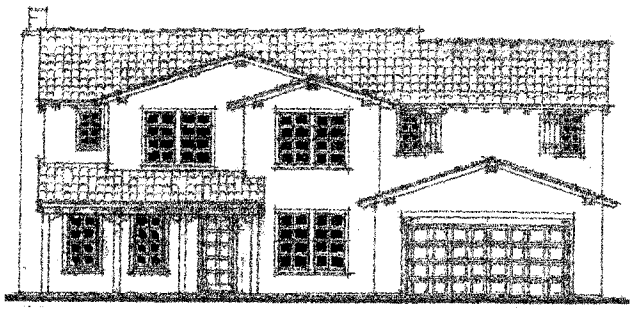
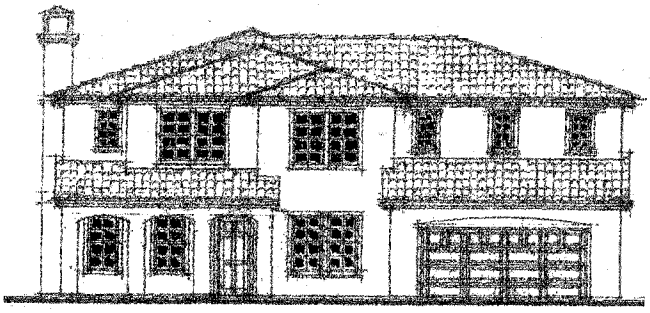
Initial Study

6782 and 6790 San Felipe Road

(PDC11-012 and PD11-029)

August 24, 2012





CITY OF SAN JOSE

Initial Study

6782 and 6790 San Felipe Road

Planned Development (PD) Rezoning (PDC11-012)
and
Planned Development (PD) Permit (PD11-029)

August 24, 2012

CITY OF SAN JOSE

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Archaeological Reconnaissance
Historical Investigation
Geotechnical Investigation
Phase I Environmental Site Assessment and Preliminary Soil Quality Evaluation
Flood Plain Analysis
Geotechnical Investigation Addendum
Civil Engineers Response to City Geologist
Conceptual Creek Bank Stabilization Planting
Creek Bank Stabilization Hydrologic Review
Certificate of Geologic Hazards Clearance

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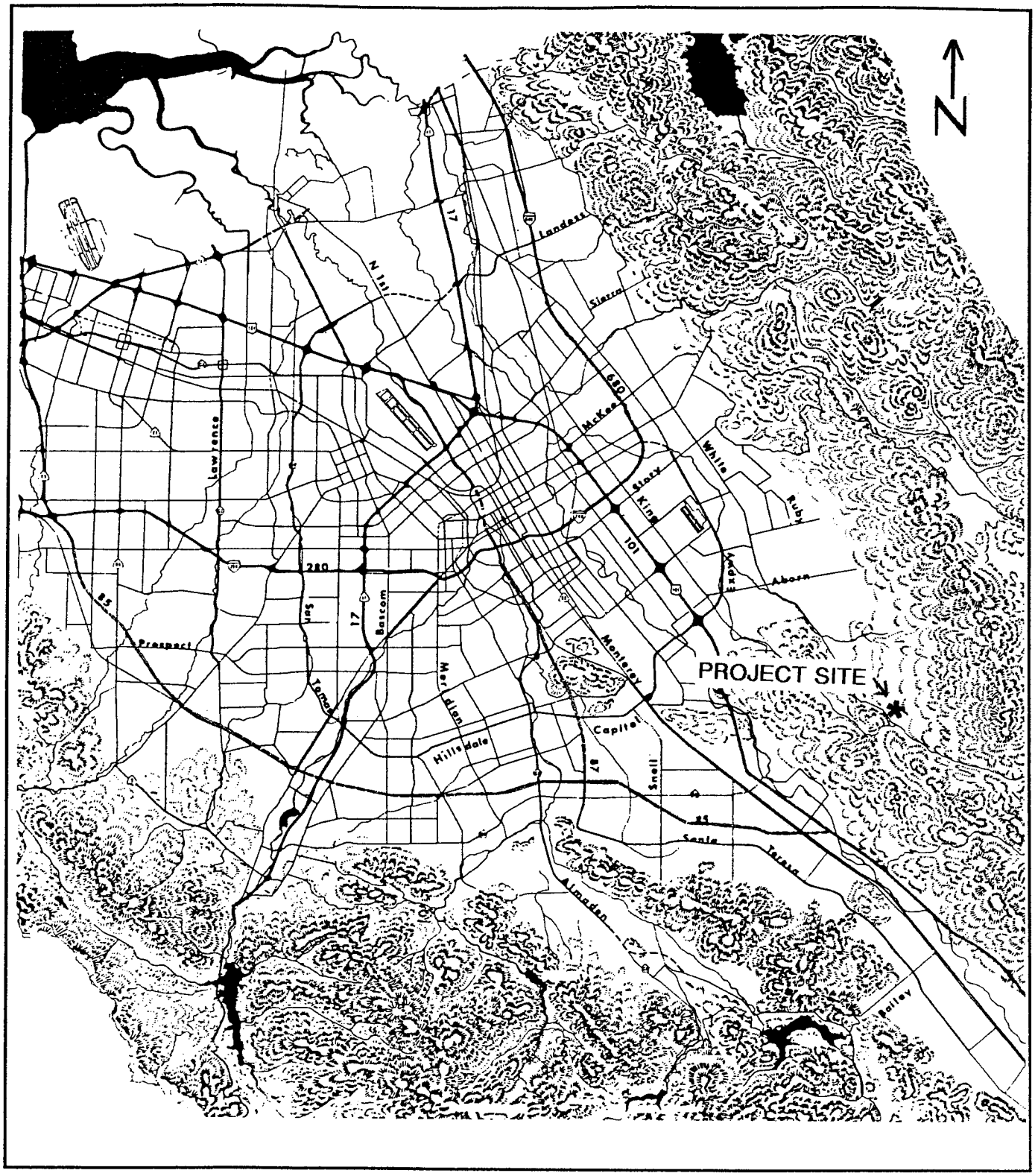
I. PROJECT DESCRIPTION

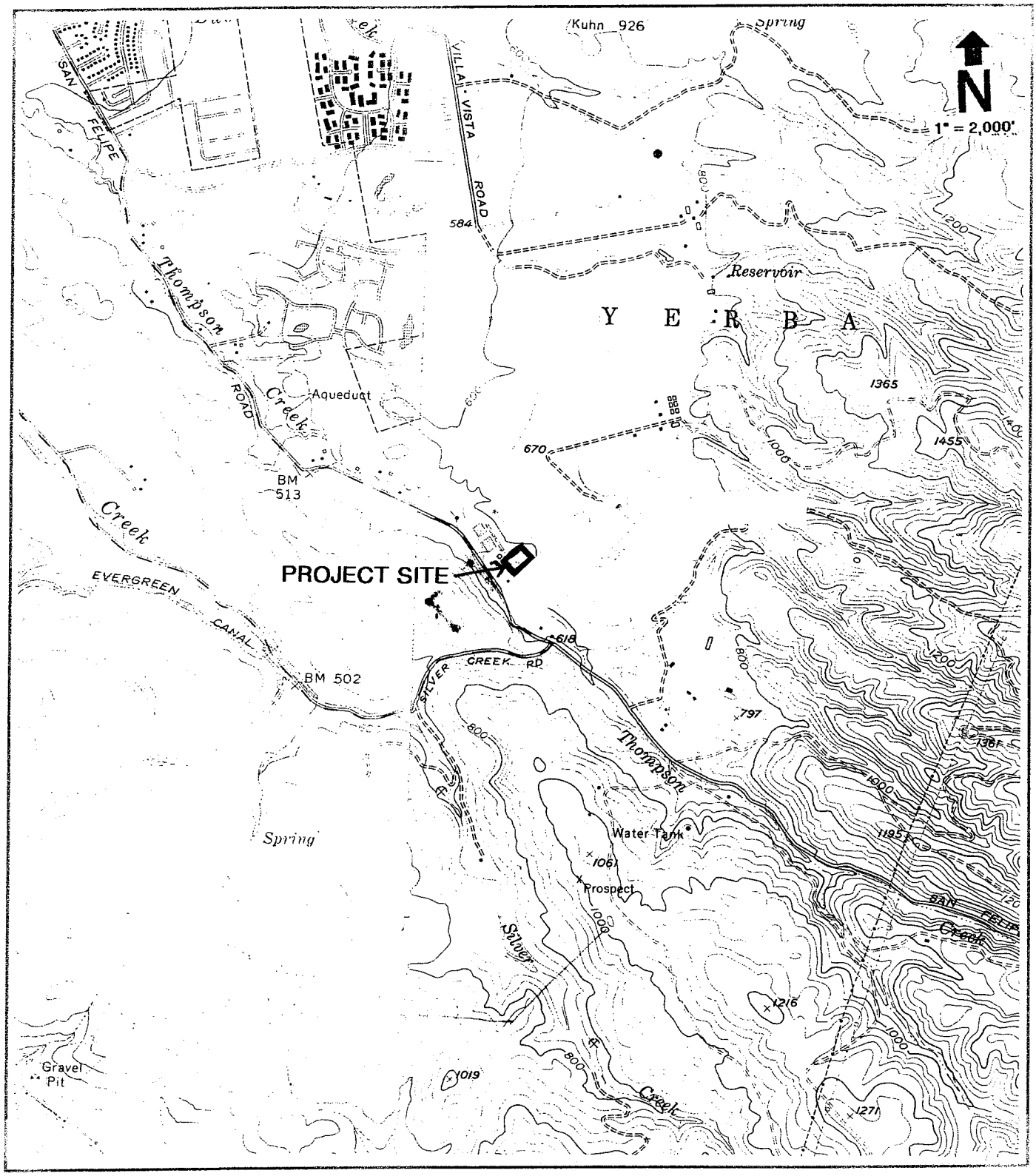
A. GENERAL INFORMATION

Lead Agency Contact:	Lesley Xavier City of San Jose Planning, Building and Code Enforcement 200 East Santa Clara Street, 3rd Floor San Jose, CA 95113 408-535-7852 lesley.xavier@sanjoseca.gov
Applicant:	DAL Properties LLC 255 W. Julian Street, Suite 502 San Jose, CA 95110 408-298-9302; (fax) 408-298-9306 Attn: Mark Lazzarini mlazzarini@dalpropertiesllc.com
Property Owner:	DAL Properties LLC 255 W. Julian Street, Suite 502 San Jose, CA 95110 408-298-9302; (fax) 408-298-9306
Environmental Consultant:	Mindigo & Associates 1984 The Alameda, Suite 1 San Jose, CA 95126 408-554-6531, (fax) 408-554-6577 rmindigo@aol.com
Name of Project and Address:	6782 and 6790 San Felipe Road
Location:	Approximately 200 feet northeasterly of San Felipe Road on future Turturici Way, approximately 400 feet south of Meadowleaf Court
Brief Description of Project:	**Planned Development (PD) Rezoning** and **PD Permit** applications for a 4-unit single family detached residential development on approximately 2.04 gross acres
Assessor's Parcel Number(s):	660-05-001 and -002



Santa Clara Valley Map

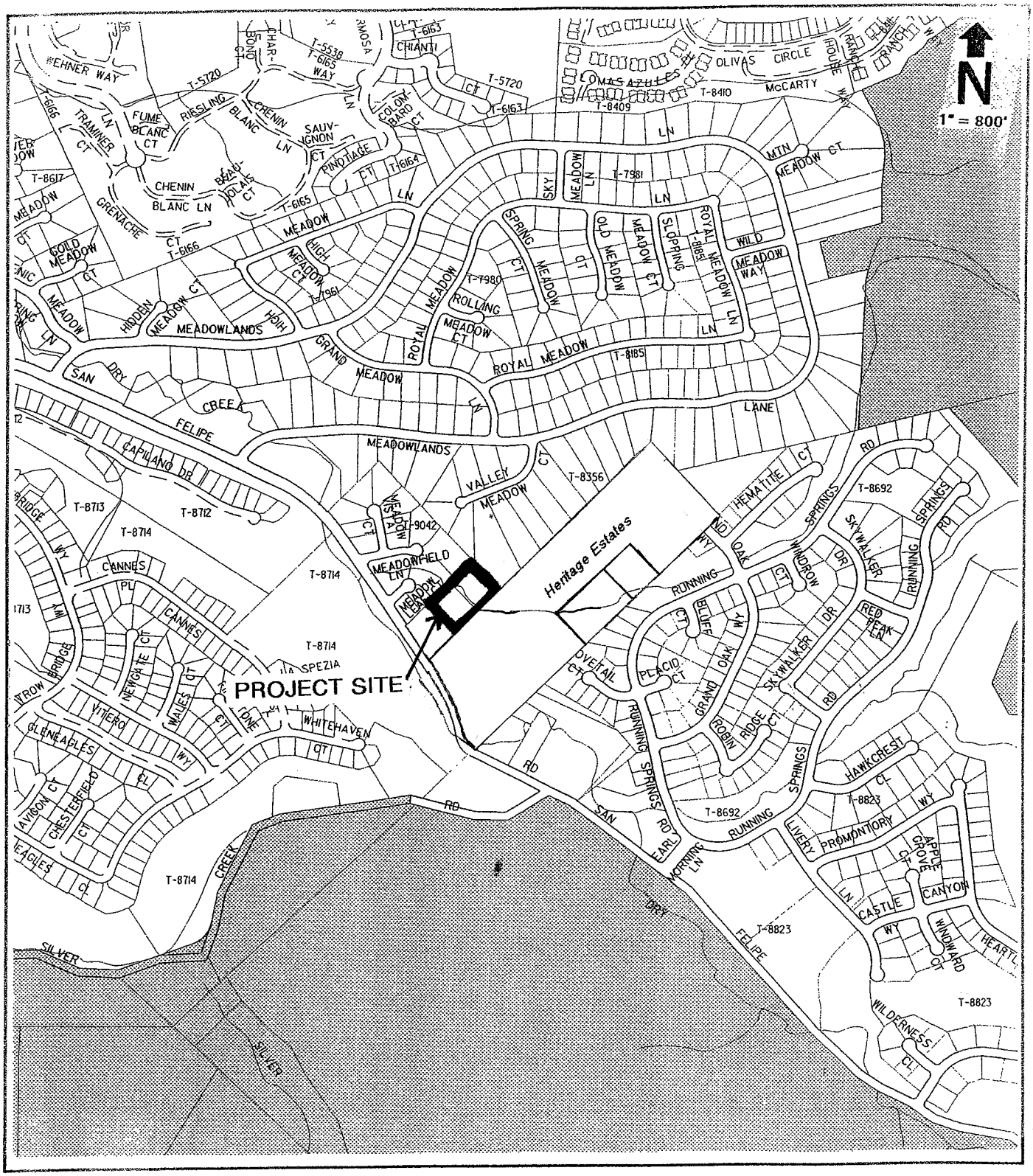
Figure 1



Source: Lick Observatory Quadrangle (1955, photorevised 1968) and San Jose East Quadrangle (1961, photorevised 1980)

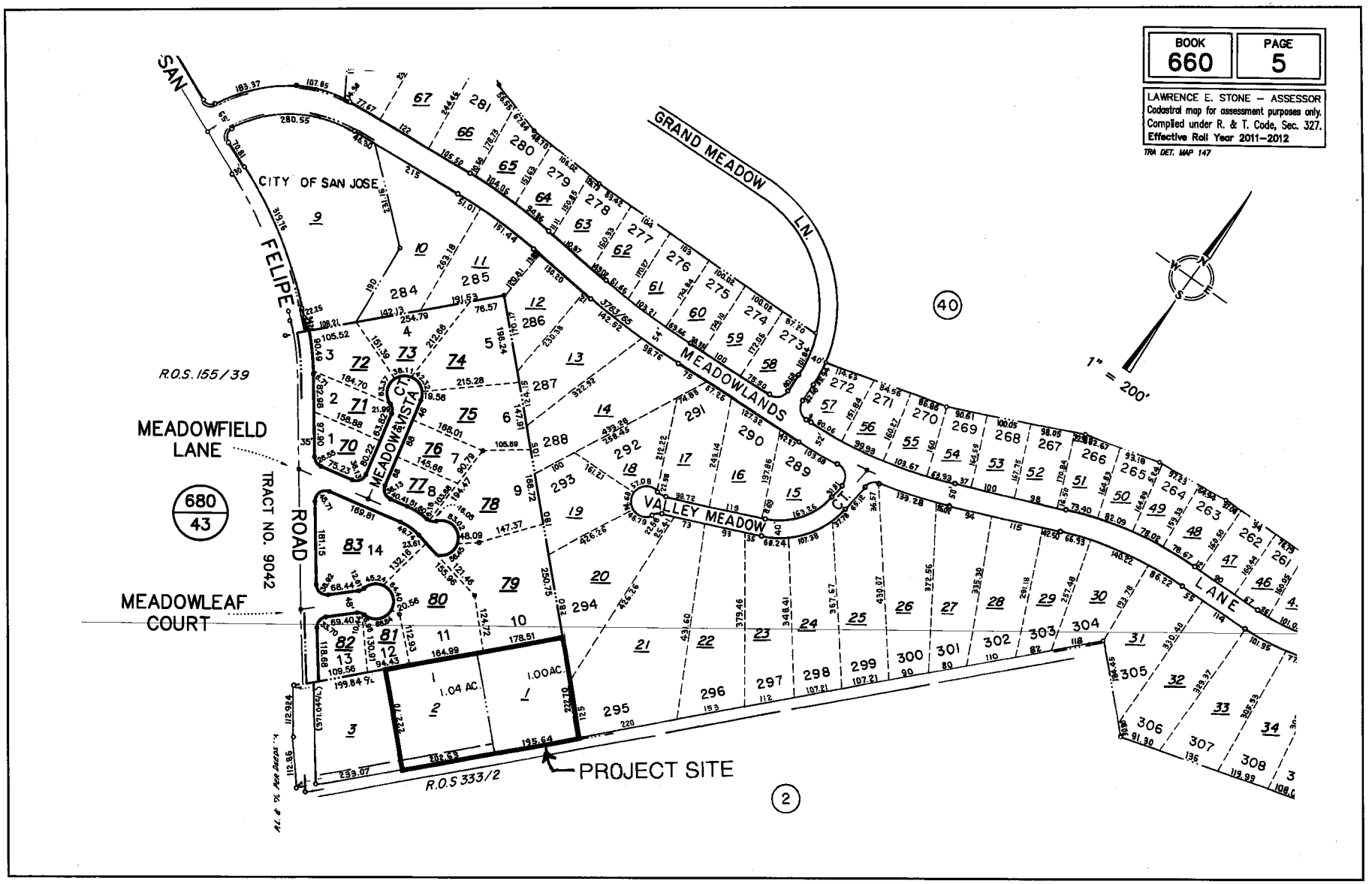
USGS Map

Figure 2



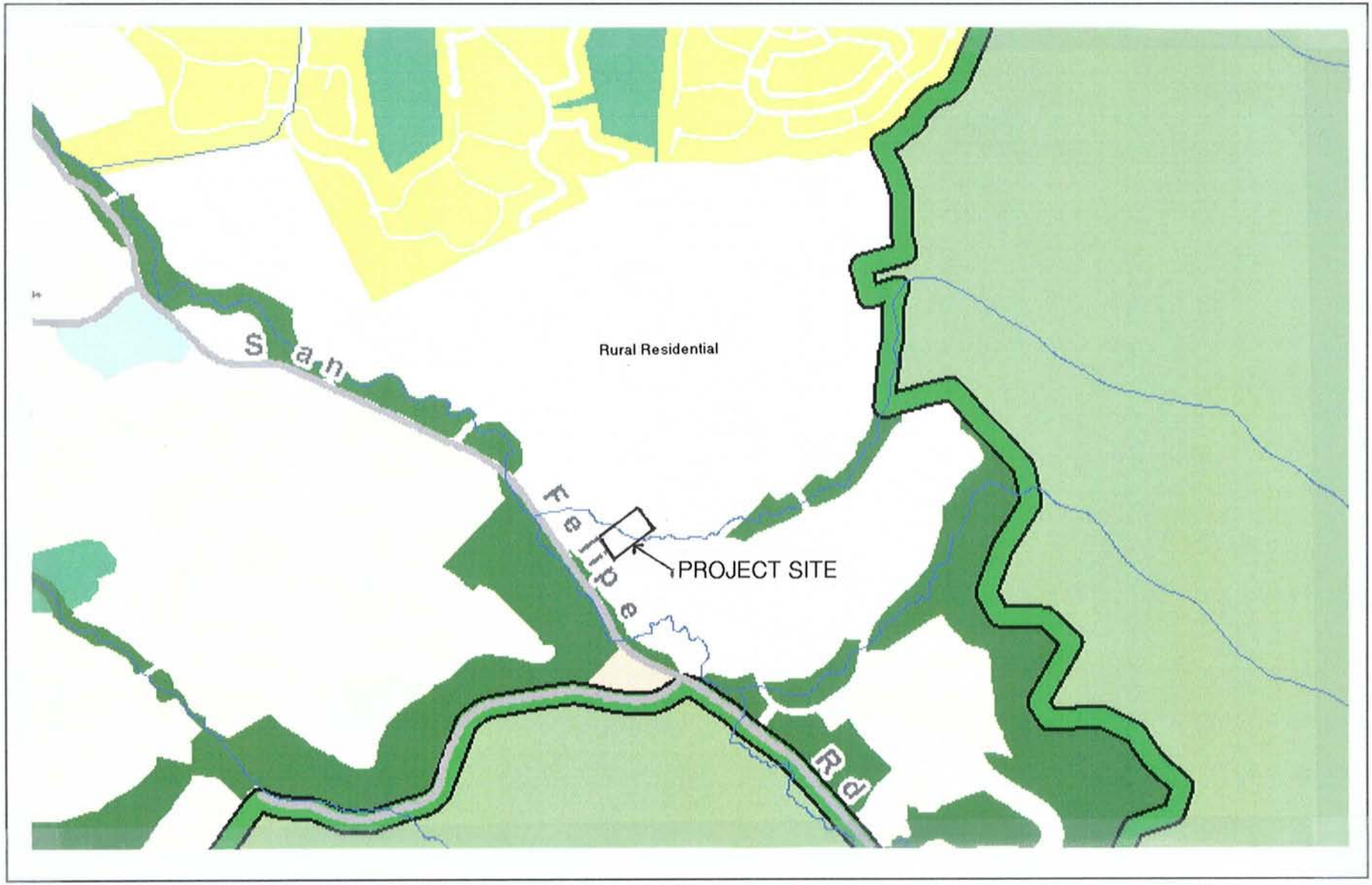
Vicinity Map

Figure 3



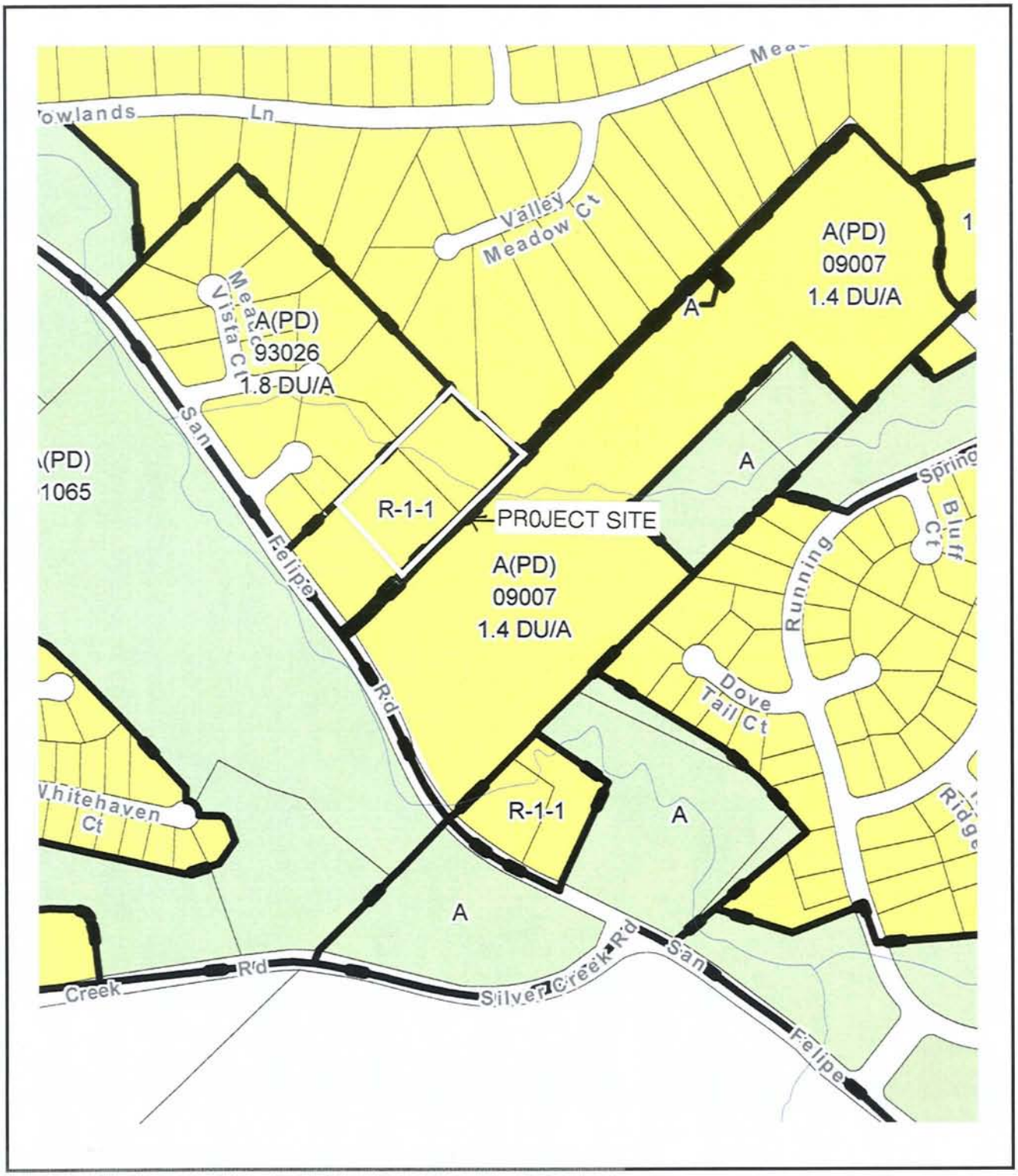
Assessor's Parcels

Figure 4



General Plan Map

Figure 5



R-1-1 - Single Family Residence District (1 unit/acre)
A(PD) - Planned Development District
A - Agriculture District

Zoning Map

Figure 6

Aerial Photo of the Site

July 23, 2002

Figure 7

Viewing easterly from the westerly corner.

Viewing southerly from the northerly corner.

View of the Site

October 12, 2011 Figure 8

Viewing northerly along Misery Creek from the southerly boundary.

Viewing southerly along Misery Creek from south of the northerly boundary.

View of the Site

October 12, 2011 Figure 9

B. PROJECT OBJECTIVE

The objective of this project is to rezone the site in order to construct single family detached homes on the site, in accordance with the goals and policies of the City of San Jose.

C. DESCRIPTION

EXISTING USE

The project site is currently rural residential with two vacant single family dwellings.

Heritage Estates

The project site is north of Heritage Estates, which is currently under construction on the south side of Turturici Way. Turturici Way and the utilities that will serve the project are being constructed as part of the Heritage Estates project. The project will become part of Heritage Estates.

PD ZONING and PD PERMIT

The project is a **Planned Development (PD) Rezoning** from R-1-1, Single Family Residence District, to A(PD), Planned Development District, and a **PD Permit** application to allow the construction of up to 4 residential units and subsequent subdivision, located on future Turturici Way, east of San Felipe Road (current addresses: 6782 and 6790 San Felipe Road). The project is a single family detached residential development with individual lots located on private driveways. The minimum lot size is 11,680 square feet in area and the average lot size is approximately 22,000 square feet. The Site Plan, Figure 11, provides for 4 units. The Project Data table and reduced copies of the project plans, Figures 10 through 16a, follow. Full size copies are available for review at the City of San Jose Planning Division.

Unit Types

The homes are the same as the adjacent Heritage Estates project, and are planned to be two story, wood frame structures with wood and stucco exteriors. Each home includes an attached three-car garage and fenced rear yard. Front yard landscaping is to be provided by the developer. There are 3 different house plans, as follows:

Plan	No. of Stories	No. of Bedrooms	No. of Baths	Square Footage
One	2	4	3.5	3,800
Two	2	4-5	4.5	4,000
Three	2	4-5	4	4,400

Landscaping

The landscaping proposed is shown in schematic form on the Preliminary Landscape Plan, Figure 16. Street trees, specimen trees, shrubs, lawn and groundcover are planned throughout the project.

Access
Access is from future Turturici Way, a public street that connects with San Felipe Road to the west.

Parking
Off-street parking for the project is to be provided in attached 3-car garages and on driveway aprons. A total of 12 off-street parking spaces are to be provided by the project.

Exterior Lighting
Standard electroliers using low pressure sodium vapor lights in accordance with the City's Outdoor Lighting on Private Developments Policy are to be provided along Turturici Way. Normal exterior household lighting is to be provided with the residences. All exterior lighting is subject to the City's Outdoor Lighting Policy 4-3.

Utilities
All utilities required to serve the project, including sanitary sewer, wastewater treatment, water supply, storm drainage, natural gas, electricity and telephone, as further described in the following Utilities and Service Systems section, would be provided with the project. All of the utilities within the project are to be underground.

Demolition
The project proposes the demolition of all the onsite structures. A discussion of potential asbestos-containing materials (ACM) and/or lead based paint (LBP) hazards is included in the following Hazards and Hazardous Materials section.

Hazardous Materials
Hazardous materials other than those for normal household and yard use will not be used as a part of the operation of any of the establishments on the project site.

Grading
Grading planned for the project is shown on the following Grading & Drainage Plan, Figure 14. The final lot and street grading for the project is to be designed to conform to the natural ground as closely as possible. The amount of grading planned is the minimum required to allow the construction of level building pads with positive drainage. In addition to the lot and street excavation, trenching is required for the underground utilities and sewer system. Approximately 3,000 to 4,000 cubic yards of material are estimated to be moved during the grading operations. The maximum finished cut or fill is estimated to be less than three feet, and no significant import or export of natural material is expected.

Water Quality Treatment
In accordance with the Santa Clara Valley Urban Runoff Pollution Prevention Program NPDES MS4 permit and City Council Policies 6-29 and 8-14, the project includes pervious concrete pavers, disconnected downspouts, and bioretention, as further discussed in the following Hydrology and Water Quality section.

Tree Removal
There are 30 existing trees onsite, 3 of which are to be removed, as further discussed in the following Biological Resources section.

Public Improvements
There are no public improvements planned with this project.

Public Land Reservations
There are no public land reservations with this project; however, the project will pay fees to improve park features in the area in accordance with the the City's Park Impact Ordinance (PIO) and/or Parkland Dedication Ordinance (PDO) (Municipal Code Chapters 14.25 and 19.38, respectively).

Other Related Permits
In addition to the proposed **Planned Development (PD) Rezoning** and **PD Permit**, other related permits to be obtained from the City of San Jose and/or any other public agency approvals required for this project by other local, State or Federal agencies are as follows:

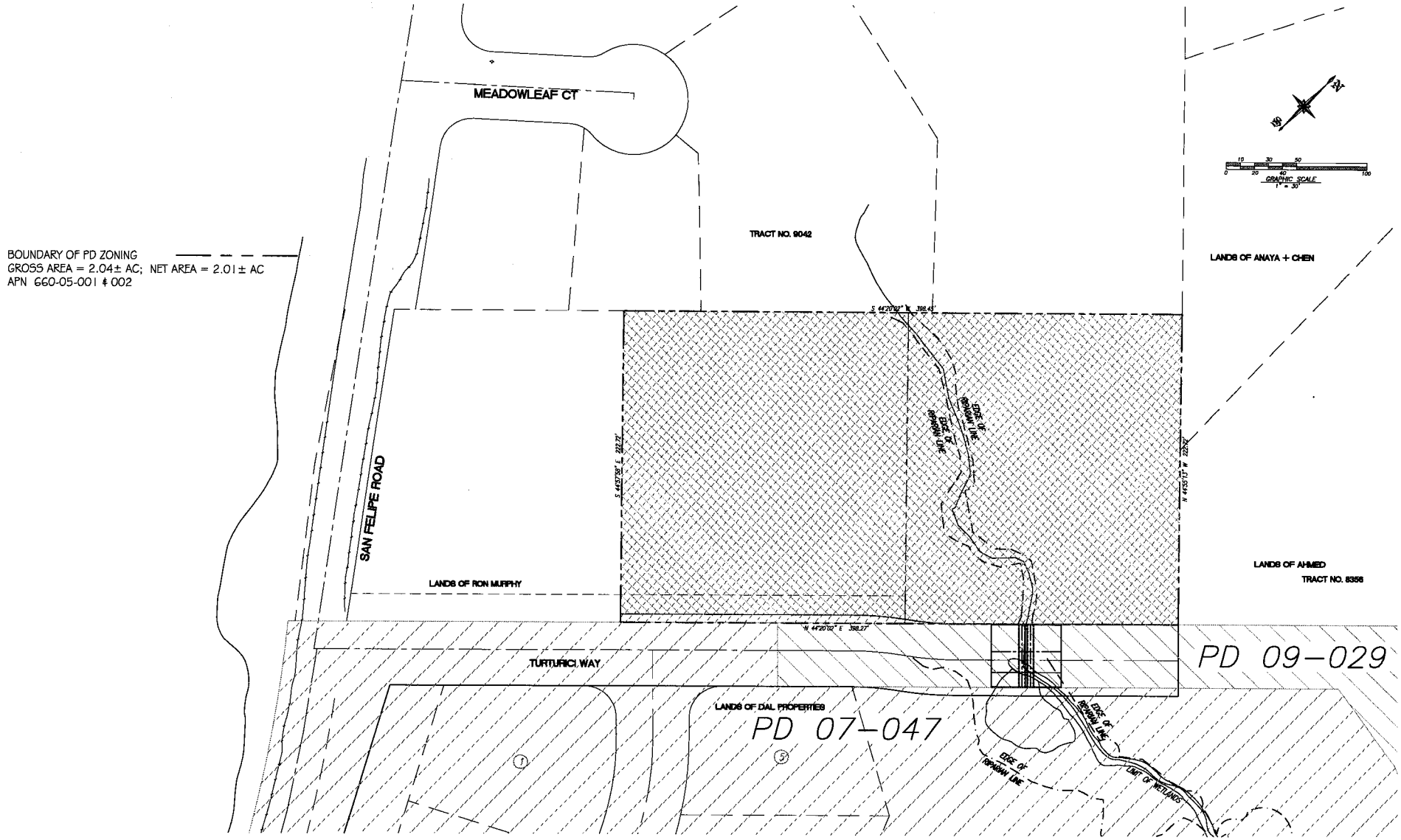
Agency	Permit / Approval
City of San Jose	Tentative Map, Final Map, Grading Plan, Building Permit(s)

Community Meeting
A community meeting to discuss the proposed project with neighbors has not yet been held.

Table 1. Project Data

Category		Figure
Gross and Net Acreage		2.04
Average Lot Size *(square feet)*		22,000
Minimum Lot Size *(square feet)*		11,680
Number of Single Family Homes		4
Maximum Building Height *(feet)*		35
Estimated Population *		12
Estimated School Children		
K-8 *(0.40)*		2
9-12 *(0.20)*		1
Total		3
Estimated Wastewater *(gallons/day)*		950
Estimated Water Demand *(gallons/day)*		1,600
Estimated Solid Waste *(tons/year)*		4
Coverage Factors	Acres	Percent
Homes & Garages	0.31	15.2
Private Open Space	1.59	78.0
Driveways	0.14	6.8
Total	2.04	100.0
Impervious Areas	Square Feet	Percent
Existing	6,626	7
Project	13,248	15
Density *(units/net acre)*		4 / 2.04 = 1.96
Start/Completion Dates		Spring, 2012 / Summer, 2012

* Based on 2000 Census average of 3.50 persons per SFD dwelling unit.



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D.A.L. PROPERTIES
255 WEST JULIAN STREET, SUITE 502
SAN JOSE, CA 95110
Telephone (408) 298-9305
Fax (408) 298-9308

LAND USE PLAN
LANDS OF DAL PROPERTIES, LLC
6782 AND 6790 SAN FELIPE ROAD - APPROX 400' SOUTH OF MEADOWLEAF COURT
SAN JOSE, CALIFORNIA

PDC ___-____

Revisions:

Date: 6-2-11 Job No.: 1842
Scale: 1" = 30' Drawn By: M.H.F.
Sheet No: 2.1
of Sheets

Charles W. Davidson Co.
A CALIFORNIA CORPORATION
CONSULTING CIVIL ENGINEERS
255 W. JULIAN ST. #200 SAN JOSE, CA 95110-2406
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Figure 10

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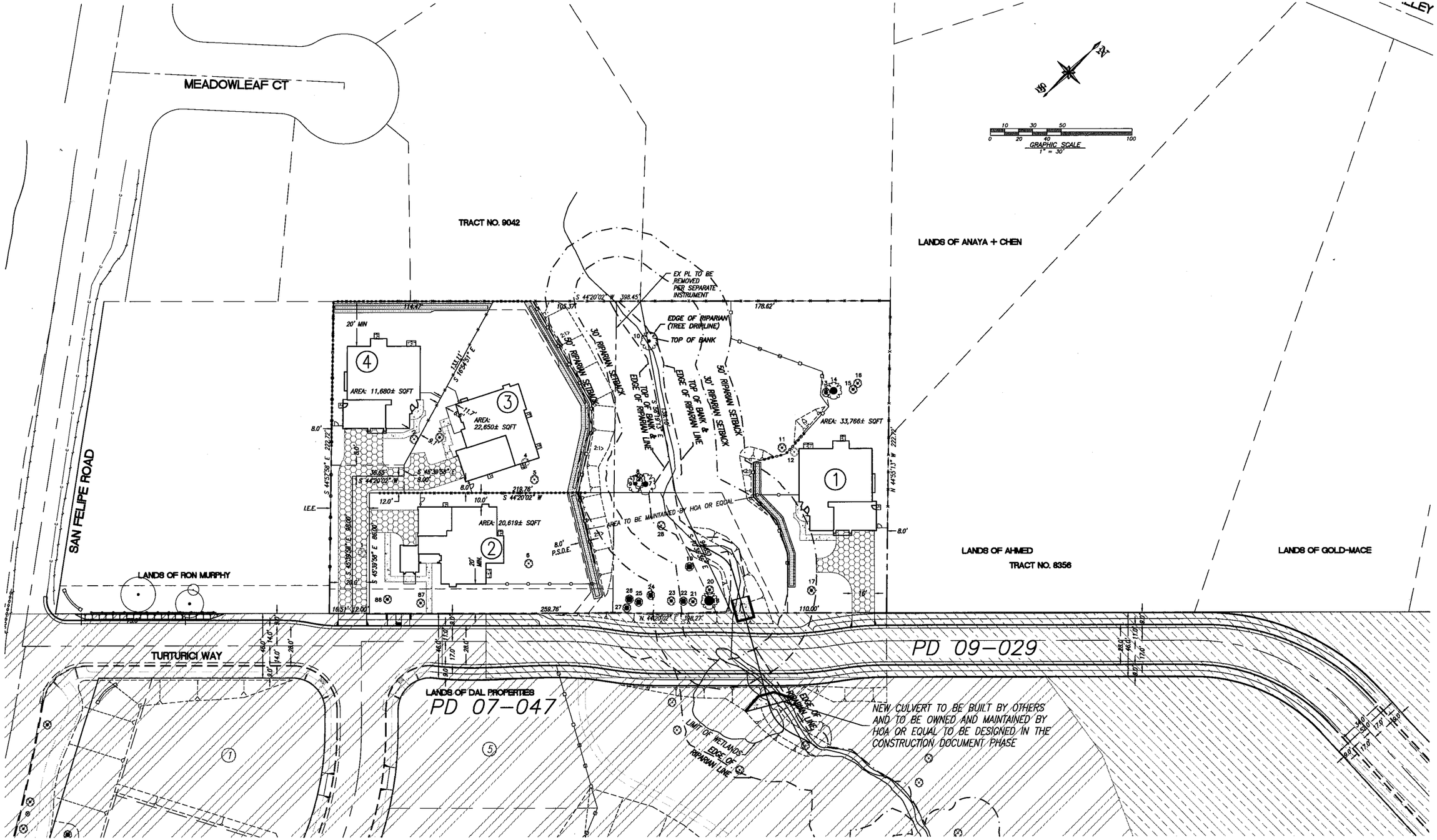

NOTES: HOUSE PLANS PLOTTED ARE SHOWN FOR SETBACK AND DRIVEWAY LOCATION PURPOSES ONLY. FINAL HOUSE MIX SHALL BE DETERMINED AT THE BUILDING PERMIT STAGE.

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D.A.L. PROPERTIES

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CONCEPTUAL SITE PLAN
LANDS OF DAL PROPERTIES, LLC
6782 AND 6790 SAN FELIPE ROAD - APPROX 400' SOUTH OF MEADOWLEAF COURT
SAN JOSE, CALIFORNIA

PDC 11-012

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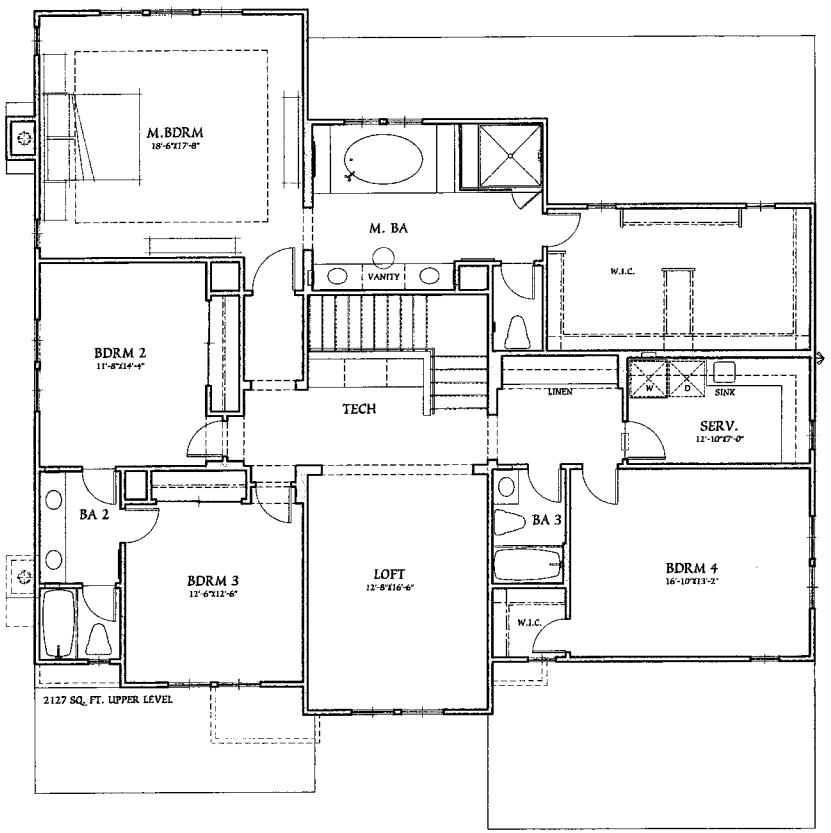
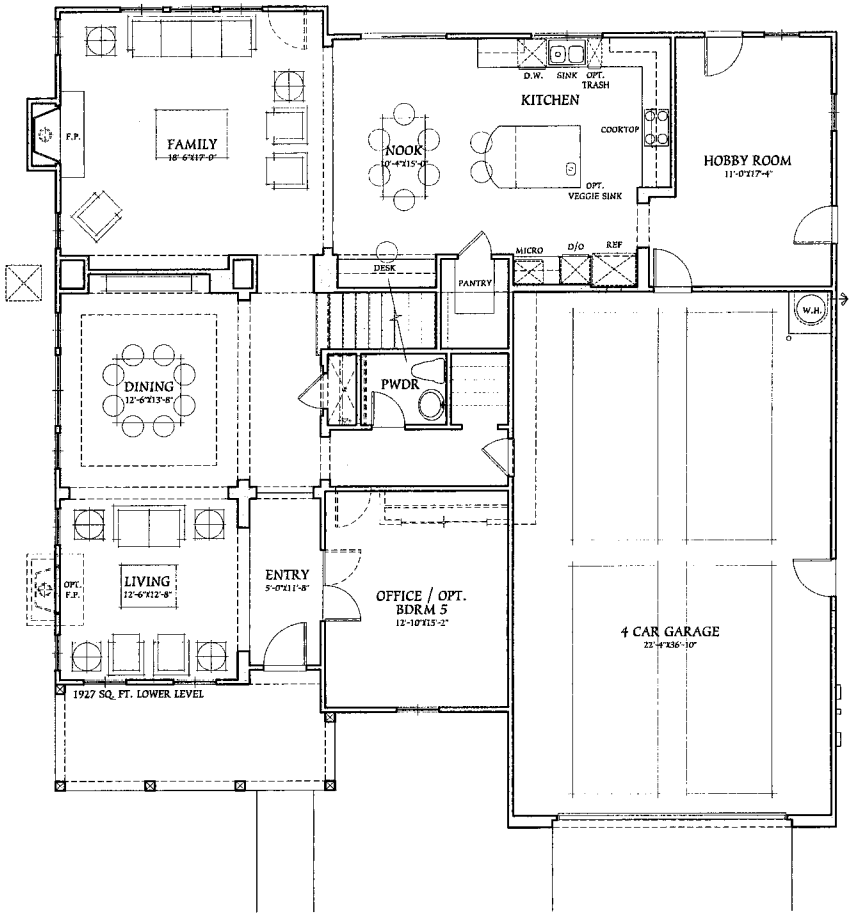
Figure 11





17

PLAN ONE

4054 SQ.FT. TOTAL
4 BDRM/LOFT/3.5 BA/LOFT
OPT. BDRM 5
4 CAR GARAGE

San Felipe Road Site

San Jose, Ca.
DAL PROPERTIES

Floor Plan Reflects Spanish Elevation Style

0 4 8 12

August 26, 2011
2007124

5.1

WILLIAM HEZMALHALCH
ARCHITECTS INC.
2850 REDHILL AVENUE SUITE 200 SANTA ANA CA 92705-5543
949 250 0607 www.whrarchitects.com fax 949 250 1529

Figure 12

san Felipe Road Site, 2007124

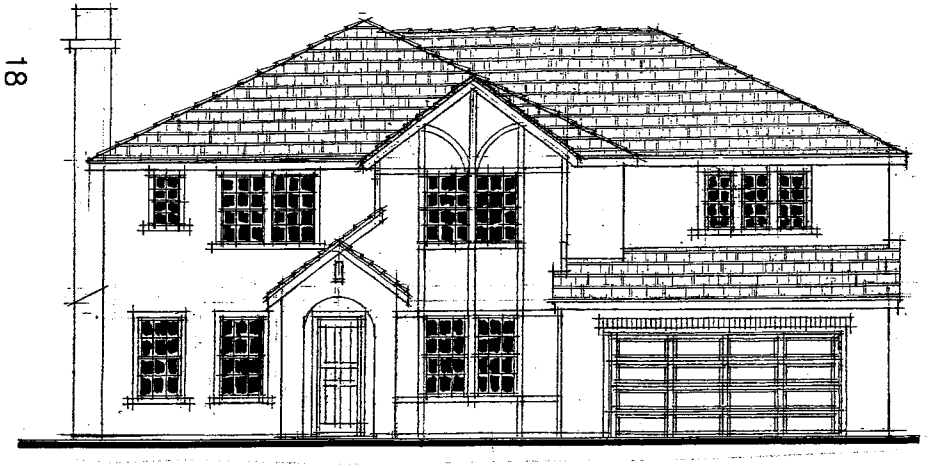
Style Elements

Roof – Concrete "S" Tile
Eave – Closed 2x4 w/ Shaped Foam Trim
Rake - 2x4 w/ Shaped Foam Trim
Exterior Wall - Sand Finish Stucco
Window – Vinyl
Column - Prefab
Trim – Stucco O/ Foam
Shutters - Wood
Garage Door - Metal Sectional Roll-Up

MEDITERRANEAN

Style Elements

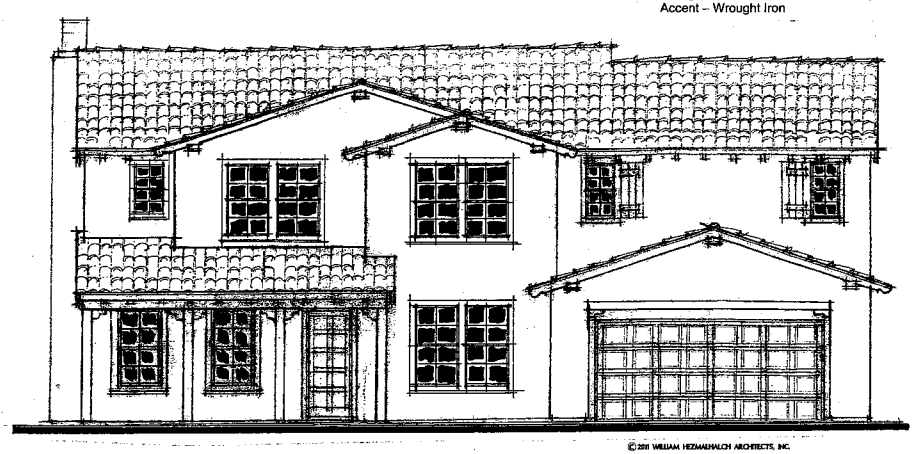
Roof – Flat Concrete Tile
Eave - 2x6 Wood Fascia
Rake - 2x6 Wood Barge Board
Gable End Detail – Louvered Vent
Exterior Wall - Sand Finish Stucco
Window - Vinyl
Trim - Wood
Garage Door - Metal Sectional Roll-Up
Chimney Shroud – Metal
Accent – Brick Veneer / 2x4 Wood



TUDOR

Style Elements

Roof – Concrete "S" Tile
Eave - 2x4 Wood Fascia
W/ 6x4 Wood Rafter Tails
Rake - 6x6 Wood Barge Board
Gable End Detail - Wd Outlookers or
Exterior Wall - Sand Finish Stucco
Window - Vinyl
Post/Bracket - Wood
Shutters - Wood
Garage Door - Metal Sectional Roll-Up
Accent – Wrought Iron



SPANISH

PLAN ONE
FRONT ELEVATIONS

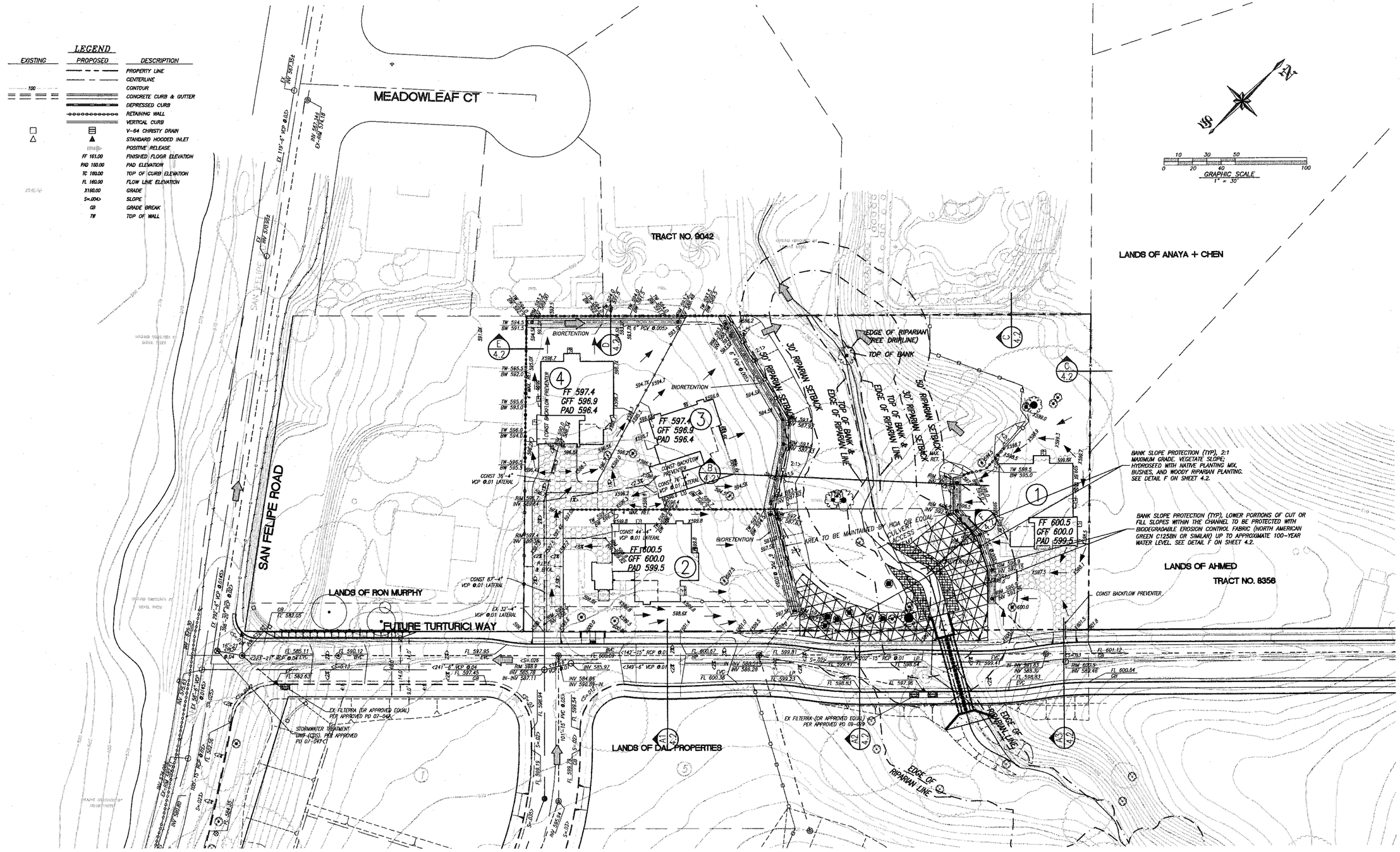
San Felipe Road Site
San Jose, Ca.
DAL PROPERTIES

0 4 8 12

August 26, 2011
2007124

5.2
WILLIAM HEZMALHALCH
ARCHITECTS INC.
2850 REDHILL AVENUE SUITE 200 SANTA ANA CA 92705-5543
949 250 0607 www.wharchitects.com fax 949 250 1529

Figure 13



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D.A.L. PROPERTIES

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CONCEPTUAL GRADING AND DRAINAGE PLAN
LANDS OF DAL PROPERTIES, LLC
6782 AND 6790 SAN FELIPE ROAD - APPROX 400' SOUTH OF MEADOWLEAF COURT
SAN JOSE, CALIFORNIA

PDC 11-012

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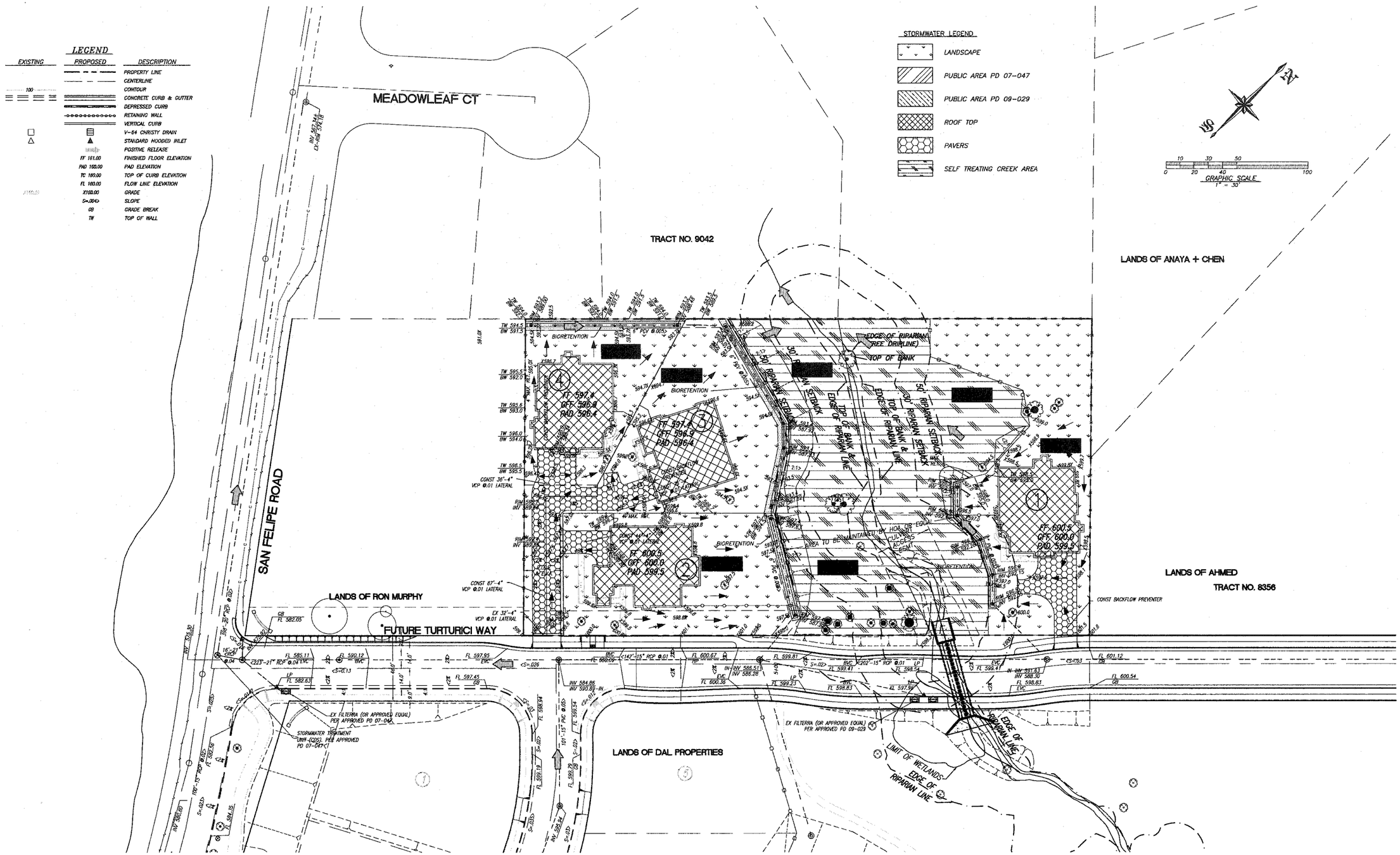
Figure 14



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CONCEPTUAL STORM WATER TREATMENT PLAN
LANDS OF DAL PROPERTIES, LLC
6782 AND 6790 SAN FELIPE ROAD - APPROX 400' SOUTH OF MEADOWLEAF COURT
SAN JOSE, CALIFORNIA

PDC 11-012

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Figure 15

PLANTING DESIGN INTENT

The landscape planting design will utilize aesthetically pleasing water conserving plant species that are well suited to the projects local climatic conditions, and that are not known to be invasive species.

The projects Tree Removal Plan requires 2 new 15 gallon trees be planted on the site. An additional 20 new 24" box replacement trees will be located in the riparian area in order to comply with the tree replacement requirements for the adjacent property. A total of 37 new 15 gallon and 24" box trees are proposed for the site. These proposed trees exceed the tree replacement requirements. Existing trees that are to remain are shown on this sheet. See Civil Engineer's "Tree Removal Plan" for list of trees being removed.

Deciduous accent trees will be utilized in the smaller landscape areas around the homes and open space areas to provide shade, seasonal flowering, and fall color changes. Some accent trees will be evergreen to provide visual interest during the winter months.

Layered shrub and ground cover massings will provide a pleasing separation between the proposed homes and adjacent streets. Taller shrub massings will be utilized around the building perimeters and in some of the large open space areas. Mixed varieties of colorful lower foreground flowering shrubs and ground covers will provide interest and added layering effect. To conserve water, lawn areas are limited to small key accent areas - such as near the entry walkways to homes.

The riparian revegetation areas will be planted with native plant species selected by the project's wetland biologist. These plant species are shown on Sheet 6.4. A 'Comprehensive Riparian Corridor Revegetation Plan' will be produced during the CD (construction drawing) Phase of the project. This will occur after PD (preliminary drawing) Phase has been approved.

IRRIGATION SYSTEM DESIGN INTENT

All planting areas will be irrigated with a fully automatic irrigation system utilizing pop-up spray heads adjacent to all walkways. The spray system will be an efficient low precipitation rate overhead spray system, utilizing matched precipitation rate spray heads. The spray system will be designed provide head to head coverage with minimal overspray onto non-irrigated areas. Separate valve circuits will be used for the turf areas and the water conserving trees, shrub, ground cover areas. Riparian revegetation area native tree and shrub plantings will be irrigated with a temporary drip irrigation system. Once plants have become established irrigation will be discontinued. Hydroseed in the riparian revegetation areas is non-irrigated.

A fully automatic ET based controller will be used to provide precise scheduled watering times. ET based irrigation controllers automatically optimize irrigation watering based upon the project sites local climatic conditions, type of plant materials, soil types and other microclimatic factors.

GENERAL NOTES

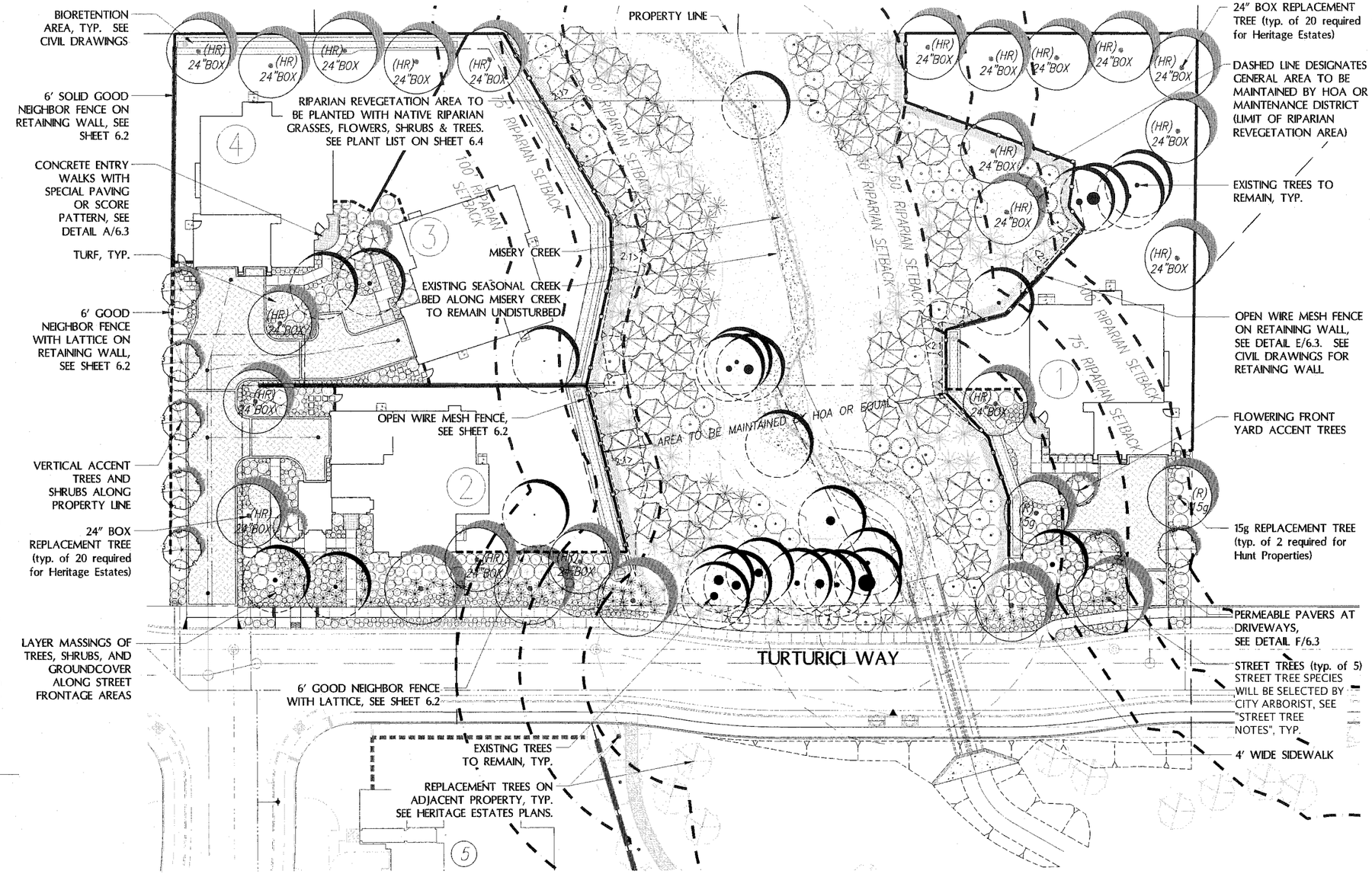
1. SEE CIVIL ENGINEER'S "TREE REMOVAL PLAN" FOR LOCATIONS OF TREES REMOVED, AND ADDITIONAL INFORMATION. EXISTING TREES TO REMAIN ARE SHOWN ON THIS SHEET.

STREET TREE NOTES

1. STREET TREE SPECIES & CONTAINER SIZE WILL BE SELECTED BY CITY ARBORIST AT TIME STREET TREE PLANTING PERMIT IS ISSUED TO CONTRACTOR. CONTACT CITY ARBORIST FOR TREE PLANTING PERMITS (408) 222-2756.
2. STREET TREES WILL BE LOCATED AS FOLLOWS:
   5' FROM WATER LINES, FIRE HYDRANTS, GAS LINES
   10' FROM STORM LINES, SEWER LINES
   20' FROM STREET LIGHTS

ROOT DEFLECTOR NOTES

1. ALL TREES CLOSER THAN 5'-0" FROM CURBS, FOUNDATIONS, SIDEWALKS, OR OTHER HARDSCAPE ITEMS SHALL BE INSTALLED WITH ROOT DEFLECTORS, SEE SHEET 6.4.



LEGEND

- 6' SOLID GOOD NEIGHBOR FENCE, SEE DETAIL E/6.3
- 6' GOOD NEIGHBOR FENCE WITH LATTICE, SEE DETAIL D/6.3
- OPEN WIRE MESH FENCE, SEE DETAIL B/6.3
- DASHED LINE DESIGNATES GENERAL AREA TO BE MAINTAINED BY HOA OR MAINTENANCE DISTRICT

TREE REPLACEMENT CHART

Total New Replacement Trees Required: 1
(per Tree Removal Plan for Hunt Properties)
Quantity Breakdown:
2 - 15 gallon Tree
20- 24" box Trees (Overflow quantity requirement for Heritage Estates Project)

Total New Trees Proposed: 37
Quantity Breakdown:
2 - 15 gallon Replacement Tree
20 - 24" box Replacement Trees
3 - 15 gallon Frontyard LandscapeTrees
7 - 24" box Frontyard Landscape Trees
5 - Street Trees (as selected by the City Arborist)

TREE REPLACEMENT LEGEND

(R) 15g	15 Gallon Hunt Properties Replacement Tree
(HR) 24"BOX	24" Box Heritage Estates Overflow Replacement Tree

0 10 20 40 80
SCALE: 1"=20'-0"

NORTH

CLIENT
DAL PROPERTIES LLC
255 W. JULIAN STREET
SUITE 502
SAN JOSE, CALIFORNIA
95110-2405
408.298.8302

LICENSED LANDSCAPE ARCHITECT
ZACKY R. ABED
Lic. No. 3405
Expires
STATE OF CALIFORNIA

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 14TH ST., SAN FRANCISCO, CA
ZIP 94103 PH (415) 864-1621 FAX(415) 864-4796

PROJECT MANAGER: ZA
DRAWN BY: WM
CHECKED BY: ZA

PROJECT NAME/LOCATION:
6782-6790 SAN FELIPE
SAN JOSE, CALIFORNIA

DRAWING TITLE:
CONCEPTUAL LANDSCAPE PLANS
PDC 11-012

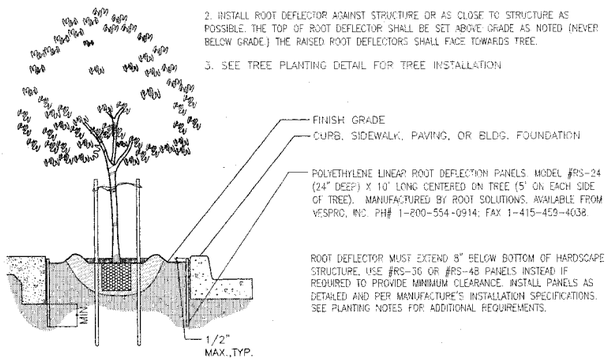
REVISIONS:
NO. | DESCRIPTION | BY: | DATE

SHEET TITLE:
PRELIMINARY LANDSCAPE PLAN

SCALE: 1"=20'-0"
ISSUE DATE: 12/19/11
PROJECT NO.: V1118
SHEET NO.: 6.1 OF

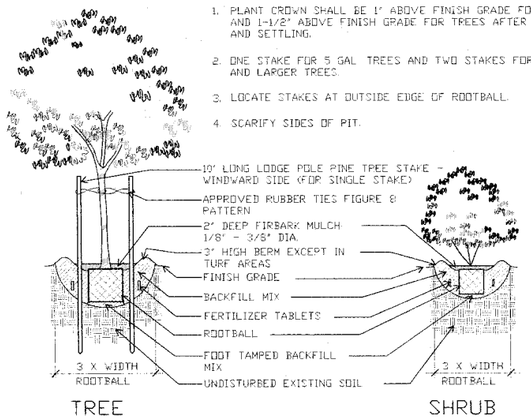
Figure 16

NOTES:
1. ROOT DEFLECTORS MAY BE REQUIRED UNDER CERTAIN CONDITIONS. SEE PLANTING NOTES FOR SPECIFIC CONDITIONS WHERE ROOT DEFLECTORS ARE REQUIRED.
2. INSTALL ROOT DEFLECTOR AGAINST STRUCTURE OR AS CLOSE TO STRUCTURE AS POSSIBLE. THE TOP OF ROOT DEFLECTOR SHALL BE SET ABOVE GRADE AS NOTED (NEVER BELOW GRADE.) THE RAISED ROOT DEFLECTORS SHALL FACE TOWARDS TREE.
3. SEE TREE PLANTING DETAIL FOR TREE INSTALLATION



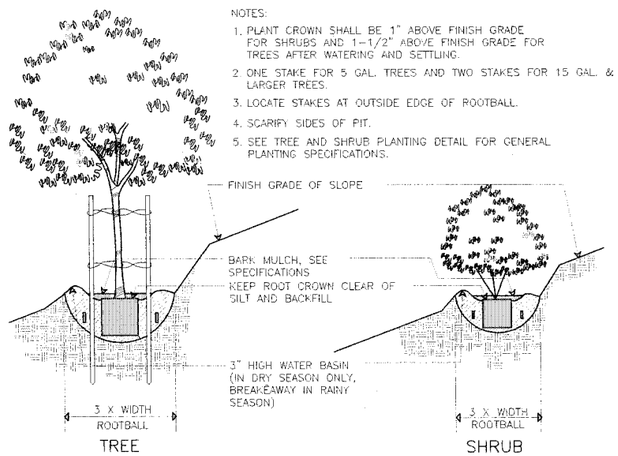
A ROOT DELECTOR
NTS

NOTES:
1. PLANT CROWN SHALL BE 1" ABOVE FINISH GRADE FOR SHRUBS AND 1-1/2" ABOVE FINISH GRADE FOR TREES AFTER WATERING AND SETTLING.
2. ONE STAKE FOR 5 GAL. TREES AND TWO STAKES FOR 15 GAL. AND LARGER TREES.
3. LOCATE STAKES AT OUTSIDE EDGE OF ROOTBALL.
4. SCARIFY SIDES OF PIT.



