.5	11	11	-	-	1.0	15
22.31	20.5	21.0	-	0.6	0.0	3.0	clayy SILT to silty CLAY	115	2.0	11	10	-	-	1.3	15
22.47	22.1	22.6	-	0.4	-0.1	2.1	clayy SILT to silty CLAY	115	2.0	11	11	-	-	1.4	15
22.64	24.5	24.8	-	0.5	0.0	2.3	clayy SILT to silty CLAY	115	2.0	12	12	-	-	1.6	15
22.80	25.0	25.3	-	0.6	-0.1	2.6	clayy SILT to silty CLAY	115	2.0	13	13	-	-	1.6	15
22.97	26.9	26.2	76.3	0.4	-0.1	1.7	clayy SILT to silty CLAY	115	2.0	13	13	-	-	1.7	15
23.13	24.9	24.2	76.7	0.4	0.0	1.8	clayy SILT to silty CLAY	115	2.0	12	12	-	-	1.6	15
23.30	20.0	20.0	-	0.6	0.0	3.0	clayy SILT to silty CLAY	115	2.0	10	10	-	-	1.3	15
23.46	14.6	14.5	-	0.8	-0.1	6.1	silty CLAY to CLAY	115	1.5	10	10	-	-	0.9	15
23.62	15.6	15.4	-	0.8	0.0	6.0	silty CLAY to CLAY	115	1.5	10	10	-	-	1.0	15
23.79	16.9	16.6	-	0.8	-0.1	5.3	silty CLAY to CLAY	115	1.5	11	11	-	-	1.1	15
23.95	18.6	18.3	-	0.8	-0.1	4.6	silty CLAY to CLAY	115	1.5	12	12	-	-	1.2	15
24.12	18.0	17.6	-	0.7	0.0	4.2	silty CLAY to CLAY	115	1.5	12	12	-	-	1.1	15
24.28	17.1	16.6	-	0.5	0.0	3.1	silty CLAY to CLAY	115	1.5	11	11	-	-	1.1	15
24.44	13.4	13.0	-	0.6	-0.1	4.9	silty CLAY to CLAY	115	1.5	9	9	-	-	0.8	15
24.61	10.5	10.2	-	0.8	0.0	8.7	silty CLAY to CLAY	115	1.5	7	7	-	-	0.6	15
24.77	15.6	14.9	-	0.7	0.0	5.2	silty CLAY to CLAY	115	1.5	10	10	-	-	1.0	15
24.94	20.7	19.8	-	0.7	0.0	3.4	silty CLAY to CLAY	115	1.5	13	14	-	-	1.3	15
25.10	18.1	17.2	-	0.8	0.0	4.7	silty CLAY to CLAY	115	1.5	11	12	-	-	1.1	15
25.26	20.6	19.6	-	1.0	0.0	5.0	silty CLAY to CLAY	115	1.5	13	14	-	-	1.3	15
25.43	21.9	20.7	-	0.9	0.0	4.4	silty CLAY to CLAY	115	1.5	14	15	-	-	1.4	15
25.59	19.7	18.6	-	1.0	0.0	5.4	silty CLAY to CLAY	115	1.5	12	13	-	-	1.2	15
25.76	17.7	16.6	-	0.7	0.0	4.5	silty CLAY to CLAY	115	1.5	11	12	-	-	1.1	15
25.92	14.9	13.9	-	0.8	0.0	5.7	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
26.08	12.7	11.8	-	1.0	0.0	8.8	silty CLAY to CLAY	115	1.5	8	8	-	-	0.8	15
26.25	15.9	14.7	-	0.7	0.0	4.9	silty CLAY to CLAY	115	1.5	10	11	-	-	1.0	15
26.41	15.8	14.6	-	0.6	0.0	4.3	silty CLAY to CLAY	115	1.5	10	11	-	-	1.0	15
26.58	12.5	11.5	-	0.6	-0.1	5.5	silty CLAY to CLAY	115	1.5	8	8	-	-	0.8	15
26.74	12.5	11.5	-	0.9	0.0	8.1	silty CLAY to CLAY	115	1.5	8	8	-	-	0.8	15
26.90	14.4	13.2	-	1.0	0.0	7.9	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
27.07	15.3	13.9	-	1.0	0.0	7.6	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
27.23	16.9	15.3	-	0.8	0.0	5.3	silty CLAY to CLAY	115	1.5	10	11	-	-	1.1	15
27.40	15.1	13.6	-	0.7	0.0	5.1	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
27.56	13.0	11.7	-	0.7	0.0	6.3	silty CLAY to CLAY	115	1.5	8	9	-	-	0.8	15
27.72	11.8	10.6	-	0.6	0.0	6.3	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
27.89	11.7	10.4	-	0.7	0.0	6.7	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
28.05	10.7	9.5	-	0.8	0.0	9.2	silty CLAY to CLAY	115	1.5	6	7	-	-	0.6	15
28.22	18.0	15.9	-	0.7	0.0	4.1	silty CLAY to CLAY	115	1.5	11	12	-	-	1.1	15
28.38	14.0	12.3	-	0.6	0.0	4.8	silty CLAY to CLAY	115	1.5	8	9	-	-	0.9	15
28.54	12.4	10.9	-	0.5	-0.1	4.4	silty CLAY to CLAY	115	1.5	7	8	-	-	0.8	15
28.71	11.8	10.3	-	0.6	0.0	6.3	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
28.87	15.2	13.3	-	0.8	0.0	6.0	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
29.04	18.4	16.0	-	1.2	0.0	7.2	silty CLAY to CLAY	115	1.5	11	12	-	-	1.2	15
29.20	28.5	24.6	-	1.3	0.0	4.8	silty CLAY to CLAY	115	1.5	16	19	-	-	1.8	15
29.36	19.4	16.7	-	1.2	0.0	7.1	silty CLAY to CLAY	115	1.5	11	13	-	-	1.2	15
29.53	18.5	15.9	-	1.3	0.0	8.0	silty CLAY to CLAY	115	1.5	11	12	-	-	1.2	15
29.69	19.7	16.8	-	1.2	0.0	6.7	silty CLAY to CLAY	115	1.5	11	13	-	-	1.2	15
29.86	18.1	15.4	-	1.0	0.0	6.1	silty CLAY to CLAY	115	1.5	10	12	-	-	1.1	15
30.02	16.4	13.9	-	0.9	0.0	6.4	silty CLAY to CLAY	115	1.5	9	11	-	-	1.0	15
30.19	16.5	13.9	-	1.9	0.0	9.9	silty CLAY to CLAY	115	1.5	9	11	-	-	1.0	15
30.35	26.5	22.3	-	1.7	0.0	6.8	silty CLAY to CLAY	115	1.5	15	18	-	-	1.7	15
30.51	20.2	17.0	-	1.9	0.0	9.9	silty CLAY to CLAY	115	1.5	11	13	-	-	1.3	15
30.68	24.4	20.4	-	1.8	0.0	7.9	silty CLAY to CLAY	115	1.5	14	16	-	-	1.5	15
30.84	56.2	46.8	-	2.8	0.0	5.1	clayy SILT to silty CLAY	115	2.0	23	28	-	-	3.7	15
31.01	93.2	82.5	145.4	2.2	0.0	2.4	silty SAND to sandy SILT	120	4.0	21	23	61	39	-	16
31.17	66.7	58.9	182.9	3.2	0.0	4.9	clayy SILT to silty CLAY	115	2.0	29	33	-	-	4.4	15
31.33	67.7	55.8	-	4.4	0.0	6.7	silty CLAY to CLAY	115	1.5	37	45	-	-	4.4	15
31.50	116.2	102.3	239.4	5.6	0.0	4.9	very stiff fine SOIL	120	2.0	51	58	68	40	-	30
31.66	182.1	160.0	328.7	9.8	0.1	5.4	very stiff fine SOIL	120	2.0	80	91	83	43	-	30
31.83	315.1	276.3	338.7	8.2	0.2	2.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	19.6	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	Safran	Operator	ML-CW	Filename	SDF(532).cpt
Job Number	19166	Cone Number	DSG0906	GPS	
Hole Number	CPT-04	Date and Time	8/18/2006 8:51:38 AM	Maximum Depth	28.87 ft
Water Table Depth		20.28 ft			



1 - sensitive fine grained	4 - silty clay to clay	7 - silty sand to sandy silt	10 - gravelly sand to sand
2 - organic material	5 - clayey silt to silty clay	8 - sand to silty sand	11 - very stiff fine grained (*)
3 - clay	6 - sandy silt to clayey silt	9 - sand	12 - sand to clayey sand (*)

Depth Increment

*Soil behavior type and SPT based on data from UBC-1983

Project ID: Geotechnologies
Data File: SDF(532).cpt
CPT Date: 8/18/2006 8:51:38 AM
GW During Test: 20 ft

Sounding ID: CPT-04
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qcln * PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT * R-N1 60%	SPT R-N 60%	Rel Den %	Ftn * Ang deg	Und Shr tsf	Nk * -
0.33	46.8	75.1	122.9	0.9	0.0	1.9	silty SAND to sandy SILT	120	4.0	19	12	58	48	-	16
0.49	88.1	141.4	171.2	1.3	0.0	1.5	clean SAND to silty SAND	125	5.0	28	18	78	48	-	16
0.66	68.2	109.3	161.1	1.5	-0.1	2.1	silty SAND to sandy SILT	120	4.0	27	17	70	48	-	16
0.82	75.5	121.1	156.2	1.2	0.0	1.6	clean SAND to silty SAND	125	5.0	24	15	73	48	-	16
0.98	82.6	132.4	160.9	1.2	-0.2	1.4	clean SAND to silty SAND	125	5.0	26	17	76	48	-	16
1.15	83.8	134.3	162.0	1.2	-0.2	1.4	clean SAND to silty SAND	125	5.0	27	17	77	48	-	16
1.31	81.8	131.2	161.3	1.2	-0.1	1.5	clean SAND to silty SAND	125	5.0	26	16	76	48	-	16
1.48	82.0	131.4	167.8	1.4	-0.2	1.7	clean SAND to silty SAND	125	5.0	26	16	76	48	-	16
1.64	77.5	124.2	169.6	1.5	-0.2	2.0	silty SAND to sandy SILT	120	4.0	31	19	74	48	-	16
1.80	59.0	94.6	165.1	1.6	-0.1	2.7	silty SAND to sandy SILT	120	4.0	24	15	65	48	-	16
1.97	41.6	66.7	161.3	1.5	0.0	3.6	clayy SILT to silty CLAY	115	2.0	33	21	-	-	2.8	15
2.13	35.6	57.1	166.6	1.5	-0.1	4.3	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
2.30	34.2	54.9	-	1.8	0.0	5.4	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.3	15
2.46	32.3	51.7	-	1.9	0.0	6.0	silty CLAY to CLAY	115	1.5	34	22	-	-	2.1	15
2.62	30.2	48.5	-	1.9	0.0	6.4	silty CLAY to CLAY	115	1.5	32	20	-	-	2.0	15
2.79	30.4	48.8	-	1.9	-0.1	6.2	silty CLAY to CLAY	115	1.5	33	20	-	-	2.0	15
2.95	30.3	48.6	-	1.9	-0.2	6.4	silty CLAY to CLAY	115	1.5	32	20	-	-	2.0	15
3.12	31.7	50.9	-	2.0	-0.1	6.3	silty CLAY to CLAY	115	1.5	34	21	-	-	2.1	15
3.28	30.8	49.3	-	2.2	-0.1	7.1	silty CLAY to CLAY	115	1.5	33	21	-	-	2.0	15
3.45	33.7	54.0	-	2.2	-0.1	6.7	silty CLAY to CLAY	115	1.5	36	22	-	-	2.2	15
3.61	36.2	58.0	-	2.2	0.0	6.1	silty CLAY to CLAY	115	1.5	39	24	-	-	2.4	15
3.77	41.8	67.0	212.7	2.4	-0.3	5.7	clayy SILT to silty CLAY	115	2.0	33	21	-	-	2.8	15
3.94	51.7	82.9	232.0	2.9	-0.4	5.6	very stiff fine SOIL	120	2.0	41	26	61	45	-	30
4.10	62.8	100.7	248.7	3.3	-0.4	5.3	very stiff fine SOIL	120	2.0	50	31	67	45	-	30
4.27	68.8	110.4	258.8	3.6	-0.6	5.2	very stiff fine SOIL	120	2.0	55	34	70	45	-	30
4.43	72.3	116.0	265.8	3.8	-0.7	5.2	very stiff fine SOIL	120	2.0	58	36	72	46	-	30
4.59	79.1	126.9	259.7	3.6	-0.3	4.6	very stiff fine SOIL	120	2.0	63	40	75	46	-	30
4.76	87.9	141.0	267.6	3.8	-0.3	4.4	very stiff fine SOIL	120	2.0	71	44	78	46	-	30
4.92	95.4	153.0	249.1	3.3	-0.3	3.5	stiff SAND to clayy SAND	115	1.0	100	95	-	-	5.9	16
5.09	85.9	137.8	446.2	8.7	-0.2	9.9	very stiff fine SOIL	120	2.0	69	43	78	46	-	30
5.25	155.2	248.9	485.0	10.1	1.6	6.5	very stiff fine SOIL	120	2.0	100	78	95	48	-	30
5.41	148.8	238.6	490.0	10.3	-0.8	6.9	very stiff fine SOIL	120	2.0	100	74	95	48	-	30
5.58	135.8	217.9	461.7	9.3	-0.1	6.9	very stiff fine SOIL	120	2.0	100	68	93	47	-	30
5.74	132.0	211.7	435.8	8.5	0.7	6.5	very stiff fine SOIL	120	2.0	100	66	92	47	-	30
5.91	126.0	202.0	421.6	8.1	0.5	6.5	very stiff fine SOIL	120	2.0	100	63	90	47	-	30
6.07	126.3	202.5	415.3	7.9	-0.2	6.3	very stiff fine SOIL	120	2.0	100	63	90	47	-	30
6.23	119.8	191.2	416.7	8.0	-0.3	6.7	very stiff fine SOIL	120	2.0	96	60	88	46	-	30
6.40	115.7	182.2	410.7	7.9	-0.3	6.8	very stiff fine SOIL	120	2.0	91	58	87	46	-	30
6.56	116.9	181.7	389.9	7.4	-0.6	6.3	very stiff fine SOIL	120	2.0	91	58	87	46	-	30
6.73	142.4	218.6	381.7	7.2	0.0	5.0	very stiff fine SOIL	120	2.0	100	71	93	47	-	30
6.89	170.8	259.1	392.3	7.3	-0.2	4.3	very stiff fine SOIL	120	2.0	100	85	95	47	-	30
7.05	154.2	231.2	386.9	7.4	-0.1	4.8	very stiff fine SOIL	120	2.0	100	77	95	47	-	30
7.22	119.2	176.5	349.7	6.5	-0.1	5.5	very stiff fine SOIL	120	2.0	88	60	86	46	-	30
7.38	92.3	135.2	333.8	6.0	0.7	6.5	very stiff fine SOIL	120	2.0	68	46	77	44	-	30
7.55	100.1	145.1	312.7	5.5	0.9	5.5	very stiff fine SOIL	120	2.0	73	50	79	45	-	30
7.71	112.5	161.3	339.3	6.4	1.2	5.7	very stiff fine SOIL	120	2.0	81	56	83	45	-	30
7.87	112.5	159.5	353.5	6.9	0.7	6.1	very stiff fine SOIL	120	2.0	80	56	82	45	-	30
8.04	115.9	162.6	378.7	7.7	0.3	6.7	very stiff fine SOIL	120	2.0	81	58	83	45	-	30
8.20	125.8	174.7	376.3	7.8	0.2	6.2	very stiff fine SOIL	120	2.0	87	63	85	45	-	30
8.37	137.0	188.5	380.4	8.0	0.0	5.9	very stiff fine SOIL	120	2.0	94	69	88	46	-	30
8.53	142.3	193.9	402.0	8.8	0.0	6.2	very stiff fine SOIL	120	2.0	97	71	89	46	-	30
8.69	148.9	200.9	414.6	9.4	-0.2	6.3	very stiff fine SOIL	120	2.0	100	74	90	46	-	30
8.86	138.3	184.8	425.6	9.8	-0.9	7.1	very stiff fine SOIL	120	2.0	92	69	87	45	-	30
9.02	132.2	175.0	425.4	9.9	-0.8	7.5	very stiff fine SOIL	120	2.0	88	66	85	45	-	30
9.19	123.2	161.6	408.1	9.3	-0.6	7.6	very stiff fine SOIL	120	2.0	81	62	83	45	-	30
9.35	102.9	133.8	380.6	8.2	-0.4	8.0	very stiff fine SOIL	120	2.0	67	51	77	44	-	30
9.51	105.6	136.2	321.6	6.4	0.1	6.1	very stiff fine SOIL	120	2.0	68	53	77	44	-	30
9.68	123.5	157.8	282.6	5.3	0.1	4.3	very stiff fine SOIL	120	2.0	79	62	82	44	-	30
9.84	124.5	157.8	258.7	4.5	0.3	3.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.7	16
10.01	125.0	157.2	244.0	4.0	0.3	3.2	silty SAND to sandy SILT	120	4.0	39	31	82	44	-	16
10.17	130.4	162.7	240.1	3.9	0.4	3.0	silty SAND to sandy SILT	120	4.0	41	33	83	44	-	16
10.34	139.7	172.9	246.8	4.0	0.4	2.9	silty SAND to sandy SILT	120	4.0	43	35	85	45	-	16
10.50	146.8	180.2	252.7	4.2	0.4	2.9	silty SAND to sandy SILT	120	4.0	45	37	86	45	-	16
10.66	156.3	190.3	252.6	4.0	0.3	2.6	silty SAND to sandy SILT	120	4.0	48	39	88	45	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(532).cpt
CPT Date: 8/18/2006 8:51:38 AM
GW During Test: 20 ft

Sounding ID: CPT-04
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
10.83	164.6	198.9	257.3	4.1	0.3	2.5	silty SAND to sandy SILT	120	4.0	50	41	90	45	-	16
10.99	173.5	208.1	265.1	4.2	0.3	2.4	silty SAND to sandy SILT	120	4.0	52	43	91	45	-	16
11.16	187.5	223.2	275.4	4.4	0.3	2.3	clean SAND to silty SAND	125	5.0	45	38	94	46	-	16
11.32	178.3	210.7	274.6	4.7	0.3	2.6	silty SAND to sandy SILT	120	4.0	53	45	92	45	-	16
11.48	156.5	183.5	259.3	4.6	0.3	2.9	silty SAND to sandy SILT	120	4.0	46	39	87	45	-	16
11.65	147.0	171.2	265.7	5.0	0.3	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	9.1	16
11.81	136.2	157.6	248.4	4.5	0.2	3.3	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.5	16
11.98	140.2	161.1	244.5	4.4	0.4	3.1	silty SAND to sandy SILT	120	4.0	40	35	83	44	-	16
12.14	142.6	162.8	261.1	5.0	0.3	3.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.9	16
12.30	129.5	146.8	261.3	5.2	0.4	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.0	16
12.47	130.2	146.7	261.0	5.2	0.3	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.1	16
12.63	112.7	126.2	256.7	5.1	0.3	4.6	very stiff fine SOIL	120	2.0	63	56	75	43	-	30
12.80	117.4	130.6	244.3	4.7	0.3	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.3	16
12.96	159.4	176.2	242.5	4.2	0.3	2.7	silty SAND to sandy SILT	120	4.0	44	40	86	44	-	16
13.12	187.0	205.4	249.6	3.9	0.3	2.1	clean SAND to silty SAND	125	5.0	41	37	91	45	-	16
13.29	188.4	205.6	246.3	3.7	0.3	2.0	clean SAND to silty SAND	125	5.0	41	38	91	45	-	16
13.45	174.1	188.8	225.9	3.2	0.3	1.8	clean SAND to silty SAND	125	5.0	38	35	88	44	-	16
13.62	141.0	151.9	188.2	2.4	0.3	1.7	clean SAND to silty SAND	125	5.0	30	28	81	43	-	16
13.78	107.9	115.5	149.9	1.7	0.3	1.6	clean SAND to silty SAND	125	5.0	23	22	72	42	-	16
13.94	92.9	98.9	122.5	1.0	0.3	1.1	clean SAND to silty SAND	125	5.0	20	19	67	41	-	16
14.11	86.1	91.0	114.3	0.9	0.3	1.1	clean SAND to silty SAND	125	5.0	18	17	64	41	-	16
14.27	104.1	109.4	163.5	2.3	0.3	2.2	silty SAND to sandy SILT	120	4.0	27	26	70	42	-	16
14.44	140.1	146.5	199.6	3.1	0.3	2.3	silty SAND to sandy SILT	120	4.0	37	35	80	43	-	16
14.60	106.1	110.3	207.8	3.8	0.3	3.6	silty SAND to sandy SILT	120	4.0	28	27	70	42	-	16
14.76	97.2	100.5	193.6	3.3	0.1	3.5	silty SAND to sandy SILT	120	4.0	25	24	67	41	-	16
14.93	80.9	83.1	186.4	3.1	-0.5	3.8	clayy SILT to silty CLAY	115	2.0	42	40	-	-	5.3	15
15.09	95.6	97.8	207.8	3.8	-0.4	4.0	clayy SILT to silty CLAY	115	2.0	49	48	-	-	6.3	15
15.26	99.6	101.3	200.6	3.6	0.2	3.7	silty SAND to sandy SILT	120	4.0	25	25	67	41	-	16
15.42	95.3	96.4	216.6	4.1	-0.6	4.4	very stiff fine SOIL	120	2.0	48	48	66	41	-	30
15.58	114.0	114.7	218.9	4.3	0.1	3.8	silty SAND to sandy SILT	120	4.0	29	29	72	42	-	16
15.75	101.8	101.9	206.4	3.9	0.0	3.8	silty SAND to sandy SILT	120	4.0	25	25	68	41	-	16
15.91	107.1	106.6	184.8	3.1	-0.5	3.0	silty SAND to sandy SILT	120	4.0	27	27	69	41	-	16
16.08	106.4	105.5	183.9	3.1	0.1	3.0	silty SAND to sandy SILT	120	4.0	26	27	69	41	-	16
16.24	124.0	122.3	185.9	3.1	-0.1	2.5	silty SAND to sandy SILT	120	4.0	31	31	74	42	-	16
16.40	146.0	143.2	190.2	3.0	-0.1	2.1	silty SAND to sandy SILT	120	4.0	36	36	79	43	-	16
16.57	180.5	176.2	206.2	2.9	-0.3	1.6	clean SAND to silty SAND	125	5.0	35	36	86	44	-	16
16.73	212.1	206.0	225.6	2.9	-0.4	1.4	clean SAND to silty SAND	125	5.0	41	42	91	44	-	16
16.90	258.3	249.5	296.9	5.7	-0.5	2.2	clean SAND to silty SAND	125	5.0	50	52	95	45	-	16
17.06	243.8	234.3	315.3	7.5	-1.2	3.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	15.2	16
17.23	149.6	143.1	311.5	8.3	-1.0	5.6	very stiff fine SOIL	120	2.0	72	75	79	42	-	30
17.39	120.1	114.4	334.3	9.0	1.7	7.5	very stiff fine SOIL	120	2.0	57	60	71	41	-	30
17.55	180.7	171.2	365.9	10.9	1.9	6.1	very stiff fine SOIL	120	2.0	86	90	85	43	-	30
17.72	172.1	162.4	311.5	8.4	1.5	4.9	very stiff fine SOIL	120	2.0	81	86	83	43	-	30
17.88	79.4	74.6	215.6	4.2	-0.8	5.4	clayy SILT to silty CLAY	115	2.0	37	40	-	-	5.2	15
18.05	63.7	59.5	165.2	2.6	-0.7	4.1	clayy SILT to silty CLAY	115	2.0	30	32	-	-	4.2	15
18.21	56.9	53.0	165.4	2.5	-0.6	4.5	clayy SILT to silty CLAY	115	2.0	26	28	-	-	3.7	15
18.37	61.7	57.2	172.2	2.7	-0.4	4.5	clayy SILT to silty CLAY	115	2.0	29	31	-	-	4.0	15
18.54	77.0	71.0	209.3	4.0	-0.2	5.3	clayy SILT to silty CLAY	115	2.0	36	38	-	-	5.1	15
18.70	77.5	71.2	213.8	4.2	-0.4	5.5	clayy SILT to silty CLAY	115	2.0	36	39	-	-	5.1	15
18.87	62.3	57.0	182.3	3.1	-0.4	5.0	clayy SILT to silty CLAY	115	2.0	29	31	-	-	4.1	15
19.03	55.6	50.7	158.3	2.3	-0.2	4.3	clayy SILT to silty CLAY	115	2.0	25	28	-	-	3.6	15
19.19	57.7	52.3	143.9	2.0	0.0	3.6	clayy SILT to silty CLAY	115	2.0	26	29	-	-	3.8	15
19.36	69.9	63.2	178.7	3.1	0.1	4.5	clayy SILT to silty CLAY	115	2.0	32	35	-	-	4.6	15
19.52	49.4	42.4	-	3.5	-0.4	7.3	silty CLAY to CLAY	115	1.5	28	33	-	-	3.2	15
19.69	63.9	57.3	161.0	2.5	-0.2	4.0	clayy SILT to silty CLAY	115	2.0	29	32	-	-	4.2	15
19.85	49.9	42.2	-	2.7	-0.3	5.6	silty CLAY to CLAY	115	1.5	28	33	-	-	3.3	15
20.01	66.0	58.8	159.9	2.5	-0.2	3.9	clayy SILT to silty CLAY	115	2.0	29	33	-	-	4.3	15
20.18	56.7	47.5	-	2.7	-0.1	4.9	clayy SILT to silty CLAY	115	2.0	24	28	-	-	3.7	15
20.34	50.0	41.8	-	3.0	-0.1	6.2	silty CLAY to CLAY	115	1.5	28	33	-	-	3.3	15
20.51	50.1	41.7	-	2.6	-0.3	5.3	silty CLAY to CLAY	115	1.5	28	33	-	-	3.3	15
20.67	38.6	32.0	-	2.5	-0.7	6.7	silty CLAY to CLAY	115	1.5	21	26	-	-	2.5	15
20.83	56.3	49.7	150.5	2.2	-0.5	4.0	clayy SILT to silty CLAY	115	2.0	25	28	-	-	3.7	15
21.00	41.9	34.5	-	2.0	-0.8	4.8	silty CLAY to CLAY	115	1.5	23	28	-	-	2.7	15
21.16	48.3	42.5	134.0	1.7	-0.5	3.6	clayy SILT to silty CLAY	115	2.0	21	24	-	-	3.1	15
21.33	64.6	52.9	-	3.9	-0.3	6.2	silty CLAY to CLAY	115	1.5	35	43	-	-	4.2	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(532).cpt
CPT Date: 8/18/2006 8:51:38 AM
GW During Test: 20 ft

Sounding ID: CPT-04
Project No: 19166
Cone/Rig: DSG0906

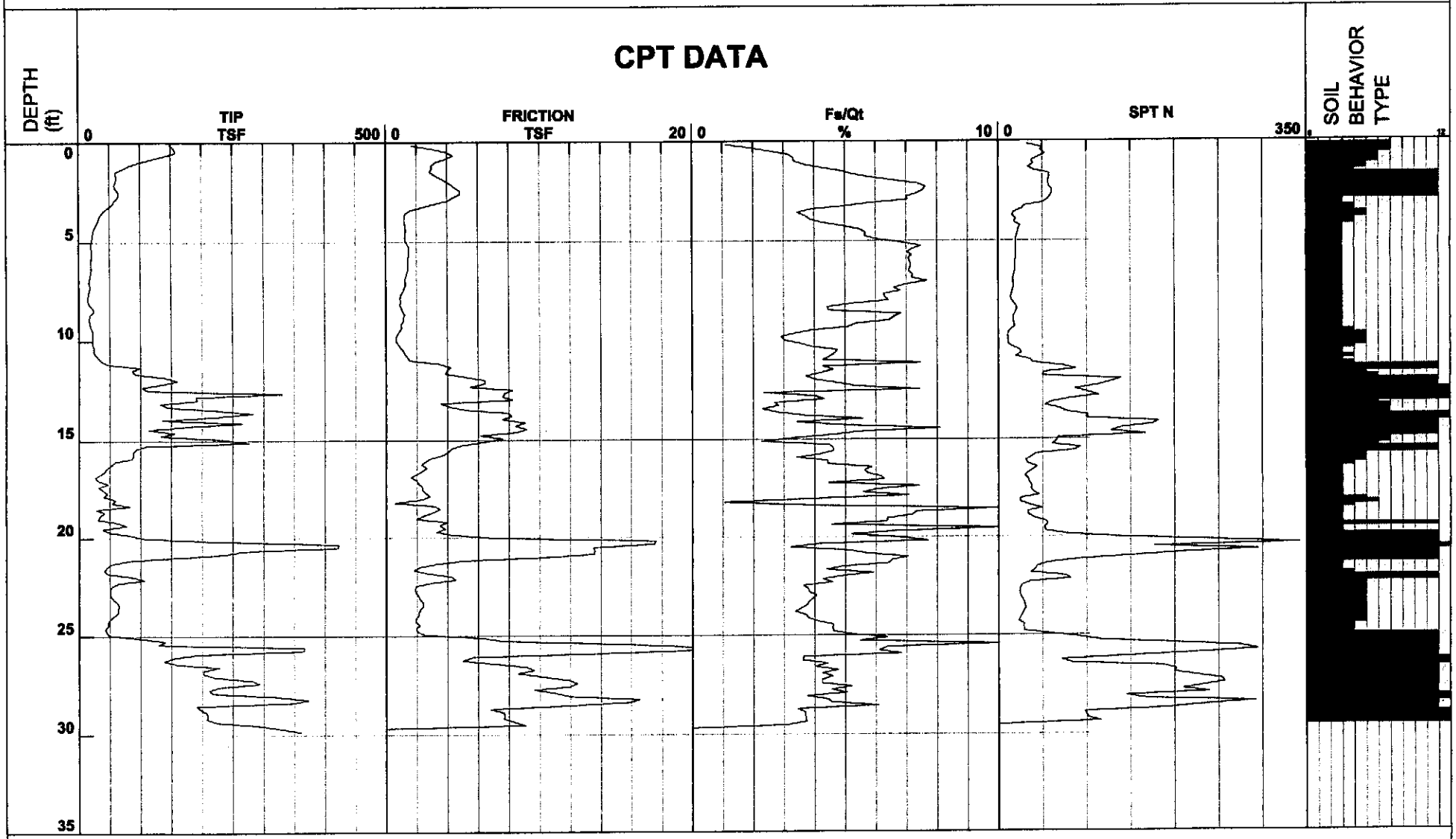
Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
21.49	91.0	79.8	237.7	5.3	0.0	5.9	very stiff fine SOIL	120	2.0	40	46	60	39	-	30
21.65	104.4	91.4	247.6	5.9	0.3	5.7	very stiff fine SOIL	120	2.0	46	52	64	40	-	30
21.82	82.0	71.6	225.6	4.8	0.0	5.9	very stiff fine SOIL	120	2.0	36	41	56	38	-	30
21.98	90.4	78.8	191.2	3.7	-0.1	4.2	clayy SILT to silty CLAY	115	2.0	39	45	-	-	5.9	15
22.15	71.8	62.5	184.3	3.3	0.0	4.7	clayy SILT to silty CLAY	115	2.0	31	36	-	-	4.7	15
22.31	81.8	71.1	159.2	2.7	0.3	3.3	clayy SILT to silty CLAY	115	2.0	36	41	-	-	5.4	15
22.47	84.4	73.2	171.0	3.1	0.5	3.7	clayy SILT to silty CLAY	115	2.0	37	42	-	-	5.5	15
22.64	102.1	88.4	177.1	3.3	1.1	3.3	silty SAND to sandy SILT	120	4.0	22	26	63	39	-	16
22.80	107.4	92.9	184.0	3.6	1.4	3.4	silty SAND to sandy SILT	120	4.0	23	27	65	40	-	16
22.97	100.1	86.3	169.7	3.1	1.4	3.1	silty SAND to sandy SILT	120	4.0	22	25	62	39	-	16
23.13	173.6	149.5	253.9	6.4	1.7	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.8	16
23.30	229.8	197.5	385.1	13.0	0.6	5.7	very stiff fine SOIL	120	2.0	99	100	89	44	-	30
23.46	205.5	176.4	467.0	17.4	1.3	8.5	very stiff fine SOIL	120	2.0	88	100	86	43	-	30
23.62	269.7	231.0	516.7	20.7	1.5	7.7	very stiff fine SOIL	120	2.0	100	100	95	44	-	30
23.79	212.1	181.3	527.1	22.9	4.8	9.9	very stiff fine SOIL	120	2.0	91	100	87	43	-	30
23.95	393.7	336.0	552.3	22.4	4.1	5.7	very stiff fine SOIL	120	2.0	100	100	95	46	-	30
24.12	359.6	306.3	499.4	19.2	5.7	5.4	very stiff fine SOIL	120	2.0	100	100	95	46	-	30
24.28	170.8	145.2	335.0	10.4	4.1	6.1	very stiff fine SOIL	120	2.0	73	85	79	42	-	30
24.44	178.9	151.9	276.9	7.6	4.4	4.3	very stiff fine SOIL	120	2.0	76	89	81	42	-	30
24.61	150.7	127.7	261.0	6.9	5.0	4.6	very stiff fine SOIL	120	2.0	64	75	75	41	-	30
24.77	150.0	126.9	253.2	6.6	6.1	4.4	very stiff fine SOIL	120	2.0	63	75	75	41	-	30
24.94	157.4	132.9	262.1	7.0	6.4	4.5	very stiff fine SOIL	120	2.0	66	79	76	41	-	30
25.10	176.3	148.6	266.5	7.2	6.5	4.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.9	16
25.26	179.5	151.0	266.6	7.2	6.9	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.1	16
25.43	192.3	161.5	255.7	6.5	7.2	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.9	16
25.59	185.2	155.3	249.1	6.3	7.5	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.5	16
25.76	185.8	155.6	246.5	6.2	7.7	3.3	silty SAND to sandy SILT	120	4.0	39	46	82	42	-	16
25.92	190.6	159.4	251.5	6.4	8.2	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.8	16
26.08	187.1	156.2	257.2	6.7	8.6	3.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.6	16
26.25	180.6	150.4	251.8	6.5	9.1	3.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.2	16
26.41	174.8	145.4	247.3	6.3	9.5	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.8	16
26.58	172.6	143.4	239.8	6.0	9.9	3.5	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.7	16
26.74	173.5	143.9	238.4	5.9	10.3	3.4	silty SAND to sandy SILT	120	4.0	36	43	79	42	-	16
26.90	178.5	147.7	242.0	6.1	10.7	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.1	16
27.07	172.8	142.9	254.9	6.8	11.0	3.9	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.7	16
27.23	174.4	144.0	257.2	6.9	11.3	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.8	16
27.40	166.3	137.1	263.3	7.2	11.4	4.4	very stiff fine SOIL	120	2.0	69	83	77	41	-	30
27.56	166.6	137.1	269.2	7.5	11.6	4.5	very stiff fine SOIL	120	2.0	69	83	77	41	-	30
27.72	175.7	144.3	282.9	8.2	11.8	4.7	very stiff fine SOIL	120	2.0	72	88	79	42	-	30
27.89	170.7	139.9	276.6	7.9	11.7	4.7	very stiff fine SOIL	120	2.0	70	85	78	42	-	30
28.05	160.7	131.5	277.1	7.9	11.5	5.0	very stiff fine SOIL	120	2.0	66	80	76	41	-	30
28.22	164.1	134.1	282.1	8.1	11.3	5.0	very stiff fine SOIL	120	2.0	67	82	77	41	-	30
28.38	186.9	152.4	290.3	8.6	10.9	4.6	very stiff fine SOIL	120	2.0	76	93	81	42	-	30
28.54	197.3	160.7	280.5	8.1	10.7	4.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	12.2	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	Safran	Operator	ML-CW	Filename	SDF(534).cpt
Job Number	19166	Cone Number	DSG0906	GPS	
Hole Number	CPT-05a	Date and Time	8/18/2006 9:56:45 AM	Maximum Depth	29.86 ft
Water Table Depth	24.98 ft				

CPT DATA



1 - sensitive fine grained	4 - silty clay to clay	7 - silty sand to sandy silt	10 - gravelly sand to sand
2 - organic material	5 - clayey silt to silty clay	8 - sand to silty sand	11 - very stiff fine grained (*)
3 - clay	6 - sandy silt to clayey silt	9 - sand	12 - sand to clayey sand (*)

Depth Increment

*Soil behavior type and SPT based on data from UBC-1983

Project ID: Geotechnologies
Data File: SDF(534).cpt
CPT Date: 8/18/2006 9:56:45 AM
GW During Test: 25 ft

Sounding ID: CPT-05a
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qcln * PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT * R-N1 60%	SPT R-N 60%	Rel * Den %	Ftn * Ang deg	Und Shr tsf	Nk * - -
0.33	156.0	250.2	285.9	3.0	0.3	1.9	clean SAND to silty SAND	125	5.0	50	31	95	48	-	16
0.49	157.1	251.9	309.9	3.9	0.3	2.5	stiff SAND to clayy SAND	115	1.0	100	100	-	-	9.8	16
0.66	139.9	224.3	307.7	4.4	0.3	3.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.7	16
0.82	118.4	189.8	280.0	3.9	0.2	3.3	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.4	16
0.98	97.0	155.6	245.7	3.2	0.1	3.3	silty SAND to sandy SILT	120	4.0	39	24	82	48	-	16
1.15	81.6	130.8	231.6	3.0	0.1	3.7	stiff SAND to clayy SAND	115	1.0	100	82	-	-	5.1	16
1.31	71.0	113.9	231.1	3.0	0.1	4.2	very stiff fine SOIL	120	2.0	57	36	71	48	-	30
1.48	59.2	95.0	228.1	2.9	0.0	4.9	very stiff fine SOIL	120	2.0	47	30	65	48	-	30
1.64	61.1	97.9	242.6	3.2	-0.1	5.2	very stiff fine SOIL	120	2.0	49	31	66	48	-	30
1.80	61.2	98.2	260.2	3.6	0.2	5.8	very stiff fine SOIL	120	2.0	49	31	66	48	-	30
1.97	60.1	96.3	277.9	3.9	0.0	6.6	very stiff fine SOIL	120	2.0	48	30	66	48	-	30
2.13	58.0	93.0	294.4	4.3	-0.3	7.4	very stiff fine SOIL	120	2.0	47	29	65	48	-	30
2.30	59.9	96.0	306.3	4.6	-0.6	7.7	very stiff fine SOIL	120	2.0	48	30	66	48	-	30
2.46	64.5	103.4	316.5	4.9	-0.8	7.6	very stiff fine SOIL	120	2.0	52	32	68	48	-	30
2.62	65.3	104.8	313.4	4.8	-0.9	7.4	very stiff fine SOIL	120	2.0	52	33	69	47	-	30
2.79	62.2	99.8	295.7	4.4	-0.9	7.0	very stiff fine SOIL	120	2.0	50	31	67	47	-	30
2.95	57.6	92.3	284.9	4.1	-0.9	7.1	very stiff fine SOIL	120	2.0	46	29	64	46	-	30
3.12	54.6	87.5	245.6	3.2	-0.9	5.8	very stiff fine SOIL	120	2.0	44	27	63	46	-	30
3.28	47.5	76.1	208.1	2.4	-0.8	5.0	clayy SILT to silty CLAY	115	2.0	38	24	-	-	3.2	15
3.45	41.0	65.7	167.2	1.6	-0.7	3.9	clayy SILT to silty CLAY	115	2.0	33	20	-	-	2.7	15
3.61	36.6	58.6	148.4	1.3	-0.3	3.5	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
3.77	33.0	52.9	147.6	1.2	-0.3	3.7	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.2	15
3.94	31.3	50.1	147.4	1.2	-0.3	3.9	clayy SILT to silty CLAY	115	2.0	25	16	-	-	2.1	15
4.10	28.9	46.3	151.0	1.2	-0.3	4.3	clayy SILT to silty CLAY	115	2.0	23	14	-	-	1.9	15
4.27	26.0	41.7	-	1.3	-0.3	5.0	silty CLAY to CLAY	115	1.5	28	17	-	-	1.7	15
4.43	23.6	37.8	-	1.3	-0.5	5.5	silty CLAY to CLAY	115	1.5	25	16	-	-	1.6	15
4.59	22.5	36.1	-	1.3	-0.8	5.7	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
4.76	22.0	35.3	-	1.2	-0.9	5.7	silty CLAY to CLAY	115	1.5	24	15	-	-	1.4	15
4.92	21.0	33.7	-	1.3	-1.0	6.1	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
5.09	20.1	32.2	-	1.4	-1.2	7.0	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
5.25	20.2	32.4	-	1.5	-0.6	7.6	silty CLAY to CLAY	115	1.5	22	13	-	-	1.3	15
5.41	21.0	33.7	-	1.5	-0.8	7.3	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
5.58	21.5	34.4	-	1.5	-0.8	7.1	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
5.74	20.7	33.2	-	1.5	-0.8	7.3	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
5.91	20.4	32.7	-	1.4	-0.8	7.2	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
6.07	20.2	32.3	-	1.4	-0.6	7.2	silty CLAY to CLAY	115	1.5	22	13	-	-	1.3	15
6.23	20.2	32.3	-	1.4	-0.6	7.3	silty CLAY to CLAY	115	1.5	22	13	-	-	1.3	15
6.40	20.5	32.9	-	1.5	-0.7	7.2	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
6.56	19.5	31.3	-	1.4	-0.7	7.2	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
6.73	18.4	29.5	-	1.3	-0.7	7.4	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
6.89	17.6	28.2	-	1.3	-0.9	7.3	silty CLAY to CLAY	115	1.5	19	12	-	-	1.1	15
7.05	16.6	26.6	-	1.3	-1.1	7.9	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
7.22	18.2	29.2	-	1.3	-1.4	7.1	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
7.38	17.8	28.5	-	1.2	-1.5	6.8	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
7.55	16.3	26.2	-	1.1	-1.5	7.0	silty CLAY to CLAY	115	1.5	17	11	-	-	1.1	15
7.71	15.4	24.7	-	1.0	-1.5	6.4	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
7.87	14.7	23.5	-	0.9	-1.4	6.5	silty CLAY to CLAY	115	1.5	16	10	-	-	0.9	15
8.04	14.9	23.9	-	1.0	-1.3	6.6	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
8.20	17.7	28.4	-	0.9	-1.3	5.3	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
8.37	23.0	36.8	-	1.0	-1.3	4.5	clayy SILT to silty CLAY	115	2.0	18	11	-	-	1.5	15
8.53	24.3	38.9	-	1.1	-0.9	4.6	clayy SILT to silty CLAY	115	2.0	19	12	-	-	1.6	15
8.69	17.9	28.8	-	1.2	-0.6	7.0	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
8.86	17.0	27.3	-	1.1	-0.6	6.8	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
9.02	17.4	27.9	-	1.1	-0.6	6.6	silty CLAY to CLAY	115	1.5	19	12	-	-	1.1	15
9.19	18.2	29.2	-	1.0	-1.4	5.5	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
9.35	20.4	32.7	-	1.0	-1.4	5.3	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
9.51	22.4	35.9	-	0.9	-0.5	4.0	clayy SILT to silty CLAY	115	2.0	18	11	-	-	1.5	15
9.68	22.4	35.9	-	0.8	-0.4	3.4	clayy SILT to silty CLAY	115	2.0	18	11	-	-	1.5	15
9.84	22.4	32.5	107.7	0.7	-0.5	3.0	clayy SILT to silty CLAY	115	2.0	16	11	-	-	1.5	15
10.01	21.7	31.2	-	0.7	-0.5	3.1	clayy SILT to silty CLAY	115	2.0	16	11	-	-	1.4	15
10.17	22.6	36.3	-	0.8	-0.5	3.6	clayy SILT to silty CLAY	115	2.0	18	11	-	-	1.5	15
10.34	24.2	38.8	-	0.9	-0.5	4.0	clayy SILT to silty CLAY	115	2.0	19	12	-	-	1.6	15
10.50	23.7	38.0	-	1.1	-0.5	4.9	silty CLAY to CLAY	115	1.5	25	16	-	-	1.5	15
10.66	26.5	42.4	-	1.2	-0.4	4.8	clayy SILT to silty CLAY	115	2.0	21	13	-	-	1.7	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(534).cpt
CPT Date: 8/18/2006 9:56:45 AM
GW During Test: 25 ft

Sounding ID: CPT-05a
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
10.83	31.3	42.6	-	1.4	-0.8	4.6	clayy SILT to silty CLAY	115	2.0	21	16	-	-	2.0	15
10.99	36.4	49.0	156.6	1.6	-1.1	4.3	clayy SILT to silty CLAY	115	2.0	24	18	-	-	2.4	15
11.16	46.3	71.5	-	3.5	-1.1	7.6	very stiff fine SOIL	120	2.0	36	23	56	39	-	30
11.32	98.5	117.9	239.1	4.2	-0.8	4.3	very stiff fine SOIL	120	2.0	59	49	72	43	-	30
11.48	86.2	102.4	231.8	4.0	-0.8	4.6	very stiff fine SOIL	120	2.0	51	43	68	42	-	30
11.65	91.5	108.0	225.9	3.9	-0.7	4.2	very stiff fine SOIL	120	2.0	54	46	70	42	-	30
11.81	139.8	163.7	268.8	5.2	-0.7	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.7	16
11.98	159.8	185.9	304.1	6.4	-0.5	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	9.9	16
12.14	136.3	157.5	299.3	6.4	-0.1	4.7	very stiff fine SOIL	120	2.0	79	68	82	44	-	30
12.30	102.5	117.6	273.2	5.5	0.0	5.4	very stiff fine SOIL	120	2.0	59	51	72	42	-	30
12.47	111.4	127.0	352.4	8.3	0.1	7.5	very stiff fine SOIL	120	2.0	63	56	75	43	-	30
12.63	330.4	374.0	421.0	7.7	0.2	2.3	stiff SAND to clayy SAND	115	1.0	100	100	-	-	20.6	16
12.80	190.1	213.9	332.7	7.6	0.1	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	11.8	16
12.96	191.5	214.1	346.0	8.3	0.1	4.3	very stiff fine SOIL	120	2.0	100	96	92	45	-	30
13.12	131.9	146.5	215.2	3.6	0.1	2.7	silty SAND to sandy SILT	120	4.0	37	33	80	43	-	16
13.29	144.9	159.9	232.2	4.1	0.1	2.8	silty SAND to sandy SILT	120	4.0	40	36	82	44	-	16
13.45	223.8	245.4	295.6	5.1	0.2	2.3	clean SAND to silty SAND	125	5.0	49	45	95	46	-	16
13.62	282.4	307.7	377.7	8.0	-0.1	2.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	17.6	16
13.78	222.2	240.6	347.4	8.2	0.1	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	13.8	16
13.94	135.6	146.0	317.0	7.6	0.1	5.6	very stiff fine SOIL	120	2.0	73	68	79	43	-	30
14.11	265.5	284.2	380.5	9.1	-0.1	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	16.5	16
14.27	169.7	180.6	335.7	8.4	0.0	5.0	very stiff fine SOIL	120	2.0	90	85	87	44	-	30
14.44	113.0	119.6	361.3	9.1	0.9	8.2	very stiff fine SOIL	120	2.0	60	57	73	42	-	30
14.60	155.8	163.9	334.3	8.5	1.1	5.5	very stiff fine SOIL	120	2.0	82	78	83	44	-	30
14.76	133.3	139.4	275.3	6.2	1.0	4.7	very stiff fine SOIL	120	2.0	70	67	78	43	-	30
14.93	233.5	242.8	331.8	7.6	1.2	3.3	stiff SAND to clayy SAND	115	1.0	100	100	-	-	14.5	16
15.09	276.4	285.9	333.5	6.3	1.1	2.3	clean SAND to silty SAND	125	5.0	57	55	95	46	-	16
15.26	109.2	112.3	239.6	4.9	0.7	4.5	very stiff fine SOIL	120	2.0	56	55	71	42	-	30
15.42	93.2	95.4	223.3	4.3	1.0	4.6	very stiff fine SOIL	120	2.0	48	47	65	41	-	30
15.58	87.9	89.4	216.9	4.1	1.0	4.7	very stiff fine SOIL	120	2.0	45	44	63	40	-	30
15.75	88.6	89.6	204.1	3.7	1.1	4.2	clayy SILT to silty CLAY	115	2.0	45	44	-	-	5.8	15
15.91	85.3	85.8	178.1	2.9	1.2	3.4	silty SAND to sandy SILT	120	4.0	21	21	62	40	-	16
16.08	58.5	58.6	172.7	2.6	1.1	4.5	clayy SILT to silty CLAY	115	2.0	29	29	-	-	3.8	15
16.24	52.4	52.2	164.9	2.3	1.0	4.5	clayy SILT to silty CLAY	115	2.0	26	26	-	-	3.4	15
16.40	44.8	46.7	-	2.6	1.0	6.0	silty CLAY to CLAY	115	1.5	31	30	-	-	2.9	15
16.57	42.0	43.3	-	2.4	0.8	5.8	silty CLAY to CLAY	115	1.5	29	28	-	-	2.7	15
16.73	35.3	36.1	-	2.0	0.8	5.9	silty CLAY to CLAY	115	1.5	24	24	-	-	2.3	15
16.90	26.4	26.7	-	1.6	0.7	6.4	silty CLAY to CLAY	115	1.5	18	18	-	-	1.7	15
17.06	31.6	31.7	-	2.0	0.6	6.5	silty CLAY to CLAY	115	1.5	21	21	-	-	2.0	15
17.23	47.4	47.1	-	2.1	0.5	4.5	clayy SILT to silty CLAY	115	2.0	24	24	-	-	3.1	15
17.39	31.7	31.2	-	2.3	0.3	7.7	silty CLAY to CLAY	115	1.5	21	21	-	-	2.0	15
17.55	39.3	38.3	-	2.4	0.3	6.2	silty CLAY to CLAY	115	1.5	26	26	-	-	2.6	15
17.72	46.1	44.5	-	2.6	0.2	5.7	silty CLAY to CLAY	115	1.5	30	31	-	-	3.0	15
17.88	40.4	38.7	-	2.9	0.2	7.3	silty CLAY to CLAY	115	1.5	26	27	-	-	2.6	15
18.05	59.0	55.8	159.1	2.3	0.2	4.0	clayy SILT to silty CLAY	115	2.0	28	29	-	-	3.9	15
18.21	54.7	51.5	81.8	0.6	0.2	1.1	silty SAND to sandy SILT	120	4.0	13	14	45	37	-	16
18.37	82.8	77.6	181.4	3.2	0.1	3.9	clayy SILT to silty CLAY	115	2.0	39	41	-	-	5.4	15
18.54	28.4	26.2	-	3.5	-1.6	9.9	silty CLAY to CLAY	115	1.5	17	19	-	-	1.8	15
18.70	41.8	38.2	-	3.1	-1.7	7.5	silty CLAY to CLAY	115	1.5	25	28	-	-	2.7	15
18.87	33.8	30.7	-	2.4	-1.7	7.4	silty CLAY to CLAY	115	1.5	20	23	-	-	2.2	15
19.03	31.4	28.3	-	2.0	-1.8	6.6	silty CLAY to CLAY	115	1.5	19	21	-	-	2.0	15
19.19	62.5	55.8	-	4.0	-1.7	6.5	silty CLAY to CLAY	115	1.5	37	42	-	-	4.1	15
19.36	76.8	70.2	191.4	3.5	-2.8	4.6	clayy SILT to silty CLAY	115	2.0	35	38	-	-	5.0	15
19.52	37.7	33.1	-	3.9	-3.0	9.9	silty CLAY to CLAY	115	1.5	22	25	-	-	2.4	15
19.69	49.6	43.1	-	3.3	-3.0	6.8	silty CLAY to CLAY	115	1.5	29	33	-	-	3.2	15
19.85	82.6	74.6	213.6	4.3	-3.0	5.3	clayy SILT to silty CLAY	115	2.0	37	41	-	-	5.4	15
20.01	106.8	96.0	285.8	7.2	-3.0	6.8	very stiff fine SOIL	120	2.0	48	53	66	40	-	30
20.18	228.9	204.9	479.5	17.6	-2.6	7.7	very stiff fine SOIL	120	2.0	100	100	91	44	-	30
20.34	422.2	376.4	513.1	17.5	-2.3	4.2	stiff SAND to clayy SAND	115	1.0	100	100	-	-	26.3	16
20.51	421.2	373.9	462.5	13.5	-1.2	3.2	stiff SAND to clayy SAND	115	1.0	100	100	-	-	26.2	16
20.67	267.6	236.7	405.4	13.6	-1.3	5.1	very stiff fine SOIL	120	2.0	100	100	95	45	-	30
20.83	235.5	207.4	400.5	13.6	-1.1	5.8	very stiff fine SOIL	120	2.0	100	100	91	44	-	30
21.00	145.8	127.9	342.5	10.3	-0.7	7.1	very stiff fine SOIL	120	2.0	64	73	75	41	-	30
21.16	78.0	63.1	-	5.1	-0.6	6.6	very stiff fine SOIL	120	2.0	32	39	52	38	-	30
21.33	51.3	41.2	-	3.3	-0.6	6.6	silty CLAY to CLAY	115	1.5	27	34	-	-	3.3	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(534).cpt
CPT Date: 8/18/2006 9:56:45 AM
GW During Test: 25 ft

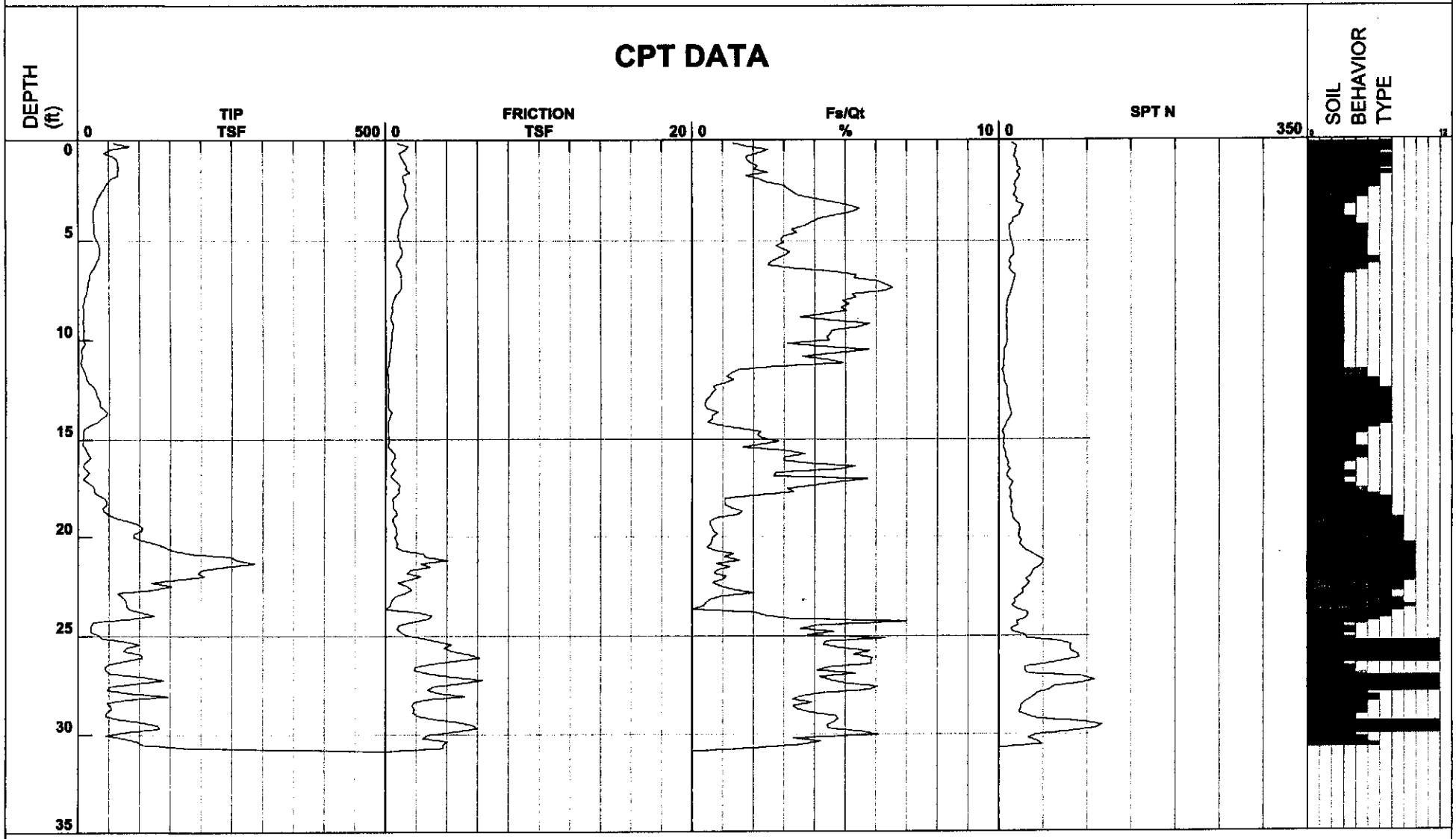
Sounding ID: CPT-05a
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qcln PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
21.49	44.8	35.7	-	2.2	-0.5	5.1	silty CLAY to CLAY	115	1.5	24	30	-	-	2.9	15
21.65	41.2	32.6	-	1.8	-0.5	4.5	silty CLAY to CLAY	115	1.5	22	27	-	-	2.7	15
21.82	46.2	36.3	-	2.7	-0.5	6.1	silty CLAY to CLAY	115	1.5	24	31	-	-	3.0	15
21.98	86.5	74.2	205.7	4.2	-0.4	5.0	clayy SILT to silty CLAY	115	2.0	37	43	-	-	5.7	15
22.15	106.6	91.1	208.9	4.5	-0.4	4.3	clayy SILT to silty CLAY	115	2.0	46	53	-	-	7.0	15
22.31	63.7	48.9	-	2.9	-0.4	4.7	clayy SILT to silty CLAY	115	2.0	24	32	-	-	4.2	15
22.47	53.4	45.3	139.2	1.9	-0.4	3.7	clayy SILT to silty CLAY	115	2.0	23	27	-	-	3.5	15
22.64	49.8	37.7	-	1.9	-0.4	3.9	clayy SILT to silty CLAY	115	2.0	19	25	-	-	3.2	15
22.80	51.0	38.4	-	2.0	-0.5	3.9	clayy SILT to silty CLAY	115	2.0	19	26	-	-	3.3	15
22.97	52.0	38.8	-	2.1	-0.5	4.2	clayy SILT to silty CLAY	115	2.0	19	26	-	-	3.4	15
23.13	56.5	41.9	-	2.2	-0.5	4.0	clayy SILT to silty CLAY	115	2.0	21	28	-	-	3.7	15
23.30	62.9	52.4	152.0	2.4	-0.5	3.9	clayy SILT to silty CLAY	115	2.0	26	31	-	-	4.1	15
23.46	64.8	53.8	152.0	2.4	-0.5	3.8	clayy SILT to silty CLAY	115	2.0	27	32	-	-	4.2	15
23.62	63.0	52.1	145.8	2.2	-0.5	3.6	clayy SILT to silty CLAY	115	2.0	26	31	-	-	4.1	15
23.79	63.4	52.3	141.5	2.1	-0.5	3.4	clayy SILT to silty CLAY	115	2.0	26	32	-	-	4.1	15
23.95	56.5	46.4	142.7	2.1	-0.5	3.8	clayy SILT to silty CLAY	115	2.0	23	28	-	-	3.7	15
24.12	50.6	36.0	-	1.9	-0.5	3.9	clayy SILT to silty CLAY	115	2.0	18	25	-	-	3.3	15
24.28	47.4	33.5	-	1.9	-0.5	4.2	clayy SILT to silty CLAY	115	2.0	17	24	-	-	3.1	15
24.44	47.5	33.3	-	2.2	-0.5	4.8	silty CLAY to CLAY	115	1.5	22	32	-	-	3.1	15
24.61	42.3	29.5	-	1.9	-0.5	4.7	silty CLAY to CLAY	115	1.5	20	28	-	-	2.7	15
24.77	44.6	30.9	-	2.1	-0.6	4.8	silty CLAY to CLAY	115	1.5	21	30	-	-	2.9	15
24.94	49.0	33.8	-	2.6	-0.5	5.4	silty CLAY to CLAY	115	1.5	23	33	-	-	3.2	15
25.10	97.7	67.0	-	6.2	-0.5	6.5	very stiff fine SOIL	120	2.0	34	49	54	38	-	30
25.26	140.3	112.7	272.1	7.7	-0.4	5.5	very stiff fine SOIL	120	2.0	56	70	71	40	-	30
25.43	129.0	88.0	-	15.4	0.1	9.9	very stiff fine SOIL	120	2.0	44	65	63	40	-	30
25.59	366.2	293.2	537.3	23.4	0.4	6.4	very stiff fine SOIL	120	2.0	100	100	95	45	-	30
25.76	365.2	291.9	521.8	22.3	0.9	6.1	very stiff fine SOIL	120	2.0	100	100	95	45	-	30
25.92	194.0	154.8	374.4	13.2	1.4	6.9	very stiff fine SOIL	120	2.0	77	97	81	42	-	30
26.08	155.2	123.7	225.2	5.7	1.9	3.7	silty SAND to sandy SILT	120	4.0	31	39	74	41	-	16
26.25	138.6	110.3	210.5	5.0	2.3	3.7	silty SAND to sandy SILT	120	4.0	28	35	70	40	-	16
26.41	159.7	126.9	255.6	7.1	2.6	4.5	very stiff fine SOIL	120	2.0	63	80	75	41	-	30
26.58	227.8	180.7	298.7	9.1	2.9	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	14.1	16
26.74	202.4	160.3	305.2	9.6	3.2	4.8	very stiff fine SOIL	120	2.0	80	100	83	42	-	30
26.90	202.4	160.1	285.2	8.6	3.4	4.3	very stiff fine SOIL	120	2.0	80	100	83	42	-	30
27.07	220.6	174.1	314.1	10.1	3.8	4.6	very stiff fine SOIL	120	2.0	87	100	85	42	-	30
27.23	282.3	222.5	352.6	12.0	4.2	4.3	very stiff fine SOIL	120	2.0	100	100	93	44	-	30
27.40	293.6	231.1	362.0	12.4	5.4	4.3	very stiff fine SOIL	120	2.0	100	100	95	44	-	30
27.56	228.4	179.5	345.4	11.9	6.9	5.3	very stiff fine SOIL	120	2.0	90	100	86	43	-	30
27.72	211.8	166.2	303.9	9.7	7.2	4.6	very stiff fine SOIL	120	2.0	83	100	84	42	-	30
27.89	218.3	171.0	328.6	11.0	7.6	5.1	very stiff fine SOIL	120	2.0	85	100	85	42	-	30
28.05	318.9	249.5	359.7	11.9	8.1	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	19.8	16
28.22	373.7	291.9	436.9	16.6	10.6	4.5	very stiff fine SOIL	120	2.0	100	100	95	45	-	30
28.38	350.1	273.1	421.8	15.9	11.5	4.6	very stiff fine SOIL	120	2.0	100	100	95	45	-	30
28.54	190.9	148.7	339.2	11.6	10.9	6.1	very stiff fine SOIL	120	2.0	74	95	80	42	-	30
28.71	198.5	154.3	249.4	6.8	11.5	3.5	stiff SAND to clayy SAND	115	1.0	100	100	-	-	12.3	16
28.87	207.9	161.4	266.0	7.7	11.8	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	12.9	16
29.04	209.2	162.2	267.4	7.7	12.0	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	13.0	16
29.20	207.7	160.8	265.9	7.7	12.1	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	12.9	16
29.36	223.9	173.1	280.1	8.4	12.3	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	13.9	16
29.53	293.0	226.3	308.9	9.1	12.7	3.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	18.2	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	Safran	Operator	ML-CW	Filename	SDF(535).cpt
Job Number	19166	Cone Number	DSG0906	GPS	
Hole Number	CPT-06	Date and Time	8/18/2006 10:41:15 AM	Maximum Depth	31.00 ft
Water Table Depth		16.26 ft			



1 - sensitive fine grained	4 - silty clay to clay	7 - silty sand to sandy silt	10 - gravelly sand to sand
2 - organic material	5 - clayey silt to silty clay	8 - sand to silty sand	11 - very stiff fine grained (*)
3 - clay	6 - sandy silt to clayey silt	9 - sand	12 - sand to clayey sand (*)

Depth Increment

*Soil behavior type and SPT based on data from UBC 1983

Project ID: Geotechnologies
Data File: SDF(535).cpt
CPT Date: 8/18/2006 10:41:15 AM
GW During Test: 16 ft

Sounding ID: CPT-06
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qcln PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
0.33	84.5	135.5	174.2	1.5	0.6	1.8	clean SAND to silty SAND	125	5.0	27	17	77	48	-	16
0.49	52.4	84.1	148.2	1.3	0.6	2.5	silty SAND to sandy SILT	120	4.0	21	13	61	48	-	16
0.66	42.6	68.3	124.6	0.9	0.4	2.2	silty SAND to sandy SILT	120	4.0	17	11	54	48	-	16
0.82	57.1	91.6	134.6	1.0	0.3	1.8	silty SAND to sandy SILT	120	4.0	23	14	64	48	-	16
0.98	63.6	102.0	144.0	1.1	0.3	1.8	silty SAND to sandy SILT	120	4.0	26	16	68	48	-	16
1.15	65.0	104.3	149.5	1.2	0.3	1.9	silty SAND to sandy SILT	120	4.0	26	16	68	48	-	16
1.31	65.5	105.1	157.5	1.4	0.3	2.1	silty SAND to sandy SILT	120	4.0	26	16	69	48	-	16
1.48	66.2	106.2	154.9	1.3	0.3	2.0	silty SAND to sandy SILT	120	4.0	27	17	69	48	-	16
1.64	65.1	104.5	167.3	1.6	0.3	2.5	silty SAND to sandy SILT	120	4.0	26	16	68	48	-	16
1.80	65.4	104.9	145.9	1.2	0.3	1.8	silty SAND to sandy SILT	120	4.0	26	16	69	48	-	16
1.97	54.2	86.9	142.1	1.2	0.3	2.2	silty SAND to sandy SILT	120	4.0	22	14	62	48	-	16
2.13	50.1	80.3	142.4	1.2	0.2	2.4	silty SAND to sandy SILT	120	4.0	20	13	60	47	-	16
2.30	45.3	72.7	151.4	1.4	0.2	3.0	silty SAND to sandy SILT	120	4.0	18	11	56	46	-	16
2.46	43.1	69.1	151.6	1.4	0.2	3.1	silty SAND to sandy SILT	120	4.0	17	11	55	46	-	16
2.62	38.8	62.2	148.6	1.3	0.0	3.3	clayy SILT to silty CLAY	115	2.0	31	19	-	-	2.6	15
2.79	36.2	58.0	148.1	1.3	0.0	3.5	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
2.95	32.3	51.9	153.4	1.3	-0.1	4.1	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.1	15
3.12	31.1	49.8	162.3	1.4	-0.1	4.6	clayy SILT to silty CLAY	115	2.0	25	16	-	-	2.1	15
3.28	28.9	46.4	-	1.5	-0.1	5.1	clayy SILT to silty CLAY	115	2.0	23	14	-	-	1.9	15
3.45	26.5	42.5	-	1.5	-0.2	5.5	silty CLAY to CLAY	115	1.5	28	18	-	-	1.8	15
3.61	25.3	40.5	-	1.3	-0.2	5.3	silty CLAY to CLAY	115	1.5	27	17	-	-	1.7	15
3.77	24.8	39.8	-	1.2	-0.2	4.7	clayy SILT to silty CLAY	115	2.0	20	12	-	-	1.6	15
3.94	25.2	40.5	-	1.0	-0.2	4.2	clayy SILT to silty CLAY	115	2.0	20	13	-	-	1.7	15
4.10	25.5	40.9	136.1	1.0	-0.3	3.9	clayy SILT to silty CLAY	115	2.0	20	13	-	-	1.7	15
4.27	26.1	41.9	133.4	1.0	-0.3	3.7	clayy SILT to silty CLAY	115	2.0	21	13	-	-	1.7	15
4.43	26.2	42.1	124.9	0.9	-0.3	3.3	clayy SILT to silty CLAY	115	2.0	21	13	-	-	1.7	15
4.59	25.8	41.4	127.4	0.9	-0.3	3.5	clayy SILT to silty CLAY	115	2.0	21	13	-	-	1.7	15
4.76	27.3	43.7	121.1	0.8	-0.3	3.0	clayy SILT to silty CLAY	115	2.0	22	14	-	-	1.8	15
4.92	29.5	47.4	123.2	0.9	-0.4	2.9	clayy SILT to silty CLAY	115	2.0	24	15	-	-	1.9	15
5.09	32.4	51.9	130.0	1.0	-0.4	3.0	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.1	15
5.25	34.2	54.9	127.6	0.9	-0.4	2.8	silty SAND to sandy SILT	120	4.0	14	9	47	41	-	16
5.41	36.1	57.9	136.1	1.1	-0.4	3.0	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
5.58	35.3	56.6	140.3	1.1	-0.5	3.2	clayy SILT to silty CLAY	115	2.0	28	18	-	-	2.3	15
5.74	34.8	55.9	136.1	1.1	-0.5	3.1	clayy SILT to silty CLAY	115	2.0	28	17	-	-	2.3	15
5.91	33.8	54.3	128.3	0.9	-0.5	2.8	silty SAND to sandy SILT	120	4.0	14	8	47	40	-	16
6.07	30.6	49.0	117.7	0.8	-0.5	2.6	silty SAND to sandy SILT	120	4.0	12	8	43	40	-	16
6.23	28.5	45.8	112.3	0.7	-0.5	2.5	silty SAND to sandy SILT	120	4.0	11	7	41	39	-	16
6.40	25.8	40.9	125.7	0.9	-0.6	3.4	clayy SILT to silty CLAY	115	2.0	20	13	-	-	1.7	15
6.56	21.3	34.2	-	1.0	-0.6	4.7	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
6.73	19.1	30.7	-	1.0	-0.6	5.5	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
6.89	19.1	30.7	-	1.0	-0.6	5.4	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
7.05	17.2	27.5	-	1.0	-0.6	6.2	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
7.22	16.5	26.5	-	1.0	-0.6	6.5	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
7.38	15.8	25.3	-	1.0	-0.7	6.7	silty CLAY to CLAY	115	1.5	17	11	-	-	1.0	15
7.55	15.0	24.1	-	0.9	-0.7	6.5	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
7.71	13.6	21.8	-	0.7	-0.7	5.4	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
7.87	11.1	17.8	-	0.6	-0.8	5.6	silty CLAY to CLAY	115	1.5	12	7	-	-	0.7	15
8.04	10.9	17.5	-	0.5	-0.8	5.1	silty CLAY to CLAY	115	1.5	12	7	-	-	0.7	15
8.20	9.0	14.4	-	0.5	-0.9	5.4	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
8.37	9.0	14.4	-	0.4	-0.9	5.1	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
8.53	9.3	15.0	-	0.5	-0.9	5.3	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
8.69	9.5	15.2	-	0.4	-1.0	4.6	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
8.86	9.7	15.5	-	0.3	-1.1	3.7	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
9.02	8.6	13.8	-	0.4	-1.1	4.9	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
9.19	8.7	14.0	-	0.5	-1.1	6.2	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
9.35	9.5	15.2	-	0.5	-1.1	5.8	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
9.51	9.9	15.8	-	0.5	-1.1	4.9	silty CLAY to CLAY	115	1.5	11	7	-	-	0.6	15
9.68	9.6	15.3	-	0.4	-1.1	4.8	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
9.84	9.1	14.6	-	0.4	-1.1	4.7	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
10.01	9.0	14.4	-	0.4	-1.2	4.8	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
10.17	11.8	18.9	-	0.4	-1.2	3.3	silty CLAY to CLAY	115	1.5	13	8	-	-	0.7	15
10.34	8.4	13.5	-	0.4	-1.2	4.6	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
10.50	5.6	8.9	-	0.3	-1.2	6.5	silty CLAY to CLAY	115	1.5	6	4	-	-	0.3	15
10.66	5.9	9.4	-	0.3	-1.2	5.3	silty CLAY to CLAY	115	1.5	6	4	-	-	0.3	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(535).cpt
CPT Date: 8/18/2006 10:41:15 AM
GW During Test: 16 ft

Sounding ID: CPT-06
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS - *	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description *	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
10.83	7.4	11.8	-	0.3	-1.2	3.9	silty CLAY to CLAY	115	1.5	8	5	-	-	0.5	15
10.99	5.8	9.0	-	0.3	-1.2	5.0	silty CLAY to CLAY	115	1.5	6	4	-	-	0.3	15
11.16	4.5	6.9	-	0.2	-1.3	5.8	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
11.32	6.4	9.7	-	0.2	-0.9	3.0	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
11.48	8.8	13.1	-	0.1	-0.9	1.6	clayy SILT to silty CLAY	115	2.0	7	4	-	-	0.5	15
11.65	11.1	16.4	-	0.1	-0.9	1.4	clayy SILT to silty CLAY	115	2.0	8	6	-	-	0.7	15
11.81	13.1	16.8	-	0.1	-0.9	1.2	clayy SILT to silty CLAY	115	2.0	8	7	-	-	0.8	15
11.98	13.9	17.6	-	0.2	-0.9	1.4	clayy SILT to silty CLAY	115	2.0	9	7	-	-	0.9	15
12.14	17.1	19.8	58.5	0.2	-1.0	1.1	silty SAND to sandy SILT	120	4.0	5	4	14	32	-	16
12.30	23.9	27.4	54.2	0.2	-1.0	0.7	silty SAND to sandy SILT	120	4.0	7	6	24	34	-	16
12.47	27.6	31.5	59.0	0.2	-1.0	0.8	silty SAND to sandy SILT	120	4.0	8	7	29	35	-	16
12.63	29.5	33.4	57.4	0.2	-1.0	0.7	silty SAND to sandy SILT	120	4.0	8	7	31	35	-	16
12.80	30.3	34.1	56.1	0.2	-1.0	0.6	silty SAND to sandy SILT	120	4.0	9	8	31	35	-	16
12.96	34.0	37.9	55.7	0.2	-1.0	0.5	silty SAND to sandy SILT	120	4.0	9	8	35	36	-	16
13.12	35.6	39.5	55.4	0.2	-1.0	0.4	clean SAND to silty SAND	125	5.0	8	7	36	36	-	16
13.29	35.1	38.7	54.7	0.1	-1.0	0.4	clean SAND to silty SAND	125	5.0	8	7	36	36	-	16
13.45	41.5	45.5	62.2	0.2	-1.0	0.5	clean SAND to silty SAND	125	5.0	9	8	41	37	-	16
13.62	46.8	50.9	75.5	0.4	-1.0	0.9	silty SAND to sandy SILT	120	4.0	13	12	45	38	-	16
13.78	45.6	49.3	69.2	0.3	-0.9	0.7	clean SAND to silty SAND	125	5.0	10	9	44	37	-	16
13.94	36.6	39.3	61.9	0.2	-1.0	0.7	silty SAND to sandy SILT	120	4.0	10	9	36	36	-	16
14.11	31.4	33.5	53.5	0.2	-1.0	0.5	silty SAND to sandy SILT	120	4.0	8	8	31	35	-	16
14.27	18.9	20.1	54.8	0.2	-1.0	0.9	silty SAND to sandy SILT	120	4.0	5	5	14	32	-	16
14.44	10.5	12.4	-	0.2	-1.0	1.7	clayy SILT to silty CLAY	115	2.0	6	5	-	-	0.6	15
14.60	8.4	9.8	-	0.2	-1.1	2.5	silty CLAY to CLAY	115	1.5	7	6	-	-	0.5	15
14.76	9.0	10.4	-	0.2	-1.0	2.4	silty CLAY to CLAY	115	1.5	7	6	-	-	0.5	15
14.93	8.7	10.0	-	0.2	-0.8	2.5	silty CLAY to CLAY	115	1.5	7	6	-	-	0.5	15
15.09	8.5	9.6	-	0.2	-0.6	3.1	silty CLAY to CLAY	115	1.5	6	6	-	-	0.5	15
15.26	7.3	8.2	-	0.2	-0.9	2.5	silty CLAY to CLAY	115	1.5	5	5	-	-	0.4	15
15.42	12.1	13.4	-	0.2	-1.5	1.8	clayy SILT to silty CLAY	115	2.0	7	6	-	-	0.7	15
15.58	13.7	15.0	-	0.4	-1.5	3.3	silty CLAY to CLAY	115	1.5	10	9	-	-	0.9	15
15.75	16.3	17.7	-	0.6	-1.5	3.9	silty CLAY to CLAY	115	1.5	12	11	-	-	1.0	15
15.91	20.5	22.1	-	0.6	-1.5	3.2	clayy SILT to silty CLAY	115	2.0	11	10	-	-	1.3	15
16.08	15.6	16.7	-	0.5	-1.6	3.2	silty CLAY to CLAY	115	1.5	11	10	-	-	1.0	15
16.24	10.1	10.7	-	0.4	-1.7	4.2	silty CLAY to CLAY	115	1.5	7	7	-	-	0.6	15
16.40	8.8	9.4	-	0.5	-1.7	6.0	silty CLAY to CLAY	115	1.5	6	6	-	-	0.5	15
16.57	13.4	14.2	-	0.7	-1.7	5.2	silty CLAY to CLAY	115	1.5	9	9	-	-	0.8	15
16.73	18.6	19.5	-	0.5	-1.8	2.9	clayy SILT to silty CLAY	115	2.0	10	9	-	-	1.2	15
16.90	13.2	13.8	-	0.4	-1.8	2.9	silty CLAY to CLAY	115	1.5	9	9	-	-	0.8	15
17.06	9.2	9.6	-	0.5	-1.9	6.4	silty CLAY to CLAY	115	1.5	6	6	-	-	0.5	15
17.23	16.8	17.4	-	0.8	-1.9	5.0	silty CLAY to CLAY	115	1.5	12	11	-	-	1.1	15
17.39	23.9	24.6	-	0.9	-1.9	4.1	silty CLAY to CLAY	115	1.5	16	16	-	-	1.5	15
17.55	27.2	27.9	-	0.8	-1.9	3.2	clayy SILT to silty CLAY	115	2.0	14	14	-	-	1.7	15
17.72	26.9	27.5	-	0.9	-2.0	3.4	clayy SILT to silty CLAY	115	2.0	14	13	-	-	1.7	15
17.88	34.2	33.5	93.5	0.7	-2.0	2.2	clayy SILT to silty CLAY	115	2.0	17	17	-	-	2.2	15
18.05	43.7	42.7	75.4	0.5	-2.0	1.1	silty SAND to sandy SILT	120	4.0	11	11	39	36	-	16
18.21	47.2	46.0	77.9	0.5	-2.0	1.1	silty SAND to sandy SILT	120	4.0	12	12	41	36	-	16
18.37	46.4	45.2	77.9	0.5	-2.1	1.1	silty SAND to sandy SILT	120	4.0	11	12	41	36	-	16
18.54	40.4	39.2	79.0	0.5	-2.6	1.3	silty SAND to sandy SILT	120	4.0	10	10	36	35	-	16
18.70	42.4	41.0	89.0	0.7	-2.6	1.7	silty SAND to sandy SILT	120	4.0	10	11	38	36	-	16
18.87	50.2	48.5	91.1	0.7	-2.6	1.5	silty SAND to sandy SILT	120	4.0	12	13	43	37	-	16
19.03	62.5	60.2	81.6	0.5	-2.6	0.8	clean SAND to silty SAND	125	5.0	12	12	50	38	-	16
19.19	82.5	79.3	91.8	0.5	-2.6	0.6	clean SAND to silty SAND	125	5.0	16	16	59	39	-	16
19.36	98.5	94.4	104.6	0.6	-2.5	0.6	clean SAND to silty SAND	125	5.0	19	20	65	40	-	16
19.52	105.0	100.5	111.6	0.7	-2.5	0.7	clean SAND to silty SAND	125	5.0	20	21	67	41	-	16
19.69	102.3	97.6	110.2	0.7	-2.5	0.7	clean SAND to silty SAND	125	5.0	20	20	66	40	-	16
19.85	91.1	86.7	104.4	0.8	-2.5	0.8	clean SAND to silty SAND	125	5.0	17	18	62	40	-	16
20.01	90.4	85.9	99.6	0.6	-2.5	0.7	clean SAND to silty SAND	125	5.0	17	18	62	40	-	16
20.18	105.7	100.1	111.0	0.7	-2.5	0.7	clean SAND to silty SAND	125	5.0	20	21	67	41	-	16
20.34	126.7	119.7	126.4	0.8	-2.5	0.6	clean SAND to silty SAND	125	5.0	24	25	73	41	-	16
20.51	141.2	133.1	133.1	0.7	-2.5	0.5	clean SAND to silty SAND	125	5.0	27	28	76	42	-	16
20.67	155.6	146.3	152.1	1.1	-2.5	0.7	clean SAND to silty SAND	125	5.0	29	31	80	42	-	16
20.83	183.2	171.9	194.9	2.5	-2.4	1.4	clean SAND to silty SAND	125	5.0	34	37	85	43	-	16
21.00	248.6	232.7	235.9	2.6	-2.4	1.1	clean SAND to silty SAND	125	5.0	47	50	95	45	-	16
21.16	259.4	242.2	265.5	4.0	-2.4	1.6	clean SAND to silty SAND	125	5.0	48	52	95	45	-	16
21.33	286.8	267.2	267.2	2.3	-2.3	0.8	clean SAND to silty SAND	125	5.0	53	57	95	45	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(535).cpt
CPT Date: 8/18/2006 10:41:15 AM
GW During Test: 16 ft

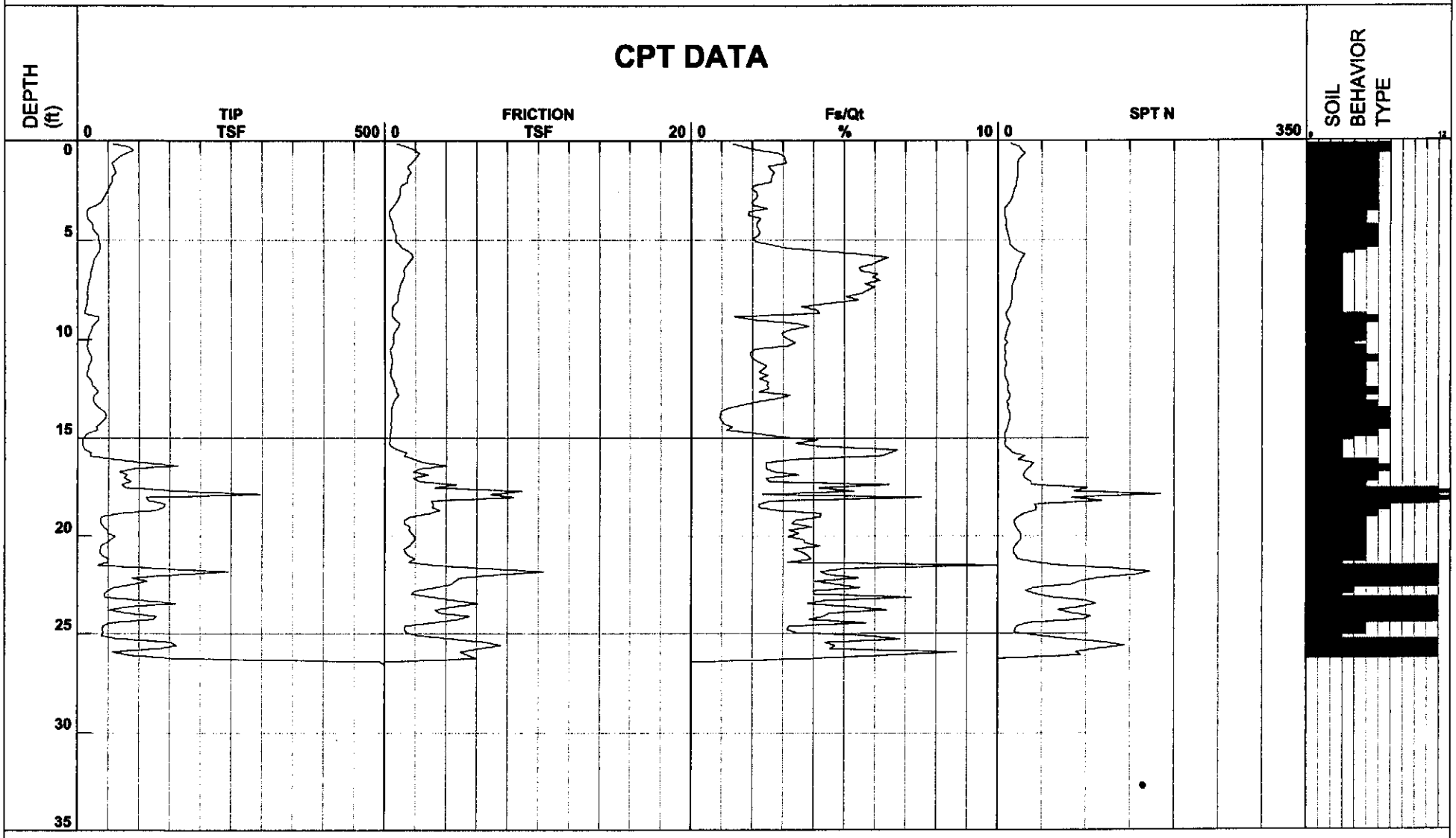
Sounding ID: CPT-06
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qcln * PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT * R-N1 60%	SPT R-N 60%	Rel * Den %	Ftn * Ang deg	Und Shr tsf	Nk * -
21.49	237.4	220.6	233.7	2.9	-2.2	1.2	clean SAND to silty SAND	125	5.0	44	47	93	44	-	16
21.65	200.9	186.3	187.4	1.6	2.1	0.8	clean SAND to silty SAND	125	5.0	37	40	88	44	-	16
21.82	195.3	180.6	180.6	1.4	1.8	0.7	clean SAND to silty SAND	125	5.0	36	39	87	43	-	16
21.98	206.3	190.4	203.2	2.3	1.6	1.1	clean SAND to silty SAND	125	5.0	38	41	88	44	-	16
22.15	162.2	149.3	163.8	1.6	1.3	1.0	clean SAND to silty SAND	125	5.0	30	32	80	42	-	16
22.31	119.4	109.6	119.8	0.8	1.0	0.7	clean SAND to silty SAND	125	5.0	22	24	70	41	-	16
22.47	152.8	140.1	153.7	1.4	0.3	0.9	clean SAND to silty SAND	125	5.0	28	31	78	42	-	16
22.64	123.9	113.3	143.0	1.7	0.4	1.4	clean SAND to silty SAND	125	5.0	23	25	71	41	-	16
22.80	64.7	59.0	114.6	1.3	0.5	2.1	silty SAND to sandy SILT	120	4.0	15	16	50	37	-	16
22.97	71.0	64.7	89.3	0.7	0.6	1.0	silty SAND to sandy SILT	120	4.0	16	18	53	38	-	16
23.13	76.9	69.9	84.1	0.5	0.6	0.6	clean SAND to silty SAND	125	5.0	14	15	55	38	-	16
23.30	78.7	71.3	81.7	0.4	0.6	0.5	clean SAND to silty SAND	125	5.0	14	16	56	38	-	16
23.46	79.0	71.4	79.6	0.3	0.7	0.4	clean SAND to silty SAND	125	5.0	14	16	56	38	-	16
23.62	83.7	75.6	75.6	0.1	0.7	0.1	clean SAND to silty SAND	125	5.0	15	17	58	39	-	16
23.79	103.5	93.2	146.1	2.2	0.8	2.1	silty SAND to sandy SILT	120	4.0	23	26	65	40	-	16
23.95	125.0	112.3	174.4	3.0	-0.1	2.5	silty SAND to sandy SILT	120	4.0	28	31	71	41	-	16
24.12	84.4	75.7	164.6	2.8	0.3	3.3	clayy SILT to silty CLAY	115	2.0	38	42	-	-	5.5	15
24.28	25.6	21.8	-	1.8	0.2	7.4	silty CLAY to CLAY	115	1.5	15	17	-	-	1.6	15
24.44	21.5	18.2	-	0.9	0.9	4.4	silty CLAY to CLAY	115	1.5	12	14	-	-	1.4	15
24.61	21.2	17.9	-	0.8	1.4	3.8	silty CLAY to CLAY	115	1.5	12	14	-	-	1.3	15
24.77	21.2	17.8	-	1.0	1.6	5.0	silty CLAY to CLAY	115	1.5	12	14	-	-	1.3	15
24.94	34.0	28.5	-	1.3	1.8	3.9	clayy SILT to silty CLAY	115	2.0	14	17	-	-	2.2	15
25.10	39.1	32.6	-	2.5	2.0	6.5	silty CLAY to CLAY	115	1.5	22	26	-	-	2.5	15
25.26	77.5	68.6	186.0	3.4	2.6	4.5	clayy SILT to silty CLAY	115	2.0	34	39	-	-	5.1	15
25.43	100.7	89.0	208.0	4.3	2.8	4.4	clayy SILT to silty CLAY	115	2.0	45	50	-	-	6.6	15
25.59	79.1	69.8	198.9	3.8	2.4	4.9	clayy SILT to silty CLAY	115	2.0	35	40	-	-	5.2	15
25.76	74.6	61.3	-	4.3	2.2	5.9	clayy SILT to silty CLAY	115	2.0	31	37	-	-	4.9	15
25.92	102.9	90.5	237.7	5.4	2.7	5.4	very stiff fine SOIL	120	2.0	45	51	64	40	-	30
26.08	104.6	91.8	256.8	6.2	2.9	6.0	very stiff fine SOIL	120	2.0	46	52	64	40	-	30
26.25	76.3	62.0	-	4.4	2.2	6.0	clayy SILT to silty CLAY	115	2.0	31	38	-	-	5.0	15
26.41	51.0	41.3	-	3.0	1.8	6.0	silty CLAY to CLAY	115	1.5	28	34	-	-	3.3	15
26.58	43.4	35.0	-	2.0	1.8	4.7	silty CLAY to CLAY	115	1.5	23	29	-	-	2.8	15
26.74	45.7	36.8	-	1.9	1.9	4.2	clayy SILT to silty CLAY	115	2.0	18	23	-	-	3.0	15
26.90	52.7	42.3	-	2.8	2.1	5.5	silty CLAY to CLAY	115	1.5	28	35	-	-	3.4	15
27.07	103.8	90.1	205.9	4.3	2.5	4.2	clayy SILT to silty CLAY	115	2.0	45	52	-	-	6.8	15
27.23	139.9	121.2	252.8	6.3	2.9	4.6	very stiff fine SOIL	120	2.0	61	70	73	41	-	30
27.40	98.4	85.1	224.0	4.9	2.5	5.1	very stiff fine SOIL	120	2.0	43	49	62	39	-	30
27.56	51.8	40.9	-	3.1	1.8	6.3	silty CLAY to CLAY	115	1.5	27	35	-	-	3.4	15
27.72	47.3	37.2	-	2.7	1.9	6.0	silty CLAY to CLAY	115	1.5	25	32	-	-	3.1	15
27.89	83.5	71.9	185.1	3.5	2.2	4.3	clayy SILT to silty CLAY	115	2.0	36	42	-	-	5.5	15
28.05	147.2	126.5	225.0	5.2	2.8	3.6	silty SAND to sandy SILT	120	4.0	32	37	75	41	-	16
28.22	81.3	69.7	158.9	2.7	2.3	3.4	clayy SILT to silty CLAY	115	2.0	35	41	-	-	5.3	15
28.38	47.2	36.7	-	1.9	2.3	4.1	clayy SILT to silty CLAY	115	2.0	18	24	-	-	3.1	15
28.54	52.6	45.0	132.7	1.7	3.0	3.4	clayy SILT to silty CLAY	115	2.0	22	26	-	-	3.4	15
28.71	54.8	46.7	138.0	1.9	3.2	3.6	clayy SILT to silty CLAY	115	2.0	23	27	-	-	3.6	15
28.87	46.5	35.8	-	1.8	3.3	4.0	clayy SILT to silty CLAY	115	2.0	18	23	-	-	3.0	15
29.04	44.9	34.4	-	2.1	3.3	4.9	silty CLAY to CLAY	115	1.5	23	30	-	-	2.9	15
29.20	65.5	50.1	-	3.1	3.5	4.9	clayy SILT to silty CLAY	115	2.0	25	33	-	-	4.3	15
29.36	102.3	86.7	215.3	4.7	3.8	4.7	clayy SILT to silty CLAY	115	2.0	43	51	-	-	6.7	15
29.53	129.9	109.9	235.8	5.7	4.3	4.5	very stiff fine SOIL	120	2.0	55	65	70	40	-	30
29.69	132.8	112.2	240.3	5.9	4.6	4.5	very stiff fine SOIL	120	2.0	56	66	71	41	-	30
29.86	81.7	68.9	215.3	4.5	4.2	5.7	clayy SILT to silty CLAY	115	2.0	34	41	-	-	5.4	15
30.02	45.4	34.1	-	2.8	3.8	6.3	silty CLAY to CLAY	115	1.5	23	30	-	-	2.9	15
30.19	73.7	61.9	151.6	2.4	4.2	3.4	clayy SILT to silty CLAY	115	2.0	31	37	-	-	4.8	15
30.35	96.7	81.1	197.0	4.1	4.8	4.3	clayy SILT to silty CLAY	115	2.0	41	48	-	-	6.4	15
30.51	104.6	87.7	186.5	3.8	5.2	3.7	clayy SILT to silty CLAY	115	2.0	44	52	-	-	6.9	15
30.68	182.6	152.7	200.0	3.8	3.6	2.1	silty SAND to sandy SILT	120	4.0	38	46	81	42	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	Safran	Operator	ML-CW	Filename	SDF(536).cpt
Job Number	19166	Cone Number	DSG0906	GPS	
Hole Number	CPT-07	Date and Time	8/18/2006 12:01:35 PM	Maximum Depth	26.57 ft
Water Table Depth	14.00 ft				