B TREE AND SHRUB PLANTING
NTS

NOTES:
1. PLANT CROWN SHALL BE 1" ABOVE FINISH GRADE FOR SHRUBS AND 1-1/2" ABOVE FINISH GRADE FOR TREES AFTER WATERING AND SETTLING.
2. ONE STAKE FOR 5 GAL. TREES AND TWO STAKES FOR 15 GAL. & LARGER TREES.
3. LOCATE STAKES AT OUTSIDE EDGE OF ROOTBALL.
4. SCARIFY SIDES OF PIT.
5. SEE TREE AND SHRUB PLANTING DETAIL FOR GENERAL PLANTING SPECIFICATIONS.



C HILLSIDE TREE AND SHRUB PLANTING
NTS

FRONTAGE & PRIVATE YARD AREA PLANT PALETTE:

STREET TREES:
STREET TREE SPECIES WILL BE SELECTED BY CITY ARBORIST, SEE "STREET TREE PLANTING NOTES", SHEET 6.1.

TREES:

CANOPY TREES		
CELTIS AUSTRALIS	EUROPEAN HACKBERRY	15 GAL.
CHITALPA TASHKENTENSIS	CHITALPA	24" BOX
CINANAMOMUM CAMPHORA	CAMPHOR TREE	15 GAL.
FRAXINUS OXYCARPA	RAYWOOD ASH	15 GAL.
MAYTENUS BORAIA	MAYTEN TREE	15 GAL.
OLEA EUROPAEA	EUROPEAN OLIVE	24" BOX
PRUNUS CAROLINIA	CARLONIA CHERRY	24" BOX
PLATANUS ACERIFOLIA	LONDON PLANE TREE	15 GAL.
QUERCUS ILEX	HOLLY OAK	15 GAL.
TRISTANIA CONFERTA	BRISBANE BOX	15 GAL.
ULMUS PARVIFOLIA 'DYNASTY'	EVERGREEN ELM	15 GAL.
VERTICAL SCREEN TREES		
CEDRUS DEODARA	DEODAR CEDAR	15 GAL.
GINKGO BILOBA 'SENTRY'	MAIDENHAIR TREE	15 GAL.
HYMENOSPORUM FLAVUM	SWEET SHADE	15 GAL.
POPOCARPUS GRACILIOR	FERN PINE	15 GAL.
PYRUS CALLERYANA 'CHANTICLEER'	ORNAMENTAL PEAR	15 GAL.
SEQUOIA SEMPERVIRENS 'LOS ALTOS'	LOS ALTOS REDWOOD	15 GAL.
FLOWERING ACCENT TREES		
ACER PALMATUM 'ACONITIFOLIUM'	JAPANESE MAPLE	15 GAL. & 24" BOX
ARBUTUS UNEDO	STRAWBERRY TREE	15 GAL. & 24" BOX
CERCIS CANADENSIS	EASTERN REDBUD	15 GAL. & 24" BOX
CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM	15 GAL. & 24" BOX
COTINUS COGGYGRIA	SMOKE BUSH	15 GAL. & 24" BOX
CRATAEGUS PHAENOPYRUM	WASHINGTON THORN	15 GAL. & 24" BOX
ERIOBOTRYA JAPONICA	JAPANESE LOQUAT	15 GAL. & 24" BOX
LAGERSTROMIA HYBRIDS	CREPE MYRTLE	15 GAL. & 24" BOX
LEPTOSPERMUM LAEVIGATUM	AUSTRALIAN TEA TREE	15 GAL. & 24" BOX
MELALUCA QUINQUENERIVA	CAJUPUT TREE	15 GAL. & 24" BOX
MAGNOLIA SOULANGIANA SPP.	LILLIPUTIAN MAGNOLIA	15 GAL. & 24" BOX
MALUS FLORIBUNDA	FLOWERING CRABAPPLE	15 GAL. & 24" BOX
PRUNUS CERASIFERA 'KV'	PURPLE-LEAF PLUM	15 GAL. & 24" BOX
PRUNUS SERULATA 'KWANZAN'	FLOWERING CHEERY	15 GAL. & 24" BOX
PYRUS KAWAKAMII	EVERGREEN PEAR	15 GAL. & 24" BOX
TIBUCHINA URVILLEANA	PRINCESS FLOWER	15 GAL. & 24" BOX
TREE STANDARDS		
ANISOENTIA HYPOMANDARUM	CAPE MALLOW	15 GAL.
PHOTINIA SERRULATA	PHOTINIA	15 GAL.
SOLANUM RANTONNETTII 'ROYAL ROBE'	PARAGUAY NIGHTSHADE	15 GAL.
RHAPHIOLEPSIS 'MAJESTIC BEAUTY'	INDIA HAWTHORN	15 GAL.
ROSA ICEBERG	TREE ROSE	15 GAL.

SHRUBS:

ABELIA GRANDIFLORA 'EG'	GLOSSY ABELIA	5 GAL.
AGAPANTHYS SPP.	AGAPANTHUS	1 GAL.
AZALEA HYBRIDS 'PINK & SWEET'	AZALEA	5 GAL.
BERBERIS THUNBERGII	JAPANESE BARBERRY	1 GAL.
BERGENIA CORDIFOLIA	HEARTLEAF BERGENIA	1 GAL.
CAMELLIA JAPONICA 'NUCCIO'S PEAL'	CAMELLIA	5 GAL.
CAMELLIA SASANQUA 'SHISHI GASHIRA'	SHISHI GASHIRA CAMELLIA	5 GAL.
CISTUS LANDANIFER	CRIMSON SPOT ROCK ROSE	5 GAL.
CLIVIA MINITATA	KAFFIR LILY	1 GAL.
COLEONEMA PULCHRUM	PINK BREATH OF HEAVEN	1 GAL.
CORREA HYBRID 'DUSKY BELLS'	AUSTALIAN FUCHSIA	1 GAL.
COTONEASTER DAMMERI 'LOWFAST'	LOWFAST BEARBERRY COTONEASTER	1 GAL.
DIETES BICOLOR	FORTNIGHT LILY	5 GAL.
ERIGERON KARVINSKIANUS	SANTA BARBARA DAISY	1 GAL.
ERYSIMUM 'BOWLES MAUVE'	COMPACT WALLFLOWER	5 GAL.
EURYOPS PECTINATUS	SHRUB DAISY	1 GAL.
ESCALLONIA SPP.	ESCALLONIA	5 GAL.
FUCHSIA HYBRIDA 'GARTENMEISTER'	FUCHSIA	5 GAL.
GREVILLIA ROSMARINIFOLIA	ROSEMARY GREVILLEA	5 GAL.
GREVILLEA NOELLII	NOELL'S GREVILLEA	5 GAL.
HEBE 'COED'	HEBE	5 GAL.
HEBE 'VERONICA LAKE'	HEBE	5 GAL.
HEMEROCALLIS HYBRID	FLOWERING DAYLILY	1 GAL.
HEUCHERA SANGUINEA	CORAL BELLS	1 GAL.
HIBISCUS ROSA-SINENSIS	RED FLOWERING HIBISCUS	1 GAL.
LATANA SPP.	LANTANA	1 GAL.
LAVATERA THURINGIACA	TREE MALLOW	5 GAL.
LAVENDULA DENTATA	FRENCH LAVENDAR	5 GAL.
LIGUSTRUM JAPONICUM	JAPANESE PRIVET	5 GAL.
MAHONIA AQUIFOLIUM	OREGON GRAPE	5 GAL.
NANDINA DOMESTICA	HEAVENLY BAMBOO	5 GAL.
NEPHROLEPIS CORDIFOLIA	SOUTHERN SWORD FERN	1 GAL.
PHOTINIA FRASERI	PHOTINIA	5 GAL.
PHORMIUM 'DAZZLER'	NEW ZELAND FLAX	5 GAL.
PHORMIUM 'MAORI QUEEN'	NEW ZELAND FLAX	5 GAL.
PHORMIUM 'TINY TIM'	DWARF NEW ZELAND FLAX	1 GAL.
PITTOSPORUM TOBIRA 'CREME DE MINT'	VARIEGATED DWARF MOCK ORANGE	1 GAL.
PITTOSPORUM TOBIRA 'VARIEGATA'	VARIEGATED MOCK ORANGE	5 GAL.
RHAPIOLEPIS INDICA SPP.	INDIA HAWTHORN	5 GAL.
RHODODENDRON	RHODODENDRON	5 GAL.
ROSA 'FUCHSIA MEIDILAND'	PINK SHRUB ROSE	1 GAL.
ROSA 'RED MEIDILAND'	RED SHRUB ROSE	1 GAL.
ROSA 'ALBA MEIDILAND'	WHITE SHRUB ROSE	1 GAL.
ROSA 'ICEBERG'	ROSE 'ICEBERG'	1 GAL.
ROMARINUS 'TUSCAN BLUE'	ROSEMARY	5 GAL.
SOLLYA HETEROPHYLLA	AUSTRALIAN BLUEBELLS	1 GAL.
TRACHELOSPERMUM JASMINOIDES	STAR JASMINE	1 GAL.
VERBENA PERUVIANA	PERUVIAN VERBENA	1 GAL.
XYLOSMA CONGESTUM 'COMPACTA'	DWARF XYLOSMA	5 GAL.

VINES:

BIGNONIA VIOLACEA	VIOLET TRUMPET VINE	5 GAL.
FICUS PUMILA	CREEPING FIG	5 GAL.
HARDENBERGIA VIOLACEA	HARDENBURGIA	5 GAL.
JASMINUM POLYANTHUM	PINK JASMINE	5 GAL.
PANDOREA JASMINOIDES	PANDOREA	5 GAL.
ROSA BANKSIAE	LADY BANKS' ROSE	5 GAL.
SOLANUM JASMONIODES	POTATO VINE	5 GAL.
WISTERIA SINENSIS	CHINESE WISTERIA	5 GAL.

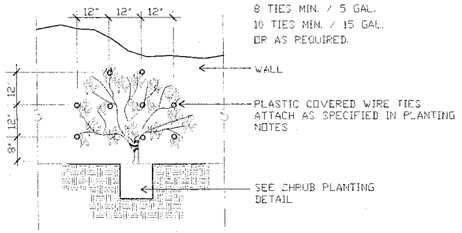
GROUNDCOVERS:

BACCHARIS PILULARIS 'PIGEON POINT'	SPREADING COYOTE BRUSH	FLATS
CEANOTHUS HEARSTIORUM	HEARST CEANOTHUS	FLATS
CHAMAEMELUM NOBILE	CHAMOMILE	FLATS
COPROSMA KIRKII 'VERDE VISTA'	VERDE VISTA MIRROR PLANT	FLATS
COTONEASTER 'LOWFAST'	SPREADING COTONEASTER	FLATS
FRAGARIA CHILEONSIS	ORNAMENTAL STRAWBERRY	FLATS
PYRACANTHA 'SANTA CRUZ'	PYRACANTHA	FLATS
ROSA 'FLOWER CARPET'	CARPET ROSES	FLATS

TURF:

MEDALION DWARF TALL FESCUE	TURF GRASS	

NOTES:
4 TIES MIN. / 1 GAL.
8 TIES MIN. / 5 GAL.
10 TIES MIN. / 15 GAL.
OR AS REQUIRED.



D VINE TYING DETAIL
NTS

RIPARIAN REVEGITATION AREA PLANT PALETTE:

TREES:

AESULUS CALIFORNICA	BUCKEYE	Tree Pots
CERCIS OCCIDENTALIS	WESTERN REDBUD	Tree Pots
QUERCUS AGRIFOLIA	COAST LIVE OAK	Tree Pots
PLATANUS RACEMOSA	WESTERN SYCAMORE	Tree Pots
UMBELLULARIA CALIFORNICA	CALIFORNIA BAY LAUREL	Tree Pots

SHRUBS:

ARCTOSTAPHYLUS 'EMERALD CARPET'	MANZANITA	1 GAL.
ARCTOSTAPHYLUS HOOKERI	HOOKER'S MANZANITA	1 & 5 GAL.
BACCHARIS PILULARIS	DWARF COYETE BRUSH	1 GAL.
CARPETERIA CALIFORNICA	BUSH ANEMONE	1 & 5 GAL.
CEANOTHUS GRISEUS HORIZONTALIS	CARMEL CREEPER	1 & 5 GAL.
HETEROMELES ARBUTIFOLIA	CALIFORNIA TOYON	1 & 5 GAL.
MIMULUS AURANTIACUS	STICKY MONKEY FLOWER	1 GAL.
MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	1 & 5 GAL.
RHAMNUS CALIFORNICA	COFFEEBERRY	1 & 5 GAL.
RIBES CALIFORNICUM	HILLSIDE GOOSEBERRY	1 GAL.
ROSA CALIFORNICA	WILD ROSE	1 GAL.
SALVIA CLEVELANDII	CLEVELAND SAGE	1 GAL.
SAMBUCUS MEXICANA	BLUE ELDERBERRY	1 & 5 GAL.
SYMPHOCARPOS ALBUS	COMMON WHITE SNOWBEERY	1 GAL.

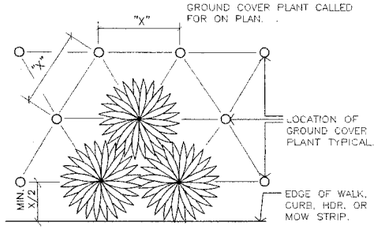
RIPARIAN PLANT PALETTE NOTES:

1. ALL RIPARIAN AREAS WILL BE REPLANTED WITH PLANT SPECIES INDICATED IN 'RIPARIAN REVEGITATION AREA PLANT PALETTE".
2. DETAILED RIPARIAN RESTORATION AREA PLANTING AND IRRIGATION PLANS (INCLUDING A COMPREHENSIVE RIPARIAN CORRIDOR REVEGITATION PLAN) WILL BE PRODUCED DURING THE CONSTRUCTION DOCUMENT PHASE OF THE PROJECT (AFTER THE PD PLANS HAVE BEEN APPROVED).

PLANT PALETTE NOTES:

1. ALL TREES, SHRUBS, VINES AND GROUND COVERS ARE WATER CONSERVING SPECIES, LISTED IN ONE OR MORE OF THE FOLLOWING PUBLICATIONS:
"WATER CONSERVING PLANTS & LANDSCAPES FOR THE BAY AREA", EBMUD BOOKS
"WATER CONSERVING PLANTS A LIST OF LOW WATER USING TREES, SHRUBS, VINES & GROUND COVERS", CITY OF PALO ALTO
"WUCOLS PROJECT: WATER USE CLASSIFICATION OF LANDSCAPE SPECIES", UC COOPERATIVE EXTENSION & STATE OF CALIFORNIA AB 325 MODEL WATER EFFICIENT LANDSCAPE ORDINANCE.

NOTES:
"X" = ON CENTER SPACING OF GROUND COVER PLANT CALLED FOR ON PLAN.



E GROUNDCOVER PLANTING
NTS

CLIENT:
DAL PROPERTIES LLC
255 W. JULIAN STREET
SUITE 502
SAN JOSE, CALIFORNIA
95110-2405
408.286.9502

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 14TH ST., SAN FRANCISCO, CA
ZIP 94103 PH (415) 864-1921 FAX (415) 864-4796

PROJECT MANAGER: MA
DRAWN BY: WM
CHECKED BY: MA

LICENSED LANDSCAPE ARCHITECT
TERRY R. GIBSON
Lic. No. 3402
Expires
STATE OF CALIFORNIA

PROJECT NAME/LOCATION:
6782-6790 SAN FELIPE
SAN JOSE, CALIFORNIA

DRAWING TITLE:
CONCEPTUAL LANDSCAPE PLANS
PDC 11-012

NO	DESCRIPTION	BY:	DATE

SHEET TITLE:
PRELIMINARY PLANT PALETE AND DETAILS
SCALE: AS SHOWN
ISSUE DATE: 12/19/11
PROJECT NO.: V1118
SHEET NO.: 6.4 OF

II. ENVIRONMENTAL SETTING, IMPACT CHECKLIST AND MITIGATION

1. AESTHETICS

SETTING

The current view of the project site consists primarily of two vacant homes, a shed, open yards, Misery Creek and a stand of large eucalyptus trees along the southeasterly boundary, which can be seen in the preceding photographs, Figures 8 and 9.

Scenic Route

The project site is not located adjacent to a designated scenic route.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
1. AESTHETICS. Would the project:					
a. Have a substantial adverse effect on a scenic vista?			X		25,26,27
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway?				X	25,26, 27,29,31
c. Substantially degrade the existing visual character or quality of the site and its surroundings?			X		25,26,27
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?			X		25, 26,28,34
e. Increase the amount of shading on public open space (e.g., parks, plazas and/or school yards)?			X		25,26,28

Scenic Vista

The project site is located approximately 250 feet from San Felipe Road and is approximately 15 to 20 feet higher in elevation. In addition, there is an existing home, outbuildings and vegetation on the parcel between the site and San Felipe Road. For these reasons, the project would not be highly visible from the roadway. Because of the existing visual character of the project site that includes two houses, the change to 2-story (maximum height = 35 feet) residential buildings would not have a substantial effect on scenic vistas.

Scenic Resources

Due to the fact that there are no state scenic highways along any of the roads that border the project site, there would be no impact to trees, rock outcrops or historic buildings along a scenic highway.

Visual Character

The project would change the view of the site from two vacant homes, a shed, open yards, Misery Creek and a stand of large eucalyptus trees along the southeasterly boundary to four single family detached homes with landscaped yards, a 50-foot setback and enhanced riparian landscaping along Misery Creek. Any trees that are to be removed will be replaced in conformance with the City's requirements, as further described in the following Biological Resources section; and street trees and landscaping will be provided as part of the project. Detailed architectural and landscape plans have been submitted for review and approval in accordance with the City's Residential Design Guidelines and PD Zoning procedure.

Light and Glare

The project could produce offsite light and/or glare. The project has been designed to utilize downward-directed low pressure sodium vapor street lights in order to prevent offsite light and glare, in accordance with the City's Outdoor Lighting on Private Developments Policy (Policy 4-3).

Temporary Construction Visual Impacts

Construction of a typical project causes short-term visual impacts. The grading operations create a visual impact, and construction debris, rubbish and trash can accumulate on construction sites and are unsightly if visible from public streets. Public streets that are impacted by project construction activities will be swept and washed down daily. Debris, rubbish and trash will be cleared from any areas onsite that are visible from a public street. The completion of the project improvements and landscaping will eliminate the short-term visual impacts of the grading and construction operations.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Design

- The project design will conform to the City's Residential Design Guidelines.

Trees

- Any tree that is removed will be replaced with the addition of a new tree(s) at the ratios shown in the City's standard Tree Replacement Ratios table.

Light and Glare

- Lighting on the site will conform to the City's Outdoor Lighting on Private Developments Policy (Policy 4-3).

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The implementation of the above standard project conditions would ensure the project will have a **less-than-significant impact** on aesthetics.

2. AGRICULTURE AND FOREST RESOURCES

SETTING

Agriculture Resources

The *Santa Clara County Important Farmland Map*, prepared by the California Department of Conservation and the USDA Natural Resources Conservation Service, classifies land in seven categories in order of significance: 1) prime farmland, 2) farmland of Statewide importance, 3) unique farmland, 4) farmland of local importance, 5) grazing land, 6) urban and built-up land and 7) other land. The southwesterly side of Misery Creek is classified as "built-up land," which is defined as land occupied by structures with a building density of at least one unit to one and one-half acres; and the northeasterly side of Misery Creek is classified as "grazing land," which is defined as land on which the existing vegetation, whether grown naturally or through management, is suited to the grazing of livestock.

Williamson Act

The California Land Conservation Act ("Williamson Act") was enacted to help preserve agricultural and open space lands via a contract between the property owner and the local jurisdiction. Under the contract, the owner of the land agrees not to develop the land in exchange for reduced property taxes. The project site is not under a Williamson Act contract.

Forest Resources

"Forest land" is defined by the California Public Resources Code as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. "Timberland" means land, other than land owned by the federal government and land designated as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. The project site is not located on forest land or timberland.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
2. AGRICULTURE AND FOREST RESOURCES. Would the project:					
a. Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X	35,36
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	37,66

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
2. AGRICULTURE AND FOREST RESOURCES (Cont.). Would the project:					
c. Conflict with existing zoning for, or cause rezoning of, forest land [as defined in PRC Section 12220(g)], timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production [as defined by GC Secion 51104(g)]?				X	25,27,29
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X	25,26,28
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				X	25,26,28

Agriculture Resources

The project site is classified as urban and built-up land and/or grazing land on the *Important Farmland Map* for Santa Clara County. Since the site is not located in an area identified as prime farmland, nor is the site being used for or zoned for agricultural use or is under a Williamson Act contract, the project would have no impact on agricultural land.

Forest Resources

Since the site is not located in an area identified as forest land or timberland, nor is the site being used for or zoned for forestry use, the project would have no impact on forest resources.

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The proposed project would have **no impact** on agriculture or forest resources.

3. AIR QUALITY

SETTING

Regional Climate

The air quality of a given area is not only dependent upon the amount of air pollutants emitted locally or within the air basin, but also is directly related to the weather patterns of the region. The wind speed and direction, the temperature profile of the atmosphere, and the amount of humidity and sunlight react with the emitted pollutants each day, and determine the resulting concentrations of air pollutants defining the "air quality."

The Bay Area climate is Mediterranean, with mild, rainy winters November through March, and warm, sunny and nearly dry summers June through September. Summer temperature inversions trap ground level pollutants. Winter conditions are less conducive to smog, but thin evening inversions sometimes concentrate carbon monoxide emissions at ground level. A temperature inversion is a thin layer of the atmosphere where the normal decrease in temperature with height switches to the temperature increasing with height; an inversion acts like a lid.

San Jose is located in the southern portion of the San Francisco Bay Area Air Basin. The proximity of this location to both the Pacific Ocean and San Francisco Bay has a moderating influence on the climate. Northwest winds and northerly winds are most common in the project area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by automobiles and factories from upwind areas of the Peninsula toward San Jose, particularly during the summer months. Winds are lightest on average in fall and winter. Every year in fall and winter there are periods of several days when winds are very light and local pollutants can build up.

Regulatory Overview

The Federal Clean Air Act establishes pollutant thresholds for air quality in the United States; which are administered by the U.S. Environmental Protection Agency (EPA). In addition to being subject to Federal requirements, California has its own, more stringent, regulations under the California Clean Air Act, which is administered by the California Air Resources Board (CARB) at the State level and by Air Quality Management Districts at the local level. The project site is located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which includes seven Bay Area counties and portions of two others.

Criteria Pollutants

The BAAQMD is primarily responsible for ensuring that the National and State ambient air quality standards are attained and maintained in the Bay Area. These ambient air quality standards are levels of contaminants that represent safe levels in order to avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The major criteria pollutants, characteristics, health effects and typical

sources for the Bay Area are identified in the table on the following page, Table 2. The BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for and inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and many other associated activities.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage and death.

Air Quality Standards

Air quality is described by the concentration of various pollutants in the atmosphere. The significance of the pollutant concentration is determined by comparing the concentration to an appropriate ambient air quality standard. The U.S. EPA and CARB have both established ambient air quality standards for common pollutants to avoid adverse health effects from each pollutant. The pollutants, which include ozone, carbon monoxide (CO), nitrogen dioxide, and particulate matter (PM_{10} and $PM_{2.5}$), and their standards are included in the Local Air Quality table, Table 2, that follows. In Santa Clara County, ozone and particulate matter are the pollutants of greatest concern since measured air pollutant levels exceed the State and Federal air quality standards concentrations at times.

Attainment Status

The Federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where the Federal or State ambient air quality standards are not met as "nonattainment areas". Because of the differences between the Federal and State standards, the designation of nonattainment areas is different under Federal and State legislation.

The U.S. EPA has classified the San Francisco Bay Area as a nonattainment area for the Federal 8-hour ozone and $PM_{2.5}$ standards. The Bay Area was designated as unclassifiable/attainment for the Federal PM_{10} standard.

Under the California Clean Air Act, Santa Clara County is a nonattainment area for ozone and particulate matter (PM_{10} and $PM_{2.5}$). The county either meets attainment or is unclassified for the other pollutants. The California Clean Air Act requires local air pollution control districts to

prepare air quality attainment plans; these plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or, if not, provide for adoption of "all feasible measures on an expeditious schedule".

Local Air Quality

Air quality in the project area is subject to the problems experienced by most of the Bay Area. Emissions from millions of vehicle-miles of travel each day often are not mixed and diluted, but are trapped near ground level by an atmospheric temperature inversion. Prevailing air currents generally sweep from the mouth of the Bay toward the south, picking up and concentrating pollutants along the way. A combination of pollutants emitted locally, the transport of pollutants from other areas, and the natural mountain barriers (the Diablo Range to the east and the Santa Cruz Range to the southwest) give San Jose a relatively high atmospheric potential for pollution compared to other parts of the San Francisco Bay Air Basin.

The BAAQMD maintains a network of monitoring sites in the Bay Area. The closest to the project site is located in Downtown San Jose. Violations of air quality standards for the last three reported years at the downtown San Jose monitoring station are shown in the following table. Federal ambient air quality standards are met in the project area with the exception of ozone and $PM_{2.5}$. State ambient standards are met with the exception of ozone and PM_{10} / $PM_{2.5}$.

Table 2. Local Air Quality

Pollutant	Standard	Days Exceeding Standard 2007	2008	2009
OZONE				
State 1-hour	0.09 ppm	0	1	0
State 8-hour	0.07 ppm	0	3	0
Federal 8-hour	0.08 ppm	0	2	0
CARBON MONOXIDE				
State/Federal 8-hour	9.0 ppm	0	0	0
NITROGEN DIOXIDE				
State 1-hour	0.25 ppm	0	0	0
PARTICULATE MATTER (PM_{10})				
State 24-hour	50 $\mu g/m^3$	3	1	0
Federal 24-hour	150 $\mu g/m^3$	0	0	0
PARTICULATE MATTER ($PM_{2.5}$)				
Federal 24-hour	35 $\mu g/m^3$	9	5	0

ppm = parts per million $\mu g/m^3$ = micrograms per cubic meter

SOURCE: Bay Area Air Quality Management District monitoring data for Downtown San Jose.

Project Site

The project site is similar to other locations in the South Bay; air quality meets adopted State and/or Federal standards (the more stringent standard applies) on most days, and during periods when regional atmospheric conditions are stagnated, the air quality is poor throughout the

extended South Bay area. There are no existing sources on the project site that currently adversely affect local air quality.

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following people who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest sensitive receptors are the existing and planned single family residences surrounding the project site.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
3. AIR QUALITY. Would the project:					
a. Conflict with or obstruct implementation of the applicable air quality plan?				X	29,39
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X		26,39
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			X		26,39
d. Expose sensitive receptors to substantial pollutant concentrations?		X			28,39
e. Create objectionable odors affecting a substantial number of people?				X	26,28

Project Impacts

Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

For most types of development projects, motor vehicles traveling to and from a project represent the primary source of air pollutant emissions associated with the project. The BAAQMD has

established thresholds of significance for these indirect impacts from projects on local and regional air quality. If project vehicle emissions of carbon monoxide (CO) exceed 9 ppm (8-hour average) or 20 ppm (1-hour average); and if a project generates over 54 lbs/day of reactive organic gases (ROG), nitrogen oxides (NO_x) or suspended particulate matter ($PM_{2.5}$ from exhaust) or over 82 lbs/day (PM_{10} from exhaust), it would have a significant air quality impact. For construction-related PM_{10} and $PM_{2.5}$ fugitive dust, the threshold of significance is a requirement that the facility employ Best Management Practices (BMPs) to minimize dust.

The BAAQMD developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a proposed project could result in potentially significant air quality impacts. If the screening criteria are met, then an air quality assessment of a project's air pollutant emissions is not required and the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the District's thresholds of significance. Operation of a proposed project would, therefore, result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions. For single family residential projects, the screening level is 325 units. The proposed 4-unit project is substantially below that level and, therefore, would not have a significant air quality impact.

Odors

The project would not generate objectionable odors or place sensitive receptors adjacent to a use that generates odors (i.e., landfill, composting, etc.).

Sensitive Receptors

The closest sensitive receptors (the existing and planned single family residences surrounding the project site) could be subjected to fugitive dust as a result of construction, as discussed below.

Temporary Construction Dust

The project would produce short-term fugitive dust generated as a result of site preparation and construction. The effects of construction activities would be increased dustfall and locally elevated levels of PM_{10} and $PM_{2.5}$ downwind of construction activity. Construction dust has the potential for creating a nuisance at nearby properties. This is considered a potentially significant impact. The BAAQMD threshold of significance for construction dust impacts is whether Best Management Practices (BMPs) are to be utilized. Mitigation measures include all basic BMPs identified by the BAAQMD; according to the District threshold of significance for construction impacts, implementation of the measures would reduce construction dust impacts of the project to a less-than-significant level.

MITIGATION MEASURES INCLUDED IN THE PROJECT

Temporary Construction Dust

- The following Best Management Practices shall be required of construction contracts and specifications for all construction to prevent visible dust emissions from leaving the site:
  - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
  - All haul trucks transporting soil, sand or other loose material off-site shall be covered.
  - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
  - All vehicle speeds on unpaved roads shall be limited to 15 mph.
  - All roadways, driveways and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by CCR Title 13). Clear signage shall be provided for construction workers at all access points.
  - All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
  - A publicly-visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

CONCLUSION

The implementation of the above mitigation measures would reduce the project's impact on air quality to a **less-than-significant impact with mitigation**.

4. BIOLOGICAL RESOURCES

Live Oak Associates, Inc. conducted a biological evaluation dated August 25, 2011 that is included in the Technical Appendix.

SETTING

A reconnaissance-level survey of the project site was conducted on November 29, 2010, at which time the principal biotic habitats of the site were identified and the constituent plants and animals of each were noted. A tree survey was also conducted on November 29, 2010. Additional surveys were conducted on May 2 and May 5, 2011 to evaluate tree resources and the condition of the riparian corridor along Misery Creek.

VEGETATION

Habitat Areas

Two main biotic habitats have been identified either on the project site or immediately adjacent to the site: 1) ruderal grassland / developed; and 2) riparian. Their general locations are shown on the following Habitat Areas map.

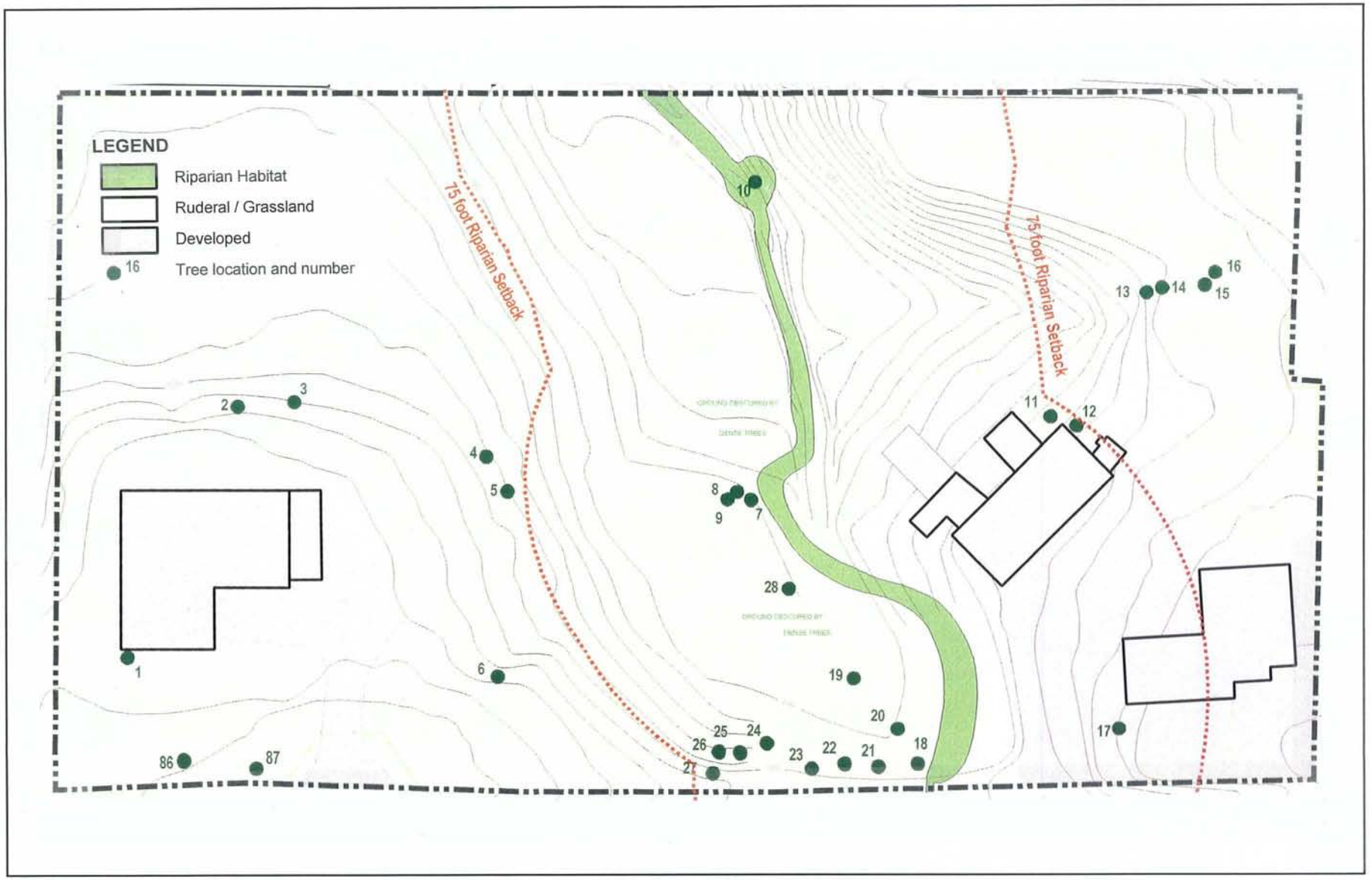
Ruderal Grassland / Developed Habitat

Two home sites are on the project site, and the surrounding grassland has been affected by years of human use. The majority of the site supports ruderal habitat comprised of a large fenced area with Misery Creek running down the center; included in this area are remnant, unmaintained fruit trees, eucalyptus trees mostly along the road to the south portion of the site, and two driveways associated with the onsite residences. Non-native grasslands and ruderal areas dominated by weedy grasses and forbs of European origin comprise the main habitat occurring onsite.

Grasses observed in this habitat include wild oat, ripgut brome, soft chess, Mediterranean barley, foxtail barley, annual bluegrass and rabbit's foot grass. The grassland areas of the site support fruit trees around the home sites, eucalyptus trees, and a few other tree species. Large eucalyptus trees were the dominant species on the site and were observed mainly in two clumps - one on the north boundary of the site and one on the south boundary. Other trees observed include coast live oak, Monterey pine, Italian cypress, and red willow.

Riparian Habitat

A riparian corridor associated with Misery Creek is located through the project site. The riparian woodland vegetation near Misery Creek running through the project site consists of a dense canopy of mature eucalyptus trees on the southern edge of the site in varying condition. Only one tree, a red willow, occurs within the riparian corridor, although the dense eucalyptus



Habitat Areas

Figure 17

near the creek offer a modest canopy over much of the creek channel. The understory of the riparian woodland is relatively sparse, consisting mainly of the same non-native ruderal grasses that are present in the upland habitat, with dead Italian thistles closer to the creek. In addition, coast live oak and blue oak seedlings were observed in the southern portion of the riparian corridor.

Special Status Plant Species

Several species of plants within the State of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. State and Federal laws have provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant species native to the state. A number of native plants have been formally designated as threatened or endangered under State and Federal endangered species legislation; others have been designated as "candidates" for such listing. Still others have been designated as "species of special concern" by the CDFG. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened or endangered. Collectively, these plants are referred to as "special status species."

A number of special-status plants occur in the vicinity of the project site. These species, and their potential to occur on the site, are listed in the report in the Technical Appendix. None of the 14 special status plant species occurring within the project vicinity occur on the project site.

Trees

The City of San Jose has a Tree Ordinance that regulates the removal of trees. An "Ordinance-sized tree" is defined as any native or non-native tree with a circumference of 56 inches (diameter of 18 inches) measured at 24 inches above the natural grade. For multi-trunk trees, the circumference is measured as the sum of the circumferences of all trunks at 24 inches above grade. A "heritage tree" is defined as a tree of special significance to the community due to history, girth, height, species, or other unique quality.

A detailed tree survey of all trees on the site was conducted. A total of 30 trees, ranging in diameter from 6 inches to 79 inches, were tagged and evaluated. Twenty-one (21) trees exceed 18 inches in diameter, are considered to be Ordinance-sized trees, and come under the review of the City's Tree Ordinance. There are no designated Heritage Trees on the site. The approximate locations of the trees are shown on the following Tree Locations map, and their description by type, size and general condition is given in the following table. Ordinance-sized trees are shown in **bold** in the table. Photographs of each Ordinance-sized tree are included in the report in the Technical Appendix.

Table 3. Existing Trees

No.	Scientific Name	Common Name	Native Tree	Diameter * *(inches)*	General Condition	To Be Removed
1.	*Cupressus sempervirens*	Italian Cypress		11	Good	X
2.	*Quercus agrifolia*	Coast Live Oak	N	8	Good	
3.	***Malus pumila***	**Apple**		**6,4,4,3,2,2****	**Good**	
4.	*Prunus armeniaca*	Apricot		9,6	Fair	X
5.	*Prunus domestica*	Plum		7	Fair	
6.	*Prunus dulcis*	Almond		6	Fair	
7.	***Eucalyptus globulus***	**Blue Gum**		**26,14,5**	**Good**	
8.	***Eucalyptus globulus***	**Blue Gum**		**20**	**Good**	
9.	***Eucalyptus globulus***	**Blue Gum**		**28**	**Good**	
10.	*Salix laevigata*	Red Willow	N	10,7	Fair	
11.	*Quercus agrifolia*	Coast Live Oak	N	17	Good	
12.	*Quercus agrifolia*	Coast Live Oak	N	9	Good	X
13.	***Eucalyptus globulus***	**Blue Gum**		**30**	**Fair**	
14.	***Eucalyptus globulus***	**Blue Gum**		**60**	**Good**	
15.	***Eucalyptus globulus***	**Blue Gum**		**15,8 ****	**Fair**	
16.	***Eucalyptus globulus***	**Blue Gum**		**21**	**Good**	
17.	***Pinus radiata***	**Monterey Pine**		**24**	**Good**	
18.	***Eucalyptus globulus***	**Blue Gum**		**79**	**Good**	
19.	***Eucalyptus globulus***	**Blue Gum**		**42**	**Fair**	
20.	***Eucalyptus globulus***	**Blue Gum**		**22**	**Dead**	
21.	***Eucalyptus globulus***	**Blue Gum**		**24**	**Fair**	
22.	***Eucalyptus globulus***	**Blue Gum**		**42**	**Good**	
23.	***Eucalyptus globulus***	**Blue Gum**		**12,7,7 ****	**Fair**	
24.	***Eucalyptus globulus***	**Blue Gum**		**32,7**	**Fair**	
25.	***Eucalyptus globulus***	**Blue Gum**		**42**	**Good**	
26.	***Eucalyptus globulus***	**Blue Gum**		**47**	**Fair**	
27.	***Eucalyptus globulus***	**Blue Gum**		**37**	**Fair**	
28.	*Eucalyptus globulus*	Blue Gum		stump sprouts	Poor	
29.	***Pinus radiata***	**Monterey Pine**		**23**	**Fair**	
30.	***Pinus radiata***	**Monterey Pine**		**20**	**Fair**	

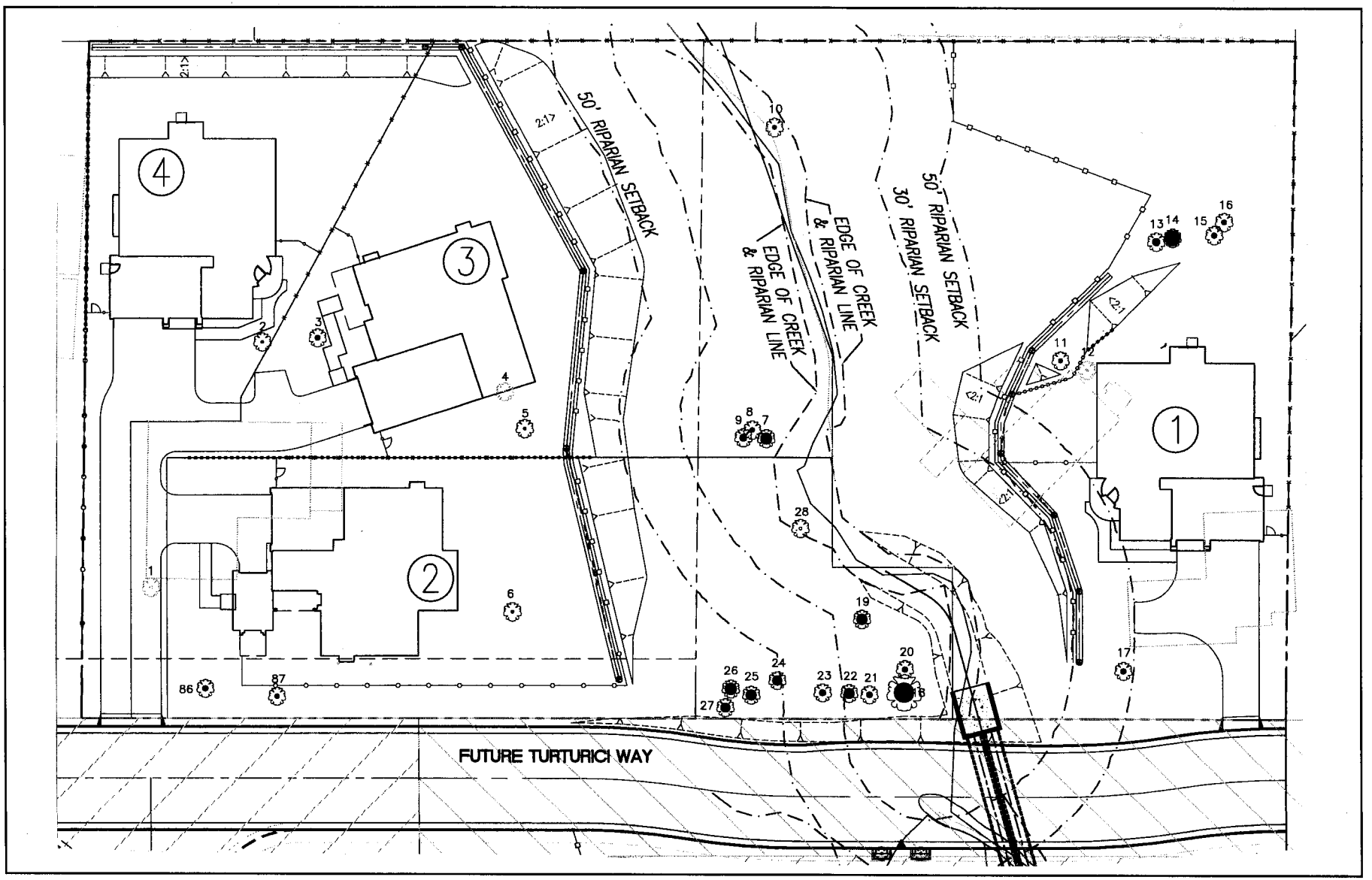
Note: Some trees have multiple stems from a single trunk. Ordinance-sized trees are shown in **bold**.

* Diameter at 2 feet above ground.

** Combined total represents an Ordinance-sized tree.

N = Native Tree.

X = To be Removed.



Tree Locations

Figure 18

WILDLIFE

Habitat Areas

Ruderal Grassland / Developed Habitat

Non-native grasslands provide important habitat to many terrestrial vertebrates. As many as 25 species of reptiles and amphibians, 100 species of birds, and 50 species of mammals are known to use grassland habitats of central California. A number of these species are expected to utilize grasslands occurring on the site throughout all or part of the year as breeding or foraging habitat. The project site provides suitable habitat for many of these species. Some of these species are grassland residents, while many more use a variety of other habitats as well. Some are migrants that would use the project site grasslands for only a portion of each year.

Although no reptiles were observed, the project grassland habitat is used or is likely used by several species of reptiles including the western fence lizard, southern alligator lizard, gopher snake, and western rattlesnake.

Bird species directly observed at the site include the red-winged blackbird, rufus crowned sparrow, western scrub jay, Anna's hummingbird, lesser goldfinch, turkey vulture (flying over the site), killdeer (just off the site), yellow rumped warbler, yellow-billed magpie, California towhee, European starling, mourning dove, and white-crowned sparrow. Two nests were also observed in a eucalyptus tree within the riparian corridor and near the road: one was a stick nest, possibly raptor or magpie; and the other was presumably an oriole nest (basket nest). Resident birds that are expected to occur on the site include the American crow, western meadowlark, and western kingbird. Winter migrants may include American pipit, Canada goose, merlin, and savannah sparrow.

A variety of raptors may be attracted to the site by its proximity to Misery Creek. Raptors that commonly utilize these types of ruderal habitats and the adjacent riparian corridors include Cooper's hawk, golden eagle, burrowing owl, great horned owl, red-shouldered hawk, red-tailed hawk, white-tailed kite, American kestrel, western screech owl, and barn owl. A stick nest was observed in one of the eucalyptus trees (along the south edge of the site); however, the status of the nest could not be determined.

Small mammals common to urban riparian corridors and ruderal habitats that do or are expected to utilize the site include the California vole, western harvest mouse, ornate shrew, California ground squirrel (observed adjacent to the site, one burrow observed on the site), brush rabbit, and Botta's pocket gopher. Mammalian predators such as coyote, opossum, bobcat, and raccoon likely forage onsite at night. Domestic or feral cat prints were observed on the site. Other large mammals such as black-tailed deer are also expected to forage onsite, especially along Misery Creek.

Riparian Habitat

The width of the corridor in this reach of Misery Creek is relatively narrow and impacted by erosion and human activities. Therefore, the wildlife value for this reach of Misery Creek is considered low to moderate. As such, wildlife use is restricted to more common species (e.g., raccoon, opossum, common passerines, etc.).

The limited leaf litter provides a moist microclimate suitable for some amphibian species such as the ensatina, arboreal salamander, California slender salamander, western toad, and Pacific tree frog. Reptiles that may utilize riparian systems include the western rattlesnake, western fence lizard, western skink, southern alligator lizard, California legless lizard, gopher snake, common kingsnake, and night snake.

Avian species that were observed in this limited riparian area during the November, 2010 survey include the the red-winged blackbird, rufus crowned sparrow, western scrub jay, Anna's hummingbird, lesser goldfinch, turkey vulture, killdeer, yellow rumped warbler, yellow-billed magpie, California towhee, European starling, mourning dove, and white-crowned sparrow. Other resident species that may be found in this habitat include the Cooper's hawk, great horned owl, Hutton's vireo, bushtit, and Nuttall's woodpecker. Winter migrants may include the sharp-shinned hawk and ruby-crowned kinglet. Summer migrants may include the ash-throated flycatcher and black-headed grosbeak.

Mammalian species that are likely to occur along the creek include the brush rabbit and western gray squirrel. Larger mammals that may occur along the riparian corridor would be the same as those found in the ruderal upland habitat.

Special Status Animal Species

Several species of animals within the State of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the State's human population grows and the habitats these species occupy are converted to agricultural and urban uses. State and Federal laws have provided the California Department of Fish and Game and the U.S. Fish and Wildlife Service with a mechanism for conserving and protecting the diversity of animal species native to the state. A number of native animals have been formally designated as threatened or endangered under State and Federal endangered species legislation; others have been designated as "candidates" for such listing. Still others have been designated as "species of special concern" by the CDFG. Collectively, these animals are referred to as "special status species."

A number of special-status animals occur in the vicinity of the project site. These species, and their potential to occur in the area, are listed in the report in the Technical Appendix. Twenty (20) special status animal species occur, or once occurred, regionally. Of these, 15 species would be absent or unlikely to occur on the site due to a lack of suitable habitat for these species, which include steelhead, California tiger salamander, California red-legged frog, coast horned

lizard, western pond turtle, peregrine falcon, northern harrier, burrowing owl, California yellow warbler, tricolored blackbird, Vaux's swift, black swift, San Francisco dusky-footed woodrat, American badger, and ringtail.

The remaining five special status species potentially occur as foragers, transients, or may be resident to the site. These include the golden eagle, white-tailed kite, loggerhead shrike, pallid bat, and Townsend's big-eared bat. Several of these species may also roost or nest in tall trees or shrubs occurring onsite or in the riparian corridor of Misery Creek.

Raptors and Other Migratory Birds

The Federal Migratory Bird Treaty Act prohibits killing, possessing or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This Act encompasses whole birds, parts of birds and bird nests and eggs. All raptors (i.e., eagles, hawks and owls) and their nests are protected under both Federal and State regulations. Birds of prey are protected in California under the State Fish and Game Code. Section 3503.5 states that it is "*unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*" Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG. Any loss of fertile eggs or any activities resulting in nest abandonment would constitute a significant impact. Construction activities such as tree removal, site grading, construction etc., that disturb a nest onsite or immediately adjacent to the site constitute a significant impact.

The project site contains trees that may provide suitable habitat for tree-nesting raptors and other migratory birds. Two nests were observed in a eucalyptus tree within the riparian corridor and near the road: one was a stick nest, possibly raptor or magpie; and the other was presumably an oriole nest (basket nest).

Burrowing Owls

The burrowing owl is a small, terrestrial owl that occurs in annual and perennial grasslands, deserts and scrublands with low-growing vegetation. Suitable owl habitat may also include trees and shrubs if the canopy does not cover more than 30 percent of the ground surface. Burrows, which provide protection, shelter and nests for burrowing owls, represent an essential component of this species' habitat. Burrowing owls typically use burrows made by fossorial (burrowing) animals, such as ground squirrels or badgers, but they will also use man-made structures such as culverts, or openings beneath cement, asphalt paving or debris piles. Burrowing owls use such sites for breeding, wintering, foraging and migration stopovers. Occupancy of suitable habitat may be verified by observations of one or more burrowing owls on the site or by the presence of owl feathers, cast pellets (or prey remains), eggshell fragments or excrement in or near a burrow

entrance. Burrowing owls are protected under a variety of state and federal laws including the Migratory Bird Treaty Act and the State Fish and Game Code as a "Species of Special Concern".

The project site is bordered by land with ground squirrels, and one burrow was located on the site. The site supports both potential foraging and breeding habitat (ground squirrel burrows) for the burrowing owl. No burrowing owl or evidence (e.g., white wash, pellets, feathers) was observed during the November, 2010 survey.

Regulated Habitats

Wetlands and Other Jurisdictional Waters

Jurisdictional waters include rivers, creeks and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (Corps), the California Department of Fish and Game (CDFG), and the California Regional Water Quality Control Board (RWQCB).

No formal wetland delineation has been done to determine if any areas of the site meet the technical criteria of jurisdictional wetlands, although the riparian dripline was mapped from the top of the banks of Misery Creek running through the site. The channel was wet during the November 29, 2010 visit, but no standing water was observed. A wet area was observed in an eastern portion of the site and was found to be the result of a leaking pipe; the pipe has been repaired and the resulting wet area is not expected to be claimed under the Corps, CDFG or RWQCB.

The channel of Misery Creek does not meet the technical criteria of a wetland, but it does have a defined bed and bank and is hydrologically connected to other Waters of the U.S. Therefore, Misery Creek is considered a jurisdictional tributary water.

Riparian Corridors

The City of San Jose has developed a riparian corridor policy that addresses several issues that relate to the identification, management, and protection of riparian resources within the City's Urban Service Area. Riparian corridors are defined as:

> "*Any defined stream channels including the area up to the bank full-flow line, as well as all riparian (streamside) vegetation in contiguous adjacent uplands. Characteristic woody riparian vegetation species could include (but are not limited to): willow, alder, box elder, Fremont sycamore, and oaks. Stream channels include all perennial and intermittent streams shown as a solid or dashed blue line on USGS topographic maps, and ephemeral streams or 'arroyos' with well-defined channels and some evidence of scour or deposition.*"

Misery Creek is covered by the City's *Riparian Corridor Policy Study*.

Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP)

To promote the recovery of endangered species while accommodating planned development, infrastructure and maintenance activities, the Local Partners, consisting of the City of San Jose, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, Santa Clara County and the cities of Gilroy and Morgan Hill, are preparing a joint Habitat Conservation Plan/Natural Community Conservation Plan. The Santa Clara Valley Habitat Plan is being developed in association with the U.S. Fish & Wildlife Service (USFWS), the California Department of Fish and Game (CDFG) and the National Marine Fisheries Service (NMFS) and in consultation with stakeholder groups and the general public to protect and enhance ecological diversity and function within more than 500,000 acres of southern Santa Clara County. The final HCP/NCCP s currently expected to be completed by the end of 2011.

The Santa Clara Habitat Plan Planning Agreement outlines the Interim Project Process to ensure coordination of projects approved or initiated in the Planning Area before completion of the Habitat Plan to help achieve the preliminary conservation objectives of the Plan, and not preclude important conservation planning options or connectivity between areas of high habitat values. The Interim Project Referral Process requires the local participating agencies to notify the wildlife agencies (CDFG and USFWS) of projects that have the potential to adversely impact covered species or natural communities, or conflict with the preliminary conservation objectives of the Habitat Plan. The wildlife agencies' comments on Interim Projects should recommend mitigation measures or project alternatives that would help achieve the preliminary conservation objectives of the Habitat Plan.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
4. BIOLOGICAL RESOURCES. Would the project:					
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X			25, 40,41,100
b. Have a substantial adverse effect on any aquatic, wetland, or riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X			25,43,100

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
4. BIOLOGICAL RESOURCES (Cont.). Would the project:					
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act including, but not limited to, marsh, vernal pool, coastal, etc., through direct removal, filling, hydrological interruption or other means?				X	25,100
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X		25,100
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X		29,42,100
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?				X	25,29

Loss of Habitat for Special Status Plants

None of the 14 special status plant species occurring within the project vicinity occur on the site, due to a lack of suitable habitat. This is mainly because the site supports no serpentine or alkaline soils. Furthermore, the site is either above or below the required elevation range of some plants and does not support vernal pools. No mitigation is warranted.

Disturbance to Trees

There are 30 trees on the project site, ranging in diameter from 6 to 79 inches. Twenty-seven (27) trees are currently planned to be retained with the project, as shown on the Site Plan, Figure 11. Three trees, of which one is native, are planned to be removed with the project, as indicated by an "X" on the preceding Existing Trees table. None of the trees to be removed exceeds 18 inches in diameter (56-inch circumference) and comes under the review of the City's Tree Ordinance, which requires approval for the removal of any tree with an 18-inch diameter (56-inch circumference) or greater. The removal of 10 or more native Ordinance-sized trees and/or the removal of 20 or more non-native Ordinance-sized trees is considered a significant impact.

Street trees will be planted along Turturici Way. Any tree that is removed will be replaced with the addition of a new tree on the project site at the ratios shown in the Tree Replacement Ratios table that follows. Replacement trees are in addition to normal landscaping, riparian planting and required street trees. In addition, 20 replacement trees for the adjacent project are to be planted on this site as shown on the Preliminary Landscape Plan, Figure 16.

Trees to remain will be safeguarded before and during construction by a Tree Protection Plan developed by a consulting arborist, and implemented with measures such as the storage of oil, gasoline, chemicals, etc. away from trees; grading around trees or root pruning only as approved, and prevention of drying out of exposed soil where cuts are made; any additional tree pruning needed for clearance performed or supervised by an arborist; application of supplemental irrigation as determined by the consulting arborist; no dumping of liquid or solid wastes in the dripline or uphill from any tree; and construction of barricades around the dripline of the trees until all grading and construction is completed, as outlined in the City's Tree Ordinance.

Loss of Habitat for Special Status Animals

Five special status animal species potentially occur as residents, regular foragers, or transients on the site; these include the golden eagle, white-tailed kite, loggerhead shrike, pallid bat, and Townsend's big-eared bat. The proposed project is expected to result in a less-than-significant impact for all of the relevant special status animal species with the possible exception of impacts to nesting raptors and the potential loss of roosting and foraging habitat for special status bat species. No mitigation would be required for loss of habitat for special status animal species. With the exception of nesting raptors and/or special status bat species, additional surveys for special status animal species are not warranted.

Raptors and Other Migratory Birds

The project site provides potentially suitable habitat for tree-nesting raptors and other migratory birds. Two nests were observed in a eucalyptus tree within the riparian corridor and near the road: one was a stick nest, possibly raptor or magpie; and the other was presumably an oriole nest (basket nest). If a raptor or other migratory bird were to nest on or immediately adjacent to the site prior to construction, development-related activities could result in the abandonment of active nests or direct mortality to these birds, which would constitute a violation of state and federal laws and be considered a significant impact. Pre-construction surveys for nesting raptors and other migratory birds should be conducted.

Burrowing Owls

The project site provides both potential foraging and breeding habitat (ground squirrel burrows) for burrowing owls. While burrowing owls are currently absent from the site, they could utilize the site at some future date. Therefore, pre-construction surveys for burrowing owls should be conducted.

Bats

The structures and mature trees on the site provide potentially suitable habitat for bats. The site does not currently contain any known roosting bats; however, pre-construction bat surveys should be conducted prior to any demolition.

Loss of Habitat for Native Wildlife

The habitats of the site comprise only a portion of most regional wildlife's entire home range or territory. In addition, the existing homes introduced considerable anthropogenic effects to this system by lighting, pets, trash and considerable modification and degradation of the onsite habitats. The proposed project would primarily result in the loss of non-native and ruderal grassland habitats that are heavily disturbed and dominated by non-native plants. These habitats possess limited biotic value and provide only low quality habitat for most species, due in part to the fact that the site has been affected by human activity for a number of years. The loss of a relatively small amount of low quality ruderal habitat that is locally abundant is not expected to affect the persistence and presence of local wildlife. Therefore, impacts due to the loss of these habitats for native wildlife resulting from the proposed project are considered less than significant, and no mitigation measures are warranted.

Interference with the Movement of Native Wildlife

Movement corridors are characterized by the regular movements of one or more species through relatively well-defined areas and are often associated with ridgelines, wetland complexes, and well-developed riparian habitats of major rivers and creeks. The area proposed for development on the site consists of two biotic habitats that support a modest assemblage of native wildlife species. The habitats most heavily impacted by the proposed development consist of ruderal and non-native grasslands. While native wildlife may move through these habitats, they do not represent a significant movement corridor for native wildlife. Misery Creek, though degraded, does function as a corridor for a number of wildlife species that occur regionally; however, project impacts to the corridor would be minimal. Construction activities and subsequent project buildout may result in a temporary disruption of local wildlife movements during the daylight hours, but are not expected to result in any permanent or substantial changes in use or movement patterns once construction is complete. Wildlife species presently using the site are expected to continue moving through the open areas of the site and within the Misery Creek riparian corridor after project buildout. Project development, therefore, is expected to have a less-than-significant impact on the movements of native wildlife, and no mitigation measures are warranted.

Disturbance to Waters of the United States or Riparian Habitats

Waters of the U.S.

Misery Creek is considered a Waters of the U.S. and is, therefore, under the jurisdiction of the Corps. There is not expected to be any disturbance to Misery Creek with the project; thus, impacts to Waters of the U.S. would be expected to be less than significant and no mitigation measures are warranted.

Riparian Habitats

Misery Creek is covered by the City's *Riparian Corridor Policy Study*, which recommends the following riparian setback dimensions:

> *"All buildings, other structures (with the exception of bridges and minor interpretive node structures), impervious surfaces, outdoor activity areas (except for passive or intermittent activities) and ornamental landscaped areas should be separated a minimum of 100 feet from the edge of the riparian corridor (or top of bank, whichever is greater)."*

The edge of the riparian corridor for Misery Creek was established to be a combination of the top-of-bank on the eastern and western sides of this reach with the exception of one red willow tree and its dripline.

While the Policy recommends a 100-foot setback along riparian corridors, it also provides for exceptions to the 100-foot setback guideline. The Policy has established that a minimum setback "*should be no less than 50 feet or, in urban infill areas, no less than 30 feet or no less than the average of existing setbacks on adjacent properties, whichever is greater.*" Two exceptions apply to this project:

1. "*Instances where implementations of the project include measures which can protect and enhance the riparian value of the corridor more than a 100-foot setback.*"

   If the riparian corridors were improved with native vegetation (e.g., oaks, willows, sycamore, elderberry, etc.), thereby restoring some of the wildlife value within the short reach of Misery Creek (to offset the project's encroachment into the 100-foot setback), the proposed project would be consistent with the *Riparian Corridor Policy Study*.

2. "*Sites adjacent to small lower order tributaries whose riparian influence does not extend 100 feet.*"

   Misery Creek is a lower order tributary, and its riparian influence does not extend to 100 feet. Rather, the depth of riparian vegetation is only one to two trees wide, at most; and the banks have been impacted by years of human activity and, for the most part, are covered in non-native ruderal vegetation.

The riparian corridor along Misery Creek has been substantially degraged due to human activity over the last several decades (e.g., two existing homes and outbuildings within close proximity to the top-of-bank and continued use of the creek corridor for human activity) that has included either the planting of or invasion by eucalyptus trees. It is likely the native willows and oaks that likely once occurred within the riparian corridor have been removed by human use (several decades ago) and, to a small degree, out-competed by the eucalyptus trees that were planted on or invaded this site. The eucalyptus trees are non-native and greatly alter the natural bio-diversity that would have occurred along this creek. Therefore, the project, in an attempt to improve the presently degraded riparian corridor, includes a riparian enhancement component that is intended to improve the current conditions along this reach of Misery Creek. The key

component of this approach is to increase the setback to 75 feet (exceeding the current setbacks of the two existing homes) on the west side of the creek and between 30 feet to as much as 75 feet on the east side of the creek. This enhancement will include native trees and shrubs along the presently sparse riparian corridor - similar to what is planned on the adjacent Heritage Estates project.

Habitat Conservation Plan / Natural Communities Conservation Plan (HCP/NCCP)

The project site meets the threshold that requires an interim Habitat Conservation Plan project referral, has been referred to the agencies and no comments have been received.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Trees

- Any tree that is removed will be replaced with the addition of a new tree(s) at the ratios shown in the following Tree Replacement Ratios table.

Table 4. Tree Replacement Ratios

Diameter of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
18 inches or greater	5:1	4:1	3:1	24-inch box
12 to <18 inches	3:1	2:1	None	24-inch box
<12 inches	1:1	1:1	None	15-gallon container

x:x = tree replacement to tree loss ratio

Note: Trees greater that 18" diameter will not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

- The species and exact number of trees to be planted on the site will be determined at the development permit stage, in consultation with the City Arborist and the Department of Planning, Building and Code Enforcement.

- Replacement trees are to be above and beyond standard landscaping; required street trees do not count as replacement trees.

- In the event the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures will be implemented, to the satisfaction of the Director of Planning, Building and Code Enforcement, at the development permit stage:
  - The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees.
  - An alternative site(s) will be identified for additional tree planting. Alternative sites may include local parks or schools or installation of trees on adjacent properties for screening

purposes to the satisfaction of the Director of the Department of Planning, Building and Code Enforcement. Contact Jaime Ruiz, Parks, Recreation and Neighborhood Services Landscape Maintenance Manager, at 975-7214 or jaime.ruiz@sanjoseca.gov for specific park locations in need of trees.

- A donation of $300.00 per mitigation tree will be paid to Our City Forest for in-lieu offsite tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. Contact Rhonda Berry, Our City Forest, at (408) 998-7337 x106 to make a donation. A donation receipt for offsite tree planting will be provided to the Planning Project Manager prior to issuance of a development permit.

- The following tree protection measures will also be included in the project in order to protect trees to be retained during construction:

Pre-construction Treatments

- The applicant will retain a consulting arborist. The construction superintendent will meet with the consulting arborist before beginning work to discuss work procedures and tree protection.
- Fence all trees to be retained to completely enclose the tree protection zone prior to demolition, grubbing or grading. Fences will be 6-foot chain link or equivalent as approved by consulting arborist. Fences are to remain until all grading and construction are completed.
- Prune trees to be preserved to clean the crown and to provide clearance. All pruning will be completed or supervised by a Certified Arborist and adhere to the Best Management Practices for Pruning of the International Society of Arboriculture.

During Construction

- No grading, construction, demolition or other work will occur within the tree protection zone. Any modifications must be approved and monitored by the consulting arborist
- Any root pruning required for construction purposes will receive the prior approval of, and be supervised by, the consulting arborist.
- Supplemental irrigation will be applied as determined by the consulting arborist.
- If injury should occur to any tree during construction, it will be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
- No excess soil, chemicals debris, equipment or other materials will be dumped or stored within the tree protection zone.
- Any additional tree pruning needed for clearance during construction must be performed or supervised by an Arborist and not by construction personnel.
- As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees will be designed to withstand differential displacement.

MITIGATION MEASURES INCLUDED IN THE PROJECT

Raptors and Other Migratory Birds

- If possible, construction should be scheduled between October and December (inclusive) to avoid the nesting season. If this is not possible, pre-construction surveys for nesting raptors

and other migratory breeding birds shall be conducted by a qualified ornithologist to identify active nests that may be disturbed during project implementation. Between January and April (inclusive) pre-construction surveys shall be conducted no more than 14 days prior to the initiation of construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys shall be conducted no more than thirty (30) days prior to the initiation of these activities. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area for nests. If an active nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist shall, in consultation with the California Department of Fish and Game, designate a construction-free buffer zone (typically 250 feet for raptors and 100 feet for other birds) around the nest, which shall be maintained until after the breeding season has ended and/or a qualified ornithologist has determined that the young birds have fledged. The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the Director of Planning, Building and Code Enforcement prior to the issuance of any grading or building permit.

Burrowing Owls

- A pre-construction survey for burrowing owls shall be conducted by a qualified biologist within 30 days prior to any ground disturbance activities.

- A buffer zone of a minimum of 250 feet shall be established around active burrowing owl nesting sites if nesting burrowing owls are discovered during pre-construction surveys conducted between February 1st and August 31st, and no disturbance shall occur within the buffer zone until a qualified biologist has determined that the young birds have fledged.

- No disturbance shall occur within 160 feet of occupied burrows if over-wintering burrowing owls are discovered using the site during the non-breeding season (September 1st through January 31st).

- If any burrowing owls are discovered using the site during the pre-construction surveys during the non-breeding season, a burrowing owl relocation plan to be approved by the California Department of Fish and Game shall be developed and implemented, including passive measures such as installation of one-way doors in active burrows for up to four days, careful excavation of all active burrows after four days to ensure no owls remain underground, and filling all burrows in the construction area to prevent owls from using them.

- A biologist report outlining the results of the pre-construction burrowing owl surveys and any recommended buffer zones or other mitigation shall be submitted to the satisfaction of the Director of Planning, Building and Code Enforcement prior to the issuance of a grading permit.

Bats

- A detailed bat survey shall be conducted to determine if bats are roosting or breeding in the onsite buildings prior to demolition. A qualified bat specialist shall look for individuals, guano, staining, and/or vocalization by direct observation and potential waiting for nighttime emergence. The survey shall be conducted during the time of year when bats are active, between April 1 and September 15. If demolition is planned within this timeframe, the survey shall be conducted within 30 days of demolition. An initial survey could be conducted to provide early warning if bats are present, but a follow-up survey will be necessary within 30 days. If demolition is planned outside of this timeframe (September 16 through March 31), the survey shall be conducted in September prior to demolition. If no bats are observed to be roosting or breeding in these structures, then no further action would be required, and demolition can proceed.

- If a non-breeding bat colony is found in the buildings to be demolished, the individuals will be humanely evicted via the partial dismantlement of the buildings prior to demolition under the direction of a qualified bat specialist to ensure that no harm or "take" would occur to any bats as a result of demolition activities. If a maternity colony is detected in the buildings, then a construction-free buffer shall be established around the structure and remain in place until it has been determined by a qualified bat specialist that the nursery is no longer active. Demolition will preferably be done between March 1 and April 15 or August 15 and October 15 to avoid interfering with an active nursery.

- A biologist report outlining the results of pre-construction bat surveys and any recommended buffer zones or other mitigation shall be submitted and approved to the satisfaction of the Director of Planning, Building and Code Enforcement prior to the issuance of any grading, building, or tree removal permit.

CONCLUSION

The implementation of the above standard project conditions and mitigation measures would reduce the project's impact on biological resources to a **less-than-significant impact with mitigation**.

5. CULTURAL RESOURCES

Holman & Associates conducted an archaeological reconnaissance dated October 17, 2011. As the report may discuss the location of specific archaeological sites, it is considered administratively confidential and is not included in this Initial Study but is on file at the City of San Jose Planning Division for review by authorized personnel. Urban Programmers conducted an historical investigation dated October 18, 2011 that is included in the Technical Appendix.

SETTING

Prehistoric Cultural Resources

Archival Review

The project site is located within a sensitive archaeological resource area as outlined on the maps on file at the City of San Jose Planning Division. Prior to a field reconnaissance, maps and records at the Northwest Information Center (NWIC), located in Rohnert Park, were consulted for any record of archaeological remains in and around the project area. No sites are recorded inside the project borders, nor has the area previously been surveyed. However, a prehistoric archaeological site, not yet formally recorded, was found on the surface of an adjacent property. Monitoring during construction confirmed that the property had once held a seasonal village site situated near the banks of Thompson Creek adjacent to San Felipe Road. Artifactual materials along with the remains of one and possibly two human burials were found.

Field Reconnaissance

A field reconnaissance of the project site was done on October 13, 2011. Visibility of the ground surface was obscured on the western side of the creek by large piles of dirt, probably excavated from a trench that had been excavated around the house located there. A visual examination of the soils exposed on both sides of Misery Creek and in the trench walls revealed a mixture of gravels consisting of basalts and cherts; none of the chert material showed any signs of deliberate use and/or modification. The walls of the trench also did not reveal any indicators of Native American use and/or modification.

There are no known cultural sites on the project site, nor does the site have any natural features of significant scenic value or with rare or unique characteristics.

Historic Cultural Resources

There are two existing houses located on the project site, one of which was constructed approximately 63 years ago and one that was constructed approximately 35 years ago. None of the structures on the project site is currently listed as a City Landmark or Candidate City Landmark, or is listed or determined eligible for listing on the National or California Register of Historic Places.

An historical investigation of the structures on the project site was conducted to determine the historic and architectural value of the buildings on the site. Historic aerial photographs beginning in 1939 do not show any structures or buildings on the property; the predominant use was as an orchard. By 1948, the Assessor's records show a small residence was added to the assessment roll. The first time a building can be seen occupying the northeast section of the otherwise undeveloped property is in a 1956 aerial photograph. An aerial photo from 1965 clearly shows the building has been enlarged and a shed/garage has been added. These buildings are the ones present on the site and addressed as 6790 San Felipe Road. The second house and garage was permitted by Santa Clara County and constructed in 1976-77 at 6782 San Felipe Road. The property has belonged to the Hunt family for over 50 years. For several years, the family engaged in a limited home business making jam and jelly that was sold in fruit stands such as the Cortese Bros. Fruit Stand on San Felipe Road.

6790 San Felipe Road

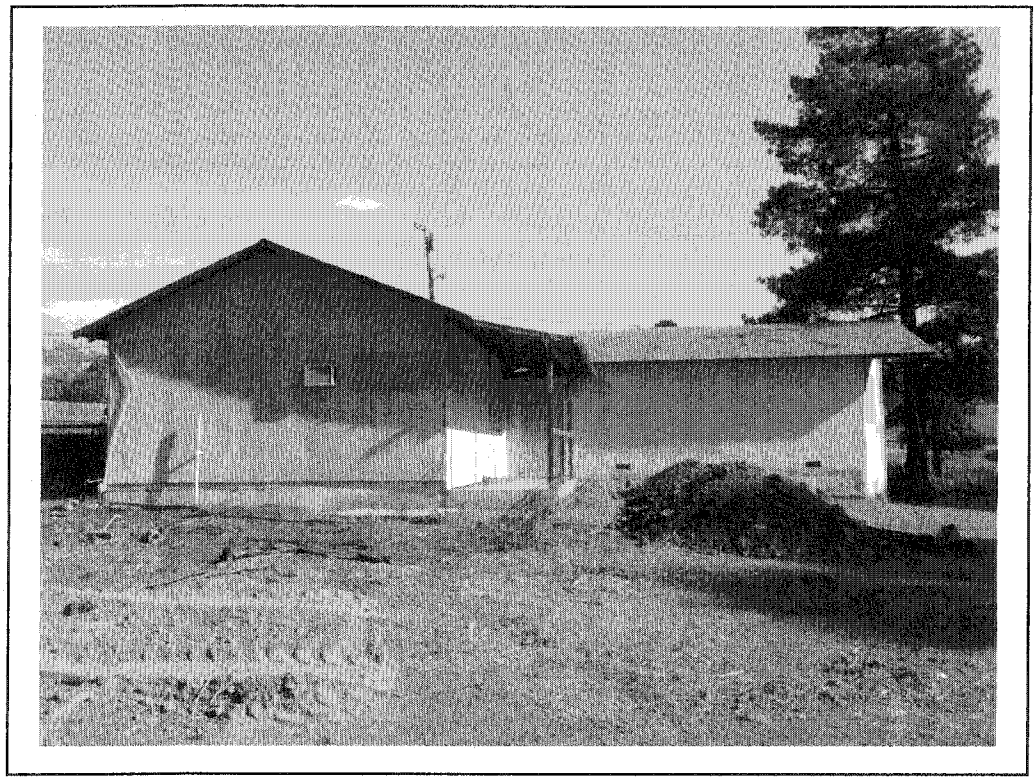
What appeared as a small cottage or cabin structure, c1948, has been enlarged and modified over the years to the buildings that exist on the northeast portion of the property. The house is a mish-mash of alterations and materials. The vernacular building appears to have been a small pioneer or cabin style while the addition is a vernacular that gives the building an "L" shape. The materials are wood frame with a connecting link in concrete block. Exterior materials are stucco and T-111 (grooved plywood). In the gable end of the original section of the building, the horizontal boards that were the siding of the building are still visible, as is a brick chimney.

The storage shed is a linear building constructed for utilitarian use with a wood frame and horizontal board siding. It appears to have been used for agricultural tools and vehicles; however, alterations created a very substandard living space that has been abandoned to vacant storage space. The building has not been maintained and is in very poor condition. The single-story pitched-roof building appears to have been mostly open on the front façade, but over time plywood has been added to create sections of wall with plywood hinged doors. The rear has "pens" attached where openings have been cut into the wall. This is where a boiler was located as part of the jelly making process. Sections of siding are missing from this façade.

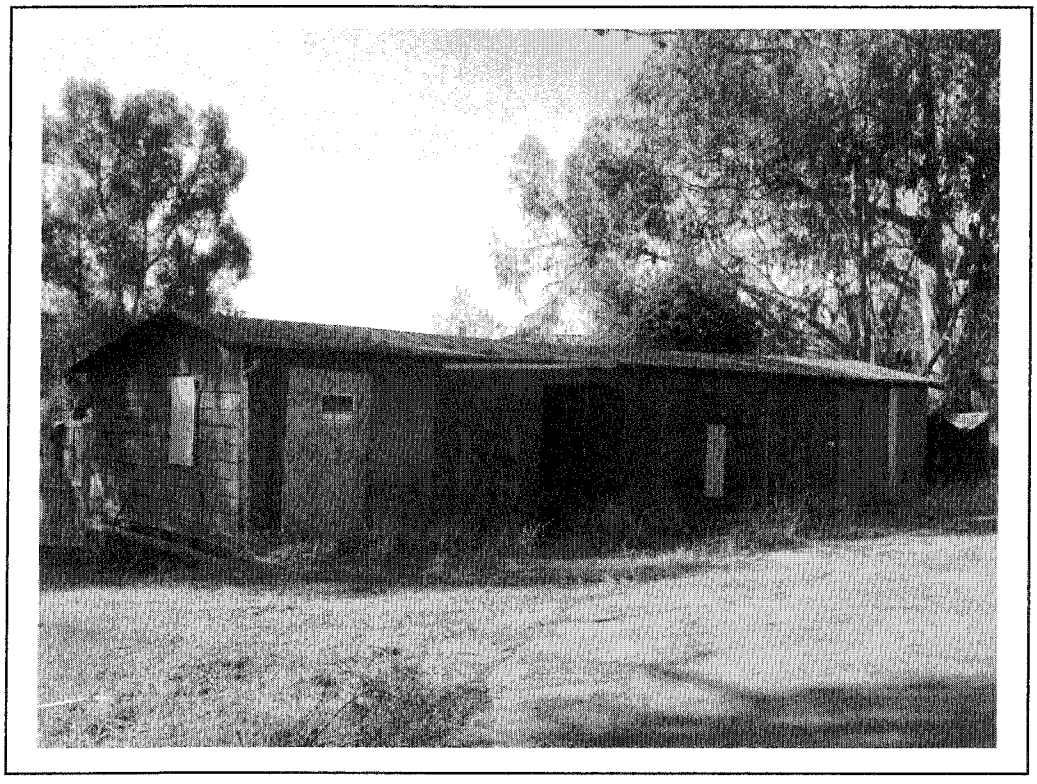
The house and shed at 6790 San Felipe Road can be seen in the following photographs.

6782 San Felipe Road

The single-story house, c1977, is constructed in an "L" form with elements of California Ranch style in the shed porch roof supported by three square posts. The rest of the wood frame building is without ornamentation or design quality. The projecting wing of the house is covered in stucco while the rest is in manufactured siding.



1948 House.



Shed.

6790 San Felipe Road Structures

October 12, 2011 Figure 19

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
5. CULTURAL RESOURCES. Would the project:					
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines §15064.5?			X		25, 45,46,102
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?		X			27,44,101
c. Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?				X	27,47
d. Disturb any human remains, including those interred outside of formal cemeteries?		X			27,101

Prehistoric Cultural Resources and Native American Burials

The project site is located within a sensitive archaeological resource area; however, there are no recorded sites on the property. Excavations done around the house at 6782 San Felipe Road did not reveal any extension of the former Native American village location found in the vicinity. There still remains some potential, however, that grading in the vicinity of Misery Creek could uncover buried prehistoric archaeological deposits, now largely covered by piles of dirt. A qualified archaeologist should be retained to monitor all future construction-related grading until he/she is satisfied that there is no further potential for the discovery of significant archaeological materials and/or human remains. Native American burials are protected by State law.

Historic Cultural Resources

6790 San Felipe Road

The house has lost integrity because it does not retain the materials or design of the original 1948 "cabin" and the addition, without interesting vernacular architectural design, gives the appearance of being "stuck" onto the cabin. A variety of materials - concrete block, grooved plywood siding and stucco - have been added at different times. The building does not represent a fine or unusual vernacular architectural design. The use has been in support of small agriculture, but that has not been present for over 50 years. The shed does not exhibit vernacular architectural distinction and the uses were ancillary to the maintenance of the property. The history is of small buildings that were occupied by agriculture workers when there was an orchard on the property, and for making jam and jelly. Research did not uncover any event, trend, or person of significance associated with the property.

6782 San Felipe Road

This c1977 house is not yet 50 years old. The house is not associated with people or events that are important in the history of San Jose. The building does not represent fine or unusual architectural design.

Conclusion

The structures on the project site are typical of a rural group including two houses, storage sheds and what appears to have been a combination apartment and storage shed. The conclusion after considering the history and current condition is that the property is not significant to the history of San Jose or the County of Santa Clara.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Native American Burials

- Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California: In the event of the discovery of human remains during construction, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner will be notified by the developer and will make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he will notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the landowner will reinter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

- Any Native American human remains that are discovered and would be subject to disturbance will be removed and analyzed, a report will be prepared, and the remains will be reburied in consultation and agreement with the Native American Most Likely Descendant designated by the Native American Heritage Commission. Prior to obtaining a Certificate of Occupancy, a copy of the report will be submitted to the satisfaction of the Director of Planning, Building and Code Enforcement.

MITIGATION MEASURES INCLUDED IN THE PROJECT

Prehistoric Cultural Resources

- A qualified professional archaeologist shall be required to monitor all construction grading and utility trenching until the archaeologist is satisfied that construction will not disturb important archaeological deposits, as follows:
  - If no resources are discovered, the archaeologist shall submit a report to the Director of Planning, Building and Code Enforcement verifying that the required monitoring occurred and that no further mitigation is necessary.
  - If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the deposits for determination of significance as defined by CEQA guidelines.

- The archaeologist shall submit reports, to the satisfaction of the Director of Planning, Building and Code Enforcement, describing the testing program and subsequent results; these reports shall identify any program mitigation to be completed in order to mitigate archaeological impacts (including resource recovery and/or avoidance, testing and analysis, removal, reburial, and curation of archaeological resources at a recognized storage facility). A final report shall verify completion of the mitigation program to the satisfaction of the Director of Planning, Building and Code Enforcement.
- In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius in order to proceed with the testing and mitigation measures required.

CONCLUSION

The implementation of the above standard project conditions and mitigation measures would reduce the project's impact on cultural resources to a **less-than-significant impact with mitigation**.

6. GEOLOGY AND SOILS

Cornerstone Earth Group conducted a geotechnical investigation dated September 20, 2011 and an Addendum dated February 17, 2012 that are both included in the Technical Appendix.

SETTING

Topography

The site generally slopes gently north from the south side toward Misery Creek, with the north side sloping gently south toward the creek. Elevation differences tend to be from about Elevation 600 feet at the north and south corners of the property, to about Elevation 580 in the bottom of the Misery Creek channel.

Geology

The project site is underlain by Quaternary alluvium (Qal), which consists of unconsolidated to weakly consolidated silt, sand and gravel. Quaternary alluvium includes Holocene and late Pleistocene alluvium and minor amounts of beach and dune sand and marine terrace deposits.

Geologic Hazard Zone

The project site is not located in a geologic hazard zone as mapped by the City of San Jose in accordance with the Geologic Hazards Ordinance.

Soils

The project site is underlain by the alluvial soils of the Zamora-Pleasanton association as classified by the U.S. Department of Agriculture, Soil Conservation Service. Pleasanton loam, 2-9% slopes (PoC) and Positas-Saratoga loams, 9-15% slopes (PrD) are the specific soil types identified at the site.

Pleasanton loam, 2-9% slopes, located generally south of Misery Creek, is characterized by a grayish brown, massive, hard, slightly acid surface layer approximately 16 to 20 inches thick; good natural drainage; moderately slow subsoil permeability; slow to medium surface runoff; slight to moderate erosion hazard; moderate inherent fertility (Class II); and a moderate shrink/swell capacity.

Positas-Saratoga loams, 9-15% slopes, located generally north of Misery Creek, are characterized by a brown, massive, hard, neutral to medium acid surface layer approximately 10 to 25 inches thick; good natural drainage; moderately slow to very slow subsoil permeability; medium surface runoff; moderate erosion hazard; moderate to low inherent fertility (Class IV); and a moderate to high shrink/swell capacity.

The Lick Observatory Quadrangle has not yet been released as part of the series of Seismic Hazard Zones maps by the California Geological Survey. According to Cooper-Clark and Associates' *San Jose Geotechnical Investigation*, the site is mapped as having a low to moderately high ground failure (liquefaction) potential, little or no weak soils and/or weak soil

layers and lenses occurring at random locations and depths, moderately to highly expansive soils, slight to moderate erosion potential, and a low susceptibility to landslides. These soils conditions can be managed using standard engineering measures and do not require further geologic study at this time as part of the environmental review process, but may require further analysis prior to the issuance of a grading or building permit.

Faulting

There are no identified earthquake faults mapped on the site, and the site is not mapped within a designated Alquist-Priolo Earthquake Fault Zone (formerly Special Studies Zone) or within a City of San Jose Fault Hazard Zone. The nearest active fault zones are the Hayward and Calaveras Faults, which are mapped approximately 0.65 and 4.5 miles respectively to the east, and the San Andreas Fault, which is mapped approximately 15.0 miles to the southwest.

Geotechnical Investigation

A geotechnical investigation was conducted on the project site. The investigation included a review of readily available literature and geologic maps for the project area, field and laboratory programs to evaluate physical and engineering properties of the subsurface soils, engineering analysis of the data, and formulation of conclusions and recommendations for development.

Literature Review

The site is located within the relatively flat alluvial plain of the Santa Clara Valley, a northwest-southeast trending valley within the Coast Range Geomorphic Province. The broad alluvial plain of the Santa Clara Valley consists of Holocene and Pleistocene alluvial deposits.

Field Investigation

Field exploration consisted of four borings drilled on the site on June 15 and 16, 2011, to a maximum depth of 30 to 50 feet below the existing ground surface (bgs). The approximate locations and logs of the borings are included in the report in the Technical Appendix. Quaternary (Upper Pleistocene) alluvial fan deposits underlie the higher elevation portions of the site; in general, these alluvial fan deposits typically consist of unconsolidated silty sands and clayey sands with varying proportions of gravel and clay, and sandy and silty gravels. Minor beds of clay and silt occur within these deposits. The lower elevation portions of the site are underlain by younger (Holocene) creek channel deposits consisting of clay, sandy clay and clayey sand with gravel. Groundwater was encountered in some of the explorations at depths ranging from 24.5 to 28.5 feet bgs. Fluctuations is groundwater levels occur due to many factors including seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

Laboratory Testing

The laboratory testing program was directed towards providing sufficient information for the determination of the engineering characteristics of the site soils so that recommendations could be formulated. Moisture content, dry densities, washed sieve analyses, and Plasticity Index tests

were performed. The results of the Plasticity Index tests indicated a low to moderate expansion potential. The remaining results of the laboratory testing program are included in the report in the Technical Appendix.

Slope Stability

Based on a surface reconnaissance, research of published and unpublished geologic maps and reports, and review of aerial photogtraphs, no significant landslides are present at or immediately adjacent to the project site. Furthermore, exposures of alluvial deposits observed in Misery Creek at the site as well as published mapping indicate the Quaternary deposits that underlie the site should be expected to have nearly horizontal contacts. Therefore, there is a low potential for landsliding to occur in areas that could potentially directly impact the project site. Misery Creek has steep to nearly-vertical creek banks that vary from about 3.5 feet to a maximum of about 8.0 feet in height; while these creek banks are underlain by alluvium that appears relatively stable, a failure and/or retreat of the creek bank due to streamflow in an usually heavy storm is possible.

Stream Erosion

Misery Creek meanders through the site, and there is potential for stream bank erosion and encroachment on the future lots. Review of aerial photographs from as far back as 1953 does not show any discernable creek bank migration or retreat for approximately 60 years. Reconnaissance of the site and laboratory testing showed some migration of stream channels within the Holocene stream channel deposits; but the current site conditions do not produce anything beyond minor erosion of the creek bank, principally through local undercutting of the stream banks. The soil deposits along the creek are generally moderately resistant to erosion and increase in density with depth.

Spring

Review of aerial photographs show an active spring or groundwater seepage on the easterly part of the site that originates from the property to the northeast. Reconnaissance of the site showed the water to be natural and concentrated but other springs were not observed. Damaged and leaking pipes conveying water were subsequently discovered and repaired as an interim measure and no further seepage or spring activity has occurred.

Investigative Conclusions

The project site is considered suitable from a geotechnical perspective for construction of the proposed development, providing the report recommendations are incorporated into the project plans and specifications. The primary geotechnical concerns are the potential for liquefaction-induced settlements, shallow groundwater, and the presence of moderately expansive soils.

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
6. GEOLOGY AND SOILS. Would the project:					
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: 1) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)				X	50, 53,54,105
2) Strong seismic ground shaking?			X		27,52,105
3) Seismic-related ground failure, including liquefaction?			X		31, 52,56,105
4) Landslides?		X			50,56,105
b. Result in substantial soil erosion or the loss of topsoil?			X		51, 52,105,106
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X		52,105
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X		51,52,105
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?				X	28

General

All earthwork and foundation plans and specifications will comply with the recommendations of the geotechnical investigation by Cornerstone Earth Group. The geotechnical report lists approximately 45 recommendations that are included in the project for earthwork, utility trenches, drainage, foundations, concrete slabs and pedestrian pavements, vehicular pavements, and retaining walls, most of which reflect standard engineering practices that are required for similar projects. Site-specific conditions are described below.

Expansive Soils

Expansive soils shrink and swell as a result of moisture changes. The surface soils on the site pose a hazard to building foundations because of their moderate shrink/swell potential. Measures for buildings on expansive soils include drainage control and the use of special

foundations. Drainage will be controlled and directed away from the structures and pavements. The proposed structures may be supported on shallow foundations provided the recommendations in the Earthwork and Foundation sections of the geotechnical investigation are followed.

Shallow Groundwater

Groundwater was measured at depths ranging from approximately 24.5 to 28.5 feet bgs. It is anticipated, however, that groundwater may exist at depths ranging from approximately 5 to 30 feet bgs. Shallow groundwater could significantly impact grading and underground construction; these impacts typically consist of potentially wet and unstable subgrade, difficulty achieving compaction, and difficult underground utility installation. Dewatering and shoring of utility trenches may be required in some areas of the site.

Slope Stability

Because a failure and/or retreat of the Misery Creek bank due to streamflow in an usually heavy storm is possible, the creek banks were screened for long-term stability as part of the slope stability review. The results of the static and seismic slope stability analysis indicate that the stability of the proposed slopes exceed generally accepted factors of safety values of 1.5 for static conditions. Slopes close to Misery Creek, however, generally exceeded accepted factor of safety values of 1.0 for seismic conditions; by 50 feet from the top of bank the seismic factor of safety was 1.0, with the potential for seismic deformation lower at greater distances. Therefore, habitable structures should be located 50 feet from the steeply-incised portions of the top of Misery Creek's bank.

Erosion

Development of the project site may subject the soils to accelerated erosion, both in graded areas and along the Misery Creek stream banks. In order to minimize erosion, erosion control measures such as those described in the Association of Bay Area Governments (ABAG) *Manual of Standards for Erosion & Sediment Control Measures* will be incorporated into the project.

Stream Erosion

Misery Creek meanders through the site, and there is potential for stream bank erosion and encroachment on the future lots. Based on review of the creek channel, subsurface conditions in site explorations, review of local geology and historical aerial photographs and incorporation of 50 to 75-foot setbacks, the creek erosion should only be a few feet and should not impact the proposed structures over their 50-year lifespan.

The banks of Misery Creek will also be stabilized from erosion via the use of native vegetation and other erosion control measures. A Vegetative Bank Stabilization Plan, comprised of long-term bank stabilization via the installation of native woody and semi-woody riparian vegetation (trees and/or shrubs/subshrubs) and short-term bank stabilization of barren soils via hydroseeding and/or the installation of coconut fiber matting, will be developed for the site.

Based on the review and acceptance of the geotechnical investigation and addendum prepared by Cornerstone Earth Group, the City Engineering Geologist issued a Certificate of Geologic Hazard Clearance for the project. A copy of the Certificate letter is included in the Technical Appendix.

Spring

There was evidence of a spring or groundwater seepage on the easterly part of the site, but it was found to be from damaged and leaking pipes coming from northeast of the site that have been repaired as an interim measure. The pipes convey the offsite water to Misery Creek. The extent of the pipes and source of the water are unknown. As part of the project, the water from the pipes will be picked up at the property line and conveyed to onsite or offsite storm drainage facilities.

Seismic Hazards

Ground Rupture

Ground rupture (surface faulting) tends to occur along lines of previous faulting. As the site is not located within a State of California Earthquake Fault Hazard Zone and there are no known active faults on the site, the potential for ground rupture due to an earthquake is low.

Seismic Shaking

The maximum seismic event occurring on the site would probably be from effects originating from the Hayward, Calaveras, or San Andreas fault systems. Ground shaking effects can be expected in the area during a major earthquake originating along any of the active faults within the Bay Area. At present, it is not possible to predict when or where movement will occur on these faults. It must be assumed, however, that movement along one or more of these faults will result in a moderate or major earthquake during the lifetime of any construction on this site. The effects on development would depend on the distance to the earthquake epicenter, duration, magnitude of shaking, design and quality of construction, and geologic character of materials underlying foundations.

The maximum credible earthquake, which is defined as *"the maximum earthquake that appears capable of occurring under the presently known framework"*, for the San Andreas Fault ranges from magnitude 8.0 to 8.3; and from magnitude 7.0 to 7.5 for either the Hayward or Calaveras Faults. The maximum probable earthquake, which is defined as *"the maximum earthquake that is likely to occur during a 100-year interval"*, for the San Andreas Fault ranges from magnitude 7.5 to 8.5; from magnitude 6.75 to 7.5 for the Hayward Fault; and from magnitude 6.5 to 7.0 for the Calaveras Fault.

Structural damage from ground shaking is caused by the transmission of earthquake vibrations from the ground into the structure. Ground shaking is apparently the only significant threat to structures built on the site; however, it is important to note that well-designed and constructed

structures that take into account the ground response of the soil or rock in their design usually exhibit minor damage during earthquake shaking.

The proposed structures on the site will be designed and constructed in conformance with the Uniform Building Code Guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking on the site.

Liquefaction

Soil liquefaction is a phenomenon in which saturated, cohesionless soil layers located close to the ground surface lose strength during cyclic loading, such as imposed by earthquakes. During the loss of strength, the soil acquires a "mobility" sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands.

Field and laboratory programs addressed this issue by sampling potentially liquefiable layers to depths of at least 30 feet, and to 50 feet in the two borings closest to Misery Creek. The analyses indicated that several layers could potentially experience liquefaction triggering that could result in soil softening and post-liquefaction total settlement ranging from no estimated settlement to nearly one inch. Differential movement for level ground sites over deep soil sites will be about half of the total settlement; therefore, differential settlements are anticipated to be on the order of less than 0.5 inch between independent foundation elements, and/or over a horizontal distance of 30 feet for continuous foundation elements.

Other Secondary Seismic Effects

Based on the topographic and lithologic data, the risk of sand boils, lateral spreading, seismic settlement/unsaturated sand shaking, tsunamis or seiches is considered low at the site.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Geologic Hazard Zone

- A Certificate of Geologic Hazard Clearance has been obtained from the Director of Public Works; and any Conditions of Clearance including, but not limited to, measures identified in the geologic evaluation for slope stabilization, surface and subsurface drainage control, offsite improvements, use restrictions, erosion control and/or maintenance guarantees for private improvements contained therein will be implemented as specified. *A Certificate of Geologic Hazard Clearance was issued for the project on June 13, 2012.*

Erosion

- A City-approved Erosion Control Plan will be developed prior to approval of a grading permit or Public Works clearance with such measures as: 1) the timing of grading activities during the dry months, if feasible; 2) temporary and permanent planting of exposed soil; 3) temporary check dams; 4) temporary sediment basins and traps; and/or 5) temporary silt

fences. The provisions of the Erosion Control Plan will be implemented to the satisfaction of the Director of Planning, Building and Code Enforcement.

Seismic Shaking

- The proposed structures on the site will be designed and constructed in conformance with the Uniform Building Code Guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking on the site.

MITIGATION MEASURES INCLUDED IN THE PROJECT

Stream Erosion

- Habitable structures shall be located a minimum of 50 feet from the steeply-incised portions of the top of Misery Creek's bank.

- A Vegetative Bank Stabilization Plan for Misery Creek, comprised of long-term bank stabilization via the installation of native woody and semi-woody riparian vegetation (trees and/or shrubs/subshrubs) and short-term bank stabilization of barren soils via hydroseeding and/or the installation of coconut fiber matting, shall be developed and implemented.

CONCLUSION

The implementation of the above standard project conditions and mitigation measures would reduce the project's impact on geology and soils to a **less-than-significant impact with mitigation**.

7. GREENHOUSE GAS EMISSIONS

SETTING

Greenhouse Gases and Climate Change

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and anthropogenic activities which alter the composition of the global atmosphere.

California State law defines greenhouse gases as including, but not limited to:

Carbon Dioxide (CO_2)	Hydrofluorocarbons
Methane (CH_4)	Perfluorocarbons
Nitrous Oxide (N_2O)	Sulfur Hexafluoride

The overall approach to the GHG discussion is based upon the technical advisory of the Governor's Office of Planning and Research (OPR) embodied in the document *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*. According to the Governor's OPR, the most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide. The last three of the six identified GHGs are primarily emitted by industrial facilities. For this discussion, only carbon dioxide, methane and nitrous oxide emissions are considered. These primary greenhouse gases are described below.

Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent. Carbon dioxide is the most widely emitted GHG and is the reference gas [Global Warming Potential (GPW) of 1] for determining GWPs for other GHGs.

Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

Greenhouse Gas Effects

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming, although there is uncertainty concerning the magnitude and rate of the warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Greenhouse Gas Regulations

Federal

In September, 2009, the EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. An estimated 85 percent of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

In April, 2009, EPA published their Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CCA (Endangerment Finding) in the Federal Register. The Administrator proposed the finding that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CCA. The final finding was released on December 7, 2009. The findings do not, in and of themselves, impose any emission reduction requirements but rather allow EPA to finalize the GHG standards proposed earlier this year for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.

State

State greenhouse gas regulations consist of:

- Assembly Bill (AB) 1493 (2002), that required ARB to develop and adopt regulations that achieve "*the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state*";
- AB 32 (2006) California Global Warming Solutions Act, which required CARB to design and implement emission limits, regulations and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions);
- AB 32 Climate Change Scoping Plan (2008), which was adopted by CARB to meet the 2020 greenhouse gas reduction limits outlined in AB 32. In order to meet these goals, California must reduce its greenhouse gases by 30 percent below projected 2020 levels, or about 10 percent from today's levels;
- SB 97 (2007), which acknowledged climate change is a prominent environmental issue that requires analysis under CEQA and directed the Governor's Office of Planning and

Research (OPR) to prepare, develop and transmit guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA;

- SB 375 (2008), which aligned regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation;
- Executive Order S-3-05 (2005), which, in recognition of California's vulnerability to the effects of climate change, set forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. The executive order also directed the Secretary of the California EPA to coordinate a multi-agency effort to reduce GHG emissions to the target levels;
- Executive Order S-13-08 (2008), which directed California to develop methods for adapting to climate change (sea level rise) through preparation of a statewide plan; and
- Executive Order S-1-07 (2007), which proclaimed the transportation sector as the main source of GHG emissions in California (over 40 percent of statewide GHG emissions) and established a goal to reduce the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020.

Regional

The Bay Area Air Quality Management District (BAAQMD) has established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the Bay Area. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative sources of energy, all of which assist in reducing emissions of GHG and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local government and other interested parties, and promotion of collaborative efforts among stakeholders.

Local

The Green Building Policy for Private Sector New Construction (Policy 6-32), which was adopted by the City Council in 2008, demonstrates the City's commitment to environmental, economic and social stewardship, to yield cost savings through reduced operating costs, to provide healthy work environments, and to contribute to the City's goals of protecting, conserving and enhancing the region's environmental resources. The Policy uses third-party Green Building Certification levels of Leadership in Energy and Environmental Design (LEED) or Build It Green (BIG) as green building standards. Adherence to these standards would result in energy efficiency levels from 10 to 15 percent better than those achieved with the 2009 Title 24 California Efficiency Standards.

Sources of Greenhouse Gas Emissions

Anthropogenic GHG emissions worldwide as of 2005 totaled approximately 30,800 CO_2 equivalent million metric tons ($MMTCO_2E$). The United States was the top producer of greenhouse gas emissions as of 2005. The primary greenhouse gas emitted by human activities

in the United States was CO_2, representing approximately 84 percent of total GHG emissions. Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 80 percent of US GHG emissions

The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. These primary contributors to California's GHG emissions and their relative contributions are presented in the following table.

Table 5. Greenhouse Gas Sources in California, 2004

Source	Annual GHG Emissions ($MMTCO_2E$)	Percent of Total
Agriculture	27.9	5.8
Commercial Uses	12.8	2.6
Electricity Generation	119.8	24.7
Forestry (*Excluding Sinks**)	0.2	0.0
Industrial Uses	96.2	19.9
Residential Uses	29.1	6.0
Transportation	182.4	37.7
Other	16.0	3.3
Total	484.4	100.0

* *Emissions are for the forestry industry. Forests, themselves, are a sink for carbon dioxide, as photosynthesis removes carbon dioxide from the atmosphere.*

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
7. GREENHOUSE GAS EMISSIONS. Would the project:					
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		29,39
b. Conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X		26,29,39

Standards

The BAAQMD adopted *CEQA Guidelines* significance thresholds for GHG emissions that include quantitative thresholds of significance for GHG emissions. The *Guidelines* provide that a development project, other than a stationary source, would have a significant cumulative impact unless:

- The project can be shown to be in compliance with a qualified Climate Action Plan; or

- Project emissions of CO_2 equivalent GHGs (CO_2e) are less than 1,100 metric tons per year; or
- Project emissions of CO_2 equivalent GHGs are less than 4.6 metric tons per year per service population (residents plus employees).

Greenhouse Gases and Climate Change

The project's incremental increases in GHG emissions associated with traffic increases and direct and indirect energy use would contribute to regional and global increases in GHG emissions and associated climate change effects. The City of San Jose does not currently have a qualified Climate Action Plan. According to the BAAQMD's *CEQA Guidelines*, projects below the applicable screening criteria (single family residential – 56 dwelling units) would not exceed the 1,100 metric tons per year of CO_2-eq GHG threshold of significance. Therefore, the proposed 4 single famly residential dwelling units would not have a significant impact on GHG emissions.

Green Design

The Green Building Policy for Private Sector New Construction (Policy 6-32) demonstrates the City's commitment to environmental, economic and social stewardship, to yield cost savings through reduced operating costs, to provide healthy work environments, and to contribute to the City's goals of protecting, conserving and enhancing the region's environmental resources. The Policy uses third-party Green Building Certification levels of Leadership in Energy and Environmental Design (LEED) or Build It Green (BIG) as green building standards. Adherence to these standards would result in energy efficiency levels from 10 to 15 percent better than those achieved with the 2009 Title 24 California Efficiency Standards. The project will be designed to be consistent with the Green Building Policy.

In addition the California Building Standards Commission (CBSC) recently adopted statewide green building standards. Known as CALGREEN, the regulations went into effect on January 1, 2011. The 2010 Green Building Standards Code require:

- 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35 and 40 percent reductions;
- Separate water meters for non-residential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects;
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;
- Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for non-residential buildings over 10,000 square feet; and
- Low-pollutant-emitting interior finish materials such as paints, carpet, vinyl flooring and particle board.

Standard Project Conditions

The following standard project condition will be included in the development permit.

Green Design

- The project will be reviewed for conformance to the Green Building Policy (Policy 6-32).

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The implementation of the above standard project condition would ensure the project will have a **less-than-significant impact** on greenhouse gas emissions.

8. HAZARDS AND HAZARDOUS MATERIALS

Cornerstone Earth Group conducted a Phase I environmental site assessment and preliminary soil quality evaluation dated December 14, 2010 that is included in the Technical Appendix.

SETTING

Phase I Environmental Site Assessment

A Phase I environmental site assessment was conducted to strive to identify, to the extent feasible, recognized environmental conditions at the property. The term "recognized environmental condition" (REC) means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The investigation included site history research (a review of readily available aerial photographs and maps, and interviews with knowledgeable persons); a site reconnaissance; and regulatory agency database review for soil and groundwater contamination cases in the vicinity.

Historical Review

Historical aerial photographs of the site and vicinity from 1939 through 2005 and topographic maps from 1897 through 1968 were reviewed. No onsite structures or other site details are depicted on the 1897 topographic map. The 1939 aerial photograph shows the southwesterly portion of the site to be occupied by an orchard, while the portion beyond Misery Creek appears undeveloped. A small structure may be present on the northeasterly portion of the site in the 1948 aerial, but details were difficult to interpret due to the quality of the photograph; a small structure definitely appears in the 1956 photograph. The structure on the northeasterly portion of the site appears to have been enlarged and appears to be the current onsite residence at 6790 San Felipe Road. A detached garage is also shown, while the remainder of the site continues to appear undeveloped. No structures or other onsite details are depicted on the 1955 topographic map; but by the 1968 map, a small structure typical of a residence is depicted on the northeastern portion. Both of the current onsite residences appear to be present on the 1982 photograph, and remain unchanged through 2005.

The general site vicinity appears to have historically consisted of undeveloped land and agricultural properties with widely spaced residences. By the early 1980s, an increase in residential development is apparent to the northwest of the site. Further increases in residential development are apparent on subsequent aerial photographs.

Site Reconnaissance

A site reconnaissance was conducted on November 24, 2010 to note readily observable indications of significant hazardous materials release to structures, soil or groundwater. At the time of the site visit, the site was developed with two single family residences that were occupied by members of the Hunt family. According to the property owner, the site had been

owned by the Hunt family since the 1950s and used for residential purposes; the residences at 6790 and 6782 San Felipe Road were reportedly constructed in 1945 and 1977, respectively. Misery Creek was observed to bisect the site.

The residence at 6782 San Felipe Road, in the southwesterly portion of the site, had an attached garage. Several recreational vehicles (RVs), cars, boats, trailers, a metal shipping container and two small storage sheds were observed near the residence. The sheds and shipping container were used to store miscellaneous household belongings. A water well was observed to the northeast of the residence; the well was reportedly operational and was historically used as a potable water supply.

The residence at 6790 San Felipe Road was observed at the northeasterly corner of the site. A detached garage and storage sheds were observed to the southwest of the residence; these structures were used for storage of miscellaneous household belongings. Due to the large volume of stored items, much of the interior of the detached garage was obscured and not easily viewed. Typical of most residential garages, several containers of paint, building and automobile maintenance supplies, and cleaning products were observed. These materials were generally stored in retail containers with capacities of one gallon or less; several 5-gallon buckets of paint were also observed. No significant hazardous materials spills were readily apparent.

An automobile maintenance pit was observed within the concrete floor slab of the garage. The pit was covered by wood planks on which stored items were located; thus, the interior of the pit could not be observed during the site visit. The pit was reported to have been infrequently used for vehicle maintenance.

A wood-fired boiler was observed on the north side of the garage; reportedly, the boiler was historically used as a heat source for a small onsite business making jams and jellies.

Several piles of debris were observed on the northern portion of the site. The debris appeared to consist of miscellaneous household items, glass jars, cardboard, wood, plastic, furniture and appliances. Two steel aboveground storage tanks (ASTs) also were present; the ASTs were reported to have been historically purchased and brought to the site, but were never used onsite.

Septic tanks were reportedly located on the northwest side of each of the two onsite residences, but the tank locations were not readily apparent.

Regulatory Agency Review

A regulatory agency database report was obtained and reviewed to help establish whether contamination incidents have been reported on the site or in the vicinity, as detailed in the report in the Technical Appendix. Based on the information presented in the agency database report, no offsite facilities were reported that appear likely to significantly impact soil or groundwater beneath the site.

Preliminary Soil Quality Evaluation

The portion of the site located southwesterly of Misery Creek was historically used for agricultural purposes; thus, pesticides may have been applied to crops in the normal course of farming operations. Additionally, soil adjacent to structures that are painted with lead-based paint can become impacted with lead as a result of the weathering and/or peeling of painted surfaces. Soil near wood-framed structures can also be impacted by pesticides historically used to control termites. A soil quality evaluation was performed to evaluate these potential concerns.

Nine soil samples were collected on December 2, 2010; five were collected adjacent to the foundations of the onsite structures (the two onsite residences and the detached garage) and four were collected from the area previously used as an orchard. In addition to being within the former orchard area, one of the samples was collected near the onsite well, as wells were often used as water sources for mixing pesticides at agricultural properties. The samples were collected from the upper approximately one-half foot of soil; the sampling locations are shown in the report in the Technical Appendix.

The soil samples were analyzed for organochlorine pesticides and metals, including lead, arsenic and mercury; these metals were selected because they are commonly associated with pesticides. Lead was additionally selected due to the possible presence of lead-based paint on the structures. The laboratory analytical results are provided in the report in the Technical Appendix. DDE, DDT, chlordane, arsenic, lead and mercury were detected at various concentrations in all of the samples.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?		X			26, 27,28,103
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?				X	28,103
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?				X	27,28,103

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
8. HAZARDS AND HAZARDOUS MATERIALS (Cont.). Would the project:					
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X	58,103
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?				X	27,71
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X	27,71
g. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?				X	27
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X	25, 27,61,62

The project site is not located within the Santa Clara County Airport Land Use Commission (ALUC) jurisdiction, nor is it on one of the City's designated evacuation routes. The site also is not located within an area subject to wildfires.

General

The project site will be viewed by a qualified environmental professional during demolition and pre-grading activities to observe areas of the property that may have been obscured by existing structures or pavement for such items as stained soils, septic systems, underground storage tanks, and/or unforeseen buried utilities; and, if found, a mitigation program will be developed, submitted to the appropriate regulatory agencies (Santa Clara County Environmental Health Department, Regional Water Quality Control Board, and Department of Toxic Substances) with a copy to the Director of Planning, Building and Code Enforcement, and implemented with such measures as soil testing, removal and/or offsite disposal at a permitted facility.

Wells

There is an existing water well on the project site that should be destroyed prior to the construction of the project. If not properly destroyed, the well could cause contamination of the groundwater. Well destruction is regulated by the Santa Clara Valley Water District's Ordinance

No. 90-1 in order to assure that such wells will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the district. The Ordinance requires that a permit be obtained before a well can be destroyed.

Septic Systems

Sewage disposal for the project site is accomplished by two onsite septic systems. The septic systems should be removed in accordance with the requirements of the Santa Clara County Sewage Disposal Ordinance.

Chemical Use and Storage

Typical of most residential garages, several containers of paint, building and automobile maintenance supplies, and cleaning products were observed within the detached garage at 6790 San Felipe Road. No significant hazardous materials spills were readily apparent. The potential for these materials to significantly impact onsite soil or groundwater appears low; however, it is recommended that all onsite hazardous materials be removed and properly disposed by the property owner.

As described in the Setting section, a Phase I environmental site assessment was conducted to identify any "recognized environmental conditions" (RECs) on the site. An automobile maintenance pit was observed within the concrete floor slab of the garage. As the pit was covered by wood planks on which stored items were located, the interior of the pit could not be observed during the site visit. Based on the reported infrequent use of the pit, it appears unlikely that this pit would have resulted in significant impacts to underlying soil and groundwater; however, after the stored items are removed, the interior of the maintenance pit should be observed for indications of hazardous material spills or staining.

Several piles of debris and two aboveground storage tanks were observed on the northern portion of the site. The debris and ASTs should be removed and properly disposed by the property owner.

Soil Contamination

None of the detected pesticide concentrations in soil samples collected from the former orchard areas exceeds its respective California Human Health Screening Level (CHHSL). However, chlordane (at up to 88 ppm) was detected at concentrations exceeding the residential CHHSL (0.43 ppm) in soil samples collected adjacent to the foundations of each of the onsite residences. Chlordane was historically used to control termites and is often found near structures.

The detected arsenic and mercury concentrations appeared typical of natural background levels. Lead was detected at 110 ppm in a soil sample collected near the residence at 6790 San Felipe Road. The residential CHHSL for lead is 80 ppm; thus, the detected lead concentration in this sample exceeds the CHHSL. The elevated lead concentration detected may reflect lead paint residues. The lead concentrations detected in the remaining samples do not exceed the CHHSL.

As described in the Setting section, a Phase I environmental site assessment was conducted to identify any "recognized environmental conditions" (RECs) on the site. The level of chlordane and lead have been identified as RECs; therefore, the impacted soil (soil with contaminants exceeding residential CHHSLs and/or natural background levels) should be over-excavated and appropriately disposed at a permitted facility prior to residential development. The cleanup goal should be residential (unrestricted use) CHHSLs. An additional soil quality evaluation should be conducted prior to over-excavating the impacted soil to further evaluate its lateral and vertical extent in an effort to minimize the quantity of soil to be removed from the site. At the time of remediation, the collection of confirmation soil samples will be required to verify that the impacted soil has been removed.

Demolition

The project proposes the demolition of a structure(s) that may contain hazards such as asbestos-containing materials (ACM) or lead based paint (LBP). The structures to be removed should be surveyed for the presence of ACM and/or LBP. If any suspect ACM are present, they should be sampled prior to demolition and removed in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) and Cal-OSHA requirements, if warranted. Notification must also be made to the Bay Area Air Quality Management District (BAAQMD). If any suspect LBP is present, it should be sampled prior to demolition and removed in accordance with EPA, OSHA and BAAQMD requirements, if warranted.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Wells

- A well destruction permit will be obtained from the Santa Clara Valley Water District, and the well will be destroyed in accordance with District standards.

Septic Systems

- The two septic systems will be abandoned in accordance with the requirements of the Santa Clara County Sewage Disposal Ordinance.

Asbestos-Containing Materials

- The structure(s) to be removed will be surveyed for the presence of asbestos-containing materials (ACM) at the demolition permit stage; and if any suspect ACM are present, they will be sampled prior to demolition in accordance with NESHAP guidelines, and all potentially friable ACM will be removed prior to building demolition and disposed of by offsite burial at a permitted facility in accordance with NESHAP, Cal-OSHA and BAAQMD requirements.

Lead Based Paint

- The structure(s) to be removed will be surveyed for the presence of lead based paint (LBP) at the demolition permit stage; and if any suspect LBP is present, it will be sampled prior to demolition, and all potential LBP will be removed prior to building demolition and disposed of by offsite burial at a permitted facility in accordance with EPA and OSHA requirements.

MITIGATION MEASURES INCLUDED IN THE PROJECT

General

- Prior to issuance of a Grading Permit, a Soil Management Plan shall be developed to the satisfaction of the appropriate regulatory agencies, with a copy to the Director of Planning, Building and Code Enforcement. The Soil Management Plan shall establish practices for managing and handling buried structures, debris and/or impacted soil if these materials/ structures are encountered prior to or during demolition and/or site grading. The measures identified in the Soil Management Plan, including testing, special handling and/or disposal measures, shall be implemented as warranted.

Chemical Use and Storage

- All onsite hazardous materials, piles of debris, and aboveground storage tanks shall be removed and properly disposed prior to development.

- The interior of the automobile maintenance pit in the garage at 6790 San Felipe Road shall be observed for indications of hazardous material spills or staining prior to development. If significant hazardous material spills or staining are observed, they shall be tested, handled and/or disposed in accordance with the Soil Management Plan.

Soil Contamination - Chlordane and Lead

- Soil at the locations of the samples with the chlordane concentrations detected above the residential CHHSL (SS-2 and SS-8) shall be over-excavated for appropriate offsite disposal.

- Soil at the location of the sample with the lead concentration detected above the residential CHHSL (SS-7) shall be over-excavated for appropriate offsite disposal.

- An additional soil quality evaluation shall be conducted prior to over-excavating the impacted soil to further evaluate its lateral and vertical extent in an effort to minimize the quantity of soil to be removed from the site.

- Verification samples shall be collected and analyzed for chlordane and lead to document that the impacted soil has been sufficiently removed from the site.

- Regulatory agency oversight is required if significantly elevated levels of contaminants of concern are detected in the soil samples. Regulatory oversight can be requested prior to and during the over-excavation of impacted soil.

CONCLUSION

The implementation of the above standard project conditions and mitigation measures would reduce the project's impact on hazards and hazardous materials to a **less-than-significant impact with mitigation**.

9. HYDROLOGY AND WATER QUALITY

Charles W. Davidson Company conducted a flood plain analysis dated August 25, 2011 that is included in the Technical Appendix.

SETTING

Waterways

Misery Creek is an ephemeral creek that flows in a westerly direction across the center of the site.

Flooding

The project site is not within an area of historic flooding, and according to the Federal Emergency Management Agency's (FEMA) *Flood Insurance Rate Maps*, the site is within Zone D, an area with undetermined flooding, but flooding is possible.

Evergreen Development Policy / Evergreen–East Hills Development Policy

The Evergreen Development Policy (EDP) was adopted in August, 1976 and revised in 1991 and 1995 to address the issues of flood protection and traffic capacity on development in the Evergreen area. The Evergreen Development Policy Area is defined as land within San Jose's Urban Service Area Boundary, south of Story Road and east of U.S. 101. The project site is located within this area.

The 1976 EDP established protection from the 100-year flood as the standard condition for development approval. Over the years, development was allowed to proceed only if the 100-year flood protection was in place for each project and downstream of each project. As a result of developer contributions, the flood control system is substantially complete. The 1995 Revised EDP maintained the 100-year flood protection prerequisite to project approvals and identified the remaining watersheds to be improved to allow the buildout of Evergreen to proceed. In 2008, the Policy was renamed Evergreen–East Hills Development Policy (EEHDP) and revised again; however, no changes were made to the flood protection policies.

Water Quality

Stormwater runoff flows from the project site to Coyote Creek via Misery Creek and/or Thompson Creek and then north to the San Francisco Bay.

The project site is currently covered with grassland, two residences and a shed, and is approximately 7 percent impervious surfaces.

Nonpoint Sources

The discharge of stormwater from the City's municipal storm sewer system is regulated primarily under the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act. The San Francisco Bay Regional Water Quality Control Board (RWQCB) implements these regulations at the regional level. New construction in San Jose is subject to

the conditions of the City's National Pollutant Discharge Elimination System (NPDES) Permit, which was reissued by the RWQCB in February, 2001. Additional water quality control measures were approved in October, 2001 (revised in 2005), when the RWQCB adopted an amendment to the NPDES Permit for Santa Clara County. This amendment, which is commonly referred to as "C3", requires all new and redevelopment projects that result in the addition or replacement of impervious surfaces totaling 10,000 square feet or more to: 1) include stormwater treatment measures; 2) ensure that the treatment measures be designed to treat an optimal volume or flow of stormwater runoff from the project site; and 3) ensure that stormwater treatment measures are properly installed, operated and maintained. On October 14, 2009, the RWQCB adopted the Municipal Regional Stormwater NPDES Permit No. CAS612008 for the San Francisco Bay Region; this Permit replaces current countywide municipal stormwater permits with a Municipal Regional Permit (MRP) for all 76 Bay Area municipalities in an effort to standardize stormwater requirements in the region.

The City has developed a policy that implements Provision C.3 of the NPDES Permit, requiring new development projects to include specific construction and post-construction measures for improving the water quality of urban runoff to the maximum extent feasible. The City's Post-Construction Urban Runoff Management Policy (6-29) established general guidelines and minimum Best Management Practices (BMPs) for specified land uses, and includes the requirement of regular maintenance to ensure their effectiveness. Later, the City adopted the Post-Construction Hydromodification Management Policy (8-14) to manage development-related increases in peak runoff flow, volume and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to local rivers, streams and creeks.

A new MRP provision (C.3.c. Low Impact Development) went into effect on December 1, 2011 and requires that each Regulated Project treat 100 percent of the design storm runoff with Low Impact Development (LID) measures. LID includes preserving and creating new pervious areas (Site Design); preventing stormwater contact with pollutants (Source Control); and treating runoff with either infiltration, stormwater collection and reuse (Harvesting and Reuse) and/or with landscaped-based treatment measures (Biotreatment). Site design and source control measures should be used to reduce treatment-requiring runoff as much as possible to limit the need for expensive treatment measures that require space, piping, and long-term maintenance. For remaining runoff from areas that are not Self-Treating or Self Retaining, the MRP allows the use of Biotreatment stormwater treatment measures if harvesting/reuse and infiltration are infeasible (for reasons including soil infiltration rate, project density, onsite water demand, land use, recycled water use, etc.). San Jose's Post- Construction Urban Runoff Management Policy (6-29) emphasizes the use of Low Impact Development measures.

The project site is exempt from the hydromodification requirements because it does not create or replace one acre or more of impervious surface. Implementation of the City's runoff policies will reduce potential water quality impacts to less-than-significant levels.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
9. HYDROLOGY AND WATER QUALITY. Would the project:					
a. Violate any water quality standards or waste discharge requirements?			X		28,64,84
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X	25,27
c. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X		25,26
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X		25,26
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?			X		26,28
f. Otherwise substantially degrade water quality?			X		26,28
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?				X	26, 27,63,104
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X	26, 27,63,104
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X	27,28

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
9. HYDROLOGY AND WATER QUALITY (Cont.). Would the project:					
j. Be subject to inundation by seiche, tsunami or mudflow?				X	27

Flooding

Misery Creek is an ephemeral creek that crosses the project site and is subject to potential flooding (Zone D). The site is not subject to seiche or tsunami. There is a 21-inch City of San Jose storm drainage line under construction in Turturici Way that is designed to serve the site in a developed condition.

A new double barrel culvert is currently being constructed where the creek crosses Turturici Way. A flood plain analysis was conducted to determine the water surface elevations for the 10-year and 100-year flows as the water passes through the new culvert and westerly across the site. The assumptions and details of the study are included in the Technical Appendix. The results of the study show that the limits of the flooding for the 10- and 100-year flows remain in the 50-foot riparian setback area, except on the southerly side along Turturici Way, as shown on the following Potential Flooding map. Flooding would not occur in the fenced yards or building areas of any of the lots and the water surface elevations are below all of the proposed building pads.

Evergreen Development Policy / Evergreen–East Hills Development Policy

The project site is located in the Evergreen Development Policy / Evergreen–East Hills Development Policy Area. Any development within the Area is subject to the flood protection requirements listed below. Each policy is followed by a statement on the project's compliance.

1. Development will be allowed only if it is protected from the 100-year flood.

   The project site is not subject to the 100-year flood.

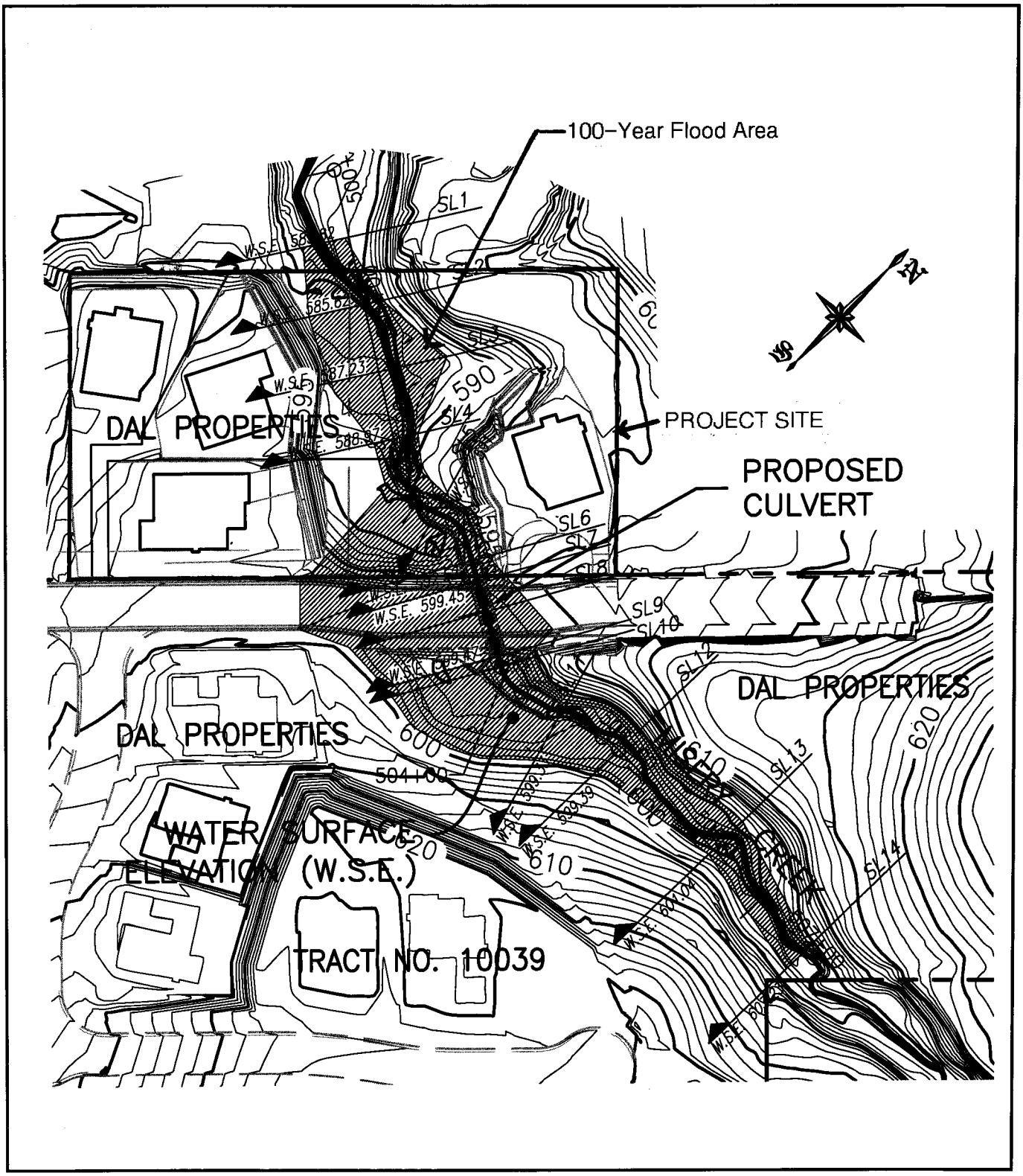
2. Development will be allowed only if it would not divert flood or overland flows onto or cause flooding on other properties.

   Completion of the improvements planned with the project would not divert flood or overland flows onto or cause flooding on any adjacent properties.

3. Flood control improvements required within the Evergreen–East Hills Development Policy Area have been completed with the exception of the Quimby and Fowler Creek watersheds. Development within these watersheds must be consistent with Policies 1 and 2.

   The project site is not within the Quimby or Fowler Creek watersheds.

The proposed project is in conformance with the flood protection requirements of the Evergreen Development Policy / Evergreen–East Hills Development Policy.



Potential Flooding

Figure 20

Erosion

The approximately 8 percent increase in impervious surface on the site would result in an increase in runoff. Increased flow and duration can contribute to downstream streambank erosion. The project would not have a direct outfall into any stream. As described above, project flows would drain through the storm drainage system to Thompson Creek, which is on the west side of San Felipe Road.

Water Quality

The primary impact on water quality would result from the addition of impervious surfaces, such as rooftop, driveway and street runoff. Particulates, oils, greases, toxic heavy metals, pesticides and organic materials are typically found in urban storm runoff. The project's contribution would have a potentially significant impact on water quality. Stormwater runoff could increase under project conditions as the amount of impervious surfaces (buildings and pavement) would increase from approximately 7 percent of the site to approximately 15 percent, as shown in the following table. The proposed increase in impervious surfaces could increase the amount of stormwater discharged into the storm drainage system and Thompson Creek. In addition, temporary construction-related activities such as clearing, grading, or excavation could result in potentially significant impacts to water quality.

Table 6. Pervious and Impervious Surfaces Comparison

Total Site: 2.04 acres 88,715 sf	**Total Disturbed Area:** 2.04 acres 88,715 sf		
Area	**Existing Condition of Site Area Disturbed - sf**	**Proposed Condition of Site Area Disturbed - sf**	
		Replaced (or Remain)	**New**
Impervious Surfaces			
Roof Area(s)	6,226	0	12,448
Parking/Private Drive (paved)	0	0	0
Sidewalks, Patios, Paths, etc.	400	0	800
Streets (Public)	0	0	0
Streets (Private)	0	0	0
Total Impervious Surfaces	**6,626**	**0**	**13,248**
Pervious Surfaces			
Landscape Areas	82,089	0	69,339
Pervious Pavers	0	0	6,128
Other Pervious Surfaces (green roof, etc.)	0	0	0
Total Pervious Surfaces	**82,089**	**0**	**75,467**
Total Proposed Replaced + New Impervious Surfaces:			**13,248**
Total Proposed Replaced + New Pervious Surfaces:			**75,467**

Stormwater runoff and pollution would be reduced by the use of pervious concrete pavers on the driveways, bioretention, and disconnected roof drains, as shown on the Storm Water Control Plan, Figure 15. Pervious paving will reduce runoff by allowing a portion of the water to filter into the natural ground. Bioretention is the collection of stormwater into treatment areas that consist of a grass buffer strip, sand bed, ponding area, organic layer or mulch layer, planting soil, and plants. Bioretention includes the following pollutant removal mechanisms: filtration, adsorption to soil particles, and biological uptake by plants. Roof drains that are not connected to the storm drainage system divert runoff to landscaped areas via splash blocks or pop-up drainage emitters. These measures would also provide some flow control benefit in conformance with HMP Policy provisions.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Water Quality - Construction

- Prior to the commencement of any clearing, grading or excavation, the project will comply with the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Construction Activities Permit, to the satisfaction of the Director of Public Works, as follows:
  - The applicant will develop, implement and maintain a Storm Water Pollution Prevention Plan (SWPPP) to control the discharge of stormwater pollutants including sediments associated with construction activities; and
  - The applicant will file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB).

- The project will incorporate Best Management Practices (BMPs) into the project to control the discharge of stormwater pollutants including sediments associated with construction activities.

- The project applicant will comply with the City of San Jose Grading Ordinance, including erosion and dust control during site preparation and with the City of San Jose Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction. The following specific BMPs will be implemented to prevent stormwater pollution and minimize potential sedimentation during construction:
  - Restriction of grading to the dry season (April 15 through October 15) or meet City requirements for grading during the rainy season;
  - Utilize onsite sediment control BMPs to retain sediment on the project site;
  - Utilize stabilized construction entrances and/or wash racks;
  - Implement damp street sweeping;
  - Provide temporary cover of disturbed surfaces to help control erosion during construction; and

- Provide permanent cover to stabilize the disturbed surfaces after construction has been completed.

Water Quality - Post-Construction

- Prior to the issuance of a Planned Development Permit, the applicant must provide details of specific BMPs including, but not limited to, bioswales, disconnected downspouts, landscaping to reduce impervious surface area, and inlets stenciled "No Dumping – Flows to Bay" to the satisfaction of the Director of Planning, Building and Code Enforcement.

- The project will comply with the Municipal Regional Stormwater NPDES Permit No. CAS612008, which provides enhanced performance standards for the management of stormwater of new development.

- The project will comply with applicable provisions of the following City Policies – 1) Post-Construction Urban Runoff Management Policy (6-29) which establishes guidelines and minimum BMPs and numerically-sized (or hydraulically-sized) Treatment Control Measures (TCMs) for all projects; and 2) Post-Construction Hydromodification Management Policy (8-14) which provides for hydromodification measures.

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The implementation of the above standard project conditions would ensure the project will have a **less-than-significant impact** on hydrology and water quality.

10. LAND USE AND PLANNING

SETTING

General Plan

The land use designation for the project site on the *Envision San Jose 2040 General Plan* Land Use/Transportation Diagram, that was adopted by the City Council on November 1, 2011, is Rural Residential (up to 2 DU/AC), as shown on the preceding General Plan Map, Figure 5.

Special Areas

The project site is not located within any of the following special areas:

- Midtown Planned Community and Specific Plan Area
- Jackson – Taylor Planned Residential Community
- Communications Hill Planned Residential Community
- Evergreen Planned Residential Community
- Berryessa Planned Residential Community
- Silver Creek Planned Residential Community
- Alviso Master Plan Area
- Tamien Specific Plan Area
- Downtown Strategy Plan Area
- North San Jose (Rincon de Los Esteros Redevelopment Area)
- Edenvale Redevelopment Area
- Martha Gardens Planned Community

Zoning

The project site is currently zoned R-1-1, Single Family Residence District, as shown on the preceding Zoning Map, Figure 6. The project is an application to rezone the site to A(PD) Planned Development District in accordance with the proposed General Development Plan.

Existing and Surrounding Uses

The project site is currently rural residential. Previous uses of the site include: agriculture. Land uses surrounding (within 500 feet of) the project site include: single family detached residential on all sides.

Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP)

As discussed in the preceding Biological Resources section, the City of San Jose, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, Santa Clara County and the cities of Gilroy and Morgan Hill are preparing a joint Habitat Conservation Plan/Natural Community Conservation Plan. The Habitat Plan is being developed in association with the USFWS, CDFG and NMFS and in consultation with stakeholder groups and the general public to protect and enhance ecological diversity and function within more than 500,000 acres of southern Santa Clara County. The Interim Project Referral Process requires the local participating agencies to notify the wildlife agencies (CDFG and USFWS) of projects that have the potential to adversely impact covered species or natural communities, or conflict with the preliminary conservation objectives of the Habitat Plan.

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
10. LAND USE AND PLANNING. Would the project:					
a. Physically divide an established community?				X	25,26
b. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X		29,68
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X	25,26,28

Projects that have the potential to physically divide an established community include new freeways and highways, major arterial streets, and railroad lines. The proposed project will not physically divide an established community. The proposed 4-unit project would provide infill housing within an existing residential area, and would, therefore, not physically divide an established community but rather complete that community.

General Plan

The project conforms to the Rural Residential (up to 2 DU/AC) land use designation for the project site on the *Envision San Jose 2040 General Plan* Land Use/Transportation Diagram. It is consistent with the prevailing neighborhood character in density, lot size and shape, massing, form and pattern and is close to the typical 2 DU/AC density called for in this designation with a density of 1.96 DU/AC.

Compatibility

The project would change the land use on the site from rural residential to very low density residential use in accordance with the General Plan land use designation. Residential use is compatible with the surrounding area. Development of the project site would introduce new homes and driveways to the area. These uses would change the view of the site and would generate increases in traffic, noise and air pollution in the area that would not be significant.

Detailed architectural and landscape plans have been submitted for review and approval in accordance with the City's Residential Design Guidelines and PD Zoning procedure. The Guidelines are intended to ensure that new development is compatible with existing neighborhood character and does not adversely impact neighboring residential uses. A less-than-significant impact would occur as a result of the project.

Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP)
The project site meets the threshold that requires an interim Habitat Conservation Plan project referral, has been referred to the agencies and no comments have been received.

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The proposed project would have a **less-than-significant impact** on land use and planning.

11. MINERAL RESOURCES

SETTING

Extractive resources known to exist in and near the Santa Clara Valley include cement, sand, gravel, crushed rock, clay and limestone. Santa Clara County has also supplied a significant portion of the nation's mercury over the past century. Pursuant to the mandate of the Surface Mining and Reclamation Act of 1975 (SMARA), the State Mining and Geology Board has designated the Communications Hill Area, bounded generally by the Southern Pacific Railroad, Curtner Avenue, State Route 87 and Hillsdale Avenue, as the only area in San Jose containing mineral deposits that are of regional significance as a source of construction aggregate materials.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
11. MINERAL RESOURCES. Would the project:					
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X	27,29,47
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X	27,29,47

Since the project site is outside of the Communications Hill area, there will be no impact on any known important mineral resource.

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The proposed project would have **no impact** on mineral resources.

12. NOISE

SETTING

Existing Noise Sources

Noise intrusion over the site originates primarily from vehicular traffic sources along San Felipe Road. The City of San Jose General Plan establishes a policy of requiring noise mitigation from transportation noise for residential land use where the exterior level exceeds 60 dB DNL and/or the interior level exceeds 45 dB DNL. San Felipe Road in the project vicinity is not designated as having noise level exceedances on the *City of San Jose Year 2020 Noise Exposure Map for Major Transportation Noise Sources.*

ALUC Noise Zone

The project site is not located within an Airport Land Use Commission (ALUC) Noise Zone (65 dB CNEL).

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
12. NOISE. Would the project result in:					
a. Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X		26, 29,68,70
b. Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?				X	25,27
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X		25,26,28
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X		25,26,28
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X	27,71
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X	27,71

Standards

Noise criteria that apply to the project are included in the City of San Jose General Plan, which establishes a policy of requiring noise mitigation from transportation noise for residential land use where the exterior level exceeds 60 dB DNL and/or the interior level exceeds 45 dB DNL. It is recognized, however, that attainment of the exterior noise quality levels in the vicinity of San Jose International Airport, the Downtown Core Area and along major roadways may not be achieved within the time frame of the General Plan. In these areas, an exterior noise goal of 65 dB DNL is acceptable where it is not feasible to reduce the exterior noise level to 60 dB DNL.