1 - sensitive fine grained	4 - silty clay to clay	7 - silty sand to sandy silt	10 - gravelly sand to sand
2 - organic material	5 - clayey silt to silty clay	8 - sand to silty sand	11 - very stiff fine grained (*)
3 - clay	6 - sandy silt to clayey silt	9 - sand	12 - sand to clayey sand (*)

Depth increment

*Soil behavior type and SPT based on data from UBC-1983

Project ID: Geotechnologies
Data File: SDF(536).cpt
CPT Date: 8/18/2006 12:01:35 PM
GW During Test: 14 ft

Sounding ID: CPT-07
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	* qc1n PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	* Material Behavior Description	Unit Wght pcf	Qc to N	* SPT R-N1 60%	SPT R-N 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	* Nk -
0.33	84.5	135.6	172.5	1.5	-0.1	1.7	clean SAND to silty SAND	125	5.0	27	17	77	48	-	16
0.49	91.5	146.8	198.5	2.0	-0.1	2.2	silty SAND to sandy SILT	120	4.0	37	23	80	48	-	16
0.66	79.0	126.7	200.6	2.3	-0.2	2.9	silty SAND to sandy SILT	120	4.0	32	20	75	48	-	16
0.82	68.5	109.8	190.2	2.1	-0.1	3.1	silty SAND to sandy SILT	120	4.0	27	17	70	48	-	16
0.98	63.2	101.4	181.8	1.9	-0.1	3.1	silty SAND to sandy SILT	120	4.0	25	16	67	48	-	16
1.15	56.6	90.7	173.3	1.8	-0.1	3.1	silty SAND to sandy SILT	120	4.0	23	14	64	48	-	16
1.31	59.2	94.9	159.3	1.5	-0.1	2.5	silty SAND to sandy SILT	120	4.0	24	15	65	48	-	16
1.48	60.9	97.6	164.4	1.6	0.0	2.6	silty SAND to sandy SILT	120	4.0	24	15	66	48	-	16
1.64	63.2	101.4	171.7	1.7	0.0	2.7	silty SAND to sandy SILT	120	4.0	25	16	67	48	-	16
1.80	57.6	92.5	160.8	1.5	0.0	2.7	silty SAND to sandy SILT	120	4.0	23	14	64	48	-	16
1.97	56.6	90.7	158.6	1.5	0.0	2.6	silty SAND to sandy SILT	120	4.0	23	14	64	48	-	16
2.13	57.0	91.4	158.7	1.5	0.0	2.6	silty SAND to sandy SILT	120	4.0	23	14	64	48	-	16
2.30	52.6	84.4	136.5	1.1	0.0	2.1	silty SAND to sandy SILT	120	4.0	21	13	61	47	-	16
2.46	51.0	81.9	131.6	1.0	0.0	2.0	silty SAND to sandy SILT	120	4.0	20	13	60	47	-	16
2.62	48.3	77.4	132.1	1.0	0.0	2.1	silty SAND to sandy SILT	120	4.0	19	12	59	46	-	16
2.79	45.1	72.4	128.6	1.0	0.1	2.2	silty SAND to sandy SILT	120	4.0	18	11	56	45	-	16
2.95	42.1	67.5	122.7	0.9	0.0	2.1	silty SAND to sandy SILT	120	4.0	17	11	54	45	-	16
3.12	39.2	62.9	115.1	0.8	0.0	2.0	silty SAND to sandy SILT	120	4.0	16	10	52	44	-	16
3.28	31.2	50.1	104.5	0.6	0.0	2.0	silty SAND to sandy SILT	120	4.0	13	8	44	43	-	16
3.45	18.4	29.5	94.4	0.5	0.0	2.5	clayy SILT to silty CLAY	115	2.0	15	9	-	-	1.2	15
3.61	15.4	24.7	77.9	0.3	0.0	1.9	clayy SILT to silty CLAY	115	2.0	12	8	-	-	1.0	15
3.77	16.2	26.1	78.5	0.3	0.0	1.9	clayy SILT to silty CLAY	115	2.0	13	8	-	-	1.1	15
3.94	17.0	27.3	88.0	0.4	0.0	2.3	clayy SILT to silty CLAY	115	2.0	14	9	-	-	1.1	15
4.10	22.4	36.0	95.0	0.5	0.0	2.2	silty SAND to sandy SILT	120	4.0	9	6	33	40	-	16
4.27	25.3	40.6	98.8	0.5	0.0	2.2	silty SAND to sandy SILT	120	4.0	10	6	37	40	-	16
4.43	25.0	40.1	99.7	0.6	0.0	2.2	silty SAND to sandy SILT	120	4.0	10	6	37	40	-	16
4.59	28.9	46.4	106.8	0.6	0.0	2.3	silty SAND to sandy SILT	120	4.0	12	7	42	41	-	16
4.76	33.8	54.3	113.2	0.7	0.0	2.2	silty SAND to sandy SILT	120	4.0	14	8	47	41	-	16
4.92	34.8	55.7	109.8	0.7	0.0	2.0	silty SAND to sandy SILT	120	4.0	14	9	48	41	-	16
5.09	34.9	56.0	112.7	0.7	0.0	2.1	silty SAND to sandy SILT	120	4.0	14	9	48	41	-	16
5.25	37.0	59.3	128.8	1.0	0.0	2.6	silty SAND to sandy SILT	120	4.0	15	9	50	41	-	16
5.41	37.0	59.3	140.6	1.1	0.0	3.1	clayy SILT to silty CLAY	115	2.0	30	18	-	-	2.4	15
5.58	35.7	57.3	167.7	1.5	-0.1	4.4	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
5.74	32.3	51.9	-	1.8	-0.2	5.6	silty CLAY to CLAY	115	1.5	35	22	-	-	2.1	15
5.91	28.8	46.1	-	1.9	-0.1	6.5	silty CLAY to CLAY	115	1.5	31	19	-	-	1.9	15
6.07	26.8	42.9	-	1.6	-0.1	6.2	silty CLAY to CLAY	115	1.5	29	18	-	-	1.8	15
6.23	25.2	40.3	-	1.5	-0.8	6.0	silty CLAY to CLAY	115	1.5	27	17	-	-	1.7	15
6.40	23.7	38.0	-	1.3	-1.4	5.6	silty CLAY to CLAY	115	1.5	25	16	-	-	1.6	15
6.56	22.3	35.8	-	1.2	-1.9	5.6	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
6.73	21.3	34.2	-	1.3	-2.3	6.2	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
6.89	21.0	33.7	-	1.2	-2.3	6.0	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
7.05	18.9	30.2	-	1.2	-1.3	6.3	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
7.22	18.2	29.2	-	1.0	-1.9	5.8	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
7.38	16.7	26.7	-	1.0	-3.5	6.1	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
7.55	16.3	26.2	-	0.9	-0.1	5.9	silty CLAY to CLAY	115	1.5	17	11	-	-	1.1	15
7.71	15.9	25.4	-	0.9	-0.3	5.7	silty CLAY to CLAY	115	1.5	17	11	-	-	1.0	15
7.87	16.8	27.0	-	0.9	-0.2	5.2	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
8.04	16.1	25.8	-	0.9	-0.3	5.6	silty CLAY to CLAY	115	1.5	17	11	-	-	1.0	15
8.20	15.8	25.3	-	0.7	-0.7	4.6	silty CLAY to CLAY	115	1.5	17	11	-	-	1.0	15
8.37	14.1	22.6	-	0.5	-0.2	3.7	clayy SILT to silty CLAY	115	2.0	11	7	-	-	0.9	15
8.53	12.5	20.0	-	0.5	-0.2	4.3	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
8.69	11.3	18.1	-	0.5	-0.2	4.4	silty CLAY to CLAY	115	1.5	12	8	-	-	0.7	15
8.86	35.2	47.4	87.4	0.5	-0.4	1.4	silty SAND to sandy SILT	120	4.0	12	9	42	38	-	16
9.02	33.7	44.9	103.1	0.7	-0.4	2.2	silty SAND to sandy SILT	120	4.0	11	8	41	38	-	16
9.19	28.4	37.5	123.1	1.0	-0.3	3.5	clayy SILT to silty CLAY	115	2.0	19	14	-	-	1.9	15
9.35	23.5	37.7	-	0.9	-0.4	3.9	clayy SILT to silty CLAY	115	2.0	19	12	-	-	1.5	15
9.51	22.8	33.7	-	0.7	-0.4	3.3	clayy SILT to silty CLAY	115	2.0	17	11	-	-	1.5	15
9.68	20.1	32.2	-	0.6	-0.4	3.1	clayy SILT to silty CLAY	115	2.0	16	10	-	-	1.3	15
9.84	18.3	29.3	-	0.5	-0.4	3.1	clayy SILT to silty CLAY	115	2.0	15	9	-	-	1.2	15
10.01	17.2	27.6	-	0.6	-0.4	3.3	clayy SILT to silty CLAY	115	2.0	14	9	-	-	1.1	15
10.17	16.9	27.1	-	0.6	-0.5	3.5	clayy SILT to silty CLAY	115	2.0	14	8	-	-	1.1	15
10.34	15.6	25.0	-	0.5	-0.4	3.3	clayy SILT to silty CLAY	115	2.0	12	8	-	-	1.0	15
10.50	17.0	23.5	-	0.4	-0.4	2.2	clayy SILT to silty CLAY	115	2.0	12	9	-	-	1.1	15
10.66	19.0	25.9	81.4	0.4	-0.4	2.0	clayy SILT to silty CLAY	115	2.0	13	9	-	-	1.2	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(536).cpt
CPT Date: 8/18/2006 12:01:35 PM
GW During Test: 14 ft

Sounding ID: CPT-07
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS - *	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
10.83	22.0	26.9	82.4	0.4	-0.3	2.0	clayy SILT to silty CLAY	115	2.0	13	11	-	-	1.4	15
10.99	23.1	27.9	85.4	0.5	-0.3	2.1	clayy SILT to silty CLAY	115	2.0	14	12	-	-	1.5	15
11.16	21.1	27.9	89.4	0.5	-0.3	2.3	clayy SILT to silty CLAY	115	2.0	14	11	-	-	1.4	15
11.32	17.4	26.3	-	0.4	-0.3	2.6	clayy SILT to silty CLAY	115	2.0	13	9	-	-	1.1	15
11.48	17.7	26.3	-	0.4	-0.5	2.4	clayy SILT to silty CLAY	115	2.0	13	9	-	-	1.1	15
11.65	15.8	23.1	-	0.3	-0.3	2.3	clayy SILT to silty CLAY	115	2.0	12	8	-	-	1.0	15
11.81	15.1	21.9	-	0.4	-0.4	2.6	clayy SILT to silty CLAY	115	2.0	11	8	-	-	1.0	15
11.98	20.2	25.4	-	0.5	-3.5	2.3	clayy SILT to silty CLAY	115	2.0	13	10	-	-	1.3	15
12.14	23.0	28.7	-	0.6	-3.0	2.6	clayy SILT to silty CLAY	115	2.0	14	12	-	-	1.5	15
12.30	24.0	29.7	96.3	0.6	-1.8	2.6	clayy SILT to silty CLAY	115	2.0	15	12	-	-	1.6	15
12.47	29.6	33.6	101.5	0.7	-4.0	2.6	clayy SILT to silty CLAY	115	2.0	17	15	-	-	1.9	15
12.63	33.3	37.6	98.7	0.7	-7.3	2.3	silty SAND to sandy SILT	120	4.0	9	8	35	36	-	16
12.80	27.7	33.3	-	0.9	-3.9	3.3	clayy SILT to silty CLAY	115	2.0	17	14	-	-	1.8	15
12.96	24.8	29.6	-	0.7	-3.4	2.9	clayy SILT to silty CLAY	115	2.0	15	12	-	-	1.6	15
13.12	26.3	29.1	89.4	0.6	-6.5	2.2	clayy SILT to silty CLAY	115	2.0	15	13	-	-	1.7	15
13.29	29.8	32.8	82.4	0.5	-4.9	1.7	silty SAND to sandy SILT	120	4.0	8	7	30	35	-	16
13.45	35.3	38.7	76.2	0.4	-3.4	1.3	silty SAND to sandy SILT	120	4.0	10	9	36	36	-	16
13.62	42.8	46.6	75.4	0.4	-2.5	1.0	silty SAND to sandy SILT	120	4.0	12	11	42	37	-	16
13.78	46.2	50.0	77.6	0.4	-0.3	1.0	silty SAND to sandy SILT	120	4.0	12	12	44	37	-	16
13.94	45.8	49.3	76.3	0.4	0.0	0.9	silty SAND to sandy SILT	120	4.0	12	11	44	37	-	16
14.11	41.4	44.4	74.3	0.4	0.1	1.0	silty SAND to sandy SILT	120	4.0	11	10	40	37	-	16
14.27	36.2	38.7	72.1	0.4	0.0	1.1	silty SAND to sandy SILT	120	4.0	10	9	36	36	-	16
14.44	30.6	32.6	74.4	0.4	0.1	1.4	silty SAND to sandy SILT	120	4.0	8	8	30	35	-	16
14.60	32.4	34.4	71.2	0.4	0.2	1.2	silty SAND to sandy SILT	120	4.0	9	8	32	35	-	16
14.76	16.7	19.8	-	0.4	0.0	2.2	clayy SILT to silty CLAY	115	2.0	10	8	-	-	1.1	15
14.93	11.3	13.3	-	0.3	0.8	3.2	silty CLAY to CLAY	115	1.5	9	8	-	-	0.7	15
15.09	7.9	9.3	-	0.3	1.6	4.6	silty CLAY to CLAY	115	1.5	6	5	-	-	0.5	15
15.26	8.2	9.6	-	0.3	3.4	3.8	silty CLAY to CLAY	115	1.5	6	5	-	-	0.5	15
15.42	9.1	10.6	-	0.4	3.1	4.6	silty CLAY to CLAY	115	1.5	7	6	-	-	0.5	15
15.58	11.6	13.5	-	0.8	2.8	7.3	silty CLAY to CLAY	115	1.5	9	8	-	-	0.7	15
15.75	22.0	25.4	-	1.4	-2.3	6.8	silty CLAY to CLAY	115	1.5	17	15	-	-	1.4	15
15.91	20.2	23.2	-	1.3	-6.6	6.5	silty CLAY to CLAY	115	1.5	15	13	-	-	1.3	15
16.08	55.0	57.1	147.5	1.9	-9.6	3.5	clayy SILT to silty CLAY	115	2.0	29	27	-	-	3.6	15
16.24	103.8	107.5	169.9	2.5	-9.6	2.5	silty SAND to sandy SILT	120	4.0	27	26	69	41	-	16
16.40	163.4	168.8	228.4	4.0	-5.2	2.5	silty SAND to sandy SILT	120	4.0	42	41	84	44	-	16
16.57	92.0	94.7	159.0	2.3	-7.7	2.5	silty SAND to sandy SILT	120	4.0	24	23	65	41	-	16
16.73	68.0	69.9	143.1	1.9	-8.0	2.8	silty SAND to sandy SILT	120	4.0	17	17	55	39	-	16
16.90	80.7	82.7	178.3	2.8	-8.1	3.6	clayy SILT to silty CLAY	115	2.0	41	40	-	-	5.3	15
17.06	76.0	77.7	142.4	1.9	-8.4	2.5	silty SAND to sandy SILT	120	4.0	19	19	59	40	-	16
17.23	87.6	89.3	156.7	2.2	-8.0	2.6	silty SAND to sandy SILT	120	4.0	22	22	63	40	-	16
17.39	72.1	73.3	242.4	4.7	-8.7	6.6	very stiff fine SOIL	120	2.0	37	36	57	39	-	30
17.55	78.2	79.3	192.5	3.3	-2.3	4.2	clayy SILT to silty CLAY	115	2.0	40	39	-	-	5.2	15
17.72	168.6	170.6	338.2	9.0	-8.1	5.4	very stiff fine SOIL	120	2.0	85	84	85	44	-	30
17.88	297.4	300.3	349.7	6.9	-1.2	2.3	clean SAND to silty SAND	125	5.0	60	59	95	46	-	16
18.05	112.0	112.8	333.0	8.4	1.5	7.6	very stiff fine SOIL	120	2.0	56	56	71	41	-	30
18.21	116.1	116.6	184.0	3.0	-2.6	2.6	silty SAND to sandy SILT	120	4.0	29	29	72	42	-	16
18.37	142.8	143.0	196.0	3.2	-5.1	2.2	silty SAND to sandy SILT	120	4.0	36	36	79	43	-	16
18.54	140.3	140.2	193.1	3.1	-5.7	2.2	silty SAND to sandy SILT	120	4.0	35	35	78	43	-	16
18.70	129.1	128.6	201.1	3.6	-7.4	2.8	silty SAND to sandy SILT	120	4.0	32	32	75	42	-	16
18.87	67.8	67.4	180.3	2.9	-7.5	4.3	clayy SILT to silty CLAY	115	2.0	34	34	-	-	4.5	15
19.03	39.6	41.3	-	1.7	-2.5	4.3	clayy SILT to silty CLAY	115	2.0	21	20	-	-	2.6	15
19.19	37.7	38.1	125.6	1.3	-1.5	3.5	clayy SILT to silty CLAY	115	2.0	19	19	-	-	2.5	15
19.36	38.7	38.3	123.5	1.3	-1.2	3.4	clayy SILT to silty CLAY	115	2.0	19	19	-	-	2.5	15
19.52	42.1	42.2	-	1.7	-1.1	4.0	clayy SILT to silty CLAY	115	2.0	21	21	-	-	2.7	15
19.69	49.3	48.5	133.4	1.6	-0.9	3.3	clayy SILT to silty CLAY	115	2.0	24	25	-	-	3.2	15
19.85	49.6	48.6	141.0	1.7	-0.5	3.6	clayy SILT to silty CLAY	115	2.0	24	25	-	-	3.2	15
20.01	61.7	60.4	145.2	1.9	-0.4	3.2	clayy SILT to silty CLAY	115	2.0	30	31	-	-	4.0	15
20.18	54.3	53.0	149.6	2.0	-0.4	3.8	clayy SILT to silty CLAY	115	2.0	27	27	-	-	3.6	15
20.34	48.2	46.9	143.2	1.8	-0.3	3.8	clayy SILT to silty CLAY	115	2.0	23	24	-	-	3.1	15
20.51	38.6	38.7	-	1.6	-0.3	4.4	clayy SILT to silty CLAY	115	2.0	19	19	-	-	2.5	15
20.67	37.5	36.8	-	1.3	-0.2	3.5	clayy SILT to silty CLAY	115	2.0	18	19	-	-	2.4	15
20.83	37.1	36.8	-	1.4	-0.2	3.8	clayy SILT to silty CLAY	115	2.0	18	19	-	-	2.4	15
21.00	40.9	40.4	-	1.6	-0.1	3.9	clayy SILT to silty CLAY	115	2.0	20	20	-	-	2.7	15
21.16	50.9	49.1	150.3	2.0	0.0	4.0	clayy SILT to silty CLAY	115	2.0	25	25	-	-	3.3	15
21.33	49.5	47.6	131.8	1.6	-0.7	3.2	clayy SILT to silty CLAY	115	2.0	24	25	-	-	3.2	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(536).cpt
CPT Date: 8/18/2006 12:01:35 PM
GW During Test: 14 ft

Sounding ID: CPT-07
Project No: 19166
Cone/Rig: DSG0906

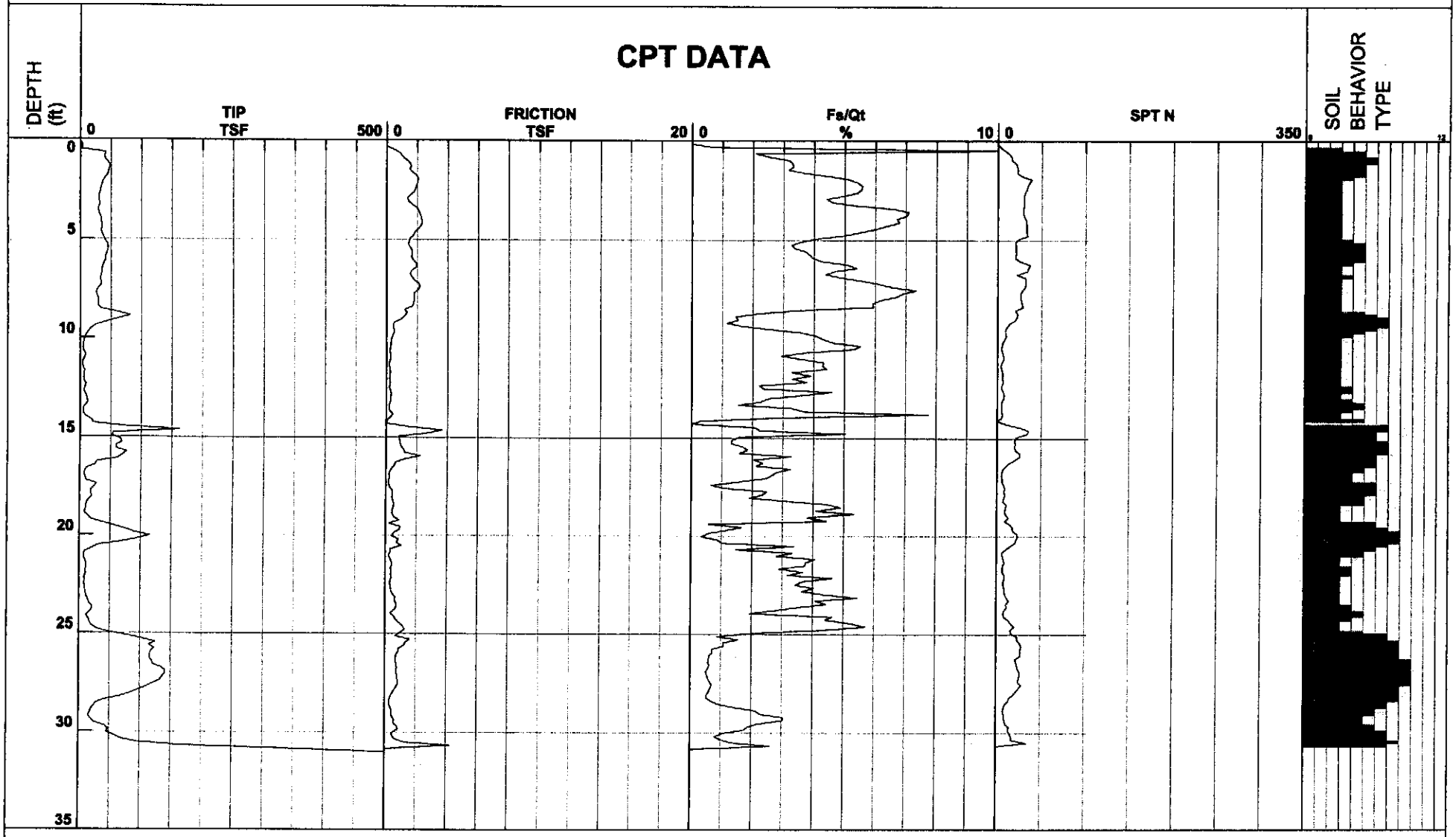
Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
21.49	33.0	32.2	-	3.3	-0.7	9.9	silty CLAY to CLAY	115	1.5	21	22	-	-	2.1	15
21.65	133.4	127.8	277.3	6.7	-0.6	5.1	very stiff fine SOIL	120	2.0	64	67	75	42	-	30
21.82	245.7	234.9	365.2	10.4	-5.0	4.2	very stiff fine SOIL	120	2.0	100	100	95	45	-	30
21.98	161.2	153.7	288.1	7.3	-0.6	4.5	very stiff fine SOIL	120	2.0	77	81	81	43	-	30
22.15	89.4	85.0	235.6	4.9	-1.6	5.6	very stiff fine SOIL	120	2.0	43	45	62	40	-	30
22.31	113.7	108.0	221.8	4.6	-0.5	4.1	very stiff fine SOIL	120	2.0	54	57	70	41	-	30
22.47	90.0	85.2	217.6	4.3	-0.5	4.9	clayy SILT to silty CLAY	115	2.0	43	45	-	-	5.9	15
22.64	58.1	55.0	-	3.2	-0.7	5.6	silty CLAY to CLAY	115	1.5	37	39	-	-	3.8	15
22.80	49.7	46.9	149.3	2.0	-0.6	4.1	clayy SILT to silty CLAY	115	2.0	23	25	-	-	3.2	15
22.97	43.6	41.0	-	1.8	-0.6	4.2	clayy SILT to silty CLAY	115	2.0	20	22	-	-	2.8	15
23.13	45.1	42.2	-	3.2	-0.6	7.4	silty CLAY to CLAY	115	1.5	28	30	-	-	2.9	15
23.30	105.6	99.0	222.2	4.6	-0.4	4.4	very stiff fine SOIL	120	2.0	50	53	67	40	-	30
23.46	160.7	150.4	258.8	6.1	-0.1	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.0	16
23.62	83.8	78.2	221.9	4.4	-2.5	5.4	very stiff fine SOIL	120	2.0	39	42	59	39	-	30
23.79	51.6	47.4	-	3.3	-2.2	6.6	silty CLAY to CLAY	115	1.5	32	34	-	-	3.4	15
23.95	80.4	74.7	197.5	3.6	-2.1	4.6	clayy SILT to silty CLAY	115	2.0	37	40	-	-	5.3	15
24.12	128.3	119.1	243.8	5.6	-2.0	4.4	very stiff fine SOIL	120	2.0	60	64	73	41	-	30
24.28	124.0	114.8	223.2	4.8	-1.4	3.9	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.7	16
24.44	52.8	47.8	-	3.0	-1.5	5.9	silty CLAY to CLAY	115	1.5	32	35	-	-	3.4	15
24.61	41.7	38.5	122.7	1.3	-1.3	3.3	clayy SILT to silty CLAY	115	2.0	19	21	-	-	2.7	15
24.77	41.3	38.0	120.9	1.3	-1.3	3.3	clayy SILT to silty CLAY	115	2.0	19	21	-	-	2.7	15
24.94	41.5	37.1	-	1.4	-1.2	3.6	clayy SILT to silty CLAY	115	2.0	19	21	-	-	2.7	15
25.10	39.0	34.8	-	2.2	-1.2	5.9	silty CLAY to CLAY	115	1.5	23	26	-	-	2.5	15
25.26	63.6	56.5	-	4.4	-0.9	7.0	silty CLAY to CLAY	115	1.5	38	42	-	-	4.2	15
25.43	152.4	139.3	267.7	6.7	-0.7	4.4	very stiff fine SOIL	120	2.0	70	76	78	42	-	30
25.59	161.1	146.9	287.9	7.6	-0.5	4.8	very stiff fine SOIL	120	2.0	73	81	80	42	-	30
25.76	136.0	123.7	255.5	6.2	-0.4	4.6	very stiff fine SOIL	120	2.0	62	68	74	41	-	30
25.92	57.1	49.9	-	5.0	-0.9	8.9	silty CLAY to CLAY	115	1.5	33	38	-	-	3.7	15
26.08	84.8	76.9	248.8	5.5	-0.5	6.6	very stiff fine SOIL	120	2.0	38	42	58	39	-	30
26.25	156.2	141.2	250.2	6.0	-0.1	3.9	stiff SAND to clayy SAND	115	1.0	100	100	-	-	9.7	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	Safran	Operator	ML-CW	Filename	SDF(537).cpt
Job Number	19166	Cone Number	DSG0906	GPS	
Hole Number	CPT-08	Date and Time	8/18/2006 12:38:18 PM	Maximum Depth	31.00 ft
Water Table Depth		18.20 ft			

CPT DATA



1 - sensitive fine grained	4 - silty clay to clay	7 - silty sand to sandy silt	10 - gravelly sand to sand
2 - organic material	5 - clayey silt to silty clay	8 - sand to silty sand	11 - very stiff fine grained (*)
3 - clay	6 - sandy silt to clayey silt	9 - sand	12 - sand to clayey sand (*)

Depth Increment

*Soil behavior type and SPT based on data from UBC 1983

Project ID: Geotechnologies
Data File: SDF(537).cpt
CPT Date: 8/18/2006 12:38:18 PM
GW During Test: 18 ft

Sounding ID: CPT-08
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
0.33	3.8	6.0	-	0.1	0.2	0.6	clayy SILT to silty CLAY	115	2.0	3	2	-	-	0.2	15
0.49	2.4	3.8	-	0.5	0.2	9.9	Organic SOILS - Peats	100	1.0	4	2	-	-	0.2	10
0.66	41.6	66.7	120.8	0.9	0.3	2.1	silty SAND to sandy SILT	120	4.0	17	10	54	48	-	16
0.82	39.8	63.9	130.4	1.0	0.3	2.6	silty SAND to sandy SILT	120	4.0	16	10	52	48	-	16
0.98	40.1	64.3	147.0	1.3	0.2	3.2	clayy SILT to silty CLAY	115	2.0	32	20	-	-	2.7	15
1.15	45.5	73.0	159.4	1.5	0.2	3.3	clayy SILT to silty CLAY	115	2.0	36	23	-	-	3.0	15
1.31	48.0	77.0	164.4	1.6	0.2	3.3	silty SAND to sandy SILT	120	4.0	19	12	58	48	-	16
1.48	47.3	75.8	159.0	1.5	0.2	3.2	silty SAND to sandy SILT	120	4.0	19	12	58	48	-	16
1.64	46.0	73.7	170.5	1.7	0.2	3.7	clayy SILT to silty CLAY	115	2.0	37	23	-	-	3.1	15
1.80	44.3	71.1	187.2	2.0	0.1	4.5	clayy SILT to silty CLAY	115	2.0	36	22	-	-	2.9	15
1.97	40.2	64.4	194.8	2.1	0.0	5.1	clayy SILT to silty CLAY	115	2.0	32	20	-	-	2.7	15
2.13	37.1	59.6	194.0	2.0	-0.3	5.4	clayy SILT to silty CLAY	115	2.0	30	19	-	-	2.5	15
2.30	35.4	56.7	-	2.0	-0.6	5.6	clayy SILT to silty CLAY	115	2.0	28	18	-	-	2.3	15
2.46	33.7	54.0	-	1.9	0.1	5.6	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.2	15
2.62	32.9	52.8	-	1.8	0.2	5.4	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.2	15
2.79	30.8	49.3	-	1.5	-0.2	5.0	clayy SILT to silty CLAY	115	2.0	25	15	-	-	2.0	15
2.95	30.4	48.7	157.1	1.3	0.4	4.4	clayy SILT to silty CLAY	115	2.0	24	15	-	-	2.0	15
3.12	31.5	50.5	163.4	1.4	0.4	4.6	clayy SILT to silty CLAY	115	2.0	25	16	-	-	2.1	15
3.28	32.1	51.4	-	1.7	0.3	5.4	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.1	15
3.45	30.2	48.4	-	2.0	-0.7	6.7	silty CLAY to CLAY	115	1.5	32	20	-	-	2.0	15
3.61	29.8	47.8	-	2.1	-0.3	7.1	silty CLAY to CLAY	115	1.5	32	20	-	-	2.0	15
3.77	31.3	50.3	-	2.2	-0.1	7.1	silty CLAY to CLAY	115	1.5	34	21	-	-	2.1	15
3.94	33.8	54.2	-	2.3	-0.4	6.7	silty CLAY to CLAY	115	1.5	36	23	-	-	2.2	15
4.10	34.4	55.2	-	2.3	-0.1	6.8	silty CLAY to CLAY	115	1.5	37	23	-	-	2.3	15
4.27	35.4	56.7	-	2.3	-0.1	6.4	silty CLAY to CLAY	115	1.5	38	24	-	-	2.3	15
4.43	34.9	56.0	-	2.1	-1.6	6.0	silty CLAY to CLAY	115	1.5	37	23	-	-	2.3	15
4.59	33.9	54.4	-	1.9	-1.2	5.5	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.2	15
4.76	35.8	57.4	180.7	1.8	0.0	5.0	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
4.92	38.1	61.1	165.5	1.5	0.3	4.1	clayy SILT to silty CLAY	115	2.0	31	19	-	-	2.5	15
5.09	40.8	65.5	159.1	1.5	0.3	3.6	clayy SILT to silty CLAY	115	2.0	33	20	-	-	2.7	15
5.25	43.9	70.4	156.9	1.4	0.3	3.3	clayy SILT to silty CLAY	115	2.0	35	22	-	-	2.9	15
5.41	45.6	73.2	162.6	1.5	0.3	3.4	clayy SILT to silty CLAY	115	2.0	37	23	-	-	3.0	15
5.58	45.1	72.3	170.6	1.7	0.3	3.7	clayy SILT to silty CLAY	115	2.0	36	23	-	-	3.0	15
5.74	43.1	69.1	170.8	1.7	0.3	3.9	clayy SILT to silty CLAY	115	2.0	35	22	-	-	2.8	15
5.91	41.3	66.2	169.9	1.6	0.2	4.0	clayy SILT to silty CLAY	115	2.0	33	21	-	-	2.7	15
6.07	41.5	66.5	177.4	1.8	0.2	4.3	clayy SILT to silty CLAY	115	2.0	33	21	-	-	2.7	15
6.23	38.7	62.1	191.0	2.0	0.2	5.1	clayy SILT to silty CLAY	115	2.0	31	19	-	-	2.6	15
6.40	35.9	57.6	-	1.9	-0.1	5.4	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
6.56	35.0	55.3	173.3	1.6	0.2	4.7	clayy SILT to silty CLAY	115	2.0	28	17	-	-	2.3	15
6.73	34.9	54.5	165.5	1.5	0.3	4.4	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.3	15
6.89	33.6	53.9	176.0	1.6	0.3	5.0	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.2	15
7.05	32.6	52.3	-	1.8	0.2	5.6	silty CLAY to CLAY	115	1.5	35	22	-	-	2.1	15
7.22	34.3	55.0	-	2.1	0.1	6.2	silty CLAY to CLAY	115	1.5	37	23	-	-	2.3	15
7.38	33.1	53.1	-	2.2	-0.1	6.6	silty CLAY to CLAY	115	1.5	35	22	-	-	2.2	15
7.55	28.3	45.3	-	2.1	0.5	7.4	silty CLAY to CLAY	115	1.5	30	19	-	-	1.9	15
7.71	26.2	42.0	-	1.8	0.5	7.0	silty CLAY to CLAY	115	1.5	28	17	-	-	1.7	15
7.87	26.9	43.1	-	1.8	0.3	6.8	silty CLAY to CLAY	115	1.5	29	18	-	-	1.8	15
8.04	29.2	46.9	-	1.8	0.1	6.3	silty CLAY to CLAY	115	1.5	31	19	-	-	1.9	15
8.20	29.9	47.9	-	1.8	-0.2	6.0	silty CLAY to CLAY	115	1.5	32	20	-	-	2.0	15
8.37	28.6	45.8	-	1.7	0.2	6.0	silty CLAY to CLAY	115	1.5	31	19	-	-	1.9	15
8.53	33.9	47.0	137.0	1.2	0.2	3.6	clayy SILT to silty CLAY	115	2.0	23	17	-	-	2.2	15
8.69	60.7	83.3	140.3	1.3	0.2	2.2	silty SAND to sandy SILT	120	4.0	21	15	61	42	-	16
8.86	81.9	111.4	142.6	1.2	0.3	1.4	clean SAND to silty SAND	125	5.0	22	16	71	43	-	16
9.02	61.9	83.3	120.3	0.9	0.3	1.5	silty SAND to sandy SILT	120	4.0	21	15	61	41	-	16
9.19	43.3	57.8	88.9	0.5	0.3	1.2	silty SAND to sandy SILT	120	4.0	14	11	49	39	-	16
9.35	25.8	34.1	82.7	0.4	0.3	1.7	silty SAND to sandy SILT	120	4.0	9	6	32	36	-	16
9.51	17.9	28.6	-	0.5	0.3	2.7	clayy SILT to silty CLAY	115	2.0	14	9	-	-	1.2	15
9.68	13.9	22.4	-	0.5	0.3	3.8	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
9.84	9.9	15.9	-	0.4	0.2	4.3	silty CLAY to CLAY	115	1.5	11	7	-	-	0.6	15
10.01	7.6	12.1	-	0.3	0.2	4.7	silty CLAY to CLAY	115	1.5	8	5	-	-	0.5	15
10.17	6.2	10.0	-	0.3	0.4	5.1	silty CLAY to CLAY	115	1.5	7	4	-	-	0.4	15
10.34	5.2	8.4	-	0.3	0.5	6.2	silty CLAY to CLAY	115	1.5	6	3	-	-	0.3	15
10.50	4.5	7.2	-	0.2	0.2	6.1	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
10.66	5.7	9.2	-	0.2	-0.3	4.2	silty CLAY to CLAY	115	1.5	6	4	-	-	0.3	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(537).cpt
CPT Date: 8/18/2006 12:38:18 PM
GW During Test: 18 ft

Sounding ID: CPT-08
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS - *	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
10.83	9.4	15.0	-	0.3	-0.4	3.2	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
10.99	7.3	11.5	-	0.3	0.2	4.0	silty CLAY to CLAY	115	1.5	8	5	-	-	0.4	15
11.16	4.7	7.2	-	0.2	0.3	5.0	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
11.32	4.0	6.1	-	0.2	0.2	5.1	silty CLAY to CLAY	115	1.5	4	3	-	-	0.2	15
11.48	4.8	7.3	-	0.2	0.3	5.1	silty CLAY to CLAY	115	1.5	5	3	-	-	0.3	15
11.65	7.4	11.0	-	0.2	0.2	3.6	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
11.81	6.0	8.9	-	0.2	-0.1	4.4	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
11.98	5.9	8.5	-	0.2	0.0	3.7	silty CLAY to CLAY	115	1.5	6	4	-	-	0.3	15
12.14	6.3	9.0	-	0.2	0.1	4.2	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
12.30	9.7	13.6	-	0.2	-0.6	2.4	clayy SILT to silty CLAY	115	2.0	7	5	-	-	0.6	15
12.47	7.8	10.8	-	0.2	-2.9	2.6	silty CLAY to CLAY	115	1.5	7	5	-	-	0.5	15
12.63	5.9	8.1	-	0.3	-2.7	5.2	silty CLAY to CLAY	115	1.5	5	4	-	-	0.3	15
12.80	8.5	11.5	-	0.3	-2.6	4.0	silty CLAY to CLAY	115	1.5	8	6	-	-	0.5	15
12.96	10.8	14.4	-	0.3	-2.9	2.7	silty CLAY to CLAY	115	1.5	10	7	-	-	0.7	15
13.12	12.0	15.9	-	0.3	-5.0	2.4	clayy SILT to silty CLAY	115	2.0	8	6	-	-	0.8	15
13.29	11.4	14.9	-	0.2	-7.2	1.6	clayy SILT to silty CLAY	115	2.0	7	6	-	-	0.7	15
13.45	5.9	7.6	-	0.2	-8.1	3.7	silty CLAY to CLAY	115	1.5	5	4	-	-	0.3	15
13.62	5.6	7.2	-	0.2	-8.0	4.3	silty CLAY to CLAY	115	1.5	5	4	-	-	0.3	15
13.78	5.2	6.5	-	0.4	-7.9	9.2	Organic SOILS - Peats	100	1.0	7	5	-	-	0.4	10
13.94	9.4	11.7	-	0.3	-7.9	3.2	silty CLAY to CLAY	115	1.5	8	6	-	-	0.6	15
14.11	18.5	19.9	39.1	0.1	-7.9	0.3	silty SAND to sandy SILT	120	4.0	5	5	14	32	-	16
14.27	21.1	22.6	35.1	0.1	-8.0	0.1	silty SAND to sandy SILT	120	4.0	6	5	18	32	-	16
14.44	66.1	70.4	125.7	1.4	-7.6	2.1	silty SAND to sandy SILT	120	4.0	18	17	55	39	-	16
14.60	162.2	171.7	223.7	3.6	-7.4	2.3	silty SAND to sandy SILT	120	4.0	43	41	85	44	-	16
14.76	54.3	57.1	184.9	2.7	-6.0	5.1	clayy SILT to silty CLAY	115	2.0	29	27	-	-	3.6	15
14.93	52.1	54.5	97.8	0.8	-4.2	1.6	silty SAND to sandy SILT	120	4.0	14	13	47	38	-	16
15.09	66.1	68.8	102.9	0.9	-1.8	1.3	silty SAND to sandy SILT	120	4.0	17	17	55	39	-	16
15.26	68.5	70.8	104.2	0.9	-1.8	1.3	silty SAND to sandy SILT	120	4.0	18	17	56	39	-	16
15.42	58.4	60.1	104.9	1.0	-1.6	1.7	silty SAND to sandy SILT	120	4.0	15	15	50	38	-	16
15.58	60.1	61.5	111.1	1.1	-1.4	1.9	silty SAND to sandy SILT	120	4.0	15	15	51	38	-	16
15.75	76.2	77.6	117.5	1.2	-1.4	1.6	silty SAND to sandy SILT	120	4.0	19	19	59	40	-	16
15.91	68.4	69.2	157.1	2.2	-1.6	3.3	clayy SILT to silty CLAY	115	2.0	35	34	-	-	4.5	15
16.08	60.8	61.3	116.5	1.2	-1.4	2.1	silty SAND to sandy SILT	120	4.0	15	15	51	38	-	16
16.24	27.4	28.2	92.3	0.6	-1.5	2.4	clayy SILT to silty CLAY	115	2.0	14	14	-	-	1.8	15
16.40	24.8	25.3	-	0.5	-0.8	2.2	clayy SILT to silty CLAY	115	2.0	13	12	-	-	1.6	15
16.57	11.9	12.4	-	0.4	-0.7	3.6	silty CLAY to CLAY	115	1.5	8	8	-	-	0.7	15
16.73	8.6	8.9	-	0.2	-0.5	3.2	silty CLAY to CLAY	115	1.5	6	6	-	-	0.5	15
16.90	7.4	7.6	-	0.2	-1.4	3.1	silty CLAY to CLAY	115	1.5	5	5	-	-	0.4	15
17.06	9.2	9.3	-	0.2	-2.3	2.7	silty CLAY to CLAY	115	1.5	6	6	-	-	0.5	15
17.23	10.3	10.3	-	0.2	-3.9	1.7	clayy SILT to silty CLAY	115	2.0	5	5	-	-	0.6	15
17.39	27.1	26.2	52.7	0.2	-4.2	0.7	silty SAND to sandy SILT	120	4.0	7	7	23	33	-	16
17.55	23.4	22.6	61.2	0.3	-4.5	1.1	silty SAND to sandy SILT	120	4.0	6	6	18	32	-	16
17.72	17.6	17.2	-	0.4	-4.2	2.6	clayy SILT to silty CLAY	115	2.0	9	9	-	-	1.1	15
17.88	18.7	18.1	-	0.4	-4.2	2.5	clayy SILT to silty CLAY	115	2.0	9	9	-	-	1.2	15
18.05	19.6	18.8	-	0.4	-8.5	2.0	clayy SILT to silty CLAY	115	2.0	9	10	-	-	1.2	15
18.21	14.4	13.8	-	0.5	-8.7	3.5	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
18.37	11.5	10.9	-	0.5	-8.6	4.9	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
18.54	10.3	9.8	-	0.5	-8.6	5.5	silty CLAY to CLAY	115	1.5	7	7	-	-	0.6	15
18.70	10.2	9.6	-	0.4	-8.4	4.6	silty CLAY to CLAY	115	1.5	6	7	-	-	0.6	15
18.87	7.7	7.3	-	0.4	-8.4	6.2	silty CLAY to CLAY	115	1.5	5	5	-	-	0.4	15
19.03	13.7	12.8	-	0.5	-8.3	4.1	silty CLAY to CLAY	115	1.5	9	9	-	-	0.8	15
19.19	19.3	18.1	-	0.9	-8.3	4.7	silty CLAY to CLAY	115	1.5	12	13	-	-	1.2	15
19.36	38.2	35.8	57.1	0.2	-8.7	0.6	silty SAND to sandy SILT	120	4.0	9	10	33	34	-	16
19.52	57.8	54.1	100.3	1.0	-7.3	1.7	silty SAND to sandy SILT	120	4.0	14	14	47	37	-	16
19.69	76.4	71.3	100.0	0.9	-4.8	1.2	silty SAND to sandy SILT	120	4.0	18	19	56	39	-	16
19.85	90.4	84.1	95.5	0.5	-3.0	0.6	clean SAND to silty SAND	125	5.0	17	18	61	39	-	16
20.01	115.9	107.6	107.6	0.4	-1.8	0.3	clean SAND to silty SAND	125	5.0	22	23	69	41	-	16
20.18	95.7	88.7	107.4	0.8	-1.2	0.9	clean SAND to silty SAND	125	5.0	18	19	63	40	-	16
20.34	68.3	63.1	90.2	0.7	-0.3	1.0	silty SAND to sandy SILT	120	4.0	16	17	52	38	-	16
20.51	30.8	27.8	-	1.0	-0.1	3.5	clayy SILT to silty CLAY	115	2.0	14	15	-	-	2.0	15
20.67	20.6	18.5	-	0.3	0.1	1.6	clayy SILT to silty CLAY	115	2.0	9	10	-	-	1.3	15
20.83	8.8	7.9	-	0.3	1.6	3.9	silty CLAY to CLAY	115	1.5	5	6	-	-	0.5	15
21.00	7.1	6.3	-	0.2	1.7	3.4	silty CLAY to CLAY	115	1.5	4	5	-	-	0.4	15
21.16	7.4	6.6	-	0.3	2.0	4.9	silty CLAY to CLAY	115	1.5	4	5	-	-	0.4	15
21.33	10.2	9.1	-	0.4	2.4	4.3	silty CLAY to CLAY	115	1.5	6	7	-	-	0.6	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(537).cpt
CPT Date: 8/18/2006 12:38:18 PM
GW During Test: 18 ft

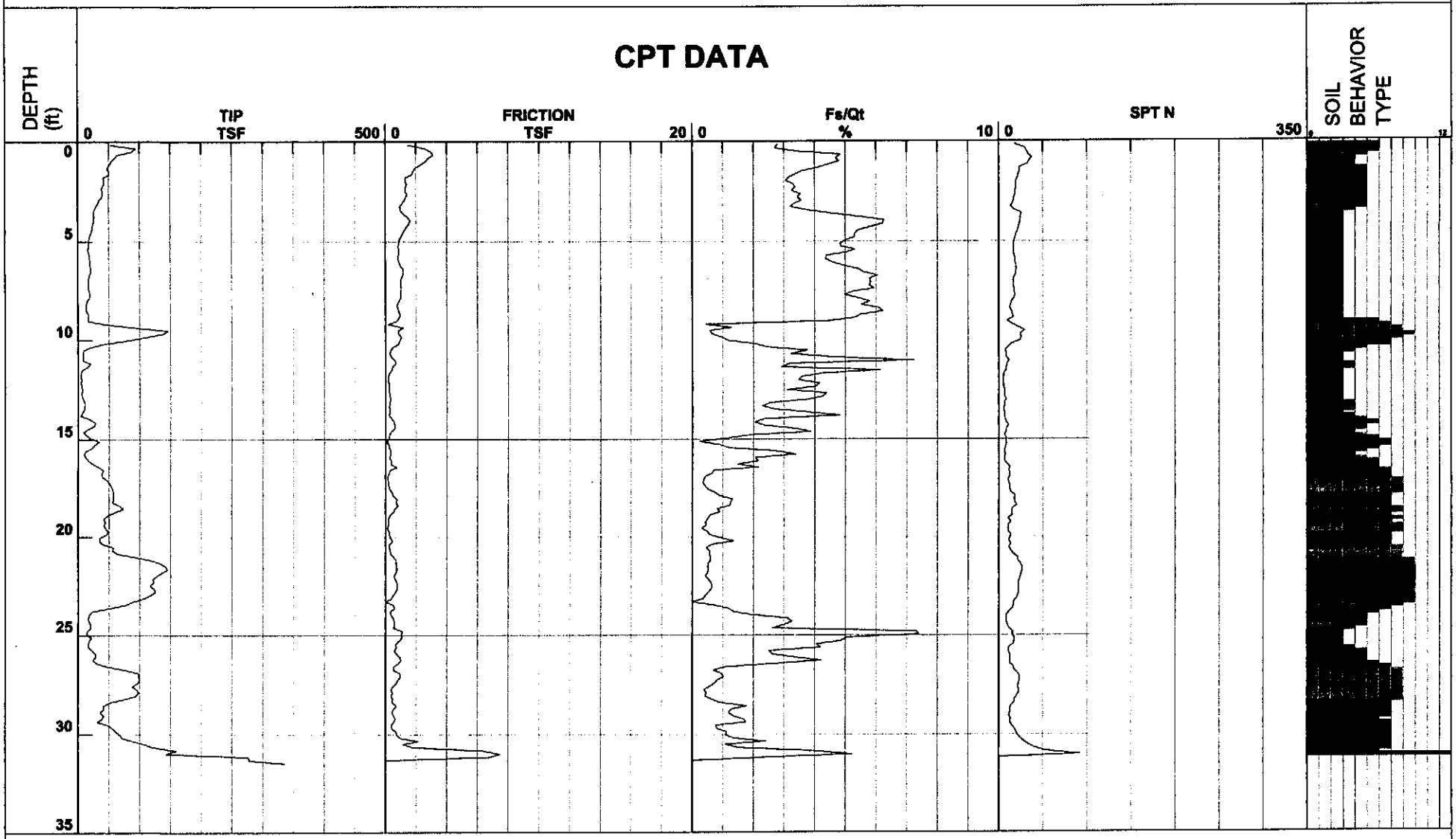
Sounding ID: CPT-08
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qcln * PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT * R-N1 60%	SPT R-N 60%	Rel * Den %	Ftn * Ang deg	Und Shr tsf	Nk * -
21.49	11.3	10.0	-	0.4	-0.9	4.2	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
21.65	11.3	9.9	-	0.3	-1.3	3.3	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
21.82	10.2	8.9	-	0.4	-1.2	4.2	silty CLAY to CLAY	115	1.5	6	7	-	-	0.6	15
21.98	10.8	9.4	-	0.3	-1.1	3.6	silty CLAY to CLAY	115	1.5	6	7	-	-	0.6	15
22.15	8.5	7.4	-	0.4	-1.9	5.5	silty CLAY to CLAY	115	1.5	5	6	-	-	0.5	15
22.31	8.6	7.4	-	0.3	-1.6	4.3	silty CLAY to CLAY	115	1.5	5	6	-	-	0.5	15
22.47	8.5	7.3	-	0.3	-3.4	4.1	silty CLAY to CLAY	115	1.5	5	6	-	-	0.5	15
22.64	8.8	7.6	-	0.4	-3.2	4.8	silty CLAY to CLAY	115	1.5	5	6	-	-	0.5	15
22.80	9.8	8.4	-	0.4	-3.0	4.2	silty CLAY to CLAY	115	1.5	6	7	-	-	0.6	15
22.97	10.7	9.1	-	0.5	-2.9	5.0	silty CLAY to CLAY	115	1.5	6	7	-	-	0.6	15
23.13	12.0	10.2	-	0.7	-2.7	6.1	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
23.30	14.6	12.4	-	0.6	-3.3	4.5	silty CLAY to CLAY	115	1.5	8	10	-	-	0.9	15
23.46	16.1	13.5	-	0.7	-5.4	4.9	silty CLAY to CLAY	115	1.5	9	11	-	-	1.0	15
23.62	21.1	17.7	-	0.7	-6.1	3.7	silty CLAY to CLAY	115	1.5	12	14	-	-	1.3	15
23.79	20.9	17.5	-	0.6	-7.3	3.0	clayy SILT to silty CLAY	115	2.0	9	10	-	-	1.3	15
23.95	16.8	14.0	-	0.3	-8.2	2.1	clayy SILT to silty CLAY	115	2.0	7	8	-	-	1.0	15
24.12	12.0	10.0	-	0.6	-8.3	5.3	silty CLAY to CLAY	115	1.5	7	8	-	-	0.7	15
24.28	15.5	12.8	-	0.7	-8.1	4.8	silty CLAY to CLAY	115	1.5	9	10	-	-	1.0	15
24.44	17.2	14.2	-	0.9	-8.1	5.8	silty CLAY to CLAY	115	1.5	9	11	-	-	1.1	15
24.61	20.2	16.6	-	1.2	-8.2	6.2	silty CLAY to CLAY	115	1.5	11	13	-	-	1.3	15
24.77	28.9	23.6	-	1.3	-8.5	4.7	silty CLAY to CLAY	115	1.5	16	19	-	-	1.8	15
24.94	49.7	43.6	99.1	1.0	-8.8	2.0	silty SAND to sandy SILT	120	4.0	11	12	40	35	-	16
25.10	77.9	68.2	90.4	0.7	-9.9	0.9	clean SAND to silty SAND	125	5.0	14	16	54	38	-	16
25.26	102.8	89.8	128.0	1.6	-9.9	1.6	silty SAND to sandy SILT	120	4.0	22	26	63	40	-	16
25.43	124.9	109.0	130.4	1.3	-9.7	1.1	clean SAND to silty SAND	125	5.0	22	25	70	41	-	16
25.59	114.6	99.8	123.0	1.3	-8.6	1.1	clean SAND to silty SAND	125	5.0	20	23	67	40	-	16
25.76	123.2	107.0	118.6	0.9	-8.4	0.7	clean SAND to silty SAND	125	5.0	21	25	69	40	-	16
25.92	117.7	102.1	115.0	0.9	-8.2	0.7	clean SAND to silty SAND	125	5.0	20	24	68	40	-	16
26.08	116.1	100.5	110.5	0.7	-8.0	0.6	clean SAND to silty SAND	125	5.0	20	23	67	40	-	16
26.25	115.4	99.7	109.6	0.7	-7.8	0.6	clean SAND to silty SAND	125	5.0	20	23	67	40	-	16
26.41	119.5	103.0	111.6	0.7	-7.5	0.6	clean SAND to silty SAND	125	5.0	21	24	68	40	-	16
26.58	121.0	104.0	113.6	0.8	-7.3	0.6	clean SAND to silty SAND	125	5.0	21	24	68	40	-	16
26.74	134.8	115.7	121.7	0.8	-7.0	0.6	clean SAND to silty SAND	125	5.0	23	27	72	41	-	16
26.90	141.3	121.0	123.6	0.7	-6.8	0.5	clean SAND to silty SAND	125	5.0	24	28	73	41	-	16
27.07	140.0	119.7	124.2	0.8	-6.7	0.6	clean SAND to silty SAND	125	5.0	24	28	73	41	-	16
27.23	136.1	116.1	122.4	0.8	-6.5	0.6	clean SAND to silty SAND	125	5.0	23	27	72	41	-	16
27.40	132.3	112.6	121.3	0.8	-6.2	0.6	clean SAND to silty SAND	125	5.0	23	26	71	41	-	16
27.56	120.1	102.1	114.4	0.9	-6.0	0.7	clean SAND to silty SAND	125	5.0	20	24	68	40	-	16
27.72	109.2	92.6	105.0	0.7	-5.8	0.7	clean SAND to silty SAND	125	5.0	19	22	64	40	-	16
27.89	97.0	82.1	95.0	0.6	-5.6	0.6	clean SAND to silty SAND	125	5.0	16	19	61	39	-	16
28.05	84.1	71.1	83.9	0.5	-4.9	0.6	clean SAND to silty SAND	125	5.0	14	17	56	38	-	16
28.22	65.8	55.5	70.9	0.3	-4.7	0.5	clean SAND to silty SAND	125	5.0	11	13	48	37	-	16
28.38	41.3	34.8	60.0	0.3	-4.6	0.7	silty SAND to sandy SILT	120	4.0	9	10	32	34	-	16
28.54	28.2	23.7	59.3	0.3	-4.3	1.0	silty SAND to sandy SILT	120	4.0	6	7	19	31	-	16
28.71	24.0	17.9	-	0.4	-4.0	1.6	clayy SILT to silty CLAY	115	2.0	9	12	-	-	1.5	15
28.87	20.1	14.9	-	0.4	-3.8	2.3	clayy SILT to silty CLAY	115	2.0	7	10	-	-	1.2	15
29.04	18.1	13.4	-	0.4	-4.5	2.5	silty CLAY to CLAY	115	1.5	9	12	-	-	1.1	15
29.20	15.9	11.7	-	0.5	-6.2	3.4	silty CLAY to CLAY	115	1.5	8	11	-	-	1.0	15
29.36	20.4	15.0	-	0.6	-6.3	3.3	silty CLAY to CLAY	115	1.5	10	14	-	-	1.3	15
29.53	25.1	18.4	-	0.6	-6.4	2.4	clayy SILT to silty CLAY	115	2.0	9	13	-	-	1.6	15
29.69	42.9	35.7	91.4	0.8	-7.0	2.0	silty SAND to sandy SILT	120	4.0	9	11	33	34	-	16
29.86	48.4	40.1	92.1	0.9	-6.6	1.8	silty SAND to sandy SILT	120	4.0	10	12	37	34	-	16
30.02	45.1	37.3	72.1	0.5	-6.6	1.1	silty SAND to sandy SILT	120	4.0	9	11	34	34	-	16
30.19	58.5	48.4	73.0	0.5	-7.0	0.8	silty SAND to sandy SILT	120	4.0	12	15	43	36	-	16
30.35	69.0	56.9	85.1	0.7	-6.9	1.0	silty SAND to sandy SILT	120	4.0	14	17	48	37	-	16
30.51	94.5	77.8	112.9	1.3	-6.7	1.4	silty SAND to sandy SILT	120	4.0	19	24	59	38	-	16
30.68	162.9	134.0	201.6	4.3	-6.5	2.7	silty SAND to sandy SILT	120	4.0	33	41	77	41	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Geotechnologies, Inc

Location	Safran	Operator	ML-CW	Filename	SDF(538).cpt
Job Number	19166	Cone Number	DSG0906	GPS	
Hole Number	CPT-09	Date and Time	8/18/2006 1:29:08 PM	Maximum Depth	31.50 ft
Water Table Depth	14.16 ft				



1 - sensitive fine grained	4 - silty clay to clay	7 - silty sand to sandy silt	10 - gravelly sand to sand
2 - organic material	5 - clayey silt to silty clay	8 - sand to silty sand	11 - very stiff fine grained (*)
3 - clay	6 - sandy silt to clayey silt	9 - sand	12 - sand to clayey sand (*)

Depth Increment

*Soil behavior type and SPT based on data from UBC-1983

Project ID: Geotechnologies
Data File: SDF(538).cpt
CPT Date: 8/18/2006 1:29:08 PM
GW During Test: 14 ft

Sounding ID: CPT-09
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS - *	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description *	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
0.33	95.0	152.4	220.2	2.6	0.0	2.7	silty SAND to sandy SILT	120	4.0	38	24	81	48	-	16
0.49	87.5	140.4	233.0	3.0	0.0	3.4	silty SAND to sandy SILT	120	4.0	35	22	78	48	-	16
0.66	64.7	103.8	239.0	3.1	-0.1	4.9	very stiff fine SOIL	120	2.0	52	32	68	48	-	30
0.82	59.7	95.7	224.5	2.8	0.0	4.7	very stiff fine SOIL	120	2.0	48	30	66	48	-	30
0.98	55.0	88.2	218.2	2.6	0.0	4.8	very stiff fine SOIL	120	2.0	44	28	63	48	-	30
1.15	52.0	83.4	203.2	2.3	0.1	4.5	clayy SILT to silty CLAY	115	2.0	42	26	-	-	3.5	15
1.31	48.2	77.4	185.7	2.0	0.0	4.1	clayy SILT to silty CLAY	115	2.0	39	24	-	-	3.2	15
1.48	51.0	81.8	177.1	1.8	0.1	3.6	clayy SILT to silty CLAY	115	2.0	41	26	-	-	3.4	15
1.64	51.6	82.8	172.8	1.8	0.2	3.4	silty SAND to sandy SILT	120	4.0	21	13	61	48	-	16
1.80	41.6	66.7	149.7	1.3	0.3	3.2	clayy SILT to silty CLAY	115	2.0	33	21	-	-	2.8	15
1.97	43.3	69.4	150.1	1.3	0.3	3.1	silty SAND to sandy SILT	120	4.0	17	11	55	47	-	16
2.13	42.8	68.7	155.6	1.4	0.3	3.3	clayy SILT to silty CLAY	115	2.0	34	21	-	-	2.8	15
2.30	39.3	63.1	151.2	1.3	0.3	3.4	clayy SILT to silty CLAY	115	2.0	32	20	-	-	2.6	15
2.46	40.2	64.5	149.9	1.3	0.3	3.3	clayy SILT to silty CLAY	115	2.0	32	20	-	-	2.7	15
2.62	40.6	65.1	158.0	1.4	0.3	3.6	clayy SILT to silty CLAY	115	2.0	33	20	-	-	2.7	15
2.79	39.2	62.9	152.9	1.4	0.3	3.5	clayy SILT to silty CLAY	115	2.0	31	20	-	-	2.6	15
2.95	34.7	55.7	147.8	1.2	0.3	3.6	clayy SILT to silty CLAY	115	2.0	28	17	-	-	2.3	15
3.12	32.8	52.6	139.0	1.1	0.3	3.4	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.2	15
3.28	29.9	48.0	130.8	1.0	0.3	3.2	clayy SILT to silty CLAY	115	2.0	24	15	-	-	2.0	15
3.45	27.0	43.2	136.9	1.0	0.3	3.8	clayy SILT to silty CLAY	115	2.0	22	13	-	-	1.8	15
3.61	26.5	42.5	-	1.2	0.2	4.6	clayy SILT to silty CLAY	115	2.0	21	13	-	-	1.8	15
3.77	27.0	43.3	-	1.5	-0.1	5.5	silty CLAY to CLAY	115	1.5	29	18	-	-	1.8	15
3.94	26.2	42.1	-	1.6	0.0	6.3	silty CLAY to CLAY	115	1.5	28	17	-	-	1.7	15
4.10	24.8	39.8	-	1.5	0.2	6.3	silty CLAY to CLAY	115	1.5	27	17	-	-	1.6	15
4.27	23.9	38.4	-	1.4	0.1	5.9	silty CLAY to CLAY	115	1.5	26	16	-	-	1.6	15
4.43	22.8	36.6	-	1.2	0.1	5.5	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
4.59	21.0	33.7	-	1.1	0.0	5.4	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
4.76	19.2	30.7	-	1.0	-0.1	5.4	silty CLAY to CLAY	115	1.5	20	13	-	-	1.3	15
4.92	18.3	29.4	-	0.9	-0.2	5.1	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
5.09	18.4	29.5	-	0.9	-0.5	4.9	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
5.25	17.6	28.2	-	0.9	-1.4	4.9	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
5.41	17.1	27.4	-	0.9	-0.8	5.4	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
5.58	18.0	28.9	-	0.9	-0.7	5.1	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
5.74	19.7	31.6	-	0.9	-2.0	4.5	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
5.91	19.7	31.6	-	0.9	-1.9	4.5	silty CLAY to CLAY	115	1.5	21	13	-	-	1.3	15
6.07	20.2	32.3	-	0.9	-1.5	4.7	silty CLAY to CLAY	115	1.5	22	13	-	-	1.3	15
6.23	20.6	33.0	-	1.0	-0.8	5.0	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
6.40	21.8	34.9	-	1.2	-0.5	5.5	silty CLAY to CLAY	115	1.5	23	15	-	-	1.4	15
6.56	21.5	34.5	-	1.2	-0.5	5.7	silty CLAY to CLAY	115	1.5	23	14	-	-	1.4	15
6.73	18.8	30.2	-	1.1	-0.1	6.2	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
6.89	18.0	28.8	-	1.0	-0.1	5.9	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
7.05	17.9	28.7	-	1.0	-0.1	6.0	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
7.22	18.1	29.1	-	1.1	-0.2	5.9	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
7.38	17.9	28.7	-	1.1	0.0	6.1	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
7.55	19.0	30.4	-	1.0	0.0	5.4	silty CLAY to CLAY	115	1.5	20	13	-	-	1.2	15
7.71	20.7	33.2	-	1.0	-0.1	5.1	silty CLAY to CLAY	115	1.5	22	14	-	-	1.4	15
7.87	18.7	29.9	-	1.0	-0.8	5.6	silty CLAY to CLAY	115	1.5	20	12	-	-	1.2	15
8.04	15.5	24.9	-	0.9	-0.9	6.0	silty CLAY to CLAY	115	1.5	17	10	-	-	1.0	15
8.20	14.1	22.5	-	0.8	-0.5	5.7	silty CLAY to CLAY	115	1.5	15	9	-	-	0.9	15
8.37	13.4	21.5	-	0.8	-0.5	6.3	silty CLAY to CLAY	115	1.5	14	9	-	-	0.9	15
8.53	14.3	22.9	-	0.9	-0.8	6.5	silty CLAY to CLAY	115	1.5	15	10	-	-	0.9	15
8.69	18.1	29.1	-	1.0	-0.8	5.7	silty CLAY to CLAY	115	1.5	19	12	-	-	1.2	15
8.86	17.0	27.3	-	0.9	-0.1	5.5	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
9.02	17.1	27.4	-	0.8	-0.1	4.6	silty CLAY to CLAY	115	1.5	18	11	-	-	1.1	15
9.19	45.1	60.1	72.2	0.2	-0.1	0.5	clean SAND to silty SAND	125	5.0	12	9	50	40	-	16
9.35	92.1	121.6	147.4	1.2	-0.1	1.3	clean SAND to silty SAND	125	5.0	24	18	73	43	-	16
9.51	146.7	191.8	191.8	0.9	0.0	0.6	clean SAND to silty SAND	125	5.0	38	29	88	45	-	16
9.68	137.2	177.7	177.7	0.9	-0.1	0.7	clean SAND to silty SAND	125	5.0	36	27	86	45	-	16
9.84	110.8	142.2	156.3	1.1	-0.1	1.0	clean SAND to silty SAND	125	5.0	28	22	79	44	-	16
10.01	79.9	101.7	127.0	1.0	-0.1	1.2	clean SAND to silty SAND	125	5.0	20	16	68	42	-	16
10.17	41.9	52.8	109.9	0.9	-0.1	2.1	silty SAND to sandy SILT	120	4.0	13	10	46	39	-	16
10.34	20.4	28.5	94.7	0.5	0.0	2.5	clayy SILT to silty CLAY	115	2.0	14	10	-	-	1.3	15
10.50	9.6	15.4	-	0.4	0.0	4.0	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15
10.66	9.3	14.9	-	0.3	0.0	3.5	silty CLAY to CLAY	115	1.5	10	6	-	-	0.6	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(538).cpt
CPT Date: 8/18/2006 1:29:08 PM
GW During Test: 14 ft

Sounding ID: CPT-09
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS - *	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
10.83	8.8	14.0	-	0.4	0.0	5.0	silty CLAY to CLAY	115	1.5	9	6	-	-	0.5	15
10.99	8.9	13.9	-	0.6	0.2	7.8	silty CLAY to CLAY	115	1.5	9	6	-	-	0.6	15
11.16	20.9	32.1	-	0.7	0.5	3.3	clayy SILT to silty CLAY	115	2.0	16	10	-	-	1.3	15
11.32	16.0	24.3	-	0.5	0.0	3.0	clayy SILT to silty CLAY	115	2.0	12	8	-	-	1.0	15
11.48	6.9	10.2	-	0.4	0.0	6.8	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
11.65	5.8	8.6	-	0.2	0.1	4.8	silty CLAY to CLAY	115	1.5	6	4	-	-	0.3	15
11.81	5.5	8.0	-	0.2	0.4	4.1	silty CLAY to CLAY	115	1.5	5	4	-	-	0.3	15
11.98	6.1	8.7	-	0.2	-0.5	3.9	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
12.14	5.6	7.9	-	0.2	-1.0	4.8	silty CLAY to CLAY	115	1.5	5	4	-	-	0.3	15
12.30	6.7	9.3	-	0.3	-1.0	4.5	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
12.47	7.6	10.4	-	0.2	-1.9	3.5	silty CLAY to CLAY	115	1.5	7	5	-	-	0.5	15
12.63	6.3	8.6	-	0.3	-3.1	5.0	silty CLAY to CLAY	115	1.5	6	4	-	-	0.4	15
12.80	7.3	9.8	-	0.3	-2.9	4.8	silty CLAY to CLAY	115	1.5	7	5	-	-	0.4	15
12.96	9.4	12.5	-	0.4	-2.8	4.2	silty CLAY to CLAY	115	1.5	8	6	-	-	0.6	15
13.12	11.5	15.0	-	0.3	-2.8	2.8	silty CLAY to CLAY	115	1.5	10	8	-	-	0.7	15
13.29	11.7	15.1	-	0.3	-3.4	2.5	clayy SILT to silty CLAY	115	2.0	8	6	-	-	0.7	15
13.45	10.7	13.7	-	0.3	-5.0	2.9	silty CLAY to CLAY	115	1.5	9	7	-	-	0.7	15
13.62	7.3	9.3	-	0.3	-6.6	4.3	silty CLAY to CLAY	115	1.5	6	5	-	-	0.4	15
13.78	5.2	6.4	-	0.2	-6.5	5.7	silty CLAY to CLAY	115	1.5	4	3	-	-	0.3	15
13.94	18.8	23.1	-	0.4	-6.4	2.5	clayy SILT to silty CLAY	115	2.0	12	9	-	-	1.2	15
14.11	28.3	30.4	88.8	0.6	-7.7	2.1	clayy SILT to silty CLAY	115	2.0	15	14	-	-	1.8	15
14.27	27.3	29.3	94.2	0.7	-7.4	2.5	clayy SILT to silty CLAY	115	2.0	15	14	-	-	1.8	15
14.44	17.6	21.4	-	0.6	-7.1	3.5	clayy SILT to silty CLAY	115	2.0	11	9	-	-	1.1	15
14.60	9.5	11.5	-	0.4	-0.8	4.3	silty CLAY to CLAY	115	1.5	8	6	-	-	0.6	15
14.76	14.1	16.9	-	0.3	-2.7	2.0	clayy SILT to silty CLAY	115	2.0	8	7	-	-	0.9	15
14.93	22.0	23.3	63.1	0.3	-4.2	1.2	silty SAND to sandy SILT	120	4.0	6	5	19	33	-	16
15.09	34.1	36.2	48.5	0.1	-9.5	0.3	clean SAND to silty SAND	125	5.0	7	7	33	35	-	16
15.26	27.0	28.6	61.1	0.2	-9.8	0.9	silty SAND to sandy SILT	120	4.0	7	7	26	34	-	16
15.42	22.7	23.9	64.8	0.3	-9.7	1.3	silty SAND to sandy SILT	120	4.0	6	6	20	33	-	16
15.58	13.2	15.5	-	0.4	-9.0	3.0	silty CLAY to CLAY	115	1.5	10	9	-	-	0.8	15
15.75	10.1	11.7	-	0.3	-8.8	3.7	silty CLAY to CLAY	115	1.5	8	7	-	-	0.6	15
15.91	13.6	15.7	-	0.3	-8.6	2.2	clayy SILT to silty CLAY	115	2.0	8	7	-	-	0.8	15
16.08	18.5	21.3	-	0.4	-8.9	2.3	clayy SILT to silty CLAY	115	2.0	11	9	-	-	1.2	15
16.24	25.6	26.6	73.3	0.4	-9.1	1.5	silty SAND to sandy SILT	120	4.0	7	6	23	33	-	16
16.40	35.0	36.3	97.3	0.8	-9.8	2.2	silty SAND to sandy SILT	120	4.0	9	9	34	35	-	16
16.57	41.8	43.3	66.3	0.3	-10.4	0.7	silty SAND to sandy SILT	120	4.0	11	10	39	36	-	16
16.73	39.5	40.7	62.8	0.3	-10.3	0.7	silty SAND to sandy SILT	120	4.0	10	10	37	36	-	16
16.90	39.7	40.8	56.8	0.2	-10.2	0.4	clean SAND to silty SAND	125	5.0	8	8	37	36	-	16
17.06	47.2	48.4	61.1	0.2	-10.1	0.4	clean SAND to silty SAND	125	5.0	10	9	43	37	-	16
17.23	51.9	53.1	64.5	0.2	-10.1	0.4	clean SAND to silty SAND	125	5.0	11	10	46	37	-	16
17.39	54.3	55.4	68.2	0.2	-10.0	0.5	clean SAND to silty SAND	125	5.0	11	11	47	38	-	16
17.55	57.0	58.0	72.9	0.3	-9.9	0.5	clean SAND to silty SAND	125	5.0	12	11	49	38	-	16
17.72	58.1	58.9	79.7	0.4	-9.8	0.8	clean SAND to silty SAND	125	5.0	12	12	50	38	-	16
17.88	58.1	58.8	83.3	0.5	-9.8	0.9	silty SAND to sandy SILT	120	4.0	15	15	49	38	-	16
18.05	58.6	59.1	95.1	0.8	-9.7	1.4	silty SAND to sandy SILT	120	4.0	15	15	50	38	-	16
18.21	56.4	56.7	91.5	0.7	-9.6	1.3	silty SAND to sandy SILT	120	4.0	14	14	48	38	-	16
18.37	67.8	68.1	100.2	0.8	-9.7	1.3	silty SAND to sandy SILT	120	4.0	17	17	54	39	-	16
18.54	74.2	74.2	94.1	0.6	-9.6	0.8	clean SAND to silty SAND	125	5.0	15	15	57	39	-	16
18.70	61.6	61.5	86.0	0.6	-8.7	0.9	silty SAND to sandy SILT	120	4.0	15	15	51	38	-	16
18.87	50.1	49.9	67.9	0.3	-8.7	0.6	clean SAND to silty SAND	125	5.0	10	10	44	37	-	16
19.03	42.1	41.8	60.0	0.2	-8.6	0.5	silty SAND to sandy SILT	120	4.0	10	11	38	36	-	16
19.19	44.7	44.2	59.3	0.2	-8.5	0.4	clean SAND to silty SAND	125	5.0	9	9	40	36	-	16
19.36	42.5	42.0	58.6	0.2	-8.6	0.5	clean SAND to silty SAND	125	5.0	8	8	38	36	-	16
19.52	44.9	44.2	56.4	0.1	-8.6	0.3	clean SAND to silty SAND	125	5.0	9	9	40	36	-	16
19.69	49.2	48.3	64.7	0.3	-8.6	0.5	clean SAND to silty SAND	125	5.0	10	10	43	37	-	16
19.85	47.2	46.3	64.7	0.3	-8.7	0.6	clean SAND to silty SAND	125	5.0	9	9	42	36	-	16
20.01	36.4	35.5	66.5	0.3	-8.5	1.0	silty SAND to sandy SILT	120	4.0	9	9	33	35	-	16
20.18	35.2	34.3	77.0	0.5	-8.4	1.4	silty SAND to sandy SILT	120	4.0	9	9	32	34	-	16
20.34	41.1	40.0	62.8	0.3	-8.4	0.7	silty SAND to sandy SILT	120	4.0	10	10	37	35	-	16
20.51	57.6	55.9	69.5	0.3	-8.5	0.5	clean SAND to silty SAND	125	5.0	11	12	48	37	-	16
20.67	57.0	55.2	71.6	0.3	-8.4	0.6	clean SAND to silty SAND	125	5.0	11	11	47	37	-	16
20.83	64.8	62.6	77.8	0.4	-8.3	0.6	clean SAND to silty SAND	125	5.0	13	13	52	38	-	16
21.00	92.1	88.7	100.1	0.6	-8.1	0.6	clean SAND to silty SAND	125	5.0	18	18	63	40	-	16
21.16	117.5	112.9	120.6	0.7	-8.0	0.6	clean SAND to silty SAND	125	5.0	23	23	71	41	-	16
21.33	134.2	128.7	130.0	0.7	-7.8	0.5	clean SAND to silty SAND	125	5.0	26	27	75	42	-	16

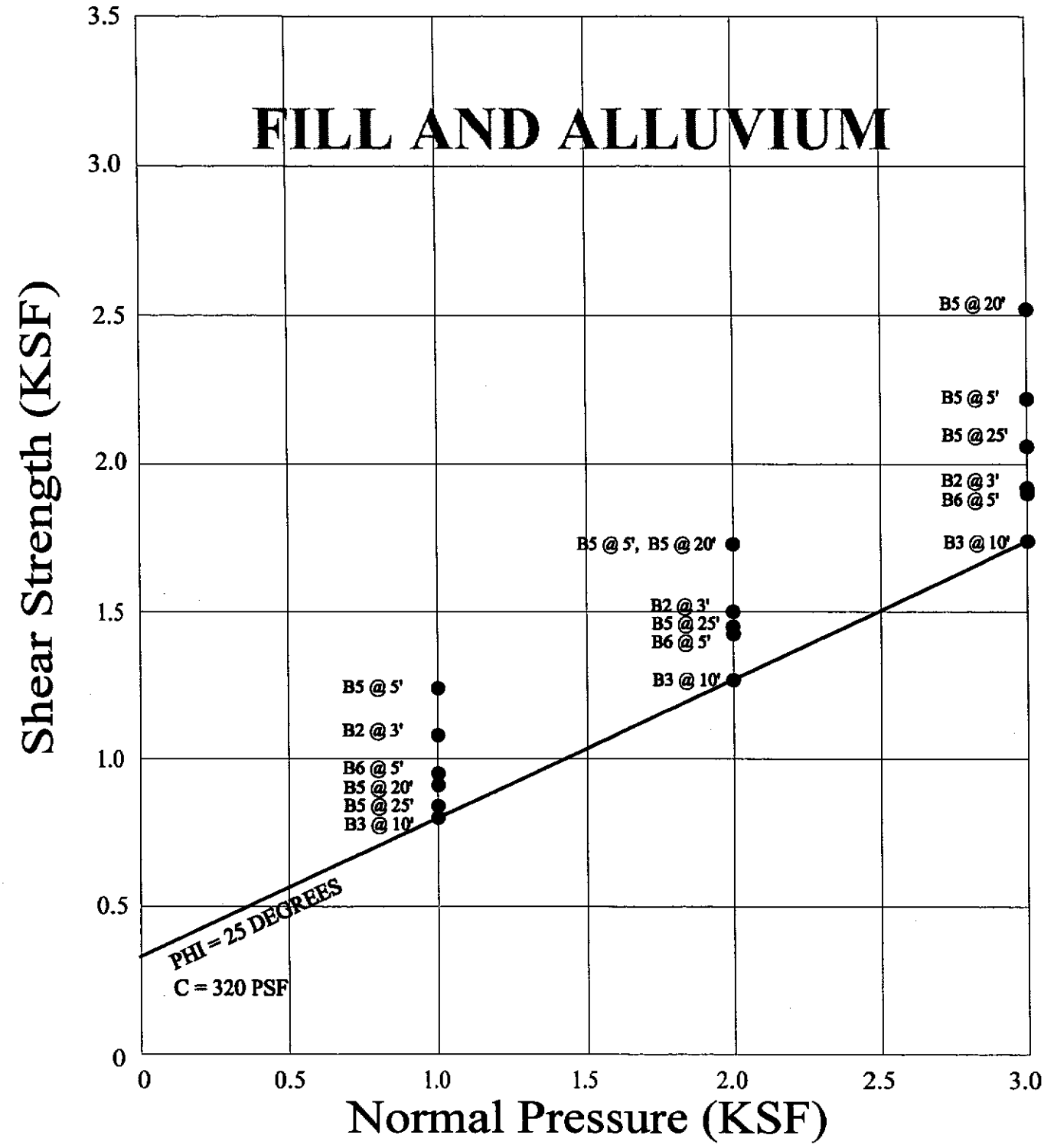
* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Geotechnologies
Data File: SDF(538).cpt
CPT Date: 8/18/2006 1:29:08 PM
GW During Test: 14 ft