Transportation Noise Exposures

Noise levels in the area are within the General Plan standards, and project development is not expected to generate traffic noise in excess of the standards.

Temporary Construction Noise

During construction, the site preparation and construction phase would generate temporary sound levels ranging from approximately 70 to 90 dBA at 50 foot distances from heavy equipment and vehicles. These construction vehicles and equipment are generally diesel powered, and produce a characteristic noise that is primarily concentrated in the lower frequencies.

The powered equipment and vehicles act as point sources of sound, which would diminish with distance over open terrain at the rate of 6 dBA for each doubling of the distance from the noise source. For example, the 70 to 90 dBA equipment peak noise range at 50 feet would reduce to 64 to 84 dBA at 100 feet, and to 58 to 78 dBA at 200 feet. Therefore, during the construction operations, sound level increases of 20 to 40 dBA due to these sources could occur near the project boundary.

Since construction is carried out in several reasonably discrete phases, each has its own mix of equipment and consequently its own noise characteristics. Generally, the short-term site preparation phase, which requires the use of heavy equipment such as concrete crushers, bulldozers, scrapers, trenchers, trucks, etc., would be the noisiest. The ensuing building construction and equipment installation phases would be quieter and on completion of the project, the area's sound levels would revert essentially to the traffic levels.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Temporary Construction Noise

- Construction activities will be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday for any onsite or offsite work within 500 feet of any residential unit. Construction outside of these hours may be approved through a development permit based on a site-specific construction noise mitigation plan and a finding by the Director of Planning,

Building and Code Enforcement that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.

- The contractor will use "new technology" power construction equipment with state-of-the-art noise shielding and muffling devices. All internal combustion engines used on the project site will be equipped with adequate mufflers and will be in good mechanical condition to minimize noise created by faulty or poorly maintained engines or other components.

- Stationary noise-generating equipment will be located as far as possible from sensitive receptors. Staging areas will be located a minimum of 200 feet from noise-sensitive receptors, such as residential uses.

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The implementation of the above standard project conditions would reduce the project's impact on noise to a **less-than-significant impact**.

13. POPULATION AND HOUSING

SETTING

The population of the City of San Jose is approximately 958,789 (January 1, 2011). The project site is located in Census Tract 5033.02, which has a population of approximately 8,609 (2000 Census). There are 2 housing units currently on the project site.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
13. POPULATION AND HOUSING. Would the project:					
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X		25,26,28
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X		25,26
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			X		25,26

The project would displace 2 existing housing units with an estimated population of 7 persons. The project would add 4 housing units that would add approximately 14 people to the City of San Jose for a net increase of 2 housing units and approximately 7 people, which would not be a substantial increase to the City's population.

In addition, the proposed project would not result in substantial population growth because its net density of 1.96 du/ac is consistent with the *San Jose 2020 General Plan* Land Use/ Transportation Diagram designation of Very Low Density Residential (2 DU/AC) and planned growth for the project site.

Growth Inducement

Direct growth inducing impacts include the construction of streets and utilities that would provide access to or capacity for additional undeveloped land. The site is bordered by developed and/or planned single family detached residential uses. The project would not have a direct growth inducing impact. Indirect growth inducing impacts include increases in population and economic impacts. There would be short-term increases in employment in the construction industry. The project would not have a significant indirect growth inducing impact.

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The proposed project would have **a less-than-significant impact** on population and housing.

14. PUBLIC SERVICES

SETTING

Schools

The project site is in the Evergreen Elementary School District (K-8) and the East Side Union High School District (9-12). Students from the project are projected to attend:

School	Address	Approx. Distance *(miles)*
Silver Oak Elementary *	5000 Farnsworth Drive	1.1
Chaboya Middle	3276 Cortona Drive	4.3
Evergreen Valley High	3300 Quimby Road	5.4

* Attendance priority at this school goes to children from the Silver Creek Valley Country Club. If space is not available, students from this project would go to another District elementary school(s) depending on classroom availability.

Parks

There are no developed City of San Jose parks within walking distance (3/4 mile) of the project site. The closest City park is Evergreen Park, located at San Felipe Road and Yerba Buena Road, approximately 2.0 miles to the northwest. This 16.4-acre neighborhood park contains picnic tables, barbecues, restrooms and a playground.

The project site is near the Thompson Creek Trail Corridor, which is planned to extend along Yerba Buena Avenue to Yerba Buena Road, where it runs parallel to Thompson Creek and San Felipe Road to its terminus at Heartland Way, southerly of the project site. The Thompson/ Silver Creek trail corridors run a total of approximately 13 miles to form a loop, which is planned to connect to Lake Cunningham in the north and to the terminus of Silver Creek Road to the south. Connections to Evergreen Park and Montgomery Hill Park will be possible from Yerba Buena Road and the creek.

Fire Protection

The project site is in the service area of the San Jose Fire Department. The closest fire station is Station No. 11, located at 2840 The Villages Parkway, approximately 3.1 miles northeasterly of the site.

Police Protection

The project site is served by the San Jose Police Department (SJPD). The project site is within the Foothill Division of the SJPD's service area.

Libraries

The project site is served by the San Jose Public Library System. The closest branch library is the Evergreen Branch, located at 2635 Aborn Road, approximately 4.6 miles northwesterly of the site.

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
14. PUBLIC SERVICES. Would the project:					
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?			X		28
Police protection?			X		28
Schools?			X		28
Parks?			X		28
Other Public Facilities?			X		28

Schools

The project would add additional students to the Evergreen Elementary School District and the East Side Union High School District, as follows:

School	Generation Factor	Number of Students
Silver Oak Elementary and Chaboya Middle	0.40/du (K-8)	2
Evergreen Valley High	0.20/du	1

Based on the district generation factors listed above, the project would generate a total of up to 3 students. This is not considered to have a significant physical effect on the environment.

The State School Facilities Act provides for school district impaction fees for elementary and high schools and related facilities as a condition of approval to offset the increased demands on school facilities caused by residential projects. Both districts have implemented such a fee. The one-time fee, which is based on the square footage of new habitable residential construction, would be paid prior to the issuance of a building permit and would be allocated to the two districts.

Parks

The City of San Jose provides parks and recreation facilities within the city. Project residents would increase the demand for public park facilities; however, there are currently no developed City parks within the 3/4-mile reasonable walking distance standard. The Thompson Creek Trail Corridor runs along San Felipe Road, near the project site.

Parkland Dedications

The City has established a Parkland Dedication Ordinance that requires dedication of land and/or payment of fees for neighborhood and community park or recreational purposes in accordance with the Services and Facilities and the Parks and Recreation Goals and Policies of the General Plan. There are currently no plans to dedicate land for park purposes with the project. Fees would be paid to improve park features in the area.

Fire Protection

The San Jose Fire Department provides fire protection for the city. No additional fire personnel or equipment are expected to be necessary to serve the project.

Police Protection

The San Jose Police Department provides police protection for the city. No additional police personnel or equipment are expected to be necessary to serve the project.

Libraries

The San Jose Public Library System provides library services for the city. No additional library facilities or personnel are expected to be necessary to serve the project.

Standard Project Conditions

The following standard project conditions will be included in the development permit.

Schools

- A school impact fee will be paid to the school districts to offset the increased demands on school facilities caused by the proposed project, in accordance with California Government Code Section 65996.

Parks

- The project will conform to the City's Park Impact Ordinance (PIO) and/or Parkland Dedication Ordinance (PDO) (Municipal Code Chapters 14.25 and 19.38, respectively).

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The implementation of the above standard project conditions would ensure the project will have a **less-than-significant impact** on public services.

15. RECREATION

SETTING

There are no developed City of San Jose parks within walking distance (3/4 mile) of the project site. The closest City park is Evergreen Park, located at San Felipe Road and Yerba Buena Road, approximately 2.0 miles to the northwest. This 16.4-acre neighborhood park contains picnic tables, barbecues, restrooms and a playground.

The project site is near the Thompson Creek Trail Corridor, which is planned to extend along Yerba Buena Avenue to Yerba Buena Road, where it runs parallel to Thompson Creek and San Felipe Road to its terminus at Heartland Way, southerly of the project site. The Thompson/ Silver Creek trail corridors run a total of approximately 13 miles to form a loop, which is planned to connect to Lake Cunningham in the north and to the terminus of Silver Creek Road to the south. Connections to Evergreen Park and Montgomery Hill Park will be possible from Yerba Buena Road and the creek.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
15. 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?			X		72,73
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X	26,28

The City of San Jose provides parks and recreation facilities within the city. Project residents would increase the demand for public park facilities; however, there are currently no developed City parks within the 3/4-mile reasonable walking distance standard. The Thompson Creek Trail Corridor runs along San Felipe Road, near the project site.

Standard Project Conditions

The following standard project condition will be included in the development permit.

Recreation

- The project will conform to the City's Park Impact Ordinance (PIO) and/or Parkland Dedication Ordinance (PDO) (Municipal Code Chapters 14.25 and 19.38, respectively).

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The implementation of the above standard project condition would ensure the project will have a **less-than-significant impact** on recreation.

16. TRANSPORTATION / TRAFFIC

SETTING

Street System

Access to the project site is provided by future Turturici Way, which is a 2-lane street that provides access to San Felipe Road.

Public Transit

Public transit in the project area is provided by the Santa Clara Valley Transportation Authority. Bus route 39 (Eastridge Transit Center to The Villages) operates along San Felipe Road northerly of the project site, with a stop at The Villages, approximately 1.5 miles to the north. The project site is not located within 2,000 feet of a light rail station.

Evergreen Development Policy / Evergreen–East Hills Development Policy

The Evergreen Development Policy (EDP) was adopted in August, 1976 and revised in 1991, 1995, 1998 and 2008 to address the issues of traffic capacity in the Evergreen area. The purpose of the 1995 Revised EDP was to provide the updated policy framework for the buildout of Evergreen, and it identified the remaining street system improvements required to allow up to 4,620 planned or potential dwelling units to proceed. In 1998, the Policy was amended to define significant impacts requiring mitigation. In 2008, the Policy was renamed Evergreen–East Hills Development Policy (EEHDP) and was updated to allow an additional 500 residential units, 500,000 square feet of commercial/retail development, and 75,000 square feet of office development; and to authorize a decreased level of service at four major intersections [Capitol Expressway and Nieman Boulevard, San Felipe Road and Yerba Buena Road (North), San Felipe Road and Delta Road, and Evergreen Commons and Tully Road] and establish the Evergreen–East Hills Development Policy Traffic Impact Fee.

This Policy is intended to apply to all properties planned for development in the EEHDP Area defined as land bounded by Story Road, U.S. 101, Hellyer Avenue, and the Urban Growth Boundary in the eastern foothills. The project site is located within the Evergreen–East Hills Development Policy Area.

Congestion Management Program Analysis

A Congestion Management Program (CMP) analysis was not performed because the Santa Clara County Congestion Management Agency, which monitors regional traffic issues, does not require an analysis for small projects of less than 100 peak hour trips.

Freeway Segment Analysis

A freeway level of service analysis was not performed since project trips on freeway segments would not be greater than one percent of the capacity of the segments.

IMPACT AND MITIGATION

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
16. TRANSPORTATION/TRAFFIC. Would the project:					
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		**X**			79
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			**X**		80
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?				**X**	27,28
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?				**X**	26,28
e. Result in inadequate emergency access?				**X**	26,28
f. Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				**X**	26,29

Trip Generation

The project traffic generation is estimated in the following table.

Table 7. Project Trip Generation

Land Use	Units/ Size	Trip Rate	Daily Trips	A.M. Peak Hour Trips In (35%)	A.M. Peak Hour Trips Out (65%)	A.M. Peak Hour Trips Total	P.M. Peak Hour Trips In (65%)	P.M. Peak Hour Trips Out (35%)	P.M. Peak Hour Trips Total
Proposed Use									
SFD Residential	4	9.9	40	1	3	4	3	1	4
Existing Use									
SFD Residential	2	9.9	20	1	1	2	1	1	2
Net New Trips			**20**	**0**	**2**	**2**	**2**	**0**	**2**

Project Impacts

The proposed project would generate a net increase of approximately 20 daily trips, with 2 a.m. and 2 p.m. net peak hour trips.

Evergreen Development Policy / Evergreen–East Hills Development Policy

The Evergreen-East Hills Development Policy provides traffic allocation for a development pool of 500 residential units on various sites throughout the Evergreen-East Hills area. Under the original Evergreen Development Policy (1995), the project site has 2 units of traffic allocation. The project proposes to secure 2 additional units from the development pool established in the EEHDP in order to develop 4 single-family residences on the site. The project qualifies as a "small residential project" as it is less than 35 dwelling units.

As required for small residential projects drawing from the EEHDP Development Pool, the proposed project does not conflict with the City's ordinances, design guidelines, and the General Plan's Major Strategies, Goals and Policies. The project will be required to pay the Traffic Impact Fee that has been created to fund the identified transportation improvements. Therefore, LOS impacts resulting from the project would not require mitigation, and the project would not result in any additional significant traffic impacts.

MITIGATION MEASURES INCLUDED IN THE PROJECT

Evergreen–East Hills Development Policy

- The Traffic Impact Fee established by the Evergreen–East Hills Development Policy shall be paid to fund and construct the transportation improvements necessary for the additional development of the Evergreen–East Hills Development Policy Area.

CONCLUSION

The implementation of the above mitigation measure would reduce the project's impact on transportation / traffic to a **less-than-significant impact with mitigation**.

17. UTILITIES AND SERVICE SYSTEMS

SETTING

Sanitary Sewers
There is a 6-inch City of San Jose sanitary sewer under construction in Turturici Way.

Wastewater Treatment
Wastewater treatment for the City of San Jose is provided by the San Jose-Santa Clara Water Pollution Control Plant (WPCP). Capacity is expected to be available to serve the project based on the current capacity of 167 million gallons per day (MGD). The Water Pollution Control Plant is currently operating under a 120 MGD dry weather flow trigger. This requirement is based upon the State Water Resources Board and the Regional Water Quality Control Board (RWQCB) concerns over the effects of additional freshwater discharges on the saltwater marsh habitat, and pollutants loading to the South Bay from the WPCP. A Growth Management System regulates new development to assure that the capacity is not exceeded. There are programs and services in place to help minimize flows to the Plant and, while plans are in place to ensure Plant compliance with the 120 mgd trigger, those plans call for conservation and water recycling as strategies for ongoing compliance.

Water Supply
There is a 12-inch San Jose Municipal Water System water line under construction in Turturici Way.

Storm Drainage Facilities
There is a 21-inch City of San Jose storm drainage line under construction in Turturici Way.

Solid Waste / Recycling
Residential solid waste disposal service for the project site is provided by the City of San Jose, using Garden City Sanitation, Inc. and/or California Waste Solutions. They are currently using the Newby Island sanitary landfill disposal site operated by International Disposal Company. The landfill area has an estimated service life based on remaining capacity and contractual commitments to 2023. An unlimited residential recycling program in the City currently results in an approximately 50 percent reduction in residential solid waste that typically required disposal in a landfill.

Gas and Electric Service
Natural gas and electric services for San Jose are provided by Pacific Gas and Electric Company. There are existing services in the area.

Telephone Service
Residential telephone service for the project site is provided by AT&T. There is existing service in the area.

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	SOURCES
17. UTILITIES AND SERVICE SYSTEMS. Would the project:					
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X		28,84
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		28
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		28
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X		28
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X		28
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X		28
g. Comply with federal, state and local statutes and regulations related to solid waste?			X		28

Sanitary Sewers

Sanitary sewer service for the project site is provided by the City of San Jose. The sanitary sewer line in Turturici Way will be available and adequate to serve the project.

Wastewater Treatment

Wastewater treatment for the City of San Jose is provided by the San Jose-Santa Clara Water Pollution Control Plant. The project is estimated to generate an average of approximately 950 gallons per day (0.001 MGD) of effluent, based on the Growth Management System's land use/effluent coefficient of 237 gallons per day per single family detached residential unit. High energy efficiency appliances (e.g., Energy Star Certified clothes washers, dishwashers, etc.) would be provided with the project.

Water Supply

Water for the project site is provided by the San Jose Municipal Water System. The water line Turturici Way will be available and adequate to serve the project. The project is estimated to require approximately 1,600 gallons of water per day, based on 130 gallons per person per day. The project incorporates built-in water savings devices such as shower heads with flow control devices and low flush toilets to reduce water usage.

Storm Drainage Facilities

An increase in impervious surfaces associated with project development would cause an increase in stormwater runoff. Storm drainage service for the project site is provided by the City of San Jose. The storm drainage line in Turturici Way will be available and adequate to serve the project. An onsite collection system including curbs, gutters and an underground system would be included in the project.

Solid Waste / Recycling

Residential solid waste disposal service for the project site is provided by the City of San Jose. The project is estimated to generate up to approximately 7 tons of solid waste per year, based on 3.0 pounds per person per day; however, with recycling, the amount disposed of in a landfill could be reduced to approximately 4 tons per year.

Construction / Demolition Debris

The project is also subject to mandatory construction and demolition debris recycling. At least 50 percent of the debris generated from the project must be recycled.

Gas and Electric Service

There are existing Pacific Gas and Electric Company gas and electric services in the area that would be extended as required to serve the project. There is sufficient capacity in this utility system to provide adequate project service.

Telephone Service

There are existing AT&T telephone facilities in the area that would be extended as required to serve the project. There is sufficient capacity in this utility system to provide adequate project service.

MITIGATION MEASURES INCLUDED IN THE PROJECT

None required.

CONCLUSION

The project's impact on utilities and service systems would be a **less-than-significant impact**.

18. MANDATORY FINDINGS OF SIGNIFICANCE

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
18. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to (1) degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal or (6) eliminate important examples of the major periods of California history or prehistory?		X		
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.			X	
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Impact Summary

As discussed in previous sections, the proposed project would have environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly, with respect to air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, and noise. With the implementation of the previously listed Standard Measures and/or Mitigation Measures Included in the Project, these impacts would be reduced to less-than-significant impacts with mitigation.

APPENDIX

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INITIAL STUDY / EIR

DISCLOSURE STATEMENT

APPLICANT DAL Properties LLC

PROJECT TITLE **6782 and 6790 San Felipe Road**
PDC11-012 and PD11-029

PROJECT LOCATION Approximately 200 feet northeasterly of San Felipe Road on future Turturici Way, approximately 400 feet south of Meadowleaf Court

Mindigo & Associates has prepared the above Initial Study or Draft Environmental Impact Report, doing business as:

An Individual

The above-named, now has or will have the following direct or indirect economic interest or interests in the development of, or, after its completion, the operation of the project for which the attached Initial Study or Draft EIR has been submitted:

None, Except Fees For The Preparation Of Environmental Studies

I/We declare, under penalty of perjury, that the statements furnished above pertaining to the environmental effects of a proposed project and to my/our economic interest or interests in that project are complete, true and correct to the best of my/our knowledge and belief.

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In order to achieve maximum objectivity in the Environmental Review process, the City requires persons, including individuals, firms, associations, partnerships, trusts, corporations, or companies, who submit to the City applications for Environmental Clearance, or who submit to the City a proposed Draft EIR, to disclose any economic interest in the project which they have derived or will or might derive from the development of, or, after its completion, the operation of the project. This application shall apply to consultants and subcontracted consultants who prepare all, or portions of, the Environmental Clearance document or the proposed Draft EIR. Each proponent, consultant, and subcontracted consultant shall prepare a disclosure statement as presented in this application.

You have an indirect economic interest in the project if your spouse or dependent child or agent acting on your behalf owns or otherwise has an economic interest in the site upon which the project is to be developed or if your spouse or dependent child or agent acting on your behalf has a present or future economic interest in the development of, or, after its completion, operation of the project. Briefly but specifically describe each of your direct and indirect economic interests in the project. You need but disclose the nature of your economic interest in the project, not the amount of said interest. If you have no interest, simply write "none" in the space provided.

Persons and Organizations Consulted

1. **Mark Lazzarini**, DAL Properties LLC
2. **Michelle Fisk**, Planner and Civil Engineer, Charles W. Davidson Company
3. **Karen Mack**, Principal Engineering Technician, Transportation Department, City of San Jose

4 to 24. Not used.

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**Numbers 1-24 are reserved for Persons and Organizations Consulted. See previous page.*

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102. **Historical Investigation RE: Property on San Felipe Road**, Urban Programmers, October 18, 2011

103. **Phase I Environmental Site Assessment and Preliminary Soil Quality Evaluation, 6782 and 6790 San Felipe Road, San Jose, California**, Cornerstone Earth Group, December 14, 2010

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107. **Proposed 4 Lot SFD Residential Subdivision, PDC11-012, 6782 San Felipe Road Civil Response Letter to Michael Shimamoto's Comment Letter dated 11/30/11**, Charles W. Davidson Co., February 29, 2012

108. **Conceptual Bank Stabilization Plan for Misery Creek, 6782 and 6790 San Felipe Road, City of San Jose, Santa Clara County, California**, Live Oak Associates, Inc., June 5, 2012

109. **Conceptual Bank Stabilization for Misery Creek, 6782 & 6790 San Felipe Road, San Jose, CA**, Schaaf & Wheeler, June 8, 2012

TECHNICAL APPENDIX

TECHNICAL APPENDIX

Copies of the following consultants' reports, which were prepared for 6782 and 6790 San Felipe Road and are summarized in this Initial Study, are included in this Technical Appendix or in the CD attached to the back cover of this document. Copies are on file at the City of San Jose Planning Division. In accordance with the State CEQA Guidelines, these reports are incorporated by reference and not reproduced in the body of the Initial Study in order to reduce the size and number of pages.

Dal Properties, Hunt Biological Evaluation, San Jose, California, Live Oak Associates, Inc., August 25, 2011

Cultural Resources Study of 6782 and 6790 San Felipe Road, San Jose, Santa Clara County, California, Holman & Associates, October 17, 2011 *

Historical Investigation RE: Property on San Felipe Road, Urban Programmers, October 18, 2011

Geotechnical Investigation, San Felipe Road Residential, 6782 and 6790 San Felipe Road, San Jose, California, Cornerstone Earth Group, September 20, 2011

Phase I Environmental Site Assessment and Preliminary Soil Quality Evaluation, 6782 and 6790 San Felipe Road, San Jose, California, Cornerstone Earth Group, December 14, 2010

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Conceptual Bank Stabilization Plan for Misery Creek, 6782 and 6790 San Felipe Road, City of San Jose, Santa Clara County, California, Live Oak Associates, Inc., June 5, 2012

Conceptual Bank Stabilization for Misery Creek, 6782 & 6790 San Felipe Road, San Jose, CA, Schaaf & Wheeler, June 8, 2012

Certificate of Geologic Hazard Clearance, Proposed 4 Lot SFD Residential Subdivision, PDC11-012, 6782 and 6790 San Felipe Road, Michael K. Shimamoto, Engineering Geologist, Development Services Division, City of San Jose, June 13, 2012

* *This report is on file at the City of San Jose Planning Division where it is available for review by authorized personnel.*

LIVE OAK ASSOCIATES, INC.
an Ecological Consulting Firm

DAL PROPERTIES
HUNT BIOLOGICAL EVALUATION
SAN JOSE, CALIFORNIA

Prepared by
LIVE OAK ASSOCIATES, INC.

Rick Hopkins, Ph.D., Principal/Senior Wildlife Ecologist
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25 August 2011

PN 1481-01

EXECUTIVE SUMMARY

Live Oak Associates, Inc. conducted an investigation of the 2.04 acre site to ascertain whether or not build-out of the proposed project would have a significant impact (as defined by CEQA) on the biological resources of the site and region. The site is bordered by a road to the south, private parcels to the north, east and west. Misery Creek bisects the site on a north-south route. Current land use in the region includes residential development to the north and northwest with undeveloped land to the south and southeast. The site is mainly comprised of two home sites with non-native grassland, and contains a small riparian corridor (approximately 260 linear feet), and supports 30 trees (the majority of which are eucalyptus) in varying condition.

The Hunt Project is located on the northeastern side of San Felipe Road and north of Meadowleaf Ct. The project is the replacement of two existing single family detached homes plus the construction of two additional single family detached homes for a total of four new single family detached homes on 10,000 square foot minimums on a total of 2.04 acres. Homes will range in size from 4000- 4700 square feet.

The project will be replacing the two existing homes (Lots #1 and #2). Lot #1 on the east side of Misery Creek is constrained. The existing home and outbuildings actually occurred within 20 feet of the Misery Creek. Project elements (i.e., hardscape) for the new home on Lot #1 will be set back a minimum of 30 ft for approximately 38% of its frontage along Misery Creek. The remaining 62% of the frontage will be set back a minimum of 50 ft and for a portion of its length as over 75 ft. On the west side of Misery Creek, project elements (i.e., hardscape) will be set back 75 ft from the top-of-bank.

The riparian corridor along Misery Creek has been substantially degraded due to human activity over the last several decades (e.g., two existing homes and outbuildings within close proximity to the top-of-bank and continued use of the creek corridor for human activity) that have included either the planting of or invasion by eucalyptus trees. It is likely the native willows and oaks that likely once occurred within the riparian corridor have been removed by human use (several decades ago) and to a small degree, out-competed by the eucalyptus that were planted or invaded this site. These trees are non-native and greatly alter the natural bio-diversity that would have occurred along this creek. Therefore, the project in an attempt to improve the presently degraded riparian corridor has incorporated within its design, a riparian enhancement component that is intended to improve the current conditions along this reach of Misery Creek. The key components of this approach is to push the setback to 75 ft (exceeding the current setbacks of the two existing homes) on the west side of the creek and between 30 ft to as much as 75 ft on the east side of the creek. This enhancement will plant native trees and shrubs along the presently sparse riparian corridor – very similarly to what is being accomplished on the adjacent Heritage Estates.

In addition to the riparian enhancement component of the Project, the Project Description will also incorporate a series of Best Management Practices (BMP) to ensure that the buildout of the project will not result in any significant impacts to biotic resources (see Appendix A for the detailed list). In summary, the Project Description incorporates avoidance and minimization measures such as:

- Preconstruction surveys for bats, nesting raptors and burrowing owls 14 to 30 days prior to construction activity;
- Construction free buffers if sensitive species are detected on site;
- Tree protection measures;
- Implement stormwater prevention BMPs.

The site was found to support suitable breeding and foraging habitat for nesting raptors and to a lesser extent for the burrowing owl that has not been reported in this portion of the Evergreen Area of San Jose. Several protected raptor species, including the white-tailed kite, northern harrier, red-tailed hawk, and the American kestrel have the potential to forage on the site. Preconstruction surveys for nesting raptors have been incorporated into the project description and have become a required element of the project. These surveys coupled with construction free buffers described in the Best Management Practices for the project will ensure that construction of the project will not harm or injure a nesting raptor or cause nest abandonment.

The project has also incorporated avoidance measures to ensure that roosting bats will not be harmed or injured with the demolition of the existing buildings or the removal of the three trees.

In summary, the Project has no significant impacts on biological resources as it has incorporated a number of avoidance and minimization measures into the project description, including the planting of riparian enhancement vegetation between the project and Misery Creek.

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1 INTRODUCTION

This site was evaluated by Live Oak Associates, Inc (LOA) to ascertain whether or not build-out of the proposed project would have a significant impact (as defined by CEQA) on the biological resources of the site and region. This report describes the biotic resources of the 2.04-acre site in San Jose and evaluates potential impacts of the proposed land use changes upon these resources, including the project's conformance to the City of San Jose's *Riparian Corridor Policy* (1999). The site is bordered by a road to the south, private parcels to the north, east and west. Misery Creek bisects the site on a north-south route. Current land use in the region includes residential development to the north and northwest with undeveloped land to the south and southeast. The site can be found on the Lick Observatory U.S.G.S. 7.5' quadrangle at the following: West ½ of the southwest ¼ of Section 34, Township 7 South, Range 2 East (Figure 1).

The site is mainly comprised of two home sites with non-native grassland, and contains a small riparian corridor (approximately 260 linear feet), and supports 22 trees (the majority of which are eucalyptus (*Eucalyptus globulus*)) in varying condition.

In general, the development of parcels can damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by policies and ordinances of the City of San Jose. Therefore, this report addresses issues related to: 1) sensitive biotic resources occurring in the study area; 2) the federal, state, and local laws regulating such resources, 3) evaluate whether or not the project results in any significant impact to these resources; and 4) if so mitigates these impacts to less-than-significant (as defined by CEQA).

The analysis of impacts, as discussed in Section 3.0 of this report, was based on the known and potential biotic resources of the study area discussed in Section 2.0. Sources of information used in the preparation of this analysis included: 1) the *California Natural Diversity Data Base* (RareFind3, 2010); 2) the *California Rare Plant Rank* (CNPS 2010); 3) manuals and references related to plants and animals of the Santa Clara Valley Region; 4) the City of San Jose's 2020 General Plan, and 5) City of San Jose policies and ordinances.

The field surveys of the study area were conducted on November, 29 2010 by LOA ecologists Nathan Hale and Katrina Huck at which time the principal biotic habitats of the site were identified and the constituent plants and animals of each were noted (Appendices B and C, respectively). The LOA ecologists also assessed riparian conditions and proposed setbacks of the project to determine if the proposed project would conform to the City of San Jose's *Riparian Corridor Policy* (1999). On November, 29 2010, Neal Kramer conducted a tree survey to determine their diameter and condition, and which, if any, would fall under the City of San Jose's Tree Ordinance. Dr. Rick Hopkins on May 2 and 5, 2011 and Melissa Denena on May 5, 2011 conducted additional surveys to evaluate tree resources and the condition of the riparian corridor along Misery Creek.

Figure 1: Vicinity map

1.1 PROJECT DESCRIPTION

Hunt Project is located on the northeastern side of San Felipe Road and north of Meadowleaf Ct. The project is the replacement of two existing single family detached homes plus the construction of two additional single family detached homes for a total of four new single family detached homes on 10,000 square foot minimums on a total of 2.04 acres. Homes will range in size from 4000- 4700 square feet.

The project will be replacing the two existing homes (Lots #1 and #2). Lot #1 on the east side of Misery Creek is constrained. The existing home and outbuildings actually occurred within 20 feet of the Misery Creek. Project elements (i.e., hardscape) for the new home on Lot #1 will be set back a minimum of 30 ft for approximately 38% of its frontage along Misery Creek. The remaining 62% of the frontage will be set back a minimum of 50 ft and for a portion of its length as over 75 ft. On the west side of Misery Creek, project elements (i.e., hardscape) will be set back 75 ft from the top-of-bank.

The riparian corridor along Misery Creek has been substantially degraded due to human activity over the last several decades (e.g., two existing homes and outbuildings within close proximity to the top-of-bank and continued use of the creek corridor for human activity) that have included either the planting of or invasion by eucalyptus trees. It is likely the native willows and oaks that likely once occurred within the riparian corridor have been removed by human use (several decades ago) and to a small degree, out-competed by the eucalyptus that were planted or invaded this site. These trees are non-native and greatly alter the natural bio-diversity that would have occurred along this creek. Therefore, the project in an attempt to improve the presently degraded riparian corridor has incorporated within its design, a riparian enhancement component that is intended to improve the current conditions along this reach of Misery Creek. The key component of this approach is to push the setback to 75 ft (greater than it was for the two existing homes on site) on the west side of the creek and between 30 ft to as much as 75 ft on the east side of the creek. This enhancement will plant native trees and shrubs along the presently sparse riparian corridor – very similarly to what is being accomplished on the adjacent Heritage Estates.

The proposed enhancement provides increased ecological value to the corridor. In addition, this enhancement is being designed to be contiguous and consistent with the planned enhancement efforts upstream (i.e., Heritage Estates), to the southeast of the project site. Between the edge of development and the existing riparian corridor, the project will install native tree and shrub plantings along the upland slopes adjacent to the extant riparian corridor. Native plant species will reflect the transitional upland riparian species found in oak woodland habitats of the area, and species used will be grown from seed stock occurring within the Coyote Creek watershed to the maximum extent practicable to ensure genetic similarity. Species to be used are likely to include native trees such as California buckeye (*Aesculus californica*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), blue elderberry (*Sambucus mexicana*), and red willow (*Salix laevigata*), and native shrub species such as California sagebrush (*Artemisia californica*), mugwort (*Artemisia douglasiana*), mule-fat (*Baccharis salicifolia*), toyon (*Heteromeles arbutifolia*), California rose (*Rosa californica*), and California snowberry (*Symphoricarpos albus*). Actual species to be included may be slightly different from this list, as they will be based upon available nursery stock, but a qualified native plant specialist will approve plantings.

All elements of the native plant enhancement effort will conform to the guidelines of San Jose's *Riparian Corridor Policy Study* (City of San Jose 1999).

In addition to the riparian enhancement component of the Project, the Project Description will also incorporate a series of Best Management Practices (BMP) to ensure that the buildout of the project will not result in any significant impacts to biotic resources (see Appendix A for the detailed list). In summary, the Project Description incorporates avoidance and minimization measures such as:

- Preconstruction surveys for bats, nesting raptors and burrowing owls 14 to 30 days prior to construction activity;
- Construction free buffers if sensitive species are detected on site;
- Tree protection measures;
- Implement stormwater prevention BMPs.

2 EXISTING CONDITIONS

The study area is rectangular, approximately 2.04-acre property located east of Highway 101 in San Jose, California, west of the foothills of the Diablo Range. The site is bordered by a private parcel to the west with San Felipe Road adjacent to that parcel, Misery Creek runs north-south through the site and a residential development is to the north and northwest with undeveloped land to the south and southeast. Misery Creek was damp, but no standing water was observed during the November 2010 site survey, and a leaking pipe is currently being repaired that was the cause of a wet area in an eastern portion of the property. The site has varying topography ranging from 560 feet National Geodetic Vertical Datum (NGVD) along the westerly boundary to 600 feet NGVD at its highest point (near the far eastern side of the site).

Two soil types were identified per the 1968 Soils of Santa Clara County (Natural Resource Conservation Service 1968). Pleasanton loam, 2 to 9 % slopes and Positas-Saratoga loams, 9 to 15% slopes. The Web Soil Survey recently included Santa Clara County on their website; this updated soil map identifies one soil type on the site, and is not considered to be hydric, although hydric soil inclusions may occur. The soil-mapping unit is Urban land-Flaskan complex, 2 to 9% slopes, and is well drained, and is comprised of 70% Urban land and 20% Flaskan soils with 10 % minor components. The Flaskan parent material is Alluvium from metamorphic and sedimentary rock or metavolcanics, while the Urban land parent material is disturbed and human transported material (Web Soil Survey 2010).

Annual precipitation in the general vicinity of the study area is about 15-20 inches, almost 85% of which falls between the months of October and March. Virtually all precipitation falls in the form of rain. Stormwater runoff readily infiltrates into the soils of the site, but when field capacity has been reached, gravitational water will sheet-flow and collect in Misery Creek, which bisects the site.

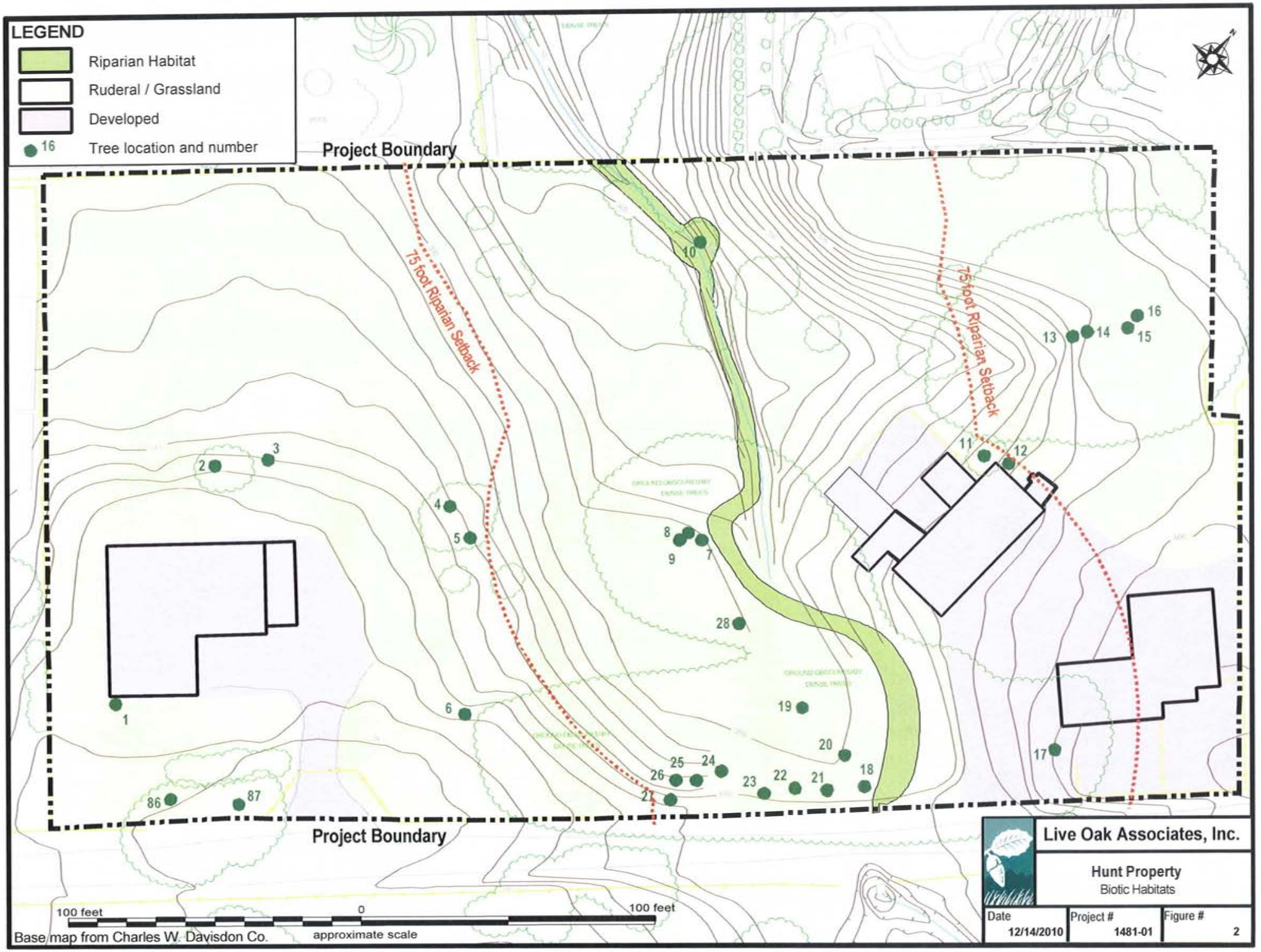
2.1 BIOTIC HABITATS

Two main biotic habitats have been identified either on the study area or immediately adjacent to the site. For the purposes of this report, these natural terrestrial communities are identified as ruderal grassland / developed and riparian (Figure 2).

2.1.1 Ruderal Grassland / Developed

Two home sites are on the site and the surrounding grassland has been affected by years of human use. The majority of the site supports ruderal habitat comprised of a large fenced area with Misery Creek running down the center; included in this area are remnant, unmaintained orchard trees, eucalyptus trees mostly along the road to the south portion of the site, and two driveways associated with onsite residences. Non-native grasslands and ruderal areas dominated by weedy grasses and forbs of European origin comprised the main habitat occurring on-site.

Grasses observed in this habitat during site surveys include wild oat (*Avena sp.*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Mediterranian barley (*Hordeum marinum ssp. gussoneanum*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), annual bluegrass (*Poa annua*), and rabbit's foot grass (*Polypogon monspeliensis*).


LEGEND
Riparian Habitat
Ruderal / Grassland
Developed
16 Tree location and number
Project Boundary
75 foot Riparian Setback
75 foot Riparian Setback
Project Boundary
1
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86
87
100 feet
0
100 feet
approximate scale
Base map from Charles W. Davisdon Co.
Live Oak Associates, Inc.
Hunt Property
Biotic Habitats
Date
12/14/2010
Project #
1481-01
Figure #
2

The grassland areas of the site support orchard trees which are around the home sites, eucalyptus trees, and a few other tree species. Large eucalyptus trees were the dominant species on the site and were observed mainly in two clumps – one on the north boundary of the site and one on the south boundary. Other trees observed included coast live oaks, Monterey pines (*Pinus radiate*), one Italian cypress (*Cupressus sempervirens*), and red willows.

Non-native grasslands provide important habitat to many terrestrial vertebrates. As many as 25 species of reptiles and amphibians, 100 species of birds, and 50 species of mammals are known to use grassland habitats of central California (Mayer et al. 1988). A number of these species are expected to utilize grasslands occurring on the site throughout all or part of the year as breeding or foraging habitat. The study area provides suitable habitat for many of these species. Some of these species are grassland residents, while a good many more use a variety of other habitats as well. Some migrants may use the grasslands of the study area for only a portion of each year.

Although no reptiles were observed, the grassland habitat of the study area is used or is likely used by several species of reptiles including the western fence lizard (*Sceloporus occidentalis*), southern alligator lizard (*Elgaria multicarinata)*, gopher snake (*Pituophis melanoleucus*) and western rattlesnake (*Crotalus viridis*).

Bird species directly observed at the site include the red-winged blackbird (*Agelaius phoeniceus*), rufus crowned sparrow (*Aimophila ruficeps*), western scrub jay (*Aphelocoma californica*), Anna's humming bird (*Calypte anna*), lesser goldfinch (*Carduelis psaltria*), turkey vulture (*Cathartes aura*) (flying over the site), killdeer (*Charadrius vociferous*) (just off the site), yellow rumped warbler (*Dendroica coronata*), yellow-billed magpie (*Pica nuttalli*), California towhee (*Pipilo crissalis*), European starling (*Sturnus vulgaris*), mourning dove (*Zenaida macroura*), and white-crowned sparrow (*Zonotrichia leucophrys*). Two nests were also observed in a eucalyptus within the riparian corridor and near the road, one was a stick nest, possibly raptor or magpie, and the other was presumably an oriole nest (basket nest). Resident birds that are expected to occur on the site include the American crow (*Corvus brachyrhynchos*), western meadowlark (*Sturnella neglecta*), and Western kingbirds (*Tyrannus verticalis*). Winter migrants may include American pipit (*Anthus rubescens*), Canada goose (*Branta canadensis*), merlin (*Falco columbarius*), and savannah sparrow (*Passerculus sandwichensis*).

A variety of raptors may be attracted to the site by its proximity to Misery Creek. Raptors that commonly utilize these types of ruderal habitats and the adjacent riparian corridor include the Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), great horned owl (*Bubo virginianus*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*B. jamaicensis*), white-tailed kite (*Elanus caeruleus*), American kestrel (*Falco sparverius*), western screech owl (*Otus kennicottii*), and barn owl (*Tyto alba*). A stick nest was observed in one of the eucalyptus trees (along the south edge of the site); however, the status of the nest could not be determined.

Small mammals common to urban riparian corridors and ruderal habitats in the City that do or are expected to utilize the site include the California vole (*Microtus californicus*), western harvest mouse (*Reithrodontomys megalotis*), ornate shrew (*Sorex ornatus*), California ground squirrel (*Spermophilus beecheyi*) (observed adjacent to the site, one burrow observed on the site), brush rabbit (*Sylvilagus bachmani*), and Botta's pocket gopher (*Thomomys bottae*) (burrows observed on the site). Mammalian predators such as coyote (*Canis latrans*), opossum (*Didelphis viginiana*), bobcat (*Lynx rufus*), and raccoon (*Procyon lotor*) likely forage onsite at

night. Domestic or feral cat (*Felis catus*) prints were observed on the site. Several domestic dogs were observed on the site. Other large mammals such as black-tailed deer (*Odocoileus hemionus columbianus*) are also expected to forage onsite, especially along Misery Creek.

2.1.2 **Riparian**

There is one riparian corridor associated with the proposed project, Misery Creek. The riparian woodland vegetation near Misery Creek running through the project site consists of a dense canopy of mature eucalyptus trees on the southern edge of the site in varying condition. Only one tree, a red willow, occurs within the riparian corridor, although the dense eucalyptus near the creek offer a modest canopy over much of the creek channel. The understory of the riparian woodland is relatively sparse, consisting mainly of the same non-native ruderal grasses present in the upland habitat, with dead Italian thistles (*Carduus pycnocephalus*) closer to the creek. In addition, coast live oak and blue oak seedlings were observed in the southern portion of the riparian corridor. The width of the corridor in this reach of the creek is relatively narrow and impacted by erosion and human activities. Therefore, the wildlife value for this reach of Misery Creek is considered poor to fair. As such, wildlife use is restricted to more common species (e.g., raccoon, opossum, common passerines, etc.).

The limited leaf litter provides a moist microclimate suitable for some amphibians species such as the ensatina (*Ensatina eschscholtzii*), arboreal salamander (*Aneides lugubris*), California slender salamander (*Batrachoseps attenuatus*), western toad (*Bufo boreas*) and Pacific tree frog (*Hyla regilla*). Reptiles that may utilize riparian systems include the western rattlesnake (*Crotalus oreganus*), western fence lizard, western skink (*Eumeces skiltonianus*), southern alligator lizard, California legless lizard (*Anniella pulchra*), gopher snake, common kingsnake (*Lampropeltis getula*), and night snake (*Hypsiglena torquata*).

Avian species that were observed in this limited riparian area during the November 2010 survey include the red-winged blackbird, rufus crowned sparrow, western scrub jay, Anna's humming bird, lesser goldfinch, turkey vulture, killdeer, yellow rumped warbler, yellow-billed magpie, California towhee, European starling (*Sturnus vulgaris*), mourning dove (*Zenaida macroura*), and white-crowned sparrow (*Zonotrichia leucophrys*). Other resident species that may be found in this habitat include the Cooper's hawk, great horned owl, Hutton's vireo (*Vireo huttoni*), bushtit (*Psaltriparus minimus*) and Nuttall's woodpecker (*Coloptes auratus*). Winter migrants may include the sharp-shinned hawk (*Accipiter striatus*) and ruby-crowned kinglet (*Regulus calendula*). Summer migrants may include the ash-throated flycatcher (*Myiarchus cinerascens*) and black-headed grosbeak (*Pheucticus melanocephalus*).

Mammalian species that are likely to occur along the creek include the brush rabbit and western gray squirrel (*Sciurus griseus*). Larger mammals that may occur along the riparian corridor would be the same as those found in the ruderal upland habitat.

2.2 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife

Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as threatened or endangered under state and federal endangered species legislation. Others have been designated as "candidates" for such listing. Still others have been designated as "species of special concern" by the CDFG. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered (CNPS 2001). Collectively, these plants and animals are referred to as "special status species."

A number of special status plants and animals occur in the vicinity of the study area. These species, and their potential to occur in the study area, are listed in Table 1. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1990), *California Natural Diversity Data Base* (CDFG 2010), *Endangered and Threatened Wildlife and Plants* (USFWS 2008), and the *Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants* (CDFG 2008).

A search of published accounts for all of the relevant special status plant and animal species was conducted for the Lick Observatory USGS 7.5 minute quadrangle in which the project site occurs, and for the eight surrounding quadrangles (Calaveras Reservoir, Mt. Day, San Jose East, Morgan Hill, Santa Teresa Hills, Isabel Valley, Mt. Sizer, and Eylar Mtn.) using the California Natural Diversity Data Base Rarefind3 2010. All species listed as occurring in these quadrangles on CNPS Lists 1A, 1B, 2, or 4 were also reviewed (See Figure 3).

The site lacks serpentine soils, therefore, those plants and animals endemic to serpentine soils will be absent such as Sharsmith's onion, bent-flowered fiddleneck, chaparral harebell, Sharsmith's harebell, Tiburon indian paintbrush, coyote ceanothus, Mt. Hamilton fountain thistle, Santa Clara Valley dudleya, talus fritillary, fragrant fritillary, smooth lessingia, Metcalf Canyon jewelflower, most beautiful jewelflower, Mt. Hamilton jewelflower, and Bay checkerspot butterfly.

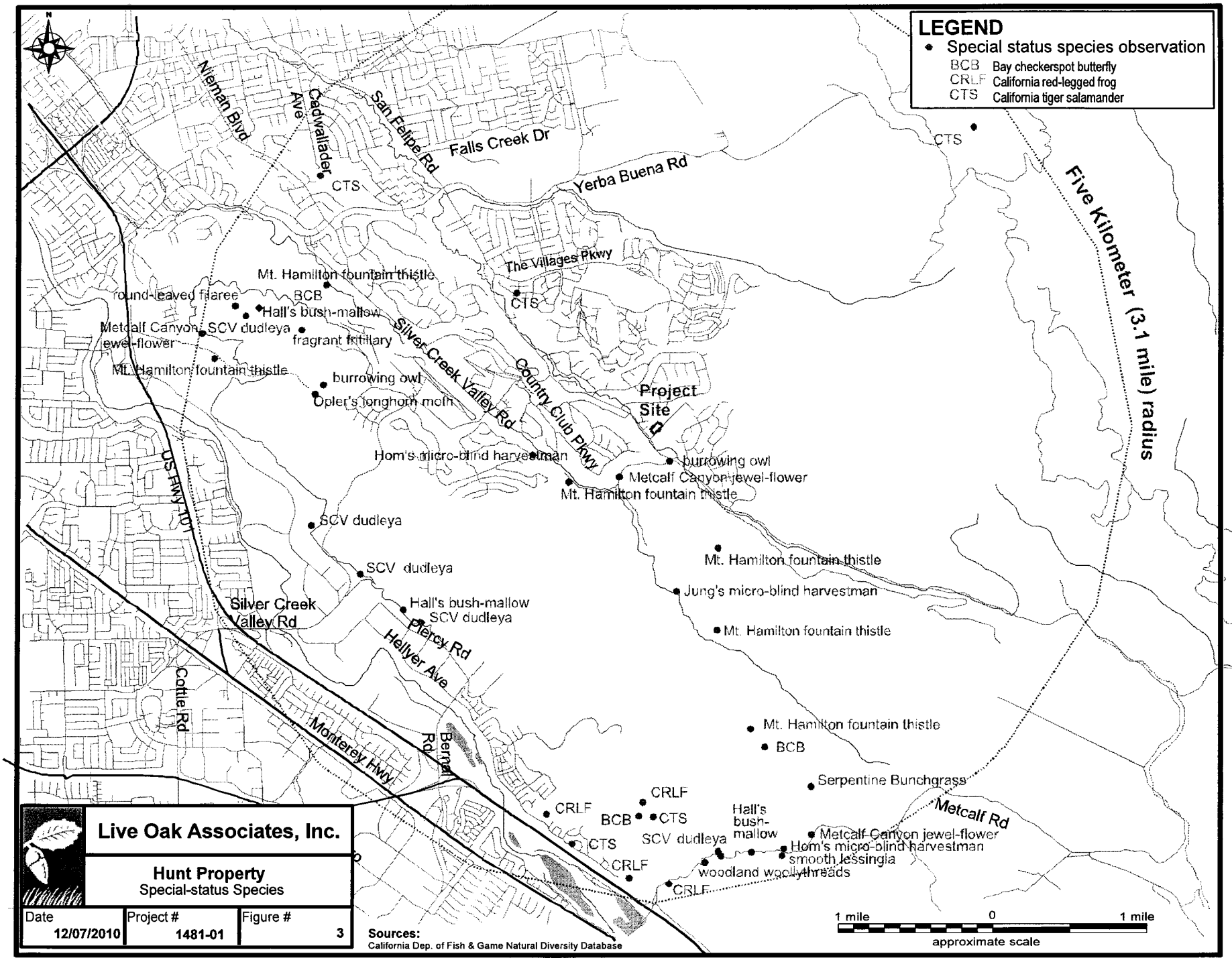
LEGEND
Special status species observation
BCB Bay checkerspot butterfly
CRLF California red-legged frog
CTS California tiger salamander
Five Kilometer (3.1 mile) radius
Project Site
Nieman Blvd
Cadwallader Ave
San Felipe Rd
Falls Creek Dr
Yerba Buena Rd
The Villages Pkwy
Silver Creek Valley Rd
Country Club Pkwy
US Hwy 101
Monterey Hwy
Bernal Rd
Hellyer Ave
Piercy Rd
Cottle Rd
Metcalf Rd
Mt. Hamilton fountain thistle
round-leaved filaree
BCB
Hall's bush-mallow
Metcalf Canyon jewel-flower
SCV dudleya
fragrant fritillary
burrowing owl
Opler's longhorn moth
Hom's micro-blind harvestman
Jung's micro-blind harvestman
Serpentine Bunchgrass
CRLF
CTS
Hall's bush-mallow
smooth lessingia
woodland woolythreads
1 mile
0
1 mile
approximate scale
Live Oak Associates, Inc.
Hunt Property
Special-status Species
Date 12/07/2010
Project # 1481-01
Figure # 3
Sources:
California Dep. of Fish & Game Natural Diversity Database

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT DO OR MAY OCCUR IN THE PROJECT VICINITY

PLANTS (adapted from CDFG, 2010 and CNPS online, 2010)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence in the Study Area
Robust Spineflower (*Chorizanthe robusta* var. *robusta*)	FE CNPS 1B.1	Occurs on sandy or gravelly soils in openings of cismontane woodlands, coastal dunes and coastal scrub at elevations between 3 and 300 meters.	**Absent.** No suitable habitat occurs within the study area.
Contra Costa Goldfields (*Lasthenia conjugens*)	FE, CNPS 1B.1	Occurs in mesic areas of valley and foothill grasslands as well as in vernal pools.	**Absent.** No suitable habitat exists on site for Contra Costa goldfields.
Rock Sanicle (*Sanicula saxatilis*)	CR CNPS 1B.2	Occurs in loose talus slopes associated with chaparral habitats between 900-1100 m.	**Absent.** No suitable habitat exists on site for the rock sanicle. Furthermore, the site is well below 900 meters in elevation.

Other special status plants listed by CNPS

Species	Status	Habitat	*Occurrence in the Study Area
Big-scale Balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)	CNPS 1B.2	Occurs in chaparral, cismontane woodland, valley and foothill grassland, sometimes on serpentine, at elevations between 90 and 1400 meters. Blooms March to June	**Absent.** The site supports marginal habitat for the big-scale balsamroot. However there are no known occurrences within three miles of the site, and the plant was not observed during site visits during its blooming season.
Round-leaved Filaree (*California macrophylla*)	CNPS 1B.1	Occurs in crosmontane woodlands and valley and foothill grasslands between 15 and 1200 meters. Blooms March to May	**Absent.** While the site supports marginal habitat for round-leaved filaree, the plant was not observed during any of the site visits that occurred over the past several years during its blooming period.
Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*)	CNPS 1B.2	Occurs in alkaline soils of valley and foothill grasslands, at elevations between 0 and 425 meters.	**Absent.** No alkaline soils occur within the study area.
Santa Clara Red Ribbons (*Clarkia concinna* ssp. *automixa*)	CNPS 4.3	Occurs in foothill woodland.	**Absent.** No suitable habitat exists on site.
San Francisco Collinsia (*Collinsia multicolor*)	CNPS 1B.2	Occurs in closed-cone coniferous forest and coastal scrub and is often associated with serpentine soils.	**Absent.** No suitable habitat occurs on the study area.
Hospital Canyon Larkspur (*Delphinium californicum* ssp. *interius*)	CNPS 1B.2	Occurs in foothill woodlands, occasionally in wetlands.	**Absent.** No suitable habitat exists on site.
Showy Golden Madia (*Madia radiate*)	CNPS 1B.1	Occurs in valley grassland and foothill woodland.	**Absent.** No suitable habitat exists on site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT DO OR MAY OCCUR IN THE PROJECT VICINITY

Other special status plants listed by CNPS

Species	Status	Habitat	*Occurrence in the Study Area
Arcuate Bush Mallow (*Malacothamnus arcuatus*)	CNPS 1B.2	Occurs in chaparral, at elevations between 15 and 355 meters.	**Absent.** No suitable habitat occurs within the study area.
Hall's Bush Mallow (*Malacothamnus hallii*)	CNPS 1B.2	Occurs in chaparral and coastal scrub, at elevations between 10 and 760 meters.	**Absent.** No suitable habitat occurs within the study area.
Hairless Popcorn Flower (*Plagiobothrys glaber*)	CNPS 1A	Occurs in heavy clay soils of alkaline meadows, at elevations between 15 and 180 meters.	**Absent.** No suitable habitat occurs within the study area.
Maple-Leaved Checkerbloom (*Sidalcea malachroides*)	CNPS 4.2	Occurs in broadleaved upland forests, coastal prairie, coastal scrub, and coniferous forests, often in disturbed areas, between 2 and 730 meters.	**Absent.** No suitable habitat occurs within the study area.

ANIMALS (adapted from CNDDB 2010 and USFWS 2010)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence in the Study Area
Steelhead (*Oncorhynchus mykiss*)	FT	Migrate up freshwater rivers or streams in the spring and spend the remainder of the time in the ocean.	**Absent.** Misery Creek's low seasonal flow does not support migration or breeding habitat for steelhead.
California Tiger Salamander (*Ambystoma californiense*)	FT, CT, CSC	Breeds in vernal pools and stock ponds of central California; adults aestivate in grassland habitats adjacent to the breeding sites.	**Absent.** The site does not support suitable breeding habitat for CTS due to the lack of vernal pools or other suitable standing water. There are a few California ground squirrel (*Spermophilus beecheyi*) and Botta pocket gopher (*Thomomys bottae*) burrows on the property, offering some suitable estivation habitat for the salamander. The nearest presumed extant breeding pond is about three miles to the northeast of the site (CNDDB 2010).
California Red-legged Frog (*Rana aurora draytonii*)	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and coast range, preferring pools with overhanging vegetation.	**Absent**. Misery Creek does not support breeding or rearing habitat (deep pools) for CRLF. At most, Misery Creek may function as a movement corridor for an errant frog, as the nearest CNDDB record is just less than three miles to the south of the site (2010).

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT DO OR MAY OCCUR IN THE PROJECT VICINITY

Federal Candidate Species and State Species of Special Concern

Species	Status	Habitat	*Occurrence in the Study Area
Coast Horned Lizard (*Phyrnosoma coronatum frontale*)	CSC	Found primarily in lowlands along sandy washes where scattered low shrubs provide cover.	**Absent.** The site does not support suitable habitat for the coast horned lizard.
Western Pond Turtle (*Actinemys marmorata*)	CSC	Open slow-moving water of rivers and creeks of central California with rocks and logs for basking.	**Unlikely**. The site does not support suitable habitat for the western pond turtle. At most, Misery Creek could serve as a movement corridor for an errant turtle; the nearest CNDDB record is just less than 4 miles to the west.
Golden Eagle (*Aquila chrysaetos*)	CSC	Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert.	**Possible.** The site provides suitable foraging habitat for this species; the taller trees onsite provide marginal breeding habitat. No records exist for golden eagles nesting in this area of Evergreen.
White-tailed Kite (*Elanus caeruleus*)	CP	Open grasslands and agricultural areas throughout central California.	**Likely.** Suitable foraging and breeding habitat exists on site for the white-tailed kite. The nearest CNDDB record is just over 7 miles to the north of the site.
Peregrine falcon (*Falco peregrinus*)	Federal Species of Concern, CSC	Individuals breed on cliffs in the Sierra or in coastal habitats; occurs in many habitats of the state during migration and winter.	**Unlikely.** Suitable nesting habitat is absent from the site itself for the peregrine falcon. There is, however, a smallchance that an occasional foraging event takes place on the site or that a transient could pass over the site.
Northern Harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	**Unlikely.** Marginally suitable foraging habitat is present within the study area, however breeding habitat is extremely marginal. This species would be expected to fly over the site from time to time en route to more suitable habitats.
Burrowing Owl (*Athene cunicularia*)	CSC	Found in open, dry grasslands, deserts, and ruderal areas. Requires suitable burrows. This species is often associated with California ground squirrels.	**Unlikely.** The site is bordered on the south by land with ground squirrels, and one burrow was located on the site. The site supports both potential foraging and breeding habitat (ground squirrel burrows) for the burrowing owl. No BUOW or evidence (e.g., white wash, pellets, feathers) was observed during November 2010 survey, however, a protocol-level survey was not conducted. The nearest CNDDB record is less than half a mile from the site, however no records for the past 10 years exist within 3 miles of the site.
Loggerhead shrike (*Lanius ludovicianus*)	CSC	Nests in tall shrubs and dense trees, forages in grasslands, marshes, and ruderal habitats.	**Possible.** Suitable foraging habitat and marginally suitable nesting habitat is present on the site for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT DO OR MAY OCCUR IN THE PROJECT VICINITY

Federal Candidate Species and State Species of Special Concern

Species	Status	Habitat	*Occurrence in the Study Area
California yellow warbler (*Dendroica petechia brewster*)	CSC	Migrants move through many habitats of Sierra and its foothills. This species breeds in riparian thickets of alder, willow and cottonwoods.	**Unlikely**. Suitable breeding and foraging do not occur along the degraded riparian area along Misery Creek.
Tricolored blackbird (*Agelaius tricolor*)	CSC	Breeds near fresh water in dense emergent vegetation. Forages in grassland and cropland habitats.	**Unlikely.** Marginally suitable habitat for the Tricolored blackbird exists on the site; red-winged blackbirds were observed during the November 2010 survey, and they use similar habitats. The nearest CNDDB record is almost 7 miles to the southwest of the site (2010).
Vaux's Swift (*Chaetura vauxi*)	CSC	Migrants and transients found throughout many habitats of California. Breeds in tree hollow in woodlands near water in Northern California.	**Unlikely.** Suitable nesting habitat is absent from the site itself. There is however a slight potential that a foraging or transient individual could pass over the site from time to time.
Black Swift (*Cypseloides niger*)	CSC	Found near cliffs near waterfalls or ocean caves.	**Absent.** Suitable habitat does not exist on the site.
Pallid Bat (*Antrozous pallidus*)	CSC	Grasslands, chaparral, woodlands, and forests of California; most common in dry rocky open areas providing roosting opportunities.	**Possible.** Suitable foraging habitat is present onsite for the pallid bat. Eucalyptus may provide roosting and breeding habitat; other roosting and breeding habitat is generally lacking.
Townsend's Big-eared Bat (Plecotus townsendii townsendii)	CSC	Primarily a cave-dwelling bat that may also roost in buildings. Occurs in a variety of habitats of the state.	**Possible**. Suitable foraging habitat is present onsite for the Townsend's big-eared bat. However, roosting and breeding habitat is generally lacking.
San Francisco Dusky-footed Woodrat (*Neotoma fuscipes annectens*)	CSC	Found in chaparral and woodland habitats around the San Francisco Bay and coastal ranges.	**Absent.** Chaparral habitat does not exist on the site and woodland habitat is limited. Although, the nearest CNDDB record is almost 5 miles to the southeast, no woodrat nests were observed on the site.
American Badger (Taxidea taxus)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	**Unlikely.** Suitable habitat occurs onsite, no burrows of suitable size for the badger were observed. The nearest CNDDB record is just over 5 miles from the site (2010), and so the site may be used for dispersal.
Ringtail (Bassariscus astutus)	CP	Occurs in dry, rocky, mountainous areas of California, but may also occur in heavily wooded areas such as riparian habitats.	**Unlikely.** Marginally suitable habitat is present along Misery Creek for the ringtail. This species may occur within some of the larger riparian trees associated with nearby hompson Creek.

*Present: Species observed on the sites at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the sites, but it could occur there from time to time.
Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FC	Federal Candidate	CP	California Protected
		CSC	California Species of Special Concern

CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	3	Plants about which we need more information – a review list
1B	Plants Rare, Threatened, or Endangered in California and elsewhere	4	Plants of limited distribution – a watch list
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere		

2.3 REGULATED HABITATS

2.3.1 Wetlands and Other Jurisdictional Waters

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the California Regional Water Quality Control Board (RWQCB). See Section 3.2.4 of this report for additional information.

No formal wetland delineation has been done to determine if any areas of the site meet the technical criteria of jurisdictional wetlands. Although, the riparian dripline was mapped from the top of the banks of Misery Creek running through the site. The channel was wet during the 29 November 2010 visit, but no standing water was observed. A wet area was observed in an eastern portion of the site, and was found to be the result of a leaking pipe; the pipe is currently being repaired and the resulting wet area is not expected to be claimed under USACE, CDFG, or RWQCB, however, these agencies are the final arbitrators.

The channel of Misery Creek does not meet the technical criteria of a wetland, but it does have a defined bed and bank, and is hydrologically connected to other Waters of the U.S. Therefore, Misery Creek is considered a jurisdictional tributary water.

2.3.2 Ordinance-Size Trees

The City of San Jose Tree Removal Controls (San Jose City Code, sections 13.31.010 to 13.32.100) serve to protect all trees having a trunk that measures 56 inches or more in circumference (18 inches in diameter) at the height of 24 inches above the natural grade of slope. The ordinance covers both native and non-native species.

A total of 30 trees were mapped and described during a tree survey conducted by Neal Kramer on 29 November 2010 which were scattered throughout the entire property (Figure 2). A total of 21 trees meet the ordinance criterion. The project will remove 3 trees, #1, #4, and #12 (see Table 2).

Table 2. Results of the November 2010 tree survey for the DAL Properties - Hunt project site.

Tree #	Common Name	Scientific Name	Trunk diameter(s) in inches @ 24" above grade	Ordinance size?	Health*
1	Italian cypress*	*Cupressus sempervirens*	11	no	Good
2	Coast live oak	*Quercus agrifolia*	8	no	Good
3	Apple	*Malus pumila*	5.5+4.5+3+4+2 +2 = **21**	yes	Good
4	Apricot*	*Prunus armeniaca*	6.5+8.5 = 15	no	Fair
5	Plum	*Prunus domestica*	6.5	no	Fair
6	Almond	*Prunus dulcis*	6	no	Fair
7	Blue gum	*Eucalyptus globulus*	14+5+26 = **45**	yes	Good
8	Blue gum	*Eucalyptus globulus*	**20**	yes	Good
9	Blue gum	*Eucalyptus globulus*	**28**	yes	Good
10	Red willow	*Salix laevigata*	6.5+10 = 16.5	no	Fair
11	Coast live oak	*Quercus agrifolia*	17	no	Good
12	Coast live oak*	*Quercus agrifolia*	9	no	Good
13	Blue gum	*Eucalyptus globulus*	**30**	yes	Fair
14	Blue gum	*Eucalyptus globulus*	**60**	yes	Good
15	Blue gum	*Eucalyptus globulus*	7.5+15 = **22.5**	yes	Fair
16	Blue gum	*Eucalyptus globulus*	**21**	yes	Good
17	Monterey pine	*Pinus radiata*	**24**	yes	Good
18	Blue gum	*Eucalyptus globulus*	**79**	yes	Good
19	Blue gum	*Eucalyptus globulus*	**42**	yes	Fair
20	Blue gum	*Eucalyptus globulus*	**22**	yes	Dead
21	Blue gum	*Eucalyptus globulus*	**24**	yes	Fair
22	Blue gum	*Eucalyptus globulus*	**42**	yes	Good
23	Blue gum	*Eucalyptus globulus*	12+6.5+7 = **25.5**	yes	Fair
24	Blue gum	*Eucalyptus globulus*	6.5+32 = **38.5**	yes	Fair
25	Blue gum	*Eucalyptus globulus*	**42**	yes	Good
26	Blue gum	*Eucalyptus globulus*	**47**	yes	Fair
27	Blue gum	*Eucalyptus globulus*	**37**	yes	Fair
28	Blue gum	*Eucalyptus globulus*	Stump sprouts 1-2" diameter	no	Poor
86	Monterey pine	*Pinus radiata*	23	yes	Fair
87	Monterey pine	*Pinus radiata*	19.5	yes	Fair

* Trees to be removed.

2.3.3 City of San Jose's Riparian Policy

The City of San Jose has developed a Riparian Policy, which addresses several issues that relate to the identification, management, and protection of riparian resources within the City's Urban Service Area (USA). The City has assumed that riparian corridors outside the USA are substantially protected by the General Plan Policies that govern these areas. This policy has noted that areas "outside the USA and not subject to specific General Plan direction regarding

riparian protection, should be subject, at a minimum, to the development guidelines in this document" [the *Riparian Corridor Policy Study*, 1999].

Misery Creek is covered by the City of San Jose's *Riparian Corridor Policy Study*. No other areas onsite are within the purview of the City's Riparian Corridor Policy.

2.3.4 Habitat Conservation Plan, Natural Community Conservation Plan or Other Approved Local, Regional, or State Habitat Conservation Plan

Several local partners including the City of San Jose are in the process of developing an HCP/NCCP, though this plan is not currently applicable to the DAL Properties – Hunt project.

3 EVALUATION OF POTENTIAL IMPACTS

3.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of the California Environmental Quality Act (CEQA). The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are constructed. For example, site development may require the removal of some or all of its existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc., may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. These impacts may be considered significant. According to *Guide to the California Environmental Quality Act* (Remy et al. 1996), "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they will:

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

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 Threatened and Endangered Species

State and federal "endangered species" legislation has provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal Endangered Species Acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status." Permits may be required from both the CDFG and USFWS if activities associated with a proposed project will result in the take of a listed species. To "take" a listed species, as defined by the state of California, is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" said species (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" of a listed species (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFG and the USFWS are responding agencies under the California Environmental Quality Act (CEQA). Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.2 Migratory Birds

State and federal laws also protect most bird species. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

3.2.3 Birds of Prey

Birds of prey are protected in California under provisions of the State Fish and Game Code, Section 3503.5, (1992), which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto". Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG.

3.2.4 Wetlands and Other "Jurisdictional Waters"

Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" (hereafter referred to as "jurisdictional waters") subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

- All interstate waters including interstate wetlands:
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As recently determined by the United States Supreme Court in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (the SWANCC decision), channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. However, the U.S Supreme Court decisions *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers* (referred together as the Rapanos decision) impose a "significant nexus" test for federal jurisdiction over wetlands. In June 2007, the USACE and Environmental Protection Agency (EPA) established guidelines for applying the significant nexus standard. This standard includes 1) a case-by-case analysis of the flow characteristics and functions of the tributary or wetland to determine if they significantly affect the chemical, physical, and biological integrity of downstream navigable waters and 2) consideration of hydrologic and ecologic factors (EPA and USACE 2007).

The USACE regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction under the SWANCC decision, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

The California Department of Fish and Game has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2003). Activities that would disturb these drainages are regulated by the CDFG via a

Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.2.5 **Ordinance Sized Trees**

The City of San Jose has a Tree Ordinance (Chapter 13.32 of the Municipal Code), which regulates the removal of trees. The City's Tree Ordinance seeks to:

> Promote the health, safety, and welfare of the city by controlling the removal of trees in the city, as trees enhance the scenic beauty of the city, significantly reduce the erosion of topsoil, contribute to increased storm water quality, reduce flood hazards and risks of landslides, increase property values, reduce the cost of construction and maintenance of draining systems through the reduction of flow and the need to divert surface waters, contribute to energy efficiency and the reduction of urban temperatures, serve as windbreaks and are prime oxygen producers and air purification systems.

An "ordinance-size tree" is defined as any native or non-native tree with a circumference of 56 inches (diameter of 18 inches) at 24 inches above the natural grade of slope. For multi-trunk trees, the circumference is measured as the sum of the circumferences of all trunks at 24 inches above the natural grade of slope. A tree removal permit is required from the City prior to the removal of any trees covered under the ordinance. Prior to the issuance of a removal permit, the City requires that a formal tree survey be conducted which indicates the number, species, trunk circumference and location of all trees which will be removed or impacted by the project.

3.2.6 **City of San Jose Riparian Policy**

The City of San Jose has developed a riparian policy, which addresses several issues that relate to the identification, management, and protection of riparian resources within the City's Urban Service Area (USA). The City has assumed that riparian corridors outside the USA are substantially protected by the General Plan Policies that govern these areas. This policy has noted that areas "outside the USA and not subject to specific General Plan direction regarding riparian protection, should be subject, at a minimum, to the development guidelines in this document" (City of San Jose, 1999).

Riparian corridors are defined as:

> Any defined stream channels including the area up to the bank full-flow line, as well as all riparian (streamside) vegetation in contiguous adjacent uplands. Characteristic wood riparian vegetation species could include (but are not limited to): willow, *Salix* sp.; alder, *Alnus* sp.; box elder, *Acer negundo*; Fremont cottonwood, *Populus fremontii*; bigleaf maple, *Acer macrophyllum*; western sycamore, *Platanus racemosa*; and oaks, *Quercus* sp. Stream channels include all perennial and intermittent streams shown as a solid or dashed blue line on USGS topographic maps, and ephemeral streams or "arroyos" with well-defined channels and some evidence of scour or deposition (City of San Jose 1999, 3).

The City's Riparian Policy recommends the following riparian setback dimensions:

> All buildings, other structures (with the exception of bridges and minor interpretative node structures), impervious surfaces, outdoor activity areas (except for passive or intermittent activities) and ornamental landscaped areas should be separated a minimum of 100 feet from the edge of the riparian corridor (or top of bank, whichever is greater) (City of San Jose 1999, 31).

While the policy does recommend a 100-foot setback along riparian systems within the Urban Service Area, it also provides for exceptions to the 100 ft. setback guideline. Exceptions include:

- Locations in or near downtown San Jose;
- Urban infill locations where most properties are already developed and parcels are generally small;
- Sites adjacent to small lower order tributaries whose riparian influence does not extend 100 feet;
- Sites with unusual geometric characteristics and/or disproportionately long riparian frontages;
- Instances where implementation of the project includes measures which can protect and enhance the riparian value of the corridor more than could a 100 foot setback;
- Recreation facilities deemed to be a critical need and for which alternative site locations are limited; and
- Utility or equipment installations, or replacements of existing ones, which involve no significant disturbance to the riparian corridor during construction and operation, and generate only incidental human activity.

During the CEQA process, the City evaluates an applicant's claim that their project meets the conditions of the relevant exceptions.

Established setbacks or buffers are designed to reduce anthropogenic effects on riparian systems. Usually, the resource agencies have asserted that buffers of 100 feet or more are necessary to reduce adverse affects on riparian systems. While reasonable evidence exists to support the notion that larger buffers provide significant additional benefit to riparian systems, there is a paucity of empirical data that allows for the establishment of a precise estimate. Therefore, the 100-foot riparian buffer that is often adopted is a historically accepted value rather than an empirically derived one. While not empirically driven, a buffer of 100 feet provides a useful starting point to evaluate the potential effects from a proposed project. For the purposes of this document, the primary purpose of the buffer is to minimize the effect of human development on the riparian system occurring onsite. Therefore, the existing condition of the riparian zone, including proximity of roads, development, and trails, is critical for understanding the potential effects of any future development.

3.2.7 Habitat Conservation Plan

The County of Santa Clara is in the process of designing a multi-species HCP/NCCP. However, at this time, no known habitat conservation plans are in effect that would influence this project site.

3.3 FRAMEWORK FOR EVALUATING PROJECT

The DAL Properties - Hunt project is the replacement of two existing single family detached homes plus the construction of two additional single family detached homes for a total of four new single family detached homes on 10,000 square foot minimums on a total of 2.04 acres. Homes will range in size from 4000- 4700 square feet.. Development of DAL Properties - Hunt will set back at least 75-feet from the riparian corridor of Misery Creek, bisecting the site into west and east sections. The project is to include all infrastructure to support the development (e.g., roads, drainages, sewer lines, etc.). Riparian enhancement along Misery Creek is included as part of the project (see Section 1.1 Project Description). As noted in Section 1.1, the project has incorporated within its design, a riparian enhancement component that is intended to improve the current conditions along this reach of Misery Creek. The key components of this approach is to push the setback to 75 ft (greater than it was for the two existing homes on site) on the west side of the creek and between 30 ft to as much as 75 ft on the east side of the creek. This enhancement will plant native trees and shrubs along the presently sparse riparian corridor – very similarly to what is being accomplished on the adjacent Heritage Estates.

Best Management Practices (BMPs, see Appendix A) have also been incorporated into the project description to avoid and minimize impacts to sensitive biotic resources. For example, pre-construction surveys are to be completed for roosting bats, nesting raptors and burrowing owls to ensure if present, impacts to these species can be avoided.

3.3.1 Potential Loss of Habitat for Special Status Plants

Potential Impact. None of the 14 special status plant species occuring within the project vicinity occur on the site (see Table 1) due to a lack of suitable habitat. This is mainly due to the fact that the site supports no serpentine or alkaline soils. Furthermore, the site is either above or below the required elevation range of some plants and does not support vernal pools.

Mitigation. None warranted.

3.3.2 Potential Loss of Habitat for Special Status Animals

Potential Impact. Twenty (20) special status animal species occur, or once occurred, regionally. Of these, 15 species would be absent or unlikely to occur on the site due to a lack of suitable habitat for these species. These species include the steelhead, California tiger salamander, California red-legged frog, coast horned lizard, western pond turtle, peregrine falcon, Northern harrier, burrowing owl, California yellow warbler, tricolored blackbird, Vaux's swift, black swift, San Francisco dusky-footed woodrat, American badger, and ringtail.
The remaining special status animal species from Table 1 potentially occur more frequently as potential regular foragers, transients, or may be resident to the site. These include the golden

eagle, white-tailed kite, loggerhead shrike, pallid bat, and Townsend's big-eared bat. Several of these species may also roost or nest in tall trees or shrubs occurring onsite or in the riparian corridor of Misery Creek.

The proposed project is expected to result in a less-than-significant impact to loss of habitat for all of the special status animal species listed in Table 1. The project applicant has incorporated a series of BMP to ensure that the project construction completely avoids disturbing roosting colonies of bats, active raptor nests, or in the unlikely event that a burrowing owl inhabits the site prior to construction disturbing an active burrowing owl nests or harming individual owls (see Appendix A).

Therefore, the demolition and replacement of the two existing homes, along with construction of two additional homes (total of four homes) will not result in a significant loss of habitat for any of the special status species noted in Table 1. In addition, the applicant has incorporated measures into the project description to ensure that any roosting bats or nesting raptors will not be disturbed or harmed.

Mitigation. No mitigation would be required for loss of habitat for special status animal species.

3.3.3 Potential Loss of Habitat for Native Wildlife

Potential Impact. The habitats of the site comprise only a portion of most regional wildlife's entire home range or territory. In addition, the existing homes introduced considerable anthropogenic effects to this system, by lighting, pets, trash and considerable modification and degradation of the on-site habitats.

The proposed project will primarily result in the loss of non-native and ruderal grassland habitats that are heavily disturbed and dominated by non-native plants. These habitats possess limited biotic value and provide only low-quality habitat for most species, due in part to the fact the site has been affected by human activity for a number of years, while the degraded riparian corridor along Misery Creek will be enhanced by the project as part of the project description.

The loss of a relatively small amount of low quality ruderal habitat that is locally abundant is not expected to affect the persistence and presence of local wildlife. Therefore, impacts due to the loss of these habitats for native wildlife resulting from the proposed project are considered less than significant.

Mitigation. No mitigation would be warranted for the loss of habitat for native wildlife.

3.3.4 Potential Interference with the Movement of Native Wildlife

Potential Impact. The area proposed for development on the site consists of two biotic habitats that support a modest assemblage of native wildlife species. The movements of various species on- and offsite vary depending on the species in question.

One must differentiate between animals' consistent use patterns in order to assess the importance of an area as a "movement corridor." Wildlife movements generally can be divided into three major behavioral categories:

- Movements within a home range or territory;
- Movements during migration; and
- Movements during dispersal.

While no detailed study of animal movements has been conducted for the study area, knowledge of the site, its habitats, and the ecology of the species occurring on-site permits sufficient predictions about the types of movements occurring in the region and whether or not proposed development would constitute a significant impact to animal movements.

The habitats most heavily impacted by the proposed development consist of ruderal and non-native grasslands. While native wildlife may move through these habitats, they do not represent a significant movement corridor for native wildlife; therefore, their loss would result in a less-than-significant impact on the movements of native wildlife. Misery Creek, though degraded, does function as a movement corridor for a number of wildlife species that occur regionally. The 75 ft setback and riparian enhancement that is incorporated as part of the project description will actually incrementally improve the creeks potential as wildlife linkage.

Construction activities within the site and subsequent project build-out may result in a temporary disruption of local wildlife movements during daylight hours but is not expected to result in any permanent or substantial changes in use or movement patterns once construction is complete. Wildlife species presently using the site are expected to continue moving through the open areas of the site and within the Misery Creek riparian corridor after project build-out. Project development, therefore, is expected to have a less-than-significant impact on the movements of native wildlife. In fact, this project is expected to incrementally result in beneficial affects on Misery Creek given the setback and enhancement components of the project.

Mitigation. No mitigation would be warranted for interference with the movement of native wildlife.

3.3.5 Potential Disturbance to Potential Bat Roosts from Construction Activities During Project Implementation

Potential Impacts. Although there were no visible signs (e.g., urine staining or guano) of bats, potentially suitable roost habitat for the pallid bat and other common bat species is present within the structures on the site and in the mature trees onsite. Removal of buildings and trimming of trees could have a negative affect on bats, if they occur in the area. No large cavities were observed in trees onsite, and no trees showed obvious signs of use, which would indicate a large population and/or extended period of use, and small colonies or individuals bats do not often leave obvious signs of use in grassland habitats. The project has incorporated a number of protective measures to ensure that roosting bats will not be disturbed or harmed during construction (see Appendix A). These include suitable preconstruction surveys coupled with measures to appropriately and humanely evict any roosting bats that are in buildings to be demolished or trees to be trimmed.

Therefore, the project is expected to have a less-than-significant impact on roosting bats.

Mitigation. No mitigation is required for disturbance to roosting bats.

3.3.6 Potential Disturbance to Active Raptor Nests from Construction Activities During Project Implementation

Potential Impacts. There is currently one stick nest located in a eucalyptus tree within the Misery Creek riparian corridor. The project has integrated preconstruction surveys for nesting raptors (including nesting and wintering burrowing owls) into the project description (see Appendix A) to ensure that active raptor nest or wintering burrowing owls will not be disturbed or individuals birds will not be harmed by construction.

A full list of BMPs can be found in Appendix A, which includes:

- A qualified biologist will conduct pre-construction surveys for nesting raptors (including both tree and ground nesting raptors) onsite within 30 days of the onset of ground disturbance, if ground disturbance is to occur during the breeding season (1 February to 31 August). These surveys will be based on the accepted protocols (e.g., as for the burrowing owl) for the target species. These surveys will explicitly consider the burrowing owl (though unlikely to occur) as a potential target species. If a nesting raptor were to be detected, an appropriate construction buffer would be established. Actual size of buffer would depend on species, topography, and type of activity that would occur in the vicinity of the nest.
- A qualified biologist will conduct pre-construction surveys for burrowing owls during the non-breeding season. Pre-construction surveys during the non-breeding season are not necessary for tree nesting raptors, as they are expected to abandon their roosts during staging. If pre-construction surveys (conducted either during the breeding or non-breeding season) determine that burrowing owls occupy the site just prior to construction then a passive relocation effort (blocking burrows with one-way doors) will be implemented to ensure that the owl(s) is not harmed or injured during construction.

Therefore, the project will not result in significant impacts to nesting raptors.

Mitigation. No mitigation is required for disturbance to active raptor nests.

3.3.7 Potential Disturbance to Waters of the United States or Riparian Habitats

Potential Impacts. Misery Creek is considered a Waters of the U.S. and is therefore under the jurisdiction of the USACE. There is not expected to be any disturbance to Misery Creek as the project has integrated a 75 ft setback including enhancement plantings of native riparian trees and shrubs. Therefore, impacts to Waters of the U.S. and the Misery Creek riparian habitat would be expected to be less-than-significant.

Mitigation. No mitigation is required for disturbance to waters of the United States or riparian habitats.

3.3.8 Potential Degradation of Water Quality in Seasonal Drainages, Stock Ponds and Downstream Waters

Potential Impact. Eventual site development, including soil and slope stabilization, may require grading that leaves the soil of construction zones barren of vegetation and, therefore, vulnerable to sheet, rill, or gully erosion. Eroded soil is generally carried as sediment in surface runoff to be

deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, urban runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. These pollutants may eventually be carried to sensitive wetland habitats used by a diversity of native wildlife species. The deposition of pollutants and sediments in sensitive riparian and wetland habitats would be considered a potentially significant adverse environmental impact.

The project will comply with the City's C3 requirements and as such will result in a less-than-significant impact to water quality.

3.3.9 Potential Disturbance to Ordinance-Size and Heritage Trees

Potential Impacts. A tree survey was conducted on the site on 29 November 2010, at which times the species, trunk diameter at 24 inches above the ground, and general condition of all trees that occur within the area of proposed development were recorded. General condition was rated according to the following scale:

Good = 67-100% healthy bark and foliage
Fair = 34-66% healthy bark and foliage
Poor = 0-33% healthy bark and foliage
Dead

Results of the survey are provided in Table 2 (see Section 2.3.2). Of the 30 trees occurring on the site, 21 trees had a trunk diameter greater than 18 inches and, therefore, would be considered by the City to be ordinance-size. Five (5) of the ordinance-size trees are native species (coast live oak, and red willow). There are no heritage trees present on-site.

The project is proposing to remove three trees, an Italian cypress, an apricot and a coast live oak (Table 2, #1, #4 and #12). As noted in the Project Description, the project will be planting 39 trees within the various common areas of the project. Fifteen of these 39 trees are to accommodate tree requirements for the buildout of adjacent project, Heritage Estates, leaving 24 trees that are being planted for this project. The planting of these 24 trees on the Hunt Project Site (8 trees planted for each of the three trees removed), more than adequately meets the City's tree replacement requirement. Therefore, the project will result in a less-than-significant impact to tree resources.

Mitigation. No mitigation is warranted for the removal of the three trees noted above.

3.3.10 City of San Jose's Riparian Policy

While the policy recommends a 100-foot setback along riparian corridors, it also provides for exceptions to the 100-foot setback guideline. The policy has established that a minimum setback "*should be no less than 50 feet or, in urban infill areas, no less than 30 feet or no less than the average of existing setbacks on adjacent properties, whichever is greater.*" Two exceptions apply to this project:

1. "*Instances where implementations of the project include measures which can protect and enhance the riparian value of the corridor more than a 100-foot setback.*"

   If the riparian corridors were improved with native vegetation (e.g., oaks, willows, sycamore, elderberry, etc.), thereby restoring some of the wildlife value within the short

reach of Misery Creek (to offset the project's encroachment into the 100-foot setback), the proposed project would be consistent with the *Riparian Corridor Policy Study.*

2. *"Sites adjacent to small lower order tributaries whose riparian influence does not extend 100 feet."*

   Misery Creek is a lower order tributary, and its riparian influence does not extend to 100 feet. Rather, the depth of riparian vegetation is only one to two trees wide, at most; and the banks have been impacted by years of human activity and for the most part are covered in non-native ruderal vegetation.

Potential Impacts. The project was analyzed to ascertain whether it conformed to the City of San Jose's Riparian Corridor Policy. This was accomplished by: 1) establishing the edge of the riparian corridor based on the guidelines discussed in the Riparian Corridor Policy Study (i.e., top-of-bank or edge of riparian vegetation (drip line) whichever is greater); and 2) evaluating the proposed project to determine if it was consistent with the City's riparian policy.

As stated above, the edge of the riparian corridor was based on the City of San Jose's Riparian Corridor Policy Study (1999) guidelines which place the edge of the corridor as the presence of riparian vegetation or top-of-bank where vegetation is absent. Therefore, the edge of the riparian corridor for Misery Creek was established to be a combination of the top-of-bank on the eastern and western sides of this reach with the exception of one red willow tree and its dripline.

Misery Creek

Given the existing conditions (e.g., two existing homes and outbuildings within close proximity to the top-of-bank) and the constraints of the remainder of the property, the proposed setback of 75-ft setback on the west side of the creek and the 30 to 50 ft setback (and greater for a portion) on the east side of the creek coupled with the enhancement plantings that have been incorporated within the setback area is consistent with the exceptions stated above.

The property along the west side of the creek will include deed restriction up to the 75 ft line that will include:

- No impermeable surfaces beyond the fencing
- No construction of any storage sheds or other structures
- No planting of any vegetation without the advice and supervision of a qualified botanist

Mitigation. No mitigation would be warranted as the project conforms to the exceptions of the riparian policy and will improve the existing degraded riparian habitats on site.

3.3.11 Potential Constraints to Development from Local Ordinances and Habitat Conservation Plans (HCPs)

Currently, there is not an HCP in effect that covers the area of the subject site. There is, however a multi-species HCP/NCCP under development for the County of Santa Clara. It is not known at this time how this HCP/NCCP may constrain future development of the site. It is clear, though, that the site will fall within the future jurisdiction of the HCP once adopted.

Mitigation. No mitigation would be warranted for conflicts with the Draft HCP as it has yet to be adopted.

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APPENDIX A
BEST MANAGEMENT PRACTICES

These BMPs have been incorporated into the project description and have been designed to avoid and minimize impacts to sensitive biotic resources. They are listed below.

Animal

All activities that will result in permanent or temporary ground disturbances or shall be preceded by a preconstruction survey by a qualified biologist for roosting bats, nesting raptors and/or nesting or wintering burrowing owls.

a) The qualified biologist will conduct a habitat assessment of the buildings to be demolished and any trimming of the larger trees to determine if bats are currently utilizing the site for maternal, day or night roosts. If bats are found present, measures have been developed to passively relocate bats outside of maternal roosting and winter hibernacula periods so that the buildings can than be demolished.

Alternatively, the project may choose to conduct night emergence surveys by a qualified bat biologist during seasonal periods of activity (March – September). These surveys will be planned no more than 30 days and no less than 10 days prior to construction activities to determine whether bats are roosting in trees that are to be trimmed. If roosting bats are found, construction activities will be scheduled when within 100 feet, to occur when bats are active, and young are volant (1 March to 15 April, and 1 August to 15 October.

b) A qualified biologist will conduct surveys for nesting raptors not more than 14 days prior to project activities when work is occurring between February 1 and April 30. Between January and April (inclusive) surveys should be conducted no more than fourteen (14) days prior to the initiation of demolition activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys will be done no more than thirty (30) days prior to the initiation of any project activity.

c) The surveying biologist will inspect all trees in and immediately adjacent to the disturbance areas for raptor nests. If an active raptor nest is found in or close enough to these disturbance areas to be impacted by these activities, the biologist will designate a construction-free buffer zone around the nest. The applicant will submit a report indicating the results of the survey and any designated buffer zones that were established to the City.

d) A qualified biologist will conduct pre-construction surveys for burrowing owls during the non-breeding season (September 1 to January 31). Pre-construction surveys during the non-breeding season are not necessary for tree nesting raptors, as they are expected to abandon their roosts during construction. If pre-construction surveys (conducted either during the breeding or non-breeding season) determine that burrowing owls occupy the site just prior to construction, then a passive relocation effort (blocking burrows with one-way doors) will be implemented to ensure that the owl(s) is not harmed or injured during construction.

If pre-construction surveys are undertaken during the breeding season (February through August) and active nest burrows are located within or near construction zones, a construction-free buffer

of 250 feet will be established around all active owl nests. The buffer areas should be enclosed with temporary fencing, and construction equipment and workers should not enter the enclosed setback areas. Buffers should remain in place for the duration of the breeding season. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.

Trees

a) The project proponent has retained a consulting arborist who will ensure that retained trees are protected during the construction phase.

b) For retained trees in the immediate vicinity of construction or demolition areas, problems of soil compaction within the root zone resulting from heavy construction equipment need to be prevented. In order to minimize construction and demolition impacts to remaining trees, barrier fencing will be installed around the dripline of all retained trees or at the edge of construction areas. Any construction or demolition activities taking place within the dripline of retained trees will be done by hand or with light equipment that does not cause soil compaction. All fencing will remain in place throughout the construction phase of the project. The type of fencing to be utilized will be at the direction of the consulting arborist.

c) Any limb or root pruning to be conducted on retained trees shall be approved and supervised by the consulting arborist and shall follow best management practices developed by the International Society of Arboriculture.

d) Supplemental irrigation to retained trees will be applied as determined by the consulting arborist.

e) The only tree that will be removed is an apricot tree that is less than 12 inches in diameter.

Construction activities will avoid the area within 75 feet of Misery Creek. This construction free area will be fenced with orange construction fence to ensure project activities remain outside of the riparian corridor. All onsite traffic will be on designated roads or preapproved overland paths. A speed limit of less than 15 miles per hour will be adhered to, to further ensure safety to any onsite animals.

The applicant will enhance plant native trees and shrubs within the 75 ft setback to enhance the riparian corridor This enhancement area will be planted only with native trees adapted to the riparian conditions onsite and consisting of small nursery stock (e.g., seedlings or dee-pots) rather than using the larger size replacement trees. Smaller trees are preferred in restoration efforts, as they historically out-perform larger starter trees. Planting stock will consist of locally collected seeds (within a 5-mile radius of the project site) to the extent possible in order to maintain genetic integrity of the species to be replaced, and replacement plantings will be completed during the period between November and January.

General

a) The applicant will comply with the provisions of a City grading permit, including standard erosion control measures that employ best management practices (BMPs). Projects involving the grading of large tracts of land must also be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the

California Regional Water Quality Control Board. Compliance with the above permits should result in no impact to water quality in seasonal creeks, reservoirs, and downstream waters from the proposed project. No additional mitigation is necessary for degradation of water quality;

b) All spills of hazardous materials shall be cleaned up immediately in accordance with the DAL Properties – Hunt Property Spill Prevention Control Plan.

c) Pets are prohibited at the site during construction.

d) Firearms are prohibited at the site. During construction

e) All food-related trash, such as wrappers, cans, bottles, bags, and food scraps shall be disposed of daily in containers with secure covers and regularly removed from project site during construction.

f) Use of rodenticides and herbicides are prohibited with this project site during construction.

g) Appropriate measures shall be undertaken to prevent unauthorized vehicle entry to areas not designated for use by the project site during construction.

APPENDIX B:
VASCULAR PLANTS OF THE STUDY AREA

The plant species listed below were observed on the Hunt study area during the survey conducted by Live Oak Associates in 2010. All plants have been named according to *The Jepson Manual* (Hickman 1993). The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
+/- - Higher/lower end of category
NR - No review
NA - No agreement
NI - No investigation

Sambucus nigra ssp. caerulea	Adoxaceae	blue elderberry	FAC
*Nerium oleander**	Apocynaceae	oleander	UPL
Artemisia californica	Asteraceae	California sagebrush	UPL
Baccharis pilularis	Asteraceae	coyote brush	UPL
*Carduus pycnocephalus**	Asteraceae	Italian thistle	UPL
*Centaurea solstitialis**	Asteraceae	yellow star thistle	UPL
*Cirsium vulgare**	Asteraceae	bull thistle	FACU
*Conyza bonariensis**	Asteraceae	Hairy Fleabane	UPL
*Crepis vesicaria ssp. taraxacifolia**	Asteraceae	weedy hawksbeard	UPL
*Dittrichia graveolens**	Asteraceae	stinkweed	UPL
*Helminthotheca echioides**	Asteraceae	bristly ox-tongue	FAC
*Hypochaeris radicata**	Asteraceae	common/rough cat's-ear	UPL
*Lactuca serriola**	Asteraceae	prickly lettuce	FAC
*Matricaria matricarioides**	Asteraceae	pineapple weed	FACU
*Silybum marianum**	Asteraceae	milk thistle	UPL
*Sonchus oleraceus**	Asteraceae	common sow thistle	NI*
*Distictis buccinatoria**	Bignoniaceae	blood-red trumpet vine	NI

*Brassica nigra**	Brassicaceae	black mustard	UPL
*Hirschfeldia incana**	Brassicaceae	summer mustard	UPL
*Raphanus sativus**	Brassicaceae	wild radish	UPL
*Beta vulgaris**	Chenopodiaceae	common beet	FACU
*Chenopodium murale**	Chenopodiaceae	wall goosefoot	UPL
*Salsola tragus**	Chenopodiaceae	Russian thistle, tumbleweed	FACU
Marah fabaceus	Cucurbitaceae	California man-root	UPL
*Cupressus sempervirens 'stricta'**	Cupressaceae	Italian cypress	NI
Cyperus eragrostis	Cyperaceae	tall cyperus/flatsedge	FACW
Quercus agrifolia	Fagaceae	coast live oak	UPL
Quercus douglasii	Fagaceae	blue oak	UPL
*Erodium botrys**	Geraniaceae	broad-leaved filaree	UPL
*Erodium cicutarium**	Geraniaceae	red-stemmed filaree	UPL
*Erodium moschatum**	Geraniaceae	white-stemmed filaree	UPL
*Geranium dissectum**	Geraniaceae	cut-leaved geranium	UPL
*Marrubium vulgare**	Lamiaceae	horehound	FAC
Trichostema lanceolatum	Lamiaceae	vinegarweed	UPL
*Malva sp.**	Malvaceae	mallow	UPL
*Eucalyptus globulus**	Myrtaceae	blue gum	UPL
*Olea europaea**	Oleaceae	olive	UPL
Epilobium brachycarpum	Onagraceae	panicled/autumn willowherb	UPL
Epilobium ciliatum	Onagraceae	California willowherb	FACW
*Pinus radiata**	Pinaceae	Monterey pine	UPL
*Plantago major**	Plantaginaceae	common plantain	FACW-

*Avena sp.**	Poaceae	wild oat	UPL
*Bromus diandrus**	Poaceae	ripgut brome	UPL
*Bromus hordeaceus**	Poaceae	soft chess	FACW-
*Hordeum marinum ssp. gussoneanum**	Poaceae	Mediterranean barley	FAC
*Hordeum murinum ssp. leporinum**	Poaceae	barnyard foxtail, foxtail barley	NI
*Poa annua**	Poaceae	annual bluegrass	FACW-
*Polypogon monspeliensis**	Poaceae	rabbit's foot grass	FACW+
*Rumex crispus**	Polygonaceae	curly dock	FACW-
*Rumex pulcher**	Polygonaceae	fiddle dock	FAC+
*Malus pumila**	Rosaceae	common apple	NI
*Prunus armeniaca**	Rosaceae	apricot	UPL
*Prunus domestica**	Rosaceae	plum	
*Prunus dulcis**	Rosaceae	almond	UPL
Salix laevigata	Salicaceae	red willow	~NI
Solanum umbelliferum	Solanaceae	blue witch	UPL

APPENDIX C: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE STUDY AREA

The species listed below are those that may reasonably be expected to use the habitats of the study area. The list was not intended to include birds that are vagrants or occasional transients. Its purpose was rather to include those species that may be expected to routinely and predictably use the planning area during some or all of the year. An asterisk denotes a species observed on the project site during the survey conducted on 29 November 2010.

CLASS: AMPHIBIA
ORDER: CAUDATA (Salamanders)
FAMILY: SALAMANDRIDAE (Newts)
California Newt (*Taricha torosa*)
FAMILY: PLETHODONTIDAE (Lungless Salamanders)
Ensatina (*Ensatina eschscholtzii*)
Pacific Slender Salamander (*Batrachoseps pacificus*)
Arboreal Salamander (*Aneides lugubris*)
ORDER: ANURA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and Relatives)
Pacific Chorus Frog (*Pseudacris regilla*)
FAMILY: RANIDAE (True Frogs)
Bullfrog (*Rana catesbeiana*)

CLASS: REPTILIA
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
Western Fence Lizard (*Sceloporus occidentalis*)
FAMILY: SCINCIDAE (Skinks)
Gilbert Skink (*Eumeces gilberti*)
FAMILY: ANGUIDAE (Alligator Lizards and Relatives)
Southern Alligator Lizard (*Elgaria multicarinata*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Gopher Snake (*Pituophis melanoleucus*)
Common Kingsnake (*Lampropeltis getulus*)
Common Garter Snake (*Thamnophis sirtalis*)
Night Snake (*Hypsiglena torquata*)
FAMILY: VIPERIDAE
Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES
ORDER: CICONIIFORMES (Herons, Storks, Ibises, and relatives)
FAMILY: ARDEIDAE (Herons and Bitterns)
Great Blue Heron (*Ardea herodias*)
Great Egret (*Casmerodias albus*)
Snowy Egret (*Egretta thule*)
FAMILY: CATHARTIDAE (American Vultures)
*Turkey Vulture (*Cathartes aura*)
ORDER: ANSERIFORMES (Screamers, Ducks, and relatives)
FAMILY: ANATIDAE (Swans, Geese and Ducks)
Canada Goose (*Branta canadensis*)
Mallard (*Anas platyrhyncyhos*)
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)
FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)
White-tailed Kite (*Elanus caeruleus*)
Northern Harrier (*Circus cyaneus*)
Sharp-shinned Hawk (*Accipiter striatus*)
Cooper's Hawk (*Accipiter cooperi*)
Red-shouldered Hawk (*Buteo lineatus*)
Red-tailed Hawk (*Buteo jamaicensis*)
Golden Eagle (*Aquila chrysaetos*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
American Kestrel (*Falco sparverius*)
Merlin (*Falco columbarius*)
ORDER: GALLIFORMES (Megapodes, Currassows, Pheasants, and Relatives)
FAMILY: ODONTOPHORIDAE (New World Quail)
California Quail (*Callipepla californica*)
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)
FAMILY: CHARADRIIDAE (Plovers and relatives)
*Killdeer (*Charadrius vociferus*)
FAMILY: LARIDAE (*Gulls and Terns*)
California Gull (*Larus californicus*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
Rock Dove (*Columba livia*)
*Mourning Dove (*Zenaida macroura*)
ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
Common Barn Owl (*Tyto alba*)
FAMILY: STRIGIDAE (Typical Owls)
Great Horned Owl (*Bubo virginianus*)
ORDER: CAPRIMULGIFORMES (Goatsuckers and Relatives)
FAMILY: CAPRIMULGIDAE (Goatsuckers)
Common Nighthawk (*Chordeiles minor*)
Common Poorwill (*Phalaenoptilus nuttalli*)
ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
*Anna's Hummingbird (*Calypte anna*)
Rufous Hummingbird (*Selasphorus rufus*)

ORDER: PICIFORMES (Woodpeckers and Relatives)
FAMILY: PICIDAE (Woodpeckers and Wrynecks)
Acorn Woodpecker (*Melanerpes formicivorous*)
Nuttall's Woodpecker (*Picoides nuttallii*)
Downy Woodpecker (*Picoides pubescens*)
Red-naped Sapsucker (*Sphyrapicus nuchalis*)
Northern Flicker (*Colaptes auratus*)
ORDER: PASSERIFORMES (Perching Birds)
FAMILY: TYRANNIDAE (Tyrant Flycatchers)
Western Wood-Pewee (*Contopus sordidulus*)
Willow Flycatcher (*Empidonax traillii*)
Dusky Flycatcher (*Empidonax oberholseri*)
Black Phoebe (*Sayornis nigricans*)
Say's Phoebe (*Sayornis saya*)
Ash-throated Flycatcher (*Myiarchus cinerascens*)
Western Kingbird (*Tyrannus verticalis*)
FAMILY: LANIIDAE (Shrikes)
Loggerhead Shrike (*Lanius ludovicianus*)
FAMILY: VIREONIDAE (Typical Vireos)
Cassin's Vireo (*Vireo cassinii*)
Hutton's Vireo (*Vireo huttoni*)
Warbling Vireo (*Vireo gilvus*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
Steller's Jay (*Cyanocitta stelleri*)
*Scrub Jay (*Aphelocoma coerulescens*)
*Yellow-billed Magpie (*Pica nuttalli*)
American Crow (*Corvus brachyrhynchos*)
Common Raven (*Corvus corax*)
FAMILY: HIRUNDINIDAE (Swallows)
Tree Swallow (*Tachycineta bicolor*)
Violet-green Swallow (*Tachycineta thalassina*)
Cliff Swallow (*Hirundo pyrrhonota*)
Barn Swallow (*Hirundo rustica*)
FAMILY: PARIDAE (Titmice)
Oak Titmouse (*Parus inornatus*)
FAMILY: AEGITHALIDAE (Bushtit)
Bushtit (*Psaltriparus minimus*)
FAMILY: SITTIDAE (Nuthatches)
Red-breasted Nuthatch (*Sitta canadensis*)
White-breasted Nuthatch (*Sitta carolinensis*)
FAMILY: CERTHIIDAE (Creepers)
Brown Creeper (*Certhia americana*)
FAMILY: TROGLODYTIDAE (Wrens)
Bewick's Wren (*Thryomanes bewickii*)
House Wren (*Troglodytes aedon*)
Rock Wren (*Salpinctes obsoletus*)
FAMILY: REGULIDAE (Kinglets)
Golden-crowned Kinglet (*Regulus satrapa*)
Ruby-crowned Kinglet (*Regulus calendula*)
FAMILY: TIMALIIDAE (Babblers)
Wrentit (*Chamaea fasciata*)
FAMILY: TURDIDAE (Thrushes)

Western Bluebird (*Sialia Mexicana*)
American Robin (*Turdus migratorius*)

FAMILY: MIMIDAE (Mockingbirds and Thrashers)
Northern Mockingbird (*Mimus polyglottos*)

FAMILY: STURNIDAE (Starlings)
*European Starling (*Sturnus vulgaris*)

FAMILY: MOTACILLIDAE (Wagtails and Pipits)
American Pipit (*Anthus rubescens*)

FAMILY: BOMBYCILLIDAE (Waxwings)
Cedar Waxwing (*Bombycilla cedrorum*)

FAMILY: PARULIDAE (Wood Warblers and Relatives)
Orange-crowned Warbler (*Vermivora celata*)
*Yellow-rumped Warbler (*Dendroica coronata*)
Black-throated Gray Warbler (*Dendroica nigrescens*)
Townsend's Warbler (*Dendroica townsendi*)
Wilson's Warbler (*Wilsonia pusilla*)

FAMILY: EMBERIZIDAE (Emberizines)
*Rufous-crowned Sparrow (*Aimophila ruficeps*)
Chipping Sparrow (*Spizella passerina*)
Black-chinned Sparrow (*Spizella atrogularis*)
Savannah Sparrow (*Passerculus sandwichensis*)
Fox Sparrow (*Passerella iliaca*)
*White-crowned Sparrow (*Zonotrichia albicollis*)
Song Sparrow (*Melospiza melodia*)
Golden-crowned Sparrow (*Zonotrichia atricapilla*)
Dark-eyed Junco (*Junco hyemalis*)
Spotted Towhee (*Pipilo maculates*)
*California Towhee (*Pipilo crissalis*)

FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
*Red-winged Blackbird (*Agelaius phoeniceus*)
Western Meadowlark (*Sturnella neglecta*)
Brewer's Blackbird (*Euphagus cyanocephalus*)
Brown-headed Cowbird (*Molothrus ater*)
Bullock's Oriole (*Icterus bullockii*)

FAMILY: FRINGILLIDAE (Finches)
Purple Finch (*Carpodacus purpureus*)
House Finch (*Carpodacus mexicanus*)
*Lesser goldfinch (*Carduelis psaltria*)

FAMILY: PASSERIDAE (Old World Sparrows)
House Sparrow (*Passer domesticus*)

FAMILY: CARDINALIDAE (Cardinals, Grosbeaks & Allies)
Black-headed Grosbeak (*Pheucticus melanocephalus*)

CLASS: MAMMALIA

ORDER: DIDELPHIMORPHIA (Marsupials)

FAMILY: DIDELPHIDAE (Opossums)
Virginia Opossum (*Didelphis virginiana*)

ORDER: INSECTIVORA (Shrews and Moles)

FAMILY: SORICIDAE (Shrews)
Ornate Shrew (*Sorex ornatus*)

FAMILY: TALPIDAE (Moles)

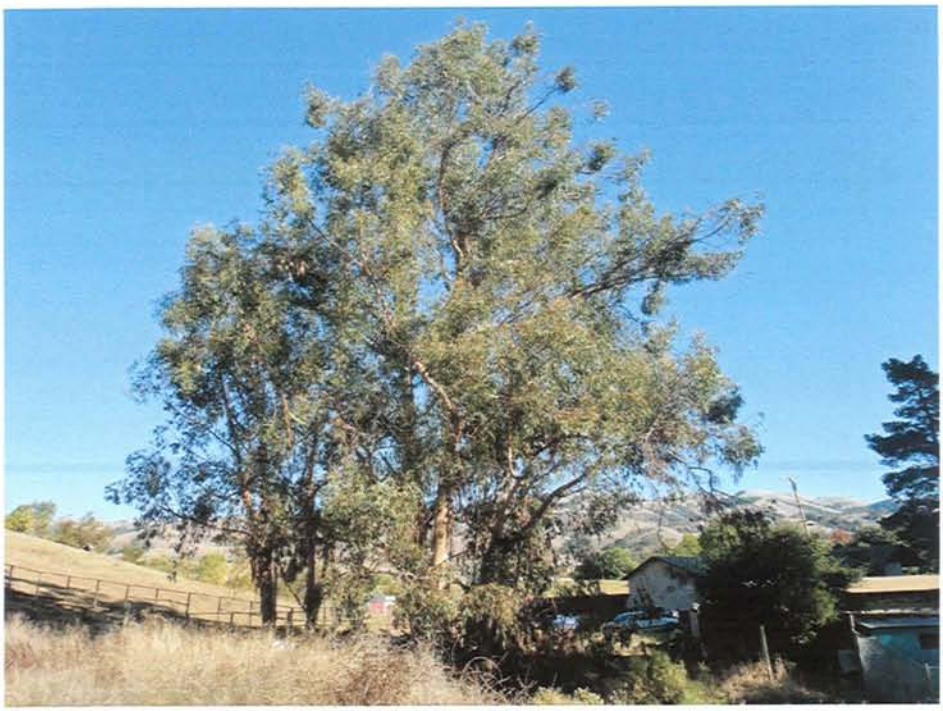
ORDER: CHIROPTERA (Bats)
FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)
Little Brown Myotis (*Myotis lucifugus*)
Long-eared Myotis, (*Myotis evotis*)
Long-legged Myotis (*Myotis volans*)
California Myotis (*Myotis californicus*)
Small-footed Myotis (*Myotis leibii*)
Western Pipistrelle (*Pipistrellus hesperus*)
Big Brown Bat (*Eptesicus fuscus*)
Hoary Bat (*Lasiurus cinereus*)
Townsend's Big-eared Bat (*Plecotus townsendii*)
Pallid Bat (*Antrozous pallidus*)
FAMILY: MOLOSSIDAE (Free-tailed Bat)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)
Western Mastiff Bat (*Eumops perotis*)
ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)
FAMILY: LEPORIDAE (Rabbits and Hares)
Desert Cottontail (*Sylvilagus audubonii*)
Black-tailed Hare (*Lepus californicus*)
ORDER: RODENTIA (Squirrels, Rats, Mice, and Relatives)
FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)
*California Ground Squirrel (*Spermophilus beecheyi*)
Western Gray Squirrel (*Sciurus griseus*)
FAMILY: GEOMYIDAE (Pocket Gophers)
*Botta's Pocket Gopher (*Thomomys bottae*)
FAMILY: HETEROMYIDAE (Pocket mice and Kangaroo Rats)
California Pocket Mouse (*Perognathus californicus*)
FAMILY: MURIDAE (Mice, Rats and Voles)
California Mouse (*Peromyscus californicus*)
Deer Mouse (*Peromyscus maniculatus*)
California Vole (*Microtus californicus*)
ORDER: CARNIVORA (Carnivores)
FAMILY: CANIDAE (Foxes, Wolves, and Relatives)
Coyote (*Canis latrans*)
Red Fox (*Vulpes vulpes*)
Gray Fox (*Urocyon cinereoargenteus*)
Domestic Dog (*Canis familiaris*)
FAMILY: PROCYONIDAE (Raccoons and Relatives)
Ringtail (*Bassariscus astutus*)
Raccoon (*Procyon lotor*)
FAMILY: MEPHITIDAE (Skunks)
Striped Skunk (*Mephitis mephitis*)
FAMILY: MUSTELIDAE (Weasels)
American badger (*taxidea taxus*)
FAMILY: FELIDAE (Cats)
*Feral Cat (*Felis cattus*)
Cougar (*Puma concolor*)
Bobcat (*Lynx rufus*)
ORDER: ARTIODACTYLA
FAMILY: CERVIDAE (Deer, Elk, and Relatives)
Black-tailed Deer (*Odocoileus hemionus columbianus*)

APPENDIX D: PHOTOS OF RIPARIAN CORRIDOR

APPENDIX E: PHOTOS OF ORDINENCE TREES

Tree 3: Apple *(Malus pumila)*

Trees 7-9: Blue gum *(Eucalyptus globulus)*



Trees 13-16: *(Eucalyptus globulus)*

Tree 17: Monterey pine *(Pinus radiata)*

Trees 18-27: Blue gum *(Eucalyptus globulus)*

Trees 86 & 87: Monterey pine *(Pinus radiata)*

URBAN PROGRAMMERS

October 18, 2011

Richard Mindigo
Mindigo & Associates
1884 the Alameda
San José CA

Re: Property on San Felipe Road

Dear Mr. Mindigo

At your request Urban Programmers has investigated the 2.0 acre property at 6782-6790 San Felipe Road to determine the historic and architectural value of the buildings on the site. The property was annexed to the City of San Jose in 1997 and is not listed in the San Jose Historic Resource Inventory nor is it listed in the Santa Clara County Historic Resource Inventory. The conclusion after considering the history and current condition is that the property is not significant to the history of San Jose or the County of Santa Clara.

The site is a rectangle that is east of San Felipe Road. The site is relatively flat with a slight slope to the southwest- the channel of Misery Creek. Other than the buildings the land is undeveloped. There is no landscaping; however eucalyptus and other volunteer trees are grouped along the bed of Misery Creek.

The buildings are typical of a rural group including two houses, storage sheds and what appears to have been a combination apartment and storage shed. Historic aerial photographs beginning in 1939 do not show any structures or buildings on the property. The predominate use is as an orchard. By 1948 the Assessor's records show a small residence was added to the assessment role. The first time a building can be seen occupying the northeast section of the otherwise undeveloped property is in a 1956 aerial photograph. An aerial photograph from 1965 clearly shows the building has been enlarged and a shed/ garage has been added. These buildings are the ones present on the site and addressed as 6790 San Felipe Road. The second house and garage was permitted by Santa Clara County and constructed in 1976-77, at 6782 San Felipe Road. The property has belonged to the Hunt family for over 50 years and they are the source for the historical record. For several years, the family engaged in a limited home business making jam and jelly that was sold in fruit stands such as the Cortese Bros. Fruit Stand on San Felipe Road.

Bonnie Bamburg, owner
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95127
USA

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Fax: 408-254-0969
E-mail: bbamburg@USA.net

6790 San Felipe Road -Buildings c. 1948:

The buildings represent a small group associated with agricultural uses. The condition of all buildings is very poor to severely deteriorated.

House: What appeared as a small cottage or cabin structure in 1947 has been enlarged and modified over the years to the buildings that exist on the northeast portion of the property. The house is a mish-mash of alterations and materials. The vernacular building appears to have been a small pioneer or cabin style while the addition is a vernacular that gives the building an "L" shape. The materials are wood frame with a connecting link in concrete block. Exterior materials are stucco and T-111 (grooved Plywood). In the gable end of the original section of the building the horizontal boards that were the siding of the building are still visible as is a brick chimney.

The building has lost integrity because it does not retain the materials or design of the original 1948 "cabin" and the addition, without interesting vernacular architectural design gives the appearance of being " stuck" onto the cabin. A variety of materials, concrete block, T-111 (grooved plywood) siding and stucco have been added at different times.

6790 San Felipe Road, San Jose.

The building does not represent a fine or unusual vernacular architectural design. The use has been in support of small agriculture but that has not been present for over 50 years.

Storage Shed: The storage shed is a linear building constructed for utilitarian use with a wood frame and horizontal board siding. It appears to have been used for agricultural tools and vehicles, however alterations created a very substandard living space and that has been abandoned to vacant storage space. The building has not been maintained and is in very poor condition.

The single-story, pitched-roof building appears to have been mostly open on the front façade, but over time plywood has been added to create sections of wall with plywood hinged doors. The rear has "pens" attached where openings have been cut into the wall. This is where a boiler was located as part of the jelly making process. Sections of siding are missing from this façade. The building does not exhibit vernacular architectural distinction and the uses were ancillary to the maintenance of the property.

6790 San Felipe Road, Storage shed- front façade facing the house.

6790 San Felipe Road. Storage shed-rear façade.

The history is of small buildings that were occupied by agriculture workers when there was an orchard on the property, and for making Jam and Jelly. Research did not uncover any event, trend, or person of significance associated with the property.

6782 San Felipe Road -House c. 1977: The single-story house is constructed in an "L" form with elements of California Ranch style in the shed porch roof supported by three square posts. The rest of the wood frame building is without ornamentation or design quality. The projecting wing of the house is covered in stucco while the rest is in manufactured siding.

The house is not associated with people of events that are important in the history of San Jose.

6782 San Felipe Road. C 1977 house.

The preliminary investigation of this property does not warrant further research or reporting. Please contact me if you have any questions.

Best regards,

Bonnie Bamburg

Bonnie Bamburg

CORNERSTONE EARTH GROUP

Type of Services	**Geotechnical Investigation**
Project Name	**San Felipe Road Residential**
Location	**6782 and 6790 San Felipe Road San Jose, California**
Client	**DAL Properties, LLC**
Client Address	**255 West Julian Street, Suite 502 San Jose, CA**
Project Number	**336-2-3**
Date	**September 20, 2011**

Prepared by

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CORNERSTONE EARTH GROUP

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APPENDIX A: FIELD INVESTIGATION
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Type of Services	**Geotechnical Investigation**
Project Name	**San Felipe Road Residential**
Location	**6782 and 6790 San Felipe Road** **San Jose, California**

SECTION 1: INTRODUCTION

This geotechnical report was prepared for the sole use of DAL Properties, LLC for the San Felipe Road Residential in San Jose, California. The location of the site is shown on the Vicinity Map, Figure 1. For our use, we were provided with the following documents:

- A site plan titled, "Conceptual Site Plan 28, Lands of Hunt, E/Side of San Felipe Road., San Jose, CA," prepared by Charles W. Davidson Co. dated May 5, 2011.
- A previous geotechnical report titled, "Supplemental Geotechnical Exploration, DAL Property at San Felipe – Northeast of Misery Creek San Jose, California," prepared by Engeo Incorporated dated February 20, 2009.

1.1 PROJECT DESCRIPTION

The project will consist of four residential structures on a 2-acre site, with lots ranging from about ¼-acre to about ⅔-acre. The site is bounded at the northeast, northwest, and southwest by residential structures on large, open lots, with an undeveloped residential development currently undergoing grading to the southeast. The residential structures will reportedly be of wood-frame construction.

As noted, we received conceptual plans for the site indicating proposed footprints and lot layouts. Although specific site grading information was not received, site grading is expected to consist of only moderate cuts and fills on the order of 2 to 3 feet. Structural loads are expected to be light, typical for this type of development.

1.2 SCOPE OF SERVICES

Our scope of services was presented in our proposal dated April 27, 2011 and consisted of a review of readily available literature and geologic maps for the project area, field and laboratory programs to evaluate physical and engineering properties of the subsurface soils, engineering analysis to prepare recommendations for site work and grading, building foundations, flatwork,

retaining walls, and pavements, and preparation of this report. Brief descriptions of our exploration and laboratory programs are presented below.

In the event that any significant changes are made to the design, layout or grading of the proposed project, we should be retained to review the changes and modify our recommendations accordingly.

1.3 EXPLORATION PROGRAM

Field exploration consisted of four borings drilled on June 15 and 16, 2011 with truck-mounted, hollow-stem auger drilling equipment. The borings were drilled to depths ranging from 30 to 50 feet. The borings were backfilled with cement grout in accordance with local requirements; exploration permits were obtained as required by local jurisdictions.

The approximate locations of our exploratory borings are shown on the Site Plan and Geologic Map, Figure 2. Details regarding our field program are included in Appendix A.

1.4 LABORATORY TESTING PROGRAM

In addition to visual classification of samples, the laboratory program focused on obtaining data for foundation design and seismic ground deformation estimates. Testing included moisture contents, dry densities, washed sieve analyses, and Plasticity Index tests. Details regarding our laboratory program are included in Appendix B.

1.5 ENVIRONMENTAL SERVICES

Environmental services were not requested for this project. If environmental concerns are determined to be present during future evaluations, the project environmental consultant should review our geotechnical recommendations for compatibility with the environmental concerns.

SECTION 2: REGIONAL SETTING

2.1 REGIONAL GEOLOGIC SETTING

The site is located within the relatively flat alluvial plain of the Santa Clara Valley, a northwest-southeast trending valley within the Coast Range Geomorphic Province. The Santa Clara Valley is within the San Francisco Bay Block, which is bounded to the east by the Hayward and Calaveras Faults and to the west by the San Andreas Fault. According to McLaughlin et al. (1999), a Neogene age range front thrust system, which includes the Shannon, Sargent, Hooker Gulch, Berrocal, and Monte Vista faults, lies in the foothills of the Santa Cruz Mountains along the western boundary of the valley. More locally, the Silver Creek Block represents a further subdivision of the San Francisco Bay block and underlies Yerba Buena Ridge and the hills along Silver Creek in the southeastern part of the San Jose East Quadrangle. The block consists largely of masses of Franciscan greenstone and graywacke of the Permanente and Marin Headlands Terranes, which are immersed in abundant melange, all belonging to the Franciscan Central Belt. These rocks, together with long seams and patches of serpentinite are

considered part of the Coast Range ophiolite, have been tectonically imbricated and interleaved. Subsequently, within the last 3 to 5 million years, these rocks, and unconformably overlying marine Miocene and nonmarine Plioene to middle-Pleistocene Santa Clara Formation, were folded into a series of open to tightly-compressed folds and repeated across northeast-vergent reverse faults of the Sargent, Berrocal, and Shannon Fault zones. The eastern edge of the valley is bounded by active and potentially active faults, such as the Calaveras Fault.

The broad alluvial plain of the Santa Clara Valley consists of Holocene and Pleistocene alluvial deposits (Helley and Wesling,1990) that consist of a deep section of unconsolidated and semi-consolidated stream and basin deposits that were deposited largely by ancestral Coyote Creek and Guadalupe River on top of the Franciscan Complex rocks that form the bottom of the basin. Several large streams in the valley, with channels as deep as 30 feet, are the sources for most of the sediment deposition within the quadrangle. Thompson Creek is joined by Yerba Buena Creek in Evergreen Valley in the southeastern part of the quadrangle where the sediment consists of late Pleistocene to Holocene alluvial fan deposits that interfinger with Holocene fan deposits coming out of the Foothills.

According to published mapping, the area of the subject site is underlain by quaternary alluvial fan deposits (Dibblee, 1972, 2005; Helley et al., 1994; Wentworth et al., 1999; Knudsen et al, 2000). A vicinity geologic map is shown in Figure 4 (a partial reproduction of that by Wentworth et al., 1999).

The tectonic regime in the San Francisco Bay region is primarily translational, expressed by mostly right-lateral strike-slip movement along the faults of the San Andreas Fault system, including the nearby Calaveras and Hayward Faults. A small component of compression is active in the region, resulting in continued folding and faulting of the geologic units. Compressional reverse or thrust faulting has occurred along the Monte Vista-Shannon Fault to the southwest of the site, but its present activity at this location is poorly understood. Similar evidence of compression is evident along the Silver Creek Fault in the hills bordering the northeast side of Santa Clara Valley.

2.2 REGIONAL SEISMICITY

The project site is located within the seismically active San Francisco Bay region that has been subjected to recurring large earthquakes. According to the Working Group (WG07), there is a 63 percent chance of at least one magnitude 6.7 or greater earthquake affecting the San Francisco Bay region. The San Andreas Fault produced the 7.1 magnitude 1989 Loma Prieta earthquake, and the Calaveras fault produced the 1984 magnitude 6.2 Morgan Hill earthquake. It can be expected that earthquakes could produce strong ground shaking at the project site during the lifetime of the structures built there.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The table below presents the State-considered active faults within 25 kilometers of the site.

Table 1: Approximate Fault Distances

Fault Name	Distance	
	(miles)	(kilometers)
Hayward (Southeast Extension)	1.1	1.8
Calaveras	3.7	5.9
Monte Vista-Shannon	8.2	13.2
Hayward (Total Length)	10.1	16.2
Sargent	13.6	21.9
San Andreas (1906)	14.9	24.0

A regional fault map is presented as Figure 5, illustrating the relative distances of the site to significant fault zones.

SECTION 3: SITE CONDITIONS

3.1 GEOMORPHOLOGY AND RECENT HISTORY

The site is in an area that encompasses the western edge of a gently southwest dipping alluvial fan surface and is characterized with a level to very gently northwest dipping ground surface. The parcel encompasses terraced land and is transected by Misery Creek. The near vertical creek bank varies in height on site from about 3½ feet to as high as 8 or 9 feet based on topographic information. The site has had several residences and associated out buildings for many years. Aerial photos were reviewed spanning a period from 1939 to 1981. Additionally, we reviewed Google Earth® images from 1998 through 2007. The 1939 photos indicate the area surrounding the site was substantially agricultural with extensive grain crops being cultivated on adjacent sites. The subject site contained no structures. By the time of the 1965 photos, the site had been fully developed with several residences and shop/storage buildings. The remainder of the site on the southwestern side of Misery Creek was undeveloped. The adjacent sites still existed as ranches. The site appears relatively unchanged since the early 1970's.

3.2 SURFACE DESCRIPTION

The site is bounded at the north, south, and west by residential structures on large, open lots, with an open field to the east. The topographic plan from Charles W. Davidson Co. and visual observations show that the site generally slopes gently north from the south side toward Misery Creek, with the north side sloping gently south toward the creek. Elevation differences tend to be from about Elevation 600 feet at the north and south corners of the property, to about Elevation 580 in the bottom of the Misery Creek channel.

3.3 SITE GEOLOGY AND SUBSURFACE CONDITIONS

For geologic mapping we have adopted the nomenclature of Wentworth et al., (1999) in assigning geologic unit names for our characterization of the site. As shown on the Vicinity Geologic Map, and Site Plan and Geologic Map (Figures 4 and 2), Quaternary (Upper Pleistocene) alluvial fan deposits ("Qpf" name Packwood Gravel) underlie the higher elevation portions of the site in the area where Borings EB-3 and EB-4 were located. In general, these alluvial fan deposits typically consist of unconsolidated silty sands and clayey sands with varying proportions of gravel and clay, and sandy and silty gravels. Minor beds of clay and silt occur within these deposits. The "Qpf" unit has been dissected by more modern creeks, which have left more recent stream channel sediments ("Qhc") within their channels and on adjacent lower lying terraces. The areas of the site near Borings EB-1 and EB-2 are underlain by these younger (Holocene) creek channel deposits. Our mapping of the subject site requires a slight revision of our previous mapping on the adjacent property (DAL properties, CEG, 2010) in that the Qpf unit extends somewhat northwest of the unnamed roadway (future Turturici Way) and into the subject site. We had previously depicted this contact as terminating at the road.

The modern stream channel deposits are exposed in the creek bank. The creek takes a somewhat sinuous path across the site but straightens out near the northwest property line. Here the stream channel deposits are stratified (horizontally bedded), poorly graded gravels with varying proportions of sand. The Qpf unit, as encountered in Borings EB-3 and EB-4, consisted of sandy clay and clayey sand with gravel. Corrected blow counts (N_{60}) obtained at the boring locations indicate this material consists of dense to very dense (sands) and very stiff to hard (clays). The Holocene stream channel deposits were encountered at Borings EB-1 and EB-2 on a small terrace adjacent to the creek. The Qhs unit consisted of clay, sandy clay and clayey sand with gravel. Corrected blow counts (N_{60}) obtained at the boring locations indicate this material is medium stiff to hard (clays) and medium dense to very dense (sands). Some interbedding of materials was apparent in some of the sampling intervals. The maximum depth achieved in the borings was 50 feet below grade. These deposits are generally moderately resistant to erosion. In general, these deposits increase in density with depth.

3.3.1 Plasticity/Expansion Potential

We performed four Plasticity Index (PI) tests on representative samples. Test results were used to evaluate expansion potential of surficial soils, and the plasticity of the fines in potentially liquefiable layers. The results of the surficial PI tests indicated PIs ranging from 10 to 22, indicating low to moderate expansion potential to wetting and drying cycles.

3.3.2 In-Situ Moisture Contents

Laboratory testing indicated that the in-situ moisture contents within the upper 10 feet range from 0 to 10 percent over the estimated laboratory optimum moisture.

3.4 GROUND WATER

Ground water was encountered in some of our explorations at depths ranging from 24½ to 28½ feet below current grades. All measurements were taken at the time of drilling and may not represent the stabilized levels that can be higher than the initial levels encountered.

Fluctuations in ground water levels occur due to many factors including seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

Table 2: Depth to Ground Water

Boring Number	Date Drilled	Depth to Ground Water (feet)	Ground Water Elevation* (feet)	Depth of Boring (feet)
EB-1	6/16/11	27.0	565.5	30
EB-2	6/16/11	24.5	568	50
EB-3	6/16/11	Not Encountered	--	30
EB-4	6/16/11	28.5	569	50

*Elevation datum (MSL, from reference, etc.)

SECTION 4: GEOLOGIC HAZARDS

4.1 FAULT RUPTURE

Several subparallel faults are present within the hills along the eastern margin of the Santa Clara Valley, including the Silver Creek Fault located approximately 0.85 miles west of the site. The City of San Jose has zoned the Silver Creek Fault as potentially hazardous and prohibits construction across the surface trace. The City of San Jose Fault Hazard Map (1983) shows a few faults located east of the subject site including; the Evergreen (4,900 feet north) and the Quimby Fault (900 feet east). Surface traces associated with the Hayward Fault Zone are located 0.65 miles east of the subject site. The active Calaveras Fault passes approximately 4½ miles east of the site.

The Quimby Fault, an oblique slip fault, was originally mapped along the eastern foothills just east of the site by Dibblee (1972). Dibblee mapped this fault as concealed beneath alluvium and inferred the fault to have offset Holocene alluvial fan deposits and on that basis, the Official AP Zone Map of 1974 shows the Quimby Fault surface traces included within an AP Earthquake Fault (regulatory) zone extending in a north-south direction just east of the site. Subsequent fault investigations conducted by consultants in the area did not encounter evidence of late quaternary offset along this mapped fault trace. In 1981-82 William Bryant conducted a fault evaluation for the state addressing the faults mapped in the Lick Observatory Quadrangle and concluded there is no geomorphic or subsurface evidence supporting the Quimby Fault is active through the low hills just east of the site. The resulting revised AP Zone map of 1982 shows the Quimby Fault omitted from the zoning. The current, nearest AP-Zone boundary is located

approximately 1,000 feet beyond the east property line delineating a short, discontinuous trace of the Hayward Fault. Subsequent fault investigations by Earth Systems Consultants, Inc, (1984, 1989, 1992), Terrasearch, Inc. (1993) and Harza (1994) were conducted on a large parcel (the Richmond Ranch) that totally shadows the subject site on the south. The studies by Earth Systems Consultants Inc. and by Terrasearch, Inc. also failed to encounter evidence of offset of Holocene age alluvium. Harza (1994) did identify a shear zone at the east end of the Richmond Ranch property, but because they could not find conclusive evidence to rule out Quaternary activity they established a 25-foot setback from the shear zone for habitable structures. This shear zone trends well east of the subject site.

Although there are several significant faults located within 25 kilometers of the site, no active or potentially active faults are mapped transecting the site. A regional fault map illustrating known active faults relative to the site is presented in Figure 5. The subject site is not located in a state designated Earthquake Fault Hazard Zone nor is it located in a City of San Jose Fault Hazard zone.

We observed no geomorphic or tonal evidence in the aerial photos that would suggest the presence of a fault surface trace transecting the site. It is our conclusion that there is a low potential for the occurrence of fault surface rupture (primary or coseismic) to occur at the subject site. Several small subparallel faults mapped in the general vicinity are discussed below.

The seismic hazard posed by these faults is discussed in Section 4.2.

4.2 ESTIMATED GROUND SHAKING

Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the Bay Area. A peak ground acceleration (PGA) was estimated for analysis using a value equal to $S_{DS}/2.5$ as allowed in the California Building Code. For our liquefaction analysis, we used a PGA of 0.40g.

4.3 LIQUEFACTION POTENTIAL

The site is within a State-designated Liquefaction Hazard Zone (CGS, San Jose East Quadrangle, 2001) as well as a Santa Clara County Liquefaction Hazard Zone (Santa Clara County, 2003) as shown on Figure 6. Our field and laboratory programs addressed this issue by sampling potentially liquefiable layers to depths of at least 30 feet, and to 50 feet in the two borings closest to Misery Creek, performing visual classification on sampled materials, and performing various tests to further classify the soil properties.

4.3.1 Background

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering, soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are

present (lateral spreading) (NCEER 1998). Limited field and laboratory data is available regarding ground deformation due to settlement; however, in clean sand layers settlement on the order of 2 to 3 percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap.

As discussed in the "Site Conditions" section above, we encountered ground water in our site exploration at depths of 24½ feet or greater; however, historical data has suggested ground water may be as shallow as 5 feet in some areas. Considering this, we screened several layers of native soils below a depth of 5 feet for liquefaction potential to demonstrate their cyclic resistance. Following the procedures in the recent monograph published by the Earthquake Engineering Research Institute, titled, "Soil Liquefaction During Earthquakes" (Idriss and Boulanger, 2008), and in accordance with CDMG Special Publication 117A guidelines (CGS, 2008), these layers were analyzed for liquefaction triggering and potential post-liquefaction settlement. These methods compare the ratio of the estimated cyclic shaking (Cyclic Stress Ratio - CSR) to the soil's estimated resistance to cyclic shaking (Cyclic Resistance Ratio - CRR), providing a factor of safety against liquefaction triggering. Factors of safety less than or equal to 1.3 are considered to be potentially liquefiable and capable of producing strains due to post-seismic reconsolidation.

The CSR for each layer quantifies the stresses anticipated to be generated due to a design-level seismic event, is based on the peak horizontal acceleration generated at the ground surface discussed in the "Estimated Ground Shaking" section above, and is corrected for overburden and stress reduction factors as discussed in the procedure developed by Seed and Idriss (1971).

The soil's CRR is estimated from the in-situ density and strength obtained from field SPT blow counts ("N" value). The "N" values are corrected for effective overburden stresses, taking into consideration both the ground water level at the time of exploration and the design ground water level, and stress reduction versus depth factors. The "N" values are also corrected for fines content, hammer efficiency, boring diameter, rod length, and sampler type (with or without liners).

Soils with significant quantities of plastic fines are typically considered too plastic or too dense/stiff to liquefy. These soil layers have been screened out during our analyses based on laboratory analysis.

The results of our analyses are summarized on Figures 7 through 10 of this report; calculations for these liquefaction analyses are attached as Appendix C.

4.3.2 Summary

Our analyses indicate that several layers could potentially experience liquefaction triggering that could result in soil softening and post-liquefaction total settlement ranging from no estimated settlement to nearly one inch in Boring EB-2 based on the Yoshimine (2006) method. As discussed in the SCEC report, differential movement for level ground sites over deep soil sites

will be about half of the total settlement. In our opinion, differential settlements are anticipated to be on the order of less than ½ inch between independent foundation elements, and/or over a horizontal distance of 30 feet for continuous foundation elements.

4.3.3 Ground Rupture Potential

The methods used to estimate liquefaction settlements assume that there is a sufficient cap of non-liquefiable material to prevent ground rupture or sand boils. For ground rupture to occur, the pore water pressure within the liquefiable soil layer will need to be great enough to break through the overlying non-liquefiable layer, which could cause significant ground deformation and settlement. The work of Youd and Garris (1995) indicates that the approximately 16-foot thick layer of non-liquefiable cap is sufficient to prevent ground rupture; therefore the above total settlement estimates should not be affected by ground rupture.

4.4 LATERAL SPREADING

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

As discussed, Misery Creek bisects the site, and banks are estimated at about 8 feet. A lateral displacement index (LDI) value was calculated for each boring location based on maximum shear strains to a depth of twice the free face height to determine an estimate of maximum expected lateral displacements. The maximum LDI was adjusted for the distance and free face height ratio, and a factor of safety of two applied. Based on our analysis, maximum lateral displacement of less than an inch is estimated, and in our opinion, the potential for lateral spreading affecting the planned residences is low.

4.5 SEISMIC SETTLEMENT/UNSATURATED SAND SHAKING

Loose unsaturated sandy soils can settle during strong seismic shaking. As the soils encountered at the site were predominantly stiff to hard clays and medium dense to very dense sands, in our opinion, the potential for significant differential seismic settlement affecting the proposed improvements is low.

4.6 LANDSLIDING

4.6.1 General

The Lick Observatory Quadrangle has not yet been released as part of the series of Seismic Hazard Zone maps by the California Geological Survey. The site is not located in a Santa Clara County landslide hazard zone. These county maps are interpretive in nature and are based on sparse data and remote sensing (aerial photo interpretation).

Our review of published landslide maps indicates no landslides mapped at the subject site or any areas that immediately impact the site (Cooper-Clark and Associates 1974; Dibblee, 1972 & 2005). Based on our surface reconnaissance, research of published and unpublished geologic maps and reports, and our review of aerial photographs, no significant landslides are present at or immediately adjacent to the subject site. Furthermore, exposures of alluvial deposits observed in Misery Creek at the subject site as well as published mapping indicate the quaternary deposits that underlie the site should be expected to have nearly horizontal contacts between units as well as very gently westward dipping internal bedding. The deposits exhibit high shear strengths and site slopes are generally inclined at slopes less than about 5 percent. Therefore, we judge that there is a low potential for landsliding to occur in areas that could potentially directly impact the subject site. Misery creek has steep to nearly vertical creek banks that vary from about 3½ feet to a maximum of about 8 feet in height. While these creek banks are underlain by alluvium that appears relatively stable, a failure and or retreat of the creek bank due to streamflow in an unusually heavy storm is possible.

4.6.2 Slope Stability

As previously discussed, the slopes at the site appear relatively gentle, and are not likely subject to landsliding that would affect the future residences. However, as previously mentioned, portions of Misery Creek are near vertical and are underlain by alluvium; riparian setbacks will likely be more than adequate mitigation for these shallow (less than 10 feet) slopes, however, as part of our slope stability review, we screened the creek banks for long-term stability (Cross Section A-A' on Figure 2). Generalized, somewhat conservative, soil parameters are indicated below for the native materials likely to comprise the proposed slopes.