Sounding ID: CPT-09
Project No: 19166
Cone/Rig: DSG0906

Depth ft	qc PS tsf	*qcln PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	* Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	*Nk -
21.49	143.5	137.2	137.2	0.7	-7.6	0.5	clean SAND to silty SAND	125	5.0	27	29	77	42	-	16
21.65	145.5	138.8	138.8	0.8	-7.4	0.5	clean SAND to silty SAND	125	5.0	28	29	78	42	-	16
21.82	136.5	129.9	130.2	0.7	-7.2	0.5	clean SAND to silty SAND	125	5.0	26	27	76	42	-	16
21.98	128.8	122.2	122.2	0.6	-7.1	0.4	clean SAND to silty SAND	125	5.0	24	26	74	42	-	16
22.15	122.1	115.7	120.2	0.7	-5.6	0.5	clean SAND to silty SAND	125	5.0	23	24	72	41	-	16
22.31	123.2	116.4	123.7	0.8	-5.3	0.6	clean SAND to silty SAND	125	5.0	23	25	72	41	-	16
22.47	117.4	110.6	120.3	0.8	-5.0	0.7	clean SAND to silty SAND	125	5.0	22	23	70	41	-	16
22.64	124.2	116.7	124.3	0.8	-4.6	0.6	clean SAND to silty SAND	125	5.0	23	25	72	41	-	16
22.80	126.1	118.2	122.5	0.7	-4.3	0.5	clean SAND to silty SAND	125	5.0	24	25	73	41	-	16
22.97	117.7	110.1	112.5	0.5	-4.0	0.4	clean SAND to silty SAND	125	5.0	22	24	70	41	-	16
23.13	105.4	98.4	100.5	0.4	-3.7	0.4	clean SAND to silty SAND	125	5.0	20	21	66	40	-	16
23.30	88.5	82.4	82.4	0.1	-3.5	0.1	clean SAND to silty SAND	125	5.0	16	18	61	39	-	16
23.46	78.2	72.6	88.9	0.5	-3.3	0.7	clean SAND to silty SAND	125	5.0	15	16	56	39	-	16
23.62	50.7	47.0	82.5	0.6	-2.8	1.2	silty SAND to sandy SILT	120	4.0	12	13	42	36	-	16
23.79	23.5	21.8	68.1	0.3	0.3	1.5	clayy SILT to silty CLAY	115	2.0	11	12	-	-	1.5	15
23.95	18.3	16.5	-	0.4	1.7	2.2	clayy SILT to silty CLAY	115	2.0	8	9	-	-	1.1	15
24.12	17.0	15.3	-	0.5	3.2	3.4	silty CLAY to CLAY	115	1.5	10	11	-	-	1.1	15
24.28	18.1	16.2	-	0.6	2.3	3.6	silty CLAY to CLAY	115	1.5	11	12	-	-	1.1	15
24.44	20.9	18.6	-	0.6	0.6	3.2	silty CLAY to CLAY	115	1.5	12	14	-	-	1.3	15
24.61	20.9	18.6	-	0.5	-4.4	2.8	clayy SILT to silty CLAY	115	2.0	9	10	-	-	1.3	15
24.77	15.3	13.6	-	1.1	-5.6	8.1	silty CLAY to CLAY	115	1.5	9	10	-	-	0.9	15
24.94	14.4	12.7	-	1.1	-5.1	8.3	silty CLAY to CLAY	115	1.5	8	10	-	-	0.9	15
25.10	21.9	19.2	-	1.1	-4.9	5.4	silty CLAY to CLAY	115	1.5	13	15	-	-	1.4	15
25.26	18.7	16.4	-	0.9	-5.5	5.3	silty CLAY to CLAY	115	1.5	11	12	-	-	1.2	15
25.43	16.9	14.7	-	0.7	-7.1	4.5	silty CLAY to CLAY	115	1.5	10	11	-	-	1.1	15
25.59	17.6	15.3	-	0.7	-7.8	4.6	silty CLAY to CLAY	115	1.5	10	12	-	-	1.1	15
25.76	23.9	20.7	-	0.6	-8.2	2.7	clayy SILT to silty CLAY	115	2.0	10	12	-	-	1.5	15
25.92	28.7	24.8	-	0.8	-8.7	2.8	clayy SILT to silty CLAY	115	2.0	12	14	-	-	1.8	15
26.08	28.6	24.5	-	1.0	-9.1	3.6	clayy SILT to silty CLAY	115	2.0	12	14	-	-	1.8	15
26.25	24.7	21.1	-	1.0	-9.4	4.5	silty CLAY to CLAY	115	1.5	14	16	-	-	1.6	15
26.41	31.4	26.8	-	0.9	-9.6	2.9	clayy SILT to silty CLAY	115	2.0	13	16	-	-	2.0	15
26.58	49.0	43.9	78.7	0.6	-9.8	1.2	silty SAND to sandy SILT	120	4.0	11	12	40	35	-	16
26.74	76.7	68.6	86.2	0.5	-10.4	0.7	clean SAND to silty SAND	125	5.0	14	15	55	38	-	16
26.90	99.2	88.5	109.9	1.0	-10.5	1.0	clean SAND to silty SAND	125	5.0	18	20	63	40	-	16
27.07	98.6	87.7	111.2	1.0	-10.4	1.1	clean SAND to silty SAND	125	5.0	18	20	63	39	-	16
27.23	100.3	89.0	106.6	0.8	-10.2	0.8	clean SAND to silty SAND	125	5.0	18	20	63	40	-	16
27.40	97.8	86.7	102.3	0.7	-10.1	0.8	clean SAND to silty SAND	125	5.0	17	20	62	39	-	16
27.56	88.0	77.8	90.4	0.5	-10.0	0.6	clean SAND to silty SAND	125	5.0	16	18	59	39	-	16
27.72	96.0	84.7	91.1	0.4	-9.9	0.4	clean SAND to silty SAND	125	5.0	17	19	62	39	-	16
27.89	99.1	87.2	95.5	0.5	-9.8	0.5	clean SAND to silty SAND	125	5.0	17	20	62	39	-	16
28.05	93.5	82.1	90.0	0.4	-9.8	0.4	clean SAND to silty SAND	125	5.0	16	19	61	39	-	16
28.22	74.8	65.6	82.8	0.5	-9.7	0.7	clean SAND to silty SAND	125	5.0	13	15	53	38	-	16
28.38	52.5	46.0	74.0	0.5	-9.7	0.9	silty SAND to sandy SILT	120	4.0	11	13	41	36	-	16
28.54	41.2	36.0	89.9	0.7	-9.5	1.9	silty SAND to sandy SILT	120	4.0	9	10	33	34	-	16
28.71	42.2	36.8	77.6	0.5	-9.2	1.3	silty SAND to sandy SILT	120	4.0	9	11	34	34	-	16
28.87	36.3	31.6	71.7	0.4	-9.4	1.3	silty SAND to sandy SILT	120	4.0	8	9	29	33	-	16
29.04	42.4	36.8	79.4	0.6	-9.5	1.4	silty SAND to sandy SILT	120	4.0	9	11	34	34	-	16
29.20	38.4	33.3	85.2	0.7	-9.5	1.8	silty SAND to sandy SILT	120	4.0	8	10	31	34	-	16
29.36	31.9	27.6	82.0	0.6	-9.4	1.9	clayy SILT to silty CLAY	115	2.0	14	16	-	-	2.0	15
29.53	49.4	42.7	68.7	0.4	-9.4	0.8	silty SAND to sandy SILT	120	4.0	11	12	39	35	-	16
29.69	56.7	48.8	73.6	0.5	-9.3	0.8	silty SAND to sandy SILT	120	4.0	12	14	43	36	-	16
29.86	61.9	53.2	86.0	0.7	-9.2	1.2	silty SAND to sandy SILT	120	4.0	13	15	46	36	-	16
30.02	68.8	59.1	89.7	0.8	-9.2	1.1	silty SAND to sandy SILT	120	4.0	15	17	50	37	-	16
30.19	72.4	62.0	99.9	1.0	-9.1	1.4	silty SAND to sandy SILT	120	4.0	16	18	51	37	-	16
30.35	90.0	77.0	142.5	2.2	-9.0	2.5	silty SAND to sandy SILT	120	4.0	19	23	58	39	-	16
30.51	107.7	92.0	116.8	1.2	-8.9	1.1	clean SAND to silty SAND	125	5.0	18	22	64	40	-	16
30.68	121.4	103.5	138.0	1.8	-8.9	1.5	silty SAND to sandy SILT	120	4.0	26	30	68	40	-	16
30.84	161.0	136.9	250.6	6.4	-8.8	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.0	16
31.01	143.2	121.6	276.6	7.5	-8.5	5.3	very stiff fine SOIL	120	2.0	61	72	73	41	-	30
31.17	277.1	234.9	292.8	6.8	-7.0	2.5	clean SAND to silty SAND	125	5.0	47	55	95	44	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

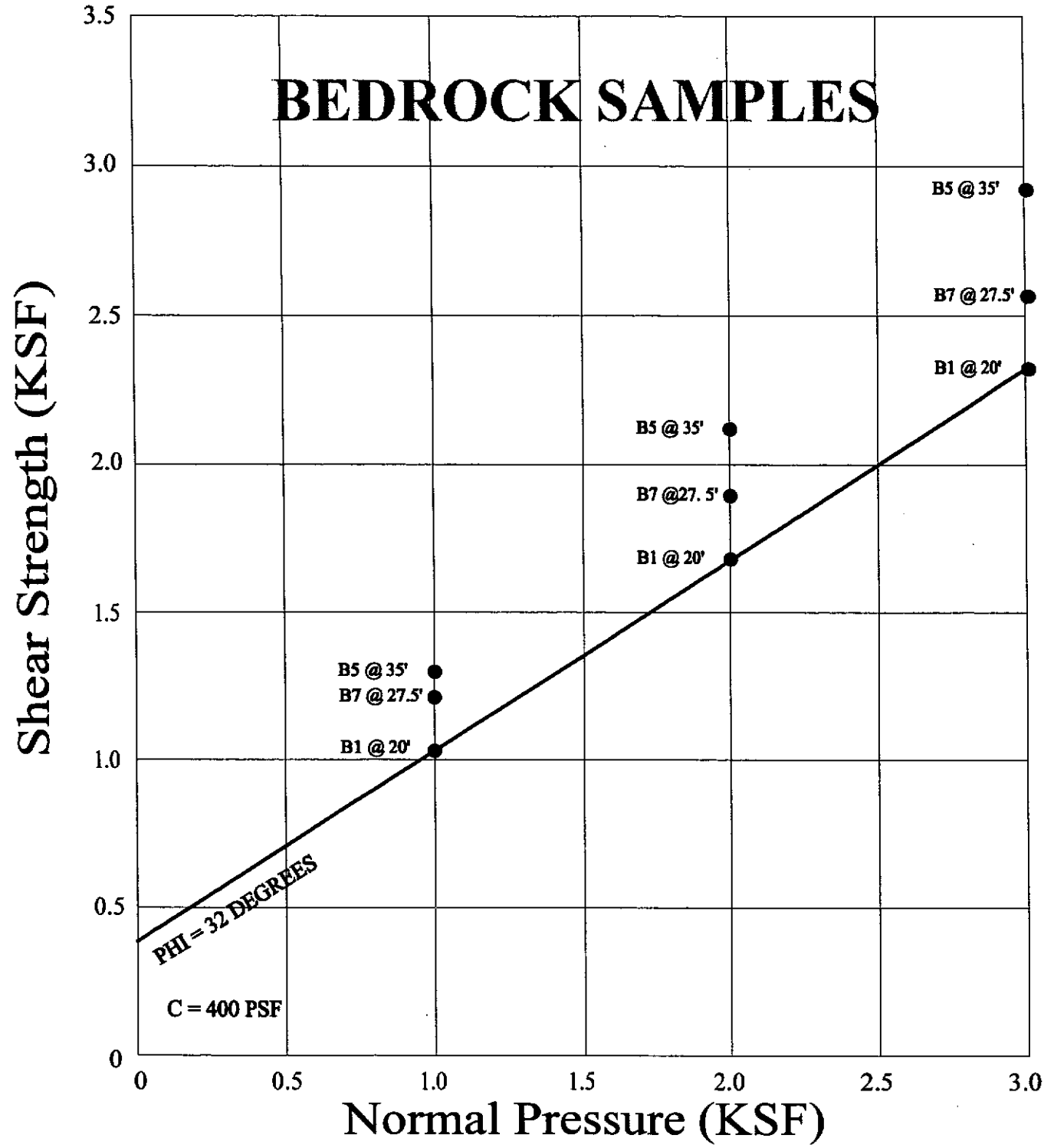


SHEAR TEST DIAGRAM

Geotechnologies, Inc.
Consulting Geotechnical Engineers

THOMAS SAFRAN & ASSOCIATES

FILE NO. 19166 | PLATE: B-1



● Direct Shear, Saturated

SHEAR TEST DIAGRAM

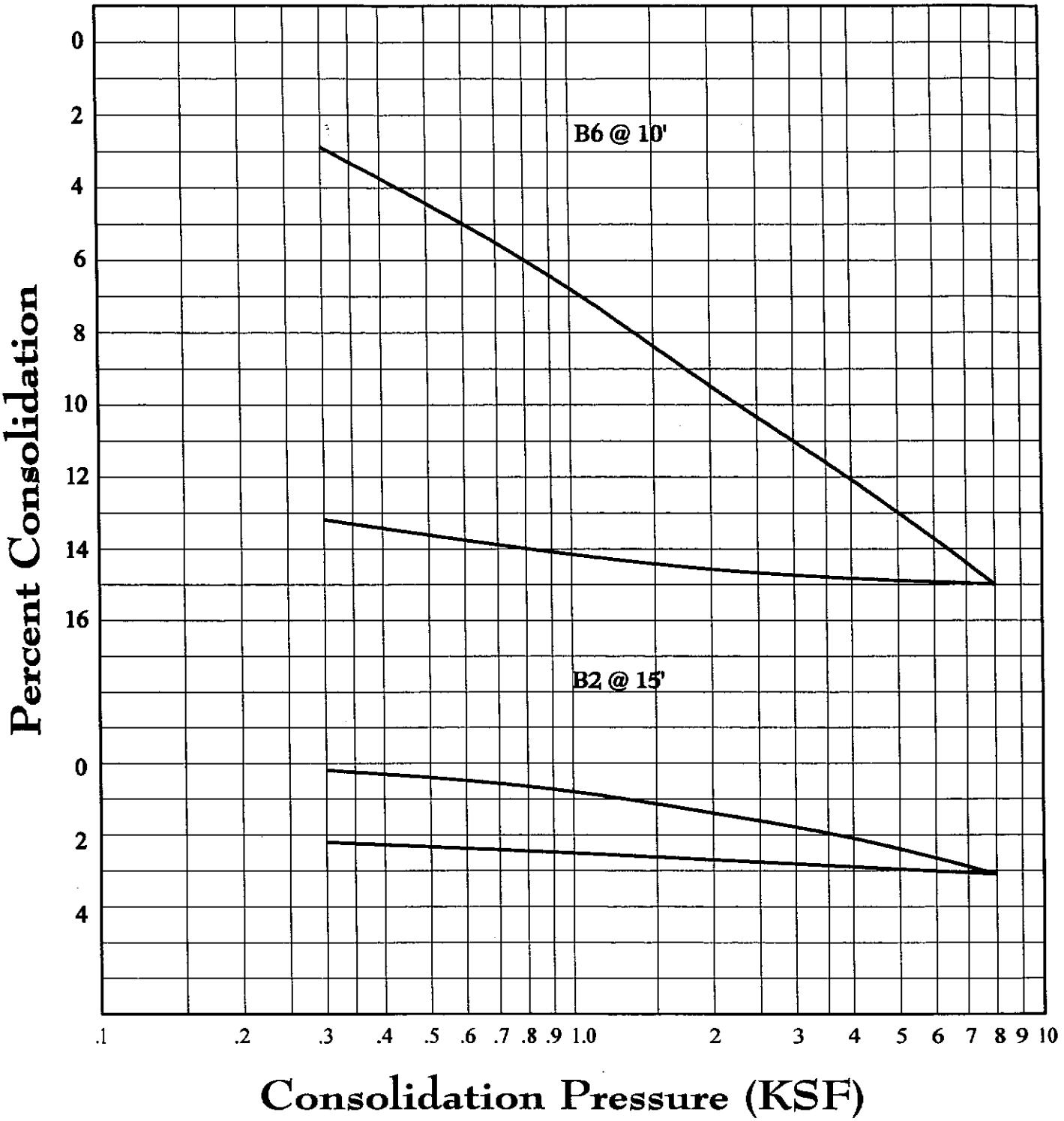
Geotechnologies, Inc.
Consulting Geotechnical Engineers

THOMAS SAFRAN & ASSOCIATES

FILE NO. 19166

PLATE: B-2

WATER ADDED AT 2 KSF



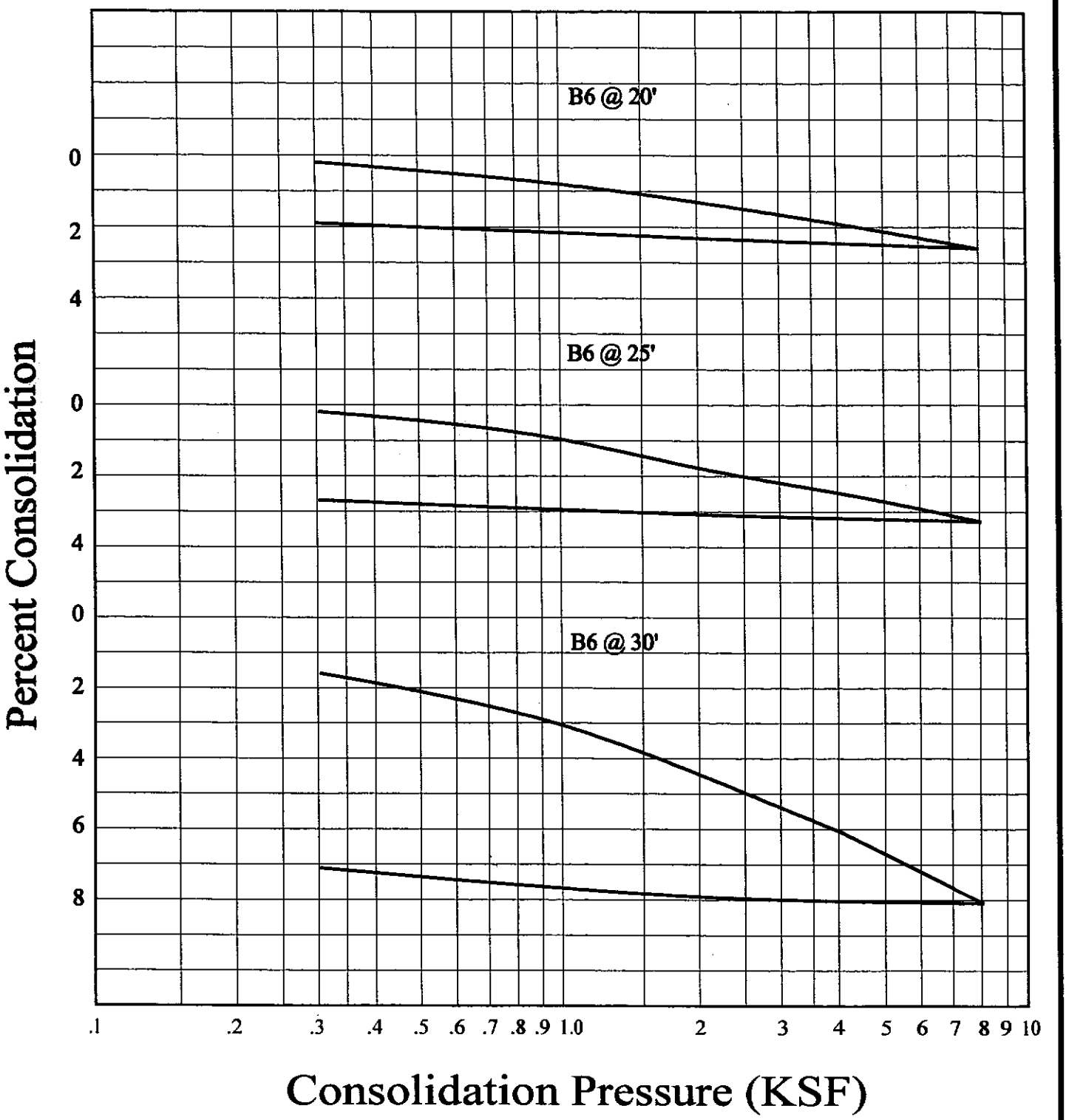
CONSOLIDATION TEST

Geotechnologies, Inc.
Consulting Geotechnical Engineers

THOMAS SAFRAN & ASSOCIATES

FILE NO. 19166 | PLATE: C-1

WATER ADDED AT 2 KSF



CONSOLIDATION TEST

Geotechnologies, Inc.
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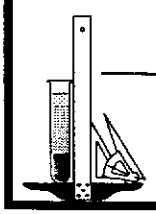
FILE NO. 19166

PLATE: C-2

ASTM D 4829-03
EXPANSION INDEX

SAMPLE	**B3 @ 2'**
SOIL TYPE	**CL**
EXPANSION INDEX UBC STANDARD 18-2	**65**
EXPANSION CHARACTER	**MODERATE**

COMPACTION/EXPANSION/SULFATE DATA SHEET



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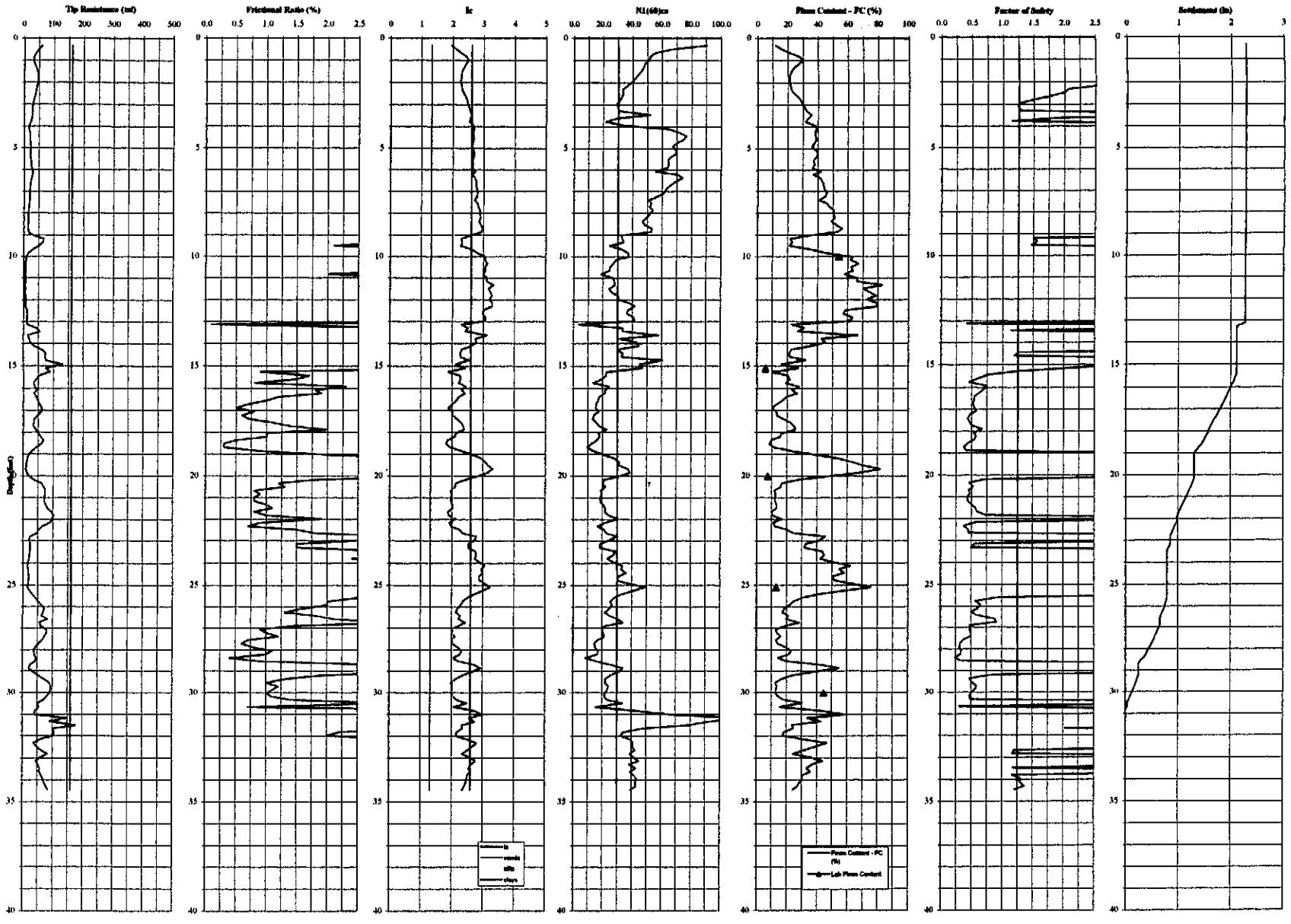
THOMAS SAFRAN & ASSOCIATES

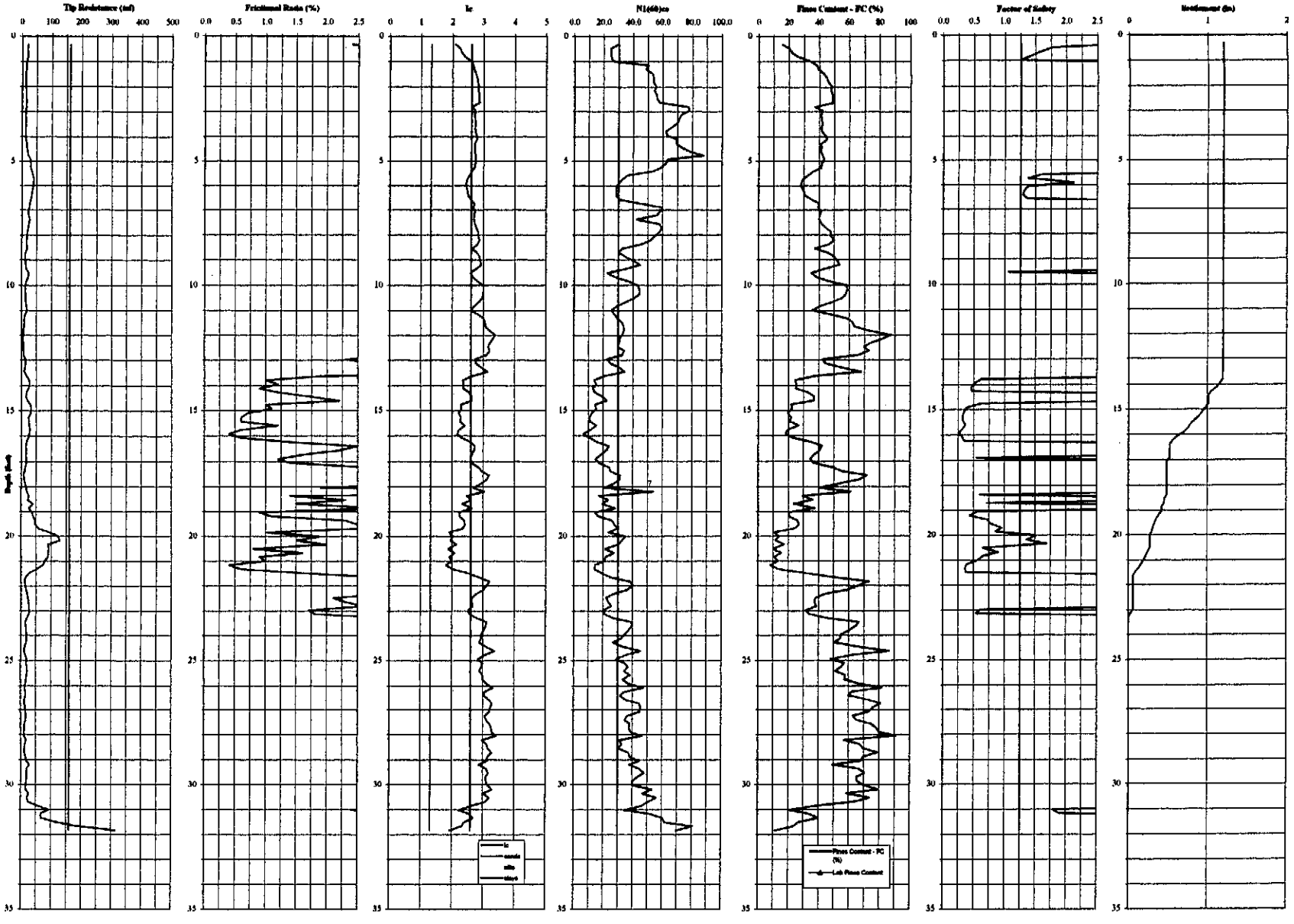
FILE NO. 19166 | PLATE: D



Geotechnologies, Inc.
Client: Thomas Safran & Associates
File No. 19166

CPT Sounding No.: **CPT-02**
Magnitude (M_w) = 7.3
Peak Ground Acceleration 0.45 g

Ground Surface Elevation ?? feet
Depth to Historic High Wa 10.0 feet



Geotechnologies, Inc.

Client: Thomas Safran & Associates

File No. 19166

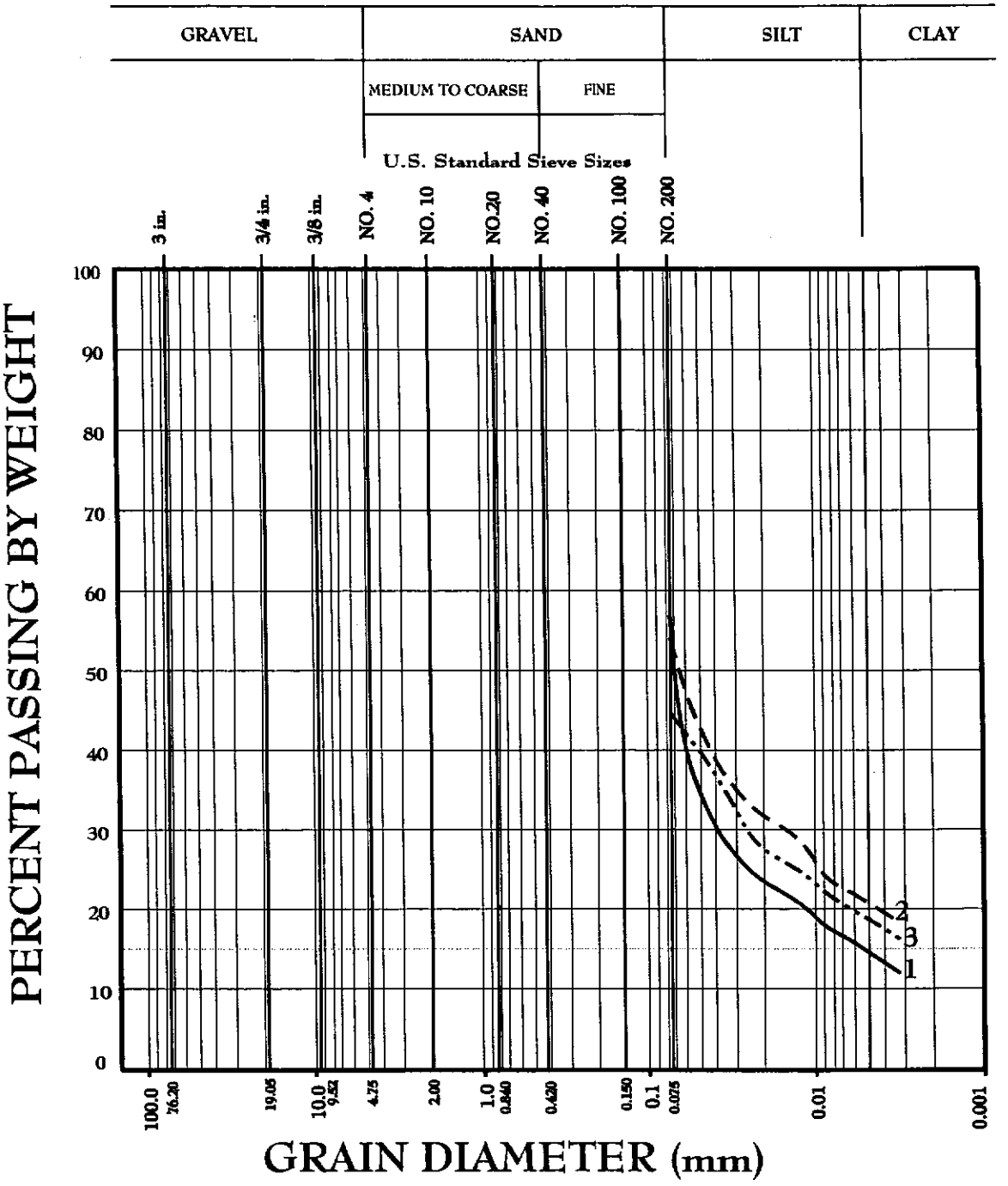
CPT Sounding No.: CPT-03

Magnitude (M_w) = 7.3

Peak Ground Acceleration 0.45 g

Ground Surface Elevation ?? feet

Depth to Historic High We 10.0 feet



SAMPLE	UNIFIED SOIL CLASSIFICATION
1- B4 @ 10'	CL
2- B6 @ 10'	ML
3- B6 @ 30'	SC

GRAIN SIZE DISTRIBUTION

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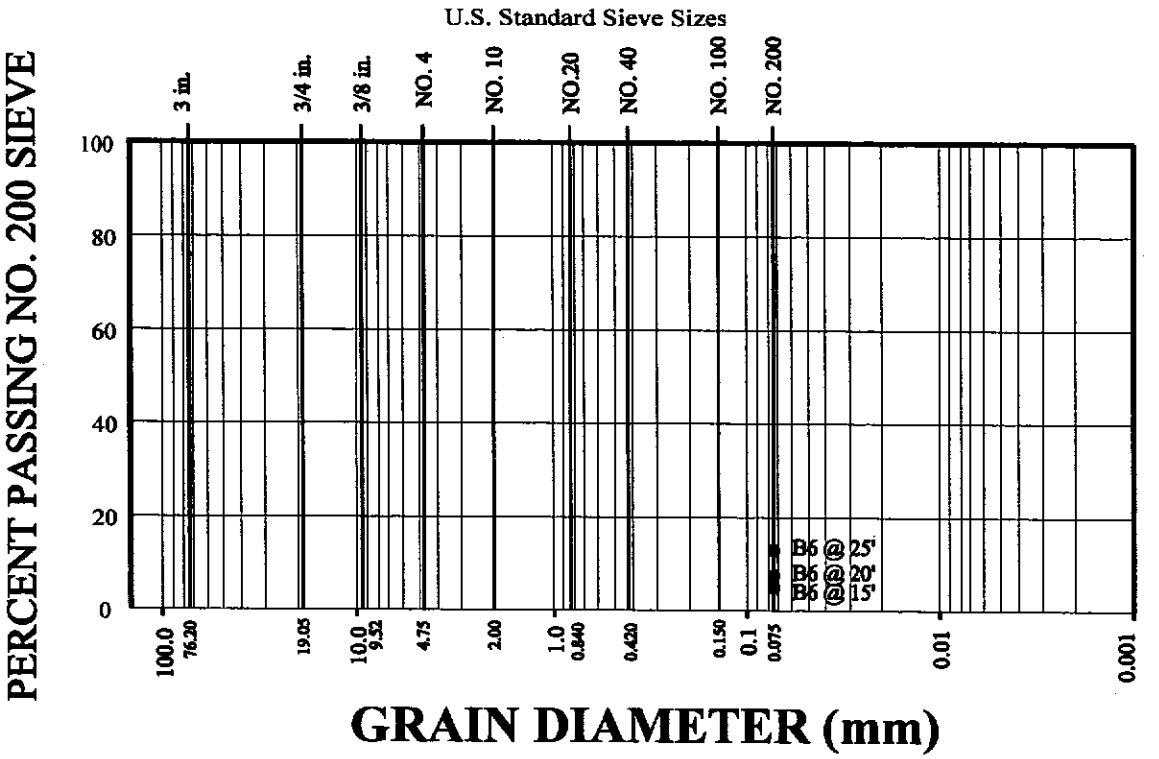
FILE NO. 19166 | PLATE: E-1

GRAVEL	SAND		SILT	CLAY
	MEDIUM TO COARSE	FINE		



SAMPLE	PERCENT PASSING NO. 200 SIEVE
B6 @ 15'	5.6
B6 @ 20'	7.2
B6 @ 25'	13.0

GRAIN SIZE ANALYSIS

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FILE NO. 19166 | PLATE: E-2

TABLE I - FAULTS IN THE VICINITY OF THE SITE

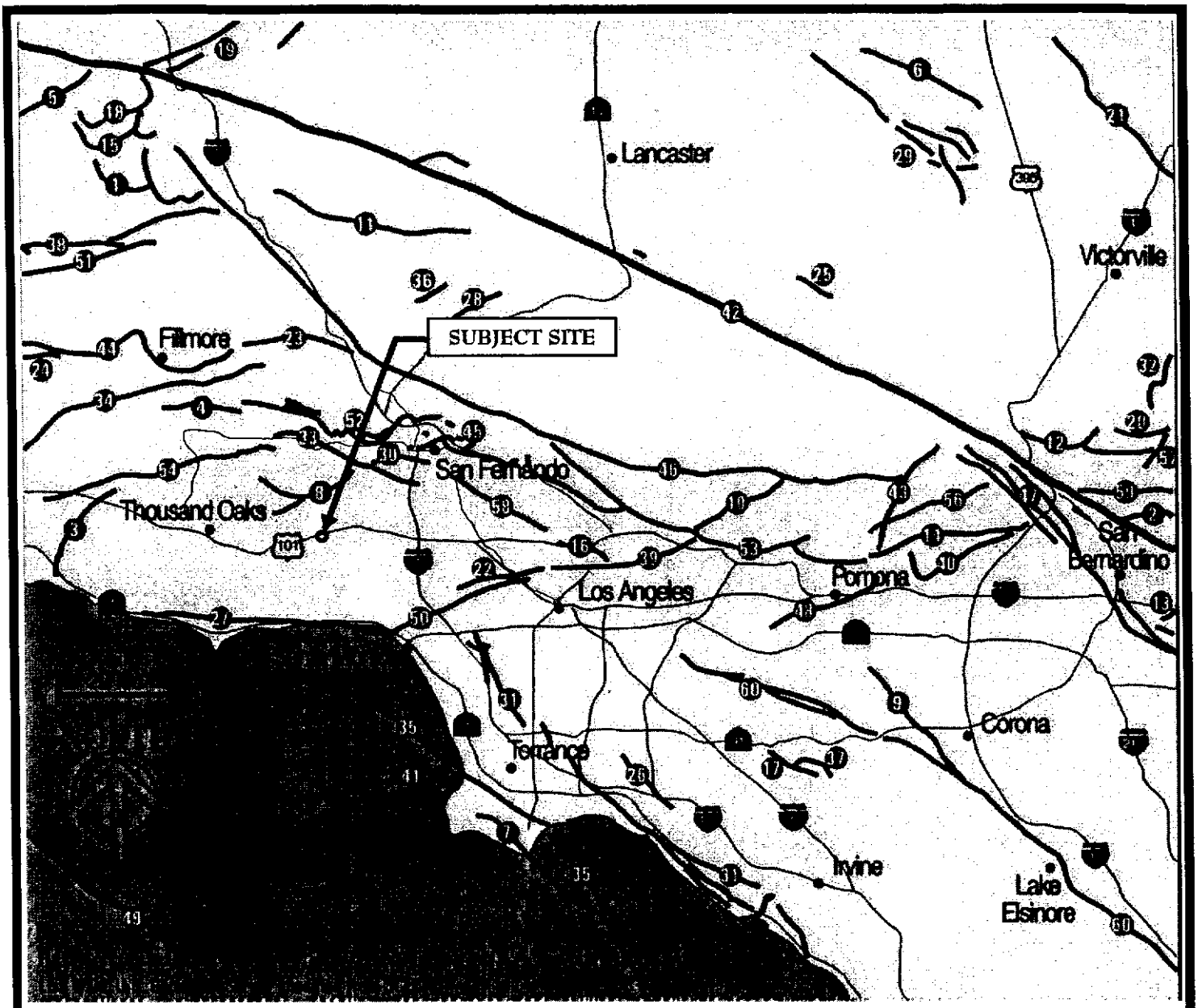
ABBREVIATED FAULT NAME	APPROXIMATE DISTANCE mi (km)	ESTIMATED MAX. EARTHQUAKE EVENT: MAXIMUM EARTHQUAKE MAG. (Mw)	ESTIMATED MAX. EARTHQUAKE EVENT: PEAK SITE ACCEL. g	ESTIMATED MAX. EARTHQUAKE EVENT: EST. SITE INTENSITY MOD.MERC.
MALIBU COAST	7.7(12.4)	6.7	0.542	X
SANTA MONICA	9.5(15.3)	6.6	0.426	X
ANACAPA-DUME	10.1(16.3)	7.5	0.590	X
NORTHRIDGE (E. Oak Ridge)	11.4(18.3)	7.0	0.439	X
SIMI-SANTA ROSA	11.6(18.7)	7.0	0.430	X
SANTA SUSANA	13.0(20.9)	6.7	0.323	IX
HOLLYWOOD	13.7(22.0)	6.4	0.258	IX
PALOS VERDES	15.0(24.1)	7.3	0.364	IX
SIERRA MADRE (San Fernando)	15.1(24.3)	6.7	0.276	IX
OAK RIDGE (Onshore)	16.2(26.0)	7.0	0.304	IX
VERDUGO	16.2(26.1)	6.9	0.287	IX
NEWPORT-INGLEWOOD (L.A.Basin)	16.3(26.3)	7.1	0.296	IX
HOLSER	17.0(27.3)	6.5	0.217	VIII
SAN GABRIEL	19.0(30.5)	7.2	0.276	IX
UPPER ELYSIAN PARK BLIND THRUST	19.8(31.9)	6.4	0.171	VIII
PUENTE HILLS BLIND THRUST	20.8(33.5)	7.1	0.248	IX
SAN CAYETANO	21.5(34.6)	7.0	0.226	IX
SIERRA MADRE	23.2(37.4)	7.2	0.234	IX
RAYMOND	23.9(38.5)	6.5	0.147	VIII
VENTURA - PITAS POINT	31.9(51.4)	6.9	0.136	VIII
SANTA YNEZ (East)	32.9(53.0)	7.1	0.149	VIII
CLAMSHELL-SAWPIT	33.9(54.6)	6.5	0.094	VII
OAK RIDGE(Blind Thrust Offshore)	35.2(56.7)	7.1	0.138	VIII
CHANNEL IS. THRUST (Eastern)	36.4(58.6)	7.5	0.171	VIII
OAK RIDGE MID-CHANNEL STRUCTURE	37.2(59.8)	6.6	0.089	VII
SAN ANDREAS - Mojave M-1c-3	37.2(59.9)	7.4	0.162	VIII
SAN ANDREAS - 1857 Rupture M-2a	37.2(59.9)	7.8	0.215	VIII
SAN ANDREAS - Cho-Moj M-1b-1	37.2(59.9)	7.8	0.215	VIII
SAN ANDREAS - Whole M-1a	37.2(59.9)	8.0	0.246	IX
WHITTIER	37.5(60.3)	6.8	0.102	VII
SAN ANDREAS - Carrizo M-1c-2	38.2(61.5)	7.4	0.158	VIII
M.RIDGE-ARROYO PARIDA-SANTA ANA	38.2(61.5)	7.2	0.134	VIII
RED MOUNTAIN	41.5(66.8)	7.0	0.105	VII
SAN JOSE	43.5(70.0)	6.4	0.061	VI
GARLOCK (West)	48.3(77.8)	7.3	0.114	VII
PLEITO THRUST	49.3(79.3)	7.0	0.082	VII
CHINO-CENTRAL AVE. (Elsinore)	49.6(79.9)	6.7	0.064	VI
BIG PINE	49.7(80.0)	6.9	0.077	VII
CUCAMONGA	49.8(80.1)	6.9	0.075	VII
SANTA CRUZ ISLAND	51.5(82.9)	7.0	0.077	VII

****

-END OF SEARCH-42 FAULTS FOUND WITHIN THE SPECIFIED SEARCH RADIUS.

THE MALIBU COAST FAULT IS CLOSEST TO THE SITE.
IT IS ABOUT 7.7 MILES (12.4 km) AWAY.

LARGEST MAXIMUM-EARTHQUAKE SITE ACCELERATION: 0.5903 g



1 Alamo thrust
2 Arrowhead fault
3 Bailey fault
4 Big Mountain fault
5 Big Pine fault
6 Blake Ranch fault
7 Cabrillo fault
8 Chatsworth fault
9 Chino fault
10 Clamshell-Sawpit fault
11 Clearwater fault
12 Cleghorn fault
13 Crafton Hills fault zone
14 Cucamonga fault zone
15 Dry Creek fault
16 Eagle Rock fault
17 El Modeno fault
18 Frazier Mountain thrust
19 Garlock fault zone
20 Grass Valley fault
21 Helendale fault
22 Hollywood fault
23 Holser fault
24 Lion Canyon fault
25 Llano fault
26 Los Alamitos fault
27 Malibu Coast fault
28 Mint Canyon fault
29 Mirage Valley fault zone
30 Mission Hills fault
31 Newport Inglewood fault zone
32 North Frontal fault zone
33 Northridge Hills fault
34 Oak Ridge fault
35 Palos Verdes fault zone
36 Pelona fault
37 Peralta Hills fault
38 Pine Mountain fault
39 Raymond fault
40 Red Hill (Etiwanda Ave) fault
41 Redondo Canyon fault
42 San Andreas Fault
43 San Antonio fault
44 San Cayetano fault
45 San Fernando fault zone
46 San Gabriel fault zone
47 San Jacinto fault
48 San Jose fault
49 Santa Cruz-Santa Catalina Ridge f.z.
50 Santa Monica fault
51 Santa Ynez fault
52 Santa Susana fault zone
53 Sierra Madre fault zone
54 Simi fault
55 Soledad Canyon fault
56 Stoddard Canyon fault
57 Tunnel Ridge fault
58 Verdugo fault
59 Waterman Canyon fault
60 Whittier fault

SOUTHERN CALIFORNIA FAULT MAP

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FILE NO. 19166 | FIGURE 1

TABLE II - HISTORICAL EARTHQUAKE EPICENTERS

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
GSP	34.2130	118.5370	01/17/1994	123055.4	18.0	6.70	0.573	X	7.0 (11.2)
DMG	34.3000	118.6000	04/04/1893	1940 0.0	0.0	6.00	0.275	IX	10.1 (16.3)
GSP	34.2310	118.4750	03/20/1994	212012.3	13.0	5.30	0.160	VIII	10.6 (17.1)
GSP	34.3050	118.5790	01/29/1994	112036.0	1.0	5.10	0.137	VIII	10.8 (17.3)
GSB	34.3010	118.5650	01/17/1994	204602.4	9.0	5.20	0.147	VIII	10.8 (17.4)
GSP	34.3260	118.6980	01/17/1994	233330.7	9.0	5.60	0.172	VIII	12.2 (19.6)
DMG	34.0000	118.5000	08/04/1927	1224 0.0	0.0	5.00	0.099	VII	13.4 (21.5)
MGI	34.0000	118.5000	11/19/1918	2018 0.0	0.0	5.00	0.099	VII	13.4 (21.5)
DMG	33.9500	118.6320	08/31/1930	04036.0	0.0	5.20	0.108	VII	14.3 (23.0)
GSP	34.3690	118.6720	04/26/1997	103730.7	16.0	5.10	0.095	VII	14.8 (23.8)
DMG	34.3080	118.4540	02/09/1971	144346.7	6.2	5.20	0.103	VII	14.8 (23.8)
PAS	33.9440	118.6810	01/01/1979	231438.9	11.3	5.00	0.086	VII	14.9 (24.0)
GSP	34.3780	118.6180	01/19/1994	211144.9	11.0	5.10	0.090	VII	15.3 (24.7)
GSP	34.3770	118.6980	01/18/1994	004308.9	11.0	5.20	0.096	VII	15.6 (25.1)
GSB	34.3790	118.7110	01/19/1994	210928.6	14.0	5.50	0.119	VII	15.9 (25.6)
PAS	33.9190	118.6270	01/19/1989	65328.8	11.9	5.00	0.076	VII	16.4 (26.4)
GSP	34.3940	118.6690	06/26/1995	084028.9	13.0	5.00	0.076	VII	16.5 (26.5)
MGI	34.0000	118.3000	09/03/1905	540 0.0	0.0	5.30	0.065	VI	22.2 (35.6)
DMG	34.4110	118.4010	02/09/1971	141028.0	8.0	5.30	0.065	VI	22.2 (35.7)
DMG	34.4110	118.4010	02/09/1971	14 244.0	8.0	5.80	0.098	VII	22.2 (35.7)
DMG	34.4110	118.4010	02/09/1971	14 041.8	8.4	6.40	0.150	VIII	22.2 (35.7)
DMG	34.4110	118.4010	02/09/1971	14 1 8.0	8.0	5.80	0.098	VII	22.2 (35.7)
MGI	34.0800	118.2600	07/16/1920	18 8 0.0	0.0	5.00	0.051	VI	22.2 (35.8)
DMG	34.0000	119.0000	09/24/1827	4 0 0.0	0.0	7.00	0.206	VIII	23.3 (37.6)
MGI	34.0000	119.0000	12/14/1912	0 0 0.0	0.0	5.70	0.084	VII	23.3 (37.6)
DMG	34.0650	119.0350	02/21/1973	144557.3	8.0	5.90	0.097	VII	23.6 (37.9)
T-A	34.0000	118.2500	09/23/1827	0 0 0.0	0.0	5.00	0.044	VI	24.7 (39.7)
T-A	34.0000	118.2500	03/26/1860	0 0 0.0	0.0	5.00	0.044	VI	24.7 (39.7)
T-A	34.0000	118.2500	01/10/1856	0 0 0.0	0.0	5.00	0.044	VI	24.7 (39.7)
DMG	33.8500	118.2670	03/11/1933	1425 0.0	0.0	5.00	0.033	V	30.0 (48.3)
MGI	34.1000	118.1000	07/11/1855	415 0.0	0.0	6.30	0.091	VII	31.0 (49.9)
PAS	34.0730	118.0980	10/04/1987	105938.2	8.2	5.30	0.040	V	31.4 (50.5)
PAS	34.0610	118.0790	10/01/1987	144220.0	9.5	5.90	0.062	VI	32.6 (52.5)
DMG	33.7830	118.2500	11/14/1941	84136.3	0.0	5.40	0.039	V	34.0 (54.8)
DMG	34.5190	118.1980	08/23/1952	10 9 7.1	13.1	5.00	0.026	V	35.4 (57.0)
GSP	34.2620	118.0020	06/28/1991	144354.5	11.0	5.40	0.034	V	37.0 (59.6)
MGI	34.0000	118.0000	12/25/1903	1745 0.0	0.0	5.00	0.024	V	38.1 (61.2)
DMG	33.7830	118.1330	10/02/1933	91017.6	0.0	5.40	0.032	V	38.8 (62.4)
DMG	34.2000	117.9000	08/28/1889	215 0.0	0.0	5.50	0.031	V	42.3 (68.0)
DMG	33.7500	118.0830	03/11/1933	910 0.0	0.0	5.10	0.022	IV	42.4 (68.3)
DMG	33.7500	118.0830	03/11/1933	230 0.0	0.0	5.10	0.022	IV	42.4 (68.3)
DMG	33.7500	118.0830	03/13/1933	131828.0	0.0	5.30	0.026	V	42.4 (68.3)
DMG	33.7500	118.0830	03/11/1933	2 9 0.0	0.0	5.00	0.021	IV	42.4 (68.3)
DMG	33.7500	118.0830	03/11/1933	323 0.0	0.0	5.00	0.021	IV	42.4 (68.3)
DMG	34.7000	119.0000	10/23/1916	254 0.0	0.0	5.50	0.030	V	42.8 (68.9)
PAS	33.6710	119.1110	09/04/1981	155050.3	5.0	5.30	0.026	V	43.1 (69.4)
DMG	34.1000	119.4000	05/19/1893	035 0.0	0.0	5.50	0.029	V	43.7 (70.4)
DMG	33.7000	118.0670	03/11/1933	85457.0	0.0	5.10	0.020	IV	45.4 (73.1)
DMG	33.7000	118.0670	03/11/1933	51022.0	0.0	5.10	0.020	IV	45.4 (73.1)
T-A	34.8300	118.7500	11/27/1852	0 0 0.0	0.0	7.00	0.088	VII	46.9 (75.5)
DMG	33.6830	118.0500	03/11/1933	658 3.0	0.0	5.50	0.027	V	47.0 (75.6)
DMG	33.9860	119.4750	08/06/1973	232917.0	16.9	5.00	0.017	IV	49.3 (79.3)
DMG	34.0000	119.5000	02/18/1926	1818 0.0	0.0	5.00	0.016	IV	50.5 (81.2)

EARTHQUAKE SEARCH RESULTS

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
DMG	33.6170	118.0170	03/14/1933	19 150.0	0.0	5.10	0.017	IV	51.5(82.9)
DMG	34.8000	119.1000	09/05/1883	1230 0.0	0.0	6.00	0.035	V	51.6(83.1)
DMG	34.8670	118.9330	09/21/1941	1953 7.2	0.0	5.20	0.018	IV	51.8(83.4)
DMG	34.9000	118.9000	10/23/1916	244 0.0	0.0	6.00	0.033	V	53.4(86.0)
DMG	33.6170	117.9670	03/11/1933	154 7.8	0.0	6.30	0.042	VI	53.6(86.2)
GSP	34.1400	117.7000	02/28/1990	234336.6	5.0	5.20	0.017	IV	53.6(86.3)
DMG	34.9000	118.9500	08/01/1952	13 430.0	0.0	5.10	0.016	IV	54.3(87.4)
DMG	34.5000	119.5000	08/05/1930	1125 0.0	0.0	5.00	0.014	IV	54.6(87.8)
DMG	34.5000	119.5000	06/29/1926	2321 0.0	0.0	5.50	0.021	IV	54.6(87.8)
PAS	34.9430	118.7430	06/10/1988	23 643.0	6.8	5.40	0.020	IV	54.6(87.9)
DMG	33.5750	117.9830	03/11/1933	518 4.0	0.0	5.20	0.017	IV	55.0(88.5)
T-A	34.9200	118.9200	01/20/1857	0 0 0.0	0.0	5.00	0.014	IV	55.1(88.6)
T-A	34.9200	118.9200	05/23/1857	0 0 0.0	0.0	5.00	0.014	IV	55.1(88.6)
DMG	34.3670	119.5830	07/01/1941	75054.8	0.0	5.90	0.029	V	55.8(89.9)
DMG	34.9500	118.8670	07/21/1952	121936.0	0.0	5.30	0.017	IV	56.3(90.6)
DMG	34.9320	118.9760	03/01/1963	02557.9	13.9	5.00	0.014	III	56.9(91.5)
DMG	34.9410	118.9870	11/15/1961	53855.5	10.7	5.00	0.013	III	57.7(92.8)
DMG	34.3700	117.6500	12/08/1812	15 0 0.0	0.0	7.00	0.065	VI	58.3(93.8)
DMG	35.0000	118.8330	07/23/1952	75319.0	0.0	5.40	0.018	IV	59.3(95.4)
DMG	35.0000	118.8330	07/23/1952	181351.0	0.0	5.20	0.015	IV	59.3(95.4)

****

-END OF SEARCH- 73 EARTHQUAKES FOUND WITHIN THE SPECIFIED SEARCH AREA.

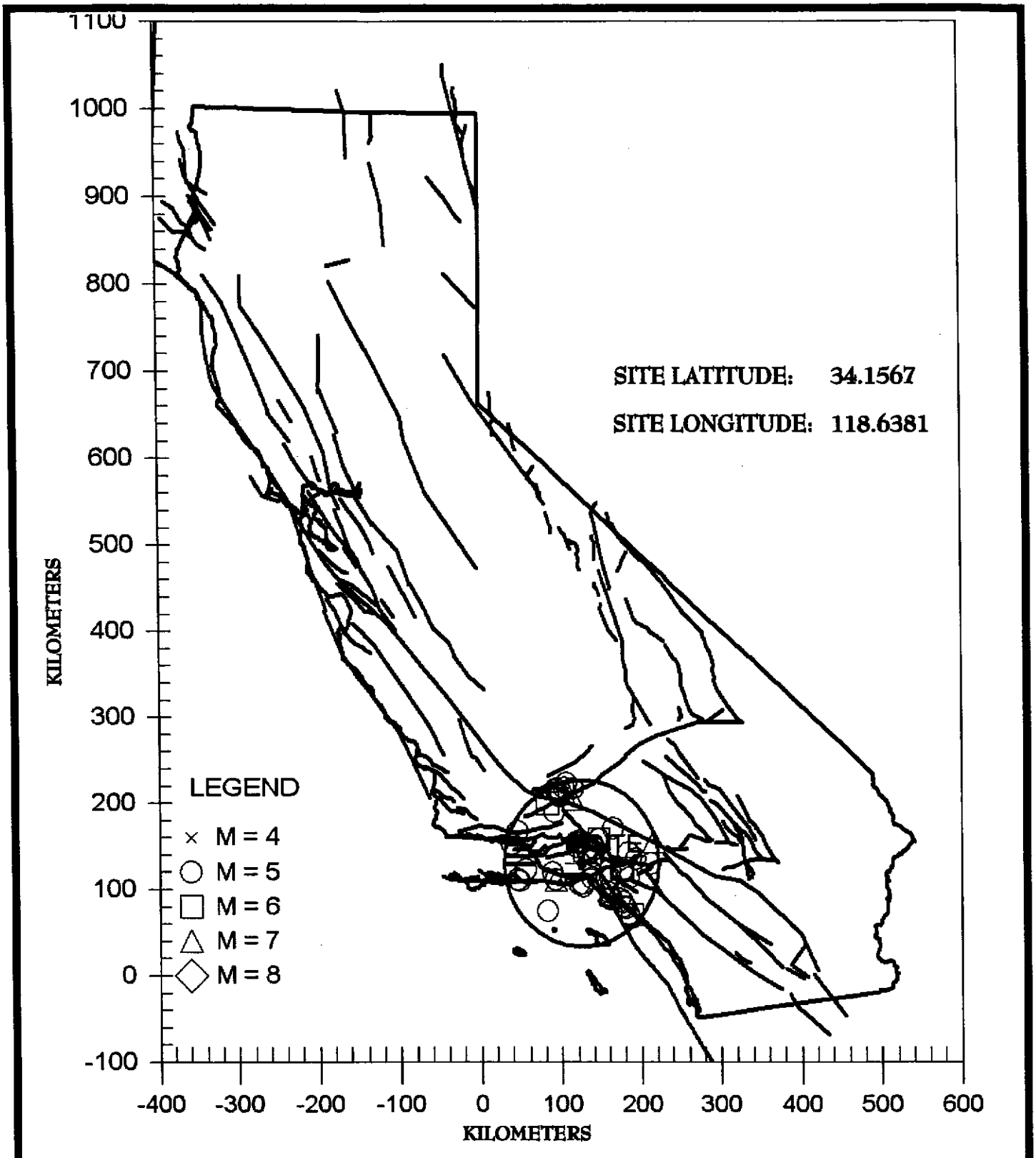
TIME PERIOD OF SEARCH: 1800 TO 2006

LENGTH OF SEARCH TIME: 207 years

THE EARTHQUAKE CLOSEST TO THE SITE IS ABOUT 7.0 MILES (11.2 km) AWAY.

LARGEST EARTHQUAKE MAGNITUDE FOUND IN THE SEARCH RADIUS: 7.0

LARGEST EARTHQUAKE SITE ACCELERATION FROM THIS SEARCH: 0.573 g



EARTHQUAKE EPICENTERS MAP

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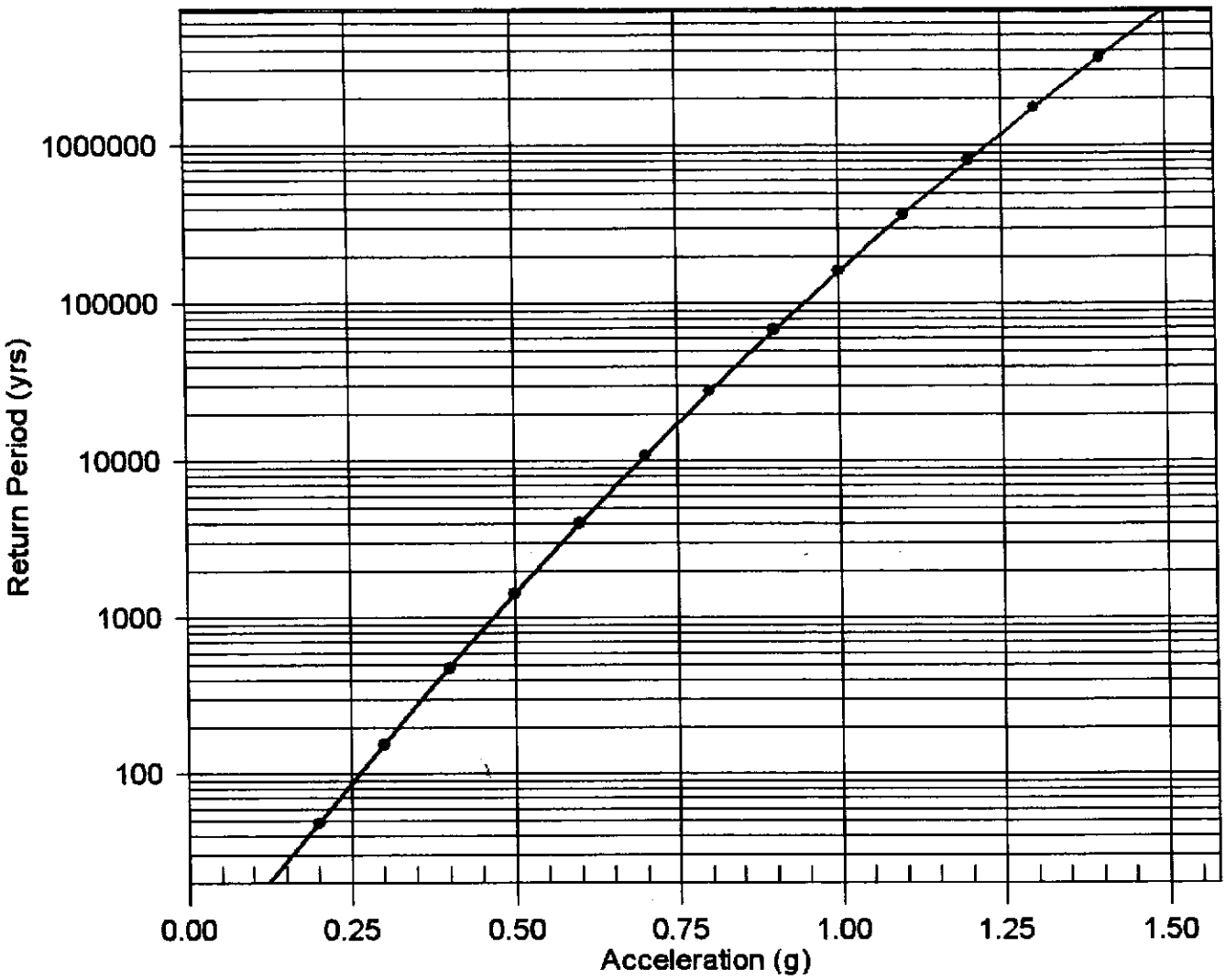
FILE NO. 19166 | FIGURE II



RETURN PERIOD vs ACCELERATION

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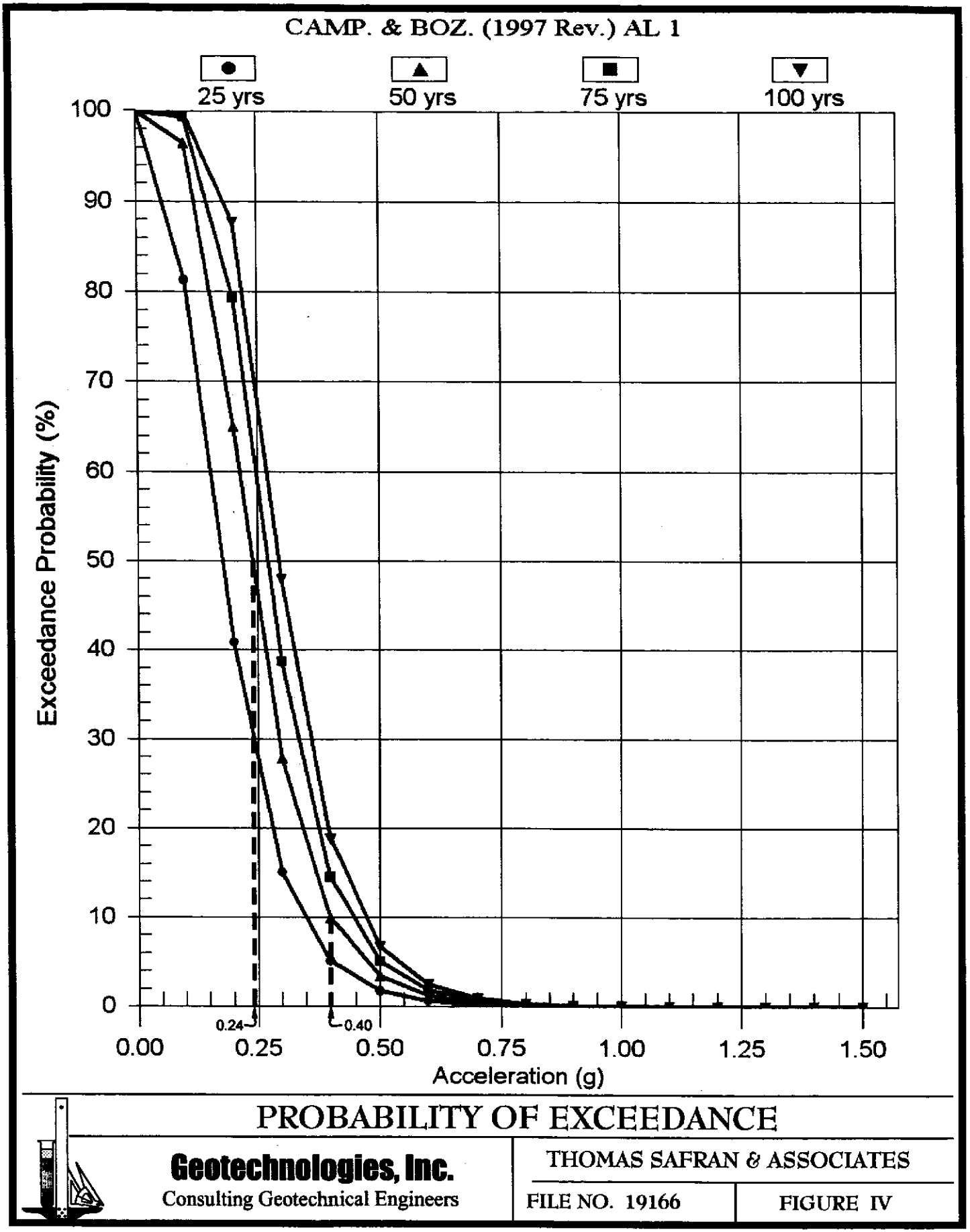
FILE NO. 19166 | FIGURE III



PROBABILITY OF EXCEEDANCE

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FILE NO. 19166 | FIGURE IV

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May 12, 2006 via fax: 818.240.9675

GEOTECHNOLOGIES, INC.
439 Western Avenue
Glendale, CA 91201-2837

Attention: Mr. Scott Moore, GE
Manager of Engineering

Re: Soil Corrosivity Study
Safran
Calabasas, California
GI #19166, SA #06-0728SCS

INTRODUCTION

Laboratory tests have been completed on four soil samples provided for the referenced project. The purpose of these tests was to determine if the soils might have deleterious effects on underground utility piping, hydraulic elevator cylinders, and concrete structures. We assume that the samples provided are representative of the most corrosive soils at the site.

The proposed structure is a four-story apartment building with one subterranean level. The site is located at 4803 El Canon Avenue in Calabasas, California and the ground water level is approximately thirteen feet deep.

The scope of this study is limited to a determination of soil corrosivity and general corrosion control recommendations for materials likely to be used for construction. Our recommendations do not constitute, and are not meant as a substitute for, design documents for the purpose of construction. If the architects and/or engineers desire more specific information, designs, specifications, or review of design, we will be happy to work with them as a separate phase of this project.

LABORATORY SOIL CORROSIVITY TESTS

The electrical resistivity of each sample was measured in a soil box per ASTM G57 in its as-received condition and again after saturation with distilled water. Resistivities are at about their lowest value when the soil is saturated. The pH of the saturated samples was measured. A 5:1 water:soil extract from each sample was chemically analyzed for the major soluble salts commonly found in soils and for ammonium and nitrate. Test results are shown in Table 1.

431 West Baseline Road · Claremont, CA 91711
Phone: 909.626.0967 · Fax: 909.626.3316

SOIL CORROSIVITY

A major factor in determining soil corrosivity is electrical resistivity. The electrical resistivity of a soil is a measure of its resistance to the flow of electrical current. Corrosion of buried metal is an electrochemical process in which the amount of metal loss due to corrosion is directly proportional to the flow of electrical current (DC) from the metal into the soil. Corrosion currents, following Ohm's Law, are inversely proportional to soil resistivity. Lower electrical resistivities result from higher moisture and soluble salt contents and indicate corrosive soil.

A correlation between electrical resistivity and corrosivity toward ferrous metals is:

Soil Resistivity in ohm-centimeters			Corrosivity Category
over		10,000	mildly corrosive
2,000	to	10,000	moderately corrosive
1,000	to	2,000	corrosive
below		1,000	severely corrosive

Other soil characteristics that may influence corrosivity towards metals are pH, soluble salt content, soil types, aeration, anaerobic conditions, and site drainage.

Electrical resistivities were in the mildly corrosive and corrosive categories with as-received moisture. When saturated, the resistivities were in the corrosive to severely corrosive categories. One as-received resistivity was near its saturated value. The remaining resistivities dropped considerably with added moisture because the samples were dry as-received.

Soil pH values varied from 6.8 to 7.4. This range is neutral to mildly alkaline.

The soluble salt content of the samples ranges from low to moderate.

Nitrate was detected in low concentrations. The detected ammonium concentration was high enough to be deleterious to copper.

Tests were not made for sulfide and negative oxidation-reduction (redox) potential because these samples did not exhibit characteristics typically associated with anaerobic conditions.

This soil is classified as severely corrosive to ferrous metals and aggressive to copper.

CORROSION CONTROL RECOMMENDATIONS

The life of buried materials depends on thickness, strength, loads, construction details, soil moisture, etc., in addition to soil corrosivity, and is, therefore, difficult to predict. Of more practical value are corrosion control methods that will increase the life of materials that would be subject to significant corrosion.

Steel Pipe

Abrasive blast underground steel piping and apply a dielectric coating such as polyurethane, extruded polyethylene, a tape coating system, hot applied coal tar enamel, or fusion bonded epoxy intended for underground use.

Bond underground steel pipe with rubber gasketed, mechanical, grooved end, or other nonconductive type joints for electrical continuity. Electrical continuity is necessary for corrosion monitoring and cathodic protection.

Electrically insulate each buried steel pipeline from dissimilar metals and metals with dissimilar coatings (cement-mortar vs. dielectric), and above ground steel pipe to prevent dissimilar metal corrosion cells and to facilitate the application of cathodic protection.

Apply cathodic protection to steel piping as per NACE International Standard RP0169-2002. The amount of cathodic protection current needed can be minimized by coating the pipe.

As an alternative to dielectric coating and cathodic protection, apply a ¾-inch cement mortar coating or encase in concrete 3 inches thick, using any type of cement.

Some steel piping systems, such as for gas and oil, have special corrosion and cathodic protection requirements that must be evaluated for each specific application.

Hydraulic Elevator

Coat hydraulic elevator cylinders as described above for steel pipe. Electrically insulate each cylinder from building metals by installing dielectric material between the piston platen and car, insulating the bolts, and installing an insulated joint in the oil line. Apply cathodic protection to hydraulic cylinders as per NACE International Standard RP0169-2002. As an alternative to electrical insulation and cathodic protection, place each cylinder in a plastic casing with a plastic watertight seal at the bottom.

The elevator oil line should be placed above ground if possible but, if underground, should be protected by providing a bonded dielectric coating, electrically isolating the pipeline, and applying of cathodic protection to steel piping as per NACE International Standard RP0169-2002; or should be placed in a PVC casing pipe to prevent contact with soil and soil moisture.

Iron Pipe

Pressurized Pipe:

Encase pressurized cast and ductile iron piping per AWWA Standard C105, coat with epoxy or polyurethane intended for underground use, or with wax tape per AWWA C217. The thin factory-applied asphaltic coating applied to ductile iron pipe for transportation and aesthetic purposes does not constitute a corrosion control coating. Electrically insulate underground iron pipe from dissimilar metals and from above ground iron pipe with insulating joints per NACE International Standard RP0286-2002. Bond all nonconductive type joints for electrical continuity. Apply cathodic protection to cast and ductile iron piping as per NACE International Standard RP0169-2002.

Non-Pressurized Pipe (Select one of the following alternatives for protection):

1. Polyethylene encase cast- and ductile-iron piping per AWWA Standard C105. Electrically insulate underground pipe from dissimilar metals and from above ground iron pipe with insulating joints per NACE International Standard RP0286-2002. Protect all non-cast iron and non-ductile iron fittings and valves with wax tape per AWWA Standard C217-99 after assembly.
2. Concrete encase all buried portions of metallic piping so that there is a minimum of 3-inches of concrete cover provided over and around surfaces of pipe, fittings, and valves.
3. Apply cathodic protection to cast and ductile iron piping as per NACE International Standard RP0169-2002. The amount of cathodic protection current needed can be minimized by coating the piping.

Copper Tubing

Protect buried copper tubing by one of the following measures:

1. Prevention of soil contact. Soil contact may be prevented by routing the tubing above ground.
2. Installation of a factory coated copper pipe with a minimum of 100-mil thickness such as "Aqua Shield" or similar products. Polyethylene coating protects against elements that corrode copper and prevents contamination between copper and sleeving. However, it must be continuous with no cuts or defects if installed underground.
3. Wrapping of copper with 12-mil polyethylene pipe wrapping tape with butyl rubber mastic over a suitable primer. Protect wrapped copper tubing by applying cathodic protection per NACE International Standard RP0169-2002. The amount of cathodic protection current needed can be minimized by coating the tubing.

Plastic and Vitrified Clay Pipe

No special precautions are required for plastic and vitrified clay piping placed underground from a corrosion viewpoint. Protect all metallic fittings and valves with wax tape per AWWA Standard C217-99 or epoxy.

All Pipe

On all pipes, appurtenances, and fittings not protected by cathodic protection, coat bare metal such as valves, bolts, flange joints, joint harnesses, and flexible couplings with wax tape per AWWA Standard C217-99 after assembly.

Where metallic pipelines penetrate concrete structures such as building floors, vault walls, and thrust blocks use plastic sleeves, rubber seals, or other dielectric material to prevent pipe contact with the concrete and reinforcing steel.

Concrete

Any type of cement may be used for concrete structures and pipe because the sulfate concentration is negligible, 0 to 0.1 percent, per 1997 Uniform Building Code (UBC) Table 19-A-4 and American Concrete Institute (ACI-318) Table 4.3.1.

Standard concrete cover over reinforcing steel may be used for concrete structures and pipe in contact with these soils.

Due to the high ground water table encountered at this site, cyclical or continual wetting may be an issue. Any contact between concrete structures and ground water should be prevented. Contact can be prevented with impermeable, waterproof, acid resistant barrier coatings such as Liquid Boot®.

Concrete Piles

It is assumed that prestressed concrete piles will contain about 8 sacks of type V prestress cement per cubic yard of concrete, a water/cement ratio not exceeding 0.45, and 2 inches of concrete cover. No further corrosion control measures are required for such piles. If ground water is present, solid steel lifting lugs are recommended to prevent ground water from wicking into the pile interior. If wire rope lifting lugs are used, they should be carefully drilled out 1.5 inches deep and the hole filled with epoxy.

CLOSURE

Our services have been performed with the usual thoroughness and competence of the engineering profession. No other warranty or representation, either expressed or implied, is included or intended.

Please call if you have any questions.

Respectfully Submitted,
SCHIFF ASSOCIATES

Brien Clark, EIT

Reviewed by,

John W. French, P. E.

Enc: Table 1

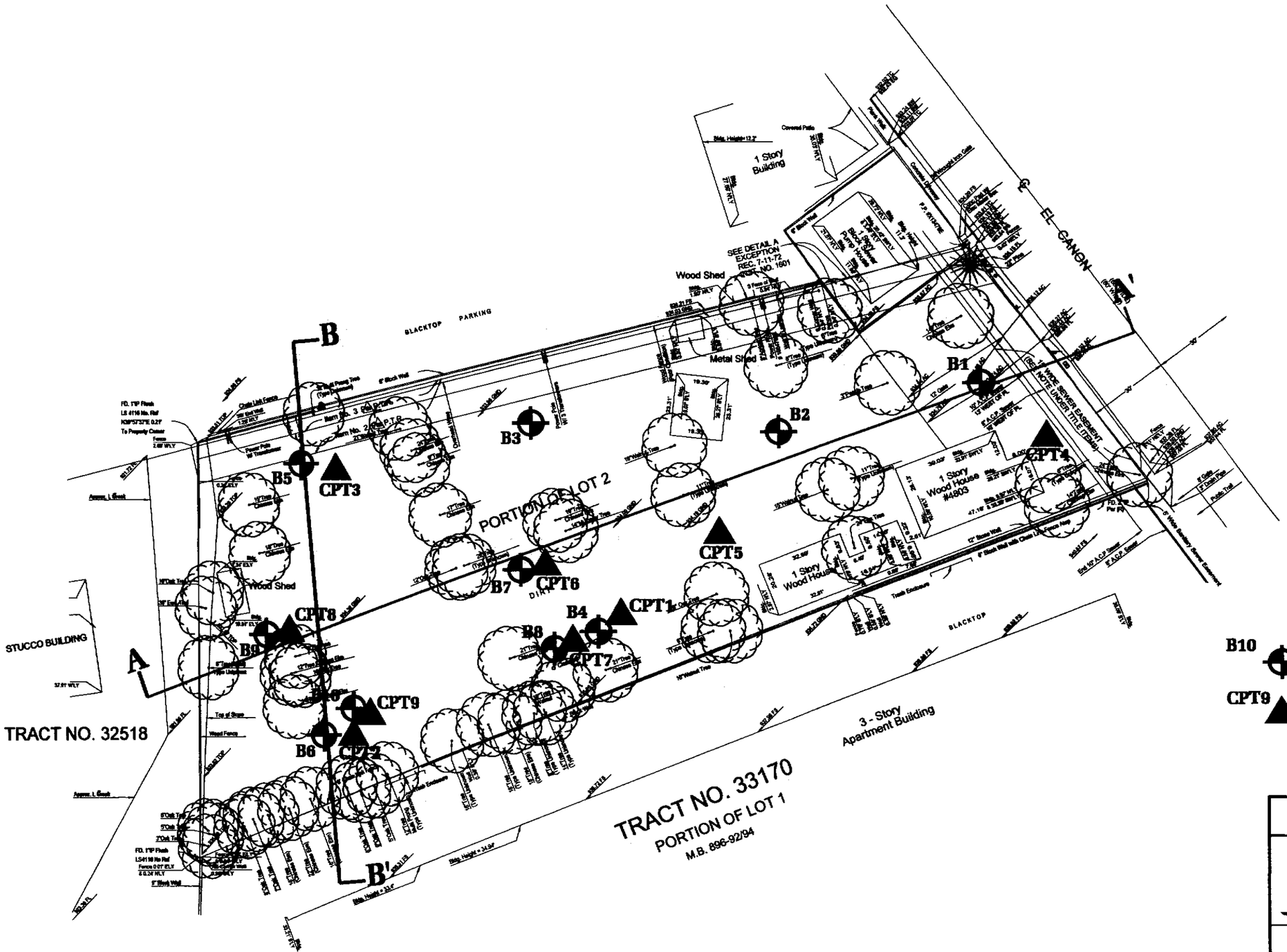
Table 1 - Laboratory Tests on Soil Samples

Geotechnologies, Inc.
Safran, Calabasas, CA
Your #19166, MJS&A #06-0728SCS
28-Apr-06

Sample ID			B1 @ 2' Silty Clay	B5 @ 7'	B2 @ 10'	B4 @ 20'
Resistivity		**Units**				
as-received		ohm-cm	1,200	11,000	20,000	16,000
saturated		ohm-cm	1,000	900	1,800	670
pH			6.8	7.1	7.4	7.0
Electrical Conductivity		mS/cm	0.40	0.43	0.14	0.40
Chemical Analyses						
Cations						
calcium	Ca^{2+}	mg/kg	112	216	108	140
magnesium	Mg^{2+}	mg/kg	105	32	90	63
sodium	Na^{1+}	mg/kg	ND	32	ND	ND
Anions						
carbonate	CO_3^{2-}	mg/kg	ND	ND	ND	ND
bicarbonate	HCO_3^{1-}	mg/kg	378	567	174	244
chloride	Cl^{1-}	mg/kg	20	20	15	85
sulfate	SO_4^{2-}	mg/kg	42	236	74	208
Other Tests						
ammonium	NH_4^{1+}	mg/kg	22.1	14.5	0.5	0.3
nitrate	NO_3^{1-}	mg/kg	ND	ND	ND	1.6
sulfide	S^{2-}	qual	na	na	na	na
Redox		mV	na	na	na	na

Electrical conductivity in millisiemens/cm and chemical analysis were made on a 1:5 soil-to-water extract.
mg/kg = milligrams per kilogram (parts per million) of dry soil.
Redox = oxidation-reduction potential in millivolts
ND = not detected
na = not analyzed

431 West Baseline Road · Claremont, CA 91711
Phone: 909.626.0967 · Fax: 909.626.3316



LEGEND

B10 ⊕ LOCATION & NUMBER OF BORING

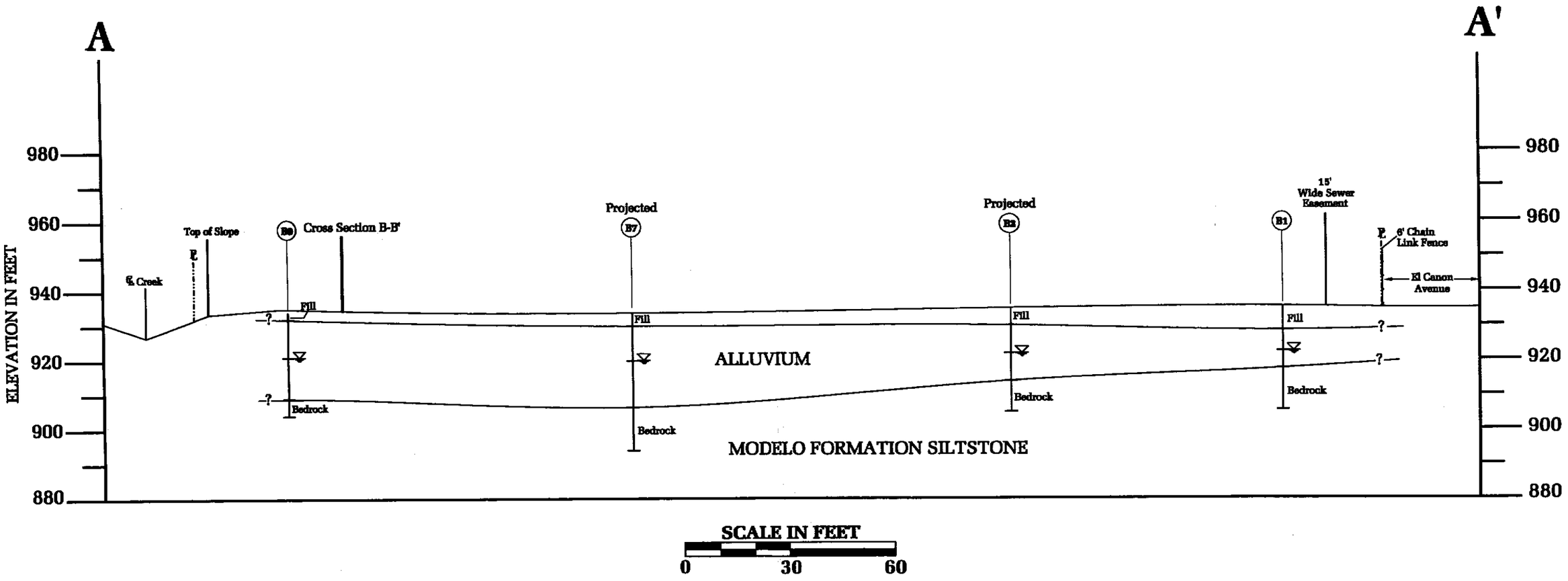
CPT9 ▲ LOCATION & NUMBER OF CPT

PLOT PLAN

Geotechnologies, Inc.
Consulting Geotechnical Engineers

THOMAS SAFRAN & ASSOCIATES

FILE No. 19166	DRAWN BY: AB
DATE: October '06	SHEET: 1 of 1



SCALE IN FEET

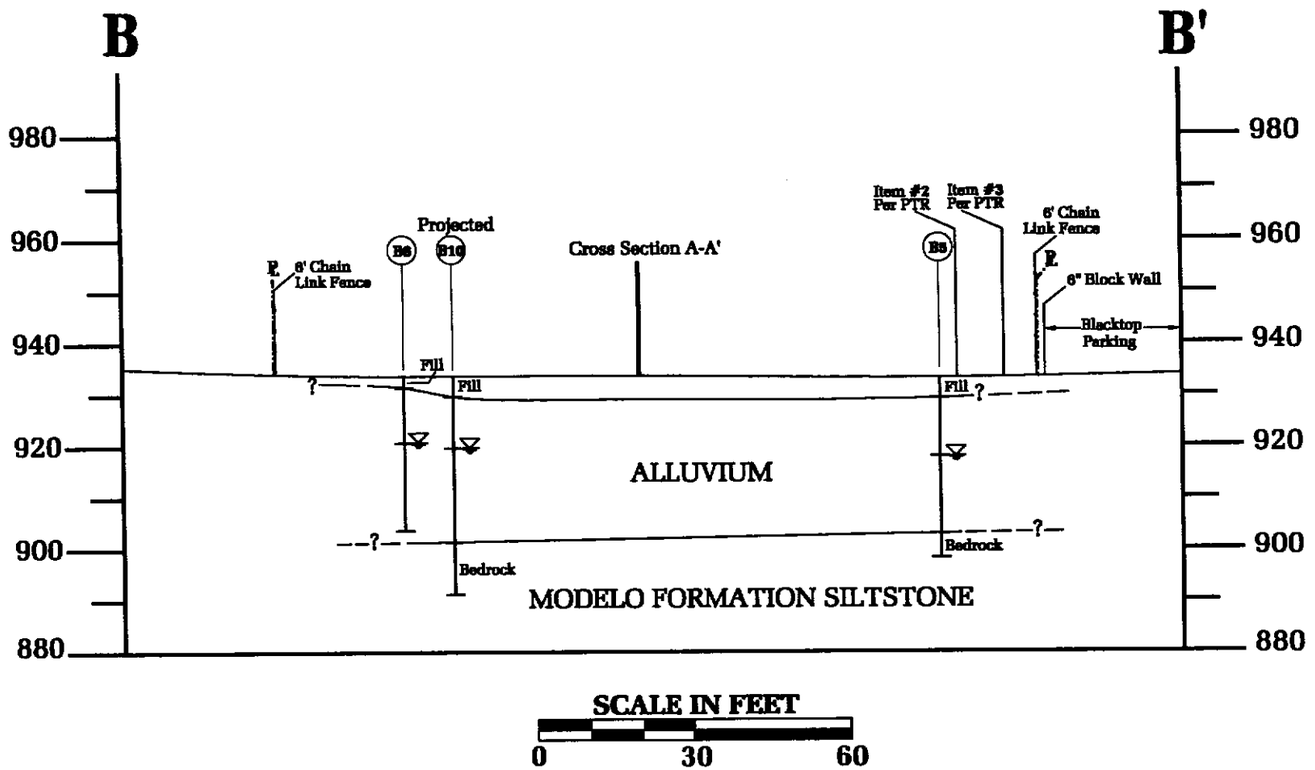
0 30 60

CROSS SECTION A-A'

Geotechnologies, Inc.
Consulting Geotechnical Engineers

THOMAS SAFRAN & ASSOCIATES

FILE No. 19166	DRAWN BY: AB
DATE: October '06	SHEET: 1 of 2



SCALE IN FEET

0 30 60

CROSS SECTION B-B'

Geotechnologies, Inc.
Consulting Geotechnical Engineers

THOMAS SAFRAN & ASSOCIATES

FILE No. 19166	DRAWN BY: AB
DATE: October '06	SHEET: 2 of 2

Appendix D

Hazards Studies

Calabasas #244

gale/jordan associates, inc.
ENVIRONMENTAL MANAGEMENT SERVICES

LIMITED SURVEY FOR ASBESTOS-CONTAINING MATERIALS

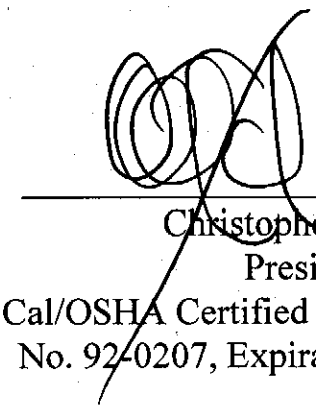
4803 El Canon Avenue
Calabasas, California

Thomas Safran & Associates
11812 San Vicente Boulevard, Suite 600
Los Angeles, CA 90049

September 2006

CI06057

3858 CARSON ST., SUITE 200 • TORRANCE, CA. 90503-6705 • TEL. (310) 316-4377 • FAX (310) 316-4558



Christopher K. Gale
President
Cal/OSHA Certified Asbestos Consultant
No. 92-0207, Expiration Date: 8/18/07

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B. Laboratory Report

1.0 SCOPE OF WORK

gale/jordan associates, inc. (g/ja) was hired by Thomas Safran & Associates to perform a pre-demolition asbestos survey at the residential structure and associated buildings located at 4803 El Canon Ave., Calabasas, California. The survey took place on September 15, 2006. Rouben Biglarian, a Cal/OSHA Certified Asbestos Consultant who is also accredited by EPA/AHERA (Asbestos Hazard Emergency Response Act) for "Building Inspection for Asbestos" surveyed the property. Christopher K. Gale, a Cal/OSHA Certified Asbestos Consultant, reviewed the project.

2.0 INVESTIGATIVE METHODS

A minimum of three samples of each suspect asbestos-containing material (ACM) were collected and analyzed to the first positive for asbestos content. One positive result determines that the material is asbestos containing; all samples must test negative to prove that the material does not contain asbestos. This sampling protocol satisfies the requirements of Cal/OSHA and the South Coast Air Quality Management District (SCAQMD) Rule 1403 for those materials sampled. No destructive sampling was performed; therefore, other asbestos-containing materials may be present.

Analysis was performed by Forensic Analytical Specialties, Inc., 2959 Pacific Commerce Drive, Rancho Dominguez, California, using Polarized Light Microscopy with Dispersion Staining (PLM/DS) in accordance with the Environmental Protection Agency (EPA), "Method for the Determination of Asbestos in Bulk Building Materials" (EPA 600/R-93-116). Percentage estimates of each material component are based on the analyst's best judgment following examination with a stereoscope and PLM/DS analysis. Please see the bulk sampling results, Appendix B.

3.0 RESULTS OF INVESTIGATION

Fourteen materials were identified as suspect asbestos-containing materials: wall plaster; ceiling tiles; flooring materials; cement board & pipe; drywall and roofing materials.