Table 3: Generalized Soil Parameters

Soil Type	Moist Unit Weight, Υ (pcf)	Friction Angle, ϕ (degrees)	Cohesion, c (psf)
Alluvium (Qhc)	120	30	50
Packwood Gravel (Qpf)	130	42	100

We used the computer program GSTABL7 for our slope stability analyses. GSTABL7 is a limit equilibrium program that computes the factors of safety for a wide range of circular, irregular and block failure surfaces using various analysis methods. For our analyses, we used the Janbu method of slices to determine sliding surfaces with a minimum factor of safety. GSTABL7 uses an iterative search routine to locate the minimum factor-of-safety and sliding surface. The search routine is modified for interactive user input, allowing hundreds of potential failure surfaces to be analyzed efficiently. Pseudo-static analysis was performed using a selected horizontal seismic coefficient of 0.3 in accordance with CGS Special Publication 117A and Stewart et al (2003).

The results of our static and seismic slope stability analysis are summarized in the table below.

Table 4: Summarized Slope Stability Results

Cross Section	Slope Type	Minimum Factor of Safety (Static)	Minimum Factor of Safety (Seismic)
A-A'	Misery Creek	2.5	<1.0

As indicated in the table above, the stability of the proposed slopes exceed generally accepted factors of safety values of 1.5 for static conditions; however, slopes close to Misery Creek generally exceeded accepted factor of safety values of 1.0 for seismic using pseudo static factors in accordance with Stewart et al (2003). Using an iterative method, we found that by 50 feet from the top of bank, the seismic factor of safety was 1.0, and the potential for seismic deformation low at greater distances.

Therefore, based on our slope stability analysis of the shallow slopes of Misery Creek, we recommend that habitable structures be located 50 feet from the steeply incised portions of the top of Misery Creek's bank. If a structure were to encroach on this setback, then mitigation with the use of deep foundations may be required.

4.7 FLOODING

Misery Creek is crossed by a road at the southeast property line. This creek crossing was created by the placement of a fill within the creek and installation of a 5-foot diameter concrete culvert. The up-drainage side of the culvert is partially blocked with manmade debris, which poses a hazard for inundation of the roadway and at least partial inundation of the subject site.

Based on our internet search of the Federal Emergency Management Agency (FEMA) flood map public database, the site is located outside of mapped flood areas; however, the creek to the southwest, paralleling San Felipe Road appears mapped within Zone A, an area within a 100-year flood zone; however, Zone A appears limited to the creek channel and does not encroach upslope to the subject site. Misery Creek is not zoned specifically for flooding. We recommend the project civil engineer be retained to confirm this information and verify the base flood elevation, if appropriate.

The Association of Bay Area Governments has compiled a database of Dam Failure Inundation Hazard Maps (ABAG, 1995). The generalized hazard maps were prepared by dam owners as required by the State Office of Emergency Services; they are intended for planning purposes only. Based on our review of these maps, the site is not located within a dam failure inundation area.

SECTION 5: CONCLUSIONS

5.1 SUMMARY

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the project design. Descriptions of each concern with brief outlines of our recommendations follow the listed concerns.

- Potential for liquefaction-induced settlements
- Shallow ground water
- Presence of moderately expansive soils

5.1.1 Potential for Liquefaction-Induced Settlements

As discussed, our liquefaction analysis indicates that there is a potential for liquefaction of localized sand layers during a significant seismic event. Although the potential for liquefied sands to vent to the ground surface is low, our analysis indicates that liquefaction-induced settlement on the order of 0 to nearly 1 inch could occur, resulting in differential settlement up to about ½ inch between independent foundation elements or over about 30 feet for continuous foundations. Foundations should be designed to tolerate the anticipated total and differential settlements. Based on our review of the preliminary foundation loads, it should be feasible to support the proposed buildings on shallow foundations; however, the building foundations will need to be designed to tolerate total and differential settlement due to static loads and liquefaction-induced settlement. Detailed foundation recommendations are presented in the "Foundations" section.

5.1.2 Shallow Ground Water

Ground water was measured at depths ranging from approximately 24½ to 28½ feet below the existing ground surface. We anticipate, however, that ground water may exist at depths ranging from approximately 5 to 30 feet below the existing ground surface. Our experience with sites in the vicinity indicates that shallow ground water could significantly impact grading and underground construction. These impacts typically consist of potentially wet and unstable subgrade, difficulty achieving compaction, and difficult underground utility installation. Dewatering and shoring of utility trenches may be required in some areas of the site. Detailed recommendations addressing this concern are presented in the "Earthwork" section of this report.

5.1.3 Expansive Soils

Moderately expansive soils were encountered in the surficial soils that blanket the site. Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. If structures are underlain by expansive soils it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes

in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering. Grading and foundation recommendations addressing this concern are presented in Section 6 of this report.

5.2 PLANS AND SPECIFICATIONS REVIEW

We recommend that we be retained to review the geotechnical aspects of the project structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction.

5.3 CONSTRUCTION OBSERVATION AND TESTING

As site conditions may vary significantly between the small-diameter borings performed during this investigation, we also recommend that a Cornerstone representative be present to provide geotechnical observation and testing during earthwork and foundation construction. This will allow us to form an opinion and prepare a letter at the end of construction regarding contractor compliance with project plans and specifications, and with the recommendations in our report. We will also be allowed to evaluate any conditions differing from those encountered during our investigation, and provide supplemental recommendations as necessary. For these reasons, the recommendations in this report are contingent of Cornerstone providing observation and testing during construction. Contractors should provide at least a 48-hour notice when scheduling our field personnel.

SECTION 6: EARTHWORK

6.1 SITE DEMOLITION, CLEARING AND PREPARATION

6.1.1 Site Stripping

The site should be stripped of all surface vegetation, and surface and subsurface improvements within the proposed development area. Demolition of existing improvements is discussed in detail below. Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material greater than 3 percent organic content by weight. Based on our site observations, surficial stripping should extend about 2 to 4 inches below existing grade in vegetated areas.

6.1.2 Tree and Shrub Removal

Trees and shrubs designated for removal should have the root balls and any roots greater than ½-inch diameter removed completely. Mature trees are estimated to have root balls extending to depths of 2 to 4 feet, depending on the tree size. Significant root zones are anticipated to extend to the diameter of the tree canopy. Grade depressions resulting from root ball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the "Compaction" section of this report.

6.1.3 Demolition of Existing Slabs, Foundations and Pavements

All slabs, foundations, and pavements should be completely removed from within planned building areas. Slabs, foundations, and pavements that extend into planned flatwork, pavement, or landscape areas may be left in place provided there is at least 3 feet of engineered fill overlying the remaining materials, they are shown not to conflict with new utilities, and that asphalt and concrete more than 10 feet square is broken up to provide subsurface drainage.

6.1.4 Abandonment of Existing Utilities

All utilities should be completely removed from within planned building areas. For any utility line to be considered acceptable to remain within building areas, the utility line must be completely backfilled with grout or sand-cement slurry (sand slurry is not acceptable), the ends outside the building area capped with concrete, and the trench fills either removed and replaced as engineered fill with the trench side slopes flattened to at least 1:1, or the trench fills are determined not to be a risk to the structure. The assessment of the level of risk posed by the particular utility line will determine whether the utility may be abandoned in place or needs to be completely removed. The contractor should assume that all utilities will be removed from within building areas unless provided written confirmation from both the owner and the geotechnical engineer.

Utilities extending beyond the building area may be abandoned in place provided the ends are plugged with concrete, they do not conflict with planned improvements, and that the trench fills do not pose significant risk to the planned surface improvements.

The risks associated with abandoning utilities in place include the potential for future differential settlement of existing trench fills, and/or partial collapse and potential ground loss into utility lines that are not completely filled with grout. In general, the risk is relatively low for single utility lines less than 4 inches in diameter, and increases with increasing pipe diameter.

6.2 REMOVAL OF EXISTING FILLS

While fills were not encountered in our borings, any fills encountered during site grading should be removed and replaced with compacted, engineered fill. All fills should be completely removed from within building areas and to a lateral distance of at least 5 feet beyond the building footprint or to a lateral distance equal to fill depth below the perimeter footing, whichever is greater. Provided the fills meet the "Material for Fill" requirements below, the fills may be reused when backfilling the excavations. Based on review of the samples collected from our borings, it appears that the fill may be reused. If materials are encountered that do not meet the requirements, such as debris, wood, trash, those materials should screened out of the remaining material and be removed from the site. Backfill of excavations should be placed in lifts and compacted in accordance with the "Compaction" section below.

6.3 TEMPORARY CUT AND FILL SLOPES

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 15 feet at the site may be classified as OSHA Site C materials. A Cornerstone representative should be retained to confirm the preliminary site classification. Recommended soil parameters for temporary shoring are provided in the "Temporary Shoring" section of this report.

Excavations performed during site demolition and fill removal should be sloped at 3:1 (horizontal:vertical) within the upper 5 feet below building subgrade. Excavations extending more than 5 feet below building subgrade and excavations in pavement and flatwork areas should be slope at a maximum inclination of 1:1.

6.4 BELOW-GRADE EXCAVATIONS

Below-grade excavations may be constructed with temporary slopes in accordance with the "Temporary Cut and Fill Slopes" section above if space allows. Alternatively, temporary shoring may support the planned cuts. The choice of shoring method should be left to the contractor's judgment based on experience, economic considerations and adjacent improvements such as utilities, pavements, and foundation loads.

6.5 SUBGRADE PREPARATION

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills, slabs-on-grade and/or pavements should be scarified to a depth of 6 inches, moisture conditioned, and compacted in accordance with the "Compaction" section below.

6.6 SUBGRADE STABILIZATION MEASURES

Soil subgrade and fill materials, especially soils with high fines contents such as clays and silty soils, can become unstable due to high moisture content, whether from high in-situ moisture contents or from winter rains. As the moisture content increases over the laboratory optimum, it becomes more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction.

As discussed in the "Subsurface" section in this report, the in-situ moisture contents are about 0 to 10 percent over the estimated laboratory optimum in the upper 10 feet of the soil profile. The contractor should anticipate drying the soils prior to reusing them as fill. In addition, repetitive rubber-tire loading will likely de-stabilize the soils.

There are several methods to address potential unstable soil conditions and facilitate fill placement and trench backfill. Some of the methods are briefly discussed below. Implementation of the appropriate stabilization measures should be evaluated on a case-by-case basis according to the project construction goals and the particular site conditions.

6.6.1 Scarification and Drying

The subgrade may be scarified to a depth of 8 to 12 inches and allowed to dry to near optimum conditions, if sufficient dry weather is anticipated to allow sufficient drying. More than one round of scarification may be needed to break up the soil clods.

6.6.2 Removal and Replacement

As an alternative to scarification, the contractor may choose to over-excavate the unstable soils and replace them with dry on-site or import materials. A Cornerstone representative should be present to provide recommendations regarding the appropriate depth of over-excavation, whether a geosynthethic (stabilization fabric or geogrid) is recommended, and what materials are recommended for backfill.

6.6.3 Chemical Treatment

Where the unstable area exceeds about 5,000 to 10,000 square feet and/or site winterization is desired, chemical treatment with quicklime (CaO), kiln-dust, or cement may be more cost-effective than removal and replacement. Recommended chemical treatment depths will typically range from 12 to 18 inches depending on the magnitude of the instability.

6.7 MATERIAL FOR FILL

6.7.1 Re-Use of On-site Soils

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter; 85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversize material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together and the compaction method will allow for loosely placed lifts not exceeding 12 inches.

6.7.2 Potential Import Sources

Imported and non-expansive material should be inorganic with a Plasticity Index (PI) of 15 or less, and not contain recycled asphalt concrete where it will be used within the inhabited building areas. To prevent significant caving during trenching or foundation construction, imported material should have sufficient fines. Samples of potential import sources should be delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stockpile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (Class 2 aggregate base, ¾-inch crushed rock, quarry fines, etc.) listing current laboratory testing data (not older than 6 months from the import date) may be provided for our

review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data to the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant's review. The potential import source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

6.8 COMPACTION REQUIREMENTS

All fills, and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557 (latest version) requirements as shown in the table below. In general, clayey soils should be compacted with sheepsfoot equipment and sandy/gravelly soils with vibratory equipment; open-graded materials such as crushed rock should be placed in lifts no thicker than 18 inches consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from a Cornerstone representative) should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moistures can cause unstable conditions. General recommendations for soil stabilization are provided in the "Subgrade Stabilization Measures" section of this report. Where the soil's PI is 20 or greater, the expansive soil criteria should be used.

Table 5: Compaction Requirements

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Fill	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
Trench Backfill	On-Site Expansive Soils	87 – 92	>3
Trench Backfill	Low Expansion Soils	90	>1
Trench Backfill (upper 6 inches of subgrade)	On-Site Low Expansion Soils	95	>1
Crushed Rock Fill	¾-inch Clean Crushed Rock	Consolidate In-Place	NA
Non-Expansive Fill	Imported Non-Expansive Fill	90	Optimum
Flatwork Subgrade	On-Site Expansive Soils	87 - 92	>3
Flatwork Subgrade	Low Expansion Soils	90	>1
Flatwork Aggregate Base	Class 2 Aggregate Base[3]	90	Optimum

Table 5: Continues

Table 5: Continued

Pavement Subgrade	On-Site Expansive Soils	87 - 92	>3
Pavement Subgrade	Low Expansion Soils	95	>1
Pavement Aggregate Base	Class 2 Aggregate Base[3]	95	Optimum
Asphalt Concrete	Asphalt Concrete	95 (Marshall)	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)
4 – Using light-weight compaction or walls should be braced

6.8.1 Construction Moisture Conditioning

Expansive soils can undergo significant volume change when dried then wetted. The contractor should keep all exposed expansive soil subgrade (and also trench excavation side walls) moist until protected by overlying improvements (or trenches are backfilled). If expansive soils are allowed to dry out significantly, re-moisture conditioning may require several days of re-wetting (flooding is not recommended), or deep scarification, moisture conditioning, and re-compaction.

6.9 TRENCH BACKFILL

Utility lines constructed within public right-of-way should be trenched, bedded and shaded, and backfilled in accordance with the local or governing jurisdictional requirements. Utility lines in private improvement areas should be constructed in accordance with the following requirements unless superseded by other governing requirements.

All utility lines should be bedded and shaded to at least 6 inches over the top of the lines with crushed rock (⅜-inch-diameter or greater) or well-graded sand and gravel materials conforming to the pipe manufacturer's requirements. Open-graded shading materials should be consolidated in place with vibratory equipment and well-graded materials should be compacted to at least 90 percent relative compaction with vibratory equipment prior to placing subsequent backfill materials.

General backfill over shading materials may consist of on-site native materials provided they meet the requirements in the "Material for Fill" section, and are moisture conditioned and compacted in accordance with the requirements in the "Compaction" section.

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean

concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

On expansive soils sites it is desirable to reduce the potential for water migration into building and pavement areas through the granular shading materials. We recommend that a plug of low-permeability clay soil, sand-cement slurry, or lean concrete be placed within trenches just outside where the trenches pass into building and pavement areas.

6.10 PERMANENT CUT AND FILL SLOPES

All permanent cut and fill slopes in soil should have a maximum inclination of 2:1 (horizontal:vertical) for slopes up to 20 feet high; slopes greater than 20 feet should be inclined at no greater than 2.5:1 or have an intermediate bench with a v-ditch. Fill slopes should be overbuilt and trimmed back, exposing engineered fill when complete. Refer to the "Erosion Control" section of this report for a discussion regarding protection of slope surfaces.

6.10.1 Keyways and Benches

Fill placed on existing ground inclined at 6:1 or greater should be benched into the existing slope and a keyway constructed at the toe of the fill. Benches should be angled slightly into the slope be spaced vertically at no greater than 4 feet between benches, and be at least 12 feet wide. Depending on the thickness of any colluvial/residual soil layer that blankets the bedrock, the benches may need to be widened beyond the minimum width to extend into competent materials. The keyway should also be angled slightly into the slope (minimum 2 percent inclination), extend at least 3 feet below grade into competent materials, and be at least 12 feet wide. A typical bench and keyway detail is depicted in Figure 11.

6.10.2 Fill Drainage

A permanent subsurface drainage system consisting of a series of perforated gravity pipes or drainage strips should be constructed between engineered fill placed against native materials and within all keyways. This system is intended to intercept perched water flowing through the native materials and transmit it to suitable outlet structures and reduce the potential for hydrostatic pressures building up behind the fills, and causing slope instability. The drain lines should be placed at the back of the keyways and benches. Bench drains should be spaced vertically at no greater than 10 feet.

The drainage system should be constructed in at the back of keyways and benches as shown in Figure 12, and will consist of a minimum 6-inch-diameter perforated SDR 35 pipe (perforations placed downward), bedded and shaded in Caltrans Class 2 Permeable Material (latest version) or ¾-inch crushed rock; if crushed rock is used, the rock should be encapsulated in filter fabric (Mirafi 140N or equivalent). The bedding should be at least 2 inches, and the trench should be at least 8 inches in width and depth. Alternatively, geocomposite strip drains may be used. All drainage lines should slope towards suitable outlet structures at an inclination of at least 0.5 percent. Suitable outlet structures may consist of connecting the drainage lines to a storm drain

system, with a sump if required; if the drain lines will outlet overland at the toe of the slope, an appropriate rock spill pad should be provided; the drain lines should not outlet onto the slope.

Vertical cleanouts should be provided at all upslope ends of the drainage lines and at all 90-degree bends.

6.10.3 Plan Review and Construction Monitoring

We should be retained to review the conceptual grading and sub-drainage plans and we can provide more specific input regarding the location of keyways and fill drainage for the final plans. A Cornerstone representative should be on site during keyway and fill slope construction. Field modifications to the planned keyway and benching may be required based on encountered field conditions. In addition, it has been our experience that cut slopes in the Santa Clara Formation are prone to localized weak zones and sloughing along bedding planes. We recommend that a Cornerstone engineering geologist observe the condition of all cut slopes and evaluate the potential for localized adverse materials or bedding orientation.

We recommend that the project civil engineer or land surveyor be retained to survey in place all keyways, sub-drainage lines, solid pipes, and cleanouts, and create an as-built plan. This plan will be of use for any future maintenance or repair work.

6.10.4 Cut/Fill Transitions

Grading information for the development is not yet available; however, we expect only moderate grading to effect the residential building pads and driveways. Foundations constructed over cut/fill transitions may experience differential movements under static and seismic loading conditions. Additionally, differing subsurface conditions at the site could increase the potential differential movement underneath the buildings near Holocene and Pleistocene transitions. For these reasons, we recommend that cut pads and pads with cut/fill transitions be over excavated a minimum of 2 feet to a distance at least 5 feet outside of the building footprint, and transitions in fill thickness should not exceed 3:1 (horizontal to vertical). If spread footings are used, the minimum fill thickness may need to be increased so that a minimum of 1 foot of fill is located below all footings. These recommendations for cut pads and pads with cut/fill transitions are illustrated on Figures 13 and 14, respectively.

6.11 SITE DRAINAGE

6.11.1 General Surface Drainage

Surface runoff should not be allowed to flow over the top of or pond at the top or toe of engineered slopes or retaining walls. Ponding should also not be allowed on or adjacent to pavements or concrete flatwork. Surface drainage should be directed towards suitable drainage facilities such as lined v-ditches or drain inlets. If surface drainage can not be directed away from engineered slopes, then lined v-ditches should be included at the top of slopes, and intermediate benches should always include v-ditches. Swales, v-ditches or retaining walls with v-ditches should be constructed at the base of all slopes adjacent to development. All v-ditches

and drain inlets should be sized to accommodate the design storm events for the upslope tributary area. Concrete-lined v-ditches should be reinforced as required and have adequate control and construction joints, and should be constructed neat in excavations; backfill around formed ditches should not be allowed.

Upslope sources of water should be evaluated. If upslope irrigation of is present or planned, additional surface and subsurface drainage, or construction of drained buttress fills may be needed to protect site improvements. We should be consulted if this issue will affect the project.

6.11.2 Lot Surface Drainage

Ponding should not be allowed adjacent to building foundations, slabs-on-grade, or pavements. Hardscape surfaces should slope at least 2 percent for at least 5 feet towards suitable discharge facilities; landscape areas should slope at least 3 percent. Roof runoff should be directed away from building areas to approved drainage facilities. Where minimal side yards are planned (10 feet or less), we recommend that area drains collect surface runoff and transmit the runoff to other suitable landscape drainage facilities to prevent ponding adjacent to building foundations. Landscape drainage such as drain inlets and storm water filtration and/or infiltration trenches should be provided to collect and transmit storm water runoff to project storm drains, and/or detention or retention facilities. Although the PT-mat foundations are designed to accommodate some moisture variability within the near-surface soils, excessive moisture or desiccation may result in additional differential foundation movement.

We recommend that cut and fill slopes greater than 5 feet in height have concrete v-ditch or grassy swales provided at the top of slopes or otherwise be graded to direct water away from slopes at grades of 2 percent or greater to re-direct surface water to approved drainage facilities. Retaining walls should be provided with at least 6 inches of freeboard and have concrete v-ditches or grassy swales to re-direct surface water to approved drainage facilities.

6.11.2 Subsurface Drainage

As discussed in the "Permanent Cut and Fill Slopes" section, subsurface drainage improvements should be installed as part of earthwork for fill construction. These improvements should include positive surface gradients for keyways and benches and the installation of a subdrain system consisting of perforated pipe and permeable gravel or drain rock. If drain rock is used, the rock and pipe should be entirely wrapped with a permeable geotextile fabric. Subdrains should also be installed at the toe of any proposed cut slopes depending on the actual conditions observed during construction. A typical bench or keyway subdrain detail is shown on Figure 12. As previously discussed, a conceptual subdrain plan should be prepared once preliminary grading plans are finalized. The actual location of subdrains should be determined in the field at the time of construction.

6.12 PERMANENT EROSION CONTROL MEASURES

Hillside grading will require periodic maintenance after construction to reduce the potential for erosion and sloughing. At a minimum all slopes should be vegetated by hydroseeding or other

landscape ground cover. The establishment of vegetation will help reduce runoff velocities, allow some infiltration and transpiration, trap sediment within runoff, and protect the soil from raindrop impact. Depending on the exposed material type and the slope inclination, more aggressive erosion control measures may be needed to protect slopes for one or more winter seasons while vegetation is establishing. For slopes with inclinations of 2:1 (horizontal:vertical) or greater, erosion control may consist of jute netting, straw matting, or erosion control blankets used in combination with hydroseeding.

Both construction and post-construction Storm Water Pollution Prevention Plans (SWPPPs) should be prepared for the project-specific requirements. We recommend that final grading plans be provided for our review.

6.13 LANDSCAPE CONSIDERATIONS

Since the near-surface soils are moderately expansive, we recommend greatly reducing the amount of surface water infiltrating these soils near foundations and exterior slabs-on-grade. This can typically be achieved by:

- Using drip irrigation,
- Avoiding open planting within 3 feet of the building perimeter or near the top of existing slopes,
- Regulating the amount of water distributed to lawns or planter areas by using irrigation timers, and
- Selecting landscaping that requires little or no watering, especially near foundations.

We recommend that the landscape architect consider these items when developing landscaping plans.

SECTION 7: FOUNDATIONS

7.1 SUMMARY OF RECOMMENDATIONS

In our opinion, the proposed structures may be supported on shallow foundations provided the recommendations in the "Earthwork" section and the sections below are followed. We recommend that all habitable structures be setback at least 50 feet from the top of bank of Misery Creek.

7.2 SEISMIC DESIGN CRITERIA

We understand that the project structural design will be based on the 2010 California Building Code (CBC), which provides criteria for the seismic design of buildings in Chapter 16. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below

grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system. Based on our borings and review of local geology, the site is underlain by deep alluvial soils with typical SPT "N" values between 15 and 50 blows per foot. Therefore, we have classified the site as Soil Classification D. The mapped spectral acceleration parameters S_S and S_1 were calculated using the USGS computer program *Earthquake Ground Motion Parameters*, Version 5.1.0, revision date February 10, 2011, based on the site coordinates presented below and the site classification. The table below lists the various factors used to determine the seismic coefficients and other parameters.

Table 6: CBC Site Categorization and Site Coefficients

Classification/Coefficient	Design Value
Site Class	D
Site Latitude	37.276248°
Site Longitude	-121.745935°
0.2-second Period Mapped Spectral Acceleration[1], S_S	1.500g
1-second Period Mapped Spectral Acceleration[1], S_1	0.600g
Short-Period Site Coefficient – Fa	1.0
Long-Period Site Coefficient – Fv	1.5
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - S_{MS}	1.500g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – S_{M1}	0.900g
0.2-second Period, Design Earthquake Spectral Response Acceleration – S_{DS}	1.000g
1-second Period, Design Earthquake Spectral Response Acceleration – S_{D1}	0.600g

[1]For Site Class B, 5 percent damped.

7.3 SHALLOW FOUNDATIONS

7.3.1 Spread Footings

Spread footings should bear on natural, undisturbed soil or engineered fill, and have the minimum dimensions presented in the table below. Bottom of footing is based on lowest adjacent grade, defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil.

Table 7: Minimum Footing Dimensions

Number of Building Stories	Minimum Footing Width (inches)	Minimum Depth to Bottom of Footing (inches)
1	12	18
2	15	18

The deeper footing embedment is due to the presence of moderately expansive soils, and is intended to embed the footing below the zone of significant seasonal moisture fluctuation, reducing the potential for differential movement.

Footings constructed to the above dimensions and in accordance with the "Earthwork" recommendations of this report are capable of supporting maximum allowable bearing pressures of 2,000 psf for dead loads, 3,000 psf for combined dead plus live loads, and 4,000 psf for all loads including wind and seismic. These pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom mats of reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

7.3.2 Footing Settlement

Structural loads were not provided to us at the time this report was prepared; therefore, we assumed the typical loading for one- to two-story, wood-frame residential structures on the order of 1 to 2 kips per foot.

Based on the loading and the allowable bearing pressures presented above, we estimate that the total static footing settlement will be less than ½ inch, with less than about ¼ inch of post-construction differential settlement between adjacent foundation elements. In addition we estimate that differential seismic movement will be less than about ½ inch between adjacent foundation elements or over a horizontal distance of 30 feet, resulting in a total estimated differential footing movement of less than about ¾ inch between foundation elements. As our footing loads were assumed, we recommend we be retained to review the final footing layout and loading, and verify the settlement estimates above.

7.3.3 Lateral Loading

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. An ultimate frictional resistance of 0.45 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above.

Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining passive pressure capacity.

7.3.4 Spread Footing Construction Considerations

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling to prevent desiccation. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations.

7.3.6 Post-Tensioned Mats

As an alternative to spread footings, the structures may be supported on post-tensioned (PT) concrete mat foundations bearing entirely on natural soil or engineered fill prepared in accordance with the "Earthwork" section of this report, and designed in accordance with the recommendations below. In our opinion, PT mats would be appropriate provided the building pad is constructed as a level pad and the foundation is set back at least 10 feet from any descending slope steeper than 5:1 (horizontal to vertical) and meets the required engineering setback.

Residential structures should be supported on post-tensioned (PT) concrete mat foundations designed in accordance with the parameters in the table below based on procedures developed by the Post-Tensioning Institute (2007).

Table 8: Post-Tensioned Mat Design Criteria

Differential Movement Condition	Center Lift	Edge Lift
Edge Moisture Variation (feet)	9.0	4.6
Differential Soil Movement (inches)	0.45	0.83

To reduce potential differential movement, all mats should be designed for a maximum average areal bearing pressure of 750 psf for dead plus live loads; at column or wall loading, the maximum localized bearing pressure should be limited to 3000 psf. When evaluating wind and seismic conditions, allowable bearing pressures may be increased by one-third. These

pressures are net values; the weight of the mat may be neglected for the portion of the mat extending below grade. Top and bottom mats of reinforcing steel should be included as required to help span irregularities and differential settlement.

7.3.7 Mat Foundation Settlement

In addition to estimated differential static movement listed in the table above for PT mats, the mats should be designed to accommodate an estimated seismic differential movement of less than about ½ inch over a horizontal distance of 30 feet.

7.3.8 Lateral Loading

Lateral loads may be resisted by friction between the bottom of mat foundation and the supporting subgrade, and also by passive pressures generated against deepened mat edges. An ultimate frictional resistance of 0.45 applied to the mat dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above. The upper 12 inches of soil should be neglected when determining passive pressure capacity.

7.3.9 Mat Foundation Construction Considerations

Due to the presence of expansive soils in some areas, mat subgrade areas should be kept moist until concrete placement by regular sprinkling to prevent desiccation. If deep drying is allowed to occur, several days of moisture conditioning (flooding of the pads is not recommended) may be required to allow the moisture to re-penetrate the subgrade. If severe drying occurs, reworking and moisture conditioning of the pad may be required. Prior to placement of any vapor retarder and mat construction, the subgrade should be proof-rolled and visually observed by a Cornerstone representative to confirm stable subgrade conditions. The pad moisture should also be checked at least 24 hours prior to vapor barrier or mat reinforcement placement to confirm that the soil has a moisture content of at least 1 or 3 percent over optimum in the upper 12 inches. A Cornerstone representative should be retained to evaluate soil properties.

7.3.10 Moisture Protection Considerations for Mat Foundations

The following general guidelines for concrete mat construction where floor coverings are planned are presented for the consideration by the developer, design team, and contractor. These guidelines are based on information obtained from a variety of sources, including the American Concrete Institute (ACI) and are intended to reduce the potential for moisture-related problems causing floor covering failures, and may be supplemented as necessary based on project-specific requirements. The application of these guidelines or not will not affect the geotechnical aspects of the mat foundation performance.

- Place a minimum 10-mil vapor retarder conforming to ASTM E 1745, Class C requirements or better directly below the concrete mat; the vapor retarder should extend

to the mat edges and be sealed at all seams and penetrations in accordance with manufacturer's recommendations and ASTM E 1643 requirements. A 4-inch-thick capillary break, consisting of ½- to ¾-inch crushed rock with less than 5 percent passing the No. 200 sieve, should be placed below the vapor retarder and consolidated in place with vibratory equipment.

- The concrete water:cement ratio should be 0.45 or less. Mid-range plasticizers may be used to increase concrete workability and facilitate pumping and placement.
- Water should not be added after initial batching unless the slump is less than specified and/or the resulting water:cement ratio will not exceed 0.45.
- Where floor coverings are planned, all concrete surfaces should be properly cured.
- Water vapor emission levels and concrete pH should be determined in accordance with ASTM F1869-98 and F710-98 requirements and evaluated against the floor covering manufacturer's requirements prior to installation.

SECTION 8: CONCRETE SLABS AND PEDESTRIAN PAVEMENTS

8.1 EXTERIOR FLATWORK

8.1.1 Pedestrian Concrete Flatwork

Exterior concrete flatwork subject to pedestrian and/or occasional light pick up loading should be at least 4 inches thick and supported on at least 6 inches of Class 2 aggregate base overlying subgrade prepared in accordance with the "Earthwork" recommendations of this report. Flatwork that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below. To help reduce the potential for uncontrolled shrinkage cracking, adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of unreinforced concrete thickness, and at greater distances for reinforced concrete. Flatwork should be isolated from adjacent foundations or retaining walls except where limited sections of structural slabs are included to help span irregularities in retaining wall backfill at the transitions between at-grade and on-structure flatwork.

At the owner's option, if desired to reduce the potential for vertical offset or widening of concrete cracks, consideration should be given to using reinforcing steel, such as No. 3 rebar spaced at 18 inches on center each direction.

SECTION 9: VEHICULAR PAVEMENTS

9.1 ASPHALT CONCRETE

The following asphalt concrete pavement recommendations tabulated below are based on the Procedure 608 of the Caltrans Highway Design Manual, estimated traffic indices for various pavement-loading conditions, and on a design R-value of 10. The design R-value was chosen based on the results of the laboratory testing performed on a surficial sample collected from the proposed pavement area and engineering judgment considering the variable surface conditions.

Table 9: Asphalt Concrete Pavement Recommendations, Design R-value = 10

Design Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base* (inches)	Total Pavement Section Thickness (inches)
4.0	2.5	7.0	9.5
4.5	2.5	8.5	11.0
5.0	2.5	10.0	12.5
5.5	3.0	11.0	14.0

*Caltrans Class 2 aggregate base; minimum R-value of 78

Frequently, the full asphalt concrete section is not constructed prior to construction traffic loading. This can result in significant loss of asphalt concrete layer life, rutting, or other pavement failures. To improve the pavement life and reduce the potential for pavement distress through construction, we recommend the full design asphalt concrete section be constructed prior to construction traffic loading. Alternatively, a higher traffic index may be chosen for the areas where construction traffic will be use the pavements.

9.2 PORTLAND CEMENT CONCRETE

If exterior driveway pavements are to be Portland Cement Concrete (PCC) pavements, we recommend that they be a minimum of 5½ inches in thickness based on methods presented in the Portland Cement Association (PCA) design manual (PCA, 1984). Recommendations for garage slabs-on-grade were provided in the "Concrete Slabs and Pedestrian Pavements" section above.

The PCC thicknesses above are based on a concrete compressive strength of at least 3,500 psi, supporting the PCC on at least 6 inches of Class 2 aggregate base compacted as recommended in the "Earthwork" section, and laterally restraining the PCC with curbs or concrete shoulders. Adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of unreinforced concrete thickness, and at greater spacing for reinforced concrete.

SECTION 10: RETAINING WALLS

10.1 STATIC LATERAL EARTH PRESSURES

The structural design of any site retaining wall should include resistance to lateral earth pressures that develop from the soil behind the wall, any undrained water pressure, and surcharge loads acting behind the wall. Provided a drainage system is constructed behind the wall to prevent the build-up of hydrostatic pressures as discussed in the section below, we recommend that the walls be designed for the following pressures:

Table 10: Recommended Lateral Earth Pressures

Sloping Backfill Inclination (horizontal:vertical)	Lateral Earth Pressure*	
	Unrestrained – Cantilever Wall	Restrained – Braced Wall
Level	45 pcf	45 pcf + 8H
3:1	55 pcf	55 pcf + 8H
2½:1	60 pcf	60 pcf + 8H
2:1	65 pcf	65 pcf + 8H
Additional Surcharge Loads	$^1/_3$ of vertical loads at top of wall	½ of vertical loads at top of wall

* Lateral earth pressures are based on an equivalent fluid pressure
** H is the distance in feet between the bottom of footing and top of retained soil

If adequate drainage cannot be provided behind the wall, an additional equivalent fluid pressure of 40 pcf should be added to the values above for both restrained and unrestrained walls for the portion of the wall that will not have drainage. Damp proofing or waterproofing of the walls may be considered where moisture penetration and/or efflorescence are not desired.

10.2 SEISMIC LATERAL EARTH PRESSURES

Section 1802A.2.7 of the 2010 CBC states that lateral pressures from earthquakes should be considered in the design of basements and retaining walls. At this time, we are not aware of any retaining walls for the project. However, minor landscaping walls (i.e. walls 4 feet or less in height) may be proposed. In our opinion, design of these walls for seismic lateral earth pressures in addition to static earth pressures is not warranted.

10.3 WALL DRAINAGE

10.3.1 At-Grade Site Walls

Adequate drainage should be provided by a subdrain system behind all walls. This system should consist of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with Class 2 Permeable Material per Caltrans Standard Specifications, latest edition. The permeable backfill should extend at least 12 inches out from the wall and to within 12 inches of outside finished

grade. Alternatively, ½-inch to ¾-inch crushed rock may be used in place of the Class 2 Permeable Material provided the crushed rock and pipe are enclosed in filter fabric, such as Mirafi 140N or approved equivalent. The upper 2 feet of wall backfill should consist of compacted on-site soil. The subdrain outlet should be connected to a free-draining outlet or sump. A schematic retaining wall detail is shown on Figure

10.4 BACKFILL

Where surface improvements will be located over the retaining wall backfill, backfill placed behind the walls should be compacted to at least 95 percent relative compaction using light compaction equipment. Where no surface improvements are planned, backfill should be compacted to at least 90 percent. If heavy compaction equipment is used, the walls should be temporarily braced.

10.5 FOUNDATIONS

Retaining walls may be supported on a continuous spread footing designed in accordance with the recommendations presented in the "Foundations" section of this report.

SECTION 11: LIMITATIONS

This report, an instrument of professional service, has been prepared for the sole use of DAL Properties, LLC specifically to support the design of the San Felipe Road Residential project in San Jose, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No warranty, expressed or implied, is made or should be inferred.

Recommendations in this report are based upon the soil and ground water conditions encountered during our subsurface exploration. If variations or unsuitable conditions are encountered during construction, Cornerstone must be contacted to provide supplemental recommendations, as needed.

DAL Properties, LLC may have provided Cornerstone with plans, reports and other documents prepared by others. DAL Properties, LLC understands that Cornerstone reviewed and relied on the information presented in these documents and cannot be responsible for their accuracy.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or his representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of

other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone's control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone must review the proposed changes and provide supplemental recommendations, as needed.

An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services.

SECTION 12: REFERENCES

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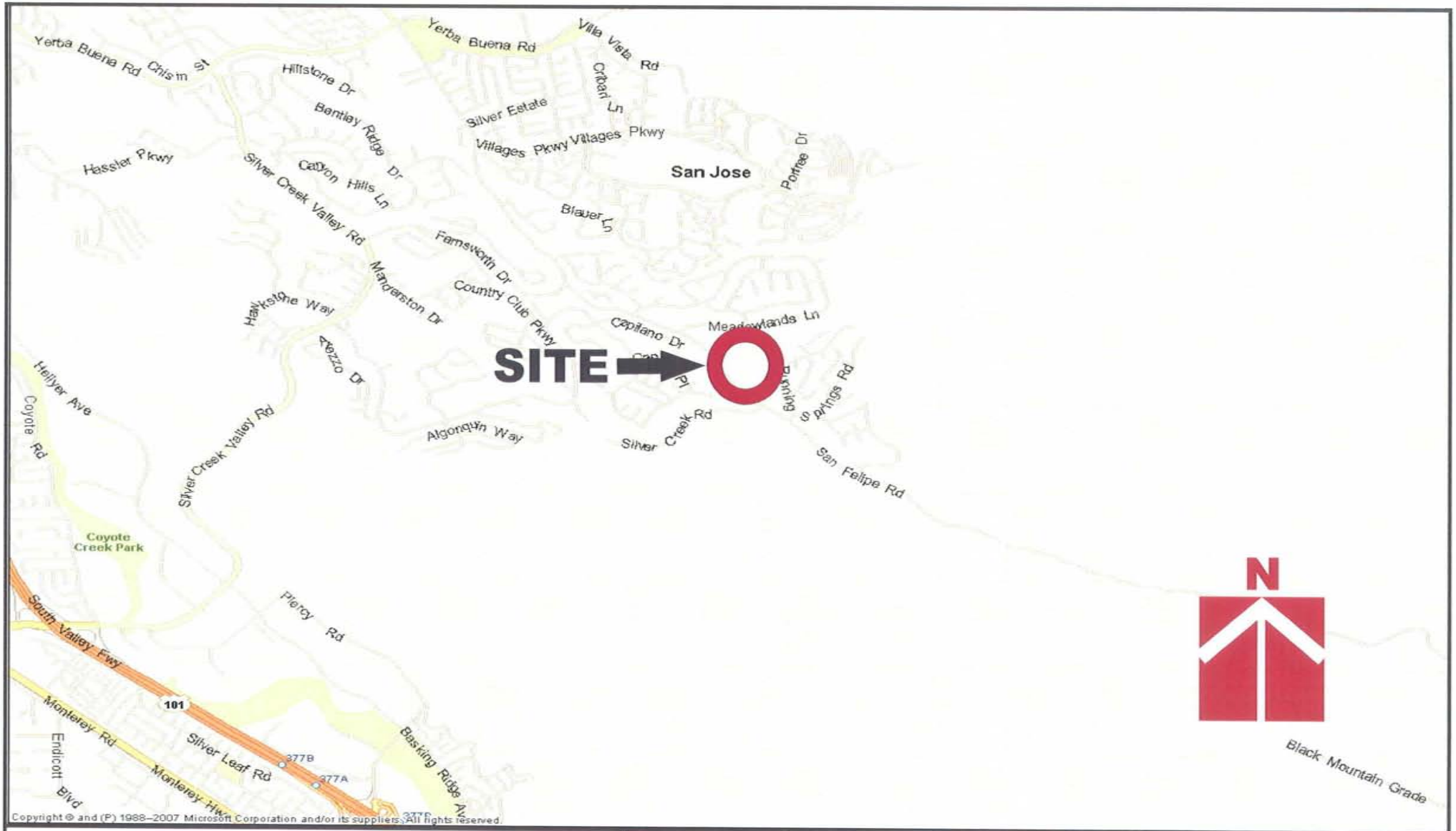


CORNERSTONE EARTH GROUP

Vicinity Map

San Felipe Road Residential
San Jose, CA

Project Number	336-2-3
Figure Number	Figure 1
Date	June 2011
Drawn By	RRN

Not part of this study

Not part of this study

EB-1

EB-2

EB-3

EB-4

AREA: 11,465 SF

AREA: 24,674 SF

AREA: 21,[illegible] SF

AREA: [illegible] SF

20.0'

10.0'

15.0'

8.0'

10.5'

8.2'

106.1'

10.0'

20.0'

15.0'

10'

12'

A

A'

?

50' RIPARIAN SETBACK

50' RIPARIAN SETBACK

Qhc

Qpf

Qpf

Af

Qhc

Not part of this study

Not part of this study

1

2

3

4

5

Explanation

Geologic Units

Af Undocumented fill. Shown where estimated to exca 1.5' in thickness

Qhc Stream channel deposits (Holo

Qpf Packwood gravel (pilo-pierstocene)

Symbols

Approximate location of exploratory boring

Geologic contact: actual transitions may vary

N

0 50 100

APPROXIMATE SCALE (FEET)

Project Number 336-2-3

Figure Number Figure 2

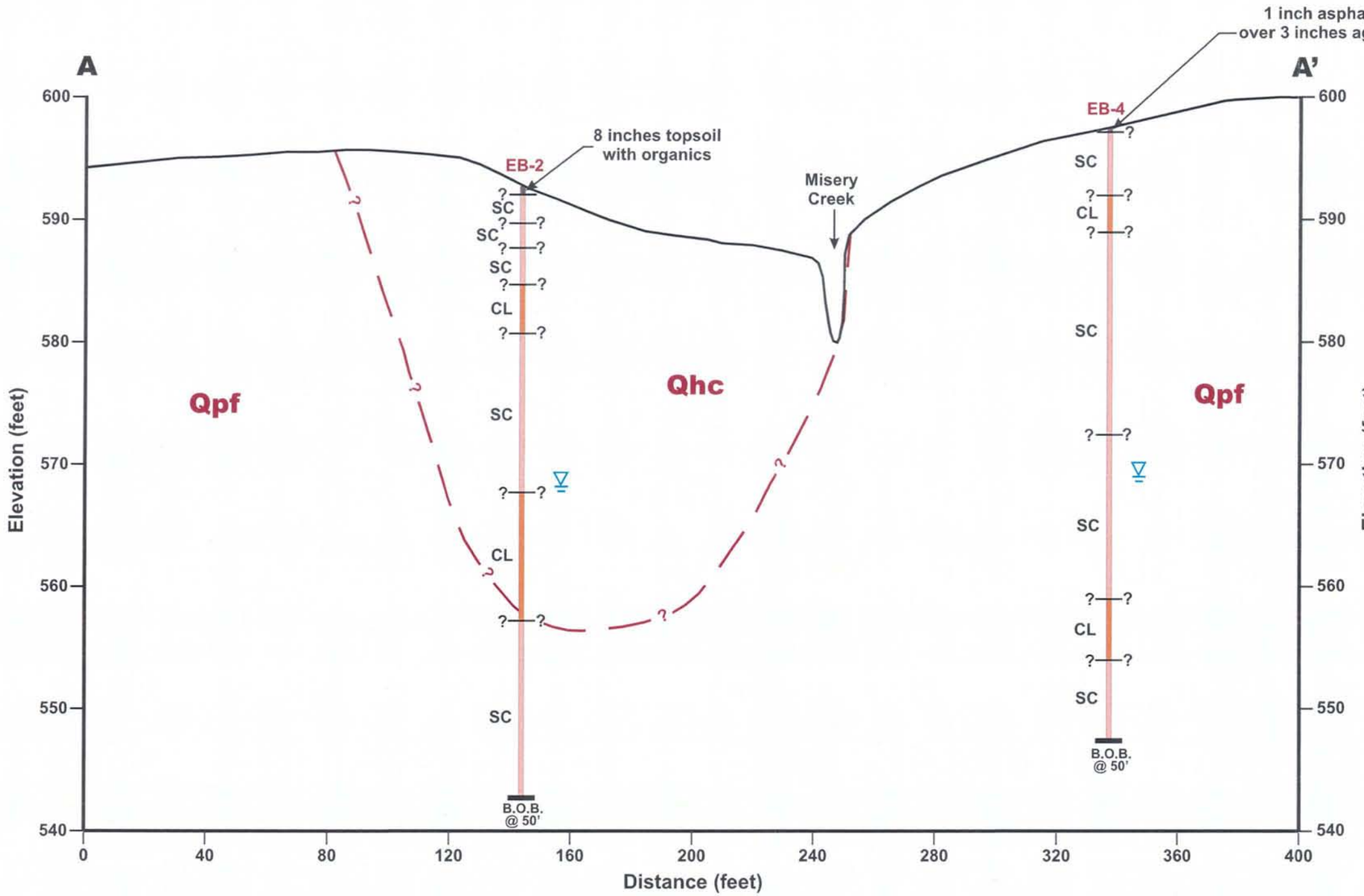
Date September 2011

Drawn By RRN

Site Plan

San Felipe Road Residential
San Jose, CA

CORNERSTONE EARTH GROUP



Section A-A'

(View Looking Northwest)
1"=10' Horizontal
1"=40' Vertical

Explanation

Geologic Units

Qhc Stream channel deposits (Holocene)

Qpf Packwood gravel (Plio-Pleistocene)

Symbols

?– — —? Geologic contact: actual transitions may vary

CL Clayey sand or sandy lean clay or clayey sand with gravel

SC Sandy Lean clay or sandy lean clay with gravel

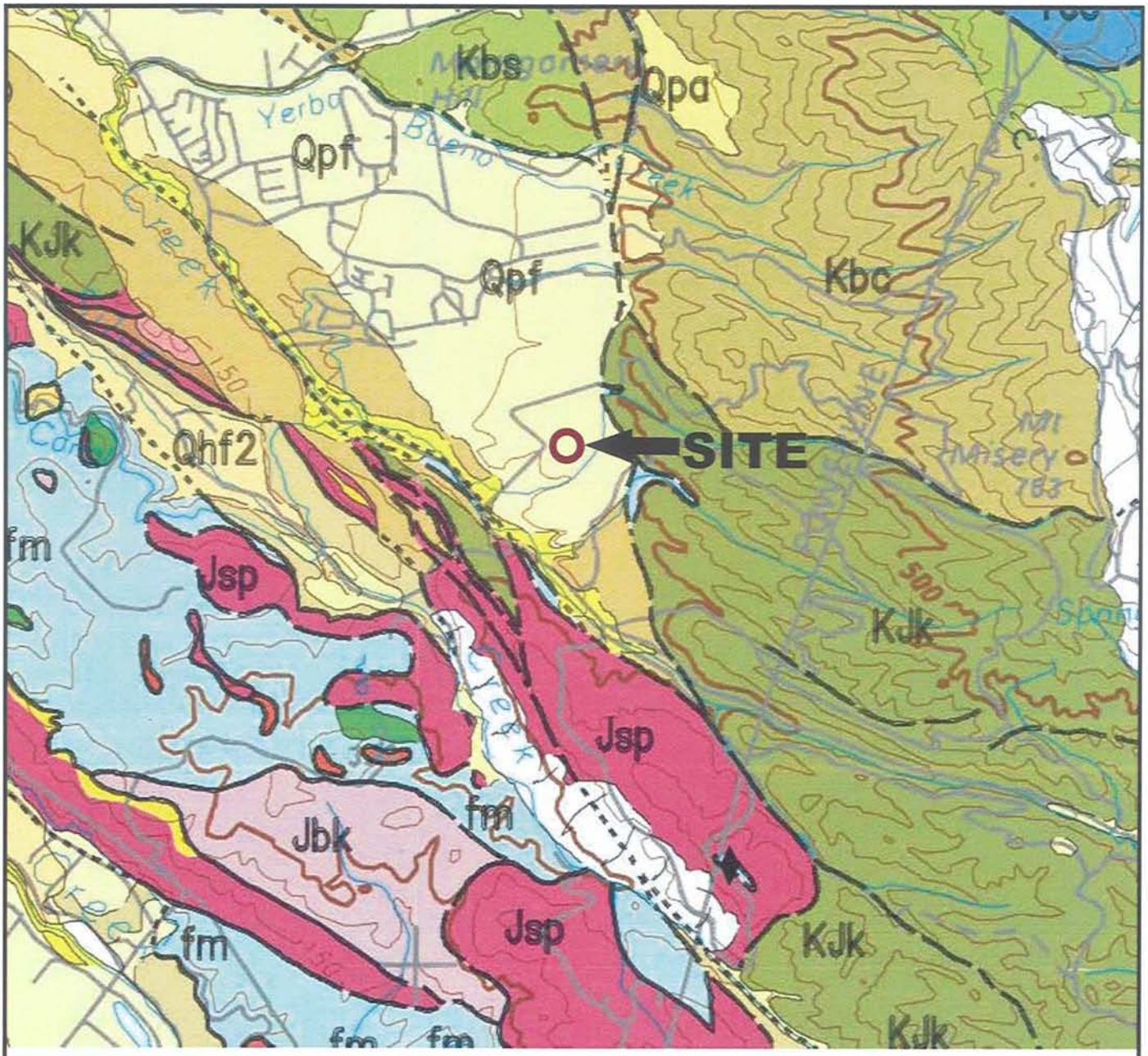
Notes:
1) Topographical information provided by Charles W. Davidson Co. dated 5/5/2011.
2) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
3) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
4) See Figure 2 for location of cross section.

Project Number 336-2-3
Figure Number Figure 3
Date September 2011
Drawn By RRN

Cross-Section A-A'

San Felipe Road Residential
San Jose, CA

CORNERSTONE EARTH GROUP



Geologic Units

- PP,GP Percolation pond, gravel pit (MODERN)
- Qhbm Bay Mud (HOLOCENE)
- Qhb Basin deposits (HOLOCENE)
- Qhfp Flood plain deposits (HOLOCENE)
- Qhl Levee deposits (HOLOCENE)
- Qhc Stream channel deposits (HOLOCENE)
- Qht Stream terrace deposits (HOLOCENE)
- Alluvial fan deposits (HOLOCENE)
  - Qhf1 Younger
  - Qhf2 Older
- Qpf Alluvial fan deposits (UPPER PLEISTOCENE)
- Qof Older alluvial fan deposits (MIDDLE TO UPPER PLEISTOCENE)

Explanation

Contact- dashed where approximate, dotted where concealed

Fault- dashed where approximate, dotted where concealed

N

Base by Wentworth et al., 1999.

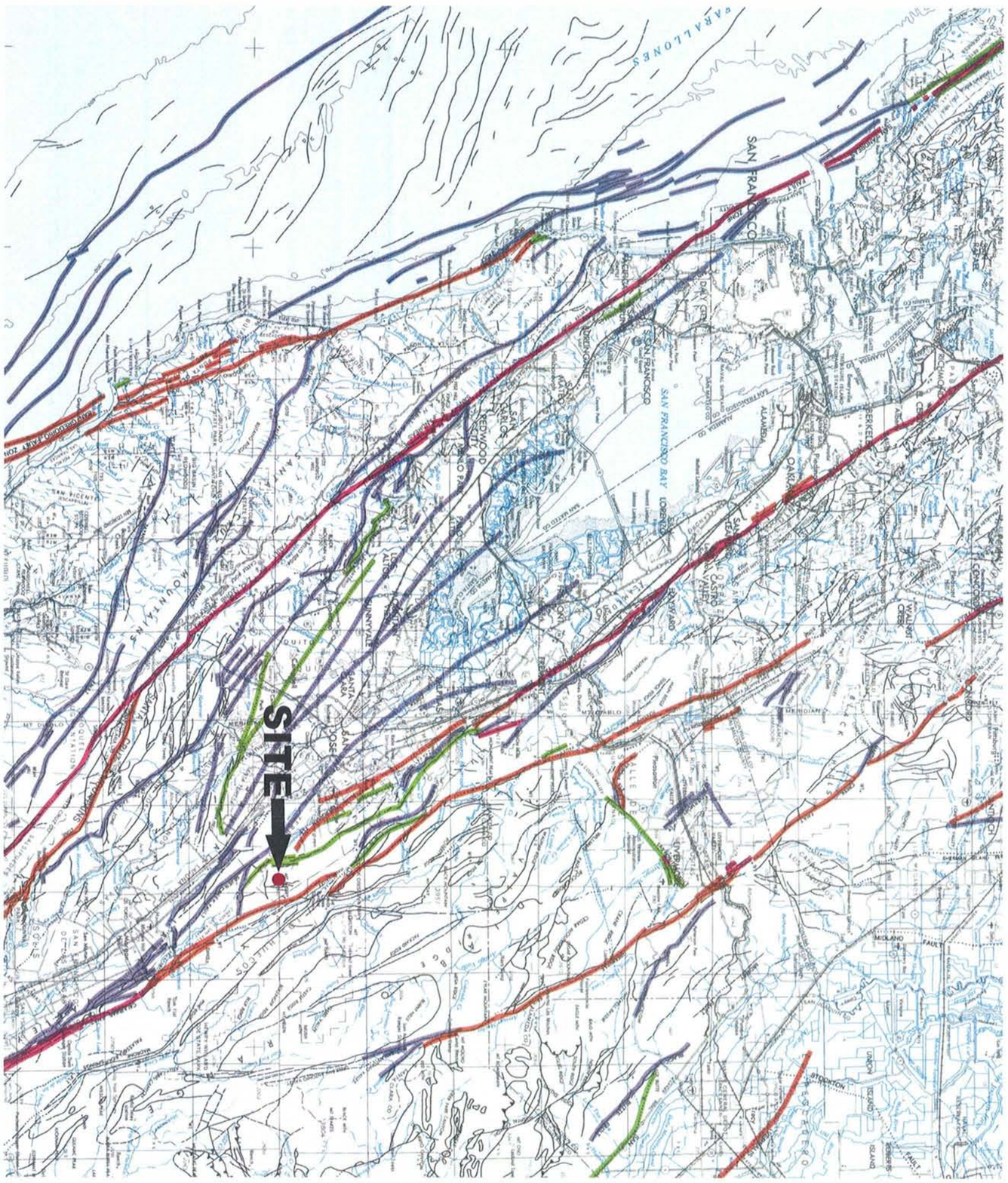
CORNERSTONE EARTH GROUP

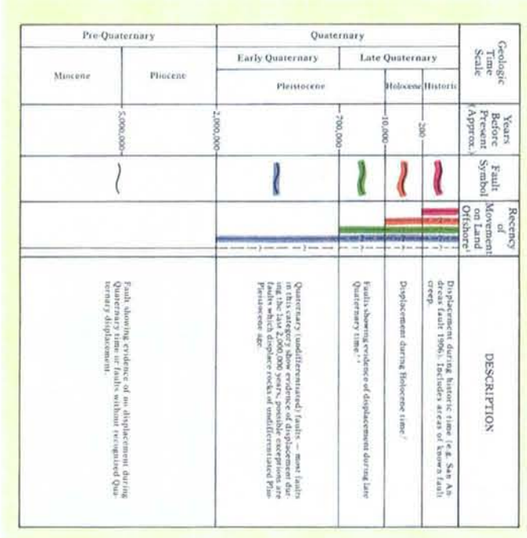
Vicinity Geologic Map

San Felipe Road Residential
San Jose, CA

Project Number	336-2-3
Figure Number	Figure 4
Date	June 2011
Drawn By	RRN

Base Map: "Map showing recency of faulting, San Francisco - San Jose Quadrangle California," by Bortugno, et.al. (California Division of Mines and Geology) dated 1991.





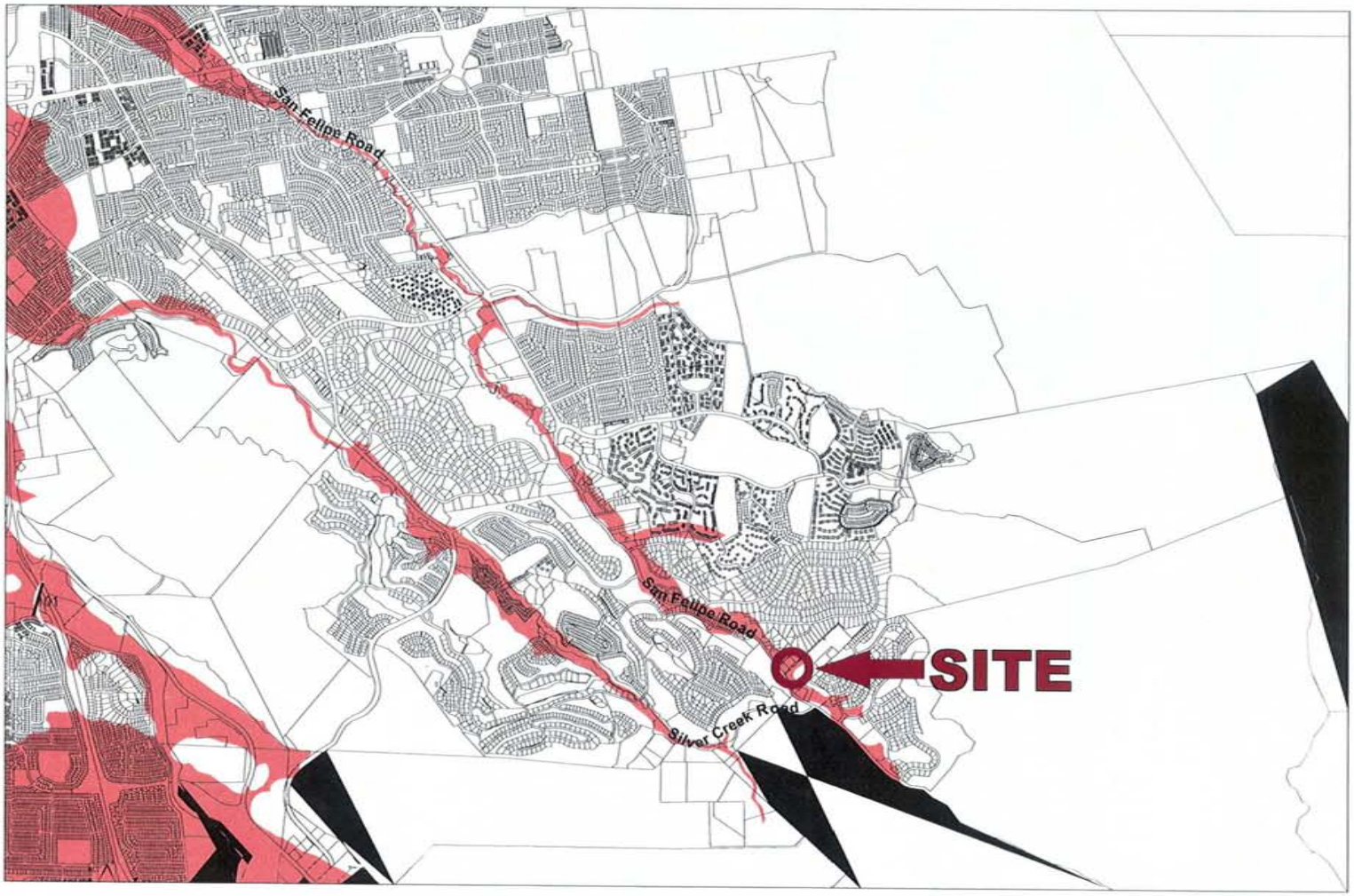
APPROXIMATE SCALE (MILES)

CORNERSTONE EARTH GROUP

Regional Fault Map

San Felipe Road Residential
San Jose, CA

Project Number	336-2-3
Figure Number	Figure 5
Date	June 2011
Drawn By	RRN



THE COUNTY OF SANTA CLARA

Santa Clara County Geologic Hazard Zones

- Liquefaction Hazard Zones
- Parcels
- County Boundary

N

0 4000 8000

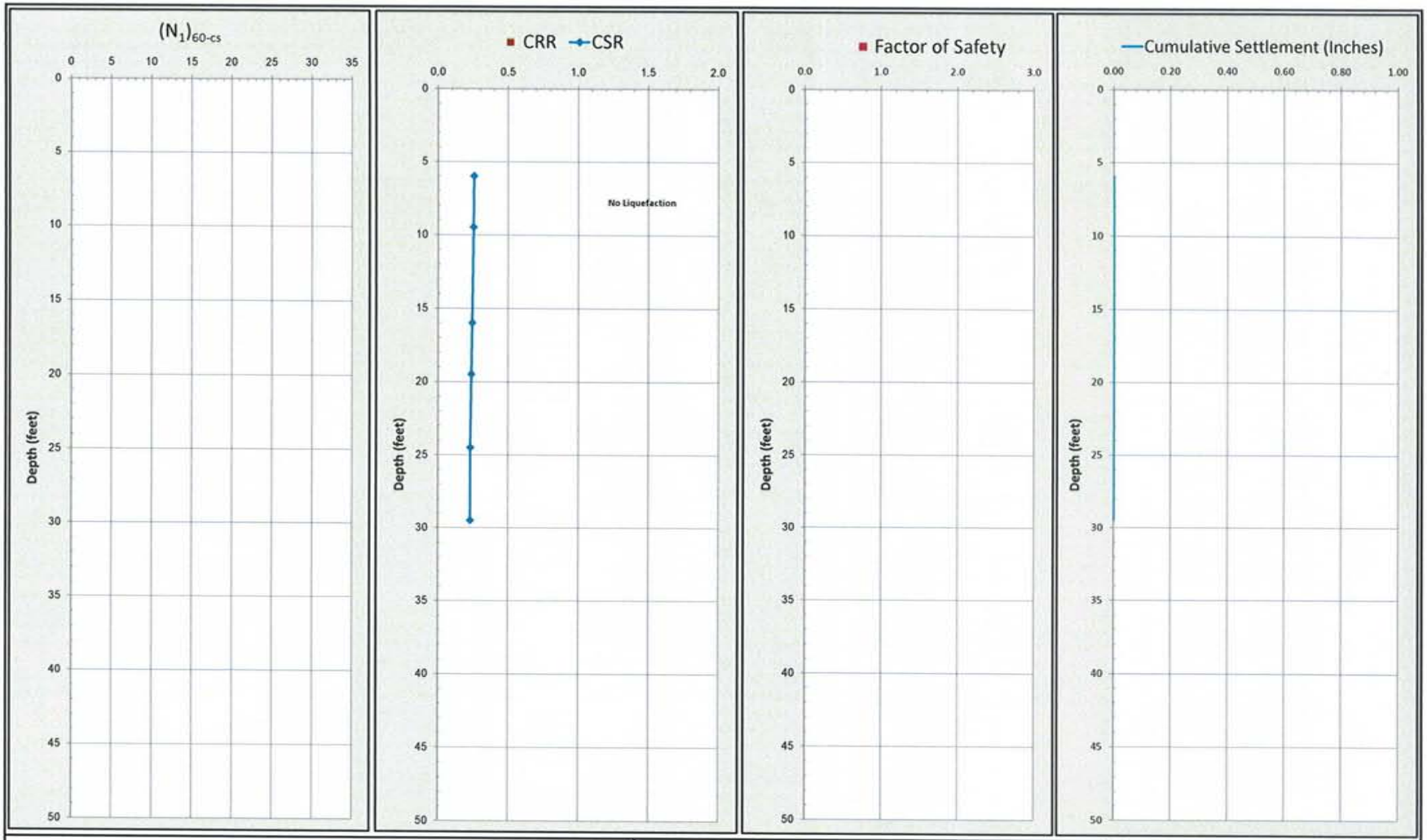
APPROXIMATE SCALE (FEET)

CORNERSTONE EARTH GROUP

Liquefaction Hazard Map

San Felipe Road Residential
San Jose, CA

Project Number	336-2-3
Figure Number	Figure 6
Date	July 2011
Drawn By	RRN



CORNERSTONE EARTH GROUP

Liquefaction Analysis Summary

San Felipe Road Residential

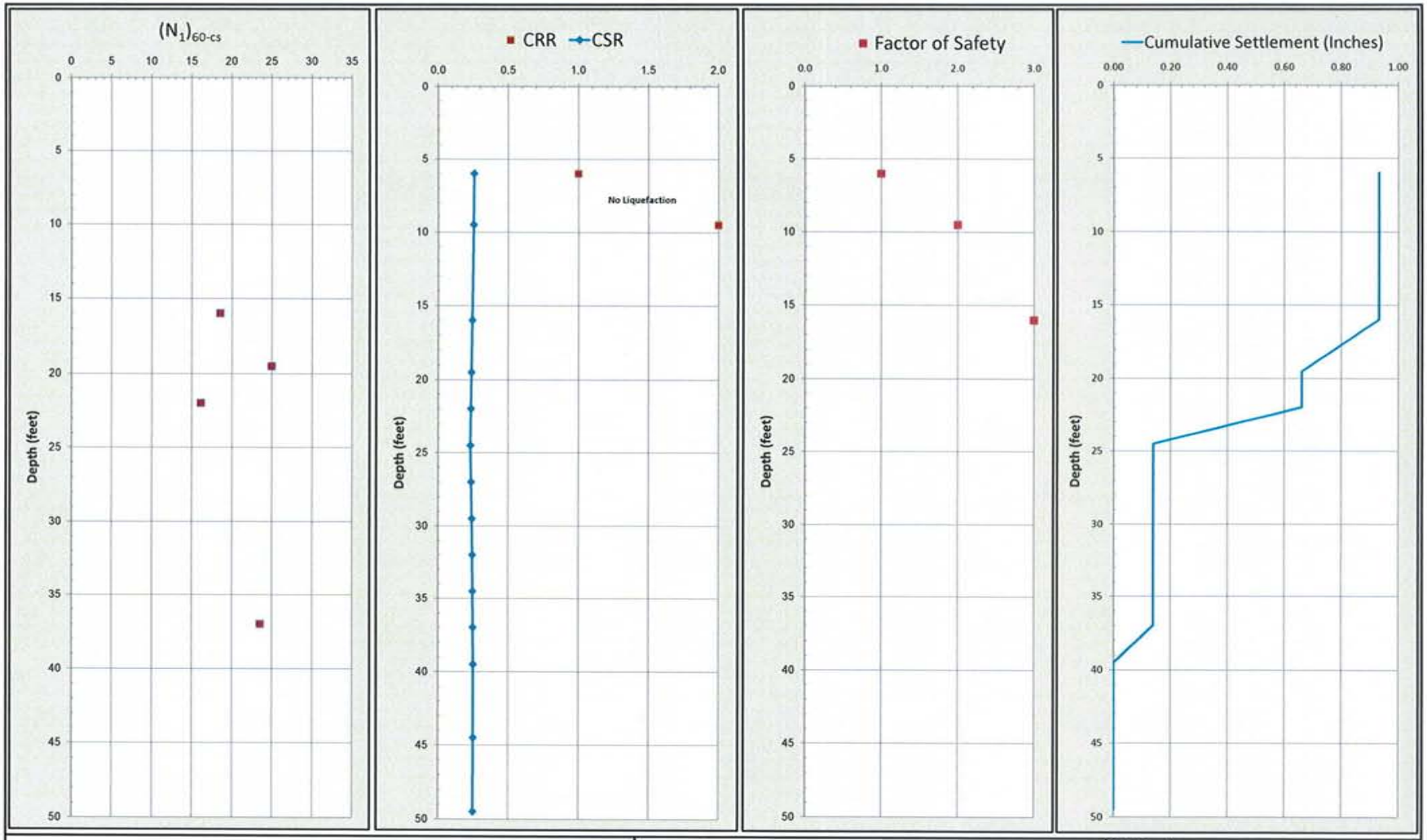
San Jose, California

Project Number: 336-2-3

Figure Number: Figure 7

9/13/2011

Boring EB-1



CORNERSTONE EARTH GROUP

Liquefaction Analysis Summary

San Felipe Road Residential

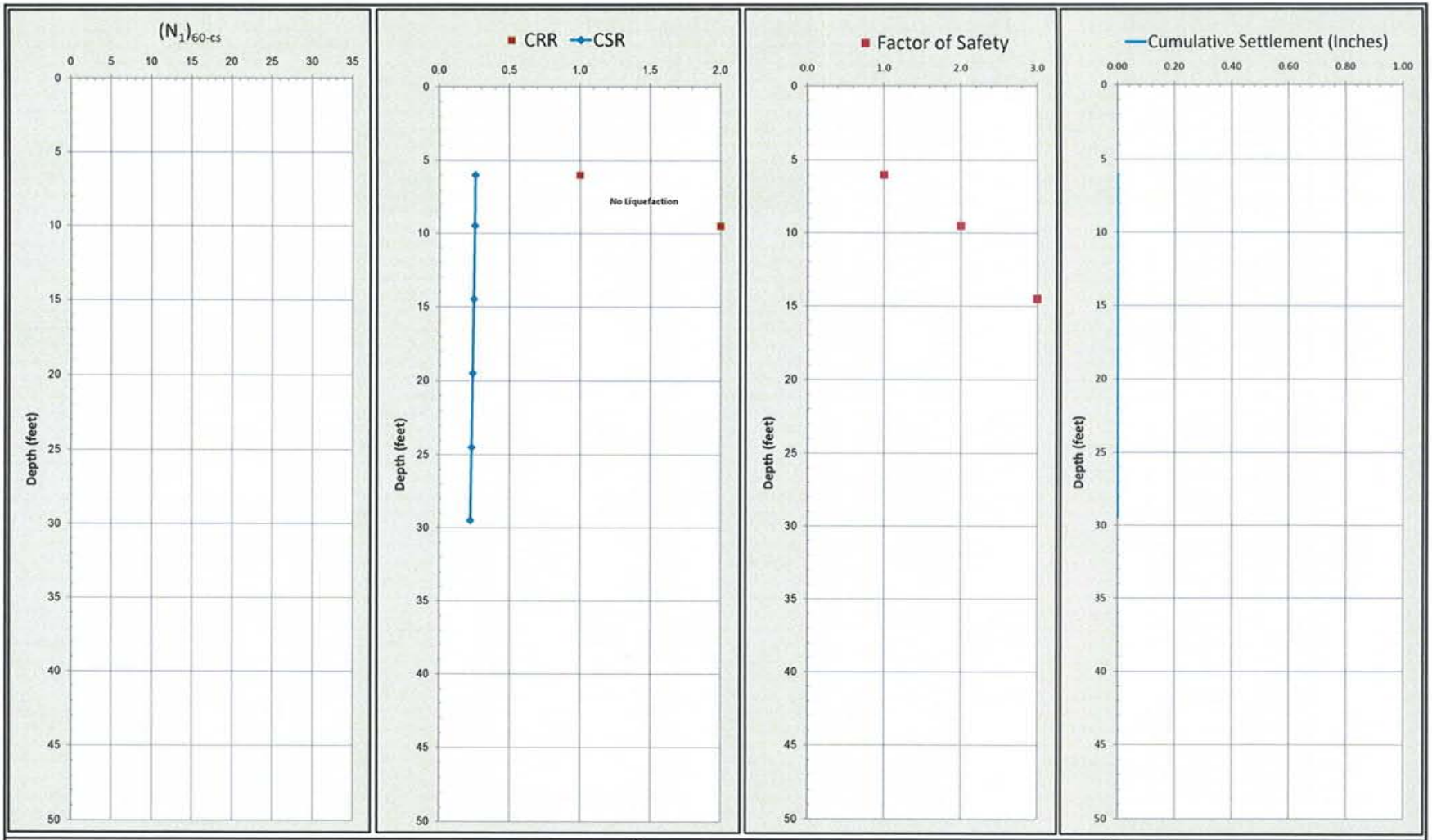
San Jose, California

Project Number: 336-2-3

Figure Number: Figure 8

9/13/2011

Boring EB-2



CORNERSTONE EARTH GROUP

Liquefaction Analysis Summary

San Felipe Road Residential

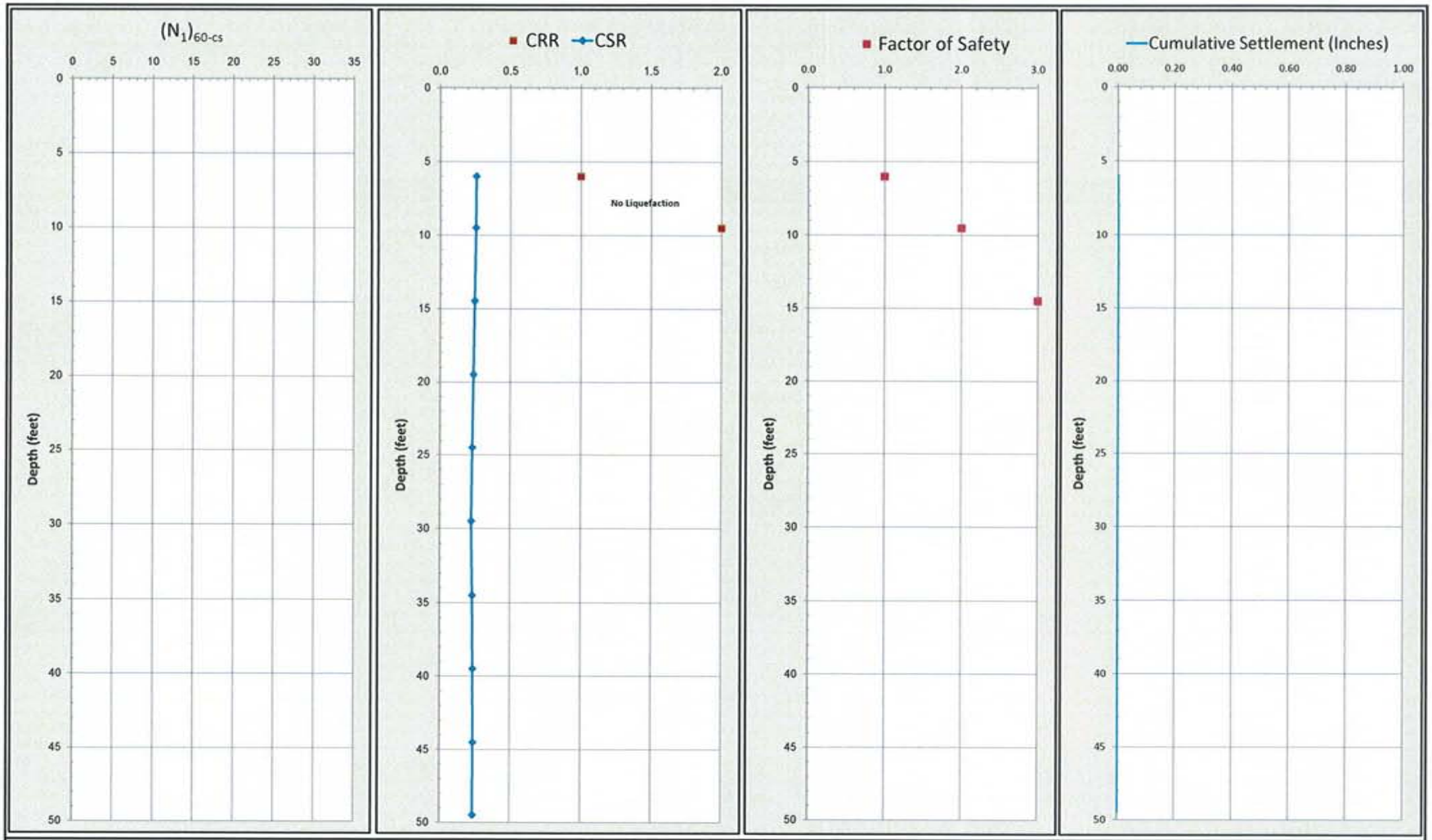
San Jose, California

Project Number: 336-2-3

Figure Number: Figure 9

9/13/2011

Boring EB-3



CORNERSTONE EARTH GROUP

Liquefaction Analysis Summary

San Felipe Road Residential

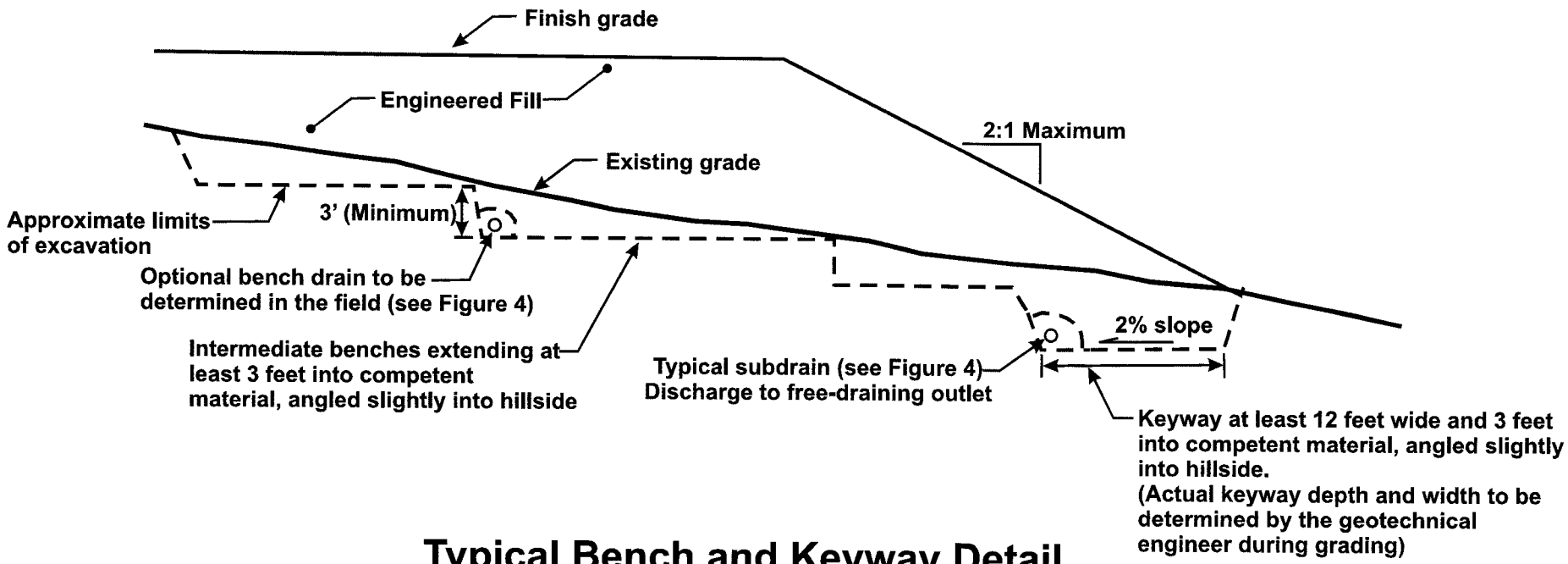
San Jose, California

Project Number: 336-2-3

Figure Number: Figure 10

9/13/2011

Boring EB-4



Typical Bench and Keyway Detail

Not to scale

Note: Fill slopes should be over-built at least 18 to 24 inches and trimmed to expose compacted fill.

CORNERSTONE EARTH GROUP

Typical Bench and Keyway Detail

San Felipe Road Residential
San Felipe Road
San Jose, CA

Project Number	336-2-13
Figure Number	Figure 11
Date	September 2009
Drawn By	FLL

DRAINAGE MATERIAL

Alternative 1

Class 2 Permeable Material
(Caltrans Standard Specs, latest edition)

Material shall consist of clean, coarse sand and gravel or crushed stone, conforming to the following gradation requirements:

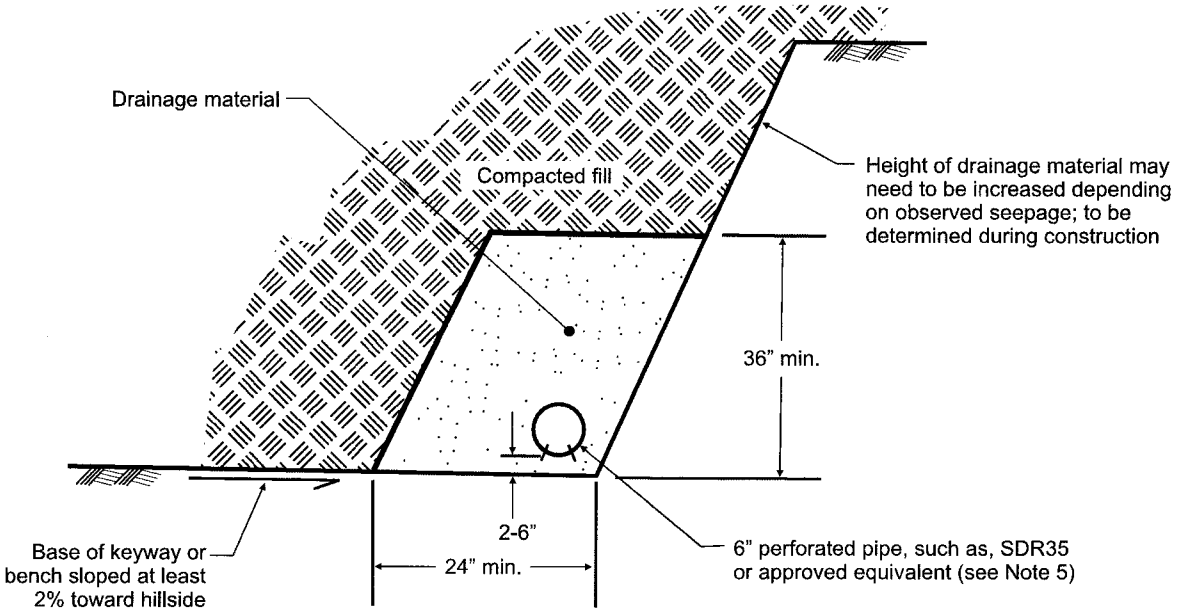
Sieve Size	% Passing Sieve
1"	100
3/4"	90-100
3/8"	40-100
#4	25-40
#8	18-33
#30	5-15
#50	0-7
#200	0-3

Alternative 2

½- to 3/4- inch Clean Crushed Rock or Gravel Wrapped in Filter Fabric

All non-woven filter fabric shall meet the following minimum average roll values unless otherwise specified by Cornerstone Earth Group

Grab Strength (ASTM D-4632):	180 lbs.
Mass Per Unit Area (ASTM D-4751):	5 oz/yd
Apparent Opening Size (ASTM D-4751):	70-100 U.S. std. sieve
Flow Rate (ASTM D-4491):	80 gal/min/ft
Puncture Strength (ASTM D-4833):	80 lbs.



Notes:

1. 1% fall (minimum) along all keyways, benches and subdrain lines.
2. All perforated pipe placed perforations down.
3. All pipe joints shall be glued.
4. All subdrains should be discharged to a free draining outlet approved by the Civil Engineer.
5. Subdrain pipe (perforated or solid connector) should consist of SDR-35 PVC pipe when placed in fills less than 30 feet deep. SDR-23.5 PVC pipe should be used when fill is greater than 30 feet deep.

CORNERSTONE EARTH GROUP

Typical Keyway Subdrain Detail

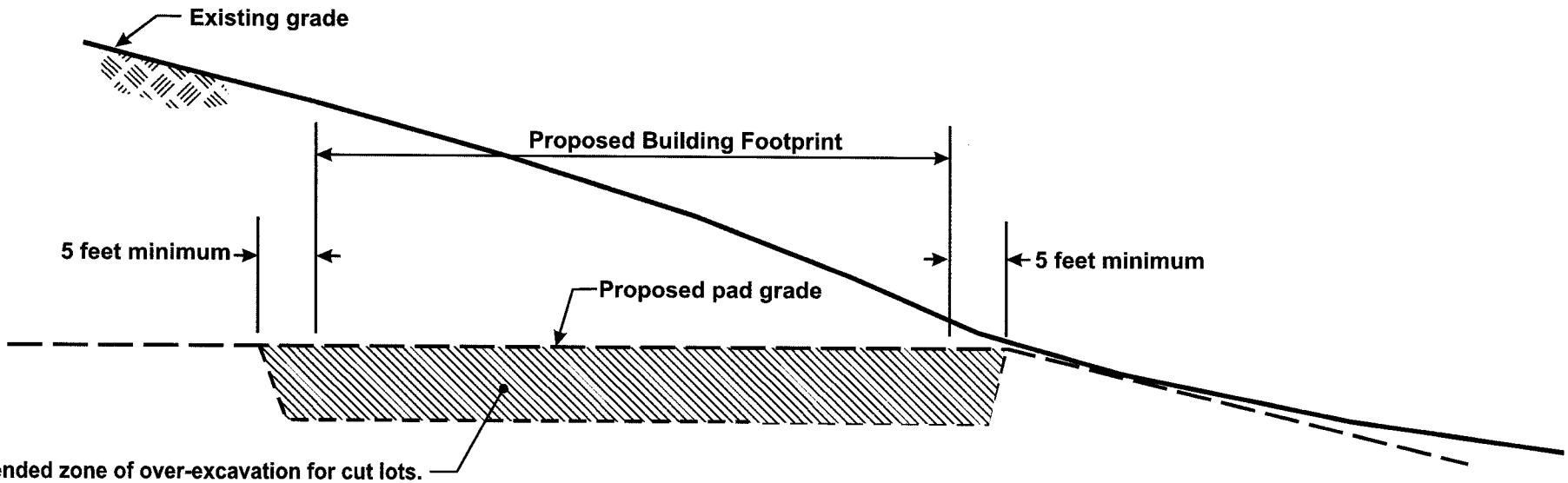
San Felipe Road Residential
San Felipe Road
San Jose, CA

Project Number: 336-2-3

Figure Number: Figure 12

Date: September 2009

Drawn By: MGV



Conceptual Cut Lot Over-Excavation

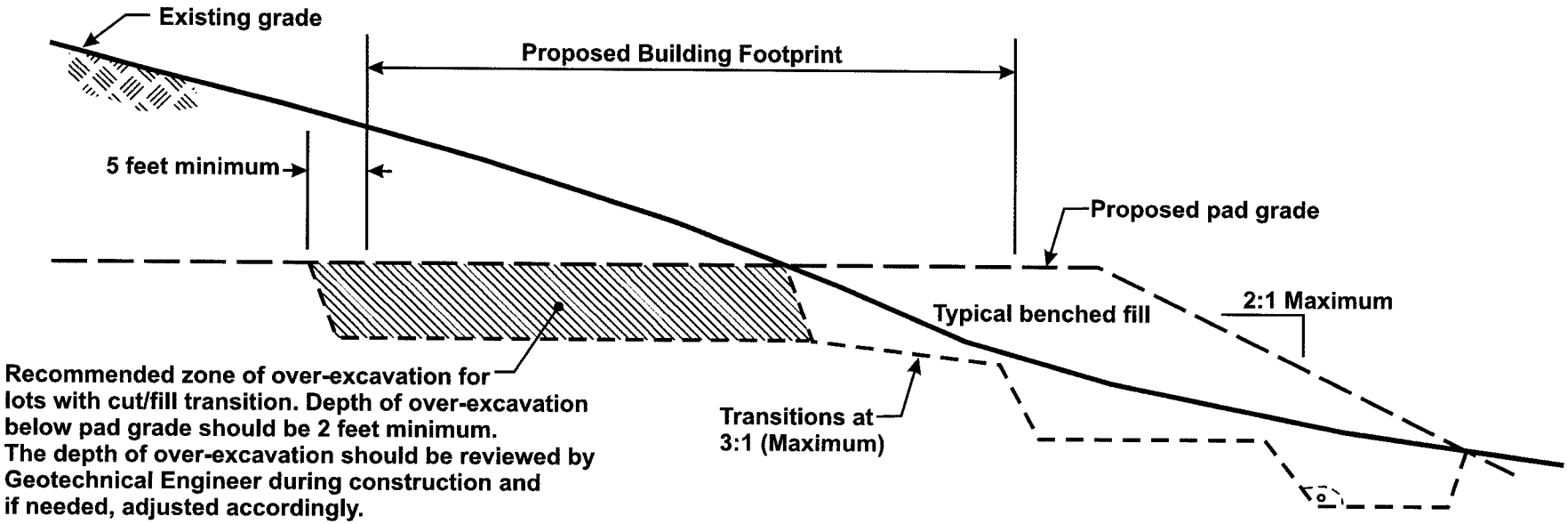
Not to scale

CORNERSTONE EARTH GROUP

Conceptual Cut Lot Over-Excavation

San Felipe Road Residential
San Felipe Road
San Jose, CA

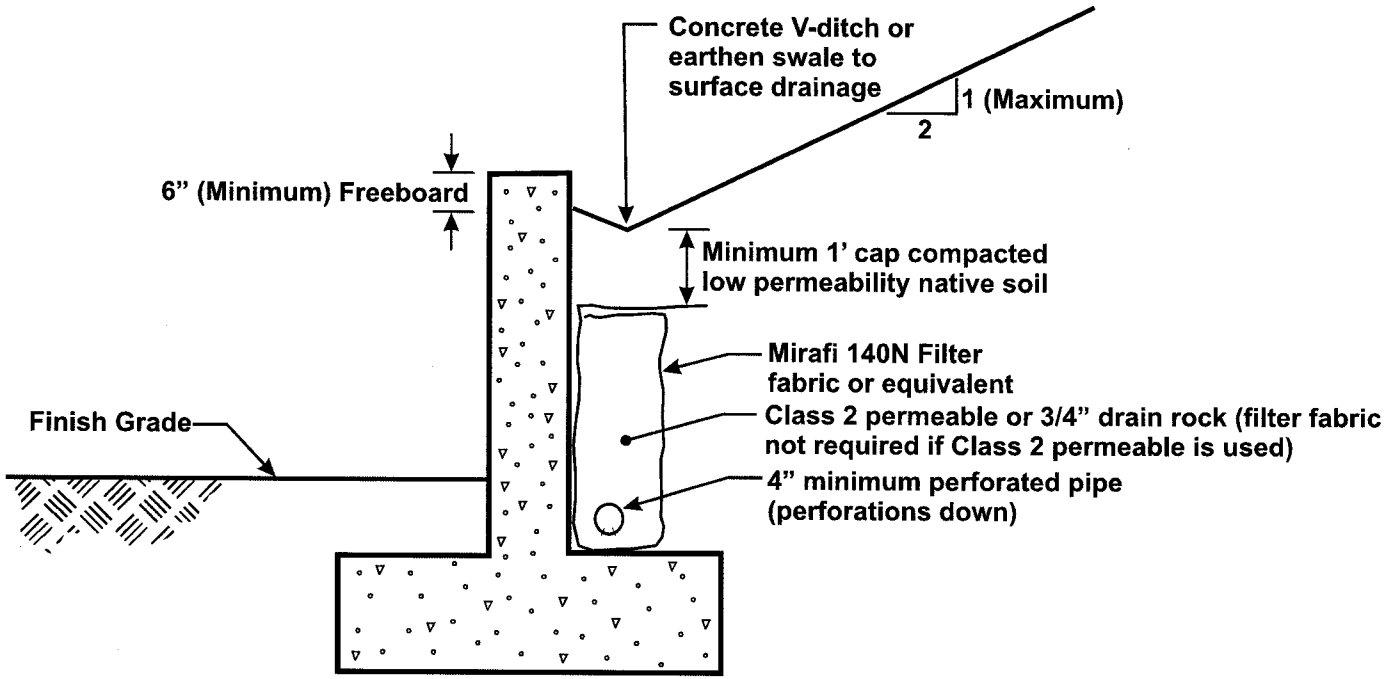
Project Number	336-2-3
Figure Number	Figure 13
Date	September 2009
Drawn By	FLL



Conceptual Cut / Fill Lot Over-Excavation

Not to scale

CORNERSTONE EARTH GROUP	Conceptual Cut / Fill Lot Over-Excavation **San Felipe Road Residential** **San Felipe Road** **San Jose, CA**	Project Number 336-2-3 Figure Number Figure 14 Date September 2009 / Drawn By FLL



Retaining Wall Schematic

Not to scale

CORNERSTONE EARTH GROUP	Retaining Wall Schematic **San Felipe Road Residential** **San Felipe Road** **San Jose, CA**	Project Number 336-2-3 Figure Number Figure 15 Date September 2009 / Drawn By FLL

APPENDIX A: FIELD INVESTIGATION

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using truck-mounted, hollow-stem auger drilling equipment. Four 8-inch-diameter exploratory borings were drilled on June 16, 2011 to depths of 30 to 50 feet. The approximate locations of exploratory borings are shown on the Site Plan, Figure 2. The soils encountered were continuously logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D2488). Boring logs, as well as a key to the classification of the soil and bedrock, are included as part of this appendix.

Boring locations were approximated using existing site boundaries and other site features as references. Boring elevations were based on interpolation of plan contours. The locations and elevations of the borings should be considered accurate only to the degree implied by the method used.

Representative soil samples were obtained from the borings at selected depths. All samples were returned to our laboratory for evaluation and appropriate testing. The standard penetration resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch O.D. split-spoon sampler was driven 18 inches and the number of blows was recorded for each 6 inches of penetration (ASTM D1586). 2.5-inch I.D. samples were obtained using a Modified California Sampler driven into the soil with the 140-pound hammer previously described. Unless otherwise indicated, the blows per foot recorded on the boring log represent the accumulated number of blows required to drive the last 12 inches. The various samplers are denoted at the appropriate depth on the boring logs.

Field tests included an evaluation of the unconfined compressive strength of the soil samples using a pocket penetrometer device. The results of these tests are presented on the individual boring logs at the appropriate sample depths.

Attached boring logs and related information depict subsurface conditions at the locations indicated and on the date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these boring locations. The passage of time may result in altered subsurface conditions due to environmental changes. In addition, any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	Cu>4 AND 1<Cc<3	GW	WELL-GRADED GRAVEL
			Cu>4 AND 1>Cc>3	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	Cu>6 AND 1<Cc<3	SW	WELL-GRADED SAND
			Cu>6 AND 1>Cc>3	SP	POORLY-GRADED SAND
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY
			PI>4 AND PLOTS<"A" LINE	ML	SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY
			PI PLOTS <"A" LINE	MH	ELASTIC SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT

OTHER MATERIAL SYMBOLS

- Poorly-Graded Sand with Clay
- Clayey Sand
- Sandy Silt
- Artificial/Undocumented Fill
- Poorly-Graded Gravelly Sand
- Topsoil
- Well-Graded Gravel with Clay
- Well-Graded Gravel with Silt
- Sand
- Silt
- Well Graded Gravelly Sand
- Gravelly Silt
- Asphalt
- Boulders and Cobble

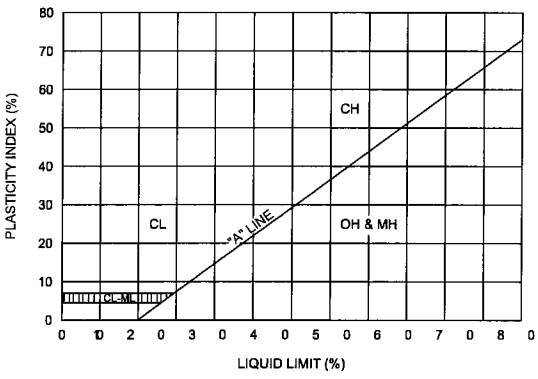
SAMPLER TYPES

- SPT
- Modified California (2.5" I.D.)
- Rock Core
- Shelby Tube
- No Recovery
- Grab Sample

ADDITIONAL TESTS

CA	-	CHEMICAL ANALYSIS (CORROSIVITY)	PI	-	PLASTICITY INDEX
CD	-	CONSOLIDATED DRAINED TRIAXIAL	SW		SWELL TEST
CN	-	CONSOLIDATION	TC	-	CYCLIC TRIAXIAL
CU	-	CONSOLIDATED UNDRAINED TRIAXIAL	TV	-	TORVANE SHEAR
DS	-	DIRECT SHEAR	UC	-	UNCONFINED COMPRESSION
PP	-	POCKET PENETROMETER (TSF)	(1.5)	-	(WITH SHEAR STRENGTH IN KSF)
(3.0)	-	(WITH SHEAR STRENGTH IN KSF)			
RV	-	R-VALUE	UU	-	UNCONSOLIDATED UNDRAINED TRIAXIAL
SA	-	SIEVE ANALYSIS: % PASSING #200 SIEVE			
▼	-	WATER LEVEL			

PLASTICITY CHART



PENETRATION RESISTANCE (RECORDED AS BLOWS / FOOT)				
SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

** UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

CORNERSTONE EARTH GROUP

LEGEND TO SOIL DESCRIPTIONS

Figure Number A-1

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential
PROJECT NUMBER 336-2-3
PROJECT LOCATION San Jose, California

DATE STARTED 6/16/11 **DATE COMPLETED** 6/16/11
GROUND ELEVATION 592.5 FT +/- **BORING DEPTH** 30 ft.
DRILLING CONTRACTOR Exploration Geoserices, Inc. **LATITUDE** _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-61, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY NBZ
▽ **AT TIME OF DRILLING** Not Encountered
NOTES _____
▼ **AT END OF DRILLING** 27 ft.

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
592.5	0	6 inches Topsoil with organics							
592.0		**Clayey Sand (SC) [Qhc]** medium dense, moist, brown, fine to medium sand, some fine subangular to subrounded gravel	27	MC-1B	101	10	10		
589.5		Liquid Limit = 25, Plastic Limit = 15							
		Lean Clay with Sand (CL) [Qhc] hard, moist, brown, fine to medium sand, trace fine subangular to subrounded gravel, moderate plasticity	56	MC-2B	111	15	22		>4.5
587.5	5	Liquid Limit = 39, Plastic Limit = 17							
		Clayey Sand with Gravel (SC) [Qhc] medium dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	23	MC-3B	113	11		23	
			15	MC-4B	104	11	15	29	
	10	Liquid Limit = 30, Plastic Limit = 15							
			15	MC-5B	106	20			
578.0	15	**Lean Clay (CL) [Qhc]** medium stiff, moist, brown, some fine to medium sand, moderate plasticity	7	SPT-6		23		89	
			14	MC					
	20	stiff, gray mottles							
570.5		**Lean Clay with Sand (CL) [Qhc]** very stiff, moist, brown with gray mottles, fine to coarse sand, some fine subangular to subrounded gravel, moderate plasticity	14	SPT-8		17			
567.5	25								

Continued Next Page

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential

PROJECT NUMBER 336-2-3

PROJECT LOCATION San Jose, California

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
567.5	25		**Lean Clay with Sand (CL) [Qhc]** very stiff, moist, brown with gray mottles, fine to coarse sand, some fine subangular to subrounded gravel, moderate plasticity						
			stff	13	SPT-9		20		
562.5	30		Bottom of Boring at 30.0 feet.						
	35								
	40								
	45								
	50								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential
PROJECT NUMBER 336-2-3
PROJECT LOCATION San Jose, California

DATE STARTED 6/16/11 **DATE COMPLETED** 6/16/11
GROUND ELEVATION 593.5 FT +/- **BORING DEPTH** 50 ft.
DRILLING CONTRACTOR Exploration Geoserices, Inc. **LATITUDE** _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-61, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY NBZ ▽ **AT TIME OF DRILLING** 24.5 ft.
NOTES _____ ▼ **AT END OF DRILLING** 25.5 ft.

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
593.5	0	8 inches topsoil with organics							
592.8		**Clayey Sand (SC) [Qhc]** medium dense, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel	30	MC-1B	103	6			
590.5		**Sandy Lean Clay (SC) [Qhc]** hard, moist, brown, fine to coarse sand, some fine subangular to subrounded gravel, moderate plasticity	44	MC-2B	111	11			>4.5
588.5	5	**Clayey Sand with Gravel (SC) [Qhc]** medium dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	41	MC-3B	128	9			>4.5
585.5		**Sandy Lean Clay (CL) [Qhc]** stiff, moist, brown, fine to medium sand, some fine subangular to subrounded gravel, low plasticity Liquid Limit = 31, Plastic Limit = 15	10	MC-4B	103	19	16	76	
581.5	10	**Clayey Sand with Gravel (SC) [Qhc]** medium dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel, some thin layers of sandy lean clay	14	MC-5B	108	8			
	15		11	SPT-6		16		48	
			18	SPT-7		13		33	
	20		11	SPT-8		11		24	
		Liquid Limit = 23, Plastic Limit = 16	18	SPT-9		12	7	13	
568.5	25								

Continued Next Page

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential

PROJECT NUMBER 336-2-3

PROJECT LOCATION San Jose, California

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
568.5	25		**Sandy Lean Clay with Gravel (CL) [Qhc]** medium stiff, moist, brown with gray mottles, fine sand, fine subangular to subrounded gravel, low to moderate plasticity	16	SPT-10		37		67
				15	NR				
	30			28	SPT-11		19		59
				31	SPT				
	35								
558.0			**Clayey Sand with Gravel (SC) [Qpf]** very dense, moist,brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	20	SPT-13		14		21
				61	SPT-14		14		28
	40								
				57	SPT-15		17		
	45								
				73	SPT-16		17		
543.5	50		Bottom of Boring at 50.0 feet.						

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential
PROJECT NUMBER 336-2-3
PROJECT LOCATION San Jose, California

DATE STARTED 6/15/11 **DATE COMPLETED** 6/15/11
GROUND ELEVATION 599.5 FT +/- **BORING DEPTH** 30 ft.
DRILLING CONTRACTOR Exploration Geoserices, Inc.
LATITUDE _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-61, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY NBZ
▽ **AT TIME OF DRILLING** Not Encountered
NOTES _____
▼ **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL)
599.5	0	1 inch asphalt concrete over 3 inches aggregate base							
599.2		**Clayey Sand with Gravel (SC) [Qpf]** medium dense, moist, light brown and reddish brown mottled, fine to coarse sand, fine to coarse subangular to subrounded gravel	38	MC-1B	114	14			
			39	MC-2B	117	9			
	5		49	MC-3B	120	13		33	
591.0		**Sandy Lean Clay (CL) [Qpf]** hard, moist, reddish brown, fine to coarse sand, some fine subangular to subrounded gravel, low to moderate plasticity	57	MC-4B	113	16			>4.5 ○
	10								
		some gray mottles	51	SPT-5		14			>4.5 ○
	15								
582.5		**Clayey Sand with Gravel (SC) [Qpf]** very dense, moist, light brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	56	SPT-6		12		24	
	20								
			61	SPT-7		11		23	
574.5	25								

Continued Next Page

BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential

PROJECT NUMBER 336-2-3

PROJECT LOCATION San Jose, California

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE
574.5	25		**Clayey Sand with Gravel (SC) [Qpf]** very dense, moist, light brown, fine to coarse sand, fine to coarse subangular to subrounded gravel						
			dense	49	SPT-8		13		26
569.5	30		Bottom of Boring at 30.0 feet.						
	35								
	40								
	45								
	50								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

BORING NUMBER EB-4

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential
PROJECT NUMBER 336-2-3
PROJECT LOCATION San Jose, California

DATE STARTED 6/16/11 **DATE COMPLETED** 6/16/11
GROUND ELEVATION 597.5 FT +/- **BORING DEPTH** 50 ft.
DRILLING CONTRACTOR Exploration Geoserices, Inc.
LATITUDE _____ **LONGITUDE** _____
DRILLING METHOD Mobile B-61, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY NBZ
▽ **AT TIME OF DRILLING** 28.5 ft.
NOTES _____
▼ **AT END OF DRILLING** Not Encountered

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0)
597.5	0		1 inch asphalt concrete over 3 inches aggregate base							
597.2			**Clayey Sand with Gravel (SC) [Qpf]** medium dense to dense, moist, light brown and reddish brown mottled, fine to coarse sand, fine to coarse subangular to subrounded gravel	41	MC-1B	113	13			
				60	MC-2B	118	12			
592.0	5		**Sandy Lean Clay (CL) [Qpf]** hard, moist, brown, fine sand, trace subangular to subrounded gravel, moderate plasticity	76	MC					>4.5 ○
589.0			**Clayey Sand with Gravel (SC) [Qpf]** medium dense to dense, moist, light brown and reddish brown mottled, fine to coarse sand, fine to coarse subangular to subrounded gravel	58	MC					
	10									
	15			73	MC-5B	125	11		18	
	20			63	MC-6B	125	12			
			becomes very dense	54	SPT-7		12		20	
572.5	25									

Continued Next Page

CORNERSTONE EARTH GROUP

PROJECT NAME San Felipe Road Residential
PROJECT NUMBER 336-2-3
PROJECT LOCATION San Jose, California

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 1.0 2.0 3.0 4.0
572.5	25		**Clayey Sand with Gravel (SC) [Qpf]** very dense, moist, light brown and reddish brown mottled, fine to coarse sand, fine to coarse subangular to subrounded gravel							
				73	SPT-8		13			
	30									
				89	SPT					
	35									
559.0			**Sandy Lean Clay (CL) [Qpf]** hard, wet, light brown with red brown mottles, fine to coarse sand, some fine subangular to subrounded gravel, low to moderate plasticity	58	SPT-10		15		65	>4.5 ○
	40									
554.0			**Clayey Sand with Gravel (SC) [Qpf]** very dense, moist, light brown and reddish brown mottled, fine to coarse sand, fine to coarse subangular to subrounded gravel	57	SPT		11			
	45									
				69	SPT-12					
547.5	50		Bottom of Boring at 50.0 feet.							

APPENDIX B: LABORATORY TEST PROGRAM

The laboratory testing program was performed to evaluate the physical and mechanical properties of the soils retrieved from the site to aid in verifying soil classification.

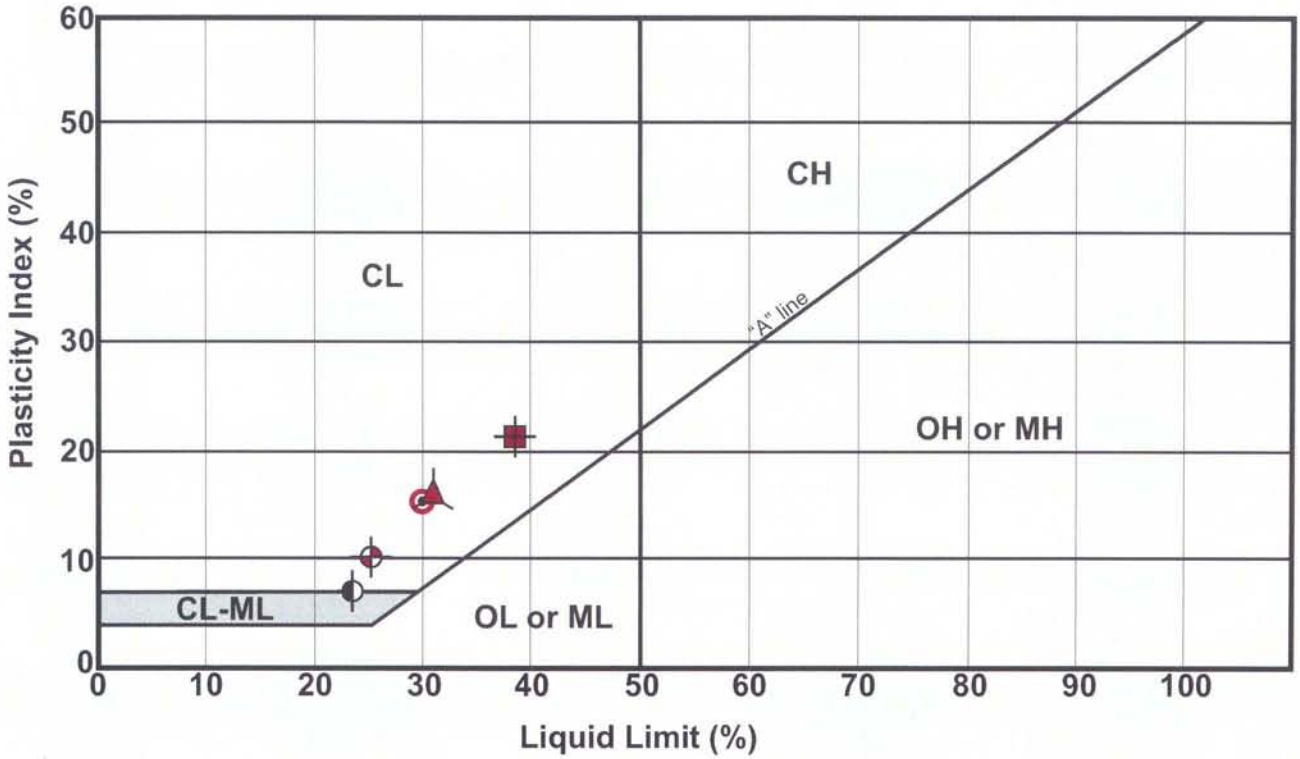
Moisture Content: The natural water content was determined (ASTM D2216) on 39 samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

Dry Densities: In place dry density determinations (ASTM D2937) were performed on 18 samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Washed Sieve Analyses: The percent soil fraction passing the No. 200 sieve (ASTM D1140) was determined on 20 samples of the subsurface soils to aid in the classification of these soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Plasticity Index: Five Plasticity Index determinations (ASTM D4318) were performed on samples of the subsurface soils to measure the range of water contents over which this material exhibits plasticity. The Plasticity Index was used to classify the soil in accordance with the Unified Soil Classification System and to evaluate the soil expansion potential. Results of these tests are shown on the boring logs at the appropriate sample depths.

Plasticity Index (ASTM D4318) Testing Summary



Symbol	Boring No.	Depth (ft)	Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	Passing No. 200 (%)	Group Name (USCS - ASTM D2487)
⊕	EB-1	2.0	10	25	15	10	—	Clayey Sand (SC) [Qhc]
■	EB-1	4.0	15	39	17	22	—	Lean Clay with Sand (CL) [Qhc]
◎	EB-1	9.0	11	30	15	15	29	Clayey Sand (SC) [Qhc]
▲	EB-2	9.5	19	31	15	16	76	Sandy Lean Clay (CL) [Qhc]
◐	EB-2	23.5	12	23	16	7	13	Clayey Sand (SC) [Qhc]

CORNERSTONE EARTH GROUP

Plasticity Index Testing Summary

San Felipe Road Development
San Jose, CA

Project Number: 336-2-3

Figure Number: Figure B1

Date: July 2011

Drawn By: FLL

APPENDIX C: LIQUEFACTION ANALYSES CALCULATION

CORNERSTONE EARTH GROUP

Boring EB-4

Total Settlement: 0.0 (Inches)

Point Number	Depth (ft)	Layer thickness (ft)	Measured N-Value (bpf)	Flags	Fines Content (%)	C_E	C_B	C_R	C_S	N_{60} (bpf)	σ_{vo} (psf)	σ'_{vo} (psf)	C_N	$(N_1)_{60}$ (bpf)	N_{fines} (bpf)	$(N_1)_{60\text{-}cs}$ (bpf)	r_d	CSR	MSF	$K\sigma$	CRR @ M=7.5 σ'_{vo}=1atm	CRR	FS	γ_{lim} (%)	Parameter F_{cs}	γ_{max} (%)	ΔH_i (ft)	ΔLDI_i (ft)	ε_{vert} (%)	ΔS_i (in)
1	6.0	2.0	46	Clay	60	1.05	1.15	0.80	1.00	44.4	750.00	750.00	1.31	n.a.	n.a.	n.a.	0.98	0.256	1.335	1.10	n.a.	n.a.	n.a.	0.000	0.000	0.000	2.0	0.000	0.000	0.000
2	9.5	4.5	35	Sand	18	1.05	1.15	0.85	1.00	35.9	1187.50	1187.50	1.16	41.8	4.1	45.9	0.97	0.251	1.335	1.10	CRR>10	CRR>10	FS>10	0.002	-1.264	0.000	4.5	0.000	0.000	0.000
3	14.5	5.0	44	Sand	18	1.05	1.15	0.85	1.00	45.2	1812.50	1812.50	1.04	47.0	4.1	51.2	0.94	0.245	1.335	1.05	CRR>10	CRR>10	FS>10	0.000	-1.683	0.000	5.0	0.000	0.000	0.000
4	19.5	5.0	38	Sand	18	1.05	1.15	0.95	1.00	43.6	2437.50	2437.50	0.96	42.0	4.1	46.1	0.91	0.237	1.335	0.96	CRR>10	CRR>10	FS>10	0.002	-1.277	0.000	5.0	0.000	0.000	0.000
5	24.5	5.0	54	Sand	20	1.05	1.15	0.95	1.00	61.9	3062.50	3062.50	0.91	56.2	4.5	60.7	0.88	0.229	1.335	0.89	CRR>10	CRR>10	FS>10	0.000	-2.483	0.000	5.0	0.000	0.000	0.000
6	29.5	5.0	73	Sand	60	1.05	1.15	1.00	1.00	88.1	3687.50	3625.10	0.87	76.5	5.6	82.1	0.85	0.224	1.335	0.84	CRR>10	CRR>10	FS>10	0.000	-4.390	0.000	5.0	0.000	0.000	0.000
7	34.5	5.0	89	Sand	15	1.05	1.15	1.00	1.00	107.5	4312.50	3938.10	0.85	91.3	3.3	94.6	0.81	0.231	1.335	0.82	CRR>10	CRR>10	FS>10	0.000	-5.551	0.000	5.0	0.000	0.000	0.000
8	39.5	5.0	58	Clay	65	1.05	1.15	1.00	1.00	70.0	4937.50	4251.10	0.83	n.a.	n.a.	n.a.	0.78	0.235	1.335	0.79	n.a.	n.a.	n.a.	0.000	0.000	0.000	5.0	0.000	0.000	0.000
9	44.5	5.0	57	Sand	15	1.05	1.15	1.00	1.00	68.8	5562.50	4564.10	0.82	56.2	3.3	59.5	0.75	0.236	1.335	0.77	CRR>10	CRR>10	FS>10	0.000	-2.382	0.000	5.0	0.000	0.000	0.000
10	49.5	3.0	69	Sand	15	1.05	1.15	1.00	1.00	83.3	6187.50	4877.10	0.80	66.9	3.3	70.2	0.71	0.235	1.335	0.75	CRR>10	CRR>10	FS>10	0.000	-3.311	0.000	3.0	0.000	0.000	0.000
11																														0.000
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CORNERSTONE EARTH GROUP

Type of Services	**Phase I Environmental Site Assessment and Preliminary Soil Quality Evaluation**
Location	**6782 and 6790 San Felipe Road San Jose, California**
Client	**DAL Properties, LLC**
Client Address	**255 West Julian Street, Suite 502 San Jose, California 95113**
Project Number	**336-2-1**
Date	**December 14, 2010**

Prepared by **Stason I. Foster, P.E.**
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CORNERSTONE
EARTH GROUP

Type of Services	**Phase I Environmental Site Assessment and Preliminary Soil Quality Evaluation**
Location	**6782 and 6790 San Felipe Road San Jose, California**

SECTION 1: INTRODUCTION

This report presents the results of the Phase I Environmental Site Assessment (ESA) and Preliminary Soil Quality Evaluation performed at 6782 and 6790 San Felipe Road in San Jose, California (Site) as shown on Figures 1 and 2. This work was performed for DAL Properties, LLC in accordance with our November 10, 2010 Agreement (Agreement). Cornerstone Earth Group, Inc. (Cornerstone) understands that DAL Properties, LLC intends to purchase the Site for residential development.

1.1 PURPOSE

The scope of work presented in the Agreement was prepared in general accordance with ASTM E 1527-05 titled, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Standard). The ASTM Standard is in general compliance with the Environmental Protection Agency (EPA) rule titled, "Standards and Practices for All Appropriate Inquiries; Final Rule" (AAI Rule). The purpose of this Phase I ESA is to strive to identify, to the extent feasible pursuant to the scope of work presented in the Agreement, Recognized Environmental Conditions at the property.

As defined by ASTM E 1527-05, the term Recognized Environmental Condition means the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water on the property.

1.2 SCOPE OF WORK

As presented in our Agreement, the scope of work performed for this Phase I ESA included the following:

- A reconnaissance of the Site to note readily observable indications of significant hazardous materials releases to structures, soil or ground water.
- Drive-by observation of adjoining properties to note readily apparent hazardous materials activities that have or could significantly impact the Site.

- Acquisition and review of a regulatory agency database report of public records for the general area of the Site to evaluate potential impacts to the Site from reported contamination incidents at nearby facilities.
- Review of readily available information on file at selected governmental agencies to help evaluate past and current Site use and hazardous materials management practices.
- Review of readily available maps and aerial photographs to help evaluate past and current Site uses.
- Interviews with persons reportedly knowledgeable of existing and prior Site uses (Site owners).
- Collection of nine near surface soil samples for laboratory analysis.
- Preparation of a written report summarizing our findings and recommendations.

The limitations for the Phase I ESA and Preliminary Soil Quality Evaluation are presented in Section 11; the terms and conditions of our Agreement are presented in Appendix A.

1.3 ASSUMPTIONS

In preparing this Phase I ESA and Preliminary Soil Quality Evaluation, Cornerstone assumed that all information received from interviewed parties is true and accurate. In addition, we assumed that all records obtained by other parties, such as regulatory agency databases, maps, related documents and environmental reports prepared by others are accurate and complete. We also assumed that the boundaries of the Site, based on information provided by DAL Properties, LLC, are as shown on Figure 2. We have not independently verified the accuracy or completeness of any data received.

1.4 ENVIRONMENTAL PROFESSIONAL

This Phase I ESA and Preliminary Soil Quality Evaluation was performed by Stason I. Foster, P.E., and Ron L. Helm, C.E.G., R.E.A. II, environmental professionals who meet the ASTM E 1527-05 qualifications.

SECTION 2: SITE DESCRIPTION

This section describes the Site as of the date of this Phase I ESA. The location of the Site is shown on Figures 1 and 2. Tables 1 through 3 summarize general characteristics of the Site and adjoining properties. The Site is described in more detail in Section 7, based on our on-Site observations.

2.1 LOCATION AND OWNERSHIP

Table 1 describes the physical location, and ownership of the property, based on information provided by DAL Properties, LLC.

Table 1. Location and Ownership

Assessor's Parcel No. (APN)	660-05-001 and 002
Reported Address/Location	6782 and 6790 San Felipe Road, San Jose, California
Owner	The Hunt Family Trust
Approximate Lot Size	2.04 acres
Approximate Bldg. Size	1,800 sq. ft. (6782 San Felipe Road) 1,064 sq. ft. (6790 San Felipe Road)
Construction Date	1977 (6782 San Felipe Road) 1945 (6790 San Felipe Road)

2.2 CURRENT/PROPOSED USE OF THE PROPERTY

The current and proposed uses of the property are summarized in Table 2.

Table 2. Current and Proposed Uses

Current Use	Residential
Proposed Use	Residential

2.3 SITE SETTING AND ADJOINING SITE USE

Land use in the general Site vicinity appears to be primarily residential and undeveloped land. Based on our Site vicinity reconnaissance, adjoining Site uses are summarized below in Table 3.

Table 3. Adjoining Site Uses

Northwest	Residential
Northeast	Undeveloped
Southwest	Residential
Southeast	Undeveloped

SECTION 3: USER PROVIDED INFORMATION

The ASTM standard defines the User as the party seeking to use a Phase I ESA to evaluate the presence of Recognized Environmental Conditions associated with a property. For the purpose of this Phase I ESA, the User is DAL Properties, LLC.

3.1 CHAIN OF TITLE

A chain-of-title was not provided for our review.

3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

DAL Properties, LLC provided Cornerstone with a preliminary title report, dated October 27, 2010, prepared by First American Title. The title report did not identify any environmental liens.

3.3 SPECIALIZED KNOWLEDGE AND/OR COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The ASTM Standard requires that if the User is aware of any specialized knowledge and/or commonly known or reasonably ascertainable information within the local community about the Site that is material to Recognized Environmental Conditions, such as environmental liens, a significantly lower purchase price due to the property being affected by hazardous materials, or other conditions that are material to Recognized Environmental Conditions in connection with the Site, it is the User's responsibility to communicate such information to the environmental professional. Based on information provided by or discussions with DAL Properties, LLC, we understand that DAL Properties, LLC does not have such specialized knowledge and/or commonly known or reasonably ascertainable information regarding the Site.

3.4 REASON FOR PERFORMING PHASE I ENVIRONMENTAL SITE ASSESSMENT

We understand that DAL Properties, LLC intends to purchase the Site for residential development. We performed this Phase I ESA and Preliminary Soil Quality Evaluation to support DAL Properties, LLC in evaluation of Recognized Environmental Conditions at the Site. This Phase I ESA and Preliminary Soil Quality Evaluation is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions at the Site.

SECTION 4: RECORDS REVIEW

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

Cornerstone contracted with a firm specializing in the computerized search of environmental regulatory databases to evaluate the likelihood of contamination incidents at and near the Site. The databases and search distances were in general accordance with the requirements of ASTM E 1527-05. A list of the database sources reviewed, a description of the sources, and a radius map showing the location of reported facilities relative to the project Site are presented in Appendix B.

Based on the information presented in the agency database report, no off-Site facilities were reported that appear likely to significantly impact soil or ground water beneath the Site. The potential for impact was based on our interpretation of the types of incidents, the location of the reported incidents in relation to the Site and the assumed ground water flow direction.

4.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

The following additional sources of readily ascertainable public information for the Site also were reviewed during this Phase I ESA.

4.2.1 City and County Agency File Review

Cornerstone requested available files pertaining to 6782 and 6790 San Felipe Road at the following public agencies; the San Jose Building Department (SJBD), San Jose Fire Department (SJFD) and the Santa Clara County Department of Environmental Health (SCCDEH). No files pertaining to the Site were identified at the SJFD or SCCDEH.

Information obtained at the SJBD indicates that the Site was annexed by the City in 1992; no additional files were available. We subsequently reviewed Santa Clara County Building Department files; the County files contained a 1976 permit for construction of a residence with an attached garage at 6782 San Felipe Road.

SECTION 5: PHYSICAL SETTING

We reviewed readily available geologic and hydrogeologic information to evaluate the likelihood that chemicals of concern released on a nearby property could pose a significant threat to the Site and/or its intended use.

5.1 RECENT USGS TOPOGRAPHIC MAP

A recent USGS 7.5 minute topographic map was reviewed to evaluate the physical setting of the Site. The Site's elevation is approximately 575 feet above mean sea level; topography in the vicinity slopes toward nearby creeks that drain generally to the northwest.

5.2 HYDROGEOLOGY

No information regarding on-Site ground water depths was identified during this study. Misery Creek bisects the Site. Ground water depths would be expected to vary based on distance from the creek. Ground water likely flows towards the creek or in a northwesterly direction.

SECTION 6: HISTORICAL USE INFORMATION

The objective of the review of historical use information is to develop a history of the previous uses of the Site and surrounding area in order to help identify the likelihood of past uses having led to Recognized Environmental Conditions at the property. The ASTM standard requires the identification of all obvious uses of the property from the present back to the property's first developed use, or back to 1940, whichever is earlier, using reasonably ascertainable standard historical sources.

6.1 HISTORICAL SUMMARY OF SITE

The historical sources reviewed are summarized below. The results of our review of these sources are summarized in Table 4.

- **Historical Aerial Photographs:** We reviewed aerial photographs dated 1939, 1948, 1956, 1965, 1973, 1982, 1993, 1998 and 2005 obtained from Environmental Data Resources, Inc. (EDR) of Milford, Connecticut; copies of aerial photographs reviewed are presented in Appendix C.

- **Historical Topographic Maps:** We reviewed USGS 15-minute and 7.5-minute historic topographic maps dated 1897, 1955 and 1968; copies of historic topographic maps reviewed are presented in Appendix C.

- **Historical Fire Insurance Maps:** EDR reported that the Site was not within the coverage area of fire insurance maps.

- **Local Street Directories:** We reviewed city directories obtained from EDR that were dated from 1922 to 2006 to obtain information pertaining to past Site occupants; the city directory summary is presented in Appendix D.

Table 4. Summary of Historical Source Information for Site

Date	Source	Comment
1897	Topographic map	No on-Site structures or other Site details are depicted.
1939	Aerial photograph	The southwest portion of the Site (southwest of Misery Creek) is shown to be occupied by an orchard. The remainder of the Site appears undeveloped.
1948	Aerial photograph	The southwest portion of the Site (southwest of Misery Creek) is shown to be occupied by an orchard. The remainder of the Site appears undeveloped. However, due to the quality of the photograph, Site details are difficult to interpret; a small structure may be present on the northeast portion of the Site.
1955	Topographic map	No on-Site structures or other Site details are depicted.
1956	Aerial photograph	A small structure appears to be present on the northeast portion of the Site. The remainder of the Site appears undeveloped.
1965	Aerial photograph	The structure on the northeast portion of the Site appears to have been enlarged and appears to be the current on-Site residence at 6790 San Felipe Road. The associated detached garage also is shown. The remainder of the Site appears undeveloped.
1968	Topographic map	A small structure typical of a residence is depicted on the northeastern portion of the Site.
1973	Aerial photograph	Due to the quality of the photograph, Site details are difficult to interpret.
1982	Aerial photograph	Due to the quality of the photograph, Site details are difficult to interpret; however, both of the current on-Site residences appear to be present.
1993 and 1998	Aerial photographs	What appear to be the two current on-Site residences are shown.
2000	City Directory	The Hunt family is listed as the Site occupant.
2005	Aerial photograph	What appear to be the two current on-Site residences are shown.
2006	City Directory	The Hunt family is listed as the Site occupant.

6.2 HISTORICAL SUMMARY OF SITE VICINITY

Based on our review of the information described in Section 6.1, the general Site vicinity appears to have historically consisted of undeveloped land and agricultural properties with widely spaced residences. By the early 1980s, an increase in residential development is apparent to the northwest of the Site. Further increases in residential development are apparent on subsequent aerial photographs.

SECTION 7: SITE RECONNAISSANCE

We performed a Site reconnaissance to evaluate current Site conditions and to attempt to identify Site Recognized Environmental Conditions. The results of the reconnaissance are discussed below. Additional Site observations are summarized in Table 5 in Section 7.2. Photographs of the Site are presented in Section 7.2.1.

7.1 METHODOLOGY AND LIMITING CONDITIONS

To observe current Site conditions (readily observable environmental conditions indicative of a significant release of hazardous materials), Cornerstone staff Stason I. Foster, P.E. visited the Site on November 24, 2010, and was accompanied by Mr. Kevin Collins (real estate agent) and Mr. Brian Keith Hunt (the owners representative and occupant of 6782 San Felipe Road). Cornerstone staff only observed those areas that were reasonably accessible, safe, and did not require movement of equipment, materials or other objects. The interior of the residential living space was not observed.

7.2 OBSERVATIONS

At the time of our visit, the Site was developed with two single family residences that were occupied by members of the Hunt family. Misery Creek was observed to bisect the Site.

The residence at 6782 San Felipe Road had an attached garage. Several recreational vehicles (RVs), cars, boats, trailers, a metal shipping container and two small storage sheds were observed near the residence. The sheds and shipping container were used to store miscellaneous household belongings. A water well was observed to the northeast of the residence. Mr. Hunt indicated that the well is operational and was historically used as a potable water supply.

A residence at 6790 San Felipe Road was observed at the northeast corner of the Site. A detached garage and storage sheds were observed to the southwest of the residence; these structures were used for storage of miscellaneous household belongings. Due to the large volume of stored items, much of the interior of the detached garage was obscured and not easily viewed. Typical of most residential garages, several containers of paint, building and automobile maintenance supplies, and cleaning products were observed within the garage. These materials were generally stored in retail containers with capacities of one-gallon or less; several 5-gallon buckets of paint also were observed. No significant hazardous materials spills were readily apparent.

An automobile maintenance pit was observed within the concrete floor slab of the garage. The pit was covered by wood planks on which stored items were located; thus, the interior of the pit could not be observed during our visit. Mr. Hunt indicated that the pit had historically been infrequently used for vehicle maintenance by his family.

A wood-fired boiler was observed on the north side of the garage. Mr. Hunt indicated that his father previously had a small business making jams and jelly and the boiler was used as a heat source.

Several piles of debris were observed on the north portion of the Site. The debris appeared to consist of miscellaneous household items, glass jars, cardboard, wood, plastic, furniture and appliances. Two steel above ground storage tanks (ASTs) also were present. Mr. Hunt indicated that the ASTs had been purchased by his father and brought to the Site, but were never used on-Site.

Mr. Hunt indicated that septic tanks were located on the northwest side of each of the two on-Site residences. The tank locations were not readily apparent.

Table 5. Summary of Readily Observable Site Features

General Observation	Comments
Aboveground Storage Tanks	Observed as described above
Agricultural or other Wells	Observed as described above
Air Emission Control Systems	Not Observed
Boilers	Observed as described above
Burning Areas	Not Observed
Chemical Mixing Areas	Not Observed
Chemical Storage Areas	Observed as described above
Clean Rooms	Not Observed
Drainage Ditches	Not Observed
Elevators	Not Observed
Emergency Generators	Not Observed
Equipment Maintenance Areas	Not Observed
Fill Placement	Not Observed
Ground Water Monitoring Wells	Not Observed
High Power Transmission Lines	Not Observed
Hoods and Ducting	Not Observed
Hydraulic Lifts	Not Observed
Incinerator	Not Observed
Petroleum Pipelines	Not Observed
Petroleum Wells	Not Observed
Ponds or Streams	Observed as described above
Railroad Lines	Not Observed
Row Crops or Orchards	Not Observed
Stockpiles of Soil or Debris	Observed as described above
Sumps or Clarifiers	Not Observed
Transformers	Not Observed
Underground Storage Tanks	Not Observed
Vehicle Maintenance Areas	Observed as described above
Vehicle Wash Areas	Not Observed
Wastewater Neutralization Systems	Not Observed

The comment "Not Observed" does not warrant that these features are not present on-Site; it only indicates that these features were not readily observed during the Site visit.

7.2.1 Site Photographs

Photograph 1. Residence at 6782 San Felipe Road.

Photograph 2. Stored vehicles on western portion of the Site.

Photograph 3. Water supply well.

Photograph 4. Residence at 6790 San Felipe Road.

Photograph 5. Detached garage/storage shed at 6790 San Felipe Road.

Photograph 6. Wood-fired boiler on north side of detached garage.

Photograph 7. Debris piles on northern portion of the Site.

Photograph 8. ASTs and debris on northern portion of the Site.

SECTION 8: INTERVIEWS

8.1 ENVIRONMENTAL QUESTIONNAIRE AND OWNER/OCCUPANT INTERVIEWS

To help obtain information on current and historical Site use and use/storage of hazardous materials on-Site, we provided an environmental questionnaire to the Site owner. A copy of the completed questionnaire is attached in Appendix E. Based on our review of the completed questionnaire and discussions with Mr. Brian Keith Hunt (occupant of 6782 San Felipe Road), the Site has been owned by the Hunt family since the 1950s and used for residential purposes. The residences at 6790 and 6782 reportedly were constructed in 1945 and 1977, respectively. The other information provided on the questionnaire appears consistent with that observed during our Site visit as described in Section 7.2.

8.2 INTERVIEWS WITH PREVIOUS OWNERS AND OCCUPANTS

Contact information for previous Site owners and occupants was not provided to us. Therefore, interviews with previous Site owners and occupants could not be performed.

SECTION 9: PRELIMINARY SOIL QUALITY EVALUATION

The portion of the Site located southwest of Misery Creek was historically used for agricultural purposes. Thus, pesticides may have been applied to crops in the normal course of farming operations. Additionally, soil adjacent to structures that are painted with lead-containing paint can become impacted with lead as a result of the weathering and/or peeling of painted surfaces. Soil near wood framed structures also can be impacted by pesticides historically used to control termites. To evaluate these potential concerns, a soil quality evaluation was performed and is described below.

9.1 SOIL SAMPLE COLLECTION AND LABORATORY ANALYSES

On December 2, 2010, nine soil samples (SS-1 through SS-9) were collected. Samples SS-1, 2, 7, 8, and 9 were collected adjacent to the foundations of the on-Site structures (the two on-Site residences and the detached garage). The remaining samples (SS-3 through SS-6) were collected from the area previously used as an orchard. In addition to being within the former orchard area, sample SS-6 was collected near the on-Site well. Wells are often used as water sources for mixing of pesticides at agricultural properties. The samples were collected from the upper approximately ½ foot of soil using hand sampling equipment. The sample locations are shown on Figure 2.

Ends of soil samples for laboratory analyses were covered in a Teflon film, fitted with plastic end caps, taped, and labeled with a unique sample identification number. Samples for laboratory analyses were placed in an ice-chilled cooler and transported to a state-certified laboratory with chain of custody documentation.

The soil samples were analyzed for organochlorine pesticides (EPA Test Method 8081) and metals including lead, arsenic and mercury (EPA Test Method 6010/7000). The metals lead, arsenic and mercury were selected because they are commonly associated with pesticides. Lead was additionally selected due to the possible presence of lead-containing paint on structures. Laboratory analytical results are summarized below in Table 6. A discussion of the sampling protocol and copies of the laboratory reports are attached in Appendix F.

Table 6. Laboratory Analytical Results of Soil Samples
(Concentrations in parts per million)

Sample ID	DDE	DDT	Chlordane	Arsenic	Lead	Mercury
SS-1	<0.008	<0.008	**1.9**	11	9.5	0.36
SS-2	<0.4	<0.4	**88**	12	13	0.22
SS-3	0.013	0.0025	<0.020	11	13	0.17
SS-4	0.0027	0.0043	<0.020	12	13	0.18
SS-5	0.012	<0.008	<0.080	10	16	0.16
SS-6	0.016	0.0099	<0.080	8.9	42	0.42
SS-7	<0.008	<0.008	<0.080	11	**110**	0.55
SS-8	0.052	0.080	**0.89**	12	27	0.25
SS-9	0.039	0.042	0.027*	8.1	77	0.26
Residential CHHSL[a]	1.6	1.6	0.43	0.07	80	18
TTLC[b]	1.0	1.0	2.5	500	1,000	20

a. California Human Health Screening Level (CHHSL), California Environmental Protection Agency, September 2010.
b. Title 22 Total Threshold Limit Concentration – if a substance in a waste is equal to or greater than the TTLC, it is considered a California hazardous waste.
< Indicates that constituent was not detected above the stated laboratory detection limit.
* Reported as alpha-chlordane
BOLD Exceeds residential CHHSL,TTLC and/or natural background concentrations of metals.

For comparison purposes, the California Human Health Screening Levels (CHHSLs) are also presented in Table 6. CHHSLs were developed by the Office of Environmental Health Hazard Assessment (OEHHA) on behalf of the California Environmental Protection Agency (Cal/EPA) and are used to screen sites for potential human health concerns where releases of chemicals to soil have occurred. Under most circumstances, the presence of a chemical in soil below the corresponding CHHSL can be assumed not to pose a significant risk to human health. A chemical exceeding the CHHSL does not indicate that adverse impacts to human health are occurring or will occur but suggests that further evaluation of potential health concerns is warranted.

Note that natural background concentrations of arsenic are often well above the health-based CHHSL; however, the California Environmental Protection Agency generally does not require cleanup of metals in soil to below background levels. Bradford et.al. (1996) estimated that background arsenic concentrations in California soil types range from 0.6 ppm to 11 ppm. Scott (1991) documented background arsenic concentrations ranging up to 20 ppm. The California Regional Water Quality Control Board (Water Board, 2005) states that "based on an informal review of environmental reports submitted to the Water Board, a range of 5 to 20 ppm is typical for much of the Bay area." Upper estimates of background arsenic concentrations in the soil at Lawrence Berkeley National Laboratory range from 24 to 42 ppm (LBNL, 2009).

SECTION 10: CONCLUSIONS (FINDINGS) AND RECOMMENDATIONS

DAL Properties, LLC reportedly intends to purchase the Site for residential development. Cornerstone performed this Phase I ESA and Preliminary Soil Quality Evaluation to support DAL Properties, LLC in evaluation of Recognized Environmental Conditions. Our conclusions and recommendations are summarized below.

10.1 HISTORICAL SITE USAGE

Based on the information obtained during this study, the southwest portion of the Site (southwest of Misery Creek) was occupied by an orchard from at least the 1930s to 1940s. The residences at 6790 and 6782 reportedly were constructed in 1945 and 1977, respectively. The Hunt family currently owns and occupies the Site and has owned the Site since the 1950s. Jams and jelly associated with a small home business were historically made on-Site within the detached garage at 6790 San Felipe Road. The Site currently is used for residential purposes and for storage of various vehicles, trailers, boats and other belongings owned by the Hunt family.

10.2 CHEMICAL STORAGE AND USE

Typical of most residential garages, several containers of paint, building and automobile maintenance supplies, and cleaning products were observed within the detached garage at 6790 San Felipe road. These materials were generally stored in retail containers with capacities of one-gallon or less; several 5-gallon buckets of paint also were observed. No significant hazardous materials spills were readily apparent. The potential for these materials to significantly impact soil or ground water on-Site appears low. We recommend, however, that all on-Site hazardous materials be removed and properly disposed prior to purchasing the Site.

An automobile maintenance pit was observed within the concrete floor slab of the garage. The pit was covered by wood planks on which stored items were located; thus, the interior of the pit could not be observed during our visit. Mr. Hunt indicated that the pit had historically been infrequently used for vehicle maintenance by his family. Based on the reported infrequent use of the pit, it appears unlikely that this pit would have resulted in significant impacts to underlying soil and ground water. However, after the stored items are removed, we recommend that the interior of the maintenance pit be observed for indications of hazardous material spills or staining.

Several piles of debris were observed on the northern portion of the Site. The debris appeared to consist of miscellaneous household items, glass jars, cardboard, wood, plastic, furniture and appliances. Two steel ASTs also were present. Mr. Hunt indicated that the ASTs had been purchased by his father and brought to the Site, but were never used on-Site. We recommend that the debris and ASTs be removed and properly disposed by the property owner prior to purchasing the Site.

10.3 SOIL QUALITY

The Site was historically used for agricultural purposes. Thus, pesticides may have been applied to crops in the normal course of farming operations. Additionally, soil adjacent to structures that are painted with lead-containing paint can become impacted with lead as a result of the weathering and/or peeling of painted surfaces. Soil near wood framed structures also can be impacted by pesticides historically used to control termites. To evaluate these potential concerns, a soil quality evaluation was performed as described in Section 9.0.