The following materials tested positive for asbestos content:

MATERIAL	SAMPLING LOCATION	ANALYTICAL RESULTS
White vinyl sheet flooring (VSF) over yellow VSF (2 layers of linoleum)	Kitchen	70% Chrysotile
Cement pipe (transite-type)	Crawlspace	2% Chrysotile; <1% Amosite
Penetration mastic – gray	Roof	7% Chrysotile
Cement board (transite-type)	Single room – W. wall	15% Chrysotile
Penetration mastic – gray	Roof – single room	7% Chrysotile

4.0 RECOMENDATIONS

4.1 Asbestos

When work is performed in the vicinity of an asbestos-containing material, the workers must be informed that the material contains asbestos. Removal of an asbestos-containing material must be performed by a licensed (Contractor's State License Board) and registered (Cal/OSHA) asbestos abatement contractor under the supervision of a Cal/OSHA Certified Asbestos Consultant.

All ACM (friable and non-friable) have the potential to release asbestos fibers into the air if they are disturbed or damaged. Building activities or events which could cause these materials to release asbestos fibers include, but are not limited to: maintenance activities, renovation work, water leaks, breakage or damage of the materials and disturbance activities (i.e., cutting or sanding).

5.0 CONFIDENTIALITY AND LIMITATIONS

This report is prepared for the express use and benefit of Thomas Safran & Associates and its agents and employees. The information in this report or portions there of may be required to be included in notifications to employees, contractors or other visitors to the building(s). The Owner or its agents shall not use this report as a specification or work plan for any of the work suggested or recommended in the report.

This report is based upon conditions and practices observed at the property and information made available to g/ja. This report does not propose to identify all hazards or unsafe practices, or to indicate that other hazards or unsafe practices do not exist at the premises. Additional suspect but un-sampled materials could be located betweens walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. g/ja cannot warrant that these buildings do not contain asbestos in locations other than those noted in this report.

g/ja's assessment of the risk of exposure to asbestos followed generally accepted protocols and is based on conditions at the time of the survey. g/ja is not responsible for changes in conditions or accepted protocols subsequent to our site visit.

APPENDIX A

BULK SAMPLING SUMMARY

BULK SAMPLING SUMMARY

N.D. indicates "non-detected".

SAMPLE NUMBERS CI06057	MATERIAL	SAMPLING LOCATION	ANALYTICAL RESULTS
01-03	White vinyl sheet flooring (VSF) over yellow VSF (2 layers of linoleum)	Kitchen	70% Chrysotile
04-06	White VSF	Bathroom	ND
07-09	Wall plaster	Throughout	ND
10-12	Drywall/gypsum/ wallboard	Throughout	ND
13-15	Ceiling plaster	Throughout	ND
16-18	Drywall/gypsum/ Wallboard ceiling	Throughout	ND
19	Cement pipe (transite-type)	Crawlspace	2% Chrysotile; <1% Amosite
20-22	Roof shingles (2 layers)	Roof	ND
23-25	Penetration mastic – gray	Roof	7% Chrysotile
26	Cement board (transite-type)	Single room – W. wall	15% Chrysotile
27-29	Penetration mastic – gray	Roof – single room	7% Chrysotile
30-32	Rolled-on roofing material w/ tar paper	Roof – single room	ND
33-35	2' x 4' ceiling tile	Storage room ceiling	ND
36-38	Roof shingle w/ tar paper	Roof - Storage room	ND

APPENDIX B

LABORATORY REPORT

Forensic Analytical

Bulk Asbestos Analysis

(NIOSH 9002, Visual Area Estimation)

Gale/Jordan Associates
Joanie Keiser
3858 Carson Street
Suite 200
Torrance, CA 90503

Client ID: 5105
Report Number: B090155
Date Received: 09/18/06
Date Analyzed: 09/19/06
Date Printed: 09/19/06
First Reported: 09/19/06

Job ID/Site: Cl06057 - 4803 El Canon Avenue, Calabasas, CA

Date(s) Collected: 09/15/2006

FASI Job ID: 5105
Total Samples Submitted: 38
Total Samples Analyzed: 32

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
1	50345028						
Layer: Yellow Sheet Flooring		Chrysotile	70 %				
Layer: Fibrous Backing			ND				
Layer: Off-White Sheet Flooring			ND				
Layer: Fibrous Backing			ND				
Layer: Beige Mastic			ND				
Total Composite Values of Fibrous Components: **Asbestos (23%)**							
Cellulose (10 %) Fibrous Glass (3 %) Synthetic (2 %)							
	50345029						
Comment: Sample not analyzed due to prior positive result in series.							
3	50345030						
Comment: Sample not analyzed due to prior positive result in series.							
4	50345031						
Layer: Off-White Sheet Flooring			ND				
Layer: Fibrous Backing			ND				
Layer: Tan Mastic			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
5	50345032						
Layer: Off-White Sheet Flooring			ND				
Layer: Fibrous Backing			ND				
Layer: Tan Mastic			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							
6	50345033						
Layer: Off-White Sheet Flooring			ND				
Layer: Fibrous Backing			ND				
Layer: Tan Mastic			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %)							

Report Number: B090155
Client Name: Gale/Jordan Associates **Date Printed:** 09/19/06

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
7	50345034						
Layer: Beige Plaster			ND				
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
8	50345035						
Layer: Beige Plaster			ND				
Layer: Off-White Plaster			ND				
Layer: Paint			ND				
Layer: White Skimcoat/Joint Compound			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
9	50345036						
Layer: Beige Plaster			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
10	50345037						
ayer: White Drywall			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (20 %)							
11	50345038						
Layer: White Drywall			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (20 %)							
12	50345039						
Layer: White Drywall			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (20 %)							
13	50345040						
Layer: Beige Plaster			ND				
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							
14	50345041						
Layer: Beige Plaster			ND				
Layer: White Plaster			ND				
Layer: Paint			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							

Report Number: B090155
Client Name: Gale/Jordan Associates **Date Printed:** 09/19/06

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
15	50345042						
Layer: Beige Plaster			**ND**				
Layer: White Plaster			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							
16	50345043						
Layer: White Drywall			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %)							
17	50345044						
Layer: White Drywall			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %)							
18	50345045						
Layer: White Drywall			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %)							
19	50345046						
Layer: Grey Semi-Fibrous Materials		Chrysotile	**2 %**	Amosite	**Trace**		
Total Composite Values of Fibrous Components:		**Asbestos (2%)**					
Cellulose (Trace)							
20	50345047						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							
21	50345048						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							
22	50345049						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							

Report Number: B090155
Date Printed: 09/19/06

Client Name: Gale/Jordan Associates

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
23	50345050						
Layer: Stones			**ND**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Semi-Fibrous Tar		Chrysotile	7 %				
Total Composite Values of Fibrous Components:		**Asbestos (2%)**					
Fibrous Glass (30 %)							
24	50345051						
Comment: Sample not analyzed due to prior positive result in series.							
25	50345052						
Comment: Sample not analyzed due to prior positive result in series.							
26	50345053						
Layer: Grey Semi-Fibrous Material		Chrysotile	**15 %**				
Total Composite Values of Fibrous Components:		**Asbestos (15%)**					
Cellulose (Trace)							
27	50345054						
Layer: Stones			**ND**				
Layer: Black Tar			**ND**				
Layer: Black Felt			**ND**				
Layer: Black Semi-Fibrous Tar		Chrysotile	7 %				
Total Composite Values of Fibrous Components:		**Asbestos (4%)**					
Fibrous Glass (30 %)							
28	50345055						
Comment: Sample not analyzed due to prior positive result in series.							
29	50345056						
Comment: Sample not analyzed due to prior positive result in series.							
30	50345057						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							
31	50345058						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							
32	50345059						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							

Report Number: B090155
Client Name: Gale/Jordan Associates **Date Printed:** 09/19/06

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
33	50345060						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (95 %)							
34	50345061						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (95 %)							
35	50345062						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (95 %)							
36	50345063						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
ayer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (15 %) Fibrous Glass (60 %)							
37	50345064						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							
38	50345065						
Layer: Stones			**ND**				
Layer: Black Tars			**ND**				
Layer: Black Felts			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (40 %) Fibrous Glass (35 %)							

Steven Takahashi, Laboratory Supervisor, Rancho Dominguez Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

ytical results and reports are generated by Forensic Analytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by Forensic Analytical to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by Forensic Analytical. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

gale/jordan associates, inc.

ENVIRONMENTAL MANAGEMENT SERVICES

Project Number 01 06057

LABORATORY SAMPLE ANALYSIS REQUEST

Submitter Name Roxbury Biglarian Date Submitted 9.15.06

Client Name Thomas Safran & Assoc. Phone #

Billing Address

Site Address 4803 E1 Canon Avenue, Calabasas, Ca

TURNAROUND
Normal
~~12 / 24 / 48 / 72 hr~~
4 / 5 day

PCM

PLM: STANDARD POINT COUNT: 400 1000

TEM: BULK AIR MVAC QUALITATIVE QUANTITATIVE AHERA Level I II NIOSH

METALS: AA/FLAME AA/FURNACE ICP

ANALYZE TO FIRST POSITIVE

Sample Number	Material Description	Volume (L)	Location	Date Collected
1	White linoleum over yellow linoleum (2 layers)	N/A	2Bdrm. House - Kitchen	9.15.06
2			- Kitchen	
3			- Kitchen	
4	White linoleum		- Restroom	
5			- Restroom	
6			- Restroom	
7	Wall plaster		- Kitchen	
8			- Living Rm	
9			- Living Rm	
10	Drywall Gypsum Wallboard		- Living Rm	

Chain of Custody

Released By	Received By	Time	Date
R Biglarian	N. Adams 9/18/06	10:30A FLE	9.15.06

gale/jordan associates, inc.

ENVIRONMENTAL MANAGEMENT SERVICES

Project Number C106057

LABORATORY SAMPLE ANALYSIS REQUEST

Submitter Name Robert Bigaran Date Submitted 9-15-06

Client Name Thomas Safran & Assoc. Phone # _____

Billing Address _____

Site Address 4803 El Canon Ave.

TURNAROUND

~~12/24/48/72 hr~~ None

4 / 5 day

PCM

PLM: STANDARD POINT COUNT: 400 1000

TEM: BULK AIR MVAC QUALITATIVE QUANTITATIVE AHERA Level I II NIOSH

METALS: AA/FLAME AA/FURNACE ICP

ANALYZE TO FIRST POSITIVE

Sample Number	Material Description	Volume (L)	Location	Date Collected
11	Drywall Gypsum Wallboard	N/A	2 Bdrm - House - Living Rm	9-15-06
12	"	"	- Dining Rm	"
13	Ceiling Plaster	"	- Kitchen	"
14	"	"	- Living Rm	"
15	"	"	- Kitchen	"
16	Drywall Gypsum Wallboard	"	- Kitchen	"
17	"	"	- Living Rm	"
18	"	"	- Dining Rm	"
19	Cement Pipe (transite)	"	- Crawl Space	"
20	Roof shingles (2 layers)	"	- Roof	"

Chain of Custody

Released By	Received By	Time	Date
RB Bigaran	M. Adams 9/15/06	10:30A PLE	9-15-06

gale/jordan associates, inc.

ENVIRONMENTAL MANAGEMENT SERVICES

Project Number C06057

LABORATORY SAMPLE ANALYSIS REQUEST

Submitter Name Rodney Bilfeni Date Submitted 9-15-06

Client Name Thomas Safran & Assoc. Phone #

Billing Address

Site Address 4803 El Canon Ave., Calabasas, Ca

TURNAROUND
Normal
12 / 24 / 48 / 72 hr
4 / 5 day

PCM

PLM: STANDARD POINT COUNT: 400 1000

TEM: BULK AIR MVAC QUALITATIVE QUANTITATIVE AHERA Level I II NIOSH

METALS: AA/FLAME AA/FURNACE ICP

ANALYZE TO FIRST POSITIVE

Sample Number	Material Description	Volume (L)	Location	Date Collected
21	Roof Shingles (2 layers)	N/A	2 Story House - Roof	9-15-06
22				
23	Grey Penetration mastic		- Roof	
24			- Roof	
25			- Roof	
26	Transite Panel (Cement board)		Single Rm - W. wall	
27	Grey Penetration mastic		Single Rm - Roof	
28			- Roof	
29			- Roof	
30	Rolled on roofing material w/ fiber paper		- Roof	

Chain of Custody

Released By	Received By	Time	Date
R Bilfeni	N adams 9/18/06	10:30 AM	9-15-06

gale/jordan associates, inc.

ENVIRONMENTAL MANAGEMENT SERVICES

Project Number C1 06057

LABORATORY SAMPLE ANALYSIS REQUEST

Submitter Name Rowan Biglari Date Submitted 9.15.06

Client Name Thomas Syfan & Assoc. Phone #

Billing Address

Site Address 4803 El Canon Ave, Calabasas, Ca

TURNAROUND
Normal
~~12 / 24 / 48~~ / 72 hr
4 / 5 day

PCM

PLM: STANDARD POINT COUNT: 400 1000

TEM: BULK AIR MVAC QUALITATIVE QUANTITATIVE AHERA Level I II NIOSH

METALS: AA/FLAME AA/FURNACE ICP

ANALYZE TO FIRST POSITIVE

Sample Number	Material Description	Volume (L)	Location	Date Collected
31	Rolled-on roofing material w/ tar paper	N/A	Single Rm - Roof	9-15-06
32				
33	2x4 Ceiling tile		Storage Rm - Ceiling	
34			- Ceiling	
35			- Ceiling	
36	Roof shingle w/ tar paper		- Roof	
37			- Roof	
38			- Roof	

Chain of Custody

Released By	Received By	Time	Date
	L. Adams 9/18/06	FLE 10:30A	9-15-06

1650 S. Pacific Coast Highway, Suite 201 ✦ Redondo Beach, CA 90277-5613 ✦ TEL (310) 316-4377 ✦ FAX (310) 316-4558

gale/jordan associates, inc.
ENVIRONMENTAL MANAGEMENT SERVICES

RECEIVED
OCT 16 2006
THOMAS SAFRAN & ASSOCIATES

October 13, 2006

Mr. Eli Rodsky
Thomas Safran & Associates
11812 San Vicente Boulevard, Suite 600
Los Angeles, CA 90049

Re: Lead-containing materials survey
4803 El Canon Avenue, Calabasas, California
g/ja Project CI06061

Dear Mr. Rodsky:

gale/jordan associates, inc. (g/ja) was hired by Thomas Safran & Associates to collect bulk samples of suspect lead-based paint from the structures located at 4803 El Canon Avenue, Calabasas, California. The bulk sampling was performed on October 12, 2006 by Paul Legerski, who is certified by the DHS for Lead Inspection. Thomas A. Jordan, g/ja Principal, reviewed the project.

Fieldwork

Bulk paint samples were collected by scraping approximately one gram of paint onto a moistened surface, in accordance with the guidelines found in the Department of Housing and Urban Development's (HUD) "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing".

The lead-based paint survey was limited to exposed painted surfaces. The purpose of the survey was to ascertain the potential for worker exposure to lead in paint, per CCR Title 8, Section 1532.1 (Cal/OSHA Lead Standard).

The samples were analyzed by Hygiea Laboratories, Sierra Madre, California using Flame Atomic Absorption Spectroscopy in accordance with EPA Method SW846-7420.

Findings

A summary of the paint samples and results is found below.

SUBSTRATE	PAINT DESCRIPTION	ANALYTICAL RESULTS (ppm)	ANALYTICAL RESULTS (wt%)
Main House			
Exterior wall	White	59130	5.91
Exterior window casing	Blue	34310	3.43
Kitchen cabinet/walls	Yellow	1882	0.188
Interior walls/door	White/beige	281	0.028
Bedroom walls	Blue	591	0.059
2nd house (behind main house)			
Exterior windows/door/eaves	Blue	21500	2.15
Exterior walls	White	<120	<0.012
Garage			
Exterior walls	White	37840	3.78
Exterior windows/eaves	Blue	34850	3.48

With the exception of the white paint on the 2nd house exterior wall, all of the samples proved to contain lead (Pb). Respiratory protection is recommended during the removal of the lead-based paint until air monitoring results indicate worker exposure is below the Federal OSHA Action Level of 30 ug/m^3. An initial exposure assessment should be performed prior to the removal of these materials.

Due to the amount of lead determined, additional analyses, such as a California Wet-Test, is required for disposal purposes. The additional testing may be performed prior to disposal to determine disposal options.

Confidentiality and Limitations

This report is prepared for the express use and benefit of Thomas Safran and Associates and its agents and employees. The information in this report or portions there of may be required to be included in notifications to employees, contractors or other visitors to the building(s). The Owner or its agents shall not use this report as a specification or work plan for any of the work suggested or recommended in the report.

This report is based upon conditions and practices observed at the property and information made available to g/ja. This report does not propose to identify all hazards or unsafe practices, or to indicate that other hazards or unsafe practices do not exist at the premises. Additional suspect but un-sampled materials could be located betweens walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas. g/ja cannot warrant that these buildings do not contain lead-based paint in locations other than those noted in this report.

g/ja's assessment of the risk of exposure to lead-based paint followed generally accepted protocols and is based on conditions at the time of the survey. g/ja is not responsible for changes in conditions or accepted protocols subsequent to our site visit.

Please contact this office if you have questions or require additional information.

Sincerely,

gale/jordan associates, inc.
Thomas A. Jordan
Corporate Vice President

Attachment

Hygeia Laboratories Inc.
82 W. Sierra Madre Blvd
Sierra Madre, CA 91024-2434
(626) 355-4711 (626) 355-4497 Fax

AIHA ELLAP Certificate No. 485
California ELAP Certificate No. 1269

Analytical Report

October 13, 2006

Hygeia Reference No.: 25115 06 0049

Gale Jordan Associates, Inc.
3858 Carson St. Suite# 200
Torrance, CA 90503

Date Sampled: October 12, 2006
Date Received: October 12, 2006
Date Analyzed: October 13, 2006
Analyst: Nahid Motamedi

Client Ref. CI06061 4803 El Canon Ave., Calabasas **Samples and data provided by:** Paul Legerski

Analyte: Lead **Analytical Method:** EPA 7420 **Detection Limit:** 25 ppm **Samples Analyzed:** 9

Sample Matrix: paint **Digestion Method:** EPA 3050B **Reporting Limit:** 120 ppm *Sample Condition Acceptable* ☑

Hygeia Sample ID	Client Sample ID	Lead Conc. (ppm)	Lead Conc. (wt%)
1039374	A	59130	5.91
1039375	B	34310	3.43
1039376	C	1882	0.188
1039377	D	281	0.028
1039378	E	591	0.059
1039379	F	21500	2.15
1039380	G	<120	<0.012
1039381	H	37840	3.78
1039382	I	34850	3.48

ppm = parts per million = mg/kg

Nahid Motamedi

Supervisor of Chemistry Laboratory
Nahid Motamedi

Sample results have not been blank corrected. All quality control results meet the QC requirements of AIHA ELLAP. This report only pertains to the samples investigated and does not apply to other similar material. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

25115 06 0049

gale/jordan associates, inc.

ENVIRONMENTAL MANAGEMENT SERVICES

Project Number CI060601

LABORATORY SAMPLE ANALYSIS REQUEST

Submitter Name Paul Legerski Date Submitted 10-12-06

Client Name _____ Phone # _____

Billing Address _____

Site Address 4803 El Canon Ave (Calabasas)

TURNAROUND

1 / 12 / 24 / 48 / 72 hr

Normal

4-5 day

Samples A-E: Main House

F+G 2nd Unit

H+I Garage

PCM

PLM: STANDARD POINT COUNT: 400 1000

TEM: BULK AIR MVAC QUALITATIVE QUANTITATIVE AHERA Level I II NIOSH

METALS: (AA/FLAME) AA/FURNACE ICP

ANALYZE TO FIRST POSITIVE

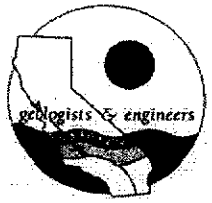
Sample Number	Material Description	Volume (L)	Location	Date Collected
A	White Paint Chip		Wall Ext	10/2/06
B	Blue		Window Casing Ext	"
C	Yellow		Kitchen Cabinets/Walls	"
D	White/Beige		Int Walls + Doors	"
E	Blue		Bedroom Walls	"
F	"		Ext Windows/Door/Eaves	"
G	White		Ext Walls	"
H	" Caulks		"	"
I	Blue		" Windows/Eaves	"

Chain of Custody

Relinquished By	Received By	Time	Date
Paul Legerski	Mark Landes	1:50p	10-12-06

1650 S. Pacific Coast Highway, Suite 201 ◆ Redondo Beach, CA 90277-5613 ◆ TEL (310) 316-4377 ◆ FAX (310) 316-4558

California



Environmental

PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT - PHASE I
Residential Property
APN 2068-004-016
4803 El Cañon Avenue
Calabasas, California 91302

FOR

THOMAS SAFRAN AND ASSOCIATES
11812 San Vicente Boulevard, Suite 600
Los Angeles, California 90049-6986

Attention: Mr. Andrew Gross

CE Job No.: EV306-2776 April 2006

1161 Calle Suerte, Suite G, Camarillo, CA 93012 (805) 445-7117 (805) 445-8599 (fax) State Contractor's Lic. A732377

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EXECUTIVE SUMMARY

A Preliminary Environmental Site Assessment - Phase I was performed for the subject property located at 4803 El Cañon Avenue, Calabasas, California. The scope of work for the Phase I meets ASTM E 1527-00 *Standard Practice for Preliminary Site Assessments*. The purpose of the Phase I report was to provide information regarding the potential for hazardous material impacts to the soil and groundwater beneath the subject property. The scope of the work included a site reconnaissance, research of land use records and other sources for preliminary indications of hazardous material use, storage, or disposal at the property.

Historical research indicates that the subject property was undeveloped from 1903 through 1938. The Farmer family first paid taxes on the property in 1929. In the late 1930's, the first structures were built resulting in the Farmer Family homestead. The subject property is still owed by the Farmer family. The property is not listed on the standard government databases researched in this report. There are no underground storage tank files or industrial records maintained for the property. No evidence of use, storage, disposal or generation of hazardous substances was observed onsite.

The nearest listed contaminated site is the Motion Picture and Television Hospital located beyond El Cañon Avenue approximately 70 feet to the east-northeast. This offsite property reported a release of gasoline from an underground tank in 1986. The case was issued closure in 1998. The depth to groundwater is approximately 10 feet below ground surface. Regional groundwater flow is towards the northeast. It is considered unlikely that the groundwater beneath the subject property is impacted from this offsite property.

Due to the age of construction of the subject buildings in the late 1930's and 1970's, it is recommended that an asbestos and lead survey be conducted by a certified asbestos and lead consultant prior to renovation or demolition of the subject buildings. Suspect ACM was observed in the form of roof felt. Lead based paint was possibly utilized onsite since the lead content in paint was not significantly reduced until 1977.

This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property. Additional site assessment research and/or subsurface assessment activities are not recommended for the subject property.

INTRODUCTION

The following report presents the findings of the Preliminary Environmental Site Assessment - Phase I performed for the subject property located at 4803 El Cañon Avenue, Calabasas, California. The scope of the Phase I study meets ASTM E 1527-00 *Standard Practice for Environmental Site Assessments* and included research of available land use records and other sources for preliminary indications of hazardous material use, storage or disposal at the property. The findings of this study are intended to provide information to the client regarding potential hazardous material impacts to the soil and groundwater beneath the site. The independent conclusions represent California Environmental's professional judgment based on the conditions that existed and the information and data available during the course of study. Factual information regarding operations, conditions, and test data provided by the client, the owner or their representatives have been assumed to be correct and complete. This report includes **GENERAL FINDINGS** and **CONCLUSIONS AND RECOMMENDATIONS**, which together with the remainder of this report are subject to the **NOTICE** at the end of the report.

The scope of work included:

- A walkover of the site.
- Review of building permits maintained by the County of Los Angeles Department of Building and Safety.
- Contact with the EDR Company to review historical Sanborn Fire Insurance maps.
- Contact with the Los Angeles Department of Health Services, Public Health Investigation Division to review their files.
- Contact with the South Coast Air Quality Management District to review their files.
- Review of Oil Field Maps published by the State of California, Division of Oil, Gas and Geothermal Resources.

- Contact with the County of Los Angeles Department of Public Works, Environmental Affairs Division for review of underground storage tank files and industrial waste records for the project area.

- Review of the following lists and maps of suspect or known contaminated sites:

  - California Regional Water Quality Control Board, (RWQCB) - Computer Case Listing of Reported Underground Tank Leaks, covering Los Angeles County.

  - California Governor's Office of Planning and Research - *Hazardous Waste and Substance Sites - Cortese List and Contaminated Wells List*, which includes the Bond Expenditure Plan (BEP) sites.

  - California Environmental Protection Agency, Department of Toxic Substances Control - *CalSites List.*

  - California Department of Health Services, *Hazardous Waste Information System*, (HWIS) and Tanner Report.

  - California Integrated Waste Management Board, *Solid Waste Information System* - (SWIS) List.

  - State Water Resources Board, Solid Waste Assessment Test Program (SWAT).

  - State Water Resources Control Board, *Hazardous Substances Storage Container Database* (UST).

  - U.S. Environmental Protection Agency Superfund Program - *National Priorities List* (NPL).

  - U.S. Environmental Protection Agency - *Comprehensive Environmental Response, Compensation, and Liability Information System* (CERCLIS).

  - U.S. Environmental Protection Agency, *Toxic Release Inventory System* (TRIS).

  - U.S. Environmental Protection Agency, *Resource Conservation and Recovery Information, System Treatment, Storage and Disposal Facilities*, (RCRIS-TSDF).

  - U.S. Environmental Protection Agency, *Resource Conservation and Recovery Information System, Large Quantity Generators*, (RCRIS-LQG).

  - U.S. Environmental Protection Agency, *Resource Conservation and Recovery Information System, Small Quantity Generators*, (RCRIS-SQG).

  - U.S. Environmental Protection Agency - *Superfund Amendment and Reauthorization Act, Title III*, (SARA Title III).

  - U.S. Environmental Protection Agency, *Emergency Response Notification System* (ERNS).

- U.S. Environmental Protection Agency, *Facility Index System* (FINDS).
- U.S. Environmental Protection Agency, *Civil Enforcement Docket* (DOCKET).

- A review of government records databases of suspect or known contaminated sites and historical city directories were performed by EDR Company. The results of the search are summarized in this report. The report is enclosed in **APPENDIX IV**.
- Preparation of this report.

SITE DESCRIPTION

LOCATION AND LEGAL DESCRIPTION

The subject property is located between Calabasas Road and Park Sorrento on the southwest side of El Cañon Avenue, in the City of Calabasas, California, see **VICINITY MAP**. According to the County of Los Angeles Tax Assessor's office, the Assessor's Parcel Number (APN) for the subject property is 2068-004-016. The current street address for the subject property is 4803 El Cañon Avenue.

SITE RECONNAISSANCE

The site conditions were observed during a reconnaissance conducted by Ms. Theresa Heirshberg on March 24, 2006. An Environmental Field Reconnaissance Questionnaire was completed during the site visit. An Environmental Field Interview Questionnaire was completed by Mrs. Betty Farmer. The Questionnaires are included in **APPENDIX I**. The features described below are shown on the enclosed **PLOT PLAN**. Photographs of the subject property are attached in the **ILLUSTRATIONS** section of this report.

Description of Property

The subject property consists of one irregular shaped parcel of land that encompasses approximately 1 acre. The property consists of a house, pool room, garage with rental unit, hobby room, aboveground swimming pool, one chicken coup, one blacksmith hut and four storage-sheds. The first structures were constructed in the late 1930's. The pool and hobby rooms were constructed in the 1970's. The remainder of the property is landscaping. Access to the property is via El Cañon Avenue to the northeast.

Adjacent Properties

The subject property is bound to the north by a pump station, Bonzai Sushi, The Little Red Barn and parking; to the east by a pump station and El Cañon Avenue with the Motion Picture and Television Hospital beyond; to the south by apartments; and to the west by Arroyo Calabasas with residential beyond.

Topography and Drainage

The subject property is nearly level. Drainage from the site is by sheetflow towards the west. No evidence of surface drains, catch basins, or standing water was observed on the subject property at the time of the site reconnaissance.

Past Uses of the Properties

No evidence of the past uses, treatment, storage, disposal or generation of hazardous substances was observed during the site reconnaissance.

Use of Hazardous Substances

No evidence of hazardous substance use was observed on the subject property at the time of the site reconnaissance.

Storage Tanks

A 100-gallon, empty aboveground butane tank and eight 5-gallon propane tanks were observed on the subject property. The butane tank was never installed or used on the property. These tanks are all owned by a former tenant. The property also has a septic tank used for private sewage disposal. The exact location of the septic tank could not be identified. No other evidence of existing aboveground or underground storage tanks, clarifiers, sumps, or grease interceptors was observed on the subject property during the site reconnaissance.

Containers of Hazardous or Unidentified Substances

No evidence of containers of hazardous or unidentified substances was observed on the subject property at the time of the site reconnaissance.

Solid Waste Disposal

Municipal trash, recycling and yard waste cans, provided by Consolidated Disposal SVC, were observed on the subject property. No other evidence of onsite disposal or landfill of solid waste material was observed on the subject property at the time of the site reconnaissance.

Poly-Chlorinated Biphenyls (PCBs)

No evidence of PCB containing transformers or equipment was observed on the subject property at the time of the site reconnaissance.

Asbestos

Sampling of suspect asbestos containing material (ACM) was not included in the scope of work for this study. Suspect ACM was observed in the form of roof felt. Due to the age of construction of the subject buildings in the late 1930's and 1970's, it is recommended that an asbestos survey be conducted by a certified asbestos consultant prior to renovation or demolition of the subject buildings.

Wastewater Disposal

The rental unit on the subject property is still connected to the onsite private septic system. In 2004, the house was disconnected from the septic tank and connected to the Las Virgenes Municipal Wastewater Collection System. No other evidence of wastewater treatment or disposal systems was observed on the subject property during the site reconnaissance.

Radon

Radon sampling was not included in the scope of this study. However, the EDR research report indicates that the average level of radon at 63 sites located within Los Angeles County, was less than one picoCurie per Liter (pCi/L). The Federal Action Level for radon is four pCi/L.

Lead

Sampling of suspect lead in paint was not included in the scope of work for this project. Lead content in paint was significantly reduced in 1977. Due to the date of construction of the subject buildings in the late 1930's and 1970's, it is possible that lead based paint was utilized onsite. The paint coating of the structures were in fair to poor condition at the time of the reconnaissance.

Wells

No evidence of dry wells, irrigation wells, injection wells, abandoned wells, monitoring wells or other wells was observed on the subject property at the time of the site reconnaissance.

Odor

No evidence of strong, pungent or noxious odors was noted on the subject property at the time of the site reconnaissance.

Stressed Vegetation

No evidence of stressed vegetation was observed on the subject property at the time of the site reconnaissance.

Stained Soil or Pavement

No evidence of staining or residue was observed on the subject property at the time of the site reconnaissance.

Pits, Ponds, or Lagoons

No evidence of pits, ponds, and/or lagoons was observed on the subject property at the time of the site reconnaissance.

Potable Water Supply

Potable water is supplied to the subject property by the local water district.

Other Conditions of Concern

No other conditions of environmental concern regarding potential sources for soil and groundwater contamination were observed on the subject property at the time of the site reconnaissance.

SITE DRIVE-BY

A drive-by of the area within one-quarter mile of the property was conducted to help identify nearby sites that possibly use, store or generate hazardous materials. The area surrounding the subject property consists of commercial, institutional and residential property. No service stations are located on the adjacent properties to the subject property. The adjacent pump station to the north has an aboveground fuel tank. A list of selected environmental risk sites identified within a one-quarter mile radius of the subject property is included in the **STANDARD ENVIRONMENTAL RECORDS SOURCES** section of this report.

HYDROGEOLOGY

The subject property is located at the southwest corner of the San Fernando Valley Groundwater Basin, along the eastern side of Arroyo Calabasas. Regional surface drainage flows northeast in the Arroyo Calabasas until the confluence with the Upper Los Angeles River carries it east. Any surface water accumulated on the property will drain to the northwest towards the creek. Shallow groundwater beneath the site will mimic the topography and flow towards the creek as well as towards the northeast. The depth to groundwater is approximately 10 feet below ground surface.

The *Geologic Map of the Calabasas Quadrangle*, by T. Dibblee Jr., dated 1992, was reviewed. The geologic map indicates that the subject property is underlain by Quaternary alluvium. The Quaternary alluvium consists of gravel, sand and clay.

The Los Angeles County Department of Public Works Hydrological Records Division maintains well information for the County of Los Angeles. The nearest well to the subject property is well no. 3575C, located near the intersection of Old Topanga Road and Bluebird Drive approximately 5,280 feet to the south-southeast. The well was last measured on November 15, 2005. The depth to groundwater at the time was 8.2 feet bgs. The ground surface elevation was measured at 990.7 feet above mean sea level.

SITE UTILIZATION HISTORY

HISTORICAL CITY DIRECTORIES

EDR Company was contacted to research historical city directories for the subject property. The city directories were reviewed at approximately five year intervals spanning 1920 to 2004. A summary of city directories reviewed for the subject property is included in **TABLE I**. The city directories are attached in **APPENDIX IV**.

TABLE I
City Directories

Year	Uses	Source
1920-1981	Address not listed in research source	Los Angeles Directory Co. Kaasen Directory Company Publishers R.L. Polk & Co. Pacific Directory Co. Pacific Telephone GTE B&G Publications
1985	Farmer Frank & Betty Jeanne (4803) Farmer Freda (4803) Watson Arthur C (4803) Watson Bl (4803) Watson Bl Arlete (4803) Watson Bl Y (4803)	Pacific Bell
1986-1990	Address not listed in research source	Pacific Bell
1991	Farmer Frank & Bett6y Jeanne (4803)	Pacific Bell
1995	Farmer Frank & Betty Jeanne (4803)	Pacific Bell Telephone
1999-2003	Address not listed in research source	GTE Haines Company Pacific Bell Telephone
2004	Farmer Betty (4803) Farmer Frank (4803)	Haines Co.

BUILDING AND GRADING PERMIT RESEARCH

The County of Los Angeles Department of Building and Safety was contacted for the purpose of researching building permits and Certificates of Occupancies for the property. The building permit information found for the property address 4803 El Cañon Avenue is summarized below in **TABLE II**. Copies of the permits are included in **APPENDIX III**.

TABLE II
Building Permits

Date	Permit No.	Owner	Purpose and Description
9/7/04	B04-005-828	Frank L and Betty Jeanne Farmer	Sewer permit. Disconnect from septic and hook into sewer.

UNDERGROUND STORAGE TANK PERMIT RESEARCH

The County of Los Angeles Department of Public Works was contacted by our personnel to research their files for underground storage tanks (USTs), permits and industrial waste records for the subject property. According to a representative of the County of Los Angeles Department of Public Works, no underground storage tank records or industrial waste files are maintained for the subject property 4803 El Cañon Avenue address.

LACHD AND SCAQMD FILE REVIEW

Inquiry letters were sent to the Los Angeles County Health Department (LACHD) and South Coast Air Quality Management District (SCAQMD) for any information they may have regarding soil, water or air contamination at the subject property. Response letters from SCAQMD indicates that there are no records maintained for the subject property. The agency inquiries and SCAQMD response letters are

included in **APPENDIX II**. The LACHD response letter will be forwarded once received should a file exist for the property.

HISTORICAL AERIAL PHOTOGRAPH RESEARCH

Historical aerial photographs were reviewed as part of this study. The photographs are part of the aerial photograph collections maintained by the EDR Company. Nine photographs were reviewed for the subject property. The photographs are summarized below in **TABLE III**.

TABLE III
Historical Aerial Photographs

Date	Photo I.D.	Description
1928	Fairchild	The subject property is undeveloped. Property is bound to the northwest by four structures; to the northeast by El Cañon Avenue with undeveloped land beyond; to the southeast by undeveloped land; and to the west by the Arroyo Calabasas with two structures beyond.
1938	Laval	The subject property is undeveloped. Property is bound to the northwest by four structures; to the northeast by El Cañon Avenue with an orchard beyond; to the southeast by undeveloped land; and to the west by the Arroyo Calabasas with an orchard and two structures beyond.
1947	Tubis	The subject property contains three structures. Property is bound to the northwest by two structures; to the northeast by El Cañon Avenue with the Motion Picture and Television Hospital in an orchard beyond; to the southeast by undeveloped land; and to the west by the Arroyo Calabasas with an orchard and two structures beyond.
1956	Fairchild	The subject property contains one structure. Property is bound to the northwest by three structures; to the northeast by El Cañon Avenue with the Motion Picture and Television Hospital in an orchard beyond; to the southeast by undeveloped land; and to the west by the Arroyo Calabasas with an orchard and one structure beyond.
1965	Fairchild	The subject property contains two structures. Property is bound to the northwest by three structures; to the northeast by El Cañon Avenue with the Motion Picture and Television Hospital in an orchard beyond; to the southeast by undeveloped land; and to the west by the Arroyo Calabasas with a developed property containing parking and one structure beyond.
1976	Teledyne	The subject property contains mature trees that obscure the view. Three structures are visible. Property is bound to the northwest by two structures; to the northeast by El Cañon Avenue with the Motion Picture and Television Hospital beyond; to the southeast by a structure; and to the west by the Arroyo Calabasas with undeveloped land beyond.
1989	USGS	The subject property contains mature trees that obscure the view. Two structures are visible. Property is bound to the northwest by two structures; to the northeast by El Cañon Avenue with the Motion Picture and Television Hospital beyond; to the southeast by a structure; and to the west by the Arroyo Calabasas with two structures beyond.
1994	USGS	The subject and adjacent properties are as previously described in 1989.

TABLE III
Historical Aerial Photographs
(continued)

Date	Photo I.D.	Description
2002	USGS	The subject property contains mature trees that obscure the view. Three structures are visible. Property is bound to the northwest by three structures; to the northeast by El Cañon Avenue with the Motion Picture and Television Hospital beyond; to the southeast by a structure; and to the west by the Arroyo Calabasas with two structures beyond.

HISTORICAL FIRE INSURANCE MAPS

The EDR Company was contacted to review historical Sanborn Fire Insurance Maps for the subject property. No Sanborn Fire Insurance Map coverage is available for the project area. The EDR response letter is included in **APPENDIX II** of this report.

HISTORICAL TOPOGRAPHIC MAPS

Historical USGS topographic maps were provided by EDR Company. Maps covering the subject property for four time periods were found. The map descriptions are summarized below in **TABLE IV.** Copies of select historical topographic maps are attached in the **ILLUSTRATIONS** section of this report.

TABLE IV
Historical Topographic Maps

Date	Quadrangle	Description
1903	Calabasas	The subject property is undeveloped. Property is bound to the northwest by a structure; to the northeast by El Cañon Avenue with undeveloped property beyond; to the southeast by a structure; and to the west by Arroyo Calabasas
1932	Dry Canyon	The subject property is undeveloped. Property is bound to the northwest by a structure; to the northeast by El Cañon Avenue with undeveloped property beyond; to the southeast by undeveloped property; and to the west by Arroyo Calabasas.
1947	Calabasas	The subject property is undeveloped. Property is bound to the northwest by Arroyo Calabasas; to the northeast by El Cañon Avenue with orchards beyond; to the southeast by an unimproved dirt road; and to the west by Arroyo Calabasas.
1952 Photo Revised 1967	Calabasas	The subject property is developed with two structures. Property is bound to the northwest by structures; to the northeast by El Cañon Avenue with Motion Picture Country House and Hospital beyond; to the southeast by an unimproved dirt road; and to the west by Arroyo Calabasas with structures beyond. Contour lines indicate a gentle slope to the northwest into the Arroyo Calabasas. Elevation of the subject property is approximately 930 to 935 feet above mean sea level.

NEARBY CONTAMINATED SITES RESEARCH

LANDFILLS

The Solid Waste Information Systems (SWIS), Waste Management Unit Database (WMUD), and County of Los Angeles Major Waste System Maps were reviewed to identify landfills and transfer stations located near the property. Map no. 144-077 and the EDR database report indicate that there are no landfills or transfer stations located within a 2,000-foot radius of the subject property. No active permitted hazardous waste landfills are located in Los Angeles County.

OIL FIELD MAPS/METHANE ZONE

Oil field maps published by the State of California, Division of Oil, Gas and Geothermal Resources were researched to determine if oil production occurred on or near the project area. Wildcat Map No. W1-2 shows that there are no oil wells or oil fields located within a 2,000-foot radius of the subject property. The property is not located within a recognized Methane Zone.

STANDARD ENVIRONMENTAL RECORDS SOURCES

In addition to the above records, agency database lists were reviewed for known or suspected contaminated sites and for sites that store, generate or use hazardous materials near the subject property. The subject property is not listed on the standard environmental government sources researched in this report. Six environmental concern sites, listed on the RCRA-SQG, FINDS, CLEANERS, HAZNET, EMI, UST, CA FID UST, SWEEPS UST, HIST UST, and CHMRIS databases, are located within a one-quarter mile radius of the subject property. The nearest list environmental concern site is the northern adjacent Las Virgenes Municipal Water District Pump Station. The pump station has an aboveground fuel tank. The nearest listed contaminated site is the Motion Picture and Television Hospital located beyond El Cañon Avenue approximately 70 feet to the east-northeast. This offsite property reported a release of gasoline from an underground tank in 1986. The case was issued closure in 1998. Selected environmental risk sites found to exist within one-quarter mile radius of the property are listed in **TABLE V.**

TABLE V
Standard Environmental Record Sources

Name	Address	Distance from Subject Property	Source(s)
Las Virgenes MWD	4815 El Cañon Rd	adjacent NW	CHMRIS SWEEPS UST
Motion Picture & Television	23450 Calabasas Rd.	70 ft. ENE	HIST UST CA FID UST SWEEPS UST
Motion Picture and TV Fund	23388 Mulholland Dr.	70 ft. ENE	UST SWEEPS UST Cortese RCRA-SQG FINDS LUST CA FID UST EMI
Murre Cleaners	23542 Calabasas Rd.	650 ft. WNW	RCRA-SQG FINDS HAZNET CLEANERS
Pacific Bell Telephone Exchange Pacific Bell Calabasas 11/B1-433	23600 Park Sorrento	740 ft. WSW	UST CA FID UST SWEEPS UST
Fazio Cleaners Flair Inc. DBA Fazio Cleaners	23383 Mulholland	775 ft. NNE	HAZNET SLIC CLEANERS EMI RCRA-SQG FINDS
Calabasas Country Inn	23627 W. Calabasas Rd.	1,200 ft. W	LOS ANGELES CO. HMS SWEEPS UST
The Courtyard at the Commons	23631 Calabasas Rd.	1,220 ft. W	SLIC
Parkway Cleaners	23643 Calabasas Rd.	1,305 ft. W	HAZNET CLEANERS

Note: A search of public information databases may omit some nearby contaminated sites due to missing or inaccurate information in the public record.

The orphan site summary in the EDR database report lists small quantity generators (i.e. auto repair and medical offices) of hazardous wastes. The properties are located greater than 500 feet from the subject site and are not expected to have an impact on the subject property.

GENERAL FINDINGS

During the research phase of this study, the following information was obtained:

- Historical aerial photograph research indicates that the subject property was undeveloped from 1928 through 1938. From 1947 through 2002, the subject property was developed with the current homestead.
- Historical topographic map research indicates that the subject property was undeveloped from 1903 through 1947. In 1952 through 1967, two structures occupied the property.
- Topographic contour lines indicate a gentle slope to the northwest into the Arroyo Calabasas.
- The elevation of the subject property is approximately 930 to 935 feet above mean sea level.
- No Sanborn Fire Insurance Map coverage is available for the subject property.
- Building permit research indicates that the residence was disconnected from septic and hooked into sewer in 2004.
- Historical city directories indicate that the property was occupied by the Farmer's from 1985 through 2004.
- No underground storage tank records or industrial waste files are maintained for the subject property.
- SCAQMD indicates that no records are maintained for the subject property.
- No landfills or transfer stations are located within a 2,000-foot radius of the subject property.
- No oil wells or oil fields are located within a 2,000-foot radius of the subject property.
- The subject property is not listed on the standard environmental government sources researched in this report.
- The nearest listed contaminated site is the Motion Picture and Television Hospital located beyond El Cañon Avenue approximately 70 feet to the east-northeast. This offsite property reported a release of gasoline from an underground tank in 1986. The case was issued closure in 1998.
- The depth to groundwater beneath the subject property is approximately 10 feet bgs.

During the site reconnaissance, the following observations were made:

- The subject property consists of one irregular shaped parcel of land that encompasses approximately 1 acre.
- The property consists of a house, pool room, garage with rental unit, hobby room, aboveground swimming pool, one chicken coup, one blacksmith hut and four storage-sheds.
- The subject property is nearly level. Drainage from the site is by sheetflow towards the west.
- No evidence of the past uses, treatment, storage, disposal or generation of hazardous substances was observed.
- No evidence of hazardous substance use was observed on the subject property.
- A 100-gallon, empty aboveground butane tank and eight 5-gallon propane tanks were observed on the subject property. The butane tank was never installed or used on the property.
- The rental unit/guest house is connected to a septic tank and system. The exact location of the tank could not be identified.
- No evidence of containers of hazardous or unidentified substances was observed on the subject property.
- Municipal trash, recycling and yard waste cans, provided by Consolidated Disposal SVC, were observed on the subject property.
- No evidence of PCB containing transformers or equipment was observed on the subject property.
- No evidence of strong, pungent or noxious odors was noted on the subject property.
- No evidence of stressed vegetation was observed on the subject property.
- No evidence of staining or residue was observed on the subject property.
- No evidence of pits, ponds, and/or lagoons was observed on the subject property.
- No other conditions of environmental concern regarding potential sources for soil and groundwater contamination were observed on the subject property.
- The area surrounding the subject property consists of commercial, institutional and residential property.

CONCLUSIONS AND RECOMMENDATIONS

Historical research indicates that the subject property was undeveloped from 1903 through 1938. The Farmer family first paid taxes on the property in 1929. In the late 1930's, the first structures were built resulting in the Farmer Family homestead. The subject property is still owed by the Farmer family. The property is not listed on the standard government databases researched in this report. There are no underground storage tank files or industrial records maintained for the property. No evidence of use, storage, disposal or generation of hazardous substances was observed onsite.

The nearest listed contaminated site is the Motion Picture and Television Hospital located beyond El Cañon Avenue approximately 70 feet to the east-northeast. This offsite property reported a release of gasoline from an underground tank in 1986. The case was issued closure in 1998. The depth to groundwater is approximately 10 feet below ground surface. Regional groundwater flow is towards the northeast away from the property. It is considered unlikely that the groundwater beneath the subject property is impacted from this offsite property.

The adjacent pump station reported a 2,000 gallon sewage spill in February 2003. The spill flowed into the Calabasas storm drain. No impact to the subject property from the spill is expected.

Due to the age of construction of the subject buildings in the late 1930's and 1970's, it is recommended that an asbestos and lead survey be conducted by a certified asbestos and lead consultant prior to renovation or demolition of the subject buildings. Suspect ACM was observed in the form of roof felt.

Lead based paint was possibly utilized onsite since the lead content in paint was not significantly reduced until 1977.

California Environmental has performed a Preliminary Environmental Site Assessment - Phase I in conformance with the scope and limitations of ASTM 1527-00 for the property located at 4803 El Cañon Avenue, Calabasas, California. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property. Additional site assessment research and/or subsurface assessment activities are not recommended for the subject property.

This report is subject to the following **NOTICE**:

NOTICE

All properties are subject to some element of environmental risk and the risk cannot be eliminated. Industrial and commercial properties developed prior to modern environmental laws are especially risk prone to environmental hazards which include, but are not limited to, wastes which may be toxic, ignitable, corrosive or reactive. The potential for these environmental hazards to impact the use of the property can be reduced by the identification and mitigation of the hazards prior to development or redevelopment of the property. Due to the difficulty in locating underground wastes, in some cases it is not always possible to ascertain that hazardous wastes are present on the property,prior to development.

A Phase I environmental site assessment does not utilize subsurface exploration to check for the presence of hazardous wastes on the property. The experience of the assessor, along with the research of available reports, aerial photographs and land use records are used to evaluate the potential for hazardous wastes to occur on the site. Based on the information gained from the audit, subsurface exploration may be recommended to check for the presence of hazardous wastes. Preexisting environmental problems such as the presence of hazardous wastes in the soil or groundwater, can be concealed by grading activities and site improvements. If such wastes are present these wastes cannot be observed by the auditor.

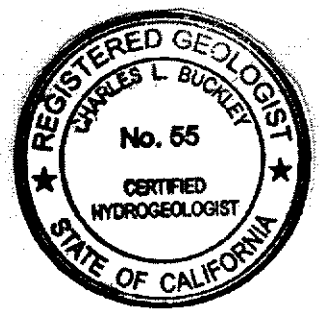
This report was prepared with the skill and competence as commonly used by environmental professionals in this area. No warranty, expressed or implied, of any kind is made or intended in connection with this report, or by the fact you are being furnished this report, or by any other oral or written statement.

Should you have any questions or desire any additional information, please contact the undersigned.

Respectfully Submitted,

Charles I. Buckley
Certified Hydrogeologist No. 55

Theresa L. Heirshberg
Geologist



2776.RPT
California Environmental Geologists & Engineers, Inc.

REFERENCES AND QUALIFICATIONS

1. Los Angeles County Department of Public Works Hydrological Records Division, Well Information, March 2006.

2. County of Los Angeles Department of Public Works, *File Review*, March 2006.

3. LACHD, *File Review*, March 2006.

4. SCAQMD, *File Review*, March 2006.

5. EDR Historical Aerial Photograph Collection, *Photograph Research*, March 2006.

6. EDR Historical Topographic Map Report, March 2006.

7. EDR-Radius Map with Geocheck, Inquiry No. 1637438.2s, March 2006.

8. Major Waste Systems Maps, Los Angeles County, *Map No. 144-077*, June 1972.

9. State Of California, Division of Oil, Gas and Geothermal Resource, *Wildcat Map W1-2,* June 1988.

10. T. Dibblee Jr., Geologic Map of Calabasas Quadrangle, *Map Review*, 1992.

CHARLES I. BUCKLEY, JR.
1161 Calle Suerte, Suite G
Camarillo, CA 93012

Bus. Tele: (805) 445-7117
E-Mail: cbuckley@calenviro.com

EDUCATION:

- **Masters** Work in Hydrogeology
  California State University, Los Angeles, 1980-1988
- **Bachelor of Science**, Geology (Engineering Geology)
  University of California, Los Angeles, 1978

REGISTRATIONS AND APPOINTMENTS:

- State of California, Dept. of Conservation, Former Member, State Mining and Geology Board (Appointed by Gov. Pete Wilson and State Senate confirmed to 4 year term, 1997-2001)
- State of California, Certified Hydrogeologist, No. 55
- State of California, Registered Geologist No. 4035
- State of California, Certified Engineering Geologist No. 1250
- State of California, Registered Environmental Assessor No. 837
- State of California, Registered Environmental Assessor II No. 20116

PROFESSIONAL EXPERIENCE:

Jan 88-Present CALIFORNIA ENVIRONMENTAL
CEO - Principal Hydrogeologist

Founded California Environmental in January of 1988. Clients include Fortune 500 Corporations, County Government, Municipal Agencies, Financial Institutions, Land Developers, and Consultants. Principal Investigator for groundwater supply and groundwater contamination investigations. Project leader for groundwater remediation at a State of California Superfund Site. Principal hydrogeologist for design and implementation of a groundwater monitoring network for an existing Sanitary Landfill. Lead investigator to delineate structure of a California Groundwater Basin; Pioneered use of a cost effective soil/gas vapor technique used to track groundwater plumes. Conducted over 2000 Phase I Environmental Investigations in California. These investigations included the use and interpretation of historic topographic maps, Sanborn Insurance Maps, aerial photography, and other historic data sources. Successfully completed remedial clean-up on 500+ sites in southern California; including impacts associated with fuels, PCBs, metals, asbestos and chlorinated solvents. Expert consultant for environmental impairment of soil and groundwater: Port of Los Angeles, L.A. County Counsel, L.A. City Recreation and Parks and private attorneys.

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PROFESSIONAL EXPERIENCE: (continued)

Mar 84-Dec 87 KOVACS-BYER AND ASSOCIATES
Manager Environmental Services Group

Spearheaded the development into the groundwater and environmental segments of consulting market. Ascended from project geologist status to manager of Environmental Services Group. Responsible for all aspects of project management including; organization and staffing, developing technical requirements needed to complete projects, client and agency liaison.

Provided technical leadership for groundwater testing including design and analysis of aquifer pump tests. Lead Geotechnical Investigator for remedial repair of complex landslide terrains. Prepared Seismic Analysis for critical facilities. Recommended specialized drainage systems for abatement of groundwater problems. Project Consultant for award winning projects on which severe geotechnical problems were overcome.

Mar 80-Mar 84 GEOTECHNICAL SERVICES GROUP; BUREAU OF ENGINEERING; CITY OF LOS ANGELES
Assistant Engineering Geologist

Performed geologic mapping in hillside areas of the City of Los Angeles. Reviewed Geotechnical Reports submitted to the City of Los Angeles for private development. Directed landslide investigations. Prepared Expert Opinion documents regarding groundwater and geologic issues for the City Engineer and City Attorney. Conducted field monitoring of known landslides within the City of Los Angeles.

Aug 79-Mar 80 UNITED STATES GEOLOGICAL SURVEY
Field Assistant

Assisted in geological mapping for a uranium resource development project sponsored by the Department of Energy and the United States Geological Survey.

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CONTINUING EDUCATION:

- "Technical Guidance for Indoor Air Vapor Intrusion", Severn Trent Laboratory, San Pedro, CA, February 22, 2005.
- "Successful Brownfields Redevelopment: Achieving Clarity on Regulatory Requirements, Processes and Options", State of California EPA, DTSC, University of Southern California, November 18, 2004.
- "Low Cost Remediation Techniques", AGSE, San Francisco, CA 2002.
- "Remediation of MtBE", AGSE, Anaheim, CA 2002.
- "MTBE: Assessment, Remediation, and Public Policy", National Ground Water Association, June 6-7, 2002.
- Conference and Exposition, Petroleum Hydrocarbons and Organic Chemicals in Ground Water, Prevention, Detection, and Remediation, November 15-17, 2000.
- "Assessment and Management of MtBE Impacted Sites", San Francisco, January 1999.
- "Workshop on MtBE Water Issues", Los Angeles, June 1997.
- "Management Action Programs Seminar", Newport Beach, November 1996.
- "ACWA - Groundwater Workshop", Monterey, June 1995.
- "SeSoil Modeling Workshop" GSC, San Francisco, CA, October 1994
- "Groundwater Monitoring and Remediation", Short Course AEG, October 1992
- "Microbial Processes in Biodegradation", AGSE, Albuquerque NM, February, 1991
- "Introduction to Groundwater Geochemistry", National Water Well Association, San Francisco, CA, September, 1988.
- "Fate and Transport of Contaminants in the Subsurface", United States Environmental Protection Agency, San Francisco, CA, December, 1987.
- "How to Monitor and Sample the Vadose Zone"
  National Water Well Association, San Diego, CA, April, 1987.
- "Treatment Technology for Contaminated Groundwater" UCLA Fall, 1986.
- "Groundwater Contamination Detection, Monitoring and Cleanup", UCLA, April, 1986.
- "Introduction to Groundwater Modeling", National Water Well Association, Fullerton, CA 1985.

ORAL PRESENTATIONS AND SEMINARS:

- "Overview of Environmental Regulations, State and Federal Laws" Guest Lecturer, University of Southern California, 1991.
- "Environmental Risks and Underground Tank Leaks, Commercial Property Inspection"
  California Real Estate Inspectors Association, Santa Monica, CA., May, 1988.

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- "Modified Technique for Soil/Gas Surveys to Detect Groundwater Contamination". Association of Engineering Geologists, Southern California Section meeting. December, 1987.
- "Historic Aerial Photographic Evidence of Landslide Development, Potrero Canyon, CA." Association of Engineering Geologists Annual Meeting, San Francisco, CA., October, 1986.
- "Environmental Issues and Careers", Guest Lecturer, USC Department of Geology, Spring 1992.

PROFESSIONAL PAPERS:

- "Geology, Landslides and Slope Stabilization.
  Potrero Canyon Park, Pacific Palisades, CA."
  Association of Engineering Geologists Guidebook,
  June 20, 1987.
- "Red Rose Landslide Stabilization, 3358-3400
  Red Rose Drive, CA.
  with Hollingsworth, R.A.; Association of Engineering Geologists Guidebook.
  June 20, 1987.
- "Residential Development and Landsliding, Castellammare Mesa area, Los Angeles, CA."
  Association of Engineering Geologists Guidebook.
  June 2, 1984.

AFFILIATIONS:

Association of Engineering Geologists.
Association of Groundwater Scientists and Engineers.
California Groundwater Association.
Hazardous Waste Association of California.
Hydrology Section-American Geophysical Union.
National Water Well Association

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EDUCATION:

DOCTORAL DEGREE, GEOLOGY COURSE WORK 1997-1998
University of California, Los Angeles *Los Angeles, CA*

MASTER OF SCIENCE, GEOLOGY 1993-1997
University of California, Los Angeles *Los Angeles, CA*

- Emphasis Sandstone Petrography, Sedimentology and Regional Geology of Southern California
- Thesis title: Actualistic Petrofacies Analysis of the Pliocene-Pleistocene Saugus Formation, Ventura Basin, Southern California: Implications for Provenance, Paleotectonics and Paleogeography

BACHELOR OF SCIENCE, GEOLOGY 1989-1993
Arizona State University *Tempe, AZ*

- Mineralogical Society of America's Outstanding Student Award
- Sigma Gamma Epsilon – Earth Science Honor Society
- Undergraduate representative to the faculty

PROFESSIONAL EXPERIENCE:

GEOLOGIST SEPTEMBER 2005-PRESENT
California Environmental *Camarillo, CA*

- Primary task is to perform Phase I Environmental Site Assessments. The numerous properties completed range from light industrial to large parcels of undeveloped land.
- Scope of work consists of literature review (previous phase I and II assessments, historical city directories, building and grading permits, underground storage tank permits, historical aerial photograph research, historical fire insurance maps, historical topographic maps, landfill maps, standard environmental record sources, groundwater permits and county assessor information), geologic/groundwater investigation (including sample collection, and determining subject property geology and hydrogeology) and report preparation/assessment.

THERESA HEIRSHBERG
1161 Calle Suerte, Suite G
Camarillo, CA 93012

PROFESSIONAL EXPERIENCE: (continued)

GEOLOGICAL CONSULTANT — JULY 19-26, 1999
Cal Mat Los Angeles, CA

- The task was to determine the mineral and aggregate potential of the units found on the Cuyama Valley Land Exchange BLM Parcel #1.
- Scope of work consisted of literature review, geologic reconnaissance (including sample collection and photographs of outcrops) and report preparation/assessment.

GEOLOGICAL CONSULTANT — AUGUST-DECEMBER, 1998
Cal Mat Los Angeles, CA

- First task was to find conglomerate in southern Ventura County with primary focus on the Saugus Formation that was usable for Portland Cement Concrete. To achieve this task every accessible canyon and foothill in the area was explored.
- Second task was to examine all units found on the Temescal Ranch at Piru Creek for their aggregate potential.
- Scope of work consisted of literature review, geologic reconnaissance (including sample collection and photographs of outcrops) and report preparation/assessment.

TEACHING ASSISTANT/ASSOCIATE — JANUARY 1994-MARCH 1998
University of California, Los Angeles — *Los Angeles, CA*

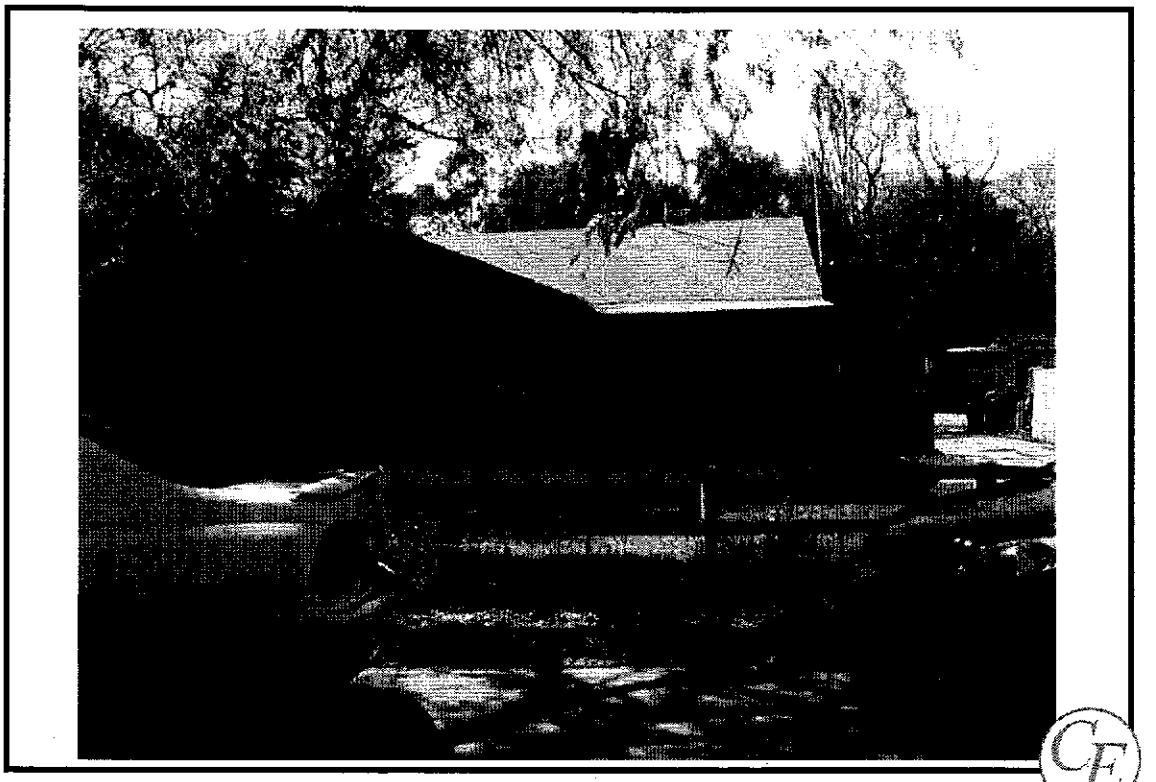
- Tasks included overseeing other teaching assistants, lecturing, preparation of students' lab materials, running laboratories and leading discussion sections.
- Courses taught: Introduction to Earth Science (Winter 1998, Winter 1997, Spring 1996, and Spring 1995), Sedimentary Petrology (Fall 1996), Introduction to Oceanography (Fall 1995 and Fall 1994), and General Chemistry (Winter 1994 and Spring 1994).

STUDENT RESEARCH ASSISTANT — JANUARY-DECEMBER 1992
Arizona State University — *Tempe, AZ*

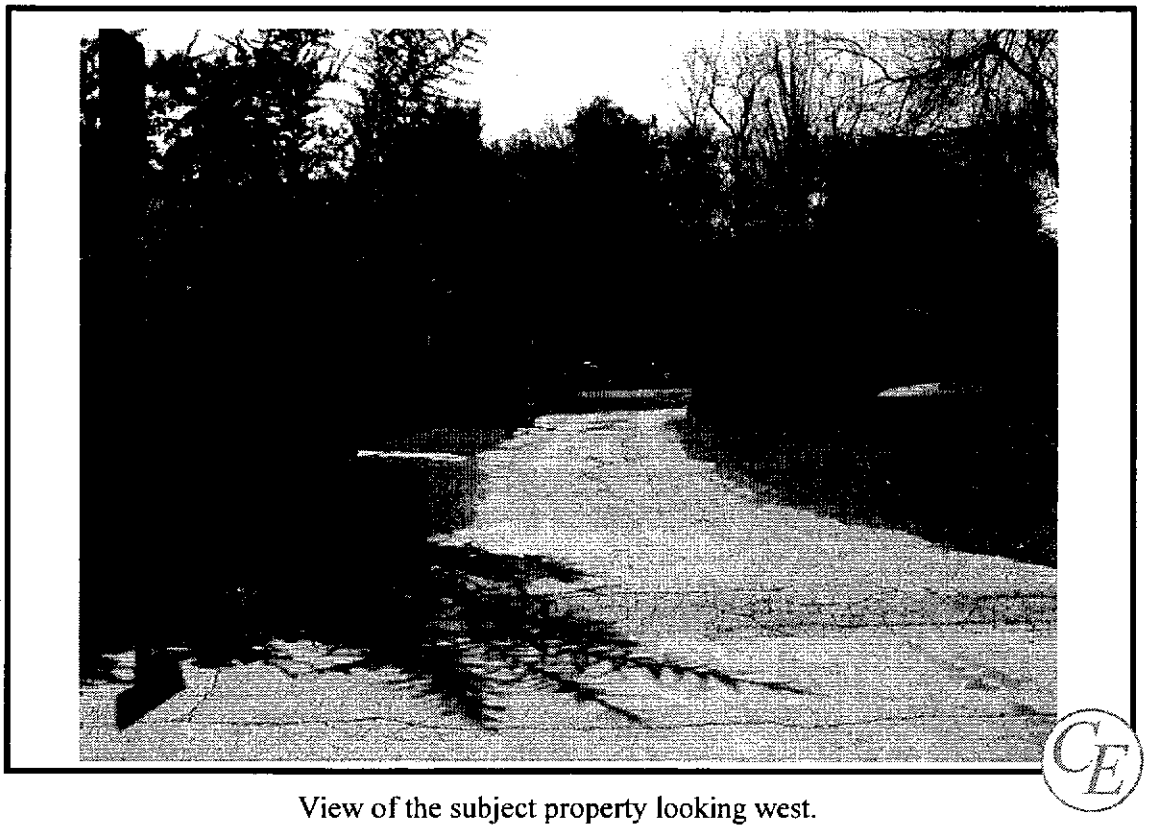
- Crushing and sieving rocks, point-counting samples and mineral identification with immersion oils.

ILLUSTRATIONS

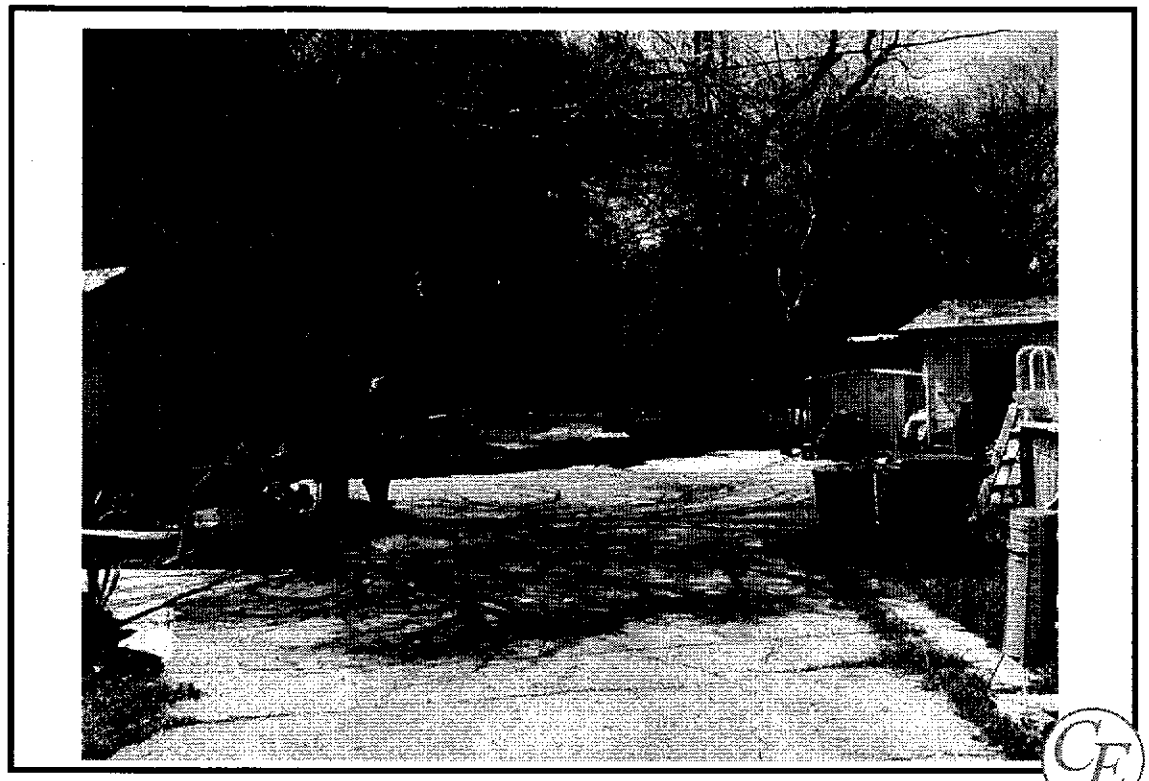
Site Photographs - Plates 1-3
Vicinity Map
Plot Plan



View of the house looking west.
4803 El Canon Ave., Calabasas, California

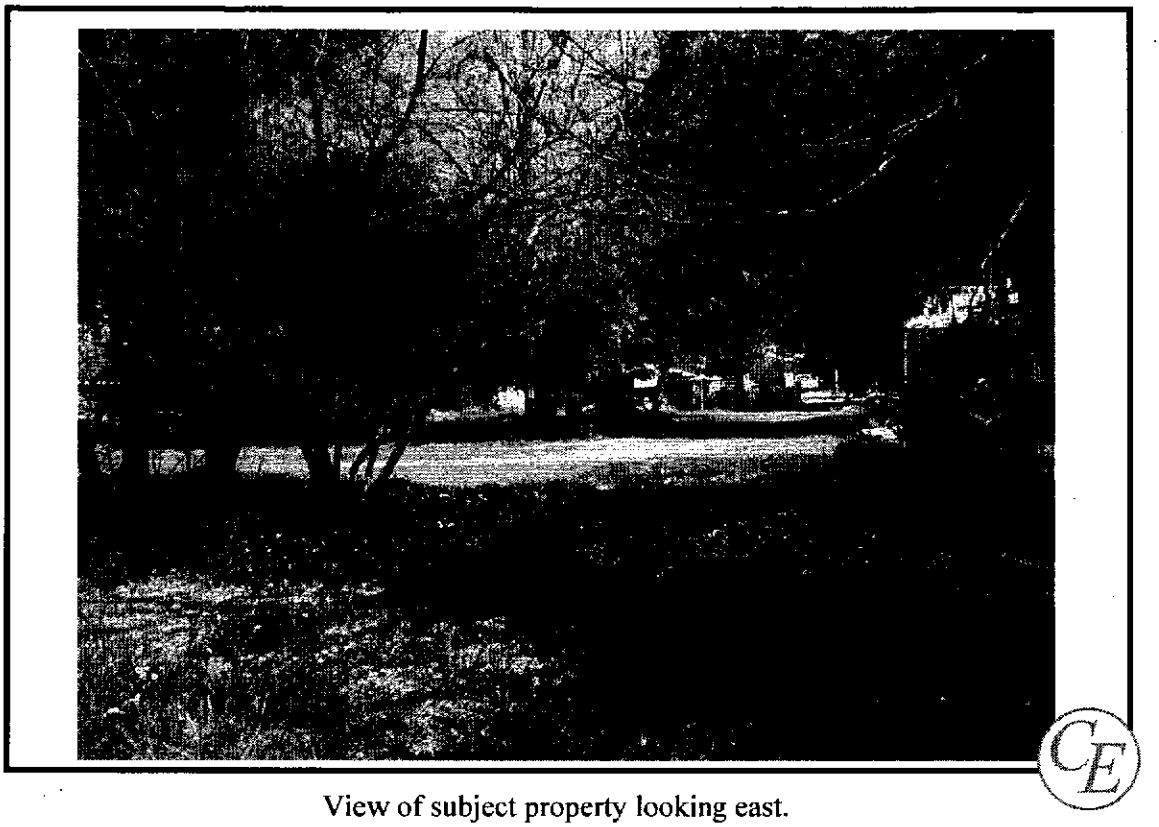


View of the subject property looking west.
4803 El Canon Ave., Calabasas, California

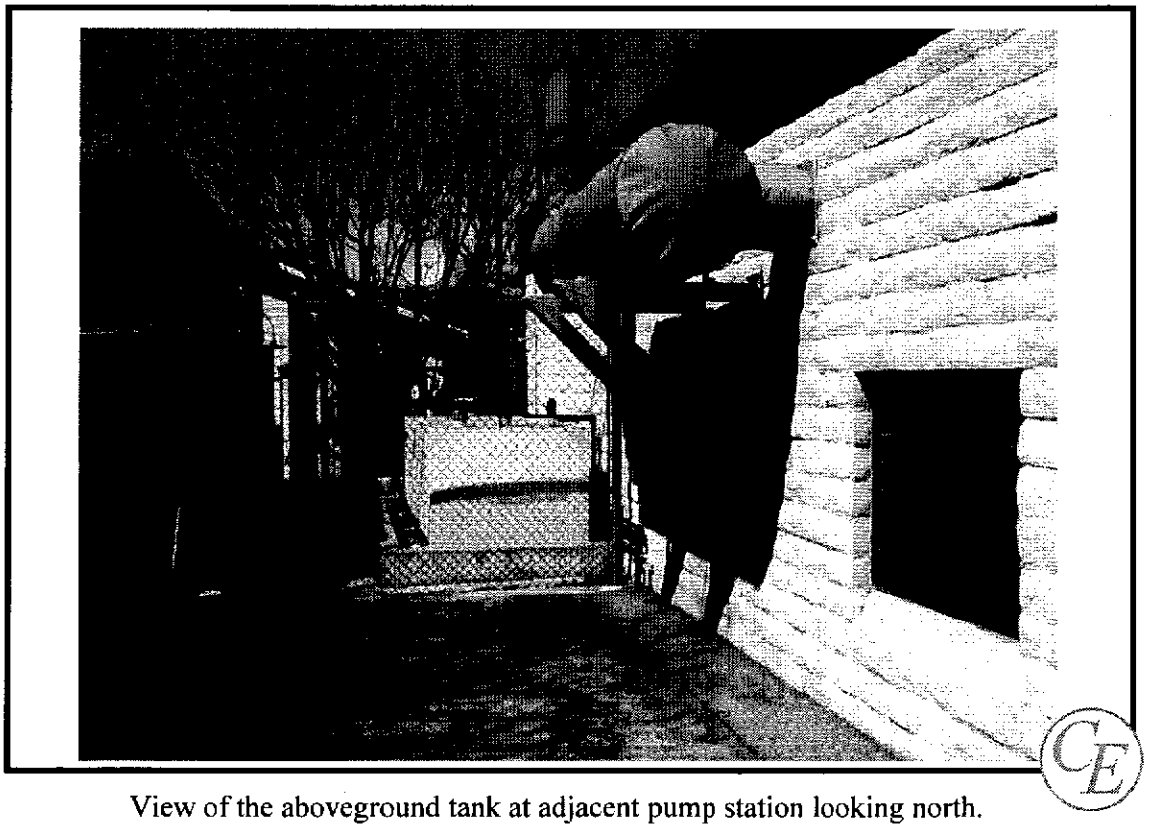


View of the subject property looking west.
4803 El Canon Ave., Calabasas, California

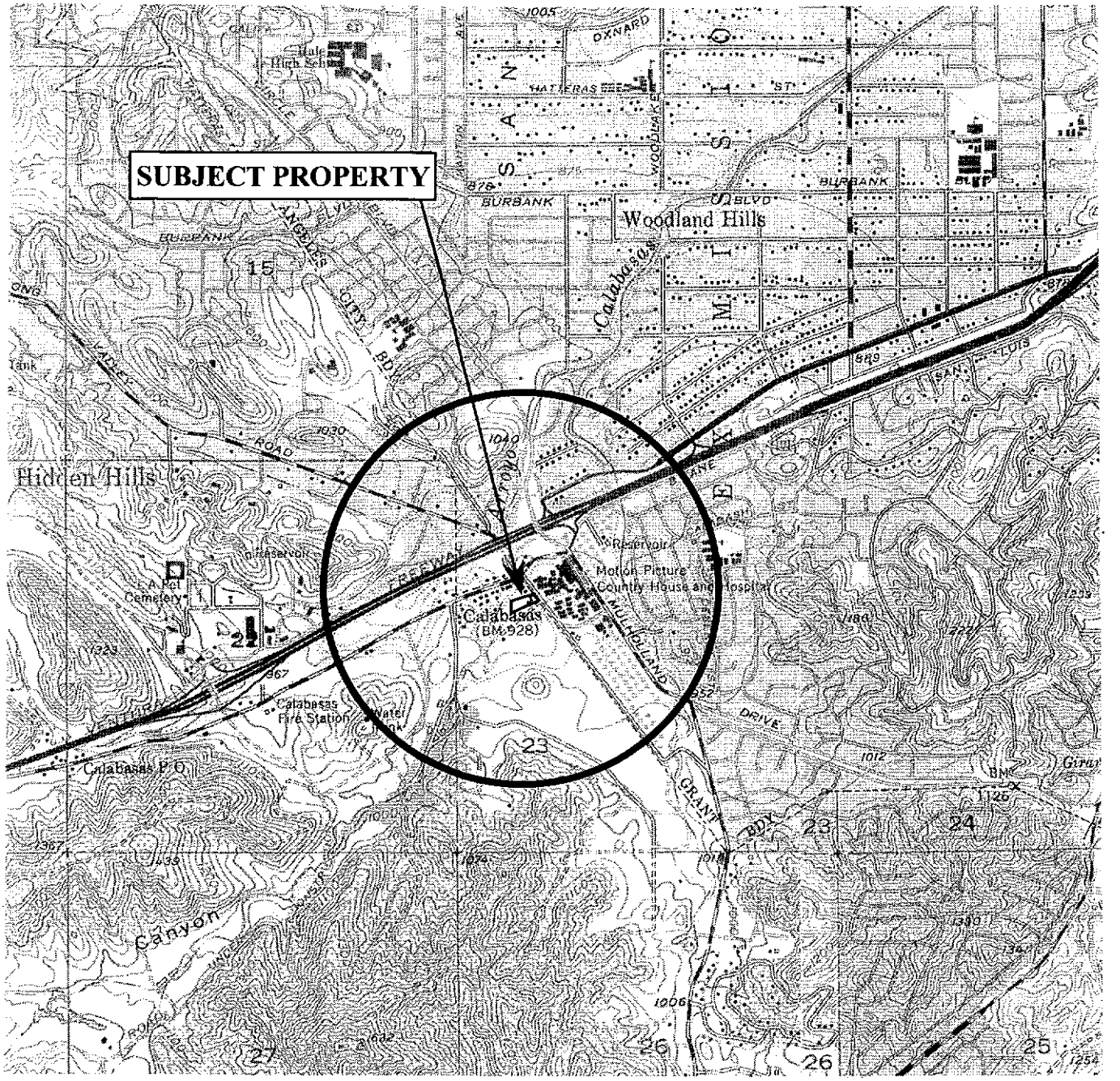
View of the western portion of subject property looking west.
4803 El Canon Ave., Calabasas, California



View of subject property looking east.
4803 El Canon Ave., Calabasas, California



View of the aboveground tank at adjacent pump station looking north.
4803 El Canon Ave., Calabasas, California



Reference: USGS 7.5' Calabasas and Canoga Park topographic quadrangle, 1952 (photorevised 1967)

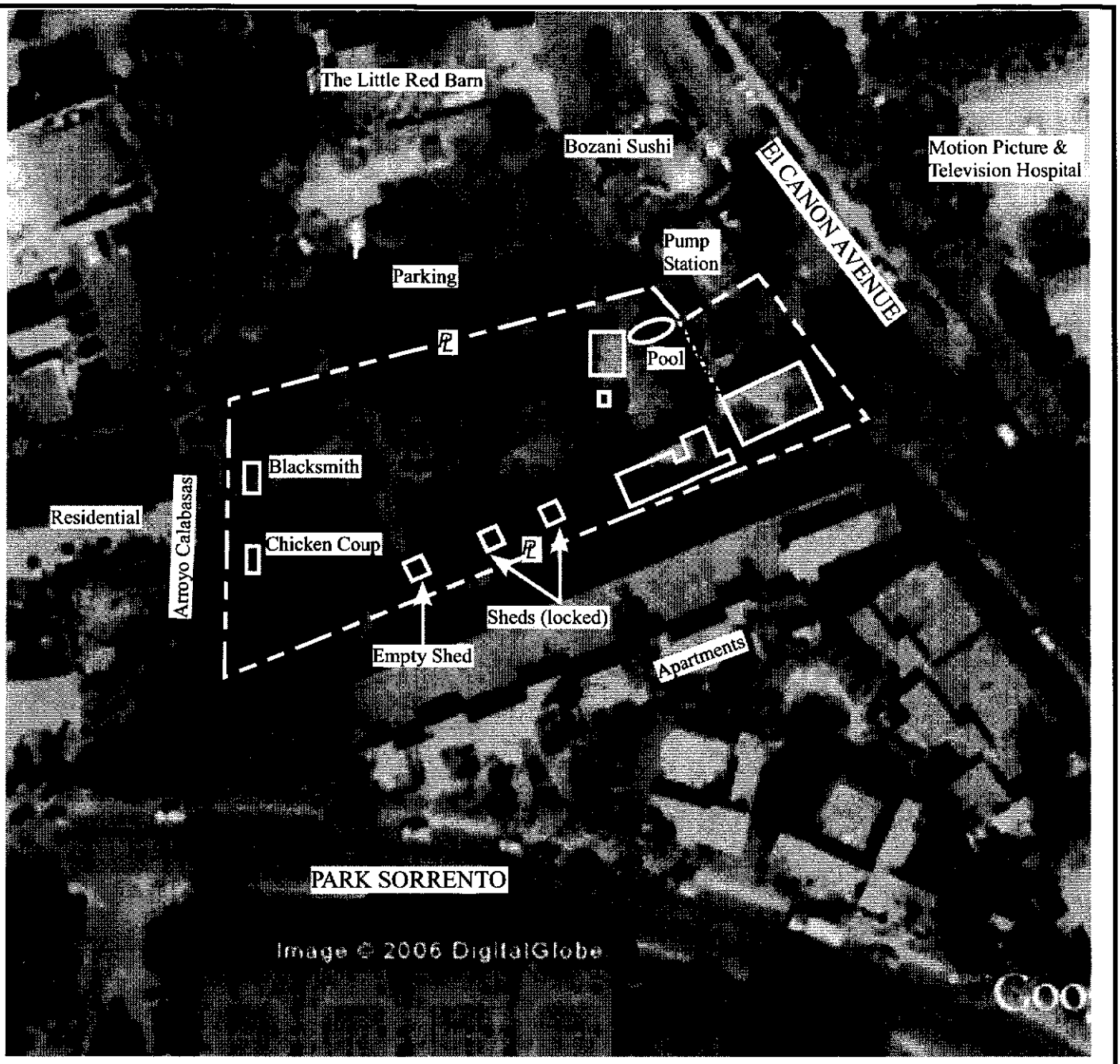
VICINITY MAP

4803 El Cañon Avenue
Calabasas, California

Drawn By:	**CGL**	**Job #**	**EV306-2776**
Checked By:	**CIB**	**Date:**	**APRIL 2006**

California Environmental

2776 Vicinity Map



SCALE

0 40 80 ft.

1 inch = 80 feet

N

Reference: Google Earth

PLOT PLAN

4803 El Cañon Avenue
Calabasas, California

Drawn By:	**CGL**	**Job #**	**EV306-2776**
Checked By:	**CIB**	**Date:**	**APRIL 2006**

California Environmental

2776 Plot Plan

APPENDIX I

Environmental Field Reconnaissance and Field Interview Questionnaires

ENVIRONMENTAL FIELD RECONNAISSANCE QUESTIONNAIRE (PART A)

Completed By: Theresa Heirshberg Title: Geologist

Property Address: 4803 El Cañon Avenue, Calabasas Date: March 24, 2006

USES OF THE PROPERTY	
1. Name of present occupants of the property (include business names and addresses or unit numbers):	Betty Farmer.
2. Describe the present use(s) of the property:	Residential property. A homestead.
3. Describe the present use of adjacent properties:	North – restaurants (Bonzai Sushi, The Little Red Barn) and parking, East – El Cañon Ave. with motion picture and television hospital; South – apartments; West – creek with residential beyond.
4. Is the property used for an industrial use?	No.
5. Is any adjoining property used for an industrial use?	No.
6. Is the property used as a gasoline station, auto repair facility, commercial printing facility, dry cleaners, photo developing laboratory, or junkyard? If so, identify which and give the name of the business(es):	No.
7. Is the property used as a landfill or a waste treatment, storage, processing, recycling, or disposal facility?	No.
8. Is any adjoining property used as a gasoline station, auto repair facility, commercial printing facility, dry cleaners, photo developing laboratory, or junkyard? If so, identify which and give the name of the business(es):	No.
9. Is any adjoining property used as a landfill or a waste treatment, storage, processing, recycling, or disposal facility?	No.
10. Is the property used for agricultural purposes?	Yes. Currently not, but in past raised chickens and had a few head of cattle.
PROPERTY CONDITIONS	
11. Are there or have there been any damaged or discarded industrial or automotive batteries on the property?	No.

12. Are there currently any solvents, paints, fuels, pesticides, herbicides, or other chemicals, in individual containers larger than 5 gallons or totaling more than 50 gallons, used on or stored at the property?	Yes. Eight propane tanks owned by a former tenant.
13. Are there currently any industrial drums (typically 55 gallons) or sacks of chemicals located on the property?	No.
14. Is there any visible evidence fill dirt has been brought onto the property from a contaminated site?	No.
15. Is there any visible evidence fill dirt has been brought onto the property from an unknown site?	No.
16. Are there any waste treatment or waste disposal ponds, pits or lagoons on the property?	No.
17. Is there any stained soil, or soil emitting unusual odors, on the property?	No.
18. Are there any flooring, drains, or walls in the facility that are stained by substances other than water or have emitted unusual odors?	No.
19. Is there any visible evidence of storage tanks (underground or aboveground) at the property?	Yes. Owner stated septic tank on property but we could not locate connection port. 100-gallon empty aboveground propane/butane tank owned by a former tenant.
20. Are there currently or have there been any vent pipes, fill pipes, fill ports, or surface covers indicating possible fill ports on the property or adjacent to any building located on the property?	No.
21. Are there any oil wells, drilling sumps, mud pits, or oil pipelines on or adjacent to the property?	No.
22. Are there any pipelines on, beneath, or adjacent to the property, other than water, sewer, and natural gas utilities serving the property?	No.
23. Is the property known to be located in a methane hazard area due to oil fields, natural seepage, or landfill gas?	No.

24. Does the property or any facility at the property produce wastewater other than domestic sewage and storm water runoff?	No.
25. Are there any wastewater treatment systems (clarifiers, oil/water separators, grease traps, filtration systems, etc.) at the property?	No.
26. How is wastewater from the property disposed of? Sanitary sewer. Septic system. Surface water. Pond, pit, sump, or well. Other (describe).	Sanitary sewer and septic system.
27. Does the property or any facility at the property produce solid waste other than domestic trash and greenwaste?	No.
28. How is solid waste from the property disposed of? Municipal or private trash service. Recycling. Onsite dumping or burial. Other (describe).	Municipal trash service.
29. How is solid waste stored at the property?	Trash containers.
30. Does the property or any facility at the property generate hazardous or special waste in the course of normal operation? Examples include spent solvents, photo processing waste, waste oil, used filters, etc. Provide copies of generator notification or waste manifests.	No.
31. If hazardous or special wastes are generated at the property, how are they stored?	N/A.
32. Are pesticides or herbicides stored, mixed, or disposed of on the property?	
33. Are there any transformers, capacitors, or hydraulic equipment on the property that are known or suspected of containing PCBs?	No.
34. Are there any building materials on the property known or suspected to contain asbestos? Please describe:	Yes. Roof felt.

ENVIRONMENTAL COMPLIANCE	
35. Does the property or any occupant of or facility on the property have any licenses, permits, registrations, or notifications for tanks, pipelines, industrial waste, wastewater treatment, wastewater discharge, stormwater discharge, waste disposal, waste storage or treatment, air emissions, chemical use, or chemical storage?	No.
36. Is there visible evidence of any spills, leaks, or other releases or threatened releases of any hazardous substances or petroleum products from the property to soil, groundwater, or surface water?	No.
37. Is there visible evidence of any release or threatened release of any hazardous substances or petroleum products from another location to soil, groundwater, or surface water at the property?	No.
38. Is there visible evidence of the current or past existence of environmental violations on the property or in any facility located on the property?	No.
39. Does the property discharge waste water, other than storm water runoff, into a storm drain or onto adjacent properties or streets?	No.
40. Does the property discharge waste water, other than storm water, into a sanitary sewer system?	No.
41. Is there visible evidence that hazardous substances, petroleum products, unidentified waste materials, tires, batteries, or any other waste materials have been dumped, buried, or burned on the property?	No.

ENVIRONMENTAL FIELD INTERVIEW QUESTIONNAIRE (PART B)

For Property Owner or Occupant

Completed By: Betty-Jeanne Farmer Title: Homeowner

Property Address: 4803 El Cañon Avenue, Calabasas, CA 91302-1305 Date: March 24, 2006

USES OF THE PROPERTY	
1. Name of present owner of the property:	Frank L and Betty-Jeanne Farmer – Trust.
2. Name of present occupants of the property (include business names and addresses or unit numbers):	Betty-Jeanne Farmer.
3. Describe the present use(s) of the property. Describe any manufacturing/industrial processes.	Homeowner's use only. Nothing commercial.
4. Describe the past use(s) of the property:	Chicken farm and a few cattle.
5. Provide initial date of construction for subject building(s). Dates of major renovations.	1929 – first time for property tax.
6. Describe the present and past use(s) of adjacent properties.	Open fields and grocery store and home.
7. Provide the company names for utilities (water, gas and electric).	Water – LA Dept. of Water and Power. Electric – Southern California Edison. Gas – The Gas Co.
8. Is the property used for an industrial use? If yes, please explain.	No.
9. Is any adjoining property used for an industrial use?	Do not know.
10. Do you have any knowledge that the property or any adjoining property has been used for an industrial use in the past? If yes, please explain.	No.
11. Is the property used as a gasoline station, auto repair facility, commercial printing facility, dry cleaners, photo developing laboratory, or junkyard? If so, identify which and give the name of the business(es):	No.
12. Is the property used as a landfill or a waste treatment, storage, processing, recycling, or disposal facility? If yes, please explain.	No.

13. Is any adjoining property used as a gasoline station, auto repair facility, commercial printing facility, dry cleaners, photo developing laboratory, or junkyard? If so, identify which and give the name of the business(es):	No.
14. Is any adjoining property used as a landfill or a waste treatment, storage, processing, recycling, or disposal facility?	Yes. Las Virgenes Municipal Water Dept. Sewage system – small portion NE corner.
15. Do you have any knowledge that the property has been used as a gasoline station, auto repair facility, commercial printing facility, dry cleaners, photo developing laboratory, or junkyard in the past? If so, identify which and give the name of the business(es):	No.
16. Do you have any knowledge that the property has been used as a landfill or a waste treatment, storage, processing, recycling, or disposal facility in the past? If yes, please explain.	No.
17. Do you have any knowledge that any adjoining property has been used as a gasoline station, auto repair facility, commercial printing facility, dry cleaners, photo developing laboratory, or junkyard in the past? If so, identify which and give the name of the business(es):	No.
18. Do you have any knowledge that any adjoining property has been used as a landfill or a waste treatment, storage, processing, recycling, or disposal facility in the past?	Same answer as No. 14.
19. Is the property used for agricultural purposes, or has it been used for agricultural purposes in the past? Provide MSDS's and/or list of agricultural chemicals applied to property.	Was only a chicken farm a few head of cattle for food some planting. Do not know what chemicals used, if any.
PROPERTY CONDITIONS	
20. Are there or have there been any damaged or discarded industrial or automotive batteries on the property? If yes, please explain.	Do not know of any. Any batteries were disposed of through recycling centers.

21. Are there currently any solvents, paints, fuels, pesticides, herbicides, or other chemicals, in individual containers larger than 5 gallons or totaling more than 50 gallons, used on or stored at the property? If yes, please explain.	No.
22. Do you have any knowledge that there have been any solvents, paints, fuels, pesticides, herbicides, or other chemicals, in individual containers larger than 5 gallons or totaling more than 50 gallons, used on or stored at the property in the past? If yes, please explain.	No.
23. Are there currently any industrial drums (typically 55 gallons) or sacks of chemicals located on the property? Provide Disposal Manifests, MSDS's and/or list with quantities. If yes, please explain.	No.
24. Do you have any knowledge that there have been any industrial drums (typically 55 gallons) or sacks of chemicals located on the property in the past? If yes, please explain.	No.
25. Do you have any knowledge that fill dirt has been brought onto the property from a contaminated site? If yes, please explain.	No.
26. Do you have any knowledge that fill dirt has been brought onto the property from an unknown site? If yes, please explain.	No.
27. Are there currently or have there been any waste treatment or waste disposal ponds, pits or lagoons on the property? If yes, please explain.	No.
28. Is there currently or has there been any stained soil, or soil emitting unusual odors, on the property? If yes, please explain.	No.
29. Are there, or have there been in the past, any flooring, drains, or walls in the facility that are stained by substances other than water or have emitted unusual odors? If yes, please explain.	No.

30. Are there currently or have there been any registered or unregistered storage tanks (underground or aboveground) at the property? List size and/or quantity.	One 100 gallon empty butane tank for sale – not part of property.
31. What year was underground or aboveground storage tank installed and/or removed?	Above was never installed.
32. Are there currently or have there been any vent pipes, fill pipes, fill ports, or surface covers indicating possible fill ports on the property or adjacent to any building located on the property?	No.
33. Are there currently or have there been any oil wells, drilling sumps, mud pits, or oil pipelines on or adjacent to the property? If yes, please explain.	No.
34. Are there currently or have there been any pipelines on, beneath, or adjacent to the property, other than water, sewer, and natural gas utilities serving the property?	No.
35. Is the property known to be located in a methane hazard area due to oil fields, natural seepage, or landfill gas?	No.
36. Does the property or any facility at the property produce wastewater other than domestic sewage and storm water runoff?	No.
37. Are there any wastewater treatment systems (clarifiers, oil/water separators, grease traps, filtration systems, etc.) at the property?	No.
38. How is wastewater from the property disposed of? Sanitary sewer. Septic system. Surface water. Pond, pit, sump, or well. Other (describe).	Sewer – septic tank.
39. Does the property or any facility at the property produce solid waste other than domestic trash and greenwaste?	No.
40. How is solid waste from the property disposed? Municipal or private trash service, recycling, onsite dumping or burial. List service company. Other (describe).	Municipal trash, recycling, and yard waste. Consolidated Disposal SVC.

41. How is solid waste stored at the property?	Not stored.
42. Does the property or any facility at the property generate hazardous or special waste in the course of normal operation? Examples include spent solvents, photo processing waste, waste oil, used filters, etc. Provide copies of generator notification or waste manifests.	No.
43. Has the property or any facility at the property generated hazardous or special waste due to occasional or one-time events such as asbestos abatement, soil or groundwater cleanup, or accidental events such as spills? Provide copies of waste manifests.	No.
44. If hazardous or special wastes are generated at the property, how are they stored?	No.
45. Have pesticides or herbicides been stored, mixed, or disposed of on the property?	Do not know.
46. Are there any transformers, capacitors, or hydraulic equipment on the property that are known or suspected of containing PCBs?	Transformers, but do not know if PCB's.
47. Are there any building materials on the property known or suspected to contain asbestos? Please describe:	No.
48. Have any asbestos surveys been performed at the property? Please provide copies of survey reports.	No.
49. Have any asbestos removal or other abatement projects taken place at the property? Please describe and provide documentation.	No.
50. Is there any known or suspected lead-based paint in buildings located at the property? Please provide copies of survey reports.	Do not know.
51. Has radon testing ever been conducted at the property? Please provide test reports.	No.

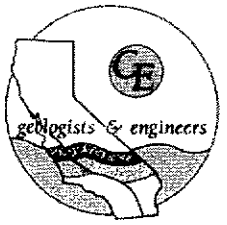
ENVIRONMENTAL COMPLIANCE	
52. Has the property ever been the subject of an environmental site assessment or environmental audit, with respect to soil, groundwater, surface water, air, or site facilities and processes? Has any environmental site assessment of the property indicated the presence of hazardous substances or petroleum products on, or contamination of, the property or recommended further assessment of the property? Please provide a copy of such reports and describe the manner in which any recognized environmental conditions have been addressed.	Only what is being done currently.
53. Does the property or any occupant of or facility on the property have any licenses, permits, registrations, or notifications for tanks, pipelines, industrial waste, wastewater treatment, wastewater discharge, stormwater discharge, waste disposal, waste storage or treatment, air emissions, chemical use, or chemical storage? Please provide copies of such documents.	Not to my knowledge.
54. Have you been informed of the current or past existence of hazardous substances or petroleum products on the property or in any facility located on the property?	Not to my knowledge.
55. Do you have knowledge of any spills, leaks, or other releases or threatened releases of any hazardous substances or petroleum products from the property to soil, groundwater, or surface water?	No.
56. Do you have knowledge of any release or threatened release of any hazardous substances or petroleum products from another location to soil, groundwater, or surface water at the property?	No.
57. Have you been informed of the current or past existence of environmental violations on the property or in any facility located on the property?	No.

58. Do you have any knowledge of environmental liens or governmental notifications relating to violations of environmental laws with respect to the property or any facility located on the property?	No.
59. Do you have knowledge of any past, threatened, or pending lawsuits, enforcement actions, or administrative proceedings concerning the property.	No.
60. If the property is served by a private well or a non-public water system, do you have any knowledge that contaminants exceeding applicable guidelines have been identified in the well or water system, or has the well or system been designated as contaminated by any governmental agency?	No.
61. Does the property discharge waste water, other than storm water runoff, into a storm drain or onto adjacent properties or streets?	No.
62. Does the property discharge waste water, other than storm water, into a sanitary sewer system?	No.
63. Do you have any knowledge that hazardous substances, petroleum products, unidentified waste materials, tires, batteries, or any other waste materials have been dumped, buried, or burned on the property?	No.

APPENDIX II

Inquiry and Response Letters

California



Environmental

March 20, 2006

Job No. EV306-2776

Custodian of Records
DHS/PHI
5555 Ferguson Drive, Suite 120-04
Commerce, California 90022

Attention: Custodian of Records

Dear Sir/Madam:

I am writing to request information on Site Inspection Files, Emergency Response file, the Doing Business As (DBA) file, Site Mitigation File Log (active or inactive), and site mitigation files, Hazardous Materials Business Plans/Inventory, Hazardous Waste Generator License, California Accidental Release Prevention (CalARP) Program Information, as well as, spills and site remediation information, and any other file that would help locate information regarding soil or water contamination at or nearby the following address.

4803 El Cañon Avenue
Calabasas, CA 91302

Please call our office regarding the availability of such files at your earliest convenience. Your timeliness in this matter is appreciated.

Thank you for your assistance,

Christopher E. Rude

Christopher E. Rude
Environmental Scientist

1161 Calle Suerte, Suite G, Camarillo, CA 93012, Tel (805) 445-7117, Fax (805) 445-8599

South Coast
Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765
(909) 396-3700
FAX (909) 396-3330

Office Use Only
CONTROL NUMBER

PUBLIC RECORDS REQUEST FORM

CE Job No. EV306-2776

(Please Type or Print)

Requestor Name	Christopher E. Rude	Date	3/20/06
Company Name	California Environmental		
Mailing Address	1161 Calle Suerte, Suite G		
City	Camarillo	State CA	Zip Code 93012
Phone	(805) 445-7117	Fax	(805) 445-8599

In order to expedite your request for records we are asking that you fill out this form completely. Check the record(s) that you are interested in receiving and the time frame of the request (eg. 1989-1991). If applicable a description of what your are requesting is also advisable.

Request Company Name

Address 4803 El Cañon Avenue

City Calabasas State **CA** Zip Code 91302

Specify Equipment (e.g Permit or ID numbers)

Time Period of Documents Requested: From: 1900 To: Present

RECORDS REQUESTED

(Check Only Three Items Maximum *Per Request*)

	Application(s)		New Source Review Balance (NSR)		AB 2588 (Toxics) HRA
X	Permit(s)		Air Monitoring Data (please describe below)		VOC RECLAIM Facilities (Disk $10.00)
X	Notices of Violation		Source Test Reports		RECLAIM NOx & Sox (Disk $10.00)
X	Site Inspection Reports		Asbestos Reports		Title V Facilities List (Disk $10.00)
					Other (please describe below)

DESCRIPTION OF ABOVE:

REPORTS/SUBSCRIPTIONS

Please check the appropriate box(s) and submit your check or money order to the attention of Public Records.
Payable to: S.C.A.Q.M.D.

NAME OF REPORT		MONTHLY		QUARTERLY		YEARLY
Asbestos/Demolition Notification Quarterly Report		--		$15.00		$60.00
Application Summary Report		$30.00		$90.00		$360.00
Civil/Criminal Monthly Report		$5.00		$15.00		$60.00
Emission Reduction Credit Report (ERC)		$5.00		$15.00		$60.00

I hereby agree to reimburse the SCAQMD for all expenses related to producing the information requested in accordance with Govt. Code Section 6257.

(Signature)

South Coast
Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765
(909) 396-3700
FAX (909) 396-3330

Office Use Only
CONTROL NUMBER

PUBLIC RECORDS REQUEST FORM

CE Job No. EV306-2776

(Please Type or Print)

Requestor Name	Christopher E. Rude	Date	3/20/06
Company Name	California Environmental		
Mailing Address	1161 Calle Suerte, Suite G		
City	Camarillo	State CA	Zip Code 93012
Phone	(805) 445-7117	Fax (805) 445-8599	

In order to expedite your request for records we are asking that you fill out this form completely. Check the record(s) that you are interested in receiving and the time frame of the request (eg.1989-1991). If applicable a description of what your are requesting is also advisable.

Request Company Name

Address 4803 El Cañon Avenue

City Calabasas State **CA** Zip Code 91302

Specify Equipment (e.g Permit or ID numbers)

Time Period of Documents Requested: From: 1900 To: Present

RECORDS REQUESTED

(Check Only Three Items Maximum *Per Request*)

	Application(s)		New Source Review Balance (NSR)	X	AB 2588 (Toxics) HRA
	Permit(s)	X	Air Monitoring Data (please describe below)		VOC RECLAIM Facilities (Disk $10.00)
	Notices of Violation		Source Test Reports		RECLAIM NOx & Sox (Disk $10.00)
	Site Inspection Reports	X	Asbestos Reports		Title V Facilities List (Disk $10.00)
					Other (please describe below)

DESCRIPTION OF ABOVE: H and S.C. 41805.5 - Air Solid Waste Assessment Testing

REPORTS/SUBSCRIPTIONS

Please check the appropriate box(s) and submit your check or money order to the attention of Public Records.
Payable to: S.C.A.Q.M.D.

NAME OF REPORT	MONTHLY		QUARTERLY		YEARLY	
Asbestos/Demolition Notification Quarterly Report		--		$15.00		$60.00
Application Summary Report		$30.00		$90.00		$360.00
Civil/Criminal Monthly Report		$5.00		$15.00		$60.00
Emission Reduction Credit Report (ERC)		$5.00		$15.00		$60.00

I hereby agree to reimburse the SCAQMD for all expenses related to producing the information requested in accordance with Govt. Code Section 6257.

(Signature)

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Information Management
Public Records Unit

Direct Dial (909) 396-3700
Fax:(909) 396-3330

COMPLETION LETTER

March 30, 2006

CHRISTOPHER RUDE
CALIFORNIA ENVIRONMENTAL
1161 CALLE SUERTE # G
CAMARILLO, CA 93012

Ref.: **CONTROL NO. 47356**
Received 3/21/2006

Re: AIR MON. DATA, ASBESTOS REC. & HRA FOR 4803 EL CANON AVE. CALABASAS, CA 91302.

After a thorough search of this agency's records:

NO REQUESTED RECORDS WERE FOUND FOR THE ABOVE-REFERENCED FACILITY OR FACILITY SITE.

If you have any questions, please do not hesitate to contact me, Tuesday through Friday, **8:00 a.m. to 4:30 p.m.**

Sincerely,

MARCUS PETERSON x3025
For Linda L Koenig
Public Records Coordinator

:mp

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 · www.aqmd.gov

Information Management
Public Records Unit

Direct Dial (909) 396-3700
Fax:(909) 396-3330

COMPLETION LETTER

March 21, 2006

CHRISTOPHER RUDE
CALIFORNIA ENVIRONMENTAL
1161 CALLE SUERTE # G
CAMARILLO, CA 93012

Ref.: CONTROL NO. 47355
Received 3/21/2006

Re: P/O'S, NOV'S & I/R'S FOR 4803 EL CANON AVE. CALABASAS, CA 91302.

After a thorough search of this agency's records:

NO REQUESTED RECORDS WERE FOUND FOR THE ABOVE-REFERENCED FACILITY OR FACILITY SITE.

If you have any questions, please do not hesitate to contact me, Tuesday through Friday, **8:00 a.m.** to **4:30 p.m.**

Sincerely,

MARCUS PETERSON x3025
For Linda L Koenig
Public Records Coordinator

:mp

EDR® Environmental Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Christine Malham
California Environmental
1161 Calle Suerte
Camarillo, CA 93012

Order Date: 3/20/2006 **Completion Date:** 3/20/2006
Inquiry #: 1637438.3
P.O. #: NA
Site Name: 4803 El Canon Avenue
Address: 4803 El Canon Avenue
City/State: Calabasas, CA 91302
Cross Streets:

Customer Project: EV306-2776
1010771PEP 805-445-7117

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report AS IS. Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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APPENDIX III

Building Permits

CITY of CALABASAS

Department of Planning & Building Services
26135 Mureau Road, Calabasas, CA 91302
(818) 878-4201

INSPECTION RECORD

Permit No. B04-005-828
Permit Type: Sewer

INSPECTION REQUEST (818) 878-4201 - POST THIS CARD AT JOB SITE

Building Address	4803 El Canon Ave
Owner Name and Address	Farmer, Frank L And Betty Jeanne 4803 El Canon Ave Calabasas, CA 91302
Owner Phone / Fax	Phone: Fax:
Contractor Name and Address	Mr. Rooter 11664 TUXFORD STREET SUN VALLEY, CA
Contractor Phone / Fax	Phone: (818) 500-7999 Fax:
State Lic. & Classif.	705233 C36 & C-42
City Lic. #	

	Liv.	Gar.	Rmdl.	Porch	Patio
Sq. Ft. Size					
Sq. Ft. Size					

☐ New ☐ Add ☐ Alteration ☐ Repair ☐ Demolition

Description of Work:

DISCONNECT FROM SEPTIC AND HOOK INTO SEWER

	Date	Insp.
Main Line	9/7/09	RV
Building Clean Out	9/7/09	RV
End of Line Clean Out	9/7/09	RV
Backwater Valve		
Split System		

FINAL INSPECTIONS

MUST BE SIGNED BEFORE UTILITY RELEASE

	Signature	Date
Planning		
Engineering		
Fire Dept.		
Health Dept.		
Landscape		
Building	RQ JR	9/9/09

CITY of CALABASAS

Department of Planning and Building Services
26135 Mureau Road
Calabasas, CA 91302
(818) 878-4201

PERMIT NO. B04-005-828

Permit Type: Sewer

PROJECT	TRACT NO.	BLK. NO.	LOT NO.	APPLICATION DATE	ISSUED BY	TYPE	STAT	Permit Status
			2	9/2/2004	JW			Issued

PROJECT ADDRESS
4803 El Canon Ave

ASSESSORS PARCEL NO.
2068-004-016

GEO CODE

OWNER
Farmer, Frank L And Betty Jeanne

MAILING ADDRESS
4803 El Canon Ave
Calabasas, CA 91302

PHONE NO. FAX NO.

APPLICANT
MR. ROOTER

MAILING ADDRESS
11664 TUXFORD STREET
SUN VALLEY, CA 91353

PHONE NO. (818) 500-7999 FAX NO.

CONTRACTOR/PROFESSIONAL
Mr. Rooter

MAILING ADDRESS
11664 TUXFORD STREET
SUN VALLEY, CA 91353

PHONE NO. (818) 500-7999 FAX NO.
EMAIL ADDRESS:

TENANT

MAILING ADDRESS

PHONE NO. FAX NO.

DESCRIPTION

DISCONNECT FROM SEPTIC AND HOOK INTO SEWER

Construction Type	UOM	# of Units	Value	Construction Type	UOM	# of Units	Value

OCCUPANCY

TOTAL VALUATION $0.00

FEE DETAIL

QTY	UOM	DESC	AMT DUE	AMT PAID	QTY	UOM	DESC	AMT DUE	AMT PAID
1.00	each	House conn	$55.75	$55.75					
1.00	each	Sewer discon	$65.00	$65.00					
Totals for: 10-000-4110-00			$120.75	$120.75					

Total Fees: $ 120.75 **Total Paid:** $ 120.75 **Balance Unpaid:** $ 0.00 **Paid Today:** $ 120.75

RECEIPTS DETAIL

Receipt #	Trans. Date	Name	Payment Type	Payment Type #	Amount
9,187	9/3/2004	MR. ROOTER	Check	32378	$120.75

APPENDIX IV

EDR City Directories and Database Report

The EDR-City Directory
Abstract

4803 El Canon Avenue
4803 El Canon Avenue
Calabasas, CA 91302

Inquiry Number: 1637438.5

Monday, March 20, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. The city directory is a sophisticated tool for locating individuals and businesses. With each address, the directory lists the name of the corresponding occupant.

References

To meet the prior use requirements of ASTM E 1527-05, Section 8.3.2, the following *standard historical sources* may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-05, Section 8.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. ASTM E 1527-05 requires *"All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historcal sources as are necessary and both reasonably ascertainable and likely to be useful."* (ASTM E 1527-05, Section 8.3.2) *Reasonably ascertainable means information that is publicly available, obtainable from a source within reasonable time and cost constraints, and practically reviewable.*

EPA's Standards and Practices for All Appropriate Inquiries (AAI), Section § 312.24, identifies the historical sources of information necessary to achieve the objectives and performance factors of § 312.20. According to AAI, *"historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."*

Data Gaps

In order to address data gaps, additional sources of information may be consulted. According the AAI, Section § 312.20 (g), *"to the extent there are data gaps (as defined in § 312.10) in the information developed...that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases...such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps."* According to ASTM E 1527-05, Section 8.3.2.3, *"historical research is complete when either: (1) the objectives in 8.3.1 through 8.3.2.2 are achieved; or (2) data failure is encountered. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met....If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for their exclusion."*

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through 2004. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

This report compiles information by geocoding the subject properties (that is, plotting the latitude and longitude for such subject properties and obtaining data concerning properties within 1/8th of a mile of the subject properties). There is no warranty or guarantee that geocoding will report or list all properties within the specified radius of the subject properties and any such warranty or guarantee is expressly disclaimed. Accordingly, some properties within the aforementioned radius and the information concerning those properties may not be referenced in this report.

Date EDR Searched Historical Sources: Mar 20, 2006

Target Property:
4803 El Canon Avenue
Calabasas, CA 91302

Year	Uses	Source
1920	Address Not Listed in Research Source	Los Angeles Directory Co.
1921	Address Not Listed in Research Source	Los Angeles Directory Co.
1923	Address Not Listed in Research Source	Los Angeles Directory Co.
1924	Address Not Listed in Research Source	Los Angeles Directory Co.
1925	Address Not Listed in Research Source	Los Angeles Directory Co.
1926	Address Not Listed in Research Source	Los Angeles Directory Co.
1927	Address Not Listed in Research Source	Kaasen Directory Company Publishers
1928	Address Not Listed in Research Source	Los Angeles Directory Co.
1929	Address Not Listed in Research Source	Los Angeles Directory Co.
1930	Address Not Listed in Research Source	Los Angeles Directory Co.
1931	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1932	Address Not Listed in Research Source	Los Angeles Directory Co.
1933	Address Not Listed in Research Source	Los Angeles Directory Co.
1934	Address Not Listed in Research Source	Los Angeles Directory Co.
1935	Address Not Listed in Research Source	Los Angeles Directory Co.

Year	Uses	Source
1936	Address Not Listed in Research Source	Los Angeles Directory Co.
1937	Address Not Listed in Research Source	Los Angeles Directory Co.
1938	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1939	Address Not Listed in Research Source	Los Angeles Directory Co.
1940	Address Not Listed in Research Source	Los Angeles Directory Co.
1942	Address Not Listed in Research Source	Los Angeles Directory Co.
1944	Address Not Listed in Research Source	R. L. Polk & Co.
1945	Address Not Listed in Research Source	R. L. Polk & Co.
1946	Address Not Listed in Research Source	Los Angeles Directory Co.
1947	Address Not Listed in Research Source	Pacific Directory Co.
1948	Address Not Listed in Research Source	Los Angeles Directory Co.
1949	Address Not Listed in Research Source	Los Angeles Directory Co.
1950	Address Not Listed in Research Source	Pacific Telephone
1951	Address Not Listed in Research Source	Los Angeles Directory Co Publishers
1952	Address Not Listed in Research Source	Los Angeles Directory Co.
1954	Address Not Listed in Research Source	R. L. Polk & Co.
1955	Address Not Listed in Research Source	R. L. Polk & Co.
1956	Address Not Listed in Research Source	Pacific Telephone
1957	Address Not Listed in Research Source	Pacific Telephone

Year	Uses	Source
1958	Address Not Listed in Research Source	Pacific Telephone
1960	Address Not Listed in Research Source	Pacific Telephone
1961	Address Not Listed in Research Source	Luskey Brothers & Co
1962	Address Not Listed in Research Source	Pacific Telephone
1963	Address Not Listed in Research Source	Pacific Telephone
1964	Address Not Listed in Research Source	Pacific Telephone
1965	Address Not Listed in Research Source	GTE
1966	Address Not Listed in Research Source	Pacific Telephone
1967	Address Not Listed in Research Source	R. L. Polk & Co.
1969	Address Not Listed in Research Source	Pacific Telephone
1970	Address Not Listed in Research Source	R. L. POLK & CO.
1971	Address Not Listed in Research Source	B&G Publications
1972	Address Not Listed in Research Source	R. L. Polk & Co.
1975	Address Not Listed in Research Source	Pacific Telephone
1976	Address Not Listed in Research Source	R.L. Polk & co Publishers
1980	Address Not Listed in Research Source	Pacific Telephone
1981	Address Not Listed in Research Source	Pacific Telephone
1985	**"EL CANON AVE"** FARMER FRANK & BETTY JEANNE (4803)	Pacific Bell

Year	Uses	Source
1985	(continued)	
	FARMER FREDA (4803)	
	WATSON ARTHUR C (4803)	
	WATSON BL (4803)	
	WATSON BL ARLETA (4803)	
	WATSON BL Y (4803)	
1986	Address Not Listed in Research Source	Pacific Bell
1990	Address Not Listed in Research Source	Pacific Bell
1991	**EL CANON AVE**	Pacific Bell
	FARMER FRANK & BETTY JEANNE (4803)	
1995	**EL CANON AVE**	Pacific Bell Telephone
	FARMER FRANK & BETTY JEANNE (4803)	
1996	Address Not Listed in Research Source	GTE
1999	Address Not Listed in Research Source	Haines Company
2000	Address Not Listed in Research Source	Pacific Bell Telephone
2001	Address Not Listed in Research Source	Haines & Company, Inc.
2003	Address Not Listed in Research Source	Haines & Company
2004	**EL CANON AVE**	Haines Company
	FAR BETTY (4803)	
	FAR FRANK (4803)	

Adjoining Properties

SURROUNDING

Multiple Addresses
Calabasas, CA 91302

Year	Uses	Source
1920	Address Not Listed in Research Source	Los Angeles Directory Co.
1921	Address Not Listed in Research Source	Los Angeles Directory Co.

Year	Uses	Source
1923	Address Not Listed in Research Source	Los Angeles Directory Co.
1924	Address Not Listed in Research Source	Los Angeles Directory Co.
1925	Address Not Listed in Research Source	Los Angeles Directory Co.
1926	Address Not Listed in Research Source	Los Angeles Directory Co.
1927	Address Not Listed in Research Source	Kaasen Directory Company Publishers
1928	Address Not Listed in Research Source	Los Angeles Directory Co.
1929	Address Not Listed in Research Source	Los Angeles Directory Co.
1930	Address Not Listed in Research Source	Los Angeles Directory Co.
1931	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1932	Address Not Listed in Research Source	Los Angeles Directory Co.
1933	Address Not Listed in Research Source	Los Angeles Directory Co.
1934	Address Not Listed in Research Source	Los Angeles Directory Co.
1935	Address Not Listed in Research Source	Los Angeles Directory Co.
1936	Address Not Listed in Research Source	Los Angeles Directory Co.
1937	Address Not Listed in Research Source	Los Angeles Directory Co.
1938	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1939	Address Not Listed in Research Source	Los Angeles Directory Co.
1940	Address Not Listed in Research Source	Los Angeles Directory Co.
1942	Address Not Listed in Research Source	Los Angeles Directory Co.

Year	Uses	Source
1944	Address Not Listed in Research Source	R. L. Polk & Co.
1945	Address Not Listed in Research Source	R. L. Polk & Co.
1946	Address Not Listed in Research Source	Los Angeles Directory Co.
1947	Address Not Listed in Research Source	Pacific Directory Co.
1948	Address Not Listed in Research Source	Los Angeles Directory Co.
1949	Address Not Listed in Research Source	Los Angeles Directory Co.
1950	Address Not Listed in Research Source	Pacific Telephone
1951	Address Not Listed in Research Source	Los Angeles Directory Co Publishers
1952	Address Not Listed in Research Source	Los Angeles Directory Co.
1954	Address Not Listed in Research Source	R. L. Polk & Co.
1955	Address Not Listed in Research Source	R. L. Polk & Co.
1956	****CALABASAS RD****	Pacific Telephone
	HUTCHINSON THOS (23455)	
	LESLIE S AUTO PARTS (23508)	
	LANDMAN EDWIN CHAS PUMPKIN HILL WEST ART CENTER ANTIQS (23517)	
	PUMPKIN HILL-WEST ART CENTER ANTIQS (23517)	
	SCANDIA TOYS MFG DIV (23525)	
	CALABASAS GARAGE (23528)	
	TREMAINE HOUSE OF PINE (23529)	
	CALABASAS CERAMICS (23546)	
	CALABASAS FOOD MKT (23548)	
	LASALA M CALABASAS FOOD MKT (23548)	
	MONTENEGRO MIGUEL H (23552)	
1957	Address Not Listed in Research Source	Pacific Telephone

Year	Uses	Source
1958	Address Not Listed in Research Source	Pacific Telephone
1960	Address Not Listed in Research Source	Pacific Telephone
1961	Address Not Listed in Research Source	Luskey Brothers & Co
1962	****CALABASAS RD****	Pacific Telephone
	HUTCHINSON THOS (23455)	
	FERGISON GEO (23501)	
	KRAMER L J (23504)	
	LANDMAN EDWIN CHAS PUMPKIN HOLLOW ART CENTER ANTIQUES (23517)	
	PUMPKIN HOLLOW ART CENTER ANTIQUES (23517)	
	HIDDEN HILLS CITY OF (23521)	
	HIDDEN HILLS MUTUAL WATER CO (23521)	
	MILLER S CUSTOM BOATS (23525)	
	CALABASAS GARAGE CALABASAS (23528)	
	KERSEY CLAIRE J (23528)	
	HANSON ENTERPRISES (23529)	
	MURPHY L B PAT (23529)	
	TORNADO TURBINES CORP (23529)	
	LOCKART LYNDON M (23534)	
	GOLDSBERRY WILL (23537)	
	THILMONY THERESA (23538)	
	GLEASON BEATRICE A (23540)	
	U S GOVERNMENT POST OFFICE DEPT BURBANK MAIN OFC (23542)	
	BEYMER LAWRENCE E SR CALABASAS FOOD MKT (23548)	
	CALABASA FOOD MKT CALABASAS (23548)	
	BRUHN ROBT L (23552)	
1963	Address Not Listed in Research Source	Pacific Telephone
1964	Address Not Listed in Research Source	Pacific Telephone
1965	****CALABASAS RD****	GTE
	PUMPKIN HOLLOW ART / ANT (23517)	
	PUMPKIN HOLLOW GALLERIES (23517)	

Year	Uses	Source
1965	(continued)	
	NFLOWER CORRAL THE (23521)	
	RERI1S GLOWER CORRAL (23521)	
	MILLERS CUSTLH BOATS (23525)	
	MILLERS CUSTOM BOATS (23525)	
	CALA1BASAS GARAGE (23528)	
	NCALABASAS GARAGE (23528)	
	HANSON ENTERPRISES (23529)	
1966	Address Not Listed in Research Source	Pacific Telephone
1967	Address Not Listed in Research Source	R. L. Polk & Co.
1969	Address Not Listed in Research Source	Pacific Telephone
1970	****SORRENTO****	R. L. POLK & CO.
	CALIFORNIAN RESTAURANT THE (23500)	
	****CALABASAS RD****	R. L. POLK & CO.
	KRAMER J (23504)	
	PUMPKIN HOLLOW GALLERIES (23523)	
	MILLER S CUSTOM BOATS (23525)	
	CASA MEDINA-MEXICAN KITCHEN (23527)	
	CALABASAS GARAGE & BODY SHOP (23528)	
	CALABASAS TOWING (23528)	
	ANTIQUES & THINGS (23529)	
	ARNOTE GARY (23536)	
	LEONIS ADOBE (23537)	
	ROSECRANS GENE (23537)	
	THILMONY THERESA CALABASAS (23538)	
	CALABASAS UPHOLSTERING (23542)	
	EL BANDIDO ANTIQUES (23542)	
	BEYMER LAWRENCE E SR CALABASAS FOOD MKT (23548)	
	CALABASAS FOOD MKT (23548)	
1971	Address Not Listed in Research Source	B&G Publications
1972	Address Not Listed in Research Source	R. L. Polk & Co.
1975	****CALABASAS RD****	Pacific Telephone

Year	Uses	Source
1975	(continued)	
	SUNDANCE SALOON (23504)	
	STAGECOACH ANTIQUES (23523)	
	SAGEBRUSH CANTINA (23527)	
	CALABASAS (23528)	
	CALABASAS AUTOMOTIVE CENTER (23528)	
	ANTIQUES & THINGS (23529)	
	CALABASAS TOWING (23532)	
	CALABASAS AUTO BODY (23532)	
	LEONIS ADOBE (23537)	
	ROSECRANS GENE (23537)	
	SKINNER LOUIS T (23538)	
	THILMONY THERESA (23538)	
	LADYBUG ANTIQUES (23542)	
	CLAY POT THE (23548)	
1976	Address Not Listed in Research Source	R.L. Polk & co Publishers
1980	**W SORRENTO**	Pacific Telephone
	CALABASAS PARK TENNIS & SWIM CLUB (23400)	
	CALABASAS RD	Pacific Telephone
	CHEZ TETON (23504)	
	JMR CONSTRUCTION CO CALABASAS (23527)	
	SAGEBRUSH CANTINA (23527)	
	BEE WAXED BY SUSAN (23528)	
	GIFT POURRI (23528)	
	LEQUIPE HAIR STYLIST UNISEX (23528)	
	NASTASIA JEWELRY (23528)	
	TRUDY S NAIL CARE (23528)	
	WALLPAPER ETC (23528)	
	ANTIQUES & THINGS (23529)	
	OLDE TLMEY PHOTO STUDIO (23532)	
	TUMBLEWEED GIFT SHOP (23532)	
	EVRON C J BUSINESS MANAGEMENT CO (23532)	
	MIRASOL	Pacific Telephone
	FORMAN MARTIN W (4690)	
	BEDNAR JOHN P (4692)	
	WELLS JACK M (4694)	

Year	Uses	Source
1980 (continued)	LAWTON ROBT L (4698)	
	MULHOLLAND DR	Pacific Telephone
	VALLEY CIRCLE CINEMA (23305)	
	KIMM S COPPER KETTLE CANDIES & ICE CREAM PARLOR (23311)	
	KIMM S COPPER KETTLE SWEET SHOPP & RESTAURANT (23311)	
	MCCONNELL S FINE ICE CREAM & FRUIT ICES (23311)	
	FRANKS PORTRAITS (23313)	
	PORTRAITS BY FRANK INC (23313)	
	DANCE EXPERIENCE THE WOODLAND HILLS STUDIO (23315)	
	MUSIC EXPRESS (23317)	
	FREDS BICYCLES WOODLAND HILLS (23321)	
	FASHION VILLA (23323)	
	WORLD SAVINGS AND LOAN ASSOCIATION (23325)	
	PEACOCK RESTAURANT WOODLAND HILLS (23327)	
	KURTZ HOWARD DVM (23333)	
	WEST HILLS PET CLINIC (23333)	
	SORRENTO	Pacific Telephone
	BENEDICT LEE (23401)	
	CALIF WESTERN MANAGEMENT SERVICES INC (23401)	
	COOK ELIZABETH (23401)	
	CUSICK DON (23401)	
	DANELL W (23401)	
	DANIELS JACQUE Y C (23401)	
	DAVILA ORAMA JOSE R (23401)	
	ECKENRODE J E (23401)	
	ELLIOTT H (23401)	
	GUMBYNER JOS H RABBI (23401)	
	HOLTON JUDIE & ROGER (23401)	
	JACOBSON HERBERT L CALABASAS (23401)	
	KAPLER IRWIN & KATHERINE (23401)	
	KEATING JAMES A (23401)	
	LUSK CARMEN (23401)	
	MASON WILLARD C (23401)	
	MECIER HELEN J (23401)	
	MECIER ROBT M (23401)	
	MOTTER CINDY (23401)	

Year	Uses	Source
1980	(continued)	
	MUELLER SCOTT (23401)	
	MYERS RONALD S CALABASAS (23401)	
	NORDSTROM WM (23401)	
	RIZZO JOE (23401)	
	SEANOR JOHN M JR (23401)	
	SPERLING STEPHEN (23401)	
	STEWART JOHN (23401)	
	THOMPSON BRUCE (23401)	
	DOOLEY K & T (23403)	
	AUGUST ALVIN DDS (23409)	
	HUMPHREY JACK B SR (23461)	
	HUMPHREY MARIANNE E (23461)	
	SWANSON MICHAEL J & KAT (23463)	
	HARBAND PAUL (23465)	
	JACOBY SCOTT (23469)	
	JACOBY STANLEY J CALB (23469)	
	WOHL MARSHALL (23471)	
	NOEL IRMA (23475)	
	CASTIGLIOLA L (23477)	
	CASTIGLIOLA TONY (23477)	
	BRADEN ANNE (23479)	
	BRADEN LISA (23479)	
	ALLSTATE POOLS (23480)	
	ASSURED BUSINESS CONSULTANTS (23480)	
	BORGERS EMIL R (23480)	
	C M MORTGAGE CO INC (23480)	
	CALABASAS HOMES (23480)	
	CALABASAS OFC PARK (23480)	
	CALABASAS SECRETARIAL SERVICE (23480)	
	CONSOLIDATED FINANCIAL PLANNERS (23480)	
	CURREY CONSTRUCTION CO (23480)	
	CURREY JANICE (23480)	
	CURREY RIACH COMPANY (23480)	
	CURREY SAM G (23480)	
	DATASERV EQUIPMENT INC (23480)	
	DAVIDSON GILBERT A ATTY (23480)	

Year	Uses	Source
1980 (continued)	DAVIDSON STEVEN E ATTY (23480)	
	DAVIDSON WM S CLU (23480)	
	EMMONS ROGER H CONSTRUCTION (23480)	
	ENGINEERED DIAMONDS & ABRASIVES (23480)	
	FLEDER J B RL EST DVLPR (23480)	
	GOMER DUANE INC (23480)	
	HICKERSON SUPPLY CO INC (23480)	
	JERAULD LEE P INS (23480)	
	KEN FLOWERS REALTY REGISTER (23480)	
	LOEWENTHAL DEVELOPMENT CO (23480)	
	LUNDIN DEVELOPMENT CO (23480)	
	LUNDIN HERB RL EST (23480)	
	MALLERS REALTY & DEVELOPMENT CO (23480)	
	NEPTUNE AIR POL INDUSTRIES (23480)	
	PLEASURE POOLS & SPAS INC (23480)	
	RCL MARKETING (23480)	
	REDMAN MARSHALL (23480)	
	STATE FARM INSURANCE COMPANIES AGENTS OFFICES CALABASAS (23480)	
	SULLIVAN KEVIN INS (23480)	
	TOWBIN DAVID C DESIGN PLANNING (23480)	
	V I P REALTY (23480)	
	VALLEY INDUSTRIAL PROPERTIES (23480)	
	WARNER ENTERPRISES INC (23480)	
	STANLEY ROBT (23481)	
	GREEN B J (23483)	
	GREEN STANLEY M (23483)	
	REINTS STEVEN (23485)	
	BEWLEY GREGORY J (23491)	
	BUDDEN ALEXANDER W (23491)	
	CALABASAS INN (23500)	
	ABRAMSON BRUCE D ATTY (23501)	
	BAUCH EDWIN ACCOUNTANCY CORP (23501)	
	BROOKWOOD REALTY (23501)	
	DAVIS ROBERT J ATTY (23501)	
	DESIGNS BY PAULA LANE (23501)	

Year	Uses	Source
1980	(continued)	
	DUTTON VERNON INC (23501)	
	ESCROW SHOPPE THE (23501)	
	FINANCIAL DECISION SYSTEMS INC (23501)	
	FLOWERS KEN REALTY REGISTER (23501)	
	FORD PROPERTIES (23501)	
	GLORIA MINK REALTY (23501)	
	GOLDEN FARMS (23501)	
	IMPERIAL ESCROW CO (23501)	
	INSURANCE NETWORK MARKETING SERVICES (23501)	
	KALLER STEVEN V ACCT (23501)	
	KATES & SCHWARTZ ATTYS (23501)	
	KATES ROY A ATTY (23501)	
	KEN FLOWERS REALTY REGISTER (23501)	
	KENNEDY CARTER CORP (23501)	
	LE BLANC ARTHUR F (23501)	
	LETS GO TRAVEL (23501)	
	MANNIS JOS A ATTY (23501)	
	MINK GLORIA REALTY (23501)	
	NOURSE STEVE C INSURANCE NETWORK MARKETING SERVICES (23501)	
	PACIFIC FRONTIER TITLE CO (23501)	
	PENN PACIFIC CORP (23501)	
	REALTY REGISTER KEN FLOWERS (23501)	
	SCHWARTZ NORMAN ATTY (23501)	
	VICTOR REALTY (23501)	
	WESTERN NATURAL GAS CO (23501)	
	WOODPARK REALTY (23501)	
	YEAGER STEVE PRODUCTS CALABASAS (23501)	
	ZINK ELMA REAL ESTATE (23501)	
	****PARK ROW DR CALABASAS ST****	Pacific Telephone
	CALABASAS INN (23500)	
	CALABRESE MARILYN BROWN (23500)	
1981	****CALABASAS RD****	Pacific Telephone
	CHEZ TETOU CALABASAS (23504)	
	TETOU CALABASAS (23504)	
	****SORRENTO****	Pacific Telephone

Year	Uses	Source
1981	(continued)	
	ABRAMSON BRUCE D ATTY CALABASAS (23501)	
	KEN REALTY REGISTER CALABASAS (23501)	
	KENNEDY CARTER CORP CALABASAS (23501)	
1985	****CALABASAS RD****	Pacific Bell
	COUNTRY HOUSE & HOSPITAL MOTION PICTURE & TELEVISION (23450)	
	FRANCES GOLDWYN LODGE (23450)	
	INFORMATION MANAGEMENT INTERNATIONAL INC (23450)	
	MOTION PICTURE & TELEVISION COUNTRY HOUSE (23450)	
	MOTION PICTURE & TELEVISION HOSPITAL (23450)	
	BILBOQUET CAFE (23504)	
	BOARDWALK (23504)	
	FOUR CORNERS GALLERY (23504)	
	ITS HAIRESY (23504)	
	KRIS TEES JEWELRY EMPORIUM (23504)	
	LINDAS TIP & TOE SALON (23504)	
	THOSE WERE THE DAYS (23504)	
	S AGE BRUS H CAN TIN A (23527)	
	BOARDWALK CASUALS (23528)	
	CALABASAS HAIR SALOON (23528)	
	ESSENTIALLY YOURS INGRIE (23528)	
	VICTORIAN DRIVE THRU CLEAN ERS (23528)	
	VICTORIAN FORMAL WEAR (23528)	
	YULY DRESS MAKING & ALTERATIONS (23528)	
	YULZARI URI (23528)	
	EVRON C J BUSINESS MANAGEMENT CO (23532)	
	EVRON F S SH OKS 9055206 (23532)	
	EVRON JEFF (23532)	
	OFC (23532)	
	OFC (23532)	
	SHIPPEY S (23532)	
	GAETANOS RISTORANTE (23536)	
	GITANOS RISTORANTE (23536)	
	GITCHEN L NOR (23536)	
	GUYTANOS RISTORANTE (23536)	
	GUYTON GARY (23536)	

Year	Uses	Source
1985	(continued)	
	CALABASAS HORSE BOARDING (23537)	
	LEONIS ADOBE (23537)	
	A TOUCH OF CLASS PARTIES (23538)	
	BERTONNEAU DUANE F GOLDSMITH (23546)	
	****EL CANON AVE****	Pacific Bell
	QUILT EMPORIUM THE (4835)	
	****SORRENTO****	Pacific Bell
	AUGUST INS SERVICES INC (23480)	
1986	****MULHOLLAND DR****	Pacific Bell
	WORLD SAVINGS AND LOAN ASSOCIATION SAVINGS & CONSUMER LOANS (23325)	
	****SORRENTO****	Pacific Bell
	CURREY CONSTRUCTION CO CALABASAS (23480)	
	NATIONAL TELEVISION NEWS CALABASAS (23480)	
	PREMLER COMPUTER SALES INC CALABASAS (23480)	
	QUALITY FILMS CALABASAS (23480)	
	TOWBIN DAVID C & ASSOCIATES INC DESIGN PLANNING CALABASAS (23480)	
	CALABASAS INN CALABASAS (23500)	
	ABRAMSON BRUCE D ATTY CALABASAS (23501)	
	COLLINS & AIKMAN CARPET DIV CALABASAS (23501)	
	FLOWERS KEN REALTY INC CALABASAS (23501)	
	HOWARD AGENCY THE CALABASAS (23501)	
1990	****CALABASAS RD****	Pacific Bell
	DWORSKY INVESTMENTS CALABASAS (23548)	
	****SORRENTO****	Pacific Bell
	CURREY CONSTRUCTION CO CALAHASAS (23480)	
	FEDDERSEN & COMPANY CPAS CALABASAS (23480)	
	FEDDERSEN MICHAEL D FEDDERSEN & COMPANY CPAS CALABASAS (23480)	
	FEDDERSEN RAYMOND E FEDDERSEN & COMPANY CPAS CALABASAS (23480)	
	NATIONAL TELEVISION NEWS CALABASAS (23480)	
	PREMIER COMPUTER SALES INC CALABASAS (23480)	
	CALABASAS INN RESTAURANT CALABASAS (23500)	
	FLOWERS KEN REALTY INC CALABASAS (23501)	
	HOWARD AGENCY THE CALABASAS (23501)	

Year	Uses	Source
1991	****CALABASAS RD****	Pacific Bell
	CALABASAS HAIR SALOON (23520)	
	S AGE BRUS H CAN TIN A (23527)	
	SAGEHORN LISA (23527)	
	CALABASAS JUNCTION ANTIQUES AND (23528)	
	CALABASAS LAND CORP (23528)	
	K& S METAL STUD FRAMING PAC (23528)	
	KS JEWELERS (23528)	
	KARENS HAIR STUDIO (23528)	
	KARENS KITCHEN (23528)	
	PHILILPS CHERY T HAIR DESIGN (23528)	
	YULY DRESS MAKING & ALTERATIONS (23528)	
	YULZARI URI (23528)	
	YUM B TUJ (23528)	
	YUM DANIELL (23528)	
	DEK RON MARBLE & GRANITE (23532)	
	EVRON CJ BUSINESS MANAGEMENT CO (23532)	
	EVRON FS SH OS (23532)	
	EVRON JACOB (23532)	
	SO CALIF CONNECTOR CO INC (23532)	
	GAETANOS RISTORANTE (23536)	
	GITANOS RISTORANTE (23536)	
	GUY TANOS RISTORANTE (23536)	
	LE ON IS ADOBE (23537)	
	LEONIS JOHN (23537)	
	PUENTES ESUS (23537)	
	A TOUCH OF CLAS S PARTIE S (23538)	
	MURRE CLEANERS (23542)	
	ALLSTATE INDUSTRIES (23548)	
	CMA INVESTMENTS (23548)	
	CALABASAS (23548)	
	CALABASAS OFFICE (23548)	
	CHRISTINES INTERIORS (23548)	
	CHRISTINES INTERIORS & GIFTWARE (23548)	
	CHRISTINES TENDER LOVING PET CARE SYLM (23548)	
	COLT CONSTRUCTION (23548)	

Year	Uses	Source
1991	(continued)	
	COLT ELECTRIC G HIS (23548)	
	FROM CANOGA PARK TELEPHONES CALL (23548)	
	GEORGETOWN FUNDING AND DEVELOPMENT (23548)	
	JUSTIN LYNN SALON THE (23548)	
	LANDAU LOIS REAL ESTATE (23548)	
	LANDAU LORI (23548)	
	MALEC KATHLEEN INS (23548)	
	MALEC RICHARD (23548)	
	PACIFIC ADVERTISING (23548)	
	SANDYS UNCLE LUIGIS (23548)	
	SANDZIMIER BL (23548)	
1995	****CALABASAS RD****	Pacific Bell Telephone
	OLD TOWN CALABASAS JUNCTION (23504)	
	ADS ASSOCIATES INC (23506)	
	CALABASAS REALTY (23506)	
	SAGEBRUSH CANTINA (23527)	
	CALABASAS ANTIQUES (23528)	
	CHERYL PHILLIPS HAIR DESIGN (23528)	
	HAIR DESIGN BY CHERYL PHILLIPS (23528)	
	HAIR DESIGN BY JUNE (23528)	
	HAIR SALOON CALABASAS (23528)	
	JUNES HAIR DESIGN (23528)	
	K S JEWELERS (23528)	
	KARENS HAIR STUDIO (23528)	
	YULY DRESS MAKING & ALTERATIONS (23528)	
	SHANK CLIFFORD & ASSOCIATES (23532)	
	SID SICOFF CO (23532)	
	GAETANOS RISTORANTE (23536)	
	GITANOS RISTORANTE (23536)	
	GUYTANOS RISTORANTE (23536)	
	LE ON IS ADOBE (23537)	
	PUENTES JESUS (23537)	
	ATOUCH OF CLAS S PARTIE S (23538)	
	BOONE KATHY (23538)	
	TOUCH OF CLASS PARTIES (23538)	
	PALM PSYCHIC & CARD READINGS (23540)	

Year	Uses	Source
1995	(continued)	
	MURRE CLEANERS (23542)	
	COLT CONSTRUCTION (23548)	
	CONSTANCE JOLCUVAR CO (23548)	
	K JOVE US A INC (23548)	
	K KNAPP E (23548)	
	LANDAU LOIS REAL ESTATE (23548)	
	LEZAK GROUP INC (23548)	
	MALEC KATHLEEN INS (23548)	
	PAC ADVERTISING (23548)	
	PANAGRA INC (23548)	
	PARK TRAVEL ASSOCIATES (23548)	
	S SUN AMERICA SECURITIES INC (23548)	
	SERENE LAKES INC (23548)	
	WILSON WALTER MANAGEMENT (23548)	
	I KNAPP ESTATE PLANNING (23548)	
	WOODLAND HILLS HEALTH CENTER WOODLAND HILLS (23450)	
	C D MANAGEMENT CALABASAS (23548)	
1996	Address Not Listed in Research Source	GTE
1999	Address Not Listed in Research Source	Haines Company
2000	Address Not Listed in Research Source	Pacific Bell Telephone
2001	Address Not Listed in Research Source	Haines & Company, Inc.
2003	Address Not Listed in Research Source	Haines & Company
2004	****CALABASAS RD****	Haines Company
	NO INFO (23450)	
	FINSCREEKSIDE (23504)	
	LEYVAROBERTO (23504)	
	LITR LE RED BARN THE (23504)	
	RENEWAL (23504)	
	RENEWAL S (23504)	
	SANFORD & MERTON (23504)	
	SPAIBOUTIQUE (23504)	

Year	Uses	Source
2004	(continued)	
	SPAINCALABASAS (23504)	
	VERNON JEWELERS (23504)	
	BANZAISUSHI (23508)	
	NO INFO (23521)	
	NO INFO (23523)	
	SAGEBRUSH CANTINA (23527)	
	CLARION MORTGAGE (23528)	
	PRUDENTIALCA (23528)	
	REALTY (23528)	
	NO INFO (23529)	
	NO INFO (23532)	
	ADOBE&PLUMMER (23537)	
	HOUSE MSM (23537)	
	LEONIS (23537)	
	LEONIS ADOBE (23537)	
	PLUMMER HO (23537)	
	GAETANO S (23538)	
	GITANO SRISTORANTE (23538)	
	GUYTANO S (23538)	
	RISTORANTE (23538)	
	RISTORANTE (23538)	
	NO INFO (23538)	
	NO INFO (23540)	
	MURRE CLEANERS (23542)	
	NO INFO (23546)	
	ADVISORS (23548)	
	ATTORNEY AT LAW (23548)	
	BLAND DANIEL D (23548)	
	BOULEVARDHAIRCO 818 B 225 M (23548)	
	BUILDING (23548)	
	CALABASAS HAIR (23548)	
	CHERYL PHILLIPS HAIR (23548)	
	COMPANY (23548)	
	COOK COMMERCIAL (23548)	
	CURSOLI LIPPIE (23548)	
	DESIGN (23548)	

Year	Uses	Source
2004	(continued)	
	ELECTROLYSIS BY (23548)	
	INVESTMTS (23548)	
	JUMELLE SKIN CARE (23548)	
	JUNE S HAIR DESIGN (23548)	
	JUSTIN LYNN HAIR (23548)	
	KINDUSTRIES (23548)	
	KNAPP FINANCIAL (23548)	
	MERYL EXCELSIOR FILMS (23548)	
	MOXIE BODY SALON (23548)	
	NATIONAL PLANNING (23548)	
	OFFICES OF (23548)	
	OLOTOWN HAIR (23548)	
	ORIGINAL IDEAS INC (23548)	
	PISA MARIA (23548)	
	REAL ESTATE (23548)	
	SALON (23548)	
	SALOON (23548)	
	SHAPIRO DAVID J LAW (23548)	
	YVETTE HAIR BY (23548)	
	NO INFO (23550)	
	EL CANON AVE	Haines Company
	NO INFO (4835)	

The EDR Radius Map
with GeoCheck®

4803 El Canon Avenue
4803 El Canon Avenue
Calabasas, CA 91302

Inquiry Number: 1637438.2s

March 20, 2006

EDR® Environmental
Data Resources Inc

The Standard in Environmental Risk Management Information

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Milford, Connecticut 06461

Nationwide Customer Service

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Internet: www.edrnet.com

FORM-STD-PEP

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

4803 EL CANON AVENUE
CALABASAS, CA 91302

COORDINATES

Latitude (North):	34.156500 - 34° 9' 23.4"
Longitude (West):	118.637300 - 118° 38' 14.3"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	349065.7
UTM Y (Meters):	3780524.8
Elevation:	943 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	34118-B6 CALABASAS, CA
Most Recent Revision:	1967
East Map:	34118-B5 CANOGA PARK, CA
Most Recent Revision:	1967

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL---------- National Priority List
Proposed NPL---------- Proposed National Priority List Sites
Delisted NPL---------- National Priority List Deletions
NPL RECOVERY---------- Federal Superfund Liens
CERCLIS---------- Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP---------- CERCLIS No Further Remedial Action Planned

EXECUTIVE SUMMARY

CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

AWP	Annual Workplan Sites
Cal-Sites	Calsites Database
CA BOND EXP. PLAN	Bond Expenditure Plan
NFA	No Further Action Determination
NFE	Properties Needing Further Evaluation
REF	Unconfirmed Properties Referred to Another Agency
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
SWF/LF	Solid Waste Information System
CA WDS	Waste Discharge System
WMUDS/SWAT	Waste Management Unit Database
SWRCY	Recycler Database
AOCONCERN	San Gabriel Valley Areas of Concern
AST	Aboveground Petroleum Storage Tank Facilities
CHMIRS	California Hazardous Material Incident Report System
Notify 65	Proposition 65 Records
LA Co. Site Mitigation	Site Mitigation List
DEED	Deed Restriction Listing
VCP	Voluntary Cleanup Program Properties
LOS ANGELES CO. HMS	HMS: Street Number List
WIP	Well Investigation Program Case List
CDL	Clandestine Drug Labs
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations

EXECUTIVE SUMMARY

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
INDIAN UST..... Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants... EDR Proprietary Manufactured Gas Plants
EDR Historical Auto StationsEDR Proprietary Historic Gas Stations
EDR Historical Cleaners.... EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store , treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/15/2005 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
MURRE CLEANERS	***23542 CALABASAS RD***	***0 - 1/8 WNW***	***2***	***7***
FLAIR INC DBA FAZIO CLEANERS	***23383 MULHOLLAND DR***	***1/8 - 1/4 NNE***	***C8***	***18***
MOTION PICTURE AND TELEVISION	***23388 MULHOLLAND DR***	***1/8 - 1/4 NNE***	***C11***	***21***

STATE AND LOCAL RECORDS

CORTESE: This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material

identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
MOTION PICTURE & TELEVISI	23388 MULHOLLAND	1/8 - 1/4 NNE	C10	21

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 01/09/2006 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
MOTION PICTURE AND TELEVISION	***23388 MULHOLLAND DR***	***1/8 - 1/4 NNE***	***C11***	***21***
Facility Status: Case Closed				

CA FID: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 3 CA FID UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
MOTION PICTURE & TELEVISION	***23450 CALABASAS RD***	***1/8 - 1/4 N***	***A4***	***11***
PAC BELL TELEPHONE EXCHANGE	***23600 PARK SORRENTO***	***1/8 - 1/4 WSW***	***B6***	***12***
MOTION PICTURE AND TELEVISION	***23388 MULHOLLAND DR***	***1/8 - 1/4 NNE***	***C11***	***21***

CA SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 01/09/2006 has revealed that there are 3 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
THE COURTYARD AT THE COMMONS	23631 CALABASAS RD	1/8 - 1/4 W	D13	28
Facility Status: Case Closed				
THE COURTYARD AT THE COMMONS	23631 CALABASAS	1/8 - 1/4 W	D14	29

Lower Elevation	Address	Dist / Dir	Map ID	Page
FAZIO CLEANERS	***23383 MULHOLLAND***	***1/8 - 1/4 NNE***	***C7***	***13***
Facility Status: Remedial Action Underway				

EXECUTIVE SUMMARY

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 01/09/2006 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
PACIFIC BELL CLBSCA11/B1-433	23600 PARK SORRENTO	1/8 - 1/4 WSW	B5	12
MOTION PICTURE AND T.V FUND	***23388 MULHOLLAND DR***	***1/8 - 1/4 NNE***	***C9***	***20***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
MOTION PICTURE & TELEVISION FU	23450 CALABASAS RD	1/8 - 1/4 N	A3	11

SWEEPS: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CALABASAS COUNTRY INN	***23627 W CALABASAS RD***	***1/8 - 1/4 W***	***D12***	***28***

Lower Elevation	Address	Dist / Dir	Map ID	Page
LAS VIRGENES MWD	***4815 EL CANON RD***	***0 - 1/8 NW***	***1***	***6***
MOTION PICTURE & TELEVISION	***23450 CALABASAS RD***	***1/8 - 1/4 N***	***A4***	***11***
PAC BELL TELEPHONE EXCHANGE	***23600 PARK SORRENTO***	***1/8 - 1/4 WSW***	***B6***	***12***
MOTION PICTURE AND T.V FUND	***23388 MULHOLLAND DR***	***1/8 - 1/4 NNE***	***C9***	***20***

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the CLEANERS list, as provided by EDR, and dated 04/18/2005 has revealed that there are 4 CLEANERS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PARKWAY CLEANERS	***23643 CALABASAS ROAD***	***1/8 - 1/4 W***	***D15***	***29***

Lower Elevation	Address	Dist / Dir	Map ID	Page
MURRE CLEANERS	***23542 CALABASAS RD***	***0 - 1/8 WNW***	***2***	***7***
FAZIO CLEANERS	***23383 MULHOLLAND***	***1/8 - 1/4 NNE***	***C7***	***13***
FLAIR INC DBA FAZIO CLEANERS	***23383 MULHOLLAND DR***	***1/8 - 1/4 NNE***	***C8***	***18***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
ROAD ELEMENT RD DIVISION 539	CA FID UST, SWEEPS UST
2 / 3 MI DUE SOUTH NEWPORT BEACH PIER	HAZNET, LUST, CHMIRS
MOBIL	LUST
SLUDGE INJ,RANCHO LAS VIRGENES	WMUDS/SWAT
DEPART OF TRANSPORTATION	RCRA-SQG, FINDS, HAZNET
WOODLAND HILL AUTO BODY	RCRA-SQG, FINDS, HAZNET

OVERVIEW MAP - 1637438.2s

0 1/4 1/2 1 Miles

- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ● Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 4803 El Canon Avenue	CLIENT: California Environmental
ADDRESS: 4803 El Canon Avenue Calabasas CA 91302	CONTACT: Christine Malham
LAT/LONG: 34.1565 / 118.6373	INQUIRY #: 1637438.2s DATE: March 20, 2006

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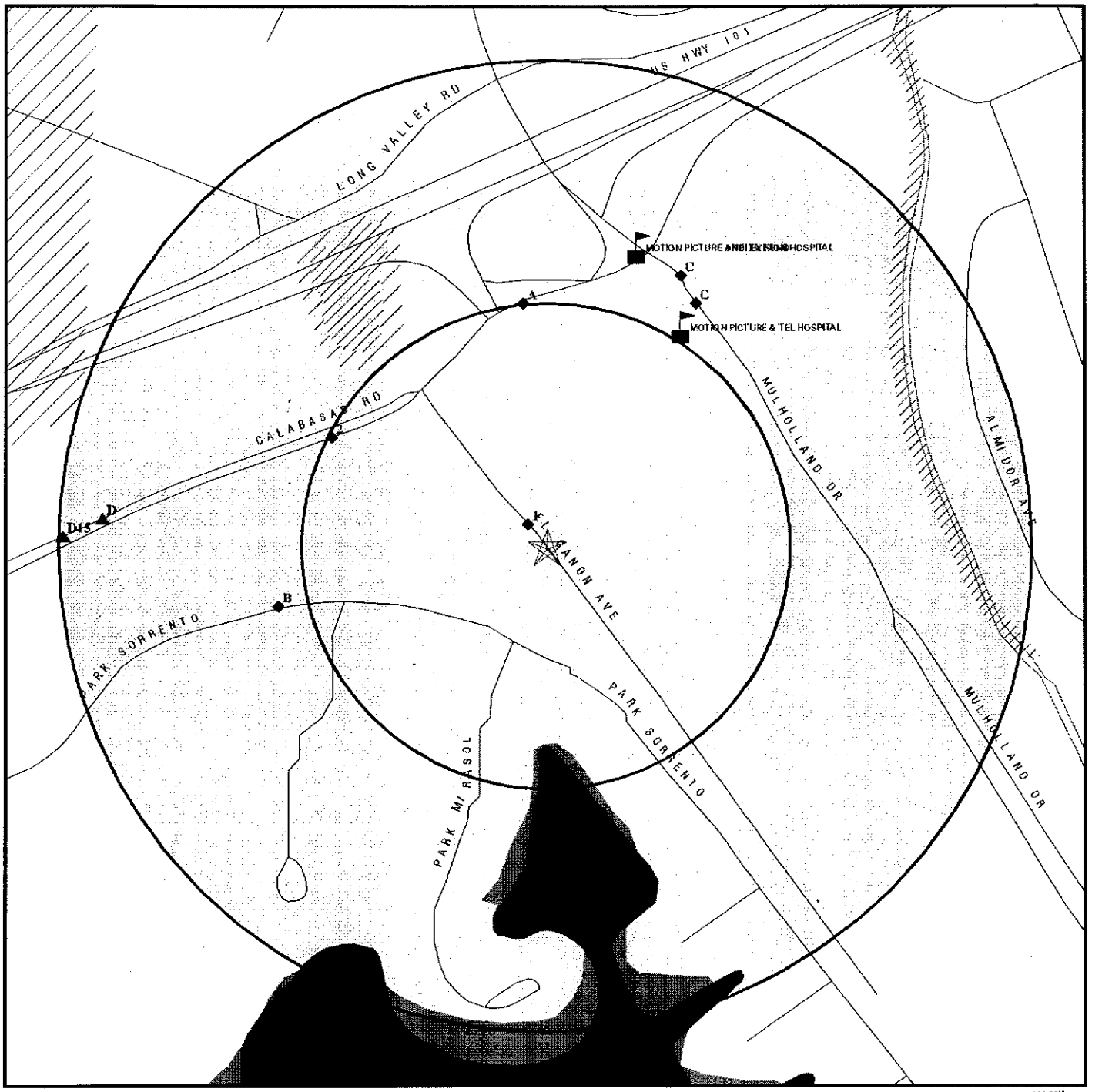
DETAIL MAP - 1637438.2s



0 1/16 1/8 1/4 Miles

- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 4803 El Canon Avenue	CLIENT: California Environmental
ADDRESS: 4803 El Canon Avenue Calabasas CA 91302	CONTACT: Christine Malham
LAT/LONG: 34.1565 / 118.6373	INQUIRY #: 1637438.2s DATE: March 20, 2006

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	1	2	NR	NR	NR	3
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
AWP		1.000	0	0	0	0	NR	0
Cal-Sites		1.000	0	0	0	0	NR	0
CA Bond Exp. Plan		1.000	0	0	0	0	NR	0
NFA		0.250	0	0	NR	NR	NR	0
NFE		0.250	0	0	NR	NR	NR	0
REF		0.250	0	0	NR	NR	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
Cortese		0.500	0	1	0	NR	NR	1
SWRCY		0.500	0	0	0	NR	NR	0
LUST		0.500	0	1	0	NR	NR	1
CA FID UST		0.250	0	3	NR	NR	NR	3

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC		0.500	0	3	0	NR	NR	3
AOCONCERN		1.000	0	0	0	0	NR	0
UST		0.250	0	2	NR	NR	NR	2
HIST UST		0.250	0	1	NR	NR	NR	1
AST		0.250	0	0	NR	NR	NR	0
SWEEPS UST		0.250	1	4	NR	NR	NR	5
CHMIRS		TP	NR	NR	NR	NR	NR	0
Notify 65		1.000	0	0	0	0	NR	0
LA Co. Site Mitigation		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	1	3	NR	NR	NR	4
Los Angeles Co. HMS		TP	NR	NR	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1 **LAS VIRGENES MWD** **CHMIRS S106399520**
NW **4815 EL CANON RD** **SWEEPS UST N/A**
< 1/8 **CALABASAS, CA 91302**
78 ft.

Relative:
Lower

Actual:
942 ft.

CHMIRS:

OES Control Number:	03-1722
Extent of Release:	Not reported
Property Use:	Not reported
Incident Date:	Not reported
Date Completed: Not reported	
Time Completed :	Not reported
Agency Id Number :	Not reported
Agency Incident Number :	Not reported
OES Incident Number :	03-1722
Time Notified :	Not reported
Surrounding Area :	Not reported
Estimated Temperature :	Not reported
Property Management :	Not reported
More Than Two Substances Involved? :	Not reported
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Resp Agncy Personel # Of Decontaminated :	Not reported
Others Number Of Decontaminated :	Not reported
Others Number Of Injuries :	Not reported
Others Number Of Fatalities :	Not reported
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	Yes
Waterway :	Calabasis storm drain
Spill Site :	Not reported
Cleanup By :	Reporting Party
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Substance :	Sewage
Quantity Released :	
E Date :	Not reported
Contained :	Yes
Site Type :	Road
Evacuations :	0
Num Of Injuries :	0
Num Of Fatalities :	0
Date/Time :	Not reported
Year :	2003
Agency :	Las Virgene Munisipal Water Dist.

LAS VIRGENES MWD (Continued) **S106399520**

BBLS :	0
Cups :	0
CUFT :	0
Gallons :	2000
Grams :	0
Pounds :	0
Liters :	0
Ounces :	0
Pints :	0
Quarts :	0
Sheen :	0
Tons :	0
Unknown :	0
Description :	A blockage in line caused overflow.
Incident date :	3/30/200312:00:00 AM
Admin Agency :	L. A. County Fire Prevention
OES date :	Not reported
OES time :	Not reported
OES notification :	3/31/200308:06:06 AM
Amount :	Not reported

SWEEPS:

Status :	A
Comp Number :	10038
Number :	9
Board Of Equalization :	44-008690
Ref Date :	03-14-91
Act Date :	03-14-91
Created Date :	06-30-89
Tank Status :	A
Owner Tank Id :	Not reported
Swrcb Tank Id :	19-000-010038-000001
Actv Date :	06-30-89
Capacity :	Not reported
Tank Use :	UNKNOWN
Stg :	W
Content :	Not reported
Number Of Tanks :	1

---

2 **MURRE CLEANERS** **RCRA-SQG 1000594977**
WNW **23542 CALABASAS RD** **FINDS CAD983588641**
< 1/8 **CALABASAS, CA 91302** **HAZNET**
648 ft. **CLEANERS**

Relative:
Lower

Actual:
931 ft.

RCRAInfo:

Owner:	HAN YOUNG HAN (415) 555-1212
EPA ID:	CAD983588641
Contact:	YOUNG HAN (818) 591-2125
Classification:	Small Quantity Generator
TSDF Activities:	Not reported

MURRE CLEANERS (Continued) **1000594977**

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

CA Cleaners:

Inactive Date:	Not reported
EPA Id:	CAD983588641
Facility Address 2 :	Not reported
NAICS Code :	81232
Facility Active :	Yes
Mail Name :	Not reported
Mailing Address:	23542 CALABASAS RD
	CALABASAS, CA 91302
Owner Name :	HAN YOUNG HAN
Mailing Address:	--
	--, 99 --
Owner Telephone :	0000000000
Contact Name :	YOUNG HAN/OWNER
Mailing Address:	23542 CALABASAS RD
	CALABASAS, CA 91302
Contact Telephone :	8185912125
Region Code :	3
Create Date :	07/09/1991
SIC Description :	Garment Pressing, and Agents for Laundries and Drycleaners
NAICS Description :	Drycleaning and Laundry Services (except Coin-Operated)

Inactive Date:	Not reported
EPA Id:	CAD983588641
Facility Address 2 :	Not reported
NAICS Code :	81232
Facility Active :	Yes
Mail Name :	Not reported
Mailing Address:	23542 CALABASAS RD
	CALABASAS, CA 91302
Owner Name :	HAN YOUNG HAN
Mailing Address:	--
	--, 99 --
Owner Telephone :	0000000000
Contact Name :	YOUNG HAN/OWNER
Mailing Address:	23542 CALABASAS RD
	CALABASAS, CA 91302
Contact Telephone :	8185912125
Region Code :	3
Create Date :	07/09/1991
SIC Description :	Drycleaning Plants, Except Rug Cleaning
NAICS Description :	Drycleaning and Laundry Services (except Coin-Operated)

Inactive Date:	Not reported
EPA Id:	CAD983588641
Facility Address 2 :	Not reported
NAICS Code :	81232
Facility Active :	Yes
Mail Name :	Not reported
Mailing Address:	23542 CALABASAS RD

MURRE CLEANERS (Continued) **1000594977**

CALABASAS, CA 91302
Owner Name : HAN YOUNG HAN
Mailing Address: --
--, 99 --
Owner Telephone : 0000000000
Contact Name : YOUNG HAN/OWNER
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302
Contact Telephone : 8185912125
Region Code : 3
Create Date : 07/09/1991
SIC Description : Power Laundries, Family and Commercial
NAICS Description : Drycleaning and Laundry Services (except Coin-Operated)

Inactive Date: Not reported
EPA Id: CAD983588641
Facility Address 2 : Not reported
NAICS Code : 81232
Facility Active : Yes
Mail Name : Not reported
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302
Owner Name : HAN YOUNG HAN
Mailing Address: --
--, 99 --
Owner Telephone : 0000000000
Contact Name : YOUNG HAN/OWNER
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302
Contact Telephone : 8185912125
Region Code : 3
Create Date : 07/09/1991
SIC Description : Laundry and Garment Services, NEC (except diaper service and clothing alteration and repair)
NAICS Description : Drycleaning and Laundry Services (except Coin-Operated)

HAZNET:
Gepaid: CAD983588641
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .7821
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: HAN YOUNG HAN
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302
County Los Angeles

MURRE CLEANERS (Continued) **1000594977**

Gepaid: CAD983588641
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.2899
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: HAN YOUNG HAN
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302
County Los Angeles

Gepaid: CAD983588641
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 1.0345
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: HAN YOUNG HAN
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302
County Los Angeles

Gepaid: CAD983588641
TSD EPA ID: AZD009015389
Gen County: Los Angeles
Tsd County: 99
Tons: .0800
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Disposal, Land Fill
Contact: HAN YOUNG HAN
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302
County Los Angeles

Gepaid: CAD983588641
TSD EPA ID: AZD009015389
Gen County: Los Angeles
Tsd County: 99
Tons: .0000
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: HAN YOUNG HAN
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23542 CALABASAS RD
CALABASAS, CA 91302

MURRE CLEANERS (Continued) **1000594977**

County Los Angeles

Click this hyperlink while viewing on your computer to access
10 additional CA HAZNET record(s) in the EDR Site Report.

A3 **MOTION PICTURE & TELEVISION FU** **HIST UST** **U001568026**
North **23450 CALABASAS RD** **N/A**
1/8-1/4 **WOODLAND HILLS, CA 91364**
663 ft.

Site 1 of 2 in cluster A

Relative:
Lower

Actual:
927 ft.

UST HIST:

Facility ID:	65251	Owner Name:	MOTION PICTURE & TELEVISION FU
Total Tanks:	3	Region:	STATE
Owner Address:	23450 CALABASAS RD WOODLAND HILLS, CA 91364		
Tank Used for:	PRODUCT		
Tank Num:	1	Container Num:	#2
Tank Capacity:	00001000	Year Installed:	1982
Type of Fuel:	DIESEL	Tank Construction:	Not Reported
Leak Detection:	None		
Contact Name:	JEFF DAVIS	Telephone:	(818) 347-1591
Facility Type:	Other	Other Type:	HOSPITAL

Facility ID:	65251	Owner Name:	MOTION PICTURE & TELEVISION FU
Total Tanks:	3	Region:	STATE
Owner Address:	23450 CALABASAS RD WOODLAND HILLS, CA 91364		
Tank Used for:	PRODUCT		
Tank Num:	2	Container Num:	#3
Tank Capacity:	00000300	Year Installed:	Not reported
Type of Fuel:	UNLEADED	Tank Construction:	Not Reported
Leak Detection:	None		
Contact Name:	JEFF DAVIS	Telephone:	(818) 347-1591
Facility Type:	Other	Other Type:	HOSPITAL

Facility ID:	65251	Owner Name:	MOTION PICTURE & TELEVISION FU
Total Tanks:	3	Region:	STATE
Owner Address:	23450 CALABASAS RD WOODLAND HILLS, CA 91364		
Tank Used for:	PRODUCT		
Tank Num:	3	Container Num:	#1
Tank Capacity:	00000575	Year Installed:	Not reported
Type of Fuel:	DIESEL	Tank Construction:	Not Reported
Leak Detection:	None		
Contact Name:	JEFF DAVIS	Telephone:	(818) 347-1591
Facility Type:	Other	Other Type:	HOSPITAL

A4 **MOTION PICTURE & TELEVISION** **CA FID UST** **S101618566**
North **23450 CALABASAS RD** **SWEEPS UST** **N/A**
1/8-1/4 **WOODLAND HILLS, CA 91367**
663 ft.

Site 2 of 2 in cluster A

Relative:
Lower

Actual:
927 ft.

MOTION PICTURE & TELEVISION (Continued) **S101618566**

FID:

Facility ID:	19055761	Regulate ID:	Not reported
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	(818) 347-1591
Mail To:	Not reported 23450 CALABASAS RD WOODLAND HILLS, CA 91364		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

SWEEPS:

Status :	Not reported
Comp Number :	4343
Number :	Not reported
Board Of Equalization :	Not reported
Ref Date :	Not reported
Act Date :	Not reported
Created Date :	Not reported
Tank Status :	Not reported
Owner Tank Id :	Not reported
Swrcb Tank Id :	Not reported
Actv Date :	Not reported
Capacity :	Not reported
Tank Use :	Not reported
Stg :	Not reported
Content :	Not reported
Number Of Tanks :	Not reported

B5
WSW
1/8-1/4
739 ft.

Relative:
Lower

Actual:
934 ft.

PACIFIC BELL CLBSCA11/B1-433 **UST** **U003777277**
23600 PARK SORRENTO **N/A**
CALABASAS, CA 91302

Site 1 of 2 in cluster B

State UST:

Facility ID:	015838
Total Tanks:	Not reported
Region:	STATE
Local Agency:	19000

B6
WSW
1/8-1/4
739 ft.

Relative:
Lower

Actual:
934 ft.

PAC BELL TELEPHONE EXCHANGE **CA FID UST** **S101587236**
23600 PARK SORRENTO **SWEEPS UST** **N/A**
CALABASAS, CA 91302

Site 2 of 2 in cluster B

PAC BELL TELEPHONE EXCHANGE (Continued) **S101587236**

FID:

Facility ID:	19055130	Regulate ID:	Not reported
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	Not reported
Mail To:	Not reported 1445 VAN NESS CALABASAS, CA 91302		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

SWEEPS:

Status :	A
Comp Number :	15838
Number :	1
Board Of Equalization :	Not reported
Ref Date :	09-19-90
Act Date :	09-19-90
Created Date :	09-19-90
Tank Status :	A
Owner Tank Id :	X-TANK - #1
Swrcb Tank Id :	19-000-015838-000001
Actv Date :	09-19-90
Capacity :	4000
Tank Use :	PETROLEUM
Stg :	P
Content :	Not reported
Number Of Tanks :	1

C7 **FAZIO CLEANERS** **HAZNET** **S103951637**
NNE **23383 MULHOLLAND** **SLIC** **N/A**
1/8-1/4 **WOODLAND HILLS, CA 91364** **CLEANERS**
775 ft. **EMI**

Site 1 of 5 in cluster C

Relative:
Lower

Actual:
928 ft.

CA Cleaners:

Inactive Date:	Not reported
EPA Id:	CAD021061387
Facility Address 2 :	Not reported
NAICS Code :	Not reported
Facility Active :	Yes
Mail Name :	BARBARA BOULET/CONTROLLER
Mailing Address:	21333 OXNARD ST 2ND FL WOODLAND HILLS, CA 91367
Owner Name :	FAZIO INC
Mailing Address:	21333 OXNARD ST 2ND FL WOODLAND HILLS, CA 91367
Owner Telephone :	Not reported
Contact Name :	BARBARA BOULET/X225
Mailing Address:	21333 OXNARD ST 2ND FL WOODLAND HILLS, CA 91367
Contact Telephone :	8187762870
Region Code :	3
Create Date :	12/30/1982
SIC Description :	Not reported
NAICS Description :	Not reported

FAZIO CLEANERS (Continued) **S103951637**

Inactive Date:	10/25/2000
EPA Id:	CAC001416664
Facility Address 2 :	Not reported
NAICS Code :	Not reported
Facility Active :	No
Mail Name :	Not reported
Mailing Address:	23383 MULHOLLAND WOODLAND HILLS, CA 91364
Owner Name :	PAUL FAZIO
Mailing Address:	23383 MULHOLLAND WOODLAND HILLS, CA 91364
Owner Telephone :	8056501400
Contact Name :	MARK GRIFFITH/OST
Mailing Address:	PO BOX 237 VENTURA, CA 93001
Contact Telephone :	8056439963
Region Code :	3
Create Date :	05/13/1998
SIC Description :	Not reported
NAICS Description :	Not reported

HAZNET:

Gepaid:	CAD021061387
TSD EPA ID:	CAT000613893
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	2.13
Facility Address 2:	Not reported
Waste Category:	Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method:	Transfer Station
Contact:	BARBARA BOULET/X225
Telephone:	(818) 776-2870
Mailing Name:	BARBARA BOULET/CONTROLLER
Mailing Address:	21333 OXNARD ST 2ND FL WOODLAND HILLS, CA 91367
County	Los Angeles

Gepaid:	CAD021061387
TSD EPA ID:	OHD980587364
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.29
Facility Address 2:	Not reported
Waste Category:	Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method:	Not reported
Contact:	BARBARA BOULET/X225
Telephone:	(818) 776-2870
Mailing Name:	BARBARA BOULET/CONTROLLER
Mailing Address:	21333 OXNARD ST 2ND FL WOODLAND HILLS, CA 91367
County	Los Angeles

FAZIO CLEANERS (Continued) **S103951637**

Gepaid: CAD021061387
TSD EPA ID: OHD980587364
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.48
Facility Address 2: Not reported
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Transfer Station
Contact: BARBARA BOULET/X225
Telephone: (818) 776-2870
Mailing Name: BARBARA BOULET/CONTROLLER
Mailing Address: 21333 OXNARD ST 2ND FL
WOODLAND HILLS, CA 91367
County Los Angeles

Gepaid: CAC001369960
TSD EPA ID: CAD097030993
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 3.3360
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Contact: B R E PROP
Telephone: (415) 445-6544
Mailing Name: Not reported
Mailing Address: ONE MONTGOMERY ST STE 2500
SAN FRANCISCO, CA 94104
County Los Angeles

CA STATE SLIC :
Global Id : SL184861469
Region : STATE
Assigned Name : SLICSITE
Lead Agency Contact : JENNY AU
Lead Agency : LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number : 645
Responsible Party : Nordman Cormany Hair & Compton
Recent Dtw : Not reported
Facility Status : Remedial Action Underway
Substance Released : PCE, VOC

SLIC Region 4:
Facility Status: Remediation
Region: 4
SLIC 0645
Staff: Jenny Au
Substance: VOCs

EMISSIONS :
Year : 1987
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19

FAZIO CLEANERS (Continued) **S103951637**

County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1990
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 4
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1996
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1997
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 0

FAZIO CLEANERS (Continued) **S103951637**

Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1998
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1999
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2000
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0

FAZIO CLEANERS (Continued) **S103951637**

Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2001
Facility ID : 9092
Air District Code : SC
SIC Code : 7216
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 2
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

C8 **FLAIR INC DBA FAZIO CLEANERS** **RCRA-SQG 1001201417**
NNE **23383 MULHOLLAND DR** **FINDS CAR000020693**
1/8-1/4 **WOODLAND HILLS, CA 91364** **HAZNET**
775 ft. **CLEANERS**

Site 2 of 5 in cluster C

Relative:
Lower

Actual:
928 ft.

RCRAInfo:
Owner: FLAIR INC
(310) 820-4660
EPA ID: CAR000020693

Contact: GUILLERMO MASFERRER
(818) 222-8441

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
NATIONAL EMISSIONS INVENTORY
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

CA Cleaners:
Inactive Date: 6/30/1998
EPA Id: CAR000020693
Facility Address 2 : Not reported
NAICS Code : Not reported
Facility Active : No
Mail Name : Not reported
Mailing Address: 23383 MULHOLLAND DR
WOODLAND HILLS, CA 91364
Owner Name : FLAIR INC
Mailing Address: 11702 SAN VICENTE BLVD
LOS ANGELES, CA 90049
Owner Telephone : 3108204660
Contact Name : M. GUILLERMO MASFERRER, STR MG
Mailing Address: INACT PER 98VQ FINAL NOTICE

FLAIR INC DBA FAZIO CLEANERS (Continued) **1001201417**

- BATCH 4/27
WOODLAND HILLS, CA 91364

Contact Telephone : --
Region Code : 0
Create Date : 05/13/1998
SIC Description : Not reported
NAICS Description : Not reported

HAZNET:

Gepaid: CAD021061387
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 1.97
Facility Address 2: Not reported
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Transfer Station
Contact: angel chicas dir of ops
Telephone: (818) 776-2870
Mailing Name: Not reported
Mailing Address: 18425 burbank blvd ste 717
tarzana, CA 91356
County Not reported

Gepaid: CAD021061387
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: 99
Tons: 0.29
Facility Address 2: Not reported
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: ***
Contact: angel chicas dir of ops
Telephone: (818) 776-2870
Mailing Name: Not reported
Mailing Address: 18425 burbank blvd ste 717
tarzana, CA 91356
County Not reported

Gepaid: CAD021061387
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 2.5734
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: Not reported
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23383 MULHOLLAND DR
WOODLAND HILLS, CA 91324
County Los Angeles

FLAIR INC DBA FAZIO CLEANERS (Continued) **1001201417**

Gepaid: CAD021061387
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 2.4151
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: Not reported
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23383 MULHOLLAND DR
WOODLAND HILLS, CA 91324
County Los Angeles

Gepaid: CAD021061387
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 1.8205
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: Not reported
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23383 MULHOLLAND DR
WOODLAND HILLS, CA 91324
County Los Angeles

Click this hyperlink while viewing on your computer to access
8 additional CA HAZNET record(s) in the EDR Site Report.

C9 **MOTION PICTURE AND T.V FUND** **UST** **U003780186**
NNE **23388 MULHOLLAND DR** **SWEEPS UST** **N/A**
1/8-1/4 **WOODLAND HILLS, CA 91364**
821 ft.

Site 3 of 5 in cluster C

Relative:
Lower

Actual:
927 ft.

SWEEPS:
Status : A
Comp Number : 5846
Number : 1
Board Of Equalization : Not reported
Ref Date : 09-14-93
Act Date : 05-02-94
Created Date : 02-29-88
Tank Status : A
Owner Tank Id : 0000005846
Swrcb Tank Id : 19-050-005846-000002
Actv Date : 12-03-92
Capacity : 500
Tank Use : OIL
Stg : W
Content : WASTE OIL
Number Of Tanks : 3

Status : A
Comp Number : 5846

MOTION PICTURE AND T.V FUND (Continued) **U003780186**

Number : 1
Board Of Equalization : Not reported
Ref Date : 09-14-93
Act Date : 05-02-94
Created Date : 02-29-88
Tank Status : A
Owner Tank Id : 0000005846
Swrcb Tank Id : 19-050-005846-000003
Actv Date : 12-03-92
Capacity : 150
Tank Use : M.V. FUEL
Stg : P
Content : REG UNLEADED
Number Of Tanks : Not reported

Status : A
Comp Number : 5846
Number : 1
Board Of Equalization : Not reported
Ref Date : 09-14-93
Act Date : 05-02-94
Created Date : 02-29-88
Tank Status : A
Owner Tank Id : 0000005846
Swrcb Tank Id : 19-050-005846-000004
Actv Date : 12-03-92
Capacity : 300
Tank Use : M.V. FUEL
Stg : P
Content : DIESEL
Number Of Tanks : Not reported

State UST:
Facility ID: 23690
Total Tanks: Not reported
Region: STATE
Local Agency: Los Angeles, Los Angeles County

C10 **MOTION PICTURE & TELEVISI** **Cortese** **S100927419**
NNE **23388 MULHOLLAND** **N/A**
1/8-1/4 **WOODLAND HILLS, CA 91364**
821 ft.

Site 4 of 5 in cluster C

Relative:
Lower

CORTESE:
Region: CORTESE
Actual: Fac Address 2: Not reported
927 ft.

C11 **MOTION PICTURE AND TELEVISION FUND** **RCRA-SQG** **1000598047**
NNE **23388 MULHOLLAND DR** **FINDS** **CAD983620881**
1/8-1/4 **WOODLAND HILLS, CA 91364** **LUST**
821 ft. **CA FID UST**
EMI

Site 5 of 5 in cluster C

Relative:
Lower

Actual:
927 ft.