None of the detected pesticide concentrations in soil samples collected from the former orchard areas exceed their respective CHHSLs. However, chlordane (at up to 88 ppm) was detected at concentrations exceeding the residential CHHSL (0.43 ppm) in soil samples collected adjacent to the foundations of each of the on-Site residences. Chlordane was historically used to control termites and is often found near structures.

Lead was detected at 110 ppm in soil sample SS-7 collected near the residence at 6790 San Felipe Road, respectively. The residential CHHSL for lead is 80 ppm; thus, the detected lead concentrations in this sample exceeded the CHHSL. The lead concentrations detected in the remaining samples do not exceed the CHHSL; the detected arsenic and mercury concentrations appeared typical of natural background levels. The elevated lead concentration detected in sample SS-7 may reflect residues of lead paint.

We recommend that the impacted soil (soil with contaminants exceeding residential CHHSLs and/or natural background levels) be over-excavated and appropriately disposed at a permitted facility prior to residential redevelopment. We recommend that the cleanup goal be residential (unrestricted use) CHHSLs in order to avoid Land Use Covenants (LUCs) that typically are required by oversight agencies to minimize the potential for disturbance of and exposure to underlying impacted soil.

We recommend conducting an additional soil quality evaluation prior to over-excavating the impacted soil to further evaluate its lateral and vertical extent in an effort to minimize the quantity of soil to be removed from the Site.

At the time of remediation, the collection of confirmation soil samples will be required to verify that the impacted soil has been removed. We recommend contacting disposal facilities to evaluate cost effective disposal alternatives. The disposal facility accepting this soil likely may require additional sampling and analyses. Based on the analytical data, this soil may require disposal as a California hazardous waste; we recommend that the generator (property owner) be required to sign hazardous waste manifests.

DAL Properties, LLC could request regulatory agency oversight prior to and during the over-excavation of impacted soil. Alternatively, DAL Properties, LLC could perform removal activities and then request regulatory agency review and approval of the final completion report. For either alternative, we recommend contacting an oversight agency to determine appropriate mitigation measures. If regulatory oversight is not desired, DAL Properties, LLC should discuss the findings of this report with an environmental attorney to determine reporting obligations.

10.4 ASBESTOS CONTAINING MATERIALS (ACMS)

Due to the age of the on-Site structures, building materials may contain asbestos. If demolition, renovation, or re-roofing of the buildings is planned, an asbestos survey is required by local authorities and/or National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines. NESHAP guidelines require the removal of potentially friable ACBMs prior to building demolition or renovation that may disturb the ACBM.

10.5 LEAD-BASED PAINT

The Consumer Product Safety Commission banned the use of lead as an additive in paint in 1978. Based on the age of the building, lead-based paint may be present. If demolition is planned, the removal of lead-based paint isn't required if it is bonded to the building materials. However, if the lead-based paint is flaking, peeling, or blistering, it should be removed prior to demolition. In either case, applicable OSHA regulations must be followed; these include requirements for worker training, air monitoring and dust control, among others. Any debris or soil containing lead must be disposed appropriately.

10.6 IMPORTED SOIL

If the planned development will require importing soil for site grading, we recommend documenting the source and quality of imported soil. The DTSC's October 2001 Clean Fill Advisory provides useful guidance on evaluating imported fill.

10.7 WATER SUPPLY WELL AND SEPTIC SYSTEMS

A well is present on-Site to the northeast of the residence at 6782 San Felipe Road. The well reportedly was historically used as a potable water source. This well should be properly abandoned prior to site development.

Additionally, septic systems are reportedly present at each of the two residences. These septic systems should be properly abandoned in accordance with applicable regulations prior to site development. Based on the historic residential use of the Site, the potential for the septic systems to have significantly impacted the Site appears low. If a higher level of comfort is desired, these systems can be sampled to confirm that unlawful discharges of hazardous materials have not occurred.

10.8 POTENTIAL ENVIRONMENTAL CONCERNS WITHIN THE SITE VICINITY

Based on the information obtained during this study, no hazardous material incidents have been reported in the Site vicinity that would be likely to significantly impact the Site.

10.9 DATA GAPS

ASTM Standard Designation E 1527-05 requires the environmental professional to comment on significant data gaps that affect our ability to identify Recognized Environmental Conditions. A data gap is a lack of or inability to obtain information required by ASTM Standard Designation E 1527-05 despite good faith efforts by the environmental professional to gather such information. A data gap by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. The following data gaps were identified:

- Contact information for the former occupants and owners of the Site was not provided to us. We understand that this information is not reasonably obtainable.

The Site history appears to have been established based on information obtained from other data sources reviewed during this study; thus, this data gap is not considered to be significant.

10.10 DATA FAILURES

As described by ASTM Standard Designation E 1527-05, a 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. Data failures are not uncommon when attempting to identify the use of a Site at five year intervals back to the first use or to 1940 (whichever is earlier). ASTM Standard Designation E 1527-05 requires the environmental professional to comment on the significance of data failures and whether the data failure affects our ability to identify Recognized Environmental Conditions. A data failure by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. No significant data failures were identified during this Phase I ESA.

10.11 RECOGNIZED ENVIRONMENTAL CONDITIONS

Cornerstone has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E 1527-05 of 6782 and 6790 San Felipe Road, San Jose, California. This assessment identified the following Recognized Environmental Conditions; however, please read the entire report for an overview of the Site.

- Concentrations of chlordane and lead were detected in soil near the foundations of on-Site structures at concentrations exceeding residential CHHSLs.

SECTION 11: LIMITATIONS

Cornerstone performed this Phase I ESA and Preliminary Soil Quality Evaluation to support DAL Properties, LLC in evaluation of Recognized Environmental Conditions associated with the Site. DAL Properties, LLC understands that no Phase I ESA and Preliminary Soil Quality Evaluation and can wholly eliminate uncertainty regarding the potential for Recognized Environmental Conditions to be present at the Site. This Phase I ESA and Preliminary Soil Quality Evaluation is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions. DAL Properties, LLC understands that the extent of information obtained is based on the reasonable limits of time and budgetary constraints.

Conclusions presented in this report are based on selected, readily available information and conditions readily observed at the time of the Site visit. Phase I ESAs are inherently limited because findings are developed based on information obtained from a non-intrusive Site evaluation. Cornerstone does not accept liability for deficiencies, errors, or misstatements that have resulted from inaccuracies in the publicly available information or from interviews of persons knowledgeable of Site use. In addition, publicly available information and field observations often cannot affirm the presence of Recognized Environmental Conditions; there is a possibility that such conditions exist. If a greater degree of confidence is desired, soil, ground water and/or soil vapor samples should be collected by Cornerstone and analyzed by a state-certified laboratory to establish a more reliable assessment of environmental conditions.

Cornerstone acquired an environmental database of selected publicly available information for the general area of the Site. Cornerstone cannot verify the accuracy or completeness of the database report, nor is Cornerstone obligated to identify mistakes or insufficiencies in the information provided (ASTM E 1527-05, Section 8.1.3). Due to inadequate address information, the environmental database may have mapped several facilities inaccurately or could not map the facilities. Releases from these facilities, if nearby, could impact the Site.

DAL Properties, LLC may have provided Cornerstone environmental documents prepared by others. DAL Properties, LLC understands that Cornerstone reviewed and relied on the information presented in these reports and cannot be responsible for their accuracy.

This report, an instrument of professional service, was prepared for the sole use of DAL Properties, LLC and may not be reproduced or distributed without written authorization from Cornerstone. It is valid for 180 days. An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

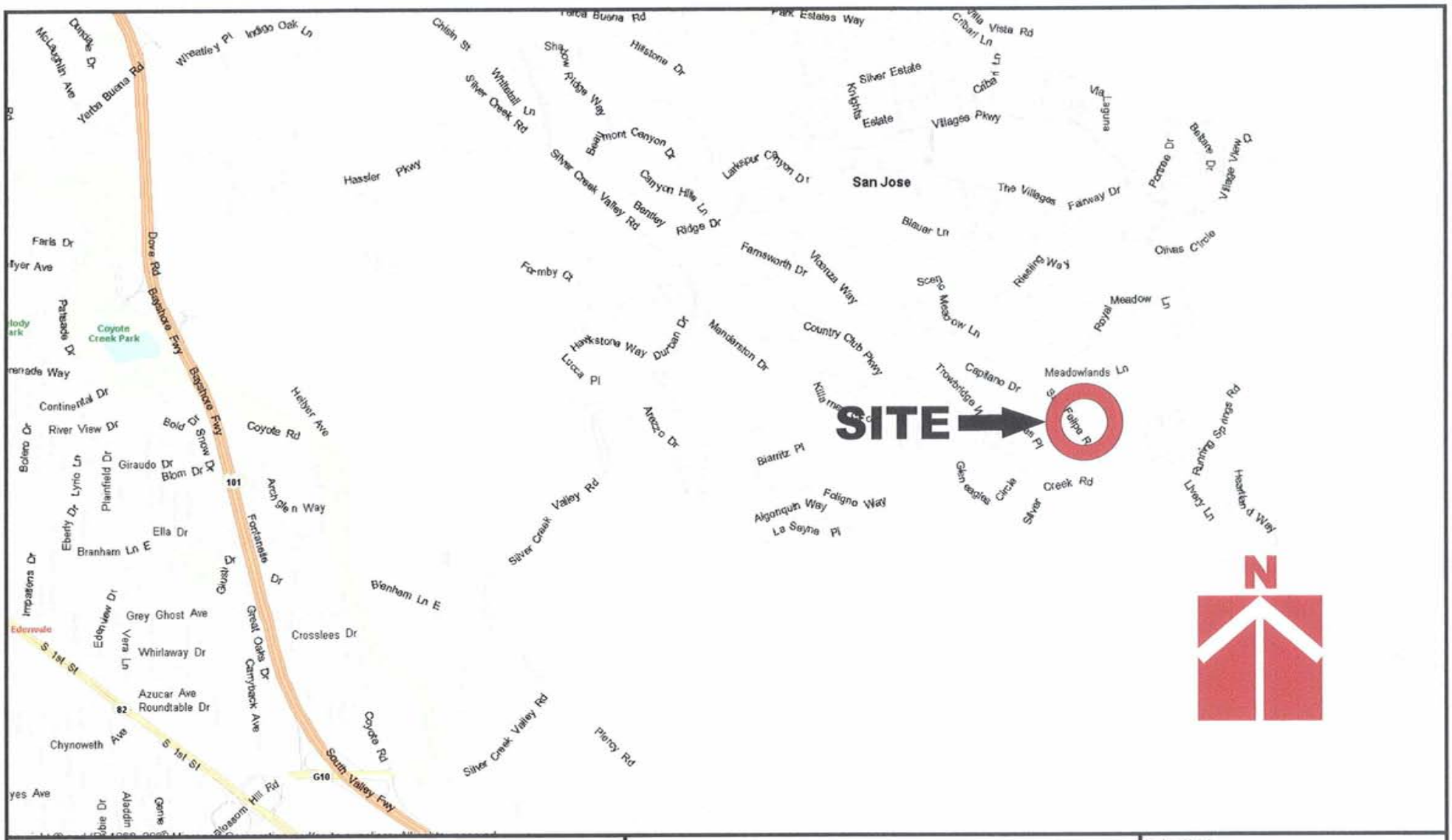
SECTION 12: REFERENCES

Bradford, et.al. March 1996. *Background Concentrations of Trace and Major Elements in California Soils.* Kearney Foundation Special Report.

California Regional Water Quality Control Board (CRWQCB). February 2005. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater.*

Lawrence Berkeley National Laboratory (LBNL). April 2009. *Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory: University of California (Berkeley), Lawrence Berkeley Laboratory.*

Scott, Christina M. 1991. *Background Metal Concentrations in Soils in Northern Santa Clara County, California.*



CORNERSTONE EARTH GROUP

Vicinity Map

6782 and 6790 San Felipe Road
San Jose, CA

Project Number	336-2-1
Figure Number	Figure 1
Date	December 2010
Drawn By	MGV

Site Plan

6782 and 6790 San Felipe Road
San Jose, CA

Project Number 336-2-1

Figure Number Figure 2

Date December 2010

Drawn By MGV

CORNERSTONE EARTH GROUP

CORNERSTONE EARTH GROUP

APPENDIX A – TERMS AND CONDITIONS

CORNERSTONE EARTH GROUP, INC.
TERMS AND CONDITIONS

1. Agreement

1.1 Cornerstone Earth Group, Inc.'s ("Cornerstone") services are defined by and limited to (a) those services (the "Work") described in the attached proposal, which is incorporated herein by this reference, and (b) these Terms and Conditions of Agreement ("Terms and Conditions"). Together, the proposal and Terms and Conditions form the "Agreement." This Agreement represents the entire agreement between the Client and Cornerstone (collectively, the "Parties") and supersedes all prior negotiations, representations, or agreements, either written or oral. The Agreement can only be amended by a written instrument signed by both the Client and Cornerstone. In the event that the Client authorizes the Work by means of a purchase order or other writing ("Confirmation"), it is expressly agreed that these Terms and Conditions shall apply, and any terms, conditions or provisions appearing in the Confirmation are void and inapplicable except to the extent the Confirmation authorizes the Work and binds the Client to this Agreement.

1.2. Failure to immediately enforce any provision in this Agreement shall not constitute a waiver of the right to enforce that provision or any other provision. No waiver by the Parties of a breach of any term or covenant contained in this Agreement, whether by conduct or otherwise, in any one or more instances shall be deemed to be or construed as a further or continuing waiver of any such breach or as a waiver of a breach of any other term or covenant in this Agreement.

2. Scope of Services

2.1 Cornerstone will serve the Client by providing professional counsel and technical advice based on information furnished by the Client. The Client will make available to Cornerstone all known information regarding existing and proposed conditions of the site, and will immediately transmit any new information that becomes available or any change in plans. The Client and Cornerstone agree that Cornerstone, its officers, directors, employees, agents and/or subcontractors shall not be liable for any claims, damages, costs, or losses arising from or in any way related to conditions not actually encountered during the course of Cornerstone's Work and Cornerstone shall not have any liability or responsibility for losses resulting from inaccurate or incomplete information supplied by the Client, and the Client agrees to defend and indemnify Cornerstone, its officers, directors, employees, agents and/or subcontractors against claims, damages, costs or losses arising therefrom. Cornerstone, its officers, directors, employees, agents and/or subcontractors shall not be liable for failing to discover any condition the discovery of which would reasonably require the performance of services not authorized by the Client.

3. Terms of Payment

3.1 The Client's obligation to pay for the Work is in no way dependent upon the Client's ability to obtain financing. The Client's obligation to pay for the Work is in no way dependent upon the Client's successful completion of the Client's project. No provision of this Agreement shall be construed to constitute a "Pay-When-Paid" clause or a "Pay-If-Paid" clause.

3.2 Payment for the Work shall be due and payable upon receipt of Cornerstone's invoice. To be recognized, any dispute over charges must be claimed in writing within thirty (30) calendar days of the billing date. Any dispute over an invoice amount shall not affect the Client's obligation to pay invoice amounts not in dispute. Amounts unpaid thirty (30) calendar days after the issue date of Cornerstone's invoice shall be assessed a service charge of 1 percent per month on balances outstanding.

3.3 Timely payment is a substantial condition of the Client's performance under this Agreement. Cornerstone may at its option withhold delivery of reports or other work product or suspend performance of the Work pending receipt of payments for all past due invoices and Cornerstone, its officers, directors, employees, agents and/or subcontractors shall have no liability to the Client for delay or damage caused because of such withholding or suspension. In the event that Cornerstone must take legal action to enforce this Agreement for payment for the Work performed and Cornerstone prevails, Cornerstone will be reimbursed by the Client for all expenses, including but not limited to reasonable attorney's fees and litigation costs.

4. Standard of Care

4.1 While performing the Work under this Agreement, Cornerstone shall exercise the degree of care and skill ordinarily exercised under similar circumstances by members of the environmental and geotechnical engineering consulting professions, as applicable, performing the kind of services to be performed hereunder and practicing in the same or similar locality at the same period of time.

4.2 Except for the express promise set forth in Subsection 4.1 herein, Cornerstone neither makes, nor offers, nor shall Cornerstone be liable to the Client for any express or implied warranties with respect to the performance of the Work.

5. Force Majeure

5.1 Cornerstone will diligently proceed with its services and will complete the Work in a timely manner, but it is expressly agreed to and understood by the Client that Cornerstone shall not be held responsible for delays occasioned by factors beyond its control, nor by factors which could not reasonably have been foreseen at the time of the execution of the Agreement between the parties.

5.2 Except for the obligation to pay for the Work performed and expenses incurred, neither Cornerstone nor the Client shall be liable for its failure to perform hereunder, in whole or in part, due to contingencies beyond its reasonable control, included, but not limited to, strikes or other concerted acts of workmen not in Cornerstone's employ, whether direct or indirect, riots, war, acts of terrorism, fire, floods, storms, washouts, acts of God or the public enemy, explosions, accidents, epidemics, breakdowns, injunctions, compliance with any law, regulation or order, whether valid or invalid, of the United States of America or any governmental body or any instrumentality thereof, whether now existing or hereafter created.

6. Effect of Delay or Impediment to Work

6.1 If any event occurs which causes or may cause Cornerstone: (a) to be impeded in its performance of the Services; or (b) to be delayed in the completion of the Work within the time provided in the attached proposal and/or in an applicable Change Order due to any act or omission of the Client, its officers, directors, employees and agents, or the Client's contractors, or due to any contingency beyond Cornerstone's control as provided in Section 5 herein, Cornerstone shall notify the Client in writing within ten (10) business days of the date on which Cornerstone becomes aware of such event.

6.2 The Client shall notify Cornerstone in writing of the Client's agreement or disagreement with Cornerstone's claim of an impediment or delay to performance within five (5) business days after receipt of Cornerstone's notice under Subsection 6.1. If the Client agrees with Cornerstone's claim, the time for performance of such requirement may be extended as mutually agreed in writing by the parties as provided in Subsection 1.1. If the Client disputes Cornerstone's assertion of an impediment or delay, such dispute shall be resolved pursuant to Section 17.

6.3 Impediments or delays to performance, addressed pursuant to this Section, shall not (a) constitute a breach hereunder; (b) give rise to any special right to terminate this Agreement; or (c) give rise to a claim by the Client for damages or other relief, if and to the extent that such impediment or delay is due to any act or omission of the Client, its officers, directors, employees and agents, or the Client's contractors, or due to any contingency beyond Cornerstone's control as provided in Section 5.

7. Right of Entry

7.1 Unless otherwise agreed in writing, the Client shall furnish and/or secure right of entry to the Site described in the proposal for Cornerstone personnel and equipment in order for Cornerstone to perform the Work. The Client shall waive any claim against Cornerstone, its officers, directors, employees, agents and/or subcontractors and agree to defend and indemnify Cornerstone, its officers, directors, employees, agents and/or subcontractors from any claims arising from entry onto the Site which is the subject of the Work.

7.2 The Parties acknowledge and agree that although Cornerstone will take reasonable precautions to minimize damage to property, including landscapes, hardscapes, crops and underground utilities, any and all damages, losses or expenses which could result from damage to such property due to Cornerstone's performance of the Work under this Agreement shall be the sole and exclusive responsibility of the Client provided that such damages, losses or expenses are not the result of Cornerstone's breach of the standard of care set forth in Subsection 4.1 herein. The Client shall indemnify, defend and hold harmless Cornerstone, its officers, directors, employees, agents and/or subcontractors from any damages, losses or expenses including, without limitation, attorney's fees, sustained or incurred by Cornerstone, its officers, directors, employees, agents and/or subcontractors as a result of any and all claims arising out of any damage to subsurface utilities due to Cornerstone's performance of the Work under this Agreement, provided that such claims are not the result of Cornerstone's breach of the standard of care set forth in Subsection 4.1 herein.

8. Monitoring of Construction

8.1 The Client acknowledges and understands that unanticipated or changed conditions may be encountered during construction. There is a substantial risk to the Client and to Cornerstone if Cornerstone is not engaged to provide complete services, including but not limited to, construction observation services. Such risks include the increased likelihood of misinterpretation of Cornerstone's findings and conclusions and error in implementing recommendations by Cornerstone. If Client fails to retain Cornerstone to provide complete services, the Client agrees, notwithstanding any other provisions of this Agreement, to the fullest extent permitted by law, to indemnify and hold harmless Cornerstone, its officers, partners, employees and Cornerstones from and against any and all claims, suits, demands, liabilities, losses, damages or costs, including reasonable attorneys' fees and defense costs arising out of or in any way connected with the Work or arising out of implementing or interpreting Cornerstone's work product except when the Claim arises from the sole negligence of Cornerstone or where the Claim arises from the willful, wanton or reckless conduct of Cornerstone.

8.2 Cornerstone shall not be required to make exhaustive or continuous on-site observations to check the quality or quantity of the Work and shall not be responsible for any contractor's failure to carry out the work in accordance with the contract documents.

8.3 Cornerstone shall not be responsible for the acts or omissions of any contractor or subcontractor or any of the contractors' or subcontractors' agents or employees or other persons performing any work on the Project.

9. Changed Conditions

9.1 If, during the term of this Agreement, circumstances or conditions that were not originally contemplated by or known to Cornerstone are revealed, to the extent that they affect the scope of services, compensation, schedule, allocation of risks or other material terms of this Agreement, Cornerstone may call for renegotiation of appropriate portions of this Agreement. Cornerstone shall notify the Client of the changed conditions necessitating renegotiation, and Cornerstone and the Client shall promptly and in good faith enter into renegotiation of this Agreement to address the changed conditions. If terms cannot be agreed to, the parties agree that either party has the absolute right to terminate this Agreement, in accordance with the termination provision hereof.

10. Jobsite Safety

10.1 Neither the professional activities of Cornerstone nor the presence of Cornerstone or its employees, subconsultants and subcontractors shall relieve the Client or the Client's General Contractor of its obligations, duties and responsibilities, including, but not limited to, health and safety programs. Cornerstone and its personnel have no authority to exercise any control over the site or any construction contractor or its employees in connection with their work or any health or safety programs or procedures. The Client acknowledges and agrees that Cornerstone shall not be responsible for jobsite safety.

11. Hazardous Materials and Environmental Contamination

11.1 The Client hereby warrants that if it knows or has any reason to assume or suspect that hazardous or toxic substances, or any other type of environmental hazard, contamination or pollution may exist at the Site, the Client will immediately inform Cornerstone to the best of the Client's knowledge of such hazardous or toxic substances, environmental hazard, contamination or pollution's type, quantity and location.

11.2 Cornerstone, its officers, directors, employees, agents and/or subcontractors shall have no title to, ownership of, or legal responsibility and/or liability for any and all contamination at the Site, including, but not limited to, the groundwater thereunder. "Contamination at the Site" includes but is not limited to any hazardous or toxic substance, or any other type of environmental hazard, contamination or pollution present at or under the Site, including, but not limited to the ground water thereunder, which is not brought onto the Site by Cornerstone, its officers, directors, employees, agents and/or subcontractors.

11.3 Cornerstone and the Client agree that the discovery of unanticipated Contamination at the Site may constitute a changed condition mandating renegotiation and/or termination of this Agreement. Cornerstone and the Client agree that the discovery of unanticipated Contamination at the Site may make it necessary for Cornerstone to take immediate measures to protect the public health, safety and the environment. The Client agrees that Cornerstone may take any or all measures that in Cornerstone's professional opinion are justified to preserve and protect the health and safety of Cornerstone's personnel, the public and the environment, and the Client agrees to compensate Cornerstone for the cost of such services.

11.4 The Client agrees to indemnify, defend and hold harmless Cornerstone, its officers, directors, employees, agents and/or subcontractors from any and all damages, losses or expenses, including, but not limited to, reasonable attorney's fees and legal costs connected therewith, liabilities, penalties and fines sustained by Cornerstone, its officers, directors, employees, agents and/or subcontractors as a result of any and all claim with respect to and arising out of any and all Contamination at the Site, provided that such claims are not the result of Cornerstone's breach of the standard of care set forth in Subsection 4.1 herein.

11.5 Subsurface sampling may result in unavoidable contamination of certain subsurface areas, as when a probe or boring is advanced or drilled through a contaminated area into a clean soil or water-bearing zone. Because of the risks posed by such work, and because subsurface sampling is often a necessary part of Cornerstone's Work, the Client hereby agrees to waive all claims against Cornerstone, its officers, directors, employees, agents and/or subcontractors with respect to and arising out of any and all subsurface sampling, including but not limited to claims relating to cross-contamination occurring because of such subsurface sampling, provided that such claims are not the result of Cornerstone's breach of the standard of care set forth in Subsection 4.1 herein.

12. Disposal of Samples and Drill Cuttings

12.1 Unless mutually agreed in writing by the Parties as provided in Subsection 1.1 herein, Cornerstone shall hold samples collected during the performance of the Work no longer than thirty (30) calendar days after their date of collection. Drill cuttings will be left on-Site. In the event that soil, rock, water, drill cuttings and/or other samples or materials are contaminated or are suspected to contain hazardous materials or other toxic substances hazardous or detrimental to public health, safety or the environment as defined by federal, state or local law, Cornerstone will, after completion of testing, notify the Client of the same in order for the Client to arrange for the disposal of the samples and/or materials. The Client recognizes and agrees that Cornerstone at no time assumes title to said samples and/or materials, and that the Client is responsible for the disposal of such samples and/or materials. The Client agrees to pay all costs associated with any storage, transport and/or disposal of samples and/or materials, and to defend and indemnify Cornerstone, its officers, directors, employees, agents and/or subcontractors from any and all claims arising out of or in any way related to the storage, transport and/or disposal of asbestos, hazardous or toxic substances, and/or pollutants, including but not limited to any samples and/or materials.

13. Use and Ownership of Documents

13.1 All reports, letters, plans, figures, specifications, computer files, field data, logs, notes and other documents and instruments prepared by Cornerstone as instruments of service shall remain the property of Cornerstone. Cornerstone shall retain all common law, statutory and other reserved rights, including copyright thereto. In the event the Client, the Client's contractors or subcontractors, or anyone for whom the Client is legally liable makes or permits to be made any changes to reports, letters, plans, figures, specifications, computer files, field data, logs, notes and other documents prepared by Cornerstone without obtaining Cornerstone's prior written consent, the Client shall assume full responsibility for the results of such changes. Therefore, the Client agrees to waive any claim against Cornerstone and to release Cornerstone from any liability arising directly or indirectly from such changes. In addition, the Client agrees, to the

fullest extent permitted by law, to indemnify and hold harmless Cornerstone from any damages, liabilities or costs, including reasonable attorney's fees and costs of defense, arising from such changes.

The Client agrees that all reports, letters, plans, figures, specifications, computer files, field data, logs, notes and other documents and other services furnished to the Client or its agents and/or employees by Cornerstone, which are not paid for, shall be immediately returned upon demand and may not be used by the Client for any purpose. Any reports, letters, plans, figures, specifications, computer files, field data, logs, notes and other documents, advice or opinions provided by Cornerstone to the Client as part of the Work are provided for the sole and exclusive use of the Client for specific application to the Site detailed in this Agreement. Any third party use of any drafts, reports, letters, plans, figures, specifications, computer files, field data, logs, notes and other documents, advice or opinion of Cornerstone is the sole responsibility of the Client.

14. Insurance

14.1 Cornerstone, its officers, directors, employees and agents have and shall maintain during the term of this Agreement insurance in the following types: (a) Worker's Compensation Insurance; (b) Employer's Liability Insurance; (c) Commercial General Liability Insurance (GLI); and (d) Professional Liability Insurance.

14.2 Cornerstone shall, at the Client's request, provide the Client with a certificate of insurance or other satisfactory evidence that such insurance has been obtained and are maintained in force through the term of this Agreement. Any additional insurance policy or increase in the coverage of existing insurance required by the Client shall constitute an additional expense under this Agreement, and the Client shall reimburse Cornerstone for any additional premiums and costs incurred by Cornerstone in connection with obtaining such additional insurance.

15. Prevailing Wage Obligations

15.1 The Client shall notify Cornerstone in writing if the Work contemplated by this Agreement constitutes a "public work" under any and all federal, state and/or local prevailing wage laws, and/or living wage laws, including but not limited to the Davis-Bacon Act and the provisions of California Labor Code §§ 1720 *et seq.* In addition, the Client shall notify Cornerstone if Cornerstone is obligated by statute, any public contracting authority and/or a developer to pay prevailing wages and benefits and/or any predetermined wages or benefits (collectively, "prevailing wage obligations"). In the event that Cornerstone must adhere to federal, state and/or local prevailing wage obligations for the Work performed, the Client shall provide Cornerstone with any and all prevailing wage determinations applicable to the Work to be performed under this Agreement. Any prevailing wage obligations might affect the payment terms contemplated by this Agreement and thus constitute a changed condition mandating renegotiation and/or termination of this Agreement. The Client understands and agrees that Cornerstone will rely on the representations made by the Client with regard to prevailing wage obligations and the Client agrees to indemnify Cornerstone, its officers, directors, employees, agents and/or subcontractors against any and all claims, liabilities, suits, demands, losses, costs and expenses, including but not limited to reasonable attorney's fees and legal costs, arising from Cornerstone's reliance upon the Client's representations regarding prevailing wage obligations.

16. Limitations—THIS CLAUSE LIMITS CORNERSTONE'S LIABILITY

16.1 Cornerstone shall not be responsible for the validity or accuracy of data collected by others or for interpretations made by others.

16.2 Cornerstone's relationship with the Client under this Agreement shall be that of an independent contractor. Nothing in this Agreement shall be construed to designate Cornerstone, its officers, directors, employees, agents and/or subcontractors as employees, agents, joint ventures or partners of the Client. Cornerstone shall have no authority to bind, commit or obligate the Client in any manner and shall not hold itself out to third parties as being capable of doing so.

16.3 The Client and Cornerstone have discussed the risks and rewards associated with this project, as well as Cornerstone's fee for services. After negotiation, the Client and Cornerstone have expressly agreed to allocate certain of the risks so that, to the fullest extent permitted by law, the total aggregate liability of Cornerstone, its officers, directors, employees, agents and subcontractors to the Client and all third-parties is limited to $50,000 or the amount of Cornerstone's fee, whichever is greater, for any and all injuries, damages, claims, losses, expenses, or claim expenses (including attorney's fees) arising out of this Agreement from any cause or causes. Such causes include but are not limited to Cornerstone's negligence, errors, omissions, strict liability, breach of contract or breach of warranty. In no event shall Cornerstone, its officers, directors, employees, agents and/or subcontractors be liable in contract, tort, strict liability, warranty or otherwise, for any special, incidental or consequential damages, such as but not limited to delay, disruption, loss of product, loss of anticipated profits or revenue, loss of use of any equipment or system, non-operation or increased expense of operation of any equipment or systems, cost of capital, or cost of purchase or replacement equipment systems or power.

16.4 Notwithstanding any other provision of this Agreement , the total aggregate liability of Cornerstone, its officers, directors, employees, agents and subcontractors to the Client and all third parties, including attorney's fees awarded pursuant to this Agreement, for claims, damages or losses arising out of the treatment, transport, storage, discharge, dispersal or release of hazardous materials, shall be limited to $50,000 or the amount of Cornerstone's fee, whichever is greater and regardless of the legal theory under which liability is imposed.

16.5 For an additional 5% of Cornerstone's total fee or $500, whichever is greater, Cornerstone will raise the limitation of liability up to the amount that actually would be paid by Cornerstone's insurance carriers if Client and Cornerstone initial below:

LIMITATION INCREASE: THE LIMITATION OF LIABILITY IS INCREASED TO THE ACTUAL AMOUNT PAID BY CORNERSTONE'S INSURANCE CARRIERS IN EXCHANGE FOR AN ADDITIONAL FEE OF 5% OF THE TOTAL SERVICE CHARGE OR $500, WHICHEVER IS GREATER.

_____	_____	_____	_____
Client's Initial	Date	Cornerstone's Initial	Date

16.6 The Client shall indemnify, defend and hold harmless Cornerstone and its officers, directors, employees, agents and subcontractors from any and all damages, losses, or expenses, included but not limited to reasonable legal expenses and attorney's fees connected therewith, sustained by Cornerstone, its officers, directors, employees, agents and subcontractors as a result of any and all claims, demands, suits, causes of action, proceedings, judgments and liabilities for property damage, statutory penalty and/or personal injury with respect to and arising out of the Client's negligent acts, omissions or material breach of this Agreement. In the event a claim is the result of joint negligent acts or omissions of the Client and Cornerstone, the Client's duty of indemnification shall be in proportion to its respective allocable share of the joint negligence.

16.7 Client acknowledges and agrees that in no event shall any action or proceeding be brought against Cornerstone or proceeding be brought against Cornerstone by Client or its assignees for any claim or cause of action arising from or in any way related to the Work or this Agreement unless such action or proceeding is commenced within three (3) years from the Date of Completion of Work provided by Cornerstone under this Agreement. The Date of Completion shall be the date of the final invoice for the Work performed under this Agreement.

16.8 If Client requests that Cornerstone's work product be relied upon by a third party, including, but not limited to a lender, Client agrees to provide the third party with a copy of these terms and conditions, and Client agrees to require said third party to agree to limit Cornerstone's total liability to Client and any third party as described in paragraph 16.4 and Client agrees to indemnify Cornerstone, its officers, directors, employees, agents and/or subcontractors against any and all claims, liabilities, suits, demands, losses, costs and expenses, including but not limited to reasonable attorney's fees and legal costs, arising from third party claims, damages, costs and losses arising our of or in any way related to Work.

17. Disputing Cornerstone's Performance

17.1 Except as provided in Section 6 and Subsection 17.2 herein, if Cornerstone shall breach any provision herein, the Client shall notify Cornerstone within five (5) business days of the Client's knowledge of such breach. Except as provided in Subsections 17.3 herein, upon receipt of the Client's notice, Cornerstone shall have the option to take such corrective measures, if any, to remedy the breach, and shall notify the Client within five (5) business days after receipt of the

Client's notification of the corrective measures Cornerstone shall take and the estimated time period within which the corrective measures shall be taken. In no event shall Cornerstone be liable to the Client for any damages without being given a reasonable opportunity to remedy its breach as provided herein.

17.2 The Client shall make no claim for professional negligence unless the Client has first provided Cornerstone with a written certification executed by an independent Consultant currently practicing in the same discipline and locality as Cornerstone and licensed in the State of California. This certification shall (a) contain the name and license number of the certifier; (b) specify the acts or omissions that the certifier contends are not in conformance with the standard care for a Cornerstone performing professional services under similar circumstances; and (c) state in detail the basis for the certifier's opinion that such acts or omissions do not conform to the standard of care. This certificate shall be provided to Cornerstone no less than thirty (30) calendar days prior to the presentation of any claim or the institution of any mediation, arbitration or judicial proceeding.

17.3 Cornerstone agrees that upon receipt of written notice from the Client pursuant to Subsection 17.2 herein it will implement necessary corrections to the Work performed by Cornerstone that fails to conform to the standard of care that Cornerstone has accepted pursuant to Subsection 4.1, as mutually agreed in writing by the Parties as provided in Subsection 1.1. herein, if such written notice is received within one (1) year of the performance of the Work failing to conform to Subsection 4.1. If Cornerstone has been paid by the Client for such Work, Cornerstone shall perform the corrections at its own expense. If Cornerstone has not been paid by the Client for such Work, and the Work is subsequently corrected to conform with the standard of care that Cornerstone has accepted pursuant to Subsection 4.1, the Client shall pay Cornerstone in accordance with Section 3 herein.

17.4 In no event shall Cornerstone, its officers, directors, employees, agents and/or subcontractors be liable for any special, incidental or consequential damages, such as but not limited to delay, disruption, loss of product, loss of anticipated profits or revenue, loss of use of any equipment or system, non-operation or increased expense of operation of any equipment or systems, cost of capital, or cost of purchase or replacement equipment systems or power, or any other incidental, special, indirect or consequential damages of any kind or nature whatsoever resulting from Cornerstone's performance or failure to perform the Work in accordance with the standard of care that Cornerstone has accepted pursuant to Subsection 4.1.

18. Termination

18.1 Cornerstone shall have the right to terminate this Agreement ten (10) business days after written notice is sent to the Client if (a) the Client fails to pay any of Cornerstone's undisputed invoices within sixty (60) days from the date of the invoice; or (b) Cornerstone's attached proposal and/or the Work was based upon misinformation, whether by the Client or a third party, or upon information not fully disclosed to Cornerstone, whether by the Client or a third party.

18.2 Except as provided for in Section 6, and after compliance with Section 17, the Client shall have the right to terminate this Agreement ten (10) business days after written notice is sent to Cornerstone if Cornerstone fails to comply in any material respect with any of the material provisions herein and subsequently fails to notify the Client pursuant to Subsections 17.1 and 17.3 of the corrective measures Cornerstone intends to take.

18.3 The termination of this Agreement by Cornerstone under Subsection 18.1 herein, or by the Client under Subsection 18.2 herein, shall not relieve the Client of its obligations to pay Cornerstone for any of the Work performed and expenses incurred as of the date of termination, and shall not constitute a waiver by Cornerstone or the Client of any cause of action for breach of this Agreement or any provision herein.

19. Miscellaneous Provisions.

19.1 "Indemnity" Defined. The term "indemnify" shall mean indemnify, defend and hold harmless from and against any and all claims, liabilities, suits, demands, losses, costs and expenses, including but not limited to reasonable attorney's fees and all legal costs incurred on appeal, and all interest thereon, accruing or resulting to any and all persons, firms, or any other legal entities, on account of any damages or losses to property or persons, including death or economic losses, arising out of the item, matter, action or inaction specified in the specific provision.

19.2 Choice of Counsel. In any circumstance whereby Cornerstone is entitled to indemnification by the Client, Cornerstone shall have the right to select counsel of its choosing.

19.3 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the Parties and their successors and assigns as provided herein. The Client shall not assign, sell, transfer or subcontract this Agreement or any interest herein without the prior written consent of Cornerstone. Cornerstone shall not assign, sell, transfer or subcontract this Agreement or any interest herein without the prior written consent of the Client. The Client hereby consents to the subcontracting of those portions of the Work as the attached proposal herein indicates are or will be subcontracted. Notwithstanding the above, Cornerstone shall have the right to assign monies due hereunder for the Work performed and expenses incurred.

19.4 Third Party Beneficiaries. The Parties agree that this Agreement is not intended by either Cornerstone or the Client to give any benefits, rights, privileges, actions or remedies to any person or entity, partnership, firm or corporation as a third party beneficiary or otherwise under any theory of law, that is not a signatory to this Agreement.

19.5 Survival. In order that the Parties may fully exercise their rights and perform their obligations arising from the performance of this Agreement, any provisions of this Agreement that are necessary to ensure such exercise or performance shall survive the termination of this Agreement.

19.6 Severability. If any part, term or provision of this Agreement shall be held illegal, unenforceable or in conflict with any federal, state or local law having jurisdiction over this Agreement, the validity of the remaining parts, terms or provisions of this Agreement shall not be affected thereby.

19.7 Choice of Law and Venue. This Agreement shall be governed by California law. The venue for any legal action brought pursuant to this Agreement shall be located within the County of Santa Clara, State of California.

19.8 Publicity. Unless otherwise mutually agreed in writing by the parties as provided in Subsection 1.1, Cornerstone may use and publish the Client's name and a general description of Cornerstone's services with respect to the Work in describing Cornerstone's experience and qualifications to other clients or prospective clients.

19.9 Signatories. Each undersigned representative of the Parties to this Agreement certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind such Party to this document.

19.10 Corporate Protection. It is intended by the parties to this Agreement that Cornerstone's services in connection with the Work shall not subject Cornerstone's individual employees, officers or directors to any personal legal exposure for the risks associated with this Project. Therefore, and notwithstanding anything to the contrary herein, the Client agrees that as the Client's sole and exclusive remedy, any claim, demand or suit shall be directed and/or asserted only against Cornerstone, a California Corporation, and not against any of Cornerstone's individual employees, officers or directors.

19.11 Code Compliance. Cornerstone shall exercise usual and customary professional care in its efforts to comply with applicable laws, codes and regulations as of the date of this Agreement.

19.12 Quotation. Unless stated in writing, this quotation shall not remain in effect after thirty (30) days of the Proposal date.

19.13 Contractors State License. Cornerstone maintains a General Engineering A license (No. 905816) with a Hazardous Substances Removal and Remedial Actions Certification with the State of California, which are regulated by the Contractors State License Board. Any questions concerning a contractor may be referred to the Registrar, Contractors State License Board, P.O. Box 26000, Sacramento, California 95826.

CORNERSTONE EARTH GROUP

APPENDIX B – DATABASE SEARCH REPORT

Phase I ESA
6782 San Felipe Road
San Jose, CA 95135

Inquiry Number: 2925633.2s
November 18, 2010

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	9
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-7
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Physical Setting Source Records Searched	A-9

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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

6782 SAN FELIPE ROAD
SAN JOSE, CA 95135

COORDINATES

Latitude (North):	37.275800 - 37° 16' 32.9''
Longitude (West):	121.746300 - 121° 44' 46.7''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	611150.2
UTM Y (Meters):	4126001.2
Elevation:	578 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	37121-C6 LICK OBSERVATORY, CA
Most Recent Revision:	1973
West Map:	37121-C7 SAN JOSE EAST, CA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2006, 2005
Source:	USDA

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:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---------- EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

LUST ---------- Geotracker's Leaking Underground Fuel Tank Report
SLIC ---------- Statewide SLIC Cases

HIST LUST - HIST LUST - Fuel Leak Site Activity Report
INDIAN LUST - Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST - Active UST Facilities
AST - Aboveground Petroleum Storage Tank Facilities
INDIAN UST - Underground Storage Tanks on Indian Land
FEMA UST - Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP - Voluntary Cleanup Priority Listing
VCP - Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS - A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 - Torres Martinez Reservation Illegal Dump Site Locations
ODI - Open Dump Inventory
WMUDS/SWAT - Waste Management Unit Database
SWRCY - Recycler Database
HAULERS - Registered Waste Tire Haulers Listing
INDIAN ODI - Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL - Clandestine Drug Labs
HIST Cal-Sites - Historical Calsites Database
SCH - School Property Evaluation Program
Toxic Pits - Toxic Pits Cleanup Act Sites
CDL - Clandestine Drug Labs
US HIST CDL - National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST - Facility Inventory Database
HIST UST - Hazardous Substance Storage Container Database
SWEEPS UST - SWEEPS UST Listing

Local Land Records

LIENS 2 - CERCLA Lien Information
LUCIS - Land Use Control Information System
LIENS - Environmental Liens Listing
DEED - Deed Restriction Listing

Records of Emergency Release Reports

HMIRS - Hazardous Materials Information Reporting System

CHMIRS California Hazardous Material Incident Report System
LDS Land Disposal Sites Listing
MCS Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen RCRA - Non Generators
DOT OPS Incident and Accident Data
DOD Department of Defense Sites
FUDS Formerly Used Defense Sites
CONSENT Superfund (CERCLA) Consent Decrees
ROD Records Of Decision
UMTRA Uranium Mill Tailings Sites
MINES Mines Master Index File
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)
HIST FTTS FIFRA/TSCA Tracking System Administrative Case Listing
SSTS Section 7 Tracking Systems
ICIS Integrated Compliance Information System
PADS PCB Activity Database System
MLTS Material Licensing Tracking System
RADINFO Radiation Information Database
FINDS Facility Index System/Facility Registry System
RAATS RCRA Administrative Action Tracking System
CA BOND EXP. PLAN Bond Expenditure Plan
NPDES NPDES Permits Listing
WDS Waste Discharge System
Cortese "Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE Hazardous Waste & Substance Site List
SAN JOSE HAZMAT Hazardous Material Facilities
Notify 65 Proposition 65 Records
DRYCLEANERS Cleaner Facilities
WIP Well Investigation Program Case List
HAZNET Facility and Manifest Data
EMI Emissions Inventory Data
INDIAN RESERV Indian Reservations
SCRD DRYCLEANERS State Coalition for Remediation of Drycleaners Listing
PCB TRANSFORMER PCB Transformer Registration Database
PROC Certified Processors Database
MWMP Medical Waste Management Program Listing
COAL ASH DOE Sleam-Electric Plan Operation Data
COAL ASH EPA Coal Combustion Residues Surface Impoundments List
HWT Registered Hazardous Waste Transporter Database
FINANCIAL ASSURANCE Financial Assurance Information Listing
HWP EnviroStor Permitted Facilities Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations EDR Proprietary Historic Gas Stations

EXECUTIVE SUMMARY

EDR Historical Cleaners ----- EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

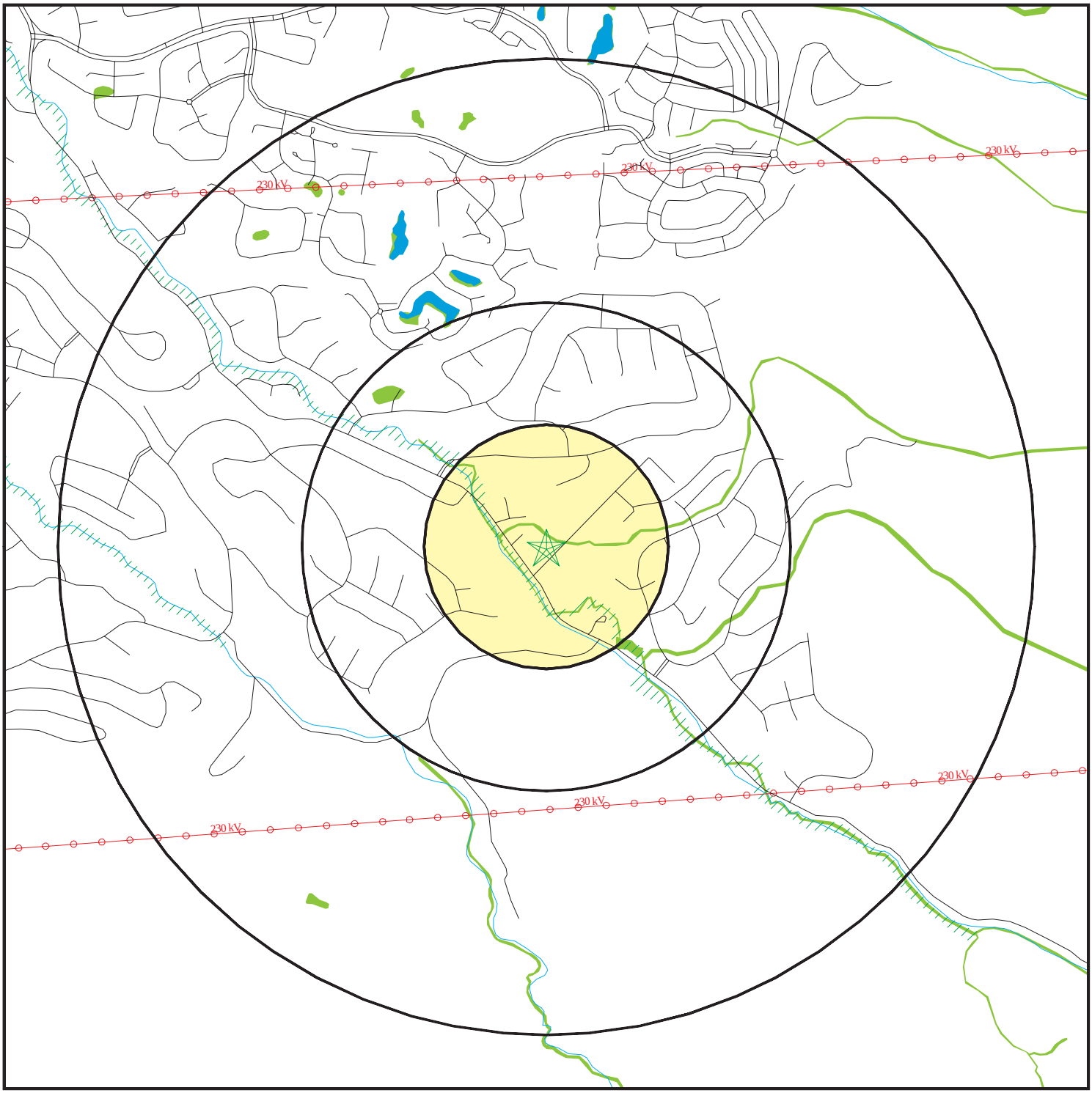
Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
ALMADEN LAKE PARK PHASE 2	NPDES
GUADALUPE RIVER-3A PHASE I	NPDES
GUADALUPE 3C PHASE 3 FLOODWALL A L	NPDES
GUADALUPE RI REACH 3A PHASE II	NPDES
S J CONCRETE PIPE CO	SWEEPS UST
COCA COLA BOTTLING COMPANY	SWEEPS UST
FONTANOSA PUMP STATION	SWEEPS UST
MARSHLAND SOLID WASTE FACILITY	SWF/LF
P&G INVESTMENT COMPANY	LUST
RECREATIONAL VEHICLE STORAGE L	HIST UST
BROOKFIELD HOMES	RCRA-SQG, FINDS
I 880-NORTH OF GISH RD ON NORTH BO	ERNS
CIVIC PLAZA	SLIC
GUADALUPE RI REACH 3A PHASE II	WDS
NEXTEL CA 0819	SAN JOSE HAZMAT
SPRINT SF73XC808	SAN JOSE HAZMAT
COMMONWEALTH CENTRAL C U	SAN JOSE HAZMAT
UNITED TECHNOLOGIES CORP, CHEM SYS	ENVIROSTOR

OVERVIEW MAP - 2925633.2s



0 1/4 1/2 1 Miles

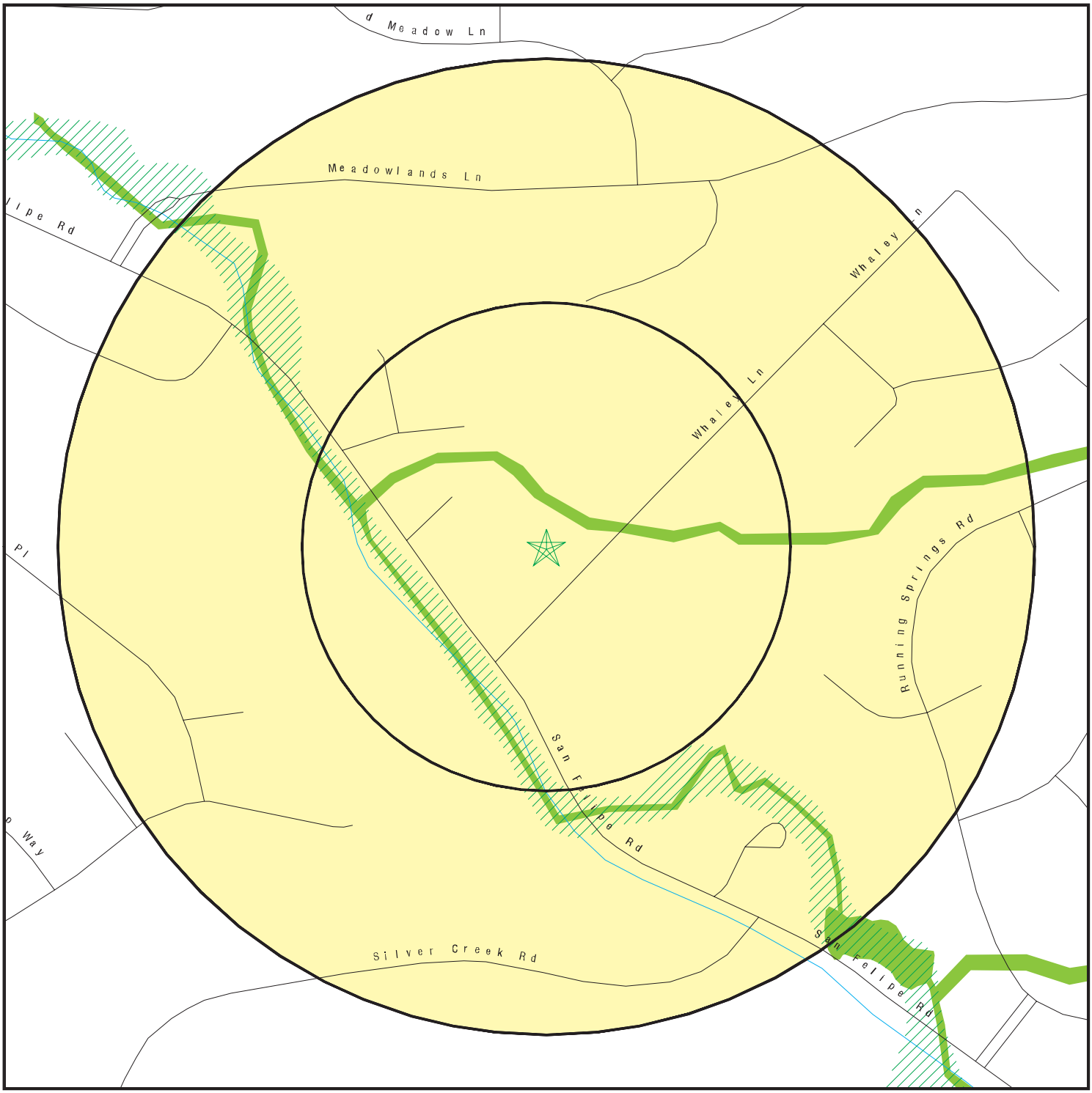
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

N

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: Phase I ESA	CLIENT: Cornerstone Earth Group
ADDRESS: 6782 San Felipe Road San Jose CA 95135	CONTACT: Stason Foster
LAT/LONG: 37.2758 / 121.7463	INQUIRY #: 2925633.2s DATE: November 18, 2010 7:49 pm

DETAIL MAP - 2925633.2s



- 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
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- 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: Phase I ESA	CLIENT: Cornerstone Earth Group
ADDRESS: 6782 San Felipe Road San Jose CA 95135	CONTACT: Stason Foster
LAT/LONG: 37.2758 / 121.7463	INQUIRY #: 2925633.2s DATE: November 18, 2010 7:50 pm

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
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE		1.000	0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR		1.000	0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	0	0	0	NR	NR	0
SLIC		0.500	0	0	0	NR	NR	0

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
HIST LUST		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
HAULERS		TP	NR	NR	NR	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
HIST Cal-Sites		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	0	NR	NR	NR	0
SWEEPS UST		0.250	0	0	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0

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
LDS		TP	NR	NR	NR	NR	NR	0
MCS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	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
MINES		0.250	0	0	NR	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
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN		1.000	0	0	0	0	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
WDS		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	0	NR	NR	0
HIST CORTESE		0.500	0	0	0	NR	NR	0
SAN JOSE HAZMAT		0.250	0	0	NR	NR	NR	0
Notify 65		1.000	0	0	0	0	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
PROC		0.500	0	0	0	NR	NR	0
MWMP		0.250	0	0	NR	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
HWT		0.250	0	0	NR	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
HWP		1.000	0	0	0	0	NR	0
EDR PROPRIETARY RECORDS								
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

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
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

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number

MAP FINDINGS

NO SITES FOUND

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address
SAN JOSE	93352167	I 880-NORTH OF GISH RD ON NORTH BO	I 880-NORTH OF GISH RD ON NORT
SAN JOSE	S109435800	ALMADEN LAKE PARK PHASE 2	ALMADEN EXPRESSWAY COLEMAN RD
SAN JOSE	S106931689	S J CONCRETE PIPE CO	1420 N BAYSHORE HWY 1
SAN JOSE	1004677314	BROOKFIELD HOMES	CORNER OF SAN FELIPE AND DELTA
SAN JOSE	S106235047	CIVIC PLAZA	FOURTH STREET / SAN FERNANDO (
SAN JOSE	S109692611	GUADALUPE RIVER-3A PHASE I	GUADALUPE RIVER NEAR JULIAN ST
SAN JOSE	S107996451	P&G INVESTMENT COMPANY	1775 64 HWY
SAN JOSE	S109821497	MARSHLAND SOLID WASTE FACILITY	NW HWY 237 / GOLD STREET ALVIS
SAN JOSE	S109445093	GUADALUPE 3C PHASE 3 FLOODWALL A L	JOSEFIA ST WILLIS AVE / MINO
SAN JOSE	S100195542	UNITED TECHNOLOGIES CORP, CHEM SYS	MIXER RD, OFF METCALF / SAN FE
SAN JOSE	S109692609	GUADALUPE RI REACH 3A PHASE II	NEW JULIAN ST. AT GUADALUPE RI
SAN JOSE	S106101952	GUADALUPE RI REACH 3A PHASE II	NEW JULIAN ST. AT GUADALUPE RI
SAN JOSE	S106924778	COCA COLA BOTTLING COMPANY	1555 OLD BAYSHORE HWY 4
SAN JOSE	S109349075	NEXTEL CA 0819	5609 SILVER CREEK VALLEY RD
SAN JOSE	S109349154	SPRINT SF73XC808	5609 SILVER CREEK VALLEY RD
SAN JOSE	S105990283	COMMONWEALTH CENTRAL C U	5890 SILVER CREEK VALLEY RD
SAN JOSE	S106926293	FONTANOSA PUMP STATION	450 SILVER CREEK VALLEY RD
SAN JOSE	U001603137	RECREATIONAL VEHICLE STORAGE L	WHALEY DRIVE

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.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

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: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
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 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

NPL LIENS: 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: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

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: 07/02/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 82

Source: EPA
Telephone: N/A
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

Federal CERCLIS list

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: 01/29/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/01/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/13/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 09/02/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 19

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/01/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 05/25/2010
Date Data Arrived at EDR: 06/02/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 124

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

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. 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). 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.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

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. 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). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

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. 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). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

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. 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.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

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: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
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: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

Federal ERNS list

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: 07/09/2010
Date Data Arrived at EDR: 07/09/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 39

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/06/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

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: 08/23/2010
Date Data Arrived at EDR: 08/24/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 36

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/24/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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: 858-637-5595
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

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: 760-776-8943
Last EDR Contact: 11/01/2011
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

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: 760-241-7365
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 09/27/2010
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: 530-542-5572
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
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: 213-576-6710
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

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: 805-542-4786
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

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: 510-622-2433
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

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: 707-570-3769
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

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. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

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: 909-782-4496
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

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: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

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: 09/20/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

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: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

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: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

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: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

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: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

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: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 11/08/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/24/2010
Date Data Arrived at EDR: 05/27/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 74

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 08/30/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/04/2009
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 07/07/2010
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

State and tribal registered storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 21

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/06/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 59

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/30/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/24/2010
Date Data Arrived at EDR: 05/27/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 74

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/03/2010
Date Data Arrived at EDR: 08/04/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 61

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 02/11/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/02/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/29/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

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: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

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: 06/24/2010
Date Data Arrived at EDR: 06/25/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/29/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

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

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Varies

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: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 07/23/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 09/27/2010
Date Data Arrived at EDR: 09/28/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 20

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/07/2010
Date Data Arrived at EDR: 06/18/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 60

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 10/29/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Quarterly

HIST 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. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

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: 08/18/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
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: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

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: 08/19/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

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

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8
Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: 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

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 1990'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

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/06/2010
Date Data Arrived at EDR: 05/11/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 90
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31
Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 09/08/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Varies

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 21
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

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: 09/14/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 04/06/2010
Date Data Arrived at EDR: 04/07/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 50

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Annually

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: 12/31/2009
Date Data Arrived at EDR: 07/21/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 30

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

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. 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). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/12/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
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: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
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: 12/31/2008
Date Data Arrived at EDR: 09/30/2009
Date Made Active in Reports: 12/01/2009
Number of Days to Update: 62

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/14/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

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: 04/11/2010
Date Data Arrived at EDR: 04/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 28

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
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: 06/01/2010
Date Data Arrived at EDR: 06/16/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
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: 12/14/2009
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 5

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 09/01/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Varies

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: 05/07/2010
Date Data Arrived at EDR: 06/09/2010
Date Made Active in Reports: 08/30/2010
Number of Days to Update: 82

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/09/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Semi-Annually

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: 12/31/2008
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 36

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/01/2010
Next Scheduled EDR Contact: 12/13/2010
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: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 10/01/2010
Next Scheduled EDR Contact: 01/10/2011
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: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/30/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/30/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

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: 12/31/2008
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 04/24/2010
Date Data Arrived at EDR: 04/29/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

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: 02/01/2010
Date Data Arrived at EDR: 04/22/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 109

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 01/31/2011
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: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/13/2010
Date Data Arrived at EDR: 07/14/2010
Date Made Active in Reports: 08/09/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/14/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

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: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
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: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
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: 12/31/2007
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 05/12/2010
Number of Days to Update: 76

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/24/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Biennially

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

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/30/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Quarterly

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/24/2010
Date Data Arrived at EDR: 08/24/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 36

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/24/2010
Next Scheduled EDR Contact: 12/06/2010
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: 10/05/2010
Date Data Arrived at EDR: 10/06/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 42

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/06/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site 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 [CALSITES].

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

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: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: No Update Planned

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: 09/15/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
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: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 10/05/2010
Next Scheduled EDR Contact: 01/17/2011
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: 12/31/2009
Date Data Arrived at EDR: 07/07/2010
Date Made Active in Reports: 08/12/2010
Number of Days to Update: 36

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/19/2010
Next Scheduled EDR Contact: 01/31/2011
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: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/29/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Varies

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: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 05/12/2010
Date Data Arrived at EDR: 05/13/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 96

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/15/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 07/23/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 8
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 09/03/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/14/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 11/09/2009
Date Data Arrived at EDR: 12/18/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/19/2010
Date Data Arrived at EDR: 10/20/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 28
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/20/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 9
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/11/2010
Next Scheduled EDR Contact: 11/22/2010
Data Release Frequency: Quarterly

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 09/27/2010
Date Data Arrived at EDR: 09/28/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 20

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Varies

FINANCIAL ASSURANCE: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/28/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: N/A

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/10/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

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: 10/13/2010
Date Data Arrived at EDR: 10/14/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 34

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/13/2010
Date Data Arrived at EDR: 10/14/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 35

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
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: 08/16/2010
Date Data Arrived at EDR: 08/17/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 3

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 11/08/2010
Next Scheduled EDR Contact: 02/21/2011
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: 10/15/2010
Date Data Arrived at EDR: 10/15/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 33

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
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: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/29/2010
Date Data Arrived at EDR: 10/29/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 19

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 21

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 08/25/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2010
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 20

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 11/01/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 17

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 02/07/2011
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

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: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/22/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 22

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/18/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 2

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: No Update Planned

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/05/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 38

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/16/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/13/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 15

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/28/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 21

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/02/2010
Date Data Arrived at EDR: 10/19/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 29

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 27

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/12/2010
Next Scheduled EDR Contact: 01/24/2011
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: 09/07/2010
Date Data Arrived at EDR: 09/08/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 21

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
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: 09/09/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/15/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 12/04/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 45
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 11/01/2010
Next Scheduled EDR Contact: 02/14/2011
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/23/2010
Next Scheduled EDR Contact: 12/27/2010
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 09/08/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 20
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 10/12/2010
Date Data Arrived at EDR: 10/13/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 36
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 07/15/2010
Date Data Arrived at EDR: 07/16/2010
Date Made Active in Reports: 08/12/2010
Number of Days to Update: 27
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/20/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 8
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 10/04/2010
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - 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: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/01/2009
Date Made Active in Reports: 06/15/2009
Number of Days to Update: 14
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 11/22/2010
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/07/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 19
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/07/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 16
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/07/2010
Next Scheduled EDR Contact: 12/20/2010
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/04/2010
Date Data Arrived at EDR: 10/05/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 43

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 10/04/2010
Next Scheduled EDR Contact: 01/17/2011
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 09/13/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 16

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/13/2010
Next Scheduled EDR Contact: 12/27/2010
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: 07/26/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 28

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/24/2010
Next Scheduled EDR Contact: 12/06/2010
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: 08/01/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 11/15/2010
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/24/2010
Next Scheduled EDR Contact: 12/06/2010
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: 08/31/2010
Date Data Arrived at EDR: 09/21/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 9

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/21/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 10/05/2010
Date Data Arrived at EDR: 10/15/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 34

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/27/2010
Next Scheduled EDR Contact: 01/10/2011
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.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/25/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/22/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/19/2010
Next Scheduled EDR Contact: 01/31/2011
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/28/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 09/24/2010
Number of Days to Update: 44

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/09/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 08/23/2010
Next Scheduled EDR Contact: 12/06/2010
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/19/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 38

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/30/2010
Next Scheduled EDR Contact: 12/13/2010
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/06/2010
Date Made Active in Reports: 07/26/2010
Number of Days to Update: 20

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/20/2010
Next Scheduled EDR Contact: 01/03/2011
Data Release Frequency: Annually

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: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

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 2003 & 2009 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 and 2005 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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PHASE I ESA
6782 SAN FELIPE ROAD
SAN JOSE, CA 95135

TARGET PROPERTY COORDINATES

Latitude (North):	37.27580 - 37° 16' 32.9''
Longitude (West):	121.7463 - 121° 44' 46.7''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	611150.2
UTM Y (Meters):	4126001.2
Elevation:	578 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	37121-C6 LICK OBSERVATORY, CA
Most Recent Revision:	1973
West Map:	37121-C7 SAN JOSE EAST, CA
Most Recent Revision:	1980

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).

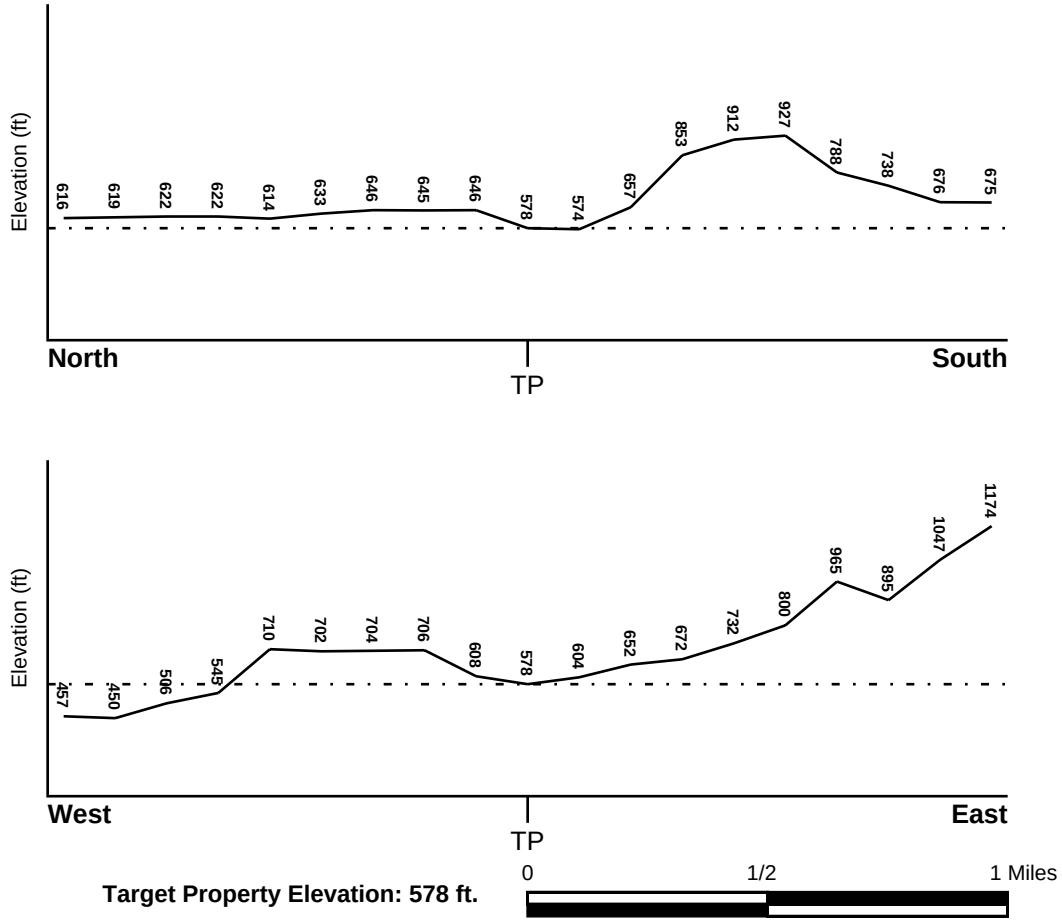
TOPOGRAPHIC INFORMATION

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 ENE

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
SANTA CLARA, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06085C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
LICK OBSERVATORY	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		

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:	Paleozoic
System:	Permian
Series:	Ultramafic rocks
Code:	uM *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

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:	AZULE
Soil Surface Texture:	clay loam
Hydrologic Group:	Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 20 inches
Depth to Bedrock Max:	> 40 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	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 7.30 Min: 5.60
2	6 inches	21 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 7.30 Min: 5.60
3	21 inches	25 inches	gravelly - clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 7.30 Min: 5.60
4	25 inches	29 inches	weathered bedrock	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:
clay
gravelly - clay loam
stony - clay
silt loam
stony - clay loam
gravelly - loam
loam
loamy sand

Surficial Soil Types:
clay
gravelly - clay loam
stony - clay
silt loam
stony - clay loam
gravelly - loam
loam
loamy sand

Shallow Soil Types:
very gravelly - clay loam
clay loam

Deeper Soil Types:
unweathered