MOTION PICTURE AND TELEVISION FUND (Continued) **1000598047**

RCRAInfo:
Owner: MOTION PICTURE AND TELEVISION FUND
(818) 876-1888
EPA ID: CAD983620881

Contact: ALENE BALL
(818) 876-1160

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
NATIONAL EMISSIONS INVENTORY
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

State LUST:

Cross Street:	CALABASAS		
Qty Leaked:	Not reported		
Case Number	Not reported		
Reg Board:	4		
Chemical:	Gasoline		
Lead Agency:	Regional Board		
Local Agency :	19050		
Case Type:	Other ground water affected		
Status:	**Case Closed**		
Review Date:	Not reported	Confirm Leak:	Not reported
Workplan:	Not reported	Prelim Assess:	Not reported
Pollution Char:	Not reported	Remed Plan:	Not reported
Remed Action:	Not reported		
Monitoring:	Not reported		
Close Date:	1998-01-26 00:00:00		
Release Date:	Not reported		
Cleanup Fund Id :	Not reported		
Discover Date :	Not reported		
Enforcement Dt :	Not reported		
Enf Type:	Not reported		
Enter Date :	Not reported		
Funding:	Not reported		
Staff Initials:	PEJ		
How Discovered:	Not reported		
How Stopped:	Not reported		
Interim :	Yes		
Leak Cause:	UNK		
Leak Source:	Tank		
MTBE Date :	1965-01-01 00:00:00		
Max MTBE GW :	2 Parts per Billion		
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected		
Priority:	Not reported		
Local Case # :	Not reported		
Beneficial:	Not reported		
Staff :	CEC		
GW Qualifier :	Not reported		
Max MTBE Soil :	Not reported		
Soil Qualifier :	Not reported		
Hydr Basin #:	SAN FERNANDO VALLEY		

MOTION PICTURE AND TELEVISION FUND (Continued) **1000598047**

Operator : Not reported
Oversight Prgm: LUST
Review Date : 1998-03-30 00:00:00
Stop Date : Not reported
Work Suspended :Not reported
Responsible PartyE.W. MALINOWSKI
RP Address: 23388 MULHOLLAND DR, WOODLAND HILLS, CA 91364
Global Id: T0603702359
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: 1
Mtbe Fuel: 1
Water System Name: HABONIM CAMP GILBOA
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: W0606501096
Waste Disch Assigned Name: 3301096-001GEN
Summary : 03/30/98 - MONITORING WELL ABANDONMENT RPT
12/03/96 - RESULTS OF TANK INTEGRITY TESTS
08/05/97 - 2ND QTR 1997 GW MON RPT
11/04/97 - GW MON RPT & REQUEST FOR CLOSURE (

LUST Region 4:
Report Date: 12/9/1986
Lead Agency: Regional Board
Local Agency: 19050
Substance: Gasoline
Case Type: Groundwater
Status: Case Closed
Region: 4
Staff: CEC
Date Case Last Changed on Database: 3/30/1998
Date Leak Record Entered: 9/9/1987
Historical Max MTBE Date: 1/1/1965
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: 2
Hist Max MTBE Conc in Soil : Not reported
County: Los Angeles
Organization : Not reported
Regional Board: 04
Owner Contact: Not reported
Responsible Party: E.W. MALINOWSKI
RP Address: 23388 MULHOLLAND DR, WOODLAND HILLS, CA 91364
Significant Interim Remedial Action Taken: Yes
Program : LUST
Lat / Long : 34.1572465 / -1
Local Agency Staff: PEJ
Beneficial Use : Not reported
Priority : Not reported
Cleanup Fund Id : Not reported
Suspended : Not reported
Local Case No : Not reported
Substance Quantity : Not reported
Abatement Method Used at the Site: Not reported
Operator : Not reported
Water System : HABONIM CAMP GILBOA
Well Name : Not reported

MOTION PICTURE AND TELEVISION FUND (Continued) **1000598047**

Approx. Dist To Production Well (ft) :	10621.539629535119799504092664
Assigned Name :	3301096-001GEN
W Global ID :	W0606501096
Source of Cleanup Funding:	Not reported
Date the Leak was Discovered:	Not reported
How the Leak was Discovered:	Not reported
How the Leak was Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	Tank
Date The Leak was Stopped:	Not reported
Date Confirmation Leak Began:	Not reported
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	4/21/1988
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	1/26/1998
Enforcement Action Date:	Not reported
Date Leak First Reported:	12/9/1986
Enforcement Type:	Not reported
Global ID :	T0603702359
Cross Street:	CALABASAS

Summary : 03/30/98 - MONITORING WELL ABANDONMENT RPT 12/03/96 - RESULTS OF TANK INTEGRITY TESTS 08/05/97 - 2ND QTR 1997 GW MON RPT 11/04/97 - GW MON RPT & REQUEST FOR CLOSURE (

FID:

Facility ID:	19001391	Regulate ID:	Not reported
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	(818) 347-1591
Mail To:	Not reported 23388 MULHOLLAND DR WOODLAND HILLS, CA 91364		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

EMISSIONS :

Year :	1990
Facility ID :	16211
Air District Code :	SC
SIC Code :	6733
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	19
County ID :	19
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	3
NOX - Oxides of Nitrogen Tons/Yr:	18
SOX - Oxides of Sulphur Tons/Yr:	0

MOTION PICTURE AND TELEVISION FUND (Continued) **1000598047**

Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1995
Facility ID : 16211
Air District Code : SC
SIC Code : 6733
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 17
Reactive Organic Gases Tons/Yr: 2
Carbon Monoxide Emissions Tons/Yr: 9
NOX - Oxides of Nitrogen Tons/Yr: 8
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1996
Facility ID : 16211
Air District Code : SC
SIC Code : 6733
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 55
Reactive Organic Gases Tons/Yr: 7
Carbon Monoxide Emissions Tons/Yr: 60
NOX - Oxides of Nitrogen Tons/Yr: 7
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1997
Facility ID : 16211
Air District Code : SC
SIC Code : 8051
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 19
County ID : 19
Total Organic Hydrocarbon Gases Tons/Yr: 37
Reactive Organic Gases Tons/Yr: 5
Carbon Monoxide Emissions Tons/Yr: 12
NOX - Oxides of Nitrogen Tons/Yr: 2
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

MOTION PICTURE AND TELEVISION FUND (Continued) **1000598047**

Year :	1998
Facility ID :	16211
Air District Code :	SC
SIC Code :	8051
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	19
County ID :	19
Total Organic Hydrocarbon Gases Tons/Yr:	45
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	12
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr :	0
Part. Matter 10 Micrometers and Smaller Tons/Yr :	0

Year :	1999
Facility ID :	16211
Air District Code :	SC
SIC Code :	8051
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	19
County ID :	19
Total Organic Hydrocarbon Gases Tons/Yr:	37
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	12
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr :	0
Part. Matter 10 Micrometers and Smaller Tons/Yr :	0

Year :	2000
Facility ID :	16211
Air District Code :	SC
SIC Code :	8051
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	19
County ID :	19
Total Organic Hydrocarbon Gases Tons/Yr:	37
Reactive Organic Gases Tons/Yr:	5
Carbon Monoxide Emissions Tons/Yr:	12
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr :	0
Part. Matter 10 Micrometers and Smaller Tons/Yr :	0

Year :	2001
Facility ID :	16211

MOTION PICTURE AND TELEVISION FUND (Continued) **1000598047**

Air District Code :	SC
SIC Code :	8051
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	19
County ID :	19
Total Organic Hydrocarbon Gases Tons/Yr:	17
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	4
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr :	0
Part. Matter 10 Micrometers and Smaller Tons/Yr :	0

Year :	2002
Facility ID :	16211
Air District Code :	SC
SIC Code :	8051
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	19
County ID :	19
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr :	0
Part. Matter 10 Micrometers and Smaller Tons/Yr :	0

Year :	2003
Facility ID :	16211
Air District Code :	SC
SIC Code :	8051
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	19
County ID :	19
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr :	0
Part. Matter 10 Micrometers and Smaller Tons/Yr :	0

D12
West
1/8-1/4
1200 ft.

Relative:
Higher

Actual:
946 ft.

CALABASAS COUNTRY INN
23627 W CALABASAS RD
CALABASAS, CA 91302

LOS ANGELES CO. HMS
SWEEPS UST

S102064204
N/A

Site 1 of 4 in cluster D

HMS:

Facility Id:	012525-012681		
Region:	LA		
Area:	5K		
Facility Type:	Not reported		
Permit Number:	Not reported	Permit Status:	Not reported
Facility Status:	Removed		
Region:	Los Angeles County:		

SWEEPS:

Status :	A
Comp Number :	12681
Number :	9
Board Of Equalization :	Not reported
Ref Date :	03-14-91
Act Date :	03-14-91
Created Date :	06-30-89
Tank Status :	Not reported
Owner Tank Id :	Not reported
Swrcb Tank Id :	Not reported
Actv Date :	Not reported
Capacity :	Not reported
Tank Use :	Not reported
Stg :	Not reported
Content :	Not reported
Number Of Tanks :	Not reported

D13
West
1/8-1/4
1216 ft.

Relative:
Higher

Actual:
946 ft.

THE COURTYARD AT THE COMMONS
23631 CALABASAS RD
CALABASAS, CA 91302

SLIC

S106485870
N/A

Site 2 of 4 in cluster D

CA STATE SLIC :

Global Id :	SLT43658656
Region :	STATE
Assigned Name :	SLICSITE
Lead Agency Contact :	JOHN GEROCH
Lead Agency :	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number :	991
Responsible Party :	Not reported
Recent Dtw :	Not reported
Facility Status :	**Case Closed**
Substance Released :	Not reported

D14
West
1/8-1/4
1216 ft.

Relative:
Higher

Actual:
946 ft.

THE COURTYARD AT THE COMMONS — **SLIC** — **S104857333** / **N/A**
23631 CALABASAS
CALABASAS, CA 91302

Site 3 of 4 in cluster D

SLIC Region 4:

Facility Status:	Closure
Region:	4
SLIC	0991
Staff:	John Geroch
Substance:	PCE

D15
West
1/8-1/4
1305 ft.

Relative:
Higher

Actual:
946 ft.

PARKWAY CLEANERS — **HAZNET CLEANERS** — **S103945160** / **N/A**
23643 CALABASAS ROAD
CALABASAS, CA 91302

Site 4 of 4 in cluster D

CA Cleaners:

Inactive Date:	Not reported
EPA Id:	CAL000005649
Facility Address 2 :	Not reported
NAICS Code :	81232
Facility Active :	Yes
Mail Name :	Not reported
Mailing Address:	23643 CALABASAS RD CALABASAS, CA 91302
Owner Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA CALABASAS, CA --
Owner Telephone :	0000000000
Contact Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA CALABASAS, CA --
Contact Telephone :	8182221370
Region Code :	3
Create Date :	11/14/1989
SIC Description :	Garment Pressing, and Agents for Laundries and Drycleaners
NAICS Description :	Drycleaning and Laundry Services (except Coin-Operated)

Inactive Date:	Not reported
EPA Id:	CAL000005649
Facility Address 2 :	Not reported
NAICS Code :	81232
Facility Active :	Yes
Mail Name :	Not reported
Mailing Address:	23643 CALABASAS RD CALABASAS, CA 91302
Owner Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA CALABASAS, CA --
Owner Telephone :	0000000000
Contact Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA CALABASAS, CA --
Contact Telephone :	8182221370
Region Code :	3
Create Date :	11/14/1989
SIC Description :	Drycleaning Plants, Except Rug Cleaning
NAICS Description :	Drycleaning and Laundry Services (except Coin-Operated)

PARKWAY CLEANERS (Continued) **S103945160**

Inactive Date:	Not reported
EPA Id:	CAL000005649
Facility Address 2 :	Not reported
NAICS Code :	81232
Facility Active :	Yes
Mail Name :	Not reported
Mailing Address:	23643 CALABASAS RD
	CALABASAS, CA 91302
Owner Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA
	CALABASAS, CA --
Owner Telephone :	0000000000
Contact Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA
	CALABASAS, CA --
Contact Telephone :	8182221370
Region Code :	3
Create Date :	11/14/1989
SIC Description :	Laundry and Garment Services, NEC (except diaper service and clothing alteration and repair)
NAICS Description :	Drycleaning and Laundry Services (except Coin-Operated)

Inactive Date:	Not reported
EPA Id:	CAL000005649
Facility Address 2 :	Not reported
NAICS Code :	81232
Facility Active :	Yes
Mail Name :	Not reported
Mailing Address:	23643 CALABASAS RD
	CALABASAS, CA 91302
Owner Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA
	CALABASAS, CA --
Owner Telephone :	0000000000
Contact Name :	SUN JA KANG
Mailing Address:	24438 PARK GRANAADA
	CALABASAS, CA --
Contact Telephone :	8182221370
Region Code :	3
Create Date :	11/14/1989
SIC Description :	Power Laundries, Family and Commercial
NAICS Description :	Drycleaning and Laundry Services (except Coin-Operated)

HAZNET:

Gepaid:	CAL000005649
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	Not reported
Facility Address 2:	Not reported
Waste Category:	Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method:	Not reported
Contact:	SUN JA KANG
Telephone:	(818) 222-1370
Mailing Name:	Not reported
Mailing Address:	23643 CALABASAS RD
	CALABASAS, CA 91302
County	Not reported

PARKWAY CLEANERS (Continued) **S103945160**

Gepaid: CAL000005649
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.12
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Transfer Station
Contact: SUN JA KANG
Telephone: (818) 222-1370
Mailing Name: Not reported
Mailing Address: 23643 CALABASAS RD
CALABASAS, CA 91302
County Not reported

Gepaid: CAL000005649
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .2107
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: SUN JA KANG
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23643 CALABASAS RD
CALABASAS, CA 91302
County Los Angeles

Gepaid: CAL000005649
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.3691
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Not reported
Contact: SUN JA KANG
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23643 CALABASAS RD
CALABASAS, CA 91302
County Los Angeles

Gepaid: CAL000005649
TSD EPA ID: CAD981397417
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .3900
Facility Address 2: Not reported
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: SUN JA KANG
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 23643 CALABASAS RD
CALABASAS, CA 91302

PARKWAY CLEANERS (Continued) **S103945160**

County Los Angeles

Click this hyperlink while viewing on your computer to access
4 additional CA HAZNET record(s) in the EDR Site Report.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALABASAS	S101587023	ROAD ELEMENT RD DIVISION 539	29773 MULHULLAND HWY	91302	CA FID UST, SWEEPS UST
CALABASAS CA	S103441715	SLUDGE INJ,RANCHO LAS VIRGENES	MULHOLLAND HWY / LAS VIRG CYN	91302	WMUDS/SWAT
LOS ANGELES	1004677579	DEPART OF TRANSPORTATION	HWY 101 43 8 51 8	91367	RCRA-SQG, FINDS, HAZNET
LOS ANGELES COUNTY	S105642458		2 / 3 MI DUE SOUTH NEWPORT BEACH PIER		HAZNET, LUST, CHMIRS
MONTE NIDO	S102433509	MOBIL	PARKWAY CALABASAS	91302	LUST
WOODLAND HILLS	1000189845	WOODLAND HILL AUTO BODY	5323 CO MERCIO HWY	91364	RCRA-SQG, FINDS, HAZNET

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 01/31/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 01/31/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 01/31/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/24/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 40

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 12/21/2005
Next Scheduled EDR Contact: 03/20/2006
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 10/24/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 40

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 12/21/2005
Next Scheduled EDR Contact: 03/20/2006
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/29/2005
Date Data Arrived at EDR: 01/11/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 41

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/15/2005
Date Data Arrived at EDR: 12/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 33

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 40

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Last EDR Contact: 01/12/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/16/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 36

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/02/2005
Date Data Arrived at EDR: 08/12/2005
Date Made Active in Reports: 10/06/2005
Number of Days to Update: 55

Source: Environmental Protection Agency
Telephone: 703-603-8867
Last EDR Contact: 03/03/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/10/2005
Date Data Arrived at EDR: 02/11/2005
Date Made Active in Reports: 04/06/2005
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 703-603-8867
Last EDR Contact: 03/03/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 01/19/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 33

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 01/19/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 12/05/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/07/2005
Date Data Arrived at EDR: 01/06/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 46

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 01/04/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/13/2005
Date Made Active in Reports: 08/17/2005
Number of Days to Update: 35

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 12/21/2005
Next Scheduled EDR Contact: 03/20/2006
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/27/2004
Date Made Active in Reports: 05/21/2004
Number of Days to Update: 24

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/17/2006
Date Data Arrived at EDR: 01/24/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 34

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 01/17/2006
Date Data Arrived at EDR: 01/24/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 01/03/2005
Date Made Active in Reports: 01/25/2005
Number of Days to Update: 22

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Annually

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 02/08/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 19

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 02/08/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/18/2005
Date Data Arrived at EDR: 10/31/2005
Date Made Active in Reports: 12/20/2005
Number of Days to Update: 50

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 02/08/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/08/2005
Date Data Arrived at EDR: 12/27/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 34

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/27/2005
Next Scheduled EDR Contact: 03/27/2006
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/16/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 01/03/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/17/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE AND LOCAL RECORDS

AWP: Annual Workplan Sites

Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 09/21/2005
Number of Days to Update: 23

Source: California Environmental Protection Agency
Telephone: 916-323-3400
Last EDR Contact: 03/16/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Annually

CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 09/21/2005
Number of Days to Update: 23

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NFA: No Further Action Determination

This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 10/06/2005
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Quarterly

NFE: Properties Needing Further Evaluation

This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 09/21/2005
Number of Days to Update: 23

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Quarterly

REF: Unconfirmed Properties Referred to Another Agency

This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 10/06/2005
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Quarterly

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 10/06/2005
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: No Update Planned

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/08/2005
Date Data Arrived at EDR: 12/13/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 37

Source: Integrated Waste Management Board
Telephone: 916-341-6320
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 12/19/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 29

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 12/21/2005
Next Scheduled EDR Contact: 03/20/2006
Data Release Frequency: Quarterly

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 05/29/2001
Date Made Active in Reports: 07/26/2001
Number of Days to Update: 58

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-9100
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 01/05/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 22

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-341-5752
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 12/27/2005
Next Scheduled EDR Contact: 03/27/2006
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-4130
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-346-7491
Last EDR Contact: 12/27/2005
Next Scheduled EDR Contact: 03/27/2006
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-346-7491
Last EDR Contact: 01/04/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Date of Government Version: 01/15/2006
Date Data Arrived at EDR: 01/16/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 36

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 02/13/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-576-2220
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The Spills, Leaks, Investigations, and Cleanups (SLIC) listings includes unauthorized discharges from spills and leaks, other than from underground storage tanks or other regulated sites.

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-341-5752
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 02/17/2006
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 24

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 02/13/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 01/23/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 01/06/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 01/17/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 35

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 01/17/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 12/14/2005
Date Data Arrived at EDR: 12/14/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 36

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Annually

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 22

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Semi-Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

AST: Aboveground Petroleum Storage Tank Facilities

Registered Aboveground Storage Tanks.

Date of Government Version: 01/30/2006
Date Data Arrived at EDR: 01/30/2006
Date Made Active in Reports: 02/17/2006
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 11/30/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 50

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: No Update Planned

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 01/03/2006
Date Data Arrived at EDR: 01/04/2006
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 15

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/03/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/29/2005
Date Made Active in Reports: 09/21/2005
Number of Days to Update: 23

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 04/18/2005
Date Data Arrived at EDR: 04/18/2005
Date Made Active in Reports: 05/06/2005
Number of Days to Update: 18

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 01/04/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 01/23/2006
Date Data Arrived at EDR: 01/24/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 28

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 01/23/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/10/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 02/08/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 10/11/2005
Date Made Active in Reports: 10/31/2005
Number of Days to Update: 20

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 02/24/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/19/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 23

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Varies

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 09/07/2005
Date Data Arrived at EDR: 09/08/2005
Date Made Active in Reports: 10/31/2005
Number of Days to Update: 53

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/10/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 12/01/2005
Date Data Arrived at EDR: 01/03/2006
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

INDIAN UST: Underground Storage Tanks on Indian Land

Date of Government Version: 11/08/2005
Date Data Arrived at EDR: 11/09/2005
Date Made Active in Reports: 12/12/2005
Number of Days to Update: 33

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 02/16/2006
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 24

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/23/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Semi-Annually

Underground Tanks

Date of Government Version: 11/08/2005
Date Data Arrived at EDR: 11/10/2005
Date Made Active in Reports: 12/08/2005
Number of Days to Update: 28

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 02/27/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/09/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 41

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/18/2006
Date Data Arrived at EDR: 01/18/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 34

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/18/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/09/2005
Date Made Active in Reports: 01/11/2006
Number of Days to Update: 33

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 07/07/1999
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 07/06/1999
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

City of El Segundo Underground Storage Tank

Date of Government Version: 11/14/2005
Date Data Arrived at EDR: 11/14/2005
Date Made Active in Reports: 12/08/2005
Number of Days to Update: 24

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 02/27/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 02/24/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 12/01/2005
Date Made Active in Reports: 12/16/2005
Number of Days to Update: 15

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 02/27/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Semi-Annually

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/31/2005
Date Data Arrived at EDR: 01/30/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 22

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 02/13/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Date of Government Version: 02/14/2006
Date Data Arrived at EDR: 02/28/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 13

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 02/15/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

City of Los Angeles Landfills

Date of Government Version: 03/01/2005
Date Data Arrived at EDR: 03/18/2005
Date Made Active in Reports: 04/08/2005
Number of Days to Update: 21

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/05/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 25

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 02/03/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Annually

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/26/2005
Date Made Active in Reports: 09/28/2005
Number of Days to Update: 33

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 12/28/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/27/2005
Next Scheduled EDR Contact: 03/27/2006
Data Release Frequency: Semi-Annually

Closed and Operating Underground Storage Tank Sites

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 12/28/2005
Date Made Active in Reports: 01/11/2006
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/27/2005
Next Scheduled EDR Contact: 03/27/2006
Data Release Frequency: Annually

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 12/01/2005
Date Data Arrived at EDR: 12/20/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 30

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 03/08/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 12/01/2005
Date Data Arrived at EDR: 12/20/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 30

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 03/08/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 12/01/2005
Date Data Arrived at EDR: 12/16/2005
Date Made Active in Reports: 01/11/2006
Number of Days to Update: 26

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 03/08/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 01/18/2006
Date Data Arrived at EDR: 01/18/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 34

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Underground Storage Tank Tank List

Date of Government Version: 02/09/2006
Date Data Arrived at EDR: 02/10/2006
Date Made Active in Reports: 03/09/2006
Number of Days to Update: 27

Source: Health Services Agency
Telephone: 951-358-5055
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Quarterly

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 02/09/2006
Date Data Arrived at EDR: 02/10/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 31

Source: Department of Public Health
Telephone: 951-358-5055
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS - Contaminated Sites

Date of Government Version: 02/02/2006
Date Data Arrived at EDR: 02/13/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 28

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

ML - Regulatory Compliance Master List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/02/2006
Date Data Arrived at EDR: 02/10/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 31

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/21/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 29

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/16/2005
Date Data Arrived at EDR: 05/18/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 29

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 01/20/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 12/29/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 21

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities

Date of Government Version: 12/07/2005
Date Data Arrived at EDR: 12/07/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 43

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

Underground Storage Tank Information

Date of Government Version: 12/07/2005
Date Data Arrived at EDR: 12/07/2005
Date Made Active in Reports: 01/11/2006
Number of Days to Update: 35

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/10/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 21

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Annually

Fuel Leak List

Date of Government Version: 01/11/2006
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 19

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 12/27/2005
Next Scheduled EDR Contact: 03/27/2006
Data Release Frequency: No Update Planned

LOP Listing

A listing of open leaking underground storage tanks.

Date of Government Version: 10/24/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 12/12/2005
Number of Days to Update: 14

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 12/27/2005
Next Scheduled EDR Contact: 03/27/2006
Data Release Frequency: Varies

Hazardous Material Facilities

Date of Government Version: 12/12/2005
Date Data Arrived at EDR: 12/12/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 38

Source: City of San Jose Fire Department
Telephone: 408-277-4659
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks

Date of Government Version: 12/13/2005
Date Data Arrived at EDR: 12/14/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 36

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

Underground Storage Tanks

Date of Government Version: 10/13/2005
Date Data Arrived at EDR: 10/31/2005
Date Made Active in Reports: 12/08/2005
Number of Days to Update: 38

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites

Date of Government Version: 01/23/2006
Date Data Arrived at EDR: 01/23/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 29

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 01/23/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Date of Government Version: 12/31/0005
Date Data Arrived at EDR: 01/05/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 26

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 01/03/2006
Next Scheduled EDR Contact: 04/03/2006
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 11/30/2005
Date Data Arrived at EDR: 01/04/2006
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 15

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2005
Date Data Arrived at EDR: 09/20/2005
Date Made Active in Reports: 10/06/2005
Number of Days to Update: 16

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 11/30/2005
Date Data Arrived at EDR: 01/03/2006
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 16

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/29/2005
Date Data Arrived at EDR: 01/20/2006
Date Made Active in Reports: 02/15/2006
Number of Days to Update: 26

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/11/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Date of Government Version: 01/18/2006
Date Data Arrived at EDR: 02/09/2006
Date Made Active in Reports: 03/09/2006
Number of Days to Update: 28

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

4803 EL CANON AVENUE
4803 EL CANON AVENUE
CALABASAS, CA 91302

TARGET PROPERTY COORDINATES

Latitude (North):	34.15650 - 34° 9' 23.4"
Longitude (West):	118.6373 - 118° 38' 14.3"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	349065.7
UTM Y (Meters):	3780524.8
Elevation:	943 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	34118-B6 CALABASAS, CA
Most Recent Revision:	1967
East Map:	34118-B5 CANOGA PARK, CA
Most Recent Revision:	1967

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

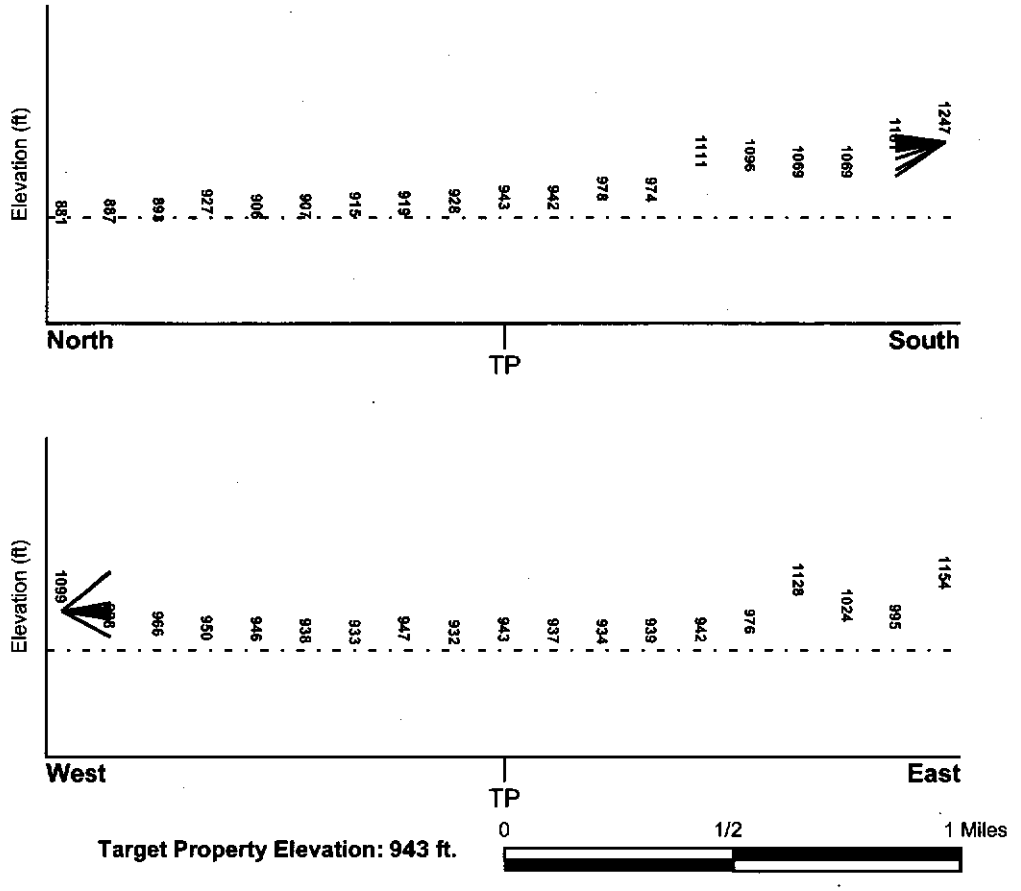
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
LOS ANGELES, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property:	0601370041C
Additional Panels in search area:	0601370035C 0601250000A 0650430614B 0607490000A

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CALABASAS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Tertiary
Series:	Miocene
Code:	Tm *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	URBAN LAND
Soil Surface Texture:	variable
Hydrologic Group:	Not reported
Soil Drainage Class:	Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 10 inches
Depth to Bedrock Max:	> 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures:
loam
clay
silt loam
clay loam
sandy loam
gravelly - sandy loam
loamy sand
fine sand
coarse sand
sand
gravelly - sand

Surficial Soil Types:
loam
clay
silt loam
clay loam
sandy loam
gravelly - sandy loam
loamy sand
fine sand
coarse sand
sand
gravelly - sand

Shallow Soil Types:
fine sandy loam
gravelly - loam
sand
silty clay

Deeper Soil Types:
stratified
clay loam
silty clay loam
gravelly - sandy loam
coarse sand
sand
weathered bedrock
very fine sandy loam

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CA1910225	0 - 1/8 Mile NW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 1637438.2s

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	4803 El Canon Avenue	CLIENT:	California Environmental
ADDRESS:	4803 El Canon Avenue Calabasas CA 91302	CONTACT:	Christine Malham
		INQUIRY #:	1637438.2s
LAT/LONG:	34.1565 / 118.6373	DATE:	March 20, 2006

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **NW** **0 - 1/8 Mile** **Lower**	**FRDS PWS**	**CA1910225**

PWS ID:	CA1910225	PWS Status:	Not Reported
Date Initiated:	Not Reported	Date Deactivated:	Not Reported
PWS Name:	LAS VIRGENES MWD CALABASAS, CA 91302		

Source: Surface water
Treatment Objective: PARTICULATE REMOVAL
Process: FILTRATION, DIATOMACEOUS EARTH

Addressee / Facility: Not Reported

Facility Latitude:	34 09 28	Facility Longitude:	118 38 15
City Served:	CALABASAS VICIN		
Treatment Class:	Treated	Population:	52000

PWS currently has or had major violation(s) or enforcement: No

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct. > 4 Pci/L
91302	184	26	14.13

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 91302

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.600 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations for District 2, 3, 5 and 6
Source: Department of Conservation
Telephone: 916-323-1779

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Appendix E

Hydrology and Hydraulic Studies

JSA

CIVIL ENGINEERS
LAND PLANNERS
SURVEYORS

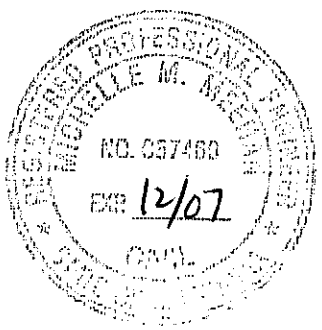
HYDRAULIC ANALYSIS

OF

50-YEAR FLOW IN CALABASAS CREEK/McCOY CANYON

IN THE VICINITY OF 4803 EL CANON AVENUE

CALABASAS, CALIFORNIA



Prepared by: Michelle Meehan

Reviewed by: David Silverman

Date: 11 May 2007

Signature: Michelle M. Meehan, PE 57460

23801 Calabasas Road, Suite 2039 Calabasas, CA 91302-1547 (818) 222-3700 FAX (818) 222-3710

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2. HEC-RAS Analysis 1
   a. HEC-RAS General Parameters 1
   b. Cross Section Development 1
   c. Culvert Analysis 1

3. Results 1

Appendix A - Calculations
Appendix B - Study Map

1. Description of Project Area

The proposed project is located at 4803 El Canon Avenue in Calabasas, California, which is in the County of Los Angeles, California. Currently the site has 2 small houses and some outbuildings, but is mostly open space. The proposed project is senior apartments with associated landscape and hardscape, with an underground garage structure. The site is adjacent to the Calabasas Creek/McCoy Canyon, which is an earthen trapezoidal channel until approximately 200 feet downstream from the subject property. At that point, the natural channel flows into a double reinforced concrete box that measures 11 feet 3 inches wide by 8 feet 6 inches high. The culvert then goes under Calabasas Road and continues in a northerly direction. The purpose of this analysis is to determine the extent of flooding in the subject property as a result of flow in the Calabasas Creek for both the pre-developed and developed conditions. An HEC-RAS analysis was performed to determine the water surface elevation of the LA County 50-year flood in the creek.

2. HEC-RAS Analysis

a. HEC-RAS General Parameters. The HEC-RAS model was developed using topographic data obtained from a field survey. A Manning's "n" value of 0.030 was used for both the channel and the overbanks. Per FEMA requirements for developing a LOMR or a CLOMR, the flow was modeled as subcritical flow. The boundary conditions were set to critical depth at the most downstream and upstream cross sections. The LA County 50-year flood discharge of 2700 cfs, per the as-built plans for the concrete portion of the channel, was used in the water surface computations.

b. Cross Section Development. Cross sections were taken perpendicular to the flow and were taken at intervals no greater than 50 feet, and the data from the field survey was used to determine elevations. All cross sections were coded from left to right while looking downstream, per the recommended HEC-RAS convention. For the analysis of the developed condition, the cross sections were modified to include the grading shown on the tentative grading for the project. The cross section locations are shown on the exhibit in Appendix B.

c. Culvert Analysis. Approximately 200 feet downstream of the northerly boundary of the subject property, the natural creek flows into a double reinforced concrete box culvert. This culvert was modeled using the HEC-RAS culvert routine. Results from the culvert analysis are included in Appendix A.

3. Results

In the pre-developed condition, some flow from the creek will innundate a portion of the subject property, at depths of less than 1 foot. In the developed condition, the finished grade will be

raised adjacent to the channel, and therefore the water will be contained within the channel. This grading and containment did not have a significant impact on the computer water surface elevation either upstream or downstream of the subject property. The extent of the flooding for both pre-developed and developed conditions was plotted on the maps that can be found in Appendix B.

Appendix A
Calculations

Pre-Developed Conditions

HEC-RAS Plan: existing 50 River: Calabasas Creek Reach: lower Profile: PF 1

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
lower	20446.	2700.00	923.85	934.99		935.91	0.001958	7.71	351.66	48.38	0.49
lower	20425.	2700.00	923.28	934.91		935.87	0.001948	7.84	345.77	45.60	0.48
lower	20401.	2700.00	921.87	934.78		935.81	0.002144	8.14	332.09	44.39	0.50
lower	20372.	2700.00	922.06	934.76		935.73	0.001853	8.05	388.71	151.04	0.47
lower	20349.	2700.00	921.72	934.44		935.66	0.002460	9.05	350.90	129.53	0.54
lower	20319.	2700.00	921.41	934.39		935.58	0.002385	9.08	351.09	93.80	0.53
lower	20293.	2700.00	921.06	934.03	932.29	935.48	0.003640	9.91	335.33	195.20	0.64
lower	20261.	2700.00	920.16	934.13	931.60	935.30	0.002721	8.86	380.57	305.10	0.56
lower	20246.	2700.00	920.54	934.11		935.25	0.002545	8.54	317.21	44.87	0.55
lower	20221.	2700.00	919.86	934.22		935.12	0.001873	7.62	354.33	42.86	0.47
lower	20200.	2700.00	919.65	933.63		935.02	0.003197	9.46	288.38	50.26	0.60
lower	20153	2700.00	919.90	931.20	931.01	934.57	0.010959	14.73	183.31	25.56	0.97
lower	20123	2700.00	919.09	933.00		933.88	0.001230	6.64	408.94	53.39	0.39
lower	20095	2700.00	919.82	932.94		933.84	0.001763	6.71	402.57	39.30	0.37
lower	20080	2700.00	919.81	932.29		933.55	0.003980	9.00	299.94	24.20	0.45
lower	20064	2700.00	917.12	932.55	924.54	933.41	0.000337	7.44	362.82	23.52	0.33
lower	20063	Culvert									
lower	19848	2700.00	913.76	921.41	921.41	925.23	0.003185	15.68	172.22	22.51	1.00

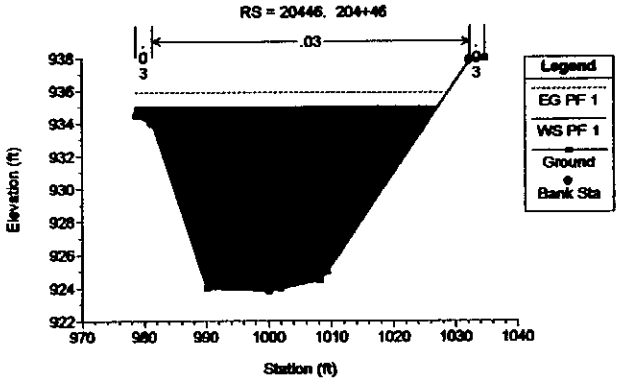
Plan: existing 50 Calabasas Creek lower RS: 20063 Culv Group: Culvert #1 Profile: PF 1

Q Culv Group (cfs)	2653.07	Culv Full Len (ft)	
# Barrels	2	Culv Vel US (ft/s)	13.87
Q Barrel (cfs)	1326.54	Culv Vel DS (ft/s)	28.28
E.G. US. (ft)	933.41	Culv Inv El Up (ft)	917.22
W.S. US. (ft)	932.55	Culv Inv El Dn (ft)	913.76
E.G. DS (ft)	925.23	Culv Frctn Ls (ft)	1.57
W.S. DS (ft)	921.41	Culv Exit Loss (ft)	5.12
Delta EG (ft)	8.18	Culv Entr Loss (ft)	1.49
Delta WS (ft)	11.14	Q Weir (cfs)	46.93
E.G. IC (ft)	933.41	Weir Sta Lft (ft)	988.24
E.G. OC (ft)	930.45	Weir Sta Rgt (ft)	1011.76
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (ft)	925.72	Weir Max Depth (ft)	0.84
Culv WS Outlet (ft)	917.93	Weir Avg Depth (ft)	0.84
Culv Nml Depth (ft)	3.37	Weir Flow Area (sq ft)	19.71
Culv Crt Depth (ft)	7.56	Min El Weir Flow (ft)	932.58

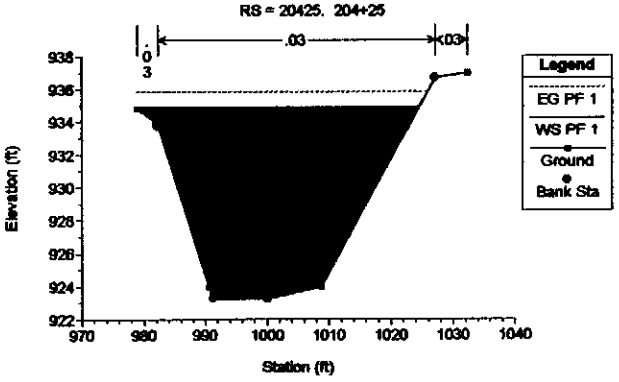
Errors Warnings and Notes

Warning:	During the culvert outlet computations, the program could not balance the culvert/weir flow. The
	reported outlet energy grade answer may not be valid.

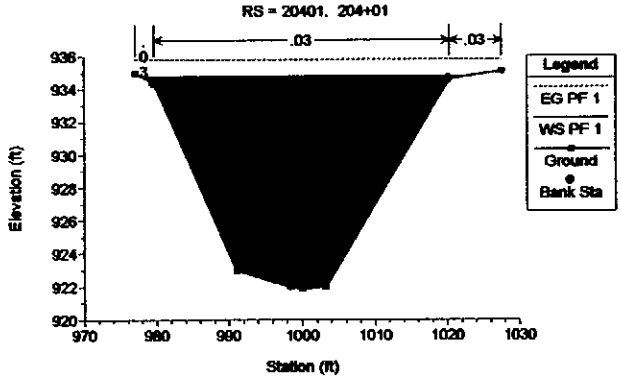
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20446. 204+46



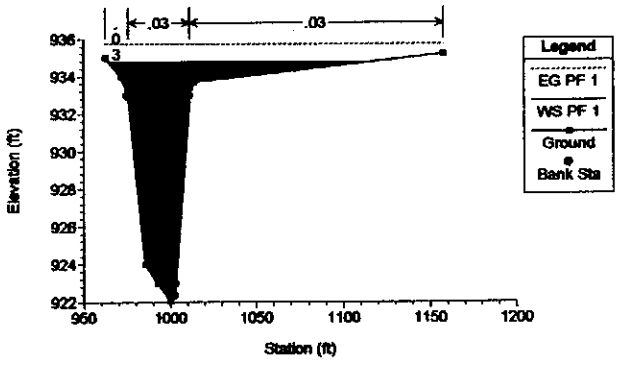
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20425. 204+25



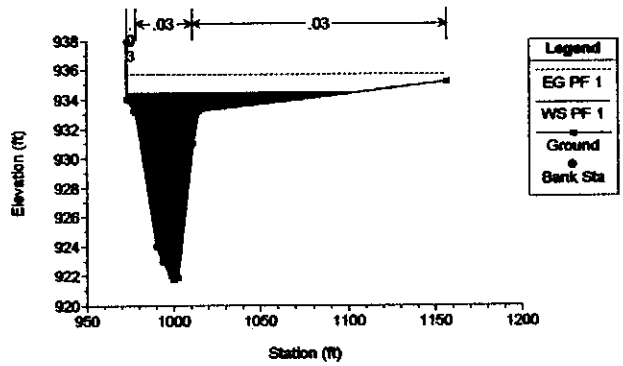
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20401. 204+01



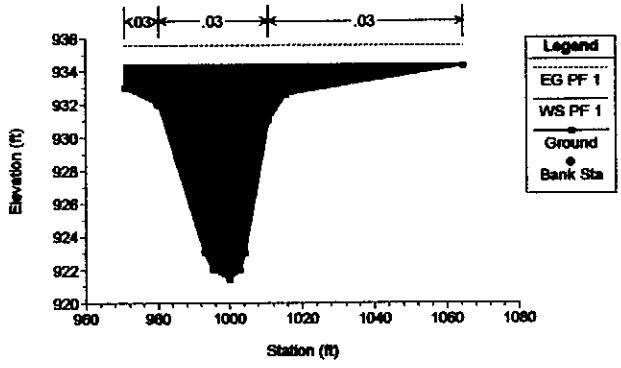
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20372. 203+72



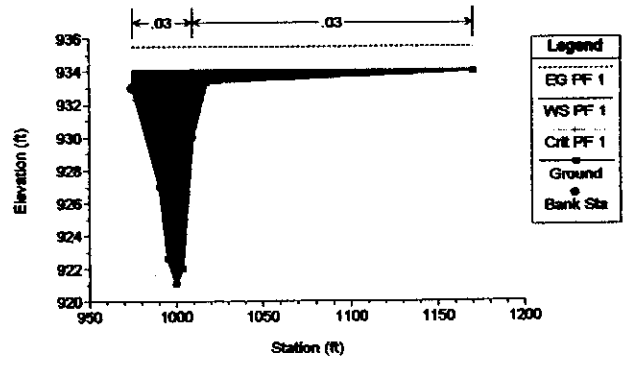
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20349. 203+49



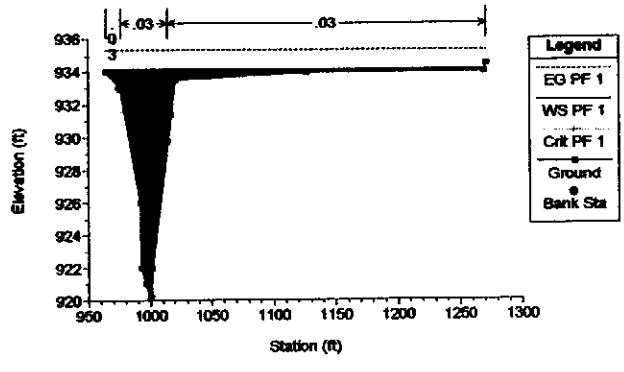
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20319. 203+19

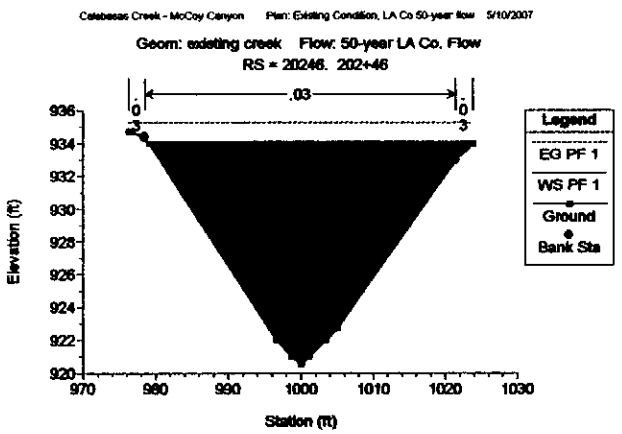


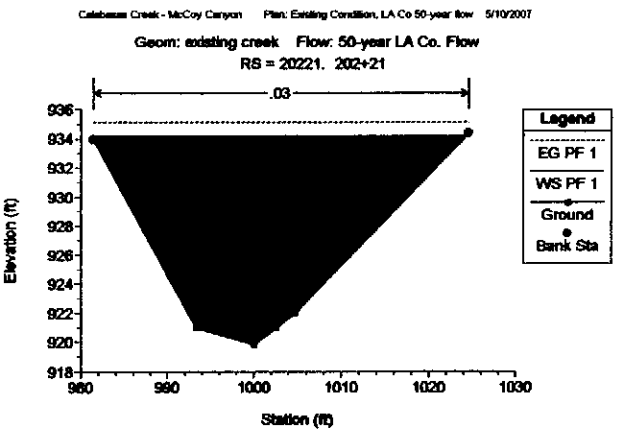
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20293. 202+93

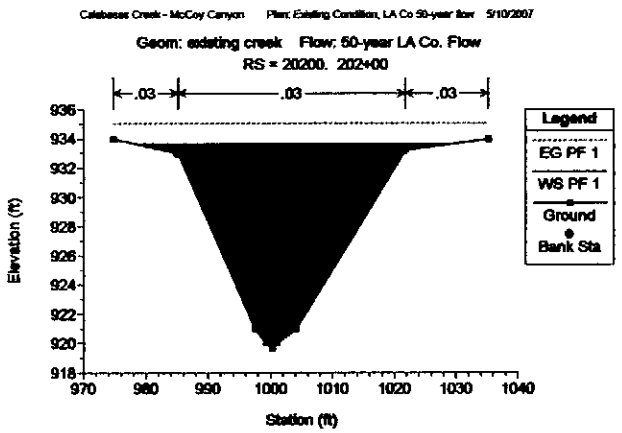


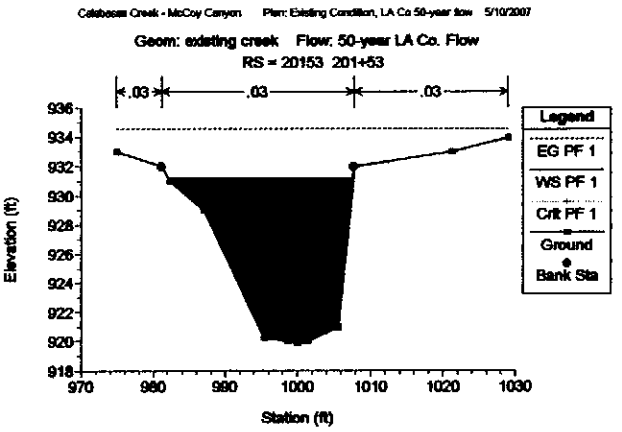
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20261. 202+61




Calabasas Creek - McCoy Canyon Plan: Existing Condition, LA Co 50-year flow 5/10/2007
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20246. 202+46
.03
0
3
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


Calabasas Creek - McCoy Canyon Plan: Existing Condition, LA Co 50-year flow 5/10/2007
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20221. 202+21
.03
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


Calabasas Creek - McCoy Canyon Plan: Existing Condition, LA Co 50-year flow 5/10/2007
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20200. 202+00
.03
.03
.03
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


Calabasas Creek - McCoy Canyon Plan: Existing Condition, LA Co 50-year flow 5/10/2007
Geom: existing creek Flow: 50-year LA Co. Flow
RS = 20153 201+53
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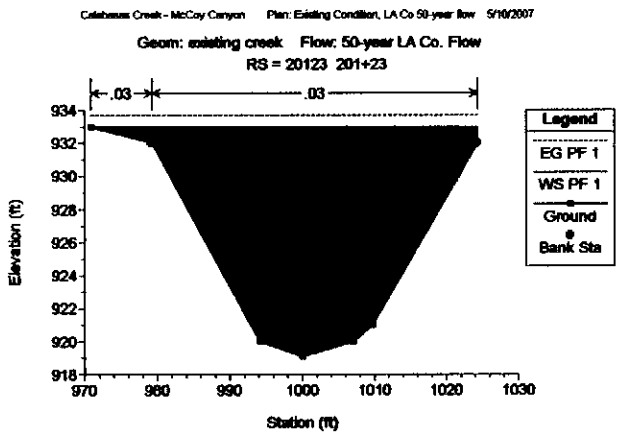
.03
.03
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


Calabasas Creek - McCoy Canyon Plan: Existing Condition, LA Co 50-year flow 5/10/2007
Geom: existing creek Flow: 50-year LA Co. Flow
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WS PF 1
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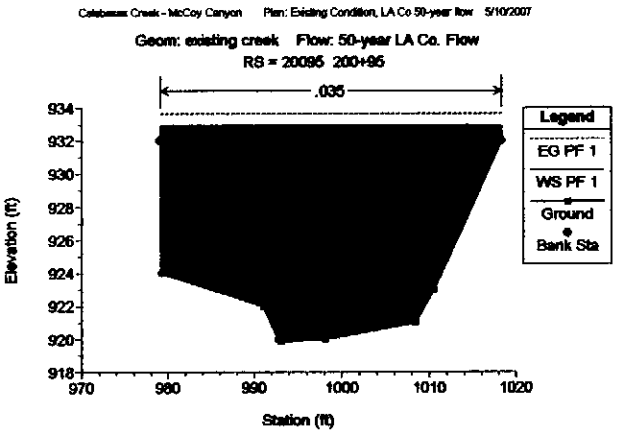
Bank Sta
Elevation (ft)
Station (ft)


Calabasas Creek - McCoy Canyon Plan: Existing Condition, LA Co 50-year flow 5/10/2007
Geom: existing creek Flow: 50-year LA Co. Flow
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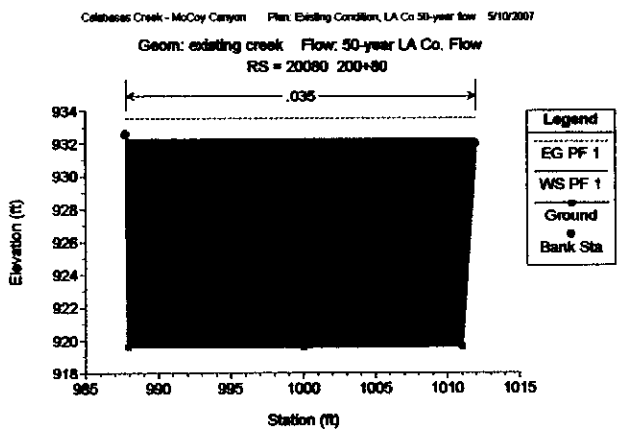
Bank Sta
Elevation (ft)
Station (ft)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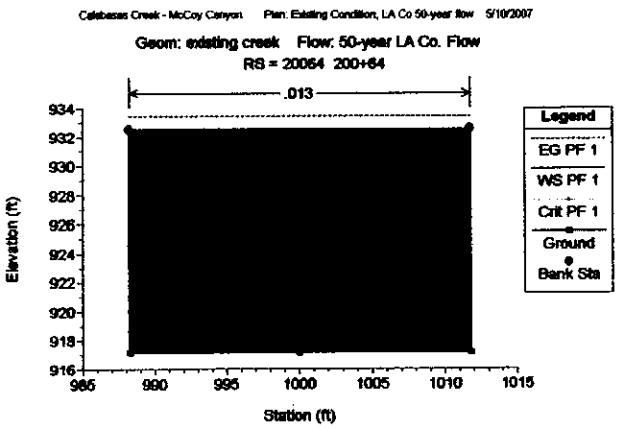
Bank Sta
Elevation (ft)
Station (ft)


Calabasas Creek - McCoy Canyon Plan: Existing Condition, LA Co 50-year flow 5/10/2007
Geom: existing creek Flow: 50-year LA Co. Flow
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Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)

Developed Conditions

HEC-RAS Plan: developed River: Calabasas Creek Reach: lower Profile: PF 1

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
lower	20446.	2700.00	923.85	935.07		935.97	0.001898	7.63	356.59	48.53	0.48
lower	20425.	2700.00	923.28	934.99		935.93	0.001890	7.76	349.52	45.72	0.48
lower	20401.	2700.00	921.87	934.87		935.87	0.002070	8.05	335.99	46.17	0.49
lower	20372.	2700.00	922.06	934.75		935.81	0.001966	8.29	335.10	51.04	0.48
lower	20349.	2700.00	921.72	934.34		935.72	0.002747	9.49	293.15	43.58	0.57
lower	20319.	2700.00	921.41	934.26		935.64	0.002656	9.52	303.40	48.11	0.56
lower	20295.	2700.00	921.06	933.95		935.53	0.003928	10.24	273.90	43.59	0.66
lower	20261.	2700.00	920.16	934.09		935.31	0.002626	9.00	315.41	57.79	0.57
lower	20246.	2700.00	920.54	934.11		935.25	0.002545	8.54	317.21	44.87	0.55
lower	20221.	2700.00	919.86	934.22		935.12	0.001873	7.62	354.33	42.86	0.47
lower	20200.	2700.00	919.65	933.63		935.02	0.003197	9.46	288.38	50.28	0.60
lower	20153	2700.00	919.90	931.20	931.01	934.57	0.010959	14.73	183.31	25.56	0.97
lower	20123	2700.00	919.09	933.00		933.68	0.001230	6.64	409.94	53.39	0.39
lower	20095	2700.00	919.82	932.94		933.64	0.001763	6.71	402.57	39.30	0.37
lower	20060	2700.00	919.61	932.29		933.55	0.003960	9.00	299.94	24.20	0.45
lower	20064	2700.00	917.12	932.55	924.54	933.41	0.000337	7.44	362.82	23.52	0.33
lower	20063	Culvert									
lower	19648	2700.00	913.76	921.41	921.41	925.23	0.003185	15.68	172.22	22.51	1.00

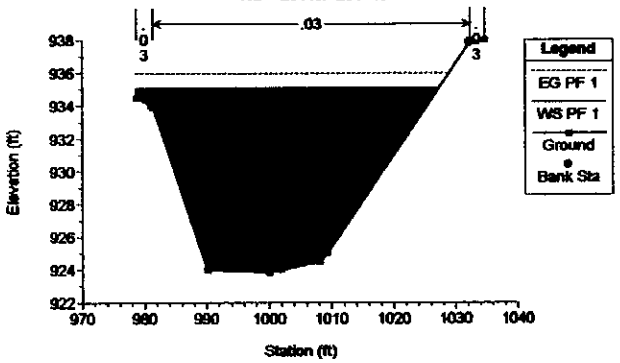
Plan: developed Calabasas Creek lower RS: 20063 Culv Group: Culvert #1 Profile: PF 1

Q Culv Group (cfs)	2653.07	Culv Full Len (ft)	
# Barrels	2	Culv Vel US (ft/s)	13.87
Q Barrel (cfs)	1326.54	Culv Vel DS (ft/s)	28.28
E.G. US. (ft)	933.41	Culv Inv El Up (ft)	917.22
W.S. US. (ft)	932.55	Culv Inv El Dn (ft)	913.76
E.G. DS (ft)	925.23	Culv Frctn Ls (ft)	1.57
W.S. DS (ft)	921.41	Culv Exit Loss (ft)	5.12
Delta EG (ft)	8.18	Culv Entr Loss (ft)	1.49
Delta WS (ft)	11.14	Q Weir (cfs)	46.93
E.G. IC (ft)	933.41	Weir Sta Lft (ft)	988.24
E.G. OC (ft)	930.45	Weir Sta Rgt (ft)	1011.76
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (ft)	925.72	Weir Max Depth (ft)	0.84
Culv WS Outlet (ft)	917.93	Weir Avg Depth (ft)	0.84
Culv Nml Depth (ft)	3.37	Weir Flow Area (sq ft)	19.71
Culv Crt Depth (ft)	7.56	Min El Weir Flow (ft)	932.58

Errors Warnings and Notes

Warning:	During the culvert outlet computations, the program could not balance the culvert/weir flow. The
	reported outlet energy grade answer may not be valid.

Geom: developed creek Flow: 50-year LA Co. Flow
RS = 20446. 204+46



Geom: developed creek Flow: 50-year LA Co. Flow
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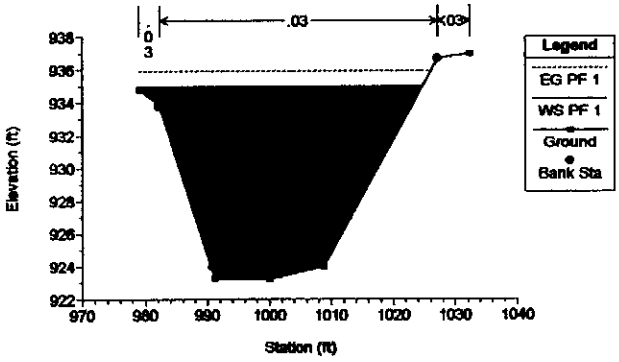

Geom: developed creek Flow: 50-year LA Co. Flow
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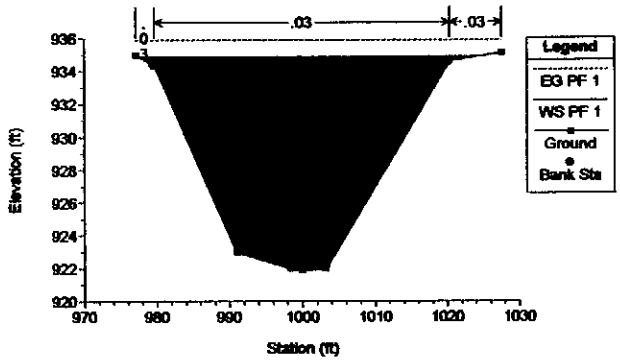

Geom: developed creek Flow: 50-year LA Co. Flow
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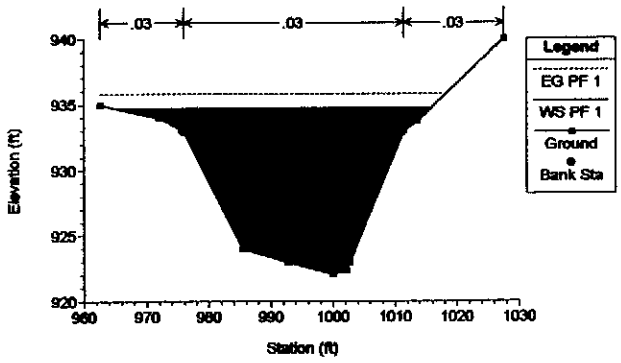

Geom: developed creek Flow: 50-year LA Co. Flow
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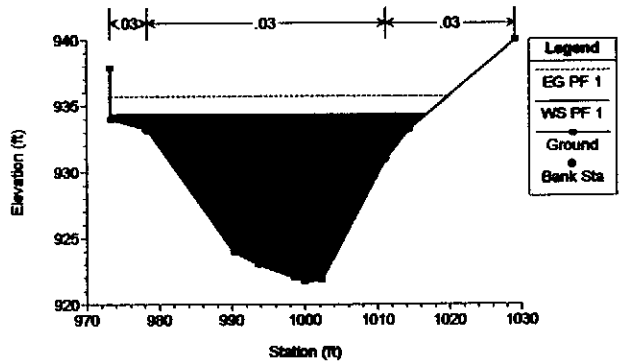

Geom: developed creek Flow: 50-year LA Co. Flow
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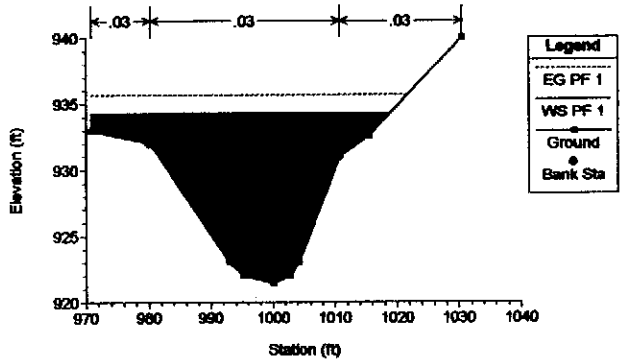

Geom: developed creek Flow: 50-year LA Co. Flow
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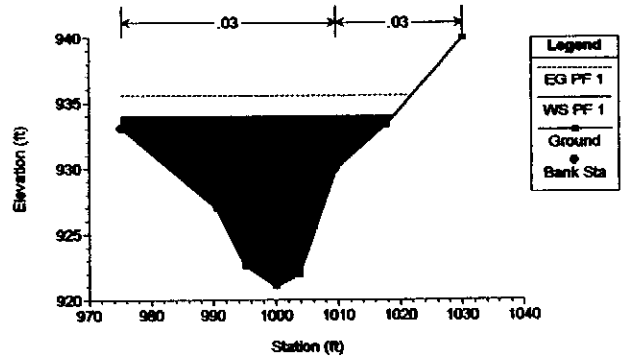

Geom: developed creek Flow: 50-year LA Co. Flow
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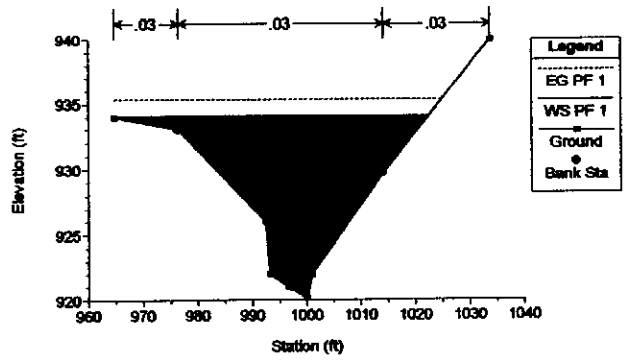

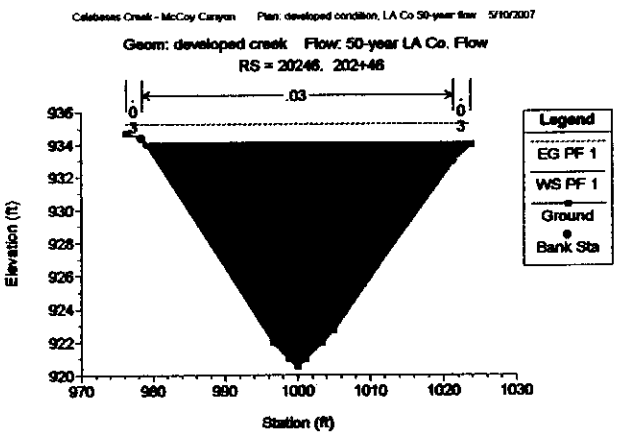
Calabasas Creek - McCoy Canyon Plan: developed condition, LA Co 50-year flow 5/10/2007
Geom: developed creek Flow: 50-year LA Co. Flow
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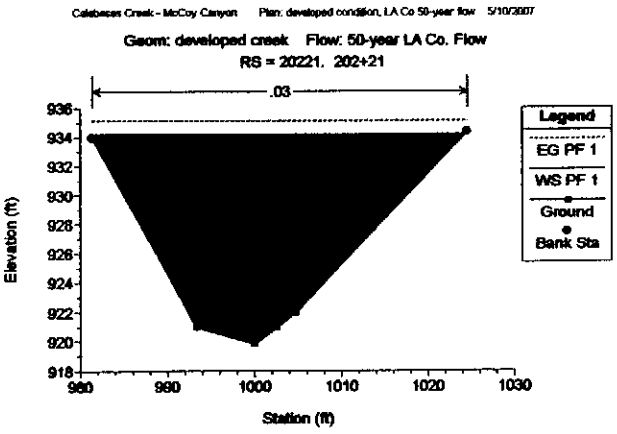
.03
.03
3
3
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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Geom: developed creek Flow: 50-year LA Co. Flow
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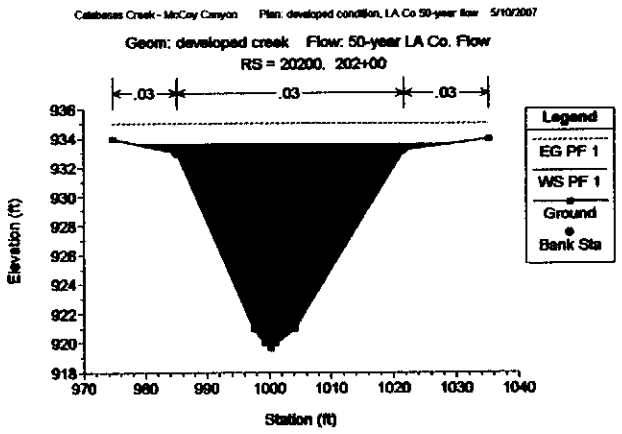
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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.03
.03
.03
Legend
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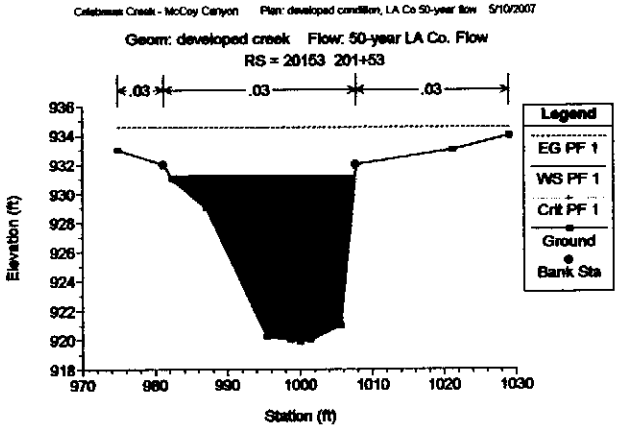
WS PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


Calabasas Creek - McCoy Canyon Plan: developed condition, LA Co 50-year flow 5/10/2007
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.03
.03
Legend
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WS PF 1
Crit PF 1
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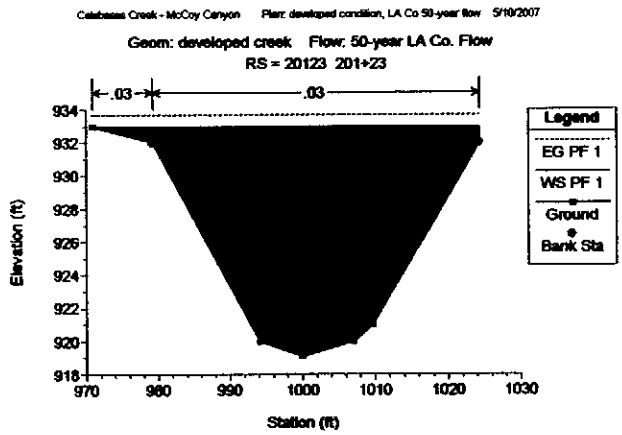
Bank Sta
Elevation (ft)
Station (ft)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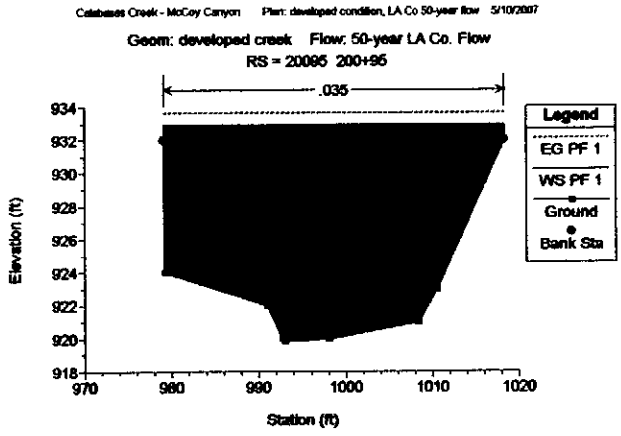
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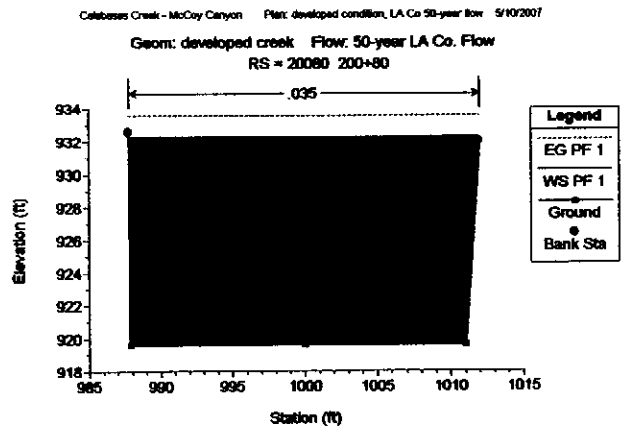
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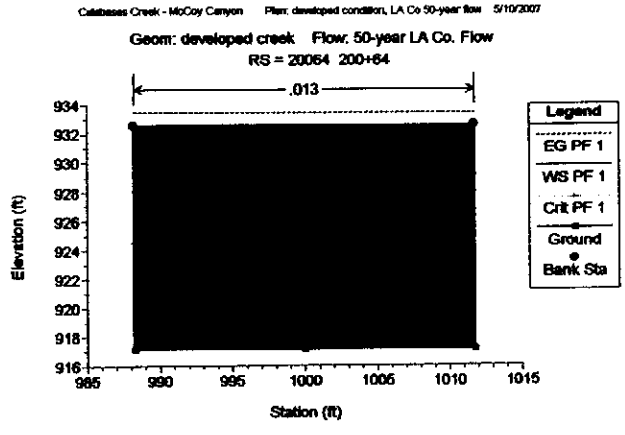
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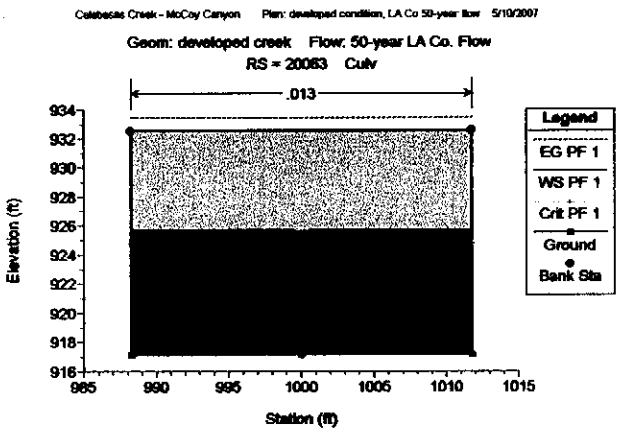
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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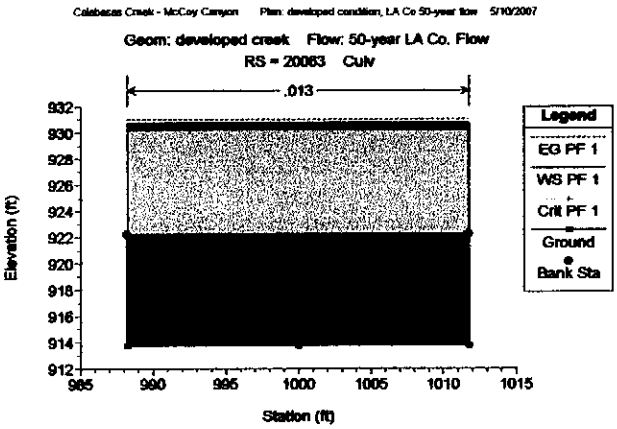
Station (ft)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Bank Sta
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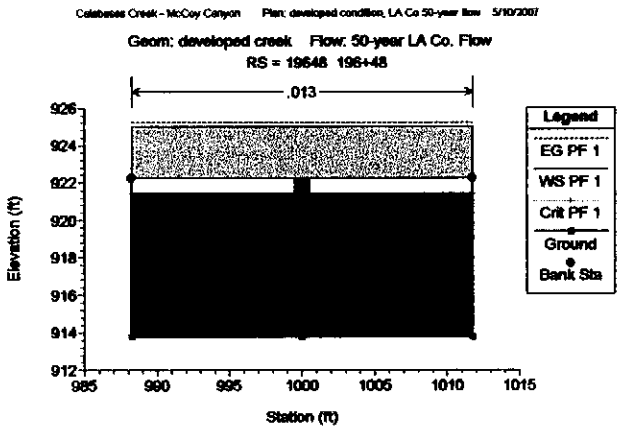
Station (ft)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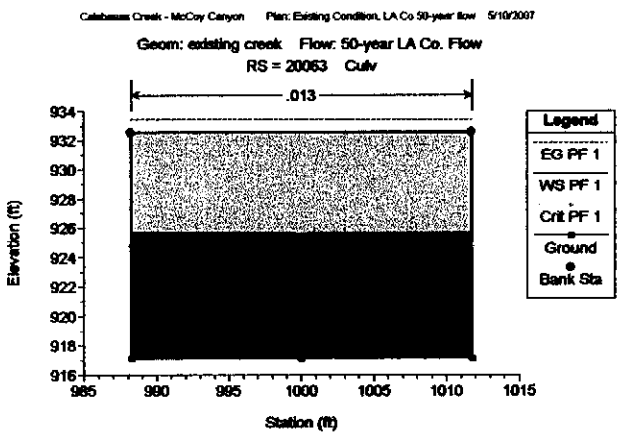
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)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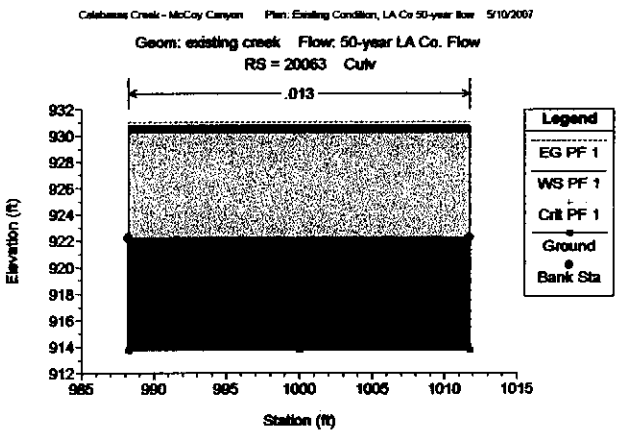
Crit PF 1
Ground
Bank Sta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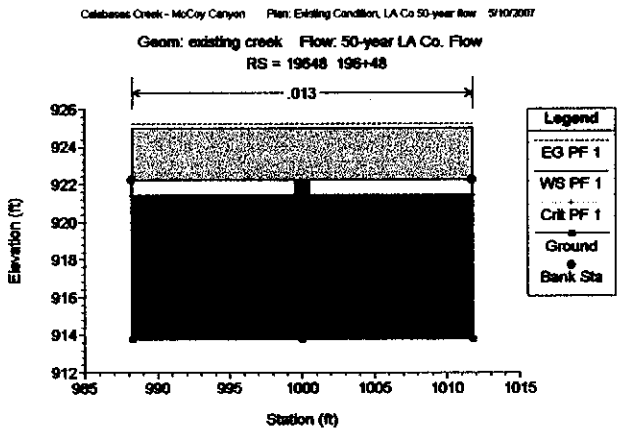
Crit PF 1
Ground
Bank Sta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RS = 19648 196+48
.013
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

JSA

CIVIL ENGINEERS
LAND PLANNERS
SURVEYORS

HYDROLOGY STUDY

FOR

4803 EL CANON AVENUE

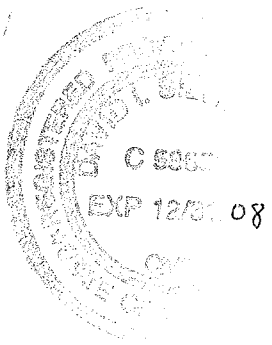
CALABASAS, CALIFORNIA

Prepared by: Michelle Meehan, PE

Revised by: David Silverman, PE, PhD

Date: 21 September 2007

Signature: _____
David Silverman PE 58650



23801 Calabasas Road, Suite 2039 Calabasas, CA 91302-1547 (818) 222-3700 FAX (818) 222-3710

Table of Contents

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   b. Hydrologic Parameters 1
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Appendix A - Hydrologic Parameters
Appendix B - Calculations
Appendix C - Hydrology Study Maps

1. Description of Project Area. The proposed project is located in the City of Calabasas, which is in the County of Los Angeles, California. The site is located just south of Calabasas Road, at 4803 El Canon Avenue. The site currently consists of a single family home and associated hardscape, including some outbuildings. The proposed development is a senior apartment building. There are no natural channels or drainage ditches through the property, and all drainage on the property is sheet flow. Additionally, the property is adjacent to Calabasas Creek.

2. Hydrologic Analysis

a. Watershed Area. The hydrologic analysis was based on design criteria presented in the Los Angeles County Department of Public Works Hydrology Manual, dated January 2006. The watershed which contributes flow to the project site in the existing condition is a total of 1.0 acres and is entirely onsite flow. In the existing condition, the runoff flows from the edge of El Canon Avenue to Calabasas Creek. In the developed condition will maintain the direction of flow to the creek.

b. Hydrologic Parameters. The hydrologic parameters were determined from the Los Angeles County Department of Public Works Hydrology Manual, dated January 2006. The project site was located on Hydrologic Map 1-H1.25, included in Appendix A. From the isohyet map, it was determined that the project site is located in the 7.4 inch 50-year 24-hour isohyet. The hydrologic map shows that the project is in soil classification area 016.

c. Determination of Discharge. For both the existing and developed conditions, the new LA County time of concentration calculator was used to determine the time of concentration for all subareas, and rational method was used in determining the design discharges. Because of the short time of concentration and the resulting high intensity of the rainfall during the 10-, 25- and 50-year events, the undeveloped runoff coefficient for all events is close to 0.9. Therefore, the developed runoff coefficient will not increase significantly, regardless of the percent impervious. As a result, the peak discharge for the 10- and 25-year events would not increase significantly due to development, and the 50-year peak discharge would not increase at all due to the development of the property. The calculations are included in Appendix B.

3. Detention Analysis. Per City of Calabasas requirements, the proposed project cannot discharge flow in excess of the existing conditions flow. The increase in flow is 0.2 cfs, 0.1 cfs, and 0 cfs for the 10-, 25-, and 50-year events, respectively. Using the 10-year return period as the governing storm and measuring the area under the hydrograph where the developed flow is greater than undeveloped flow, a storage volume of 424 cubic feet is required (Appendix B). There is approximately 7100 square feet of open space that can be used for storage, requiring a depth of only 0.06 feet of water. Also, there will be about 150 feet of 12" pipe and 650 feet of 6" pipe, giving an additional available storage volume of 245 cubic feet. Therefore, there is

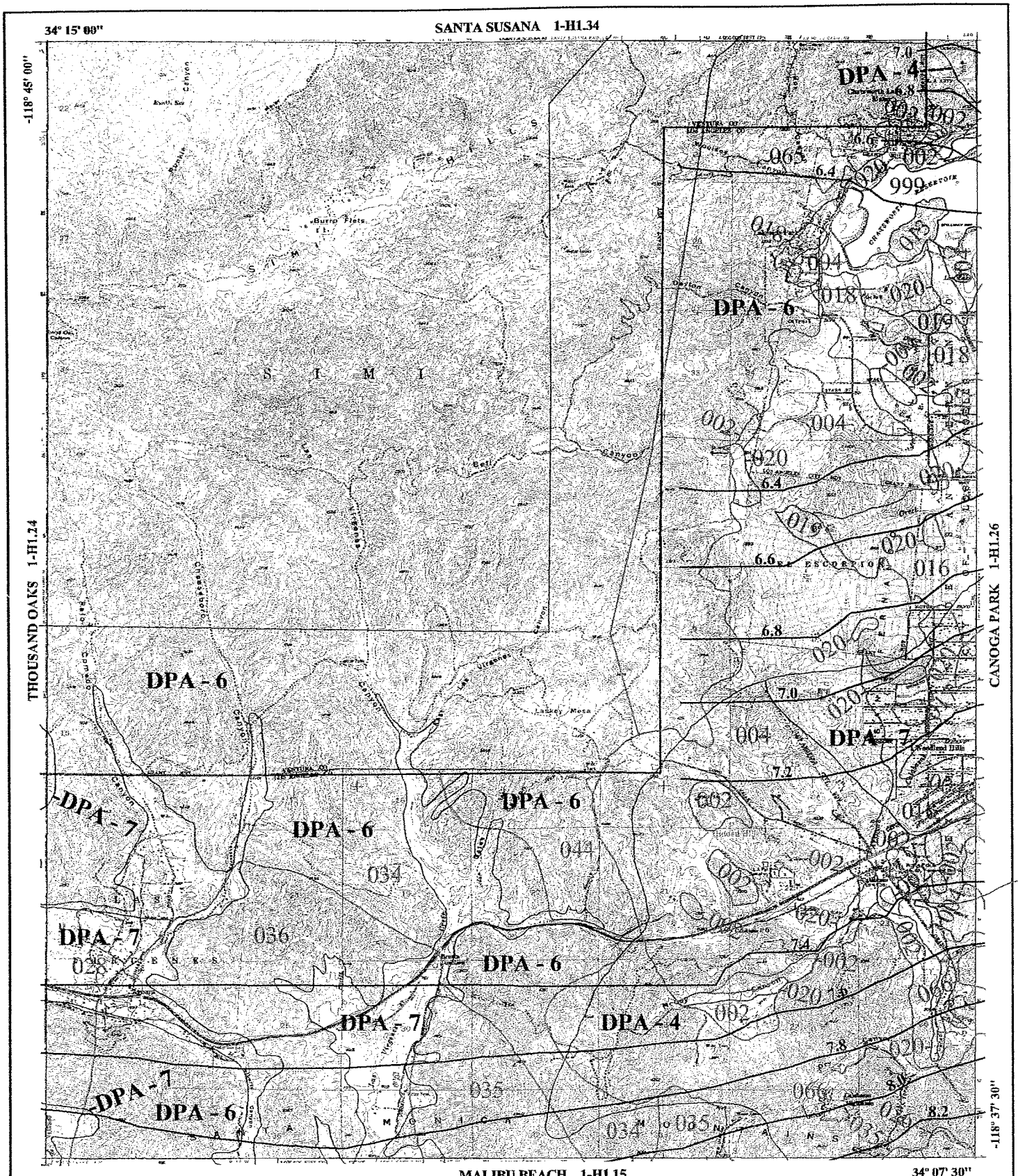
adequate storage on-site without the use of a separate detention basin. Inflow into the SUSMP filter box will be restricted to the maximum predeveloped flow to limit the outflow from the project site to the predeveloped amount.

4. Debris Potential. Since there are no undeveloped areas contributing flow to the project site, there will not be any debris.

5. SUSMP Requirements. In order to meet SUSMP requirements, all flow from impervious areas subject to contamination will be conveyed into grating basins fitted with Drain Pac filters or equivalent. Once cleaned by the filters and detained in the basin, the flow will be outlet into Calabasas Creek.

6. Conclusion. All storm water runoff currently flows into Calabasas Creek and will continue to flow there is the developed condition. Any flow from impervious areas potentially containing contaminants (roof area, driveways) would be cleaned by filters before being released from the project site. The small increased flow produced by the development will be detained in the on-site storm drain pipes and in very shallow depths on the surface in the open space.

Appendix A
Hydrologic Parameters

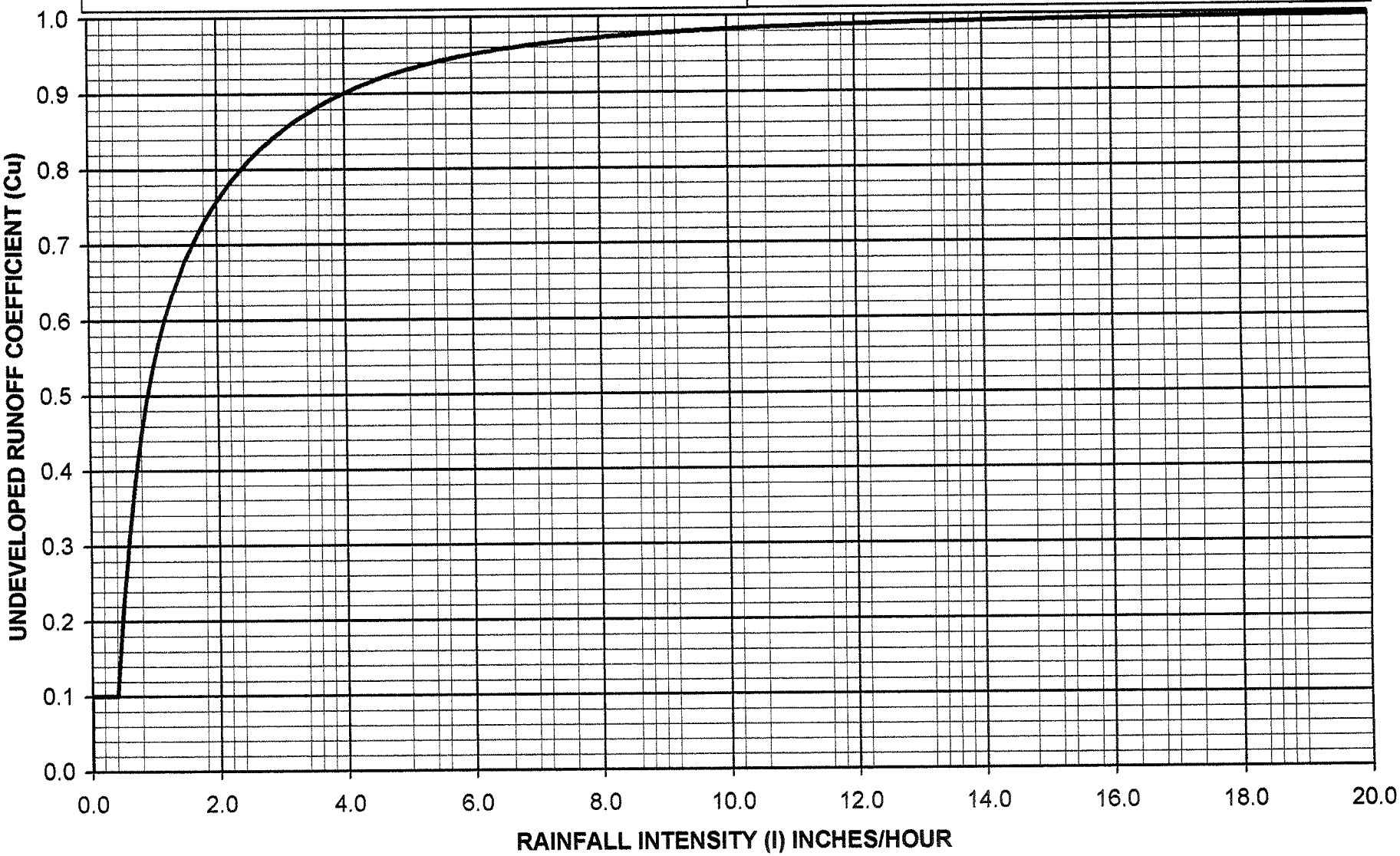

34° 15' 00"
SANTA SUSANA 1-H1.34
-118° 45' 00"
THOUSAND OAKS 1-H1.24
CANOGA PARK 1-H1.26
-118° 37' 30"
MALIBU BEACH 1-H1.15
34° 07' 30"
DPA - 4
DPA - 6
DPA - 7
PROJECT LOCATION
016
SOIL CLASSIFICATION AREA
7.2
INCHES OF RAINFALL
DPA - 6
DEBRIS POTENTIAL AREA
N
W
E
S
1 0 1 2 Miles
25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714
CALABASAS
50-YEAR 24-HOUR ISOHYET
1-H1.25
LOS ANGELES COUNTY
PUBLIC WORKS
Public Service That Works

$C_D = (0.9 * IMP) + (1.0 - IMP) * C_U$

Where: C_D = Developed Runoff Coefficient
IMP = Proportion Impervious
C_U = Undeveloped runoff coefficient

Los Angeles County Department of Public Works

RUNOFF COEFFICIENT CURVE
SOIL TYPE NO. 016



Appendix B
Calculations

Project	Subarea	Area (acres)	%Imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
Existing	1A	1	0.08	10	16	380	0.008	5.3	7	2.7	0.82	0.83	2.24
Existing	1A	1	0.08	25	16	380	0.008	6.5	6	3.56	0.88	0.88	3.13
Existing	1A	1	0.08	50	16	380	0.008	7.4	5	4.42	0.91	0.9	3.98
Developed	1A	1	0.99	10	16	400	0.008	5.3	7	2.7	0.82	0.9	2.43
Developed	1A	1	0.99	25	16	400	0.008	6.5	6	3.56	0.88	0.9	3.2
Developed	1A	1	0.99	50	16	400	0.008	7.4	5	4.42	0.91	0.9	3.98

TIME	Q	area	
0	0		
100	0.11		
200	0.11		
300	0.12		
400	0.12		
500	0.13		
600	0.14		
700	0.15		
800	0.17		
900	0.2		
1000	0.24		
1050	0.3		
1100	0.38		
1110	0.47		
1120	0.52		
1130	0.61		
1131	0.62		
1132	0.63		
1133	0.65		
1134	0.67		
1135	0.68		
1136	0.7		
1137	0.73		
1138	0.76		
1139	0.78		
1140	0.79		
1141	0.83		
1142	0.86		
1143	0.9		
1144	0.92		
1145	0.98		
1146	1.04		
1147	1.1		
1148	1.14		
1149	1.4		
1150	1.67		
1151	1.93		
1152	2.16		
1152.35	2.24	**Volume**	
1153	2.39	90.6	
1154	2.38	143.1	
1155	2.34	141.6	
1155.357	2.24	49.1	
1156	2.06	**424.4**	**Total detained volume (cu ft)**
1157	1.76		
1158	1.45	7100.0	sq ft open space
1159	1.13	**0.06**	**Depth of water**
1160	0.81		
1161	0.71		
1162	0.64		
1163	0.6		
1164	0.56		
1165	0.53		
1166	0.5		

Appendix C
Hydrology Study Map

Appendix F

Noise Data and Modeling Results

C:\LARDAV\SLMUTIL\07OCT_3.bin Interval Data

Meas Site	Location	Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk	L(10)
0	safra senio	0	03Oct 07	7:29:22	1200	60	90.8	70.9	58	87	96.6	60.9
0	safra senio	0	03Oct 07	7:52:20	1200	76	106.8	85.1	60.3	98.7	100.7	82.5

L(33)	L(50)	L(90)	L(100)	L(100)
59.9	59.6	58.8	0	0
62.2	61.7	61.1	0	0

ROADWAY TRAFFIC NOISE

Project: Safran Senior Housing - Calabasas Project No. 07-61560
Date: 3-Oct-07

Roadway: El Canon Avenue

PROJECT DATA and ASSUMPTIONS

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO):	TNM	
Distance to Receptor:	50	feet
Site Condition (Hard or Soft):	Soft	
Upgrade longer than 1 mile:	0	%
Existing Total Traffic Volume (ADT):	1,200	vehicles
Ambient Growth Factor:	0.0%	
Future Year :	2009	
Total Project Volume (ADT):	261	vehicles
Total Cumulative Growth Volume (ADT):	0	vehicles

Source of Traffic Data: Kunzman Associates

Daily Vehicle Mix

	Existing	*Project*	*Future*
Automobile	90.0%	90.0%	90.0%
Medium Truck	5.0%	5.0%	5.0%
Heavy Truck	5.0%	5.0%	5.0%

Source: Assumed given land use and road characteristics

Percentage of Daily Traffic

Existing and Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

Project

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	100.0%	0.0%	0.0%
Medium Truck	100.0%	0.0%	0.0%
Heavy Truck	100.0%	0.0%	0.0%

Source: Default Assumption

Average Speed

Existing

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	35	35	35
Medium Truck	35	35	35
Heavy Truck	35	35	35

Source: Assumed average speed

Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	35	35	35
Medium Truck	35	35	35
Heavy Truck	35	35	35

Source: Assumed average speed

ROADWAY TRAFFIC NOISE

Project: Safran Senior Housing - Calabasas Project No. 07-61560
Date: 3-Oct-07

Roadway: El Canon Avenue

Vehicle Noise Emission Levels*: TNM

RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)

	Ldn at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	58.2 dBA	#N/A	#N/A	#N/A	33	82
Existing + Project	58.7 dBA	#N/A	#N/A	#N/A	37	88
Future with Ambient Growth	58.2 dBA	#N/A	#N/A	#N/A	33	82
Future with Ambient Growth and Project	58.7 dBA	#N/A	#N/A	#N/A	37	88
Future with Ambient Growth and Cumulative Projects	58.2 dBA	#N/A	#N/A	#N/A	33	82
Future with Ambient, Cumulative, and Project Growth	58.7 dBA	#N/A	#N/A	#N/A	37	88

Change in Noise Levels	
Due to Project	0.5 dBA
Due to Ambient Growth	0.0 dBA
Due to Ambient and Cumulative	0.0 dBA
Due to All Future Growth	0.5 dBA

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)

	CNEL at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	58.6 dBA	#N/A	#N/A	#N/A	36	86
Existing + Project	59.0 dBA	#N/A	#N/A	#N/A	40	92
Future with Ambient Growth	58.6 dBA	#N/A	#N/A	#N/A	36	86
Future with Ambient Growth and Project	59.0 dBA	#N/A	#N/A	#N/A	40	92
Future with Ambient Growth and Cumulative Projects	58.6 dBA	#N/A	#N/A	#N/A	36	86
Future with Ambient, Cumulative, and Project Growth	59.0 dBA	#N/A	#N/A	#N/A	40	92

Change in Noise Levels	
Due to Project	0.4 dBA
Due to Ambient Growth	0.0 dBA
Due to Ambient and Cumulative	0.0 dBA
Due to All Future Growth	0.4 dBA

*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable

Appendix G

Traffic Study

CITY OF CALABASAS

CALABASAS SENIOR HOUSING

TRAFFIC IMPACT ANALYSIS (REVISED)

Prepared by:

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Carl Ballard, and
William Kunzman, P.E.

William Kunzman

September 14, 2007

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City of Calabasas

Calabasas Senior Housing

Traffic Impact Analysis

This report contains the traffic impact analysis for the Calabasas Senior Housing project. The project site is located south of Calabasas Road and west of El Canon Avenue in the City of Calabasas. The proposed development consists of 75 dwelling units of affordable senior attached housing.

The traffic report contains documentation of existing traffic conditions, traffic generated by the project, distribution of the project traffic to roads outside the project, an analysis of Opening Year (2009) traffic conditions without and with the project. Each of these topics is contained in a separate section of the report. The first section is "Findings", and subsequent sections expand upon the findings. In this way, information on any particular aspect of the study can be easily located by the reader.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided within Appendix A.

I. Findings

This section summarizes the existing traffic conditions, project traffic impacts, and the proposed mitigation measures.

A. Existing Traffic Conditions

1. The project site is currently vacant and not generating significant traffic.

2. Pursuant to discussions with City of Calabasas staff, the study area includes the following intersection:

   Calabasas Road (NS) at:
   El Canon Avenue (EW)

3. The following study area intersection currently operates at Level of Service F during the evening peak hour for existing traffic conditions (see Table 1):

   Calabasas Road (NS) at:
   El Canon Avenue (EW)

4. A traffic signal appears to currently be warranted at the following study area intersection for existing traffic conditions (see Appendix D):

   Calabasas Road (NS) at:
   El Canon Avenue (EW)

B. Traffic Impacts

1. The proposed development consists of 75 dwelling units of affordable senior attached housing. The project site will have access to El Canon Avenue.

2. The proposed development is projected to generate approximately 261 daily vehicle trips, 6 of which will occur during the morning peak hour and 8 of which will occur during the evening peak hour. The Institute of Transportation Engineers, Trip Generation, 7th Edition, 2003 does not provide rates for affordable senior attached housing; therefore, senior attached housing rates have been used in the traffic study.

3. The study area intersection is projected to operate at Level of Service A during the peak hours for Opening Year (2009) without project traffic conditions, with traffic signal improvements (see Table 4).

4. The study area intersection is projected to operate at Level of Service A during the peak hours for Opening Year (2009) with project traffic conditions, with traffic signal improvements (see Table 5).

5. The project traffic contribution calculations are based on the evening peak hour traffic volumes. The increase in traffic volume on the intersection from this project is negligible, at an addition of 8 evening peak hour trips (out of 2,500 current trips, or a .003 increase). The project traffic contribution of the intersection of Calabasas Road and El Canon Ave. is 3.1% of projected new traffic from new developments in 2009.

C. Recommendations

The following measures are recommended traffic conditions for the project:

1. Site-specific circulation and access recommendations are depicted on Figure 25.

2. Construct El Canon Avenue from the north project boundary to the south project boundary as a two lane roadway including landscaping and parkway improvements in conjunction with development.

3. Sufficient on-site parking shall be provided to meet State of California parking code requirements for affordable senior attached housing.

4. The project frontage area available for street parking shall have signs installed and curbs painted restricting the curb use to loading and unloading only, subject to approval from the City of Los Angeles.

5. The cul-de-sac of El Canon Avenue shall have signs installed prohibiting parking to provide adequate turning space for all vehicle types, subject to approval from the City of Los Angeles.

6. Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Los Angeles standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. No landscaping or objects shall be installed in the vicinity of the driveway which may obstruct sight lines during vehicular ingress/egress, subject to the approval of the City Engineer.

7. On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

8. Sidewalks and right-of-ways should be designed to ensure the highest amount of pedestrian safety by meeting all City of Los Angeles requirements.

9. The site plan shows a 20 percent grade for the garage access ramp. Some jurisdictions allow a 20 percent grade including the City of Los Angeles, County of Los Angeles, and City of Santa Clarita (see Appendix E). A 20 percent grade is reasonable and acceptable for the garage access ramp for this 75 unit development.

10. Left Turns onto Calabasas Road from El Canon Avenue shall be prohibited during peak periods per City of Los Angeles requirements.

11. The intersection of El Canon Avenue and Calabasas Road shall be painted as "Keep Clear" per City of Los Angeles requirements.

12. The City shall accrue fair share funds for installation of a traffic signal and shall install a traffic signal at the intersection of El Canon Avenue and Calabasas Road if it is warranted after a demonstration period determined by the Public Works Director/City Engineer.

13. As is the case for any roadway design, the City of Calabasas should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

II. Congestion Management Program Methodology

This section discusses the County Congestion Management Program. The purpose, prescribed methodology, and definition of a significant traffic impact are discussed.

A. County Congestion Management Program

The Congestion Management Program is a result of Proposition 111 which was a statewide initiative approved by the voters in June 1990. The proposition allowed for a nine cent per gallon state gasoline tax increase over a five-year period.

Proposition 111 explicitly stated that the new gas tax revenues were to be used to fix existing traffic problems and was not to be used to promote future development. For a city to get its share of the Proposition 111 gas tax, it has to follow certain procedures specified by the State Legislature. The legislation requires that a Traffic Impact Analysis be prepared for new development. The traffic impact analysis is prepared to monitor and fix traffic problems caused by new development.

The Legislature requires that adjacent jurisdictions use a standard methodology for conducting a traffic impact analysis. To assure that adjacent jurisdictions use a standard methodology in preparing traffic impact analyses, one common procedure is that all cities within a county, and the county agency itself, adopt and use one standard methodology for conducting traffic impact analyses.

Although each county has developed standards for preparing traffic impact analyses, traffic impact analysis requirements do vary in detail from one county to another, but not in overall intent or concept. The general approach selected by each county for conducting traffic impact analyses has common elements.

The general approach for conducting a traffic impact analysis is that existing weekday peak hour traffic is counted and the percent of roadway capacity currently used is determined. Then growth in traffic is accounted for and added to existing traffic and the percent of roadway capacity used is again determined. Then the project traffic is added and the percent of roadway capacity used is again determined. If the new project adds traffic to an overcrowded facility, then the new project has to mitigate the traffic impact so that the facility operates at a level that is no worse than before the project traffic was added.

If the project size is below a certain minimum threshold level, then a project does not have to have a traffic impact analysis prepared, once it is shown or agreed that the project is below the minimum threshold. If a project is bigger than the minimum threshold size, then a traffic impact analysis is required.

B. Prescribed Methodology for a Traffic Impact Analysis

The traffic impact analysis must include all monitored intersections to which the project adds traffic above a certain minimum amount. In Los Angeles County, the monitored intersections are contained in Appendix A of the Congestion Management Program for the County of Los Angeles.

If a project adds more traffic than the minimum threshold amount to an intersection, then that intersection has to be analyzed for deficiencies.

If the intersection has to be analyzed for deficiencies, then mitigation is required if the existing traffic plus anticipated traffic growth plus project traffic does cause the Intersection Capacity Utilization/Delay to go above a certain point.

The technique used to assess the capacity needs of an intersection is known as the Intersection Delay Method (see Appendix C). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

Project traffic is generated using rates and procedures contained in the Institute of Transportation Engineers, Trip Generation manual. The project traffic distribution is provided by the reviewing agency or is agreed to in advance of the traffic impact analysis being prepared. The traffic impact analysis has to be prepared by a licensed Traffic Engineer.

This traffic analysis has been prepared in accordance with the traffic impact analysis requirements except as noted. The traffic impact analysis not only examined the Congestion Management Program system of roads and intersections, but also other roads and intersections.

The project-generated traffic was added to intersections, and a full intersection analysis was conducted, even when the project added traffic failed to meet the minimum thresholds that require an intersection analysis.

C. Mitigation Measures

If a project is large enough to require that a traffic impact analysis be prepared, and if the project adds traffic to an intersection above a minimum threshold, and if the intersection is operating at above an acceptable level of operation, then the project must mitigate its traffic impact.

Traffic mitigation can be in many forms including adding lanes. Lanes can sometimes be obtained through restriping or elimination of parking, and sometimes require spot roadway widening.

III. Project Description

This section discusses the project's location and proposed development. Figure 1 shows the project location map. Figure 2 illustrates the site plan.

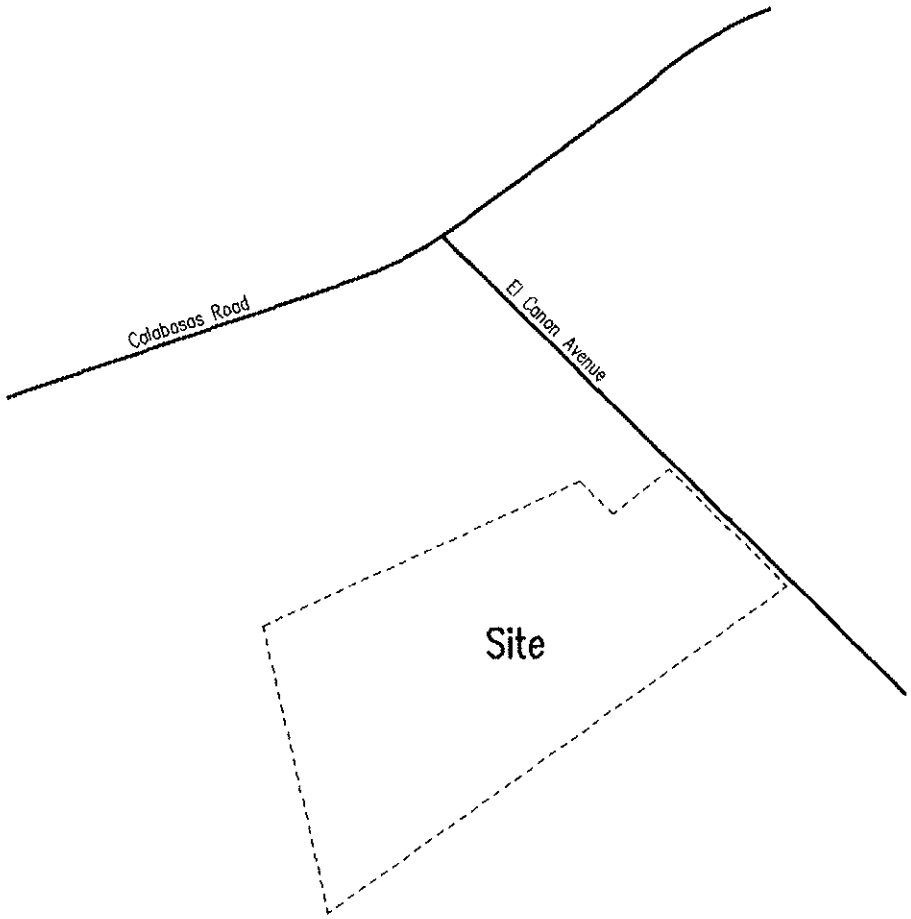
A. Location

The project site is located south of Calabasas Road and west of El Canon Avenue in the City of Calabasas.

B. Proposed Development

The proposed development consists of 75 dwelling units of affordable senior attached housing. The project site will have access to El Canon Avenue.

Figure 1
Project Location Map



Kunzman Associates

3917b/1

Figure 2
Site Plan

Kunzman Associates 3917b/2

IV. Existing Traffic Conditions

The traffic conditions as they exist today are discussed below and illustrated on Figures 3 to 6.

A. Surrounding Street System

Study area roadways that will be utilized by the development include Calabasas Road and El Canon Avenue.

Calabasas Road: This east-west roadway currently is three lanes divided in the study area. Calabasa Road currently carries approximately 24,000 to 24,700 vehicles per day in the study area.

El Canon Avenue: This north-south roadway currently is two lanes undivided in the study area. El Canon Avenue currently carries approximately 1,200 vehicles per day in the study area.

B. Existing Travel Lanes and Intersection Controls

Figure 3 identifies the existing roadway conditions for study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

C. Existing Average Daily Traffic Volumes

Figure 4 depicts the existing average daily traffic volumes. The existing average daily traffic volumes have been factored from peak hour counts obtained by Kunzman Associates in July 2007 (see Appendix B) using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) x 10 = Leg Volume.

This is a conservative estimate and may over estimate the average daily traffic volumes.

D. Existing Levels of Service

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method (see Appendix C). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

The Delay for the existing traffic conditions have been calculated and are shown in Table 1. Existing Delay are based upon manual morning and evening peak hour intersection turning movement counts made for Kunzman

Associates in July 2007 (see Figures 5 and 6). Traffic count worksheets are provided in Appendix B.

There are two peak hours in a weekday. The morning peak hour is between 7:00 AM and 9:00 AM, and the evening peak hour is between 4:00 PM and 6:00 PM. The actual peak hour within the two-hour interval is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest combined volume.

The following study area intersection currently operates at Level of Service F during the evening peak hour for existing traffic conditions (see Table 1):

Calabasas Road (NS) at:
El Canon Avenue (EW)

This intersection is approximately 300 feet from the intersection of SR-101 Freeway NB on/off ramps and Calabasas Road. It is not advisable to signalize this intersection because of its close proximity to the signalized ramp intersection.

Existing Delay worksheets are provided in Appendix C.

Table 1

Existing Levels of Service

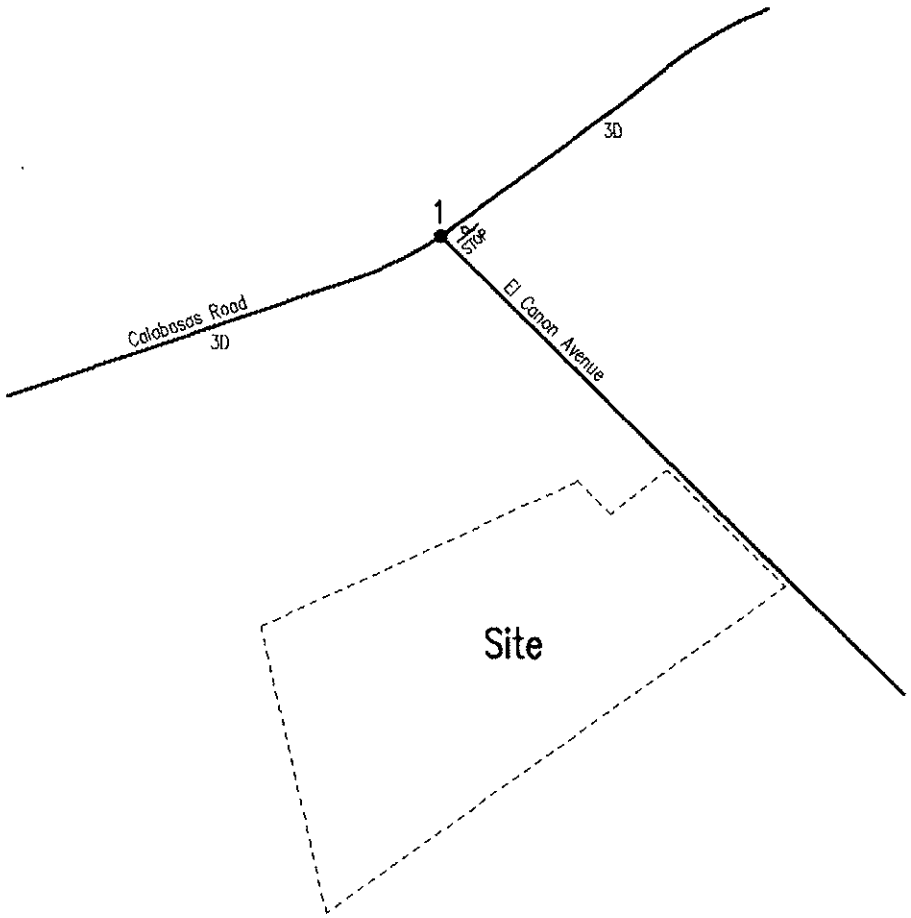
Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
El Canon Avenue (NS) at: Calabasas Road (EW)	CSS	0	1	0	0	0	0	0	2	0	1	1	0	20.3-C	50.8-F

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right

[2] Delay has been calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, for intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop

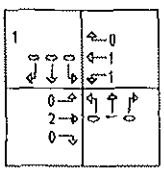
Figure 3
Existing Through Travel Lanes and Intersection Controls



Legend

STOP = Stop Sign
3 = Through Travel Lanes
D = Divided

N



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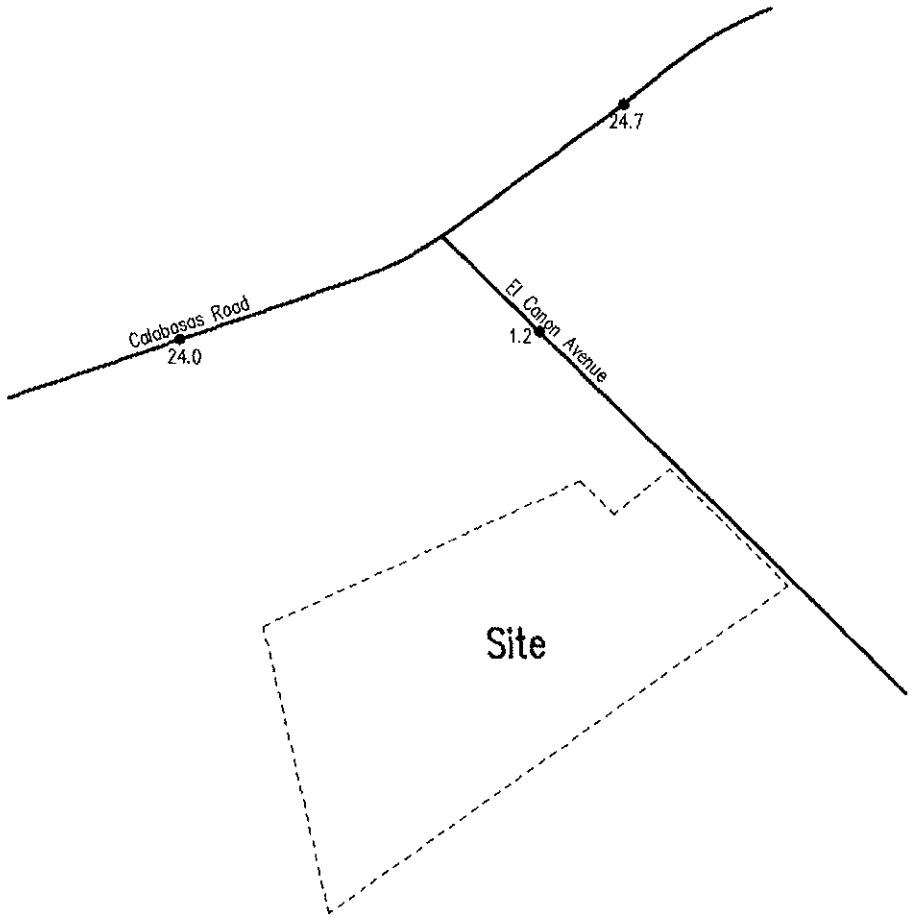
Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/3

Figure 4
Existing Average Daily Traffic Volumes



Legend

1.2 = Vehicles Per Day (1000's)

N

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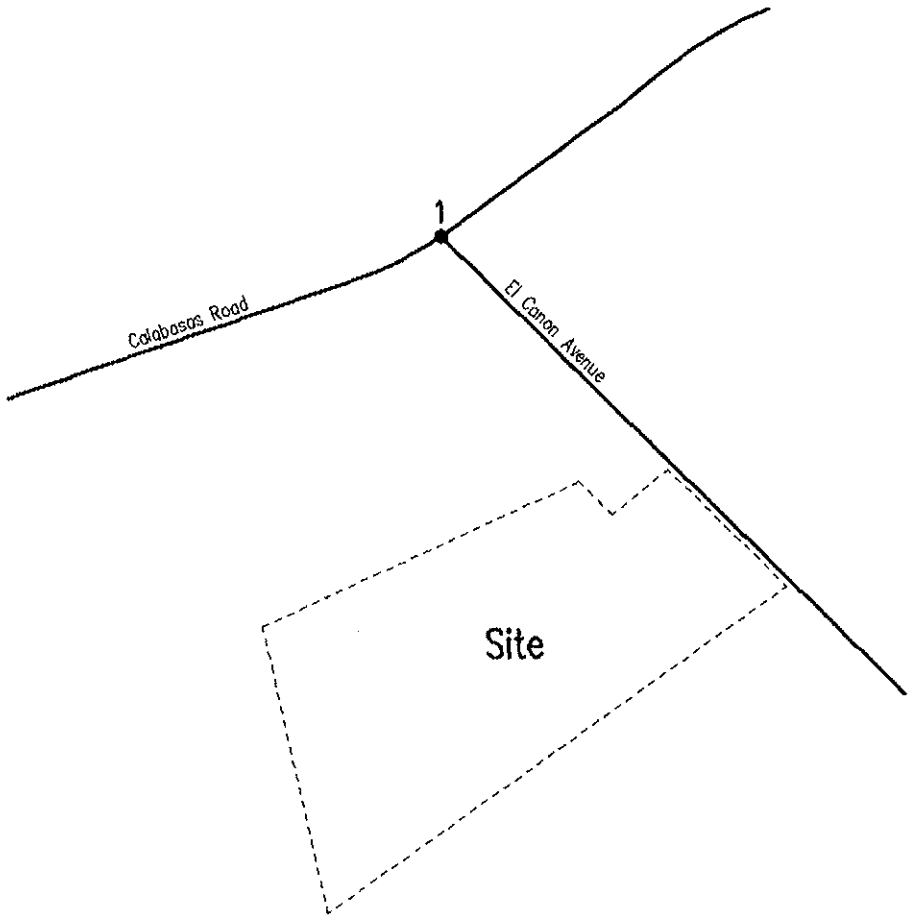
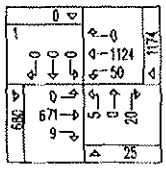
3917b/4

Figure 5
Existing Morning Peak Hour Intersection Turning Movement Volumes





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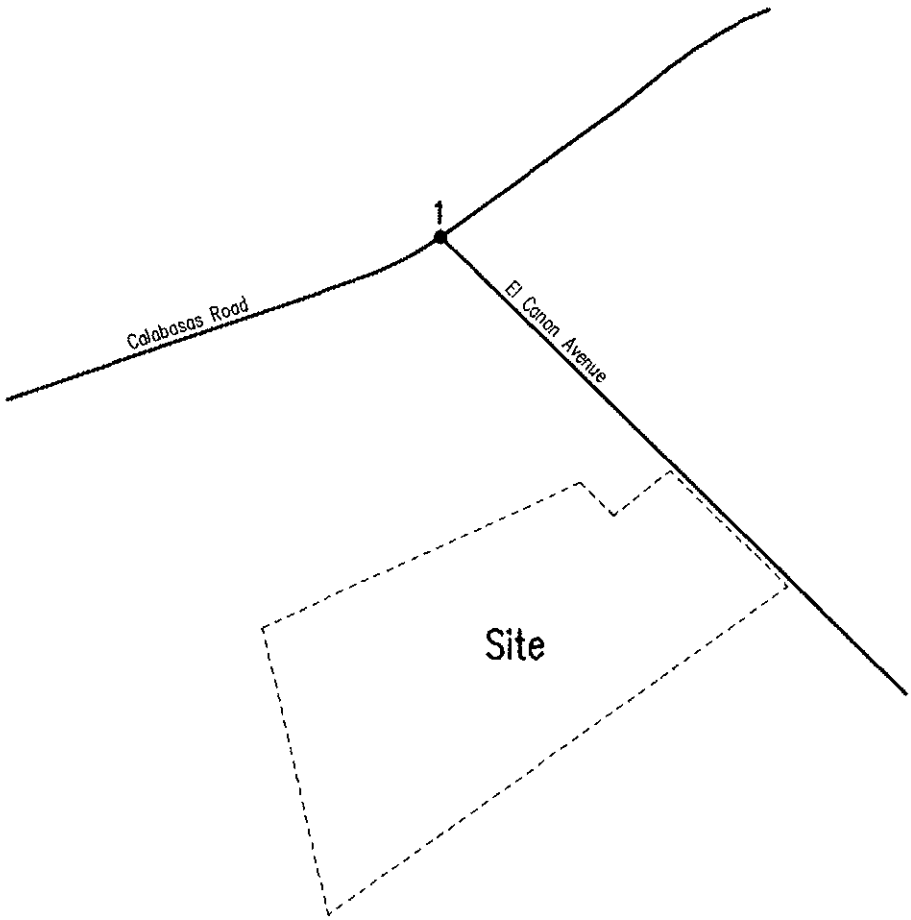
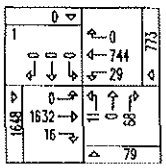
Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbos

Figure 6
Existing Evening Peak Hour Intersection Turning Movement Volumes





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Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbas

V. Project Traffic

The proposed development consists of 75 dwelling units of affordable senior attached housing. The project site will have access to El Canon Avenue.

A. Trip Generation

The traffic generated by the project is determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our life styles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the traffic generation rates by the land use quantity, the traffic volumes are determined. Table 2 exhibits the traffic generation rates and peak hour volumes and project daily traffic volumes. The traffic generation rates are from the Institute of Transportation Engineers, Trip Generation, 7th Edition, 2003.

The proposed development is projected to generate approximately 261 daily vehicle trips, 6 of which will occur during the morning peak hour and 8 of which will occur during the evening peak hour. The Institute of Transportation Engineers, Trip Generation, 7th Edition, 2003 does not provide rates for affordable senior attached housing; therefore, senior attached housing rates have been used in the traffic study.

B. Trip Distribution

Figure 7 contains the directional distribution of the project traffic for the proposed land use. To determine the traffic distribution for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were reviewed.

C. Trip Assignment

Based on the identified traffic generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 8. Morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figures 9 and 10, respectively.

Table 2

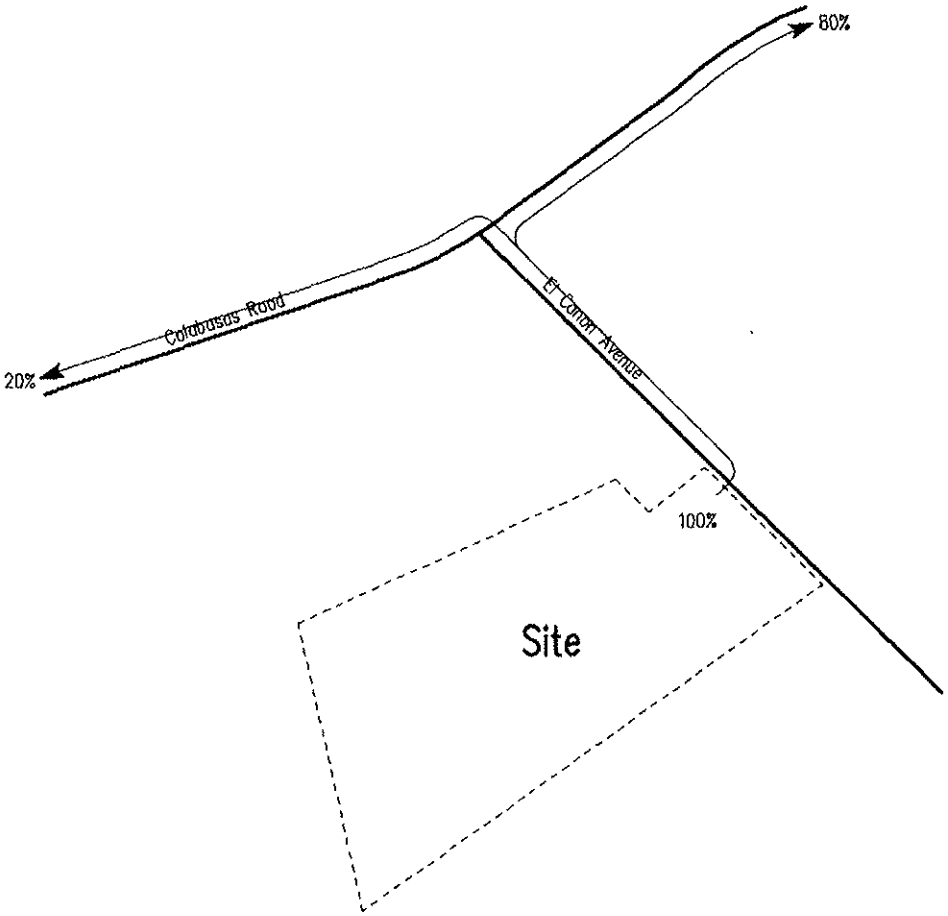
Project Traffic Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Senior Attached Housing	75	DU	0.04	0.04	0.08	0.07	0.04	0.11	3.48
Trips Generated									
Senior Attached Housing	75	DU	3	3	6	5	3	8	261

[1] Source: Institute of Transportation Engineers, Trip Generation, 7th Edition, 2003, Land Use Category 252.
The Institute of Transportation Engineers, Trip Generation, 7th Edition, 2003 does not provide rates for affordable senior attached housing; therefore, senior attached housing rates have been used in the traffic study.

[2] DU = Dwelling Unit

Figure 7
Project Traffic Distribution



Legend

10% = Percent To/From Project

N

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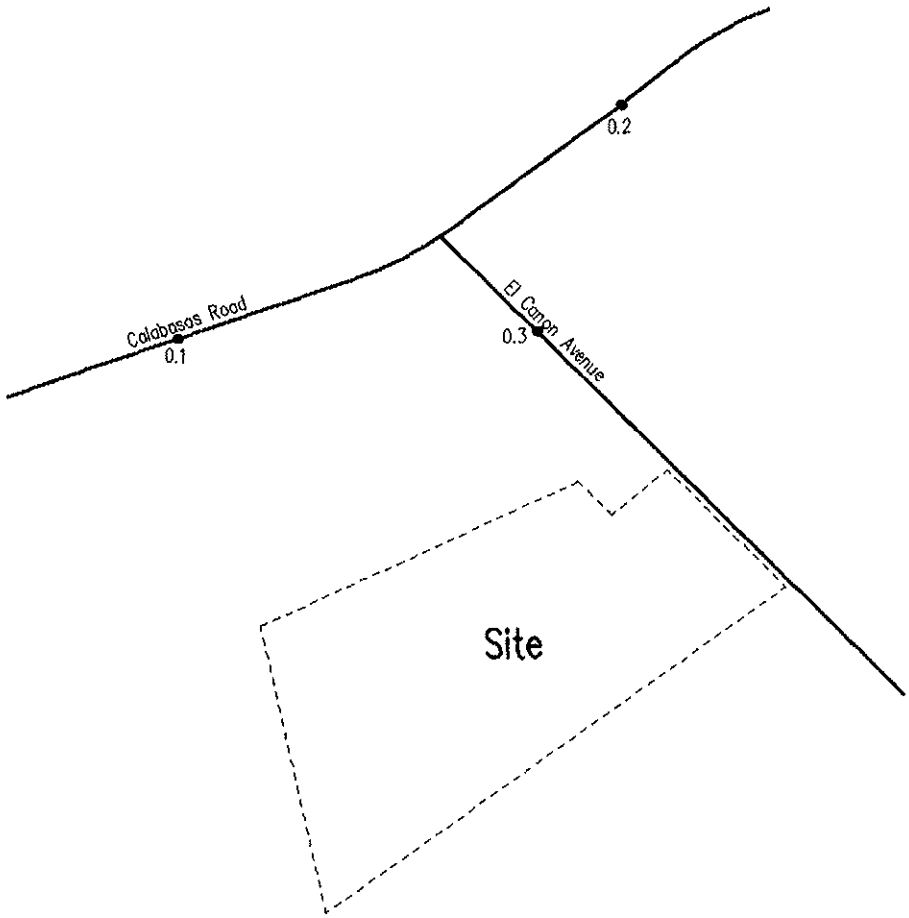
3917b/7

Figure 8
Project Average Daily Traffic Volumes



Legend

0.3 = Vehicles Per Day (1000's)

N

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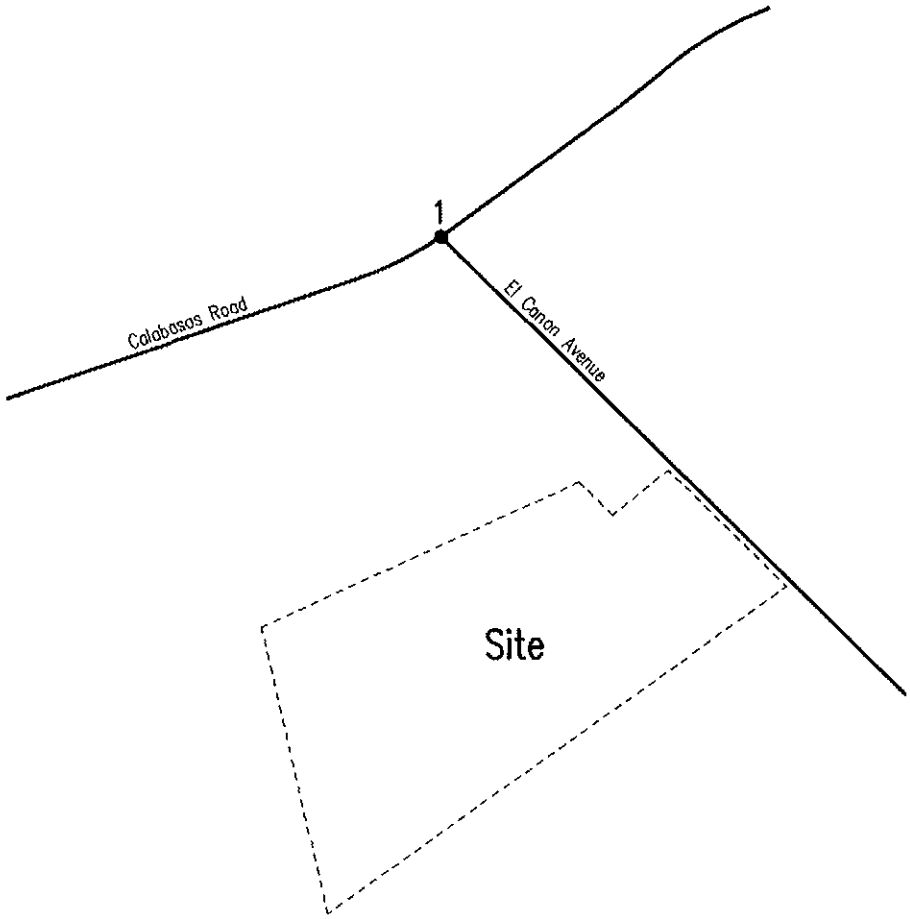
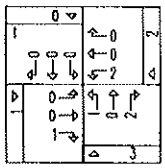
3917b/8

Figure 9
Project Morning Peak Hour Intersection Turning Movement Volumes





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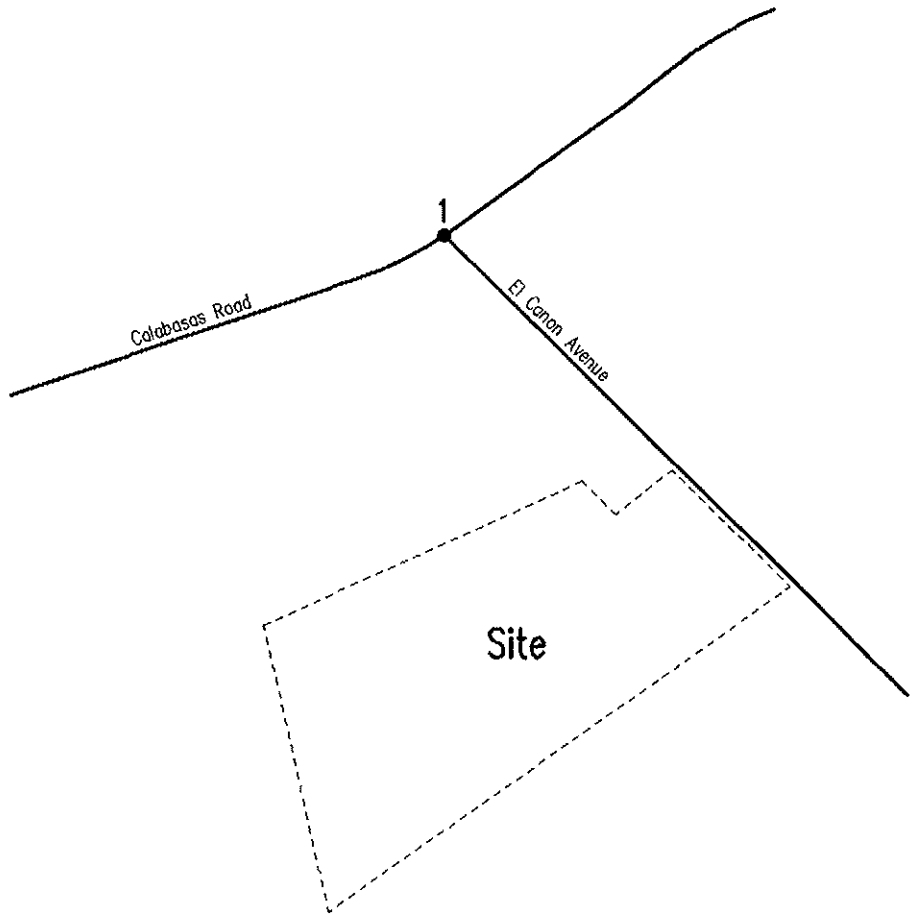
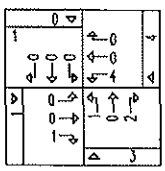
Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbos

Figure 10
Project Evening Peak Hour Intersection Turning Movement Volumes





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Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbas

VI. Opening Year (2009) Traffic Conditions

In this section, Opening Year (2009) traffic conditions without and with the project are discussed. Figures 11 to 24 depict the Opening Year (2009) traffic conditions.

A. Method of Projection

To account for areawide growth on roadways, Opening Year (2009) traffic volumes have been calculated based on a two (2) percent annual growth rate of existing traffic volumes over a two (2) year period. The areawide growth rate has been provided by City of Calabasas staff.

Table 3 shows the daily and peak hour vehicle trips generated by the other development in the study area. Figures 12 to 15 contain the directional distributions of the other development traffic for the proposed land uses. The other development average daily traffic volumes are show on Figure 16. Other development morning and evening peak hour intersection turning movement volumes are shown on Figures 17 and 18, respectively.

Areawide growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the project and other development.

B. Opening Year (2009) Average Daily Traffic Volumes

Opening Year (2009) without project average daily traffic volumes are as illustrated on Figure 19. The Opening Year (2009) with project average daily traffic volumes are as illustrated on Figure 20.

C. Opening Year (2009) Levels of Service

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method (see Appendix C). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

The Delay for the Opening Year (2009) without project traffic conditions have been calculated and are shown in Table 4. Opening Year (2009) without project morning and evening peak hour intersection turning movement volumes are shown on Figures 21 and 22, respectively.

The study area intersections are projected to operate at Level of Service A during the peak hours for Opening Year (2009) without project traffic conditions, with traffic signal improvements (see Table 4). Opening Year (2009) without project Delay worksheets are provided in Appendix C.

The Delay for the Opening Year (2009) with project traffic conditions have been calculated and are shown in Table 5. Opening Year (2009) with project morning and evening peak hour intersection turning movement volumes are shown on Figures 23 and 24, respectively.

The study area intersection is projected to operate at Level of Service A during the peak hours for Opening Year (2009) with project traffic conditions, with traffic signal improvements (see Table 5). Opening Year (2009) with project Delay worksheets are provided in Appendix C.

D. Project Traffic Contribution

The project contribution calculations are based on the evening peak hour traffic volumes. As shown below, the project's contribution of identified intersection percentage is 3.1% (See Table 6).

E. Traffic Signal at El Canon Avenue and Calabasas Road

A traffic signal is theoretically warranted today at the intersection of El Canon Avenue and Calabasas Road. However, this intersection is approximately 300 feet from the intersection of SR-101 Freeway NB on/off ramps and Calabasas Road. It is not advisable to signalize this intersection because of its close proximity to the signalized ramp intersection.

The project adds 6 vehicles to this intersection in the morning peak hour and 8 vehicles in the evening peak hour. The existing entering volumes are 1,879 vehicles and 2,500 vehicles in the morning and evening peak hours, respectively.

A recommended mitigation is to paint "Keep Clear" on eastbound Calabasas Road at the intersection so that northbound left turn can be made from El Canon Road.

Table 3

Other Development Traffic Generation

Project	Land Use	Quantity	Units[1]	Peak Hour						Daily
				Morning			Evening			
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Car Dealership	New Car Sales	170	TSF	258	90	348	175	274	449	5,668
Condominiums	Multi-Family Attached Residential	34	DU	2	13	15	12	6	18	199
ZA-2006-9582-CU	Multi-Family Attached Residential	1	DU	0	0	0	0	0	0	6
	Single-Family Detached Residential	1	DU	0	1	1	1	0	1	10
ZA-2007-1120-F	Multi-Family Attached Residential	75	DU	14	42	56	48	28	76	440
Total				274	146	420	236	308	544	6,323

[1] TSF = Thousand Square Feet; DU = Dwelling Unit

Table 4

Opening Year (2009) Without Project Levels of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
El Canon Avenue (NS) at:															
Calabasas Road (EW)															
- Without Improvement	CSS	0	1	0	0	0	0	0	2	0	1	1	0	24.5-C	90.9-F
- With Improvement	TS	0	1	0	0	0	0	0	2	0	1	1	0	2.4-A	2.6-A

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; 1 = Improvement

[2] Delay has been calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, for intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop; TS = Traffic Signal

Table 5

Opening Year (2009) With Project Levels of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
El Canon Avenue (NS) at:															
Calabasas Road (EW)															
- Without Improvement	CSS	0	1	0	0	0	0	0	2	0	1	1	0	26.1-D	99.9-F
- With Improvement	TS	0	1	0	0	0	0	0	2	0	1	1	0	2.5-A	2.7-A

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; 1 = Improvement

[2] Delay has been calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, for intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop; TS = Traffic Signal

Table 6

Project Fair Share Intersection Traffic Contribution[1]

Opening Year (2009)							
Intersection	Total Cost	Existing Traffic	Future With Project Traffic	Project Traffic	Total New Traffic	Project % of New Traffic	Project Cost Share
El Canon Avenue (NS) Calabasas Road (EW)	$250,000	2,500	2,759	8	259	3.1%	$ 7,722

Figure 11
Other Development Location Map

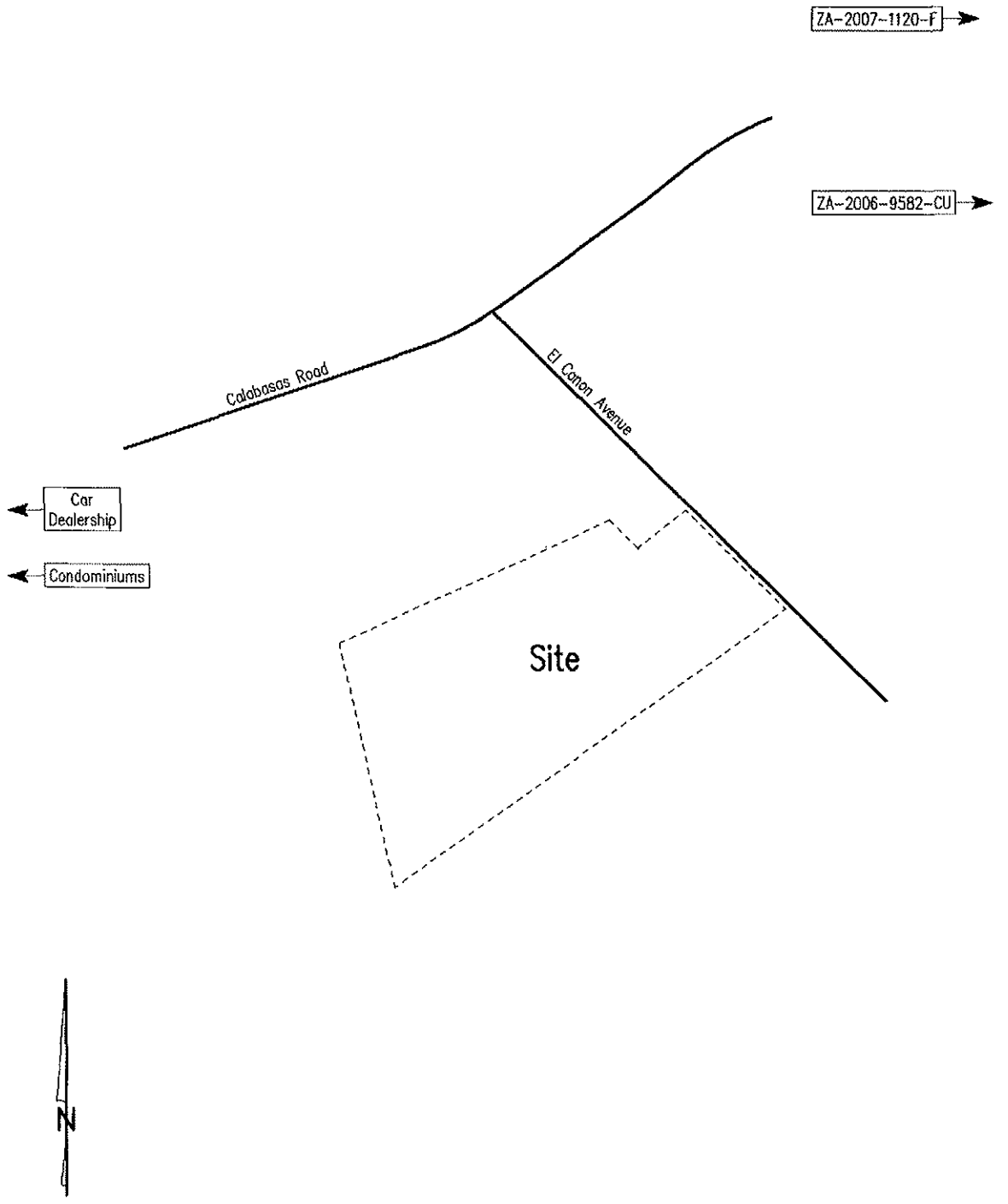

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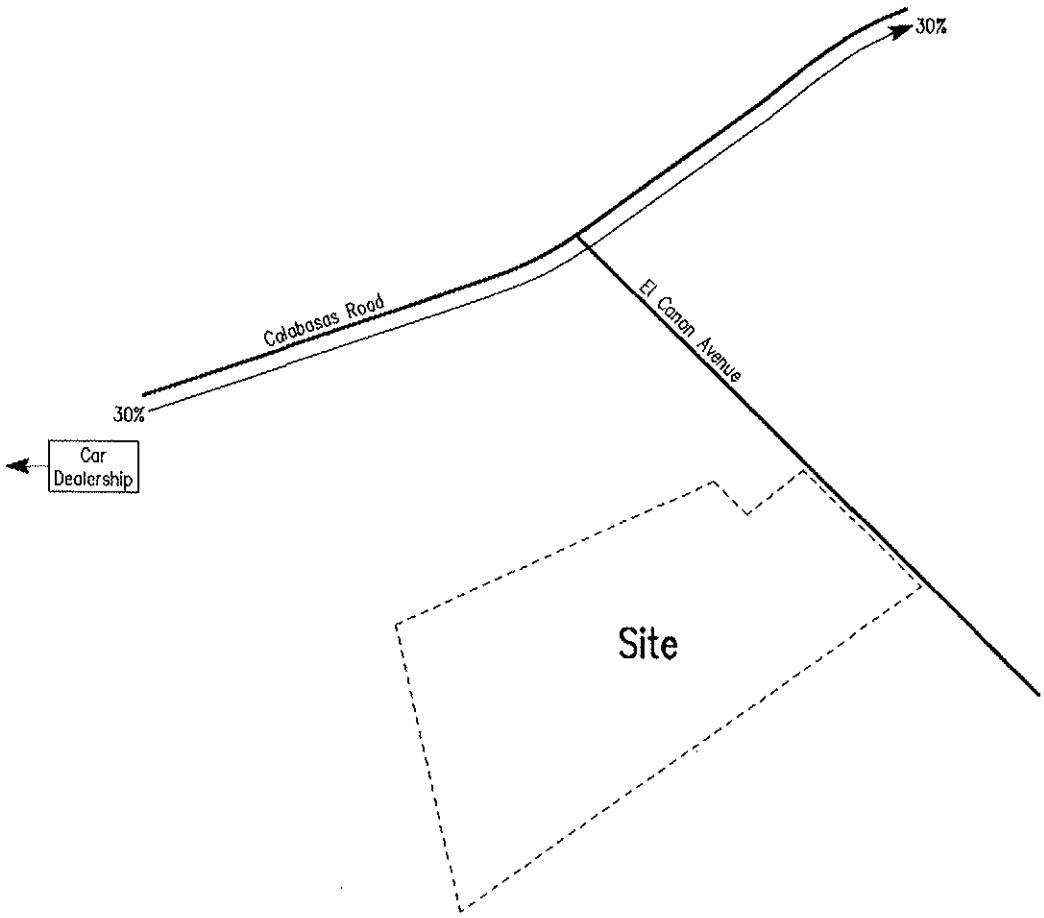
Figure 12
Car Dealership Traffic Distribution



Legend

10% = Percent To/From Project

N

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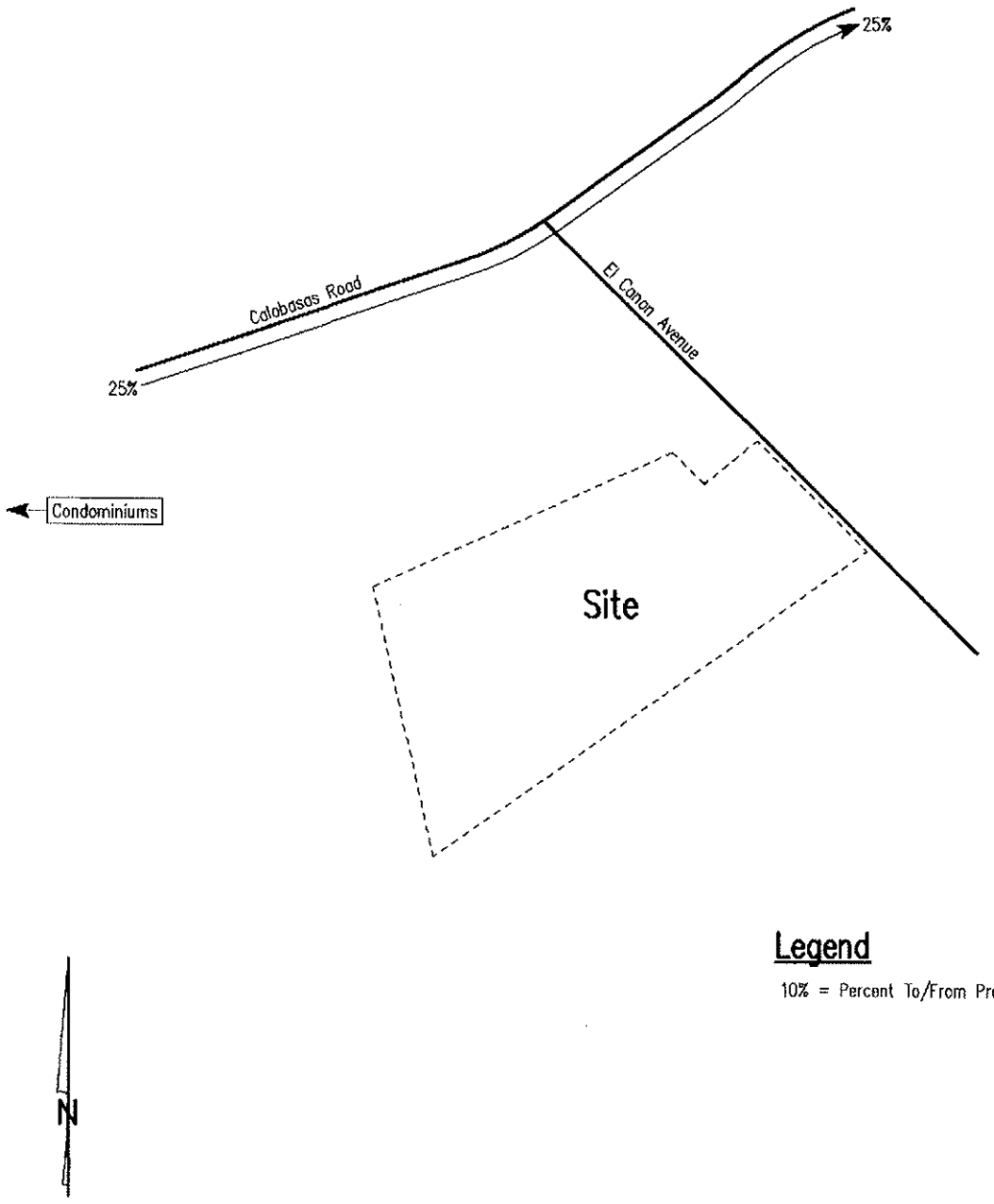
Figure 13
Condominiums Traffic Distribution



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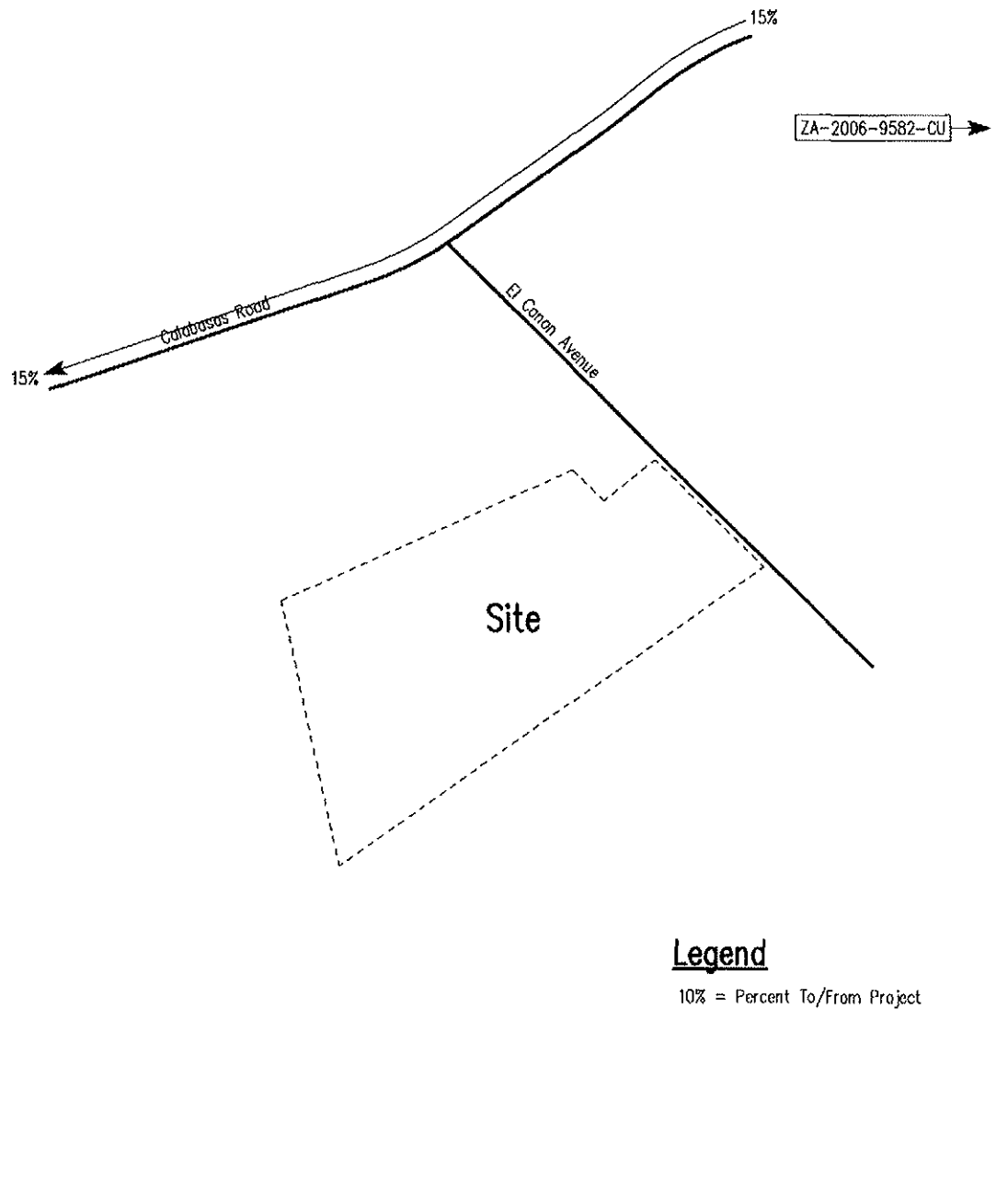
3917b/13

Figure 14
ZA-2006-9582-CU Traffic Distribution



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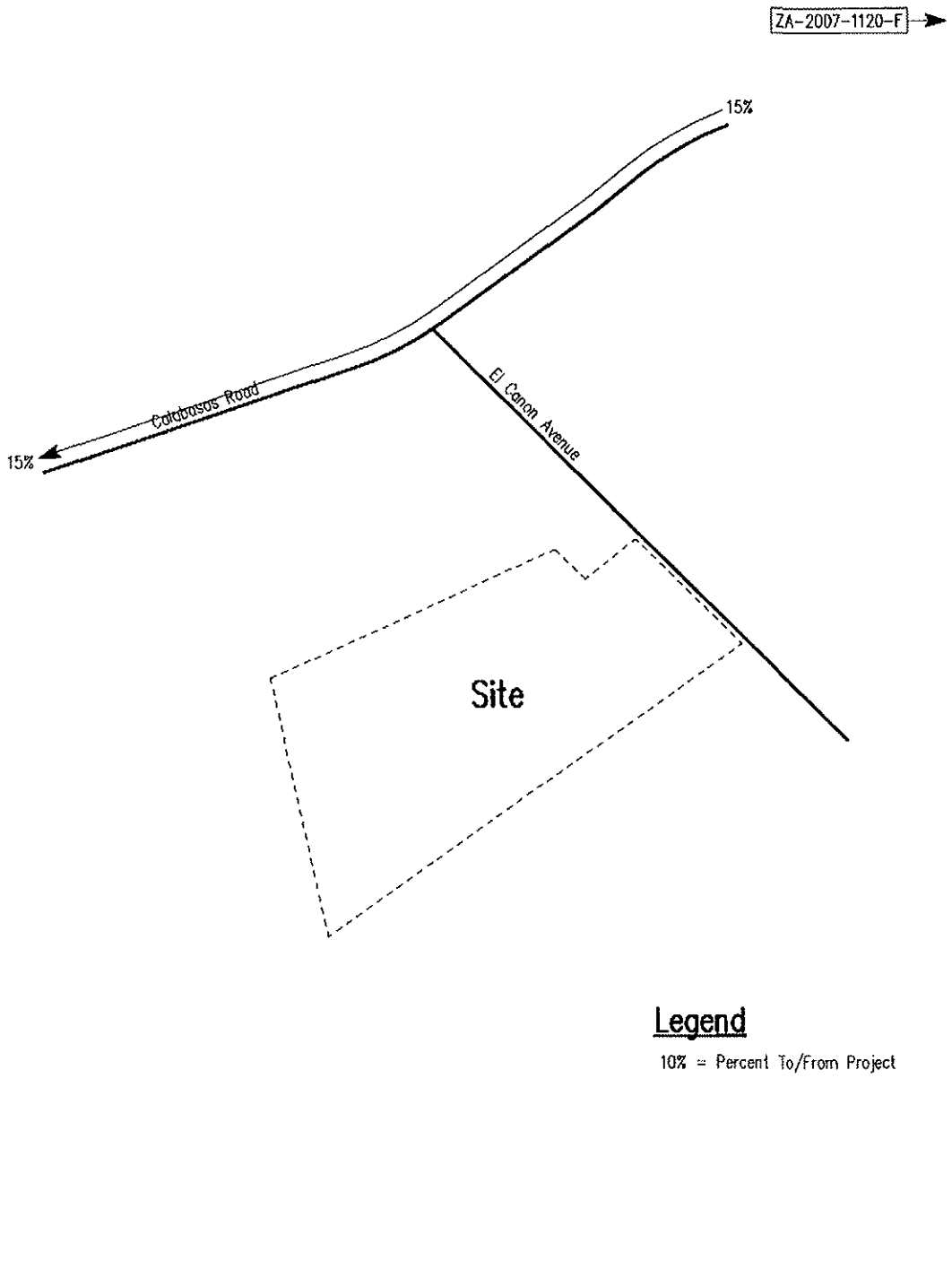
3917b/14

Figure 15
ZA-2007-1120-F Traffic Distribution



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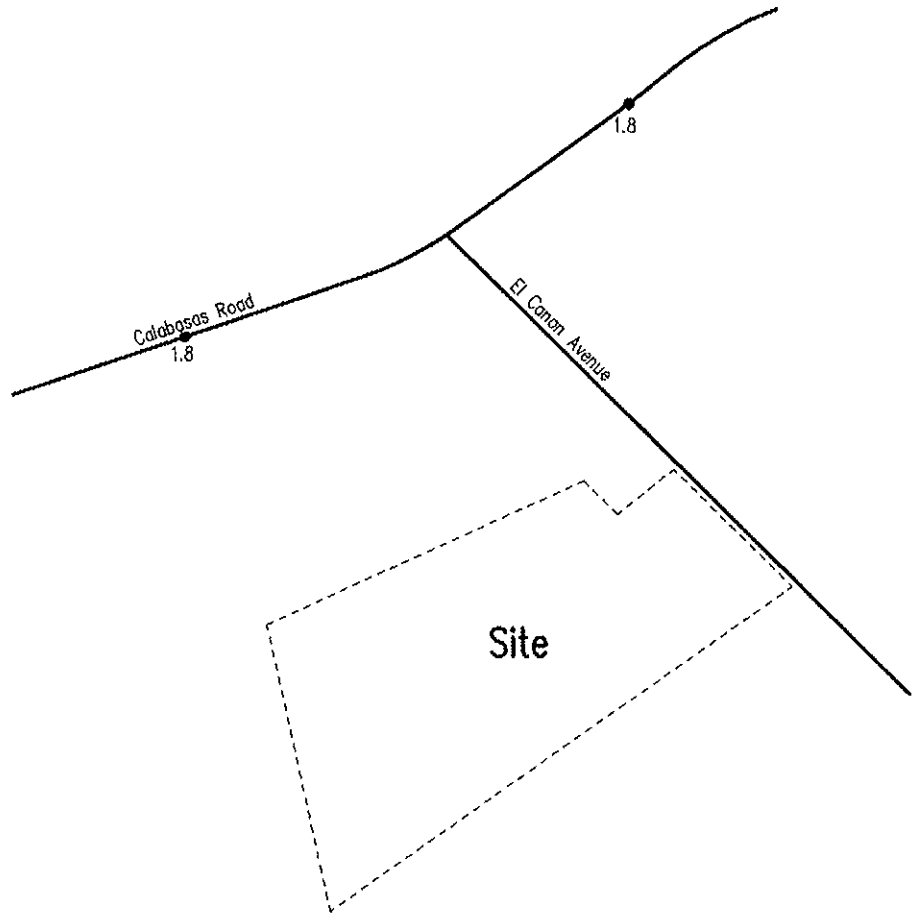
3917b/15

Figure 16
Other Development Average Daily Traffic Volumes



Legend

1.8 = Vehicles Per Day (1000's)

N

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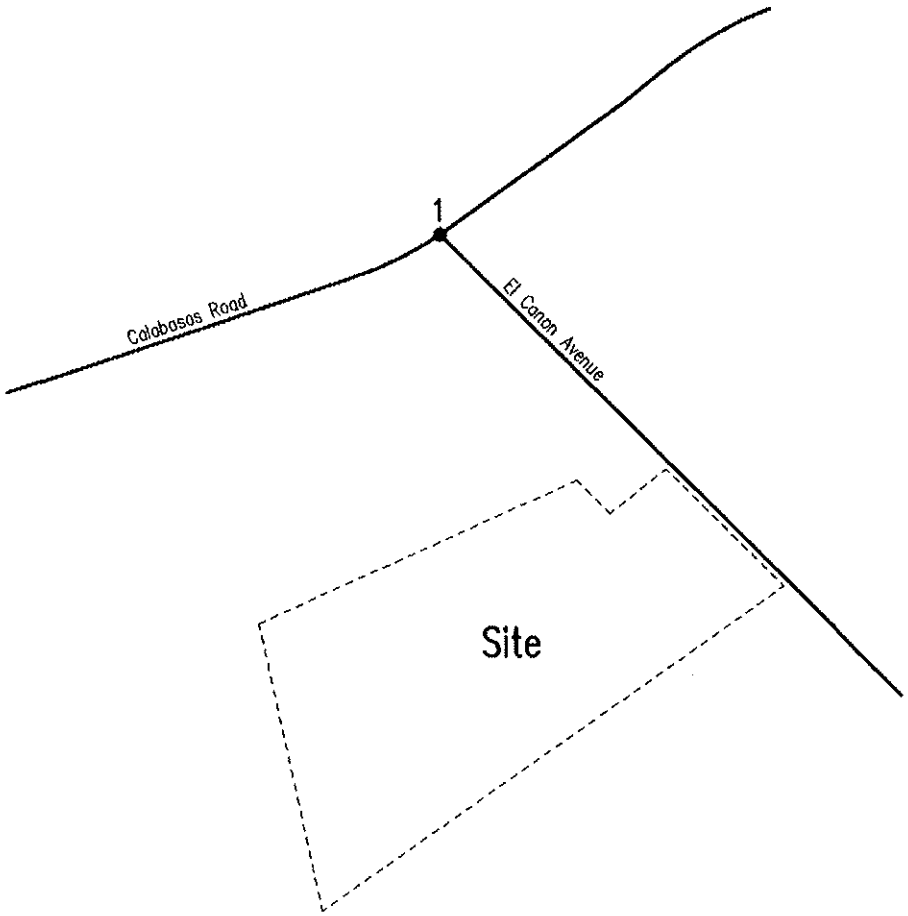
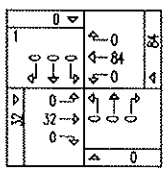
Figure 17
Other Development
Morning Peak Hour Intersection Turning Movement Volumes





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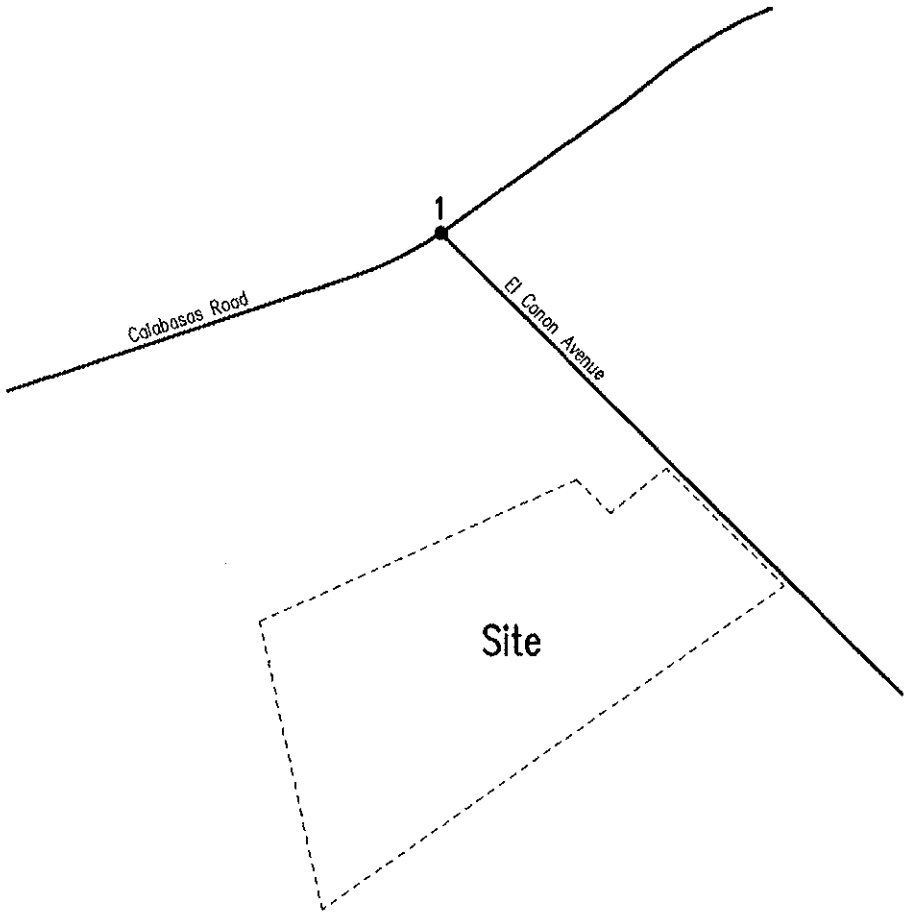
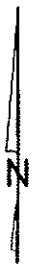
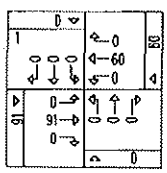
Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbas

Figure 18
Other Development
Evening Peak Hour Intersection Turning Movement Volumes







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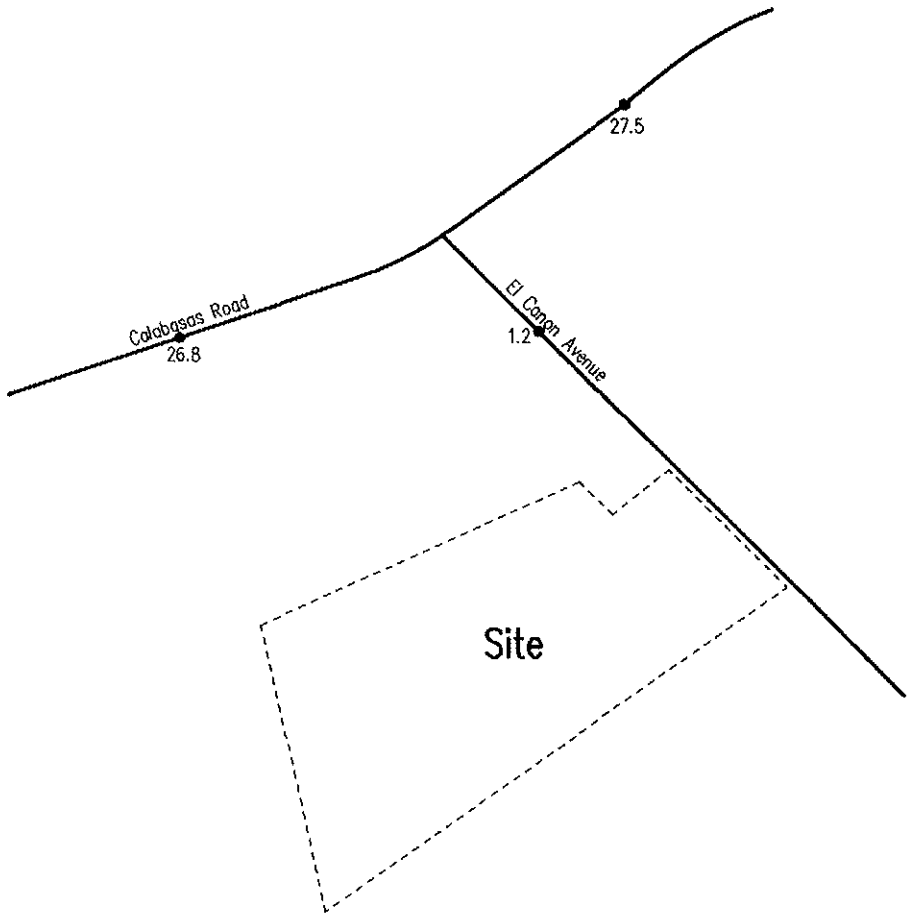
Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbas

Figure 19
Opening Year (2009) Without Project Average Daily Traffic Volumes



Legend

1.2 = Vehicles Per Day (1000's)

N

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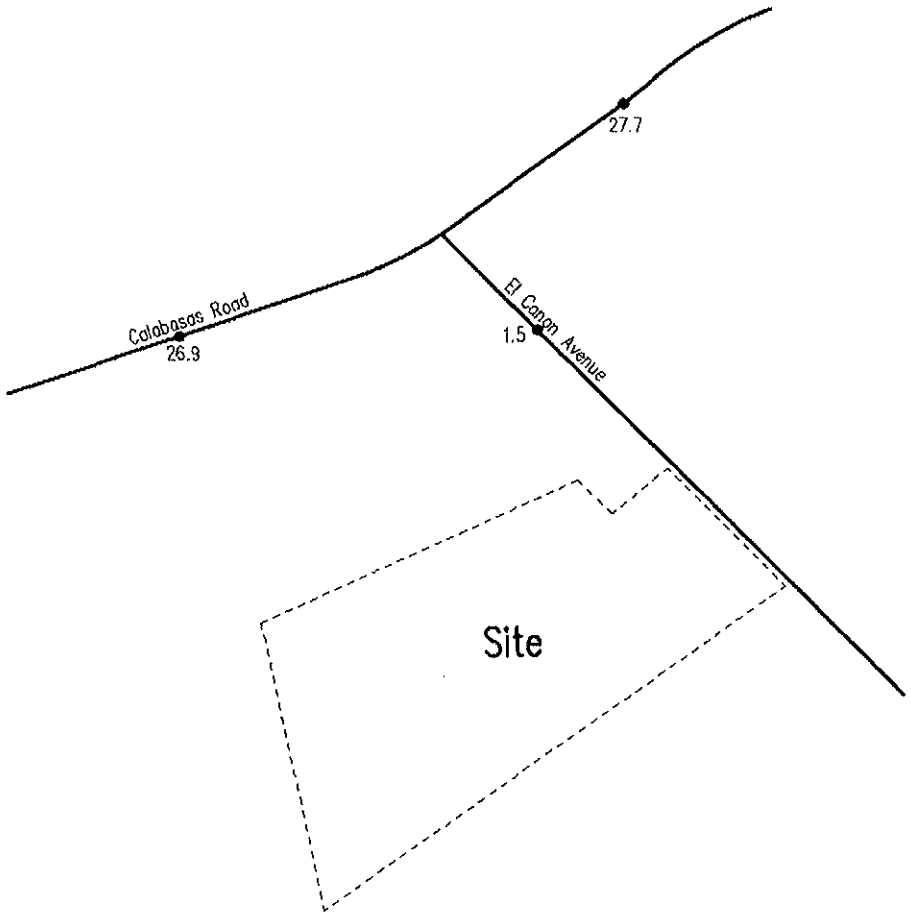
3917b/19

Figure 20
Opening Year (2009) With Project Average Daily Traffic Volumes



Legend

1.5 = Vehicles Per Day (1000's)

N

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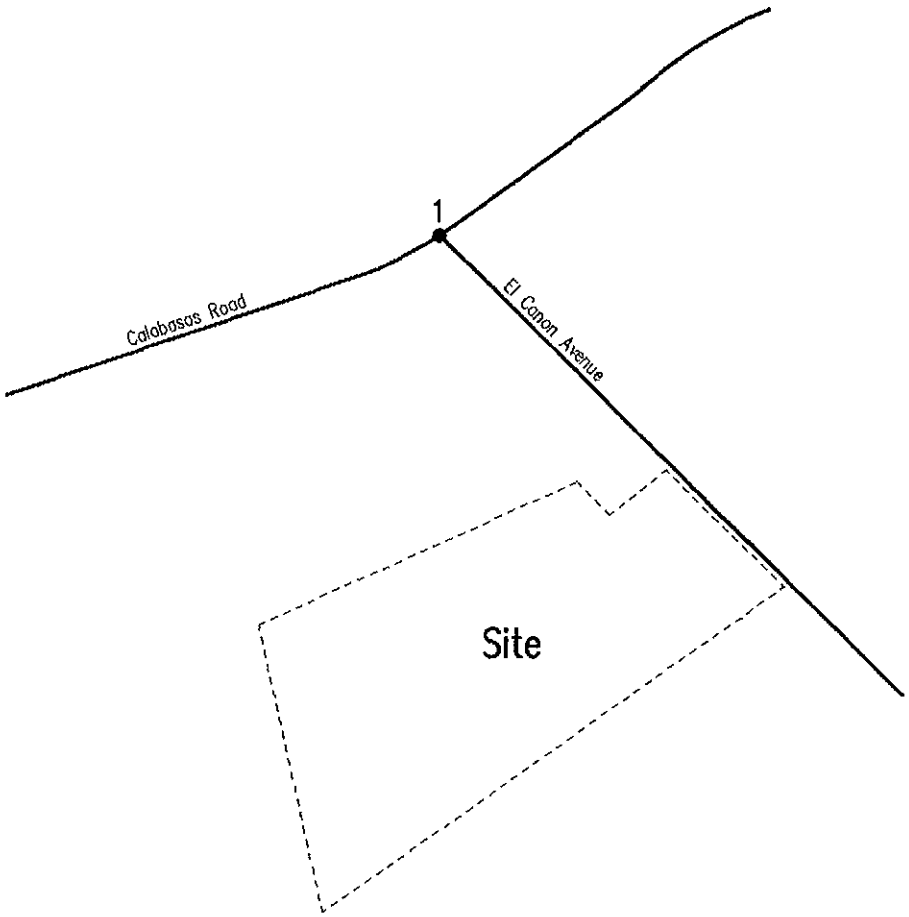
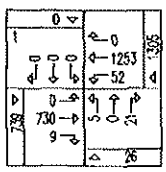
3917b/20

Figure 21
Opening Year (2009) Without Project
Morning Peak Hour Intersection Turning Movement Volumes





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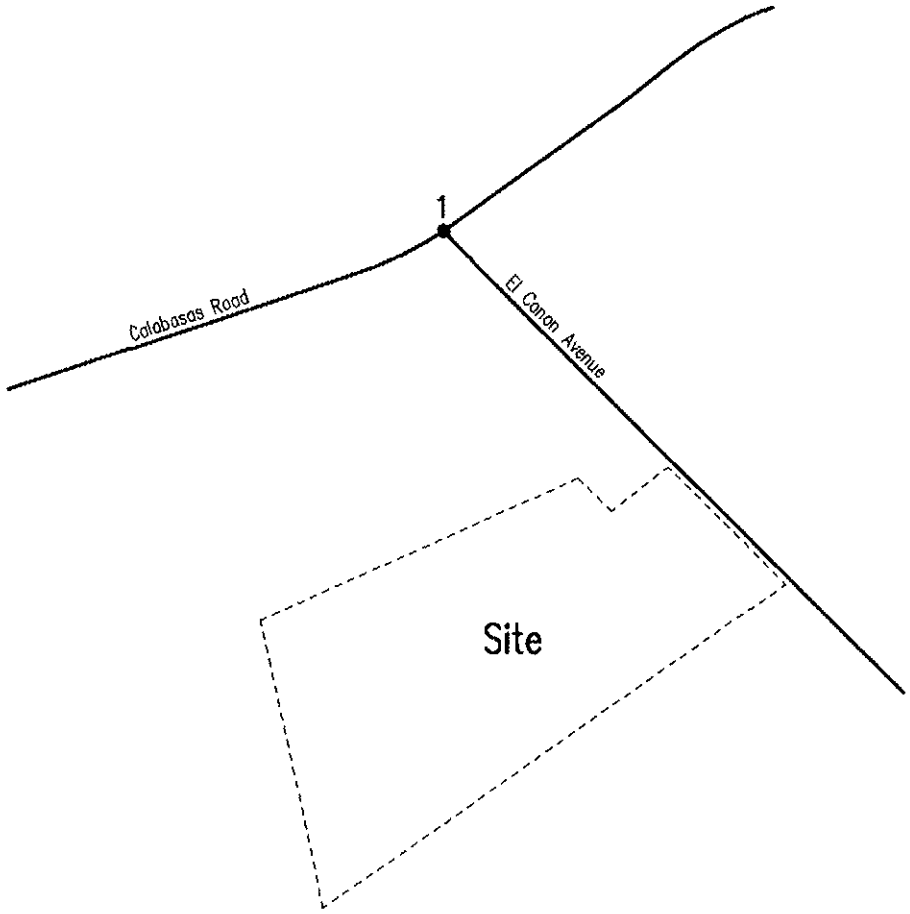
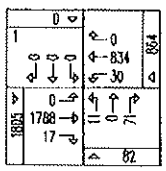
Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbas

Figure 22
Opening Year (2009) Without Project
Evening Peak Hour Intersection Turning Movement Volumes





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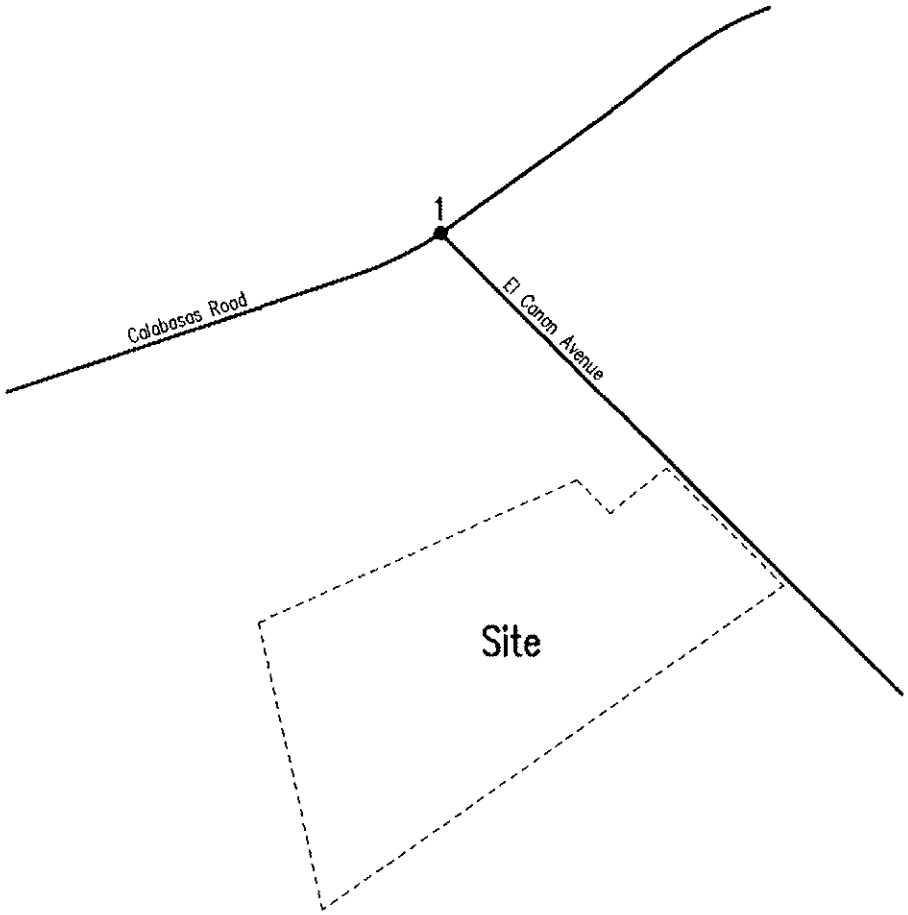
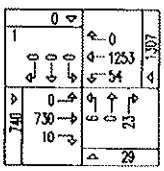
Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbas

Figure 23
Opening Year (2009) With Project
Morning Peak Hour Intersection Turning Movement Volumes



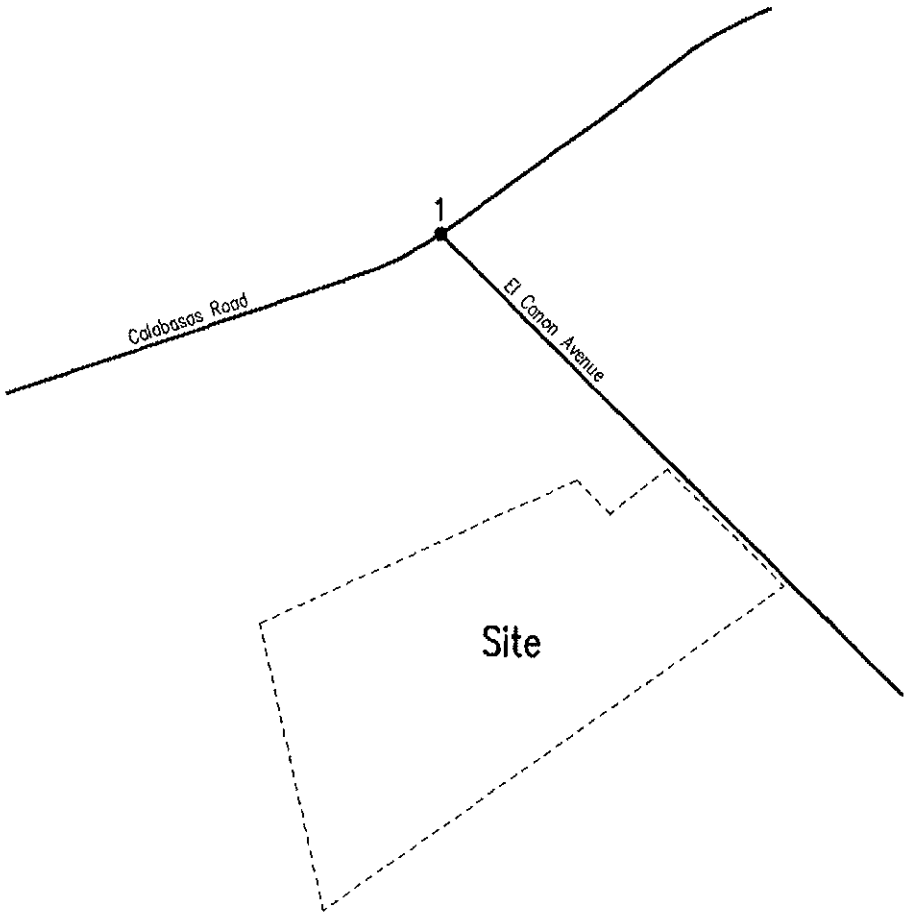


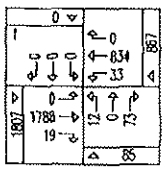
Kunzman Associates

Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbos

Figure 24
Opening Year (2009) With Project
Evening Peak Hour Intersection Turning Movement Volumes





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Intersection reference numbers are in upper left corner of turning movement boxes.

3917b/bbas

VII. Recommendations

A. Site Access

The project site will have access to El Canon Avenue.

B. Roadway Improvements

1. On- Site

Site-specific circulation and access recommendations are depicted on Figure 25.

Construct El Canon Avenue from the north project boundary to the south project boundary as a two lane roadway including landscaping and parkway improvements in conjunction with development.

Sufficient on-site parking shall be provided to meet state of California parking code requirements, for affordable senior attached housing.

Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Los Angeles standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. No landscaping or objects shall be installed in the vicinity of the driveway which may obstruct sight lines during vehicular ingress/egress, subject to the approval of the City Engineer.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

The project frontage area available for street parking shall have signs installed and curbs painted restricting the curb use to loading and unloading only, subject to approval from the City of Los Angeles.

Sidewalks and right-of ways should be designed to ensure the highest amount of pedestrian safety by meeting all City of Los Angeles requirements.

The site plan shows a 20 percent grade in the garage access ramp. Some jurisdictions allow a 20 percent grade including the City of Los Angeles, County of Los Angeles, and City of Santa Clarita (see Appendix E). A 20 percent grade is reasonable and acceptable for the garage vehicles access ramp for this 75 unit development.

2. Off-Site

As is the case for any roadway design, the City of Calabasas should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

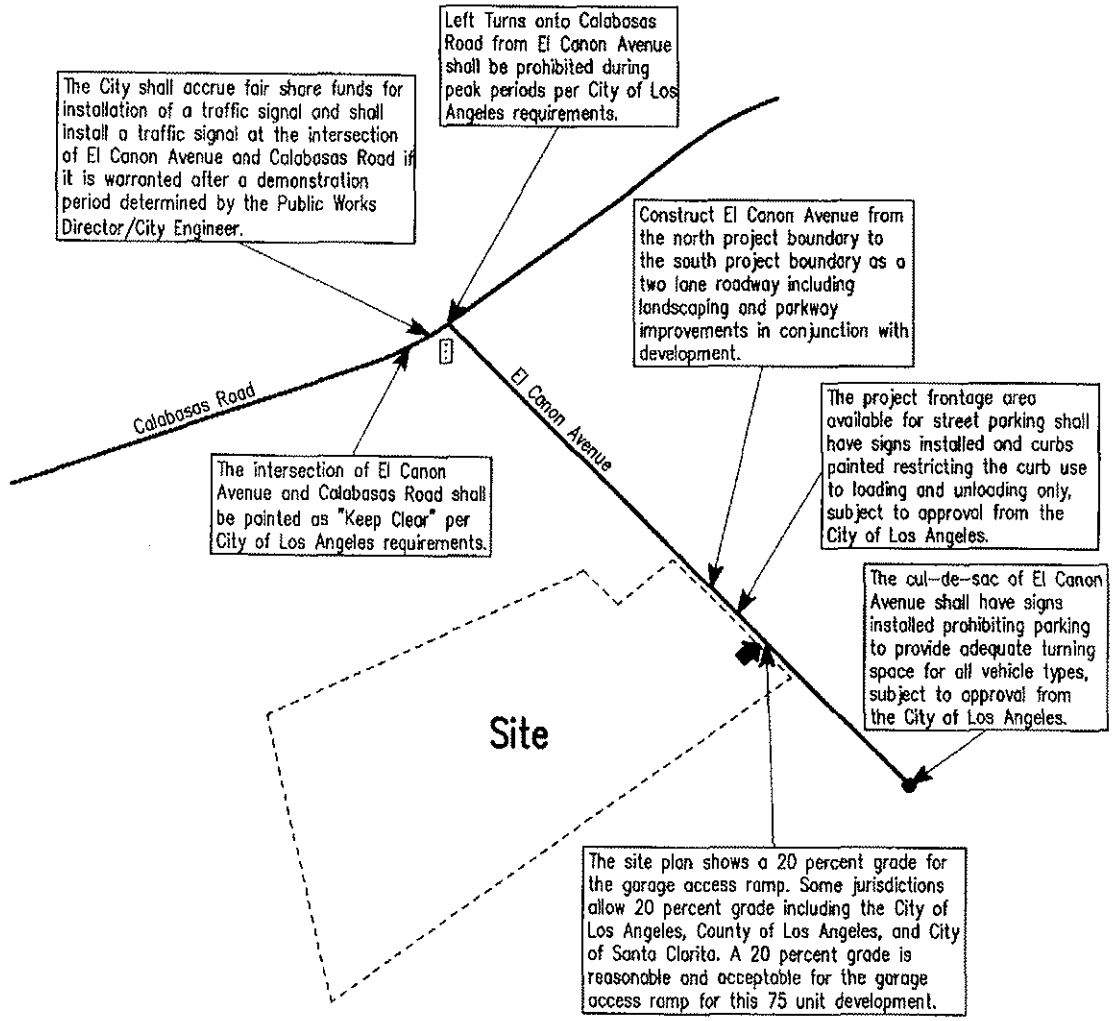
The intersection of El Canon Avenue and Calabasas Road shall be painted as "Keep Clear" per City of Los Angeles requirements.

Left Turns onto Calabasas Road from El Canon Avenue shall be prohibited during peak periods per City of Los Angeles requirements.

The City shall accrue fair share funds for installation of a traffic signal and shall install a traffic signal at the intersection of El Canon Avenue and Calabasas Road if it is warranted after a demonstration period determined by the Public Works Director/City Engineer.

The cul-de-sac of El Canon Avenue shall have signs installed prohibiting parking to provide adequate turning space for all vehicle types, subject to approval from the City of Los Angeles.

Figure 25
Circulation Recommendations



Sidewalks and right-of-ways should be designed to ensure the highest amount of pedestrian safety by meeting all City of Los Angeles requirements.

Sufficient on-site parking shall be provided to meet City of Calabasas parking code requirements.

Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Los Angeles standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. No landscaping or objects shall be installed in the vicinity of the driveway which may obstruct sight lines during vehicular ingress/egress, subject to the approval of the City Engineer.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

As is the case for any roadway design, the City of Calabasas should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Legend

= Traffic Signal
STOP = Stop Sign
= Full Access Driveway

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3917b/25

Appendices

Appendix A – Glossary of Transportation Terms

Appendix B – Traffic Count Worksheets

Appendix C – Explanation and Calculation of Delay

Appendix D – Traffic Signal Warrant Worksheet

Appendix E – Parking Slope Municipal Codes

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quality of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

Traffic Count Worksheets

APPENDIX C

Explanation and Calculation of Delay

EXPLANATION AND CALCULATION OF INTERSECTION LEVEL OF SERVICE USING DELAY METHODOLOGY

The levels of service at the unsignalized intersections are calculated using the delay methodology in the 2000 Highway Capacity Manual. This methodology views an intersection as consisting of several lane groups. A lane group is a set of lanes serving a movement. If there are two northbound left turn lanes, then the lane group serving the northbound left turn movement has two lanes. Similarly, there may be three lanes in the lane group serving the northbound through movement, one lane in the lane group serving the northbound right turn movement, and so forth. It is also possible for one lane to serve two lane groups. A shared lane might result in there being 1.5 lanes in the northbound left turn lane group and 2.5 lanes in the northbound through lane group.

For each lane group, there is a capacity. That capacity is calculated by multiplying the number of lanes in the lane group times a theoretical maximum lane capacity per lane times 12 adjustment factors.

Each of the 12 adjustment factors has a value of approximately 1.00. A value less than 1.00 is generally assigned when a less than desirable condition occurs.

The 12 adjustment factors are as follows:

1. Peak hour factor (to account for peaking within the peak hour)
2. Lane utilization factor (to account for not all lanes loading equally)
3. Lane width
4. Percent of heavy trucks
5. Approach grade
6. Parking

7. Bus stops at intersections

8. Area type (CBD or other)

9. Right turns

10. Left turns

11. Pedestrian activity

12. Signal progression

The maximum theoretical lane capacity and the 12 adjustment factors for it are all unknowns for which approximate estimates have been recommended in the 2000 Highway Capacity Manual. For the most part, the recommended values are not based on statistical analysis but rather on educated estimates. However, it is possible to use the delay method and get reasonable results as will be discussed below.

Once the lane group volume is known and the lane group capacity is known, a volume to capacity ratio can be calculated for the lane group.

With a volume to capacity ratio calculated, average delay per vehicle in a lane group can be estimated. The average delay per vehicle in a lane group is calculated using a complex formula provided by the 2000 Highway Capacity Manual, which can be simplified and described as follows:

Delay per vehicle in a lane group is a function of the following:

1. Cycle length

2. Amount of red time faced by a lane group

3. Amount of yellow time for that lane group

4. The volume to capacity ratio of the lane group

The average delay per vehicle for each lane group is calculated, and eventually an overall average delay for all vehicles entering the intersection is calculated. This average delay per vehicle is then used to judge Level of Service. The Level of Services are defined in the table that follows this discussion.

Experience has shown that when a maximum lane capacity of 1,900 vehicles per hour is used (as recommended in the 2000 Highway Capacity Manual), little or no yellow time penalty is used, and none of the 12 penalty factors are applied, calculated delay is realistic. The delay calculation for instance assumes that yellow time is totally unused. Yet experience shows that most of the yellow time is used.

An idiosyncrasy of the delay methodology is that it is possible to add traffic to an intersection and reduce the average total delay per vehicle. If the average total delay is 30 seconds per vehicle for all vehicles traveling through an intersection, and traffic is added to a movement that has an average total delay of 15 seconds per vehicle, then the overall average total delay is reduced.

The delay calculation for a lane group is based on a concept that the delay is a function of the amount of unused capacity available. As the volume approaches capacity and there is no more unused capacity available, then the delay rapidly increases. Delay is not proportional to volume, but rather increases rapidly as the unused capacity approaches zero.

Because delay is not linearly related to volumes, the delay does not reflect how close an intersection is to overloading. If an intersection is operating at Level of Service C and has an average total delay of 18 seconds per vehicle, you know very little as to what percent the traffic can increase before Level of Service E is reached.

DELAY LEVEL OF SERVICE DESCRIPTION[1]

Level of Service	Description	Average Total Delay Per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 2000.

Existing

Calabasas Senior Housing Development
Existing
Morning Peak Hour

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C[20.3]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 1 0			1 0 1 0 0		
Volume Module:												
Base Vol:	5	0	20	0	0	0	0	671	9	50	1124	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	0	20	0	0	0	0	671	9	50	1124	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	0	20	0	0	0	0	671	9	50	1124	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	20	0	0	0	0	671	9	50	1124	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1900	xxxx	340	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	680	xxxx	xxxxx
Potent Cap.:	77	xxxx	707	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	922	xxxx	xxxxx
Move Cap.:	74	xxxx	707	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	922	xxxx	xxxxx
Volume/Cap:	0.07	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	260	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	20.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:		20.3			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		C			*			*			*	

****

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

****

Calabasas Senior Housing Development
Existing
Evening Peak Hour

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: F[50.8]

****

Approach:	North Bound			South Bound			East Bound						West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	0
Volume Module:																				
Base Vol:	11	0	68			0	0	0			0	1632	16			29	744	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	11	0	68			0	0	0			0	1632	16			29	744	0		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	11	0	68			0	0	0			0	1632	16			29	744	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Final Vol.:	11	0	68			0	0	0			0	1632	16			29	744	0		
Critical Gap Module:																				
Critical Gp:	6.4	xxxx		6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			4.1	xxxx	xxxxx			
FollowUpTim:	3.5	xxxx		3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			2.2	xxxx	xxxxx			
Capacity Module:																				
Cnflict Vol:	2442	xxxx		824	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			1648	xxxx	xxxxx			
Potent Cap.:	35	xxxx		376	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			397	xxxx	xxxxx			
Move Cap.:	33	xxxx		376	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			397	xxxx	xxxxx			
Volume/Cap:	0.33	xxxx		0.18	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			0.07	xxxx	xxxx			
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				0.2	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				14.8	xxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	*	*	*				B	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	154	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	2.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	50.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Shared LOS:	*	F	*	*	*	*	*	*	*				*	*	*			
ApproachDel:		50.8			xxxxxx			xxxxxx						xxxxxx				
ApproachLOS:		F			*			*						*				

****

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

****

Opening Year (2009) Without Project

Calabasas Senior Housing Development
Opening Year (2009) Without Project
Morning Peak Hour

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C[24.5]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 1	1	0	1 0 1	0	0
Volume Module:												
Base Vol:	5	0	20	0	0	0	0	671	9	50	1124	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	5	0	21	0	0	0	0	698	9	52	1169	0
Added Vol:	0	0	0	0	0	0	0	32	0	0	84	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	21	0	0	0	0	730	9	52	1253	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	0	21	0	0	0	0	730	9	52	1253	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	0	21	0	0	0	0	730	9	52	1253	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2091	xxxx	370	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	739	xxxx	xxxxx
Potent Cap.:	58	xxxx	681	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	876	xxxx	xxxxx
Move Cap.:	56	xxxx	681	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	876	xxxx	xxxxx
Volume/Cap:	0.09	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.06	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	210	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	24.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	*	*	*
ApproachDel:		24.5			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		C			*			*			*	

****

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

Calabasas Senior Housing Development
Opening Year (2009) Without Project
Evening Peak Hour

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

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: F[90.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!		0 0	0 0 0		0 0	0 0 1		1 0	1 0 1		0 0
Volume Module:												
Base Vol:	11	0	68	0	0	0	0	1632	16	29	744	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	11	0	71	0	0	0	0	1697	17	30	774	0
Added Vol:	0	0	0	0	0	0	0	91	0	0	60	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	0	71	0	0	0	0	1788	17	30	834	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	0	71	0	0	0	0	1788	17	30	834	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	11	0	71	0	0	0	0	1788	17	30	834	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2691	xxxx	902	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1805	xxxx	xxxxx
Potent Cap.:	24	xxxx	339	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	346	xxxx	xxxxx
Move Cap.:	23	xxxx	339	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	346	xxxx	xxxxx
Volume/Cap:	0.50	xxxx	0.21	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	16.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	C	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	115	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	3.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	90.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:		90.9			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		F			*			*			*	

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

Calabasas Senior Housing Development
Opening Year (2009) Without Project
Morning Peak Hour - With Improvements

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Cycle (sec): 85 Critical Vol./Cap.(X): 0.708
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 2.4
Optimal Cycle: OPTIMIZED Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	5	0	20	0	0	0	0	671	9	50	1124	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	5	0	21	0	0	0	0	698	9	52	1169	0
Added Vol:	0	0	0	0	0	0	0	32	0	0	84	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	0	21	0	0	0	0	730	9	52	1253	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	0	21	0	0	0	0	730	9	52	1253	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	0	21	0	0	0	0	730	9	52	1253	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	5	0	21	0	0	0	0	730	9	52	1253	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	1.00	0.89	1.00	1.00	1.00	1.00	0.95	0.95	0.38	1.00	1.00
Lanes:	0.20	0.00	0.80	0.00	0.00	0.00	0.00	1.97	0.03	1.00	1.00	0.00
Final Sat.:	339	0	1356	0	0	0	0	3557	46	718	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.21	0.21	0.07	0.66	0.00
Crit Moves:	****										****	
Green/Cycle:	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.93	0.00
Volume/Cap:	0.71	0.00	0.71	0.00	0.00	0.00	0.00	0.22	0.22	0.08	0.71	0.00
Delay/Veh:	89.3	0.0	89.3	0.0	0.0	0.0	0.0	0.3	0.3	0.3	1.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.3	0.0	89.3	0.0	0.0	0.0	0.0	0.3	0.3	0.3	1.9	0.0
LOS by Move:	F	A	F	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	2	0	2	0	0	0	0	1	1	0	8	0

****

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

Traffix 7.8.0115 (c) 2006 Dowling Assoc. Licensed to KUNZMAN ASSOC, ORANGE CA

Calabasas Senior Housing Development
Opening Year (2009) Without Project
Evening Peak Hour - With Improvements

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.591
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 2.6
Optimal Cycle: OPTIMIZED Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	11	0	68	0	0	0	0	1632	16	29	744	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	11	0	71	0	0	0	0	1697	17	30	774	0
Added Vol:	0	0	0	0	0	0	0	91	0	0	60	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	0	71	0	0	0	0	1788	17	30	834	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	0	71	0	0	0	0	1788	17	30	834	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	0	71	0	0	0	0	1788	17	30	834	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	11	0	71	0	0	0	0	1788	17	30	834	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.84	1.00	1.00	1.00	1.00	0.95	0.95	0.12	1.00	1.00
Lanes:	0.14	0.00	0.86	0.00	0.00	0.00	0.00	1.98	0.02	1.00	1.00	0.00
Final Sat.:	222	0	1375	0	0	0	0	3573	33	226	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.50	0.50	0.13	0.44	0.00
Crit Moves:	****							****				
Green/Cycle:	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.85	0.85	0.85	0.85	0.00
Volume/Cap:	0.59	0.00	0.59	0.00	0.00	0.00	0.00	0.59	0.59	0.16	0.52	0.00
Delay/Veh:	33.0	0.0	33.0	0.0	0.0	0.0	0.0	1.7	1.7	1.2	1.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.0	0.0	33.0	0.0	0.0	0.0	0.0	1.7	1.7	1.2	1.6	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	3	0	3	0	0	0	0	6	6	0	5	0

****

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

Traffix 7.8.0115 (c) 2006 Dowling Assoc. Licensed to KUNZMAN ASSOC, ORANGE CA

Opening Year (2009) With Project

Calabasas Senior Housing Development
Opening Year (2009) With Project
Morning Peak Hour

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: D[26.1]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 1 0			1 0 1 0 0		
Volume Module:												
Base Vol:	5	0	20	0	0	0	0	671	9	50	1124	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	5	0	21	0	0	0	0	698	9	52	1169	0
Added Vol:	1	0	2	0	0	0	0	32	1	2	84	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	23	0	0	0	0	730	10	54	1253	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	0	23	0	0	0	0	730	10	54	1253	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	6	0	23	0	0	0	0	730	10	54	1253	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2096	xxxx	370	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	740	xxxx	xxxxx
Potent Cap.:	58	xxxx	680	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	876	xxxx	xxxxx
Move Cap.:	55	xxxx	680	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	876	xxxx	xxxxx
Volume/Cap:	0.11	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.06	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	199	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	26.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	D	*	*	*	*	*	*	*	*	*	*
ApproachDel:		26.1		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		D		*			*			*		

****

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

Calabasas Senior Housing Development
Opening Year (2009) With Project
Evening Peak Hour

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: F[105.7]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 1 0			1 0 1 0 0		
Volume Module:												
Base Vol:	11	0	68	0	0	0	0	1632	16	29	744	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	11	0	71	0	0	0	0	1697	17	30	774	0
Added Vol:	1	0	2	0	0	0	0	91	1	4	60	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	0	73	0	0	0	0	1788	18	34	834	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	0	73	0	0	0	0	1788	18	34	834	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	12	0	73	0	0	0	0	1788	18	34	834	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2699	xxxx	903	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1806	xxxx	xxxxx
Potent Cap.:	24	xxxx	339	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	346	xxxx	xxxxx
Move Cap.:	22	xxxx	339	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	346	xxxx	xxxxx
Volume/Cap:	0.56	xxxx	0.21	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	16.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	C	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	110	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	106	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	105.7			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			*			*			*		

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

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Calabasas Senior Housing Development
Opening Year (2009) With Project
Morning Peak Hour - With Improvements

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

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

Cycle (sec):	80	Critical Vol./Cap.(X):	0.712
Loss Time (sec):	4 (Y+R=4.0 sec)	Average Delay (sec/veh):	2.5
Optimal Cycle: OPTIMIZED		Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	5	0	20	0	0	0	0	671	9	50	1124	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	5	0	21	0	0	0	0	698	9	52	1169	0
Added Vol:	1	0	2	0	0	0	0	32	1	2	84	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	0	23	0	0	0	0	730	10	54	1253	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	6	0	23	0	0	0	0	730	10	54	1253	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	0	23	0	0	0	0	730	10	54	1253	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	0	23	0	0	0	0	730	10	54	1253	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	1.00	0.89	1.00	1.00	1.00	1.00	0.95	0.95	0.38	1.00	1.00
Lanes:	0.21	0.00	0.79	0.00	0.00	0.00	0.00	1.97	0.03	1.00	1.00	0.00
Final Sat.:	363	0	1335	0	0	0	0	3552	50	716	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.21	0.21	0.08	0.66	0.00
Crit Moves:	****										****	
Green/Cycle:	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.93	0.00
Volume/Cap:	0.71	0.00	0.71	0.00	0.00	0.00	0.00	0.22	0.22	0.08	0.71	0.00
Delay/Veh:	83.9	0.0	83.9	0.0	0.0	0.0	0.0	0.3	0.3	0.3	2.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	83.9	0.0	83.9	0.0	0.0	0.0	0.0	0.3	0.3	0.3	2.0	0.0
LOS by Move:	F	A	F	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	2	0	2	0	0	0	0	1	1	0	8	0

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

Calabasas Senior Housing Development
Opening Year (2009) With Project
Evening Peak Hour - With Improvements

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

****

Intersection #1 El Canon Avenue (NS) / Calabasas Road (EW)

****

Cycle (sec):	60	Critical Vol./Cap.(X):	0.594	
Loss Time (sec):	4 (Y+R=4.0 sec)	Average Delay (sec/veh):	2.7	
Optimal Cycle: OPTIMIZED		Level Of Service:	A	

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 0	0 0	0 0	1	1 0	1 0	1 0	0
Volume Module:												
Base Vol:	11	0	68	0	0	0	0	1632	16	29	744	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	11	0	71	0	0	0	0	1697	17	30	774	0
Added Vol:	1	0	2	0	0	0	0	91	1	4	60	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	0	73	0	0	0	0	1788	18	34	834	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	0	73	0	0	0	0	1788	18	34	834	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	0	73	0	0	0	0	1788	18	34	834	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	12	0	73	0	0	0	0	1788	18	34	834	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.84	1.00	1.00	1.00	1.00	0.95	0.95	0.12	1.00	1.00
Lanes:	0.15	0.00	0.85	0.00	0.00	0.00	0.00	1.98	0.02	1.00	1.00	0.00
Final Sat.:	233	0	1364	0	0	0	0	3571	35	226	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.50	0.50	0.15	0.44	0.00
Crit Moves:	****							****				
Green/Cycle:	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.84	0.84	0.84	0.84	0.00
Volume/Cap:	0.59	0.00	0.59	0.00	0.00	0.00	0.00	0.59	0.59	0.18	0.52	0.00
Delay/Veh:	32.8	0.0	32.8	0.0	0.0	0.0	0.0	1.8	1.8	1.3	1.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.8	0.0	32.8	0.0	0.0	0.0	0.0	1.8	1.8	1.3	1.6	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	3	0	3	0	0	0	0	6	6	0	5	0

****

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

Traffix 7.8.0115 (c) 2006 Dowling Assoc. Licensed to KUNZMAN ASSOC, ORANGE CA

APPENDIX D

Traffic Signal Warrant Worksheet

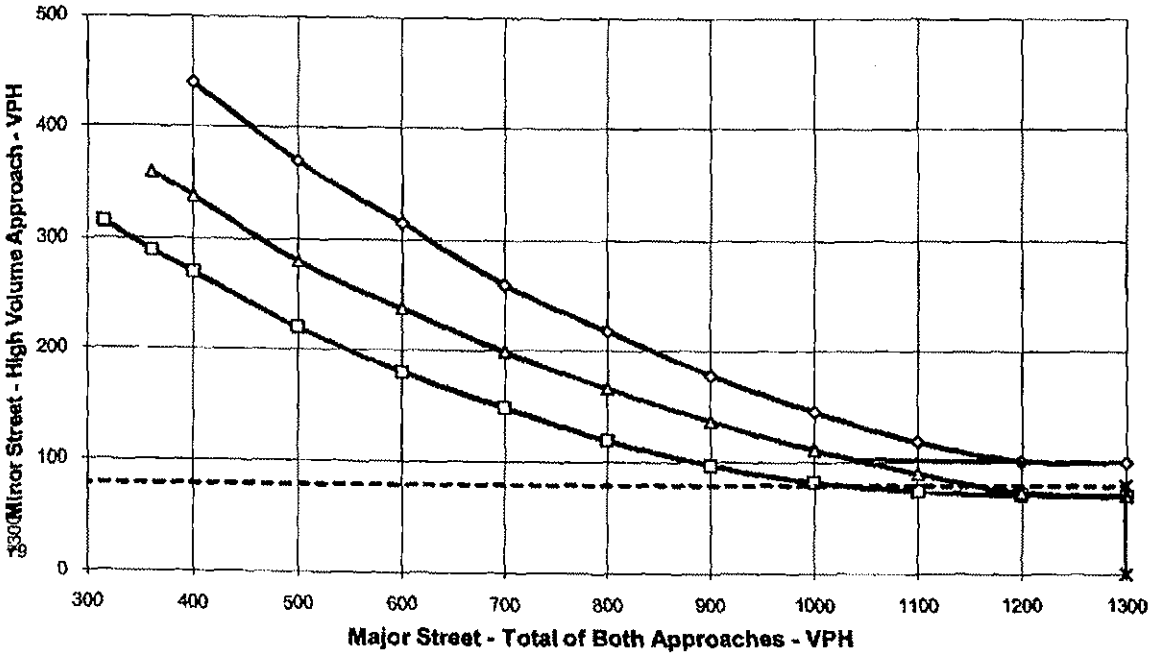
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing

Major Street Name = **Calabasas Road (EW)** Total of Both Approaches (VPH) = **2421**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **El Canon Avenue (NS)** High Volume Approach (VPH) = **79**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

APPENDIX E

Parking Slope Municipal Codes

County of Los Angeles

B. The director or county engineer finds that alternate parking facilities are not feasible. (Ord. 83-0161 § 27, 1983: Ord. 1494 Ch. 7 Art. 3 § 703.6, 1927.)

22.52.1060 Specifications for development or parking facilities.

All land used for parking, other than a lot or parcel of land having a gross area of one acre or more per dwelling unit used, designed or intended to be used for residential purposes shall be developed and used as follows:
A. Paving. Where access to a parking space or spaces is from a highway, street or alley which is paved with asphaltic or concrete surfacing, such parking areas, as well as the maneuvering areas and driveways used for access thereto, shall be paved with:
1. Concrete surfacing to a minimum thickness of three and one-half inches, with expansion joints as necessary; or
2. Asphalt surfacing, rolled to a smooth, hard surface having a minimum thickness of one and one-half inches after compaction, and laid over a base of crushed rock, gravel or other similar material compacted to a minimum thickness of four inches. The requirement for said base may be modified if:
a. A qualified engineer, retained to furnish a job-site soil analysis, finds that said base is unnecessary to insure a firm and unyielding subgrade, equal, from the standpoint of the service, life and appearance of the asphaltic surfacing, to that provided if said base were required, and so states in writing, together with a copy of his findings and certification to such effect, or
b. Other available information provides similar evidence; or
3. Other alternative material that will provide at least the equivalent in service, life and appearance of the materials and standards which would be employed for development pursuant to subsection A1 or A2 of this section;
4. The county engineer, at the request of the director, shall review and report on the adequacy of paving where modification of base is proposed under subsection A2, or where alternative materials are proposed under subsection A3. The county engineer may approve such modification or such alternative materials if, in his opinion, the evidence indicates compliance with subsection A2 or A3 as the case may be.
B.1. Marking of Spaces. Each parking space shall be clearly marked with paint or other similar distinguishable material, except spaces established in a garage or carport having not more than three spaces.
2. Striping for parking spaces may be modified by the director where there is a dual use of the parking facility or where an alternate paving material as described in subsection A3 of this section is used. In approving such modification by site plan the director shall require suitable alternate means of marking the space to insure the required number of spaces is provided.
3. Each compact automobile parking space shall be clearly marked with the words "Compact Only."
C. Wheel Stops. Wheel stops shall be provided for parking lots with a slope of more than three percent, except that the installation of wheel stops is optional for parking stalls oriented at right angles to the direction of slope. Wheel stops are also required on the perimeter of parking lots which are adjacent to walls, fences or pedestrian walkways.
D. Walls.
1. Front Yards. Where parking facilities are located adjacent to the front lot lines, a solid masonry wall not less than 30 inches nor more than 42 inches in height, shall be established parallel to and not nearer than five feet to the front lot line except that:
a. The wall required shall not be nearer to the front lot line than the abutting required front or side yard of property in a residential or agricultural zone for a distance of 50 feet from the common boundary line;
b. Where abutting and adjacent property is in zones other than a residential or agricultural, the director may permit the establishment of the required wall:
i. Closer than five feet to the front property line, and/or
ii. To a height not exceeding six feet pursuant to the provisions of Part 12 of Chapter 22.56 except where a yard is required in the zone.
2.a. Side and Rear Yards. Where parking facilities are located on land adjoining a residential or agricultural zone, a solid masonry wall not less than five feet nor more than six feet in height shall be established along the side and rear lot lines adjoining said zones except that:
i. Where such wall is located within 10 feet of any street, highway or alley and would interfere with the line-of-sight of the driver of a motor vehicle leaving the property on a driveway, or moving

past a corner at the intersection of two streets or highways, said wall shall not exceed a height of 42 inches.
ii. Such wall shall not be less than four feet in height above the surface of the adjoining property. If said wall is more than six feet in height above said adjoining property, it shall be set back from the adjoining property line a distance of one foot for each one foot in height above six feet.
3. The director may approve substitution of a decorative fence or wall, or landscaped berm where, in his opinion, such fence, wall or landscaped berm will adequately comply with the intent of this section pursuant to the provisions of Part 12 of Chapter 22.56.
E. Landscaping.
1. Where a wall is required to be set back from a lot line, the area between said lot line and such wall shall be landscaped with a lawn, shrubbery, trees and/or flowers, and shall be continuously maintained in good condition.
2. Where more than 20 automobile parking spaces exist on a lot or parcel of land, areas not used for vehicle parking or maneuvering, or for the movement of pedestrians to and from vehicles, should be used for landscaping. At least two percent of the gross area of the parking lot shall be landscaped. Landscaping shall be distributed throughout the parking lot, so as to maximize the aesthetic effect and compatibility with adjoining uses. This regulation shall not apply to parking areas on the roofs of buildings, nor to parking areas within a building.
3. All landscaping materials and sprinkler systems shall be clearly indicated on the required site plans.
F. Lighting. Lighting shall be so arranged to prevent glare or direct illumination in any residential or agricultural zone.
G. Slope. Parking lots shall not have a slope exceeding five percent, except for access ramps or driveways which shall not exceed a slope of 20 percent.
H. Design. Parking lots shall be designed so as to preclude the backing of vehicles over a sidewalk, public street, alley or highway. Parked vehicles shall not encroach on nor extend over any sidewalk. Parking spaces shall be designed and striped as shown in Appendix 3 of this Title 22. Modifications to the designs shown in Appendix 3 may be approved by the director provided that such modifications are compatible with the design criteria contained in said appendix.
I. Site Plans. A site plan shall be submitted to the director to insure that said use will properly comply with the provisions of this Title 22 as provided in Part 12 of Chapter 22.56 on director's review. (Ord. 83-0161 §§ 29--37, 1983; Ord. 1494 Ch. 7 Art. 3 § 703.21, 1927.)

22.52.1070 Parking for handicapped persons.

A. Number required:
1. All nonresidential parking lots accessible to the public, with the exception of parking lots providing 100 percent valet parking with an approved parking permit, shall provide parking spaces designated for use by handicapped persons, in the number indicated by the following table:

Total Number of Parking Spaces	Number of Parking Spaces Required For the Handicapped
1--40	1
41--80	2
81--120	3
121--160	4
161--300	5
301--400	6
401--500	7
over 500	1 additional for each 200 additional spaces provided

City of Los Angeles

Such driveways shall be located in accordance with a plan approved by the Department of Building and Safety in the following instances:

(1) On a lot in a P (including any combination with an A or R Zone) or PB Zone.

(2) For every parking area and garage having a capacity of more than 25 automobiles or trucks.

The Department of Building and Safety shall disapprove any plan which it determines fails to meet the standards established by this paragraph.

(f) **Driveway Width.** Every access driveway shall be at least nine feet in width in the A, RE, RS, R1, RU, RZ, R2, RMP, and RW Zones, and 10 feet in width in the RD, R3, R4, R5, P, PB, C and M Zones; provided, however, every access driveway serving a parking area or garage having a capacity of more than 25 automobiles or trucks shall be at least 19 feet in width, or in lieu thereof there shall be two access driveways, each of which is at least 10 feet in width; provided further, however, that an access driveway serving an apartment house erected in the R2 Zone shall be at least 10 feet in width. *(Amended by Ord. No. 154,904, Eff. 7/7/80.)*

(g) **Driveway and Ramp Slopes.** The slope of every driveway or ramp shall not exceed 20 percent; except that where an existing driveway being used for access is required to be modified because of a public improvement project, such grade may exceed 20 percent, provided the design is approved by the City Engineer.

Transition slopes in driveways and ramps shall be designed to the standards established by the Superintendent of Building and the City Engineer.

(h) **Tandem Parking.** Each required parking stall within a parking area or garage shall be individually and easily accessible, except that automobiles may be parking in tandem in the following instances:

(1) In a public garage or public parking area providing attendants to park vehicles at all times said garage or area is open for use.

(2) In a private garage or private parking area serving an apartment house, apartment hotel, hotel, two-family dwelling in an RW Zone, two-family dwelling in an RD, R3, R4 or R5 Zone on a lot with a frontage of less than 40 feet, or multiple or group dwelling, where said tandem parking is not more than two cars in depth, and provided that at least one parking stall per dwelling unit and all of the parking stalls required for any guest rooms are individually and easily accessible. *(Amended by Ord. No. 145,627, Eff. 5/25/74.)*

(3) In a private garage or private parking area serving a dwelling in the RU and RZ Zones, not including any parking areas for recreational vehicles or guests. *(Amended by Ord. No. 181,716, Eff. 12/6/86.)*

(i) **Parking Stall Location.** Each automobile parking stall shall be so located that:

City of Santa Clarita

17.18.050 Width, Paving and Slope of Driveways.

Access to other or more parking spaces required by this chapter which serve three (3) or more dwelling units shall be developed in accordance with the following:

A. Driveways shall be not less than ten (10) feet wide.

B. Where this section requires that such access be paved, the pavement shall be not less than ten (10) feet in width throughout, except that a center strip over which the wheels of a vehicle will not pass in normal use need not be paved.

C. Unless modified by the Director of Community Development because of topographical or other conditions, no portion of a driveway providing access to parking areas shall exceed a slope of twenty (20) percent. Where there is a change in the slope of driveway providing such access, it must be demonstrated that vehicles will be able to pass over such change in slope without interference with their undercarriages.

D. All parcels less than one-half of an acre in size shall have a solid/secure surface driveway (concrete, asphalt or other surface) that complies with the driveway standards to the satisfaction of the Director of Community Development.

E. Where driveways are not perpendicular to the street, sufficient back-up room shall be provided to the satisfaction of the Director of Community Development.

F. Circular driveways are not permitted for lots having less than ten thousand nine hundred eighty (10,980) square feet. (Ord. 00-3, 2/8/00; Ord. 02-5, 4/23/02; Ord. 05-1 § 2, 1/25/05; Ord. 05-19 § 2, 12/13/05)

17.18.060 Difficult or Impossible Access to Parking Space—Alternate Requirements.

Where vehicular access to any parking space on the same lot or parcel of land as the residential structure to which it would be accessory is not possible from any highway or street due to topographical or other conditions, or is so difficult that to require such access is unsafe and/or unreasonable in the opinion of the Director of Community Development, the parking space shall not be required if:

A. Alternate parking facilities approved by the Director of Community Development are provided; or

B. **The Director of Community Development finds that alternate parking facilities are not needed or feasible.** (Ord. 00-3, 2/8/00; Ord. 05-1 § 2, 1/25/05; Ord. 05-19 § 2, 12/13/05)

17.18.070 Specifications for Development of Parking Facilities.

All land used for parking, other than a lot or parcel of land having a gross area of one acre or more per dwelling unit used, designed or intended to be used for residential purposes, shall be developed and used as follows:

A. **Paving.** Where access to a parking space or spaces is from a highway, street or alley which is paved with asphaltic or concrete surfacing, such parking areas, as well as the maneuvering areas and driveways used for access thereto, shall be paved with:

1. Concrete surfacing to a minimum thickness of three and one-half (3.5) inches, with expansion joints as necessary; or

2. Asphalt surfacing, rolled to a smooth, hard surface having a minimum thickness of one and one-half (1.5) inches after compaction, and laid over a base of crushed rock, gravel or other similar material compacted to a minimum thickness of four (4) inches. The requirement for said base may be modified if:

a. A qualified engineer, retained to furnish a job-site soil analysis, finds that said base is unnecessary to ensure a firm and unyielding subgrade, equal from the standpoint of the service, life and appearance of the asphaltic surfacing to that provided if said base were required, and so states in writing, together with a copy of his findings and certification to such effect; or

b. Other available information provides similar evidence.

3. Other alternative material that will provide at least the equivalent in service, life and appearance of the materials and standards which would be employed for development pursuant to subsection (A)(1) or (A)(2) of this section.

4. The City Engineer, at the request of the Director, shall review and report on the adequacy of paving where modification of base is proposed under subsection (A)(2) of this section, or where alternative materials are proposed under subsection (A)(3) of this section. The City Engineer may approve such modification or such alternative materials if, in his opinion, the evidence indicates compliance with subsections (A)(2) or (A)(3) of this section as the case may be.

B. **Marking of Spaces.**

1. Each parking space shall be clearly marked with paint or other similar distinguishable material, except spaces established in a garage or carport having not more than three (3) spaces.

Appendix H

Comments and Responses

COMMENTS and RESPONSES

This appendix contains all of the written comments received in response to the Draft IS/MND during the 30-day public review period that concluded on November 29, 2007. Each comment received during the comment period by the City of Calabasas (City) has been included within this section. Responses to the comments have been prepared to address the environmental concerns raised by the commenters and to indicate where and how the IS/MND addresses these environmental issues. Textual changes within the document are indicated by a vertical line in the right page margin. Each letter is presented first, with the responses following.

COMMENTERS on the DRAFT IS/MND

The City received seven (9) written comments on the Draft IS/MND during the comment period. These letters are listed as follows and will be used for referencing in this section.

Respons e ID	Commenter	Date	Page Number
1	California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	11/30/07	2
2	Native American Heritage Commission, Program Analyst	11/26/07	5
3	California Department of Fish and Game - CDFG	11/29/07	8
4	South Coast Air Quality Management District - SCAQMD -CEQA Section	11/16/07	12
5	Southern California Association of Governments - SCAG - Program Development and Evaluation Division	12/7/07	14
6	County of Los Angeles Department of Public Works - -Land Development Division	11/29/07	16
7	Las Virgenes Municipal Water District - LVMWD	11/20/07	19
8	County of Los Angeles Sheriff's Department, Malibu/Lost Hills Station	12/3/07	23
9	County of Los Angeles Sheriff's Department, Facilities Planning Bureau	12/12/07	27

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

(1)

November 30, 2007

RECEIVED
DEC 05 2007
COMMUNITY DEVELOPMENT
PLANNING DEPT.

Talyn Mirzakhanian
City of Calabasas
26135 Mureau Road
Calabasas, CA 91302-3172

Subject: Safran Affordable Senior Housing Project
SCH#: 2007101137

Dear Talyn Mirzakhanian:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on November 29, 2007, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

(1) Cont.

Document Details Report
State Clearinghouse Data Base

SCH# 2007101137
Project Title Safran Affordable Senior Housing Project
Lead Agency Calabasas, City of

Type MN Mitigated Negative Declaration
Description D

The proposed project involves the construction of 75 units of affordable senior housing on a 42,176 sf parcel. Project development would include the construction of two, three-story buildings. The buildings would be connected by a network of landscaped walkways, with a subterranean parking garage providing 74 standard spaces, two handicapped spaces, including one van accessible space, and 83 bicycle spaces situated beneath the development. Of the 75 senior dwelling units proposed, 74 would be one bedroom units ranging from ~550 sf to ~650 sf. One unit would have 2 bedrooms and ~1,124 sf, and is intended to house the onsite complex manager.

Lead Agency Contact

Name Talyn Mirzakhanian
Agency City of Calabasas
Phone (818) 878-4225 x274 **Fax**
email
Address 26135 Mureau Road
City Calabasas **State** CA **Zip** 91302-3172

Project Location

County Los Angeles
City Calabasas
Region
Cross Streets 4803 El Canon Avenue
Parcel No. 2068-004-016
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use Z: Commercial, Old Town (CT)
GPD: Business - Old Town (B-OT)

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 5; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 7; Department of Housing and Community Development; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 10/31/2007 **Start of Review** 10/31/2007 **End of Review** 11/29/2007

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter 1

COMMENTER: Terry Roberts, Director, State Clearinghouse

DATE: November 30, 2007

Response 1

The commenter acknowledges that the State Clearinghouse review requirements for draft environmental documents, pursuant of the California Environmental Quality Act, have been fulfilled. No response is necessary.

(2)

STATE OF CALIFORNIA — Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

RECEIVED
NOV 28 2007
COMMUNITY DEVELOPMENT
PLANNING DEPT.

November 26, 2007

Ms. Talyn Mirzakhanian, Planner
CITY OF CALABASAS PLANNING DIVISION
26135 Mureau Raod
Calabasas, CA 91302

Re: SCH#2007101137; CEQA Notice of Completion; Initial Study and Mitigated Negative Declaration for Safran Senior Affordable Housing Project; City of Calabasas Los Angeles County, California

Dear Ms. Mirzakhanian:

The Native American Heritage Commission is the state agency designated to protect California's Native American Cultural Resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ http://www.ohp.parks.ca.gov/1068/files/IC%20Roster.pdf The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in 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 measurers 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 pubic 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 (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity that may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section; .

- The NAHC advises the use of Native American Monitors to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact (APE). In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s).

√ 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 or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the

(2) Cont.

NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning and implementation

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Attachment: List of Native American Contacts

Cc: State Clearinghouse

(2) Cont.

Native American Contacts
Los Angeles County
November 26, 2007

Charles Cooke
32835 Santiago Road
Acton , CA 93510
(661) 269-1422
(661) 733-1812

Chumash
Fernandeno
Tataviam
Kitanemuk

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez
981 N. Virginia
Covina , CA 91722
(626) 339-6785

Yowlumne
Kitanemuk

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

Chumash
Tataviam
Fernandeño

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall , CA 91322
tsen2u@msn.com
(661) 753-9833 Office
(760) 885-0955 Cell
(760) 949-1604 Fax

Fernandeño
Tataviam
Serrano
Vanyume
Kitanemuk

Fernandeno Tataviam Band of Mission Indians
Randy Guzman-Folkes, Cultural/Environ Depart
601 South Brand Boulevard, Suite 102
San Fernando , CA 91340
ced@tataviam.org
(818) 837-0794 Office
(805) 501-5279 Cell
(818) 837-0796 Fax

Fernandeno
Tataviam

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5324
(213) 386-3995 FAX

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 American with regard to cultural resources for the proposed SCH#2007101137; CEQA Notice of Completion; Initial Study and Mitigated Negative Declaration for Afran Senior Affordable Housing Project; City of Calabasas; Los Angeles County, California.

Letter 2

COMMENTER: Dave Singleton, Program Analyst, Native American Heritage Commission

DATE: November 26, 2007

Response 2

The commenter lists the Native American Heritage Commission's (NAHC) recommendations for assessing and mitigating project-related impacts on archeological resources and provides a Native American Contacts list. As noted in the Initial Study, no cultural resources are known to exist within the project area and the project site is not within an area of potential archaeological sensitivity (City of Calabasas General Plan FEIR, 2003). In the event that cultural resources or human remains are discovered during construction activities, Mitigation Measures CR-1 and CR-2 would reduce impacts to unknown cultural resources or human remains to a less than significant level.

(3)

Patrick Nichols

From: Talyn Mirzakhanian [tmirzakhanian@cityofcalabasas.com]
Sent: Thursday, November 29, 2007 1:53 PM
To: Patrick Nichols
Subject: Farmer MND Comment

Attachments: Bird Language excerpt.doc

Bird Language excerpt.doc (24 ...

FYI...

-----Original Message-----
From: Scott P. Harris [mailto:spharris@dfg.ca.gov]
Sent: Thursday, November 29, 2007 1:28 PM
To: Talyn Mirzakhanian
Subject: Re: email address

Talyn,

Attached is the native bird avoidance language the Department of Fish and Game recommends be included as a mitigation measure for all projects under that will result in the removal of or disturbances to native and non native vegetation including the Senior Housing Project that the City is reviewing.

Thank you

Scott Harris
Environmental Scientist
CA Dept. of Fish and Game
Habitat Conservation Planning

>>> "Talyn Mirzakhanian" <tmirzakhanian@cityofcalabasas.com> 11/29/2007 9:06:02 AM >>>
Thanks!

Talyn Mirzakhanian

Planner

26135 Mureau Rd.

Calabasas, CA 91302

Tel: (818) 878-4225 ext. 274

Fax: (818) 878-4208

(3) Cont.

a. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

b. Proposed project activities (including disturbances to native and non-native vegetation, structures and substrates) should take place outside of the breeding bird season which generally runs from March 1- August 31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86).

c. If avoidance of the breeding bird season is not feasible, the Department recommends that beginning thirty days prior to the disturbance of suitable nesting habitat the project proponent should arrange for weekly bird surveys to detect protected native birds occurring in the habitat that is to be removed and any other such habitat within 300 feet of the construction work area (within 500 feet for raptors) as access to adjacent areas allows. The surveys should be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys should continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work. If a protected native bird is found, the project proponent should delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, must be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing marking the protected area 300 feet (or 500 feet) from the nest. Construction personnel should be instructed on the sensitivity of the area. The project proponent should record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds.

Letter 3

COMMENTER: Scott Harris, California Department of Fish and Game, Habitat Conservation Planning

DATE: November 29, 2007

Response 3

The commenter states that native bird avoidance language is attached, and that the Department of Fish and Game recommends the language be included as a mitigation measure for all projects that would include removal of or disturbance to native and non native vegetation including the proposed Safran Affordable Senior Housing Project. The language has been added to the Biological Resources Section of the Initial Study.

Patrick Nichols

From: Talyn Mirzakhanian [tmirzakhanian@cityofcalabasas.com]
Sent: Monday, November 19, 2007 7:55 AM
To: Patrick Nichols
Subject: FW: MND for Safran Senior Affordable Housing Project

FYI...

From: Charles Blankson [mailto:CBlankson@aqmd.gov]
Sent: Friday, November 16, 2007 9:19 AM
To: Talyn Mirzakhanian
Subject: MND for Safran Senior Affordable Housing Project

Ms. Talyn:

I have reviewed the above report and have the following editorial comments to be used to revise the relevant portions of the MND for the Final MND.

1. Appendix A shows that the lead agency used the current URBEMIS 2007 Version 9.2.2 to calculate the proposed project's construction and operational emissions. SCAQMD staff recommends the use of this model. However, the text of the MND on pages 13 and 14 states that the lead agency used URBEMIS 2002 to calculate the emissions. This is incorrect. Please revise this and also revise the footnotes to the Tables 3 and 4 regarding sources. A

2. The URBEMIS 2007 Assumptions in the printout in Appendix A shows that for Fine Grading of the site, 15 acres were disturbed with a daily average of 3.73 acres. It is not clear where these numbers came from given that the total site for the proposed project is only 0.968 acres. Please correct this for the Final MND. B

Please call me if you have any questions on the above comments.

Charles Blankson, Ph.D.
Air Quality Specialist
SCAQMD, CEQA Section
21865 Copley Drive
Diamond Bar, CA 91765
Tel: 909 396-3304
Fax: 909 396-3324
cblankson@aqmd.gov

Letter 4

COMMENTER: Charles Blankson, Ph.D., South Coast Air Quality Management District, CEQA Section

DATE: November 16, 2007

Response 4A

The commenter notes that Appendix A shows that the current URBEMIS 2007 Version 9.2.2 was used to calculate the proposed project construction and operation emissions, and states that SCAQMD staff recommends the use of this model. However, the commenter notes that the references in the MND text cite URBEMIS 2002, which is incorrect. The URBEMIS references have been corrected in the Initial Study to reflect the version of the model that was actually used for the analysis.

Response 4B

The commenter notes that the URBEMIS 2007 assumptions in the printout in Appendix A show that for fine grading the model was run assuming that 15 acres were disturbed with a daily average of 3.73 acres, which is unclear as the site of the proposed project is 0.968 acres. The URBEMIS 2007 model was rerun with a 0.968 acre site assumption for fine grading, the printout in Appendix A was replaced. The corresponding values in Table 3 of the MND have been revised and the new values are lower than the previously modeled emissions.

(5)

SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

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Orange County: Chris Norby, Orange County • Christine Barnes, La Palma • John Beauman, Brea • Lou Bone, Tustin • Debbie Cook, Huntington Beach • Leslie Daigle, Newport Beach • Richard Dixon, Lake Forest • Troy Edgar, Los Alamitos • Paul Glaab, Laguna Niguel • Robert Hernandez, Anaheim • Sharon Quirk, Fullerton

Riverside County: Jeff Stone, Riverside County • Thomas Buckley, Lake Elsinore • Bonnie Flickinger, Moreno Valley • Ron Loveridge, Riverside • Greg Pettis, Cathedral City • Ron Roberts, Temecula

San Bernardino County: Gary Ovitt, San Bernardino County • Lawrence Dale, Barstow • Paul Eaton, Montclair • Lee Ann Garcia, Grand Terrace • Tim Jasper, Town of Apple Valley • Larry McCallon, Highland • Deborah Robertson, Rialto • Alan Wapner, Ontario

Ventura County: Linda Parks, Ventura County • Glen Becerra, Simi Valley • Carl Morehouse, San Buenaventura • Toni Young, Port Hueneme

Tribal Government Representative: Andrew Masiel, Sr., Pechanga Band of Luiseño Indians

Orange County Transportation Authority: Art Brown, Buena Park

Riverside County Transportation Commission: Robin Lowe, Hemet

San Bernardino Associated Governments: Paul Leon

Ventura County Transportation Commission: Keith Millhouse, Moorpark

10/24/07

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DEC 11 2007

COMMUNITY DEVELOPMENT
PLANNING

December 7, 2007

Ms. Talyn Mirzakhanian
Planner
City of Calabasas
26135 Mureau Road
Calabasas, CA 91302-3172

RE: SCAG Clearinghouse No. I 20070663 Safran Senior Affordable Housing Project

Dear Ms. Mirzakhanian:

Thank you for submitting the **Safran Senior Affordable Housing Project** for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

We have reviewed the **Safran Senior Affordable Housing Project**, and have determined that the proposed Project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality Act (CEQA) Guidelines (Section 15206). Therefore, the proposed Project does not warrant comments at this time. Should there be a change in the scope of the proposed Project, we would appreciate the opportunity to review and comment at that time.

A description of the proposed Project was published in SCAG's **November 1-30, 2007** Intergovernmental Review Clearinghouse Report for public review and comment.

The project title and SCAG Clearinghouse number should be used in all correspondence with SCAG concerning this Project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact me at (213) 236-1857. Thank you.

Sincerely,

LAVERNE JONES, Planning Technician
Program Development and Evaluation Division

Doc #142251

Letter 5

COMMENTER: Laverne Jones, Southern California Association of Governments, Program Development and Evaluation Division

DATE: December 7, 2007

Response 5

The commenter states that the project is not regionally significant per South Coast California Association of Governments Intergovernmental Review and CEQA Guidelines. The commenter further states that the proposed project does not warrant comments at this time. No response is necessary.

(6)

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

DONALD L. WOLFE, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

November 29, 2007

IN REPLY PLEASE
REFER TO FILE: LD-0

Ms. Talyn Mirzakhanian
Planning
City of Calabasas
26135 Mureau Road
Calabasas, CA 91302-3172

Dear Ms. Mirzakhanian:

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
SAFRAN SENIOR AFFORDABLE HOUSING PROJECT
CITY OF CALABASAS

Thank you for the opportunity to review the Draft Initial Study and Mitigated Negative Declaration for the above project. We offer the following comments for your consideration.

Hazardous Waste

The existing Hazardous Waste Management (HWM) infrastructure in this County is inadequate to handle the hazardous waste currently being generated. The proposed project may generate household hazardous waste, which could adversely impact existing HWM infrastructure. Mitigation measures may include, but are not limited to, providing new homeowners with educational materials on the proper management and disposal of household hazardous waste. The project proponent may contact Public Works for available educational materials by calling 1(888) CLEAN LA. A

Should any operation within the subject project include the construction, installation, modification, or removal of underground storage tanks, industrial waste treatment or disposal facilities, Public Works' Environmental Programs Division must be contacted for required approvals and operating permits. B

6 Cont.

If you have any questions, please contact Mr. Conal McNamara, AICP, at (626) 458-4948.

Very truly yours,

DONALD L. WOLFE
Director of Public Works

for DENNIS HUNTER
Assistant Deputy Director
Land Development Division

CDM:ca
P:\LDPUB\CEQA\CDM\Calabasas-SafranSeniorAffordableHousingProject.doc

Letter 6

COMMENTER: Donald L. Wolfe, County of Los Angeles Department of Public Works, Land Development Division

DATE: November 29, 2007

Response 6A

The commenter states that the existing Hazardous Waste Management (HWM) infrastructure in Los Angeles County, in which the project is located, is inadequate to handle the hazardous waste currently being generated. The commenter also suggests that the proposed project may generate household hazardous waste that could adversely affect existing HWM infrastructure and suggests mitigation measures regarding management and disposal of household hazardous waste.

The City currently has a Household Hazardous Waste Collection Program, which includes an educational web site, material on what constitutes household hazardous waste, suggestions on how to reduce household hazardous waste, and monthly Household Hazardous Waste Roundups where household hazardous waste is collected from residents and disposed of properly. Information regarding the Household Hazardous Waste Collection Program is provided to all City residents through flyers, advertisements in the local newspaper, advertisements on the local television station, and the City's website. This level of notification is considered sufficient, and no revisions to the Initial Study are warranted.

Response 6B

The commenter notes that should any operation within the subject project include the construction, installation, modification, or removal of underground storage tanks, industrial waste treatment or disposal facilities, LA County Public Works Environmental Programs Division must be contacted for required approvals and operating permits. As stated in the Initial Study, a Phase I Environmental Site Assessment was conducted for the proposed project, and no underground storage tanks were found to have ever existed onsite. Furthermore, the proposed project involves the development of 75 affordable senior housing units, and would not include the construction, installation, modification, or removal of underground storage tanks, industrial waste treatment or disposal facilities. Therefore, the comment is noted and no further response is necessary.

(7)

LAS VIRGENES MUNICIPAL WATER DISTRICT
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4232 Las Virgenes Road
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November 20, 2007

City of Calabasas
Community Development Department
26135 Mureau Road
Calabasas, CA 91302-3172

Attention: **Talyn Mirzakhanian, Planner**

Subject: SPR-006-101 and CUP-600-025
Draft Initial Study/Mitigated Negative Declaration-Safran Senior Affordable Housing Project
4803 El Canon Avenue

Dear Ms. Mirzakhanian:

We are in receipt of your Notice of Intent to adopt a Mitigated Negative Declaration for a proposed 75 unit complex of affordable senior housing at 4803 El Canon Avenue. The District first responded to the City in a letter dated January 3, 2007. In that correspondence we noted that the project would be adjacent to our sewer lift station at 4815 El Canon Road. Our concerns were occasional maintenance at the station, odor control issues and noise. A

The Mitigated Negative Declaration indicates that two (2) noise measurements were taken at the station. A measurement with two pumps running and the other with the pump station doors open and the auxiliary generator running. The first measurement was in the normally acceptable range for multi-family residential. The other measurement exceeded the thresholds identified in the Calabasas General Plan. The second measurement was taken with the auxiliary generator running. It was concluded in the Mitigated Negative Declaration that the noise levels with the generator running would be less than significant. **The number of times the emergency generator will be operating cannot be determined** even though the report stated that the generator would come on only 3-8 times during the summer season. This conclusion is not necessarily correct and could be significant. B

The projects water demands would not result in a significant impact to the water supply of the District. In order to meet the City's water conservation performance objectives, certain techniques will be part of the mitigation measures of this project. C

7 Cont.

The District's water conservation measures are incorporated into the Draft Initial Study.

Included in the report under the Preliminary Environmental Site Assessment is a statement indicating no evidence of strong pungent or noxious odors was present at the time of the reconnaissance. It is the opinion of the District that further odor testing may be warranted to verify the presence of no strong odors at or around the pump station site. D

The developer will continue to be required to meet all of the District's conditions of service in order to be served including the payment of all connection fees for sewer and water. E

If you have any questions concerning this matter, please feel free to contact me at any time. Thank you.

Very truly yours,

Neal L. Clover

Neal L. Clover

Civil Engineering Assistant

NLC:acg

Letter 7

COMMENTER: Neal L. Clover, Las Virgenes Municipal Water District (District)

DATE: November 20, 2007

Response 7A

The commenter states that in previous correspondence the District has expressed concerns regarding occasional maintenance at any hour, odor control issues, and noise, all associated with a District sewer lift station located adjacent to the project site. The comment is noted and no response is necessary. Specific responses to the commenter's concerns are provided below.

Response 7B

The commenter notes that noise measurements were conducted on the project site near the sewer lift station while two pumps were operating at normal capacity and again with doors open and auxiliary generator running to simulate emergency situations. The noise levels did not exceed the threshold for multi-family residences with the two pumps running; however, with the auxiliary generator running, noise levels did exceed the threshold. The commenter notes that in the Initial Study, impacts associated with noise from the sewer lift station would be less than significant. The commenter states that the number of times the emergency generator will be in operation cannot be determined, that it may exceed the 3 – 8 times per season identified in the Initial Study, and thus impacts could be significant. In a personal communication, John Stangle of the Las Virgenes Municipal Water District, indicated that the auxiliary generator was used only during power outages, called rolling "brown outs" or "black outs." The auxiliary generator operates on a time delay to fire up when power is out for two to five minutes to avoid firing up on short surges. Mr. Stangle indicated that the power outages occur on average once or twice a month during the summer season, with certain summers experiencing more and other summers, such as the summer of 2007, experiencing very few. However, considering the average is once or twice a month during the summer season, and for variable lengths of time, this would be intermittent noise generation exceeding the thresholds, and would not result in prolonged exposure to noise levels in excess of the City thresholds for multi-family residences. No changes to the document are required.

Response 7C

The commenter notes that the project's water demands would not result in a significant impact to the water supply of the District. Furthermore, in order to meet the City's water conservation performance objectives, certain techniques will be part of the mitigation measures of this project, including proposed Mitigation Measure U-1.

Response 7D

The commenter notes that the Initial Study states that no evidence of strong pungent or noxious odors was present on site during the Preliminary Environmental Site Assessment reconnaissance. The commenter states that in the opinion of the District further odor testing may be warranted to verify the presence of no strong odors at or around the pump station. It is

unknown what type of "odor testing" is recommended, since no evidence of odors was found during any site visits throughout the course of the Initial Study analysis. There is no formal protocol for "odor testing," and the commenter was unavailable for clarification on what kind of testing was desired. No evidence of strong pungent or noxious odors was present on site during any of the site visits, approximately five of which were conducted by Patrick Nichols of Rincon Consultants Inc., during the course of 2007. Furthermore, in a personal communication, Dale Reynolds of the District indicated that the carbon scrubber filtration system had been updated with a new filter during 2007. Further testing is not required.

Response 7E

The commenter notes that the developer would continue to be required to meet all of the District's conditions of service in order to be served, including the payment of all connection fees for sewer and water. The comment is noted, and no response in necessary.

(8)

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169

Leroy D. Baca, Sheriff

RECEIVED
DEC 10 2007
#522
FACILITIES PLANNING BUREAU
ADMINISTRATIVE SERVICES DIVISION

December 3, 2007

Mr. Gary T.K. Tse, Director
Facilities Planning Bureau
1000 South Fremont Avenue
Alhambra, CA 91803

SAFRAN SENIOR AFFORDABLE HOUSING CUP-600-025

IMPACT ON SHERIFF SERVICES

Law enforcement services for the project area are provided exclusively by the Los Angeles County Sheriffs Department Malibu/Lost Hills Station. The current ratio for police services with respect to population is 1.3 deputies/1000 residents. The proposed 75 units of affordable housing could affect law enforcement staffing at that ratio. Mitigation of potential impacts on Sheriff's response times due to the increase in community population or the project's design should be addressed in the Final Mitigated Negative Declaration. A

The current Sheriff's station facility that services the area could accommodate any additional staffing that may be needed, and no modifications to that facility would be required.

TRAFFIC IMPACT STUDY

The intersection of El Canon at Calabasas Road is often grid locked during peak hours as a result of the 101 freeway on/off ramps several hundred feet to the east. The combination of the freeway traffic and the Valley Circle intersection farther to the east causes significant delays. Specific measures to mitigate this problem should be identified in the Final Mitigated Negative Declaration. B

The extremely narrow width of El Canon Street makes parking and U-Turns extremely difficult. Combined with the traffic exiting the adjacent motion picture facility at the end of the cul-de-sac, there are significant parking issues on this street. Specific measures that would ease these problems should also be included in the Final Mitigated Negative Declaration. C

(8) Cont.

FACILITY SAFETY AND SECURITY

A senior housing facility of this type generates a large amount of foot traffic. In addition to security lighting immediately outside the facility, the amount of ambient street lighting along El Canon towards Calabasas Road should be improved. It is very difficult to see the driveways along the sidewalk and uneven pavement presents a significant slip and fall hazard to elderly residents. D

Finally, the evacuation plan for the facility needs to account for the extended amount of time it will take to remove elderly residents from the building and the limited space availability for street parking of emergency vehicles in front of the housing project. E

If you have any further concerns, please feel free to contact Sergeant Philip Brooks at (818) 878-5555.

Sincerely,

LEROY D. BACA, SHERIFF

Thomas G. Martin, Captain
Malibu/Lost Hills Station

Letter 8

COMMENTER: Thomas G. Martin, Captain, County of Los Angeles Sheriff's Department, Malibu/Lost Hills Station

DATE: December 3, 2007

Response 8A

The commenter notes that law enforcement services for the project area are provided exclusively by the Los Angeles County Sheriff's Department Malibu/Lost Hills Station, and that the current ratio for police services with respect to population is 1.3 deputies/1,000 residents. The commenter states that the proposed 75 units of affordable senior housing could affect law enforcement staffing and result in potential effects to the Sheriff's response times due to the increase in community population or the project's design which should be mitigated. However, the commenter states the current Sheriff's station facility that services the area could accommodate any additional staffing that may be needed, and no modifications to that facility would be required. The comment is noted that additional staff may be needed, but no new or physically altered facilities that could result in adverse physical impacts to the environment would be needed.

Response 8B

The commenter states that the intersection of El Canon at Calabasas Road often experiences peak hour traffic problems associated with the 101 Freeway ramps and the Valley Circle intersection to the east of El Canon Ave. The commenter requests that measures to mitigate potential problems associated with peak hour traffic at the intersection of El Canon and Calabasas Road be incorporated into the MND. Mitigation Measures T-1 and T-2 in the MND were designed by the City in order to address this issue, and are expected to mitigate the potentially significant impacts identified in the Initial Study to less than significant levels. No further changes are warranted.

Response 8C

The commenter notes that the width of El Canon Street makes parking and U-turns difficult, and that combined with the traffic exiting the Motion Picture and Television Hospital, there are significant parking issues on this street. However, the proposed project would provide onsite parking in a subterranean parking structure with a total of 76 spaces. Operation of the proposed project would not affect street parking since adequate space would be provided onsite.

Response 8D

The commenter notes that a senior housing facility of the type proposed generates a large amount of foot traffic, and recommends that in addition to security lighting immediately outside the facility, the amount of ambient street lighting along El Canon towards Calabasas Road should be improved. The commenter continues that it is difficult to see the driveways

along the sidewalk and uneven pavement presents a significant slip and fall hazard to elderly residents.

The proposed project would include improvements to the street front and sidewalk at the proposed project site, as well as provide additional lighting in front of the proposed project. Remaining sidewalk conditions along El Canon do vary, and the comment is noted and will be passed on to City decision makers for consideration in their review of the proposed project.

Response 8E

The commenter notes that the evacuation plan for the facility needs to account for the extended amount of time it will take to remove elderly residents from the building and the limited space availability for street parking of emergency vehicles in front of the proposed project. The County of Los Angeles Fire Department would review site plans, site construction, and the actual structures prior to occupancy. As part of the review, the Fire Department would ensure that required fire protection safety features, including adequate emergency access, are implemented.

(9)

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169

LEROY D. BACA, SHERIFF

RECEIVED
DEC 17 2007
COMMUNITY DEVELOPMENT
PLANNING DEPT.

December 12, 2007

Ms. Talyn Mirzakhanian
Community Development Department
Planning Division
City of Calabasas
26135 Mureau Road
Calabasas, CA 91302-3172

Dear Ms. Mirzakhanian:

SAFRAN SENIOR AFFORDABLE HOUSING CUP-600-025

This is in response to your notice dated October 30, 2007, requesting comments from the Malibu/Lost Hills Sheriff's Station regarding the Initial Study and Notice of Intent to adopt a Negative Declaration/Mitigated Negative Declaration for the proposed construction of the Safran Senior Affordable Housing Project in the City of Calabasas. For our comments, please see the attached letter from Captain Thomas Martin of the Malibu/Lost Hills Sheriff's Station.

In summary, the Station raises concerns about traffic gridlock during peak hours and difficulties with parking and turning on El Canon Street. It is recommended that specific measures to mitigate these problems should be considered in the Final Mitigated Negative Declaration. It is also recommended that facility security lighting and street lighting should be improved to enhance pedestrian safety. Special attention should be given to the need for greater emergency evacuation time for the elderly and the limited amount of emergency vehicle parking space at the front of the housing project.

The impact on law enforcement staffing will be proportional to the increase in the community's population brought about by this project. No modifications to the existing Sheriff's station would be required to accommodate any additional staffing. We reserve the right to address these issues in future reviews.

9 Cont.

Should you have any additional questions regarding this matter, please contact Tom Bellizia, of my staff at (626) 300-3021.

Sincerely,

LEROY D. BACA, SHERIFF

Gary Tse by

Gary T. K. Tse, Director
Facilities Planning Bureau

9 Cont.

GTKT:TB:/mm

Attachments

cc: Glen Dragovich, Assistant Division Director, ASD
Adrianne Ferree, Assistant Director, FPB
Captain Thomas martin, Malibu/Lost Hills Station
Sergeant Philip Brooks, Malibu/Lost Hills Station
Tom Bellizia, Project Manager
Chrono
File
(SafranSeniorHousingCalabasas.doc)

Letter 9

COMMENTOR: Gary T.K. Tse, Director, County of Los Angeles Sheriff's Department, Facilities Planning Bureau

DATE: December 12, 2007

Response 9

The commenter summarizes the comment letter from Thomas G. Martin, Captain of the Malibu/Lost Hill Station (Letter 8 in the appendix). Please refer to Responses 8A through 8E for discussion and responses.

Appendix I

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

Safran Senior Affordable Housing Project IS/MND

Prepared for:

City of Calabasas
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December 2007

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
IV BIOLOGICAL RESOURCES							
BIO-1 **Oak Tree Permit Conditions.** The City's oak tree permit conditions require that a mitigation program be developed for proposed impacts. Several options are available to offset the loss of oak tree inventory on the site. A loss in oak tree inventory on the site shall be described in terms of species, total inches of diameter aggregate loss, and the magnitude of the impacts. The City may attach the following conditions, or a combination thereof, on an oak tree permit that may include the following: • A cash fee paid to the oak tree mitigation fund, which shall include maintenance and monitoring costs. The determination of the dollar value, cost or loss shall be calculated in accordance with the most current mitigation schedule established by the City Council. The Council shall review and approve such fees at least once every three years. The City may accept appropriate dedication of land in lieu of cash. • One inch of oak tree diameter shall be planted for each inch of tree removed. Locations appropriate for new replacement plantings may be proposed by the applicant and approved by the City arborist prior to the granting of a permit based on the potential for long-term viability. • Replacement or placement of additional oak trees, associated hardwood canopy, land, or wildlife habitat to proportionally offset the impacts associated with the loss of oak trees, limbs, roots, or potential long-term adverse impacts due to alterations or encroachment within the protected zone. Locations appropriate to such new plantings may be proposed by the applicant and must be approved by City staff prior to the granting of a	Approval of landscape and oak tree permit plan to verify compliance with requirements Monitoring during grading and development activities	• Prior to issuance of permits • Throughout development	• Once for plan • Ongoing	• Calabasas Planning Division			

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permit based on the potential for long-term viability. • Relocation of oak trees over 10 inches in diameter shall not be considered as mitigation. • Restrictions on construction activities within the protected zone of oak trees. • Remedial maintenance programs to improve the health of existing oak trees. • Monitoring shall be conducted during all grading and construction activities at intervals warranted by the site conditions and level of activity. The monitoring program shall consist of quantitative and qualitative observations useful in identifying stress-related responses of oak trees. Monitoring activities shall be performed in accordance with the procedures adopted in the guidelines. Following construction, annual monitoring shall be performed for a minimum of five years as warranted by site conditions, to ensure continued health of the trees and habitat areas. A City-qualified arborist shall conduct all monitoring. Costs shall be borne by the applicant. Restitution or remediation shall be required, should a project fail to comply with the desired establishment goals. Information provided by monitoring shall be used in establishing realistic mitigation measures and to ensure the future of oak resources throughout the City. Criteria for evaluating the success of oak tree preservation and establishing associated vegetation shall be specified in the permit conditions. Remediation shall be required as necessary to enable a site to meet the establishment criteria. • Registration. All replacement oak trees shall be registered with the City in accordance with the guidelines. • Maintenance. All oak trees shall be maintained							

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in accordance with the guidelines. • Bond. The City may require adequate security to ensure performance, correct construction procedures, reforestation, monitoring and maintenance, in an amount to be determined by the City. • Recordation. As deemed necessary by the City or as set forth in the City's Municipal Code, conditions of approval for an oak tree permit shall be recorded. The specific wording of the recorded permit shall be subject to the approval of the director.							
BIO-2 Retained Oak Trees. For any oak tree whose removal can be avoided, the following guidelines shall be followed to avoid impacts to the retained oak trees: • No construction activities or placement of structures shall occur within the protected zone of any retained oak tree. • Landscaping, trenching or irrigation systems shall not be installed within the oak tree protected zone. • Activities that cause excessive compaction within the protected zone shall not be permitted. • Manufactured cut slopes shall not begin their downward cut within the protected zone. • Manufactured fill slopes shall not extend within the protected zone. • On-slope retaining structures, if required, shall be designed to protect the root system of retained oak trees by preserving the natural grade within the protected zone. • Sedimentation and siltation shall be controlled to avoid filling around bases of oak trees. • Construction fence shall be erected along the protected zone of retained oak trees to prevent encroachment into the protected area.	Approval of plans to verify compliance with requirements Monitoring during grading and development activities	• Prior to issuance of permits • Throughout development	• Once for plan • Ongoing	• Calabasas Planning Division			

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BIO-3 **Monitoring Removed Oak Trees.** Monitoring activities for removal of oak trees shall consist of the following: • The applicant shall provide verification of the location of each tree that is proposed for removal. • All oak trees designated to be removed shall be flagged prior to removal, and located using a hand held tape measure. Measuring along the south property line with off sets to the north. With the verified location of each tree, status shall be rechecked (i. e. remove, save, etc). • All oak tree removal shall be verified to check for damage to any retained oak trees growing close association to the removed tree. • Mitigation may be required for damage to any retained oak tree.	Approval of plans to verify compliance with requirements Monitoring during grading and development activities	• Prior to issuance of permits • Throughout development	• Once for plan • Ongoing	• Calabasas Planning Division			
BIO-4 **Mitigation Planting.** The impacts to any oak trees as a result of this project shall be mitigated by planting container-grown oak trees. To the greatest extent practicable, replacement trees will be planted on site. The balance of the replacement trees will be planted within the City. The proper planting locations should be determined by a qualified arborist or landscape contractor. Irrigation for the planted oak trees should be available for the first two to three years to increase the survival rate. The planted trees should be monitored for soil moisture level, pest/disease infestation, and herbivory.	Approval of plans to verify compliance with requirements Monitoring during grading and development activities	• Prior to issuance of permits • Throughout development	• Once for plan • Ongoing	• Calabasas Planning Division			
BIO-5 **Ivy Removal.** All ivy should be removed from retained trees by a qualified landscape contractor. Ivy removal must be done carefully, taking great care to avoid damaging oak bark or branches. Use of a selective herbicide may be possible; a qualified pest control advisor should be consulted regarding any pesticide.	Removal of ivy from trees	• Throughout development	• Ongoing	• Calabasas Planning Division			

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BIO-6	**Notice.** The applicant shall provide a forty-eight (48) hour notice to the City and the applicant's oak tree consultant prior to the start of any approved work within the protected zone of any oak tree.	Submit notice city	• At least 48 hours prior to action	• Ongoing	• Calabasas Planning Division			
BIO-7	**Protected Zone Fencing.** Prior to start of construction, all oak trees shall be fenced at the edge of the protected zone to the extent possible in accordance with the Oak Tree Preservation and Protection Guidelines.	Install fencing prior to start of construction	• Prior to start of construction	• Once	• Calabasas Planning Division			
BIO-8	**Qualified Arborist.** All approved pruning shall be performed by a qualified arborist under the direction of the applicant's oak tree consultant. The arborist shall use the Pruning ANSI A300 Standards adopted by the Western Chapter of the International Society of Arboriculture. The same arborist shall, at the direction of the City Arborist, remove the ivy that is growing into the branch structure of the oaks as identified in BIO-5.	Submit proof of a qualified arborist	• Prior to issuance of permits	• Once	• Calabasas Planning Division			
BIO-9	**Protected Zone.** All approved excavation within the protected zone of any oak tree shall be performed with hand tools under the direction of the applicant's oak tree consultant. No construction materials, debris or vehicles shall be stored within the protected zone of any oak tree at any time.	Monitoring during activity within protected zones	• Throughout development	• Ongoing	• Calabasas Planning Division			
BIO-10	**Irrigation and Drainage.** Unless specifically approved by the City, no planting or irrigation shall be placed within the protected zone of any oak tree. All future drainage shall be directed away from the drip line of oak trees. The area beneath the drip lines shall remain dry at all times.	Approval of plans to verify compliance with requirements Verification upon completion of project	• Prior to issuance of permits • Upon completion of project and landscaping	• Once for plan • Once post construction s	• Calabasas Planning Division			
BIO-11	**Mulch.** At the completion of construction, the applicant shall place three inches (3") of an	Verification upon completion of project	• Upon completion of	• Once	• Calabasas Planning			

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approved mulch throughout the drip line of each oak tree.		project		Division			
BIO-12 Written Certification. Within ten (10) days of the completion of work, the applicant's oak tree consultant shall submit written certification to the Planning Division. This certification shall describe all work performed and whether such work was performed in accordance with the mitigation measures and permit conditions required.	Submittal of written certification of work by oak tree consultant	• Within ten (10) days or completion of work	• Once	• Calabasas Planning Division • Oak tree consultant			
BIO-13 Removal and Replacement. All oak removal shall be replaced on an inch for inch basis with at least 50% of the replacement trees of the species Quercus lobata (Valley Oak). The oak tree consultant shall be on-site and monitoring the removal of any oak trees. Further, they should be present whenever any work is performed with the protected zone of any oak tree.	Approval of landscape and oak tree permit plan to verify compliance with requirements Monitoring during work and verification upon completion of work	• Prior to issuance of permits • Throughout development and upon completion	• Once for plan • Ongoing	• Calabasas Planning Division • Oak tree consultant			
BIO-14 Native Bird Avoidance. (a)Migratory non-game native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C F R. Section10 13). Sections 3503, 3503 5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory non-game birds (as listed under the Federal MBTA). (b)Proposed project activities (including disturbances to native and non-native vegetation, structures and substrates) should take place outside of the breeding bird season which generally runs from March 1- August 31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs	Verification of voidance of disturbance during breeding bird season, or verification of bird surveys conducted 30 days prior to disturbance activities	• Throughout development, or prior to disturbance activities	• Ongoing, or once	• Calabasas Planning Division			

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and/or young) . Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86). (c)If avoidance of the breeding bird season is not feasible, the Department recommends that beginning thirty days prior to the disturbance of suitable nesting habitat the project proponent should arrange for weekly bird surveys to detect protected native birds occurring in the habitat that is to be removed and any other such habitat within 300 feet of the construction work area (within 500 feet for raptors) as access to adjacent areas allows. The surveys should be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys should continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work. If a protected native bird is found, the project proponent should delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, must be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing marking the protected							

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area 300 feet (or 500 feet) from the nest. Construction personnel should be instructed on the sensitivity of the area. The project proponent should record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds.							
V CULTURAL RESOURCES							
CR-1 **Resource Recovery Procedures.** If unanticipated cultural resource remains are encountered during construction or land modification activities, the developer shall follow the applicable procedures established by the Advisory Council on Historic Preservation concerning protection and preservation of Historic and Cultural Properties (36 CFR 8700). In this event, the developer/construction contractor shall cease work until the nature, extent, and possible significance of any cultural remains can be assessed and, if necessary, remediated. Such assessment and remediation shall be implemented by the developer and shall be subject to review and approval by the Deputy Director/City Planner prior to commencement with onsite construction/grading activities. If remediation is needed, possible techniques include removal, documentation, or avoidance of the resource, depending upon the nature of the find.	If potential cultural resources are discovered, ceasing work and assessing find If necessary assessment and remediation plan submitted to Deputy Director/City planner	Ongoing during project development When potential resources are discovered	Ongoing during project development Once upon discovery of cultural resources	Onsite project manager Calabasas Planning Division			
CR-2 **Human Remains Recovery Procedures.** In the event that human remains are discovered during construction or land modification activities, the developer shall follow the procedures in Section 7050 5 of the California Health and Safety Code. These procedures require notification of the County coroner and the Native American Heritage Commission if the	Ceasing of construction activities if remains are unearthed and implementation of appropriate cultural resources management program, as necessary	Ongoing during project development activities	Random checks on a bimonthly basis to ensure compliance	Calabasas Planning Division			

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coroner determines the remains to be those of Native American ancestry. Onsite construction/grading shall not commence until evidence has been presented to the City manager that the developer has adhered to these procedures.							
VI GEOLOGY AND SOILS							
GEO-1 Ground Improvement. Ground improvement shall be determined by a specialty firm in order to mitigate the potential for liquefaction and lateral spreading and to densify the soils for the support of the building foundation(s). Suitable measures to reduce impacts from liquefaction and lateral spreading could include one or more of the following techniques, as determined by a qualified geotechnical engineer: • Specialized design of foundations by a structural engineer; • Removal or treatment of liquefiable soils to reduce the potential for liquefaction; • Drainage to lower the groundwater table to below the level of liquefiable soil; • In-situ densification of soils or other alterations to the ground characteristics; or • Other alterations to the ground characteristics Suitable measures to reduce impacts from expansive soils could include one or more of the following techniques, as determined by a qualified geotechnical engineer: • Excavation of existing soils and importation of non-expansive soils; and • Foundation design to accommodate certain amounts of differential expansion such as	Approval of final geotechnical report and recommendations Verification that the submitted building plans and foundation design fulfill all requirements within the approved geotechnical report	Prior to issuance of grading permits Prior to commencement of foundation construction activities	Once Once	Calabasas Building and Safety Division			

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posttensional slab and/or ribbed foundations designed in accordance with Chapter 18, Division III of the UBC The following measures shall be preformed by the firm that oversees ground improvement work: • The Geotechnical Engineer shall review the plans and specifications for the proposed ground improvement method • After review of the proposed ground improvement plans and specifications, the Geotechnical Engineer shall prepare a supplemental report indicating their concurrence with the proposed ground improvement plans and specifications. The report shall also provide quality control and quality assurance criteria to provide a means of confirming that mitigation of the potential for liquefaction, lateral spreading and soil densification has been accomplished • A representative of the Geotechnical Engineer shall monitor and document the construction/installation of the ground improvement components • After completion of the ground improvement work, testing shall be preformed under the direction of the Geotechnical Engineer, as appropriate, to confirm the suitability of the ground improvement(s) performed • The Geotechnical Engineer shall prepare a report summarizing the results of the post-ground improvement testing. The report shall include a statement that the ground improvement has mitigated the potential for liquefaction and later spreading at the site and will provide suitable support for foundations.							
VII HAZARDS AND HAZARDOUS MATERIALS							

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HAZ-1 Asbestos Removal. When work is performed in the vicinity of ACM, the workers shall be informed that the materials contain asbestos. Removal of ACM shall be performed by a licensed (Contractor's State License Board) and registered (Cal/OSHA) asbestos abatement contractor under the supervision of a Cal/OSHA certified Asbestos Consultant and asbestos shall be removed and disposed of in compliance with applicable State laws. Regardless of whether asbestos is identified in the building, prior to demolition of the existing structure, the South Coast Air Quality Management District (SCAQMD) shall be notified and an SCAQMD Asbestos Demolition and Renovation Compliance Checklist shall be submitted to both SCAQMD and the City of Calabasas.	Cal/OSHA certified Asbestos consultant shall be present during demolition	During demolition	Ongoing	Calabasas Building and Safety Division			
HAZ-2 Lead Removal. Workers shall utilize respiratory protection during the removal of lead-based paint until air monitoring results indicate that worker exposure is below the Federal OSHA Action Level of 30 ug/m3. Due to the amount of lead encountered, additional analysis, such as a California Wet-Test, shall be performed prior to disposal to determine disposal options.	Monitoring and testing during demolition	During demolition	Ongoing	Calabasas Building and Safety Division			
VIII HYDROLOGY AND WATER QUALITY							
HWQ-1 Rain Gutters. Install rain gutters and orient them towards permeable surfaces rather than driveways or non-permeable surfaces so that runoff would penetrate into the ground instead of flowing off-site.	• Approval of plans to verify compliance with requirements	• Prior to issuance of permits	• Once	• Calabasas Public Works Department, Environmental Services Division			
HWQ-2 Grades. Modify grades of property to divert flow to permeable areas and to minimize the amount of storm water leaving the property.	• Approval of plans to verify compliance with requirements	• Prior to issuance of permits	• Once	• Calabasas Public Works Department, Environmental Services			

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HWQ-3 Sediment Traps. Use sediment traps to intercept runoff from drainage areas and hold or slowly release the runoff, with sediments held in the trap for later removal.	• Approval of plans to verify compliance with requirements	• Prior to issuance of permits	• Once	• Calabasas Public Works Department, Environmental Services Division			
HWQ-4 Retention. Use retention structures or design rooftops to store runoff. Utilize subsurface areas for storm runoff either for reuse or to enable release of runoff at predetermined times or rates to minimize the peak discharge into storm drains. Cisterns are also a possible storage mechanism for reuse.	• Approval of plans to verify compliance with requirements	• Prior to issuance of permits	• Once	• Calabasas Public Works Department, Environmental Services Division			
HWQ-5 Site Design. Design curbs, berms or the like so as to avoid isolation of permeable or landscaped areas. Implement the use of pervious asphalt, grassy swales and berms near the creek to the maximum extent feasible.	• Approval of plans to verify compliance with requirements	• Prior to issuance of permits	• Once	• Calabasas Public Works Department, Environmental Services Division			
HWQ-6 Structural Design. Elevation of the lowest habitable floor shall be situated above levels of potential shallow flooding during 50-year storm flows. Floodproofing shall be incorporated into the design of the subterranean garage which shall be submitted to City engineer for review and approval.	• Approval of plans to verify compliance with requirements	• Prior to issuance of permits	• Once	• Calabasas Public Works Department, Environmental Services Division			
XI NOISE							
N-1 Hours of Construction Activity. Construction activity for site preparation and development shall be limited to the hours between 7:00 a m and 6:00 p m , Monday through Friday and between the hours of 8:00 a m and 5:00 p m on Saturdays. No construction shall occur on State holidays (e g , Thanksgiving, Labor Day). Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities, such as	• Verification that noise restrictions are shown in Grading and Construction Plan notes • Site visits to ensure compliance	• At final plan check • During construction activities	• Once • Monthly	• Calabasas Planning Division • Calabasas Building and Safety			

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interior painting, are not subject to these restrictions.							
N-2 Stationary Construction Equipment. Stationary construction equipment that generates noise which exceeds 65 dBA at the project boundaries shall be shielded and located as far away from residences and other noise sensitive uses to the maximum extent feasible.	Review of construction noise reduction plan by the City; on-site monitoring to ensure noise levels from stationary equipment do not exceed 65 dBA	• Prior to issuance of grading permits • During construction activity	• Once • Bi-monthly during construction and/or within 24 hours after complaints are received	• Calabasas Planning Division • Calabasas Building and Safety			
XV TRANSPORTATION/TRAFFIC							
T-1 Intersection Improvement. "Keep Clear" shall be painted in the eastbound lane of Calabasas Road at the intersection of El Canon Avenue so that the northbound left turn can be made from El Canon Avenue.	Verification of painting of intersection	Prior to occupation of project	Once	• Calabasas Planning Division			
T-2 Traffic Analysis/Traffic Signal. Approximately one year after project occupancy, a traffic analysis shall be performed to determine whether the Calabasas Road/El Canon Avenue intersection is functioning at an acceptable level of service. If the traffic analysis determines that the level of service is unacceptable, a traffic signal shall be installed. The project applicant shall contribute a fair share toward funding of this traffic signal.	Perform traffic analysis of intersection	One year after completion of project	Once	Calabasas Transportation Division			
T-3 Registered Traffic Engineer Consideration. Have a registered traffic engineer consider the following safety issues and propose solutions that will be fair yet effective: • The current design has the driveway ingress aligned with the internal egress movement.	Traffic engineer shall consider safety issues and propose solutions	Prior to issuance of permits	Once	Calabasas Transportation Division			

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This exposes a potential for head on collisions at the transition. • The northern driveway wall into the substructure will block the visibility of vehicles maneuvering within the parking spaces immediately to the north. Cars exiting this area will not be visible to entering vehicles. • Since the parking structure is subterranean, visibility upon ingress during daylight hours will decrease unless the transition area is well lit							
XVI UTILITIES AND SERVICE SYSTEMS							
U-1 **Water Conservation Techniques.** In order to meet the City's water conservation performance objectives, the following techniques shall be included: • Incorporation of drought tolerant and low water using plants; maximize preservation of natural vegetation • Incorporation of water conservation techniques into the design of the irrigation system through such techniques as mulching, installation of drip irrigation systems, landscape design to group plants of similar water demand, rain sensors and automatic irrigation systems • Clustering of landscaped areas to maximize the efficiency of the irrigation system; design of irrigation systems to eliminate watering of impervious surfaces • Installation of water conserving kitchen and bathroom fixtures and appliances, installation of thermostatically controlled mixing valves for baths and showers, and insulation of hot water circulating systems.	Verification that requirements are incorporated into landscape plan, and floor plans	Prior to approval of grading permits	Once	Calabasas Planning Division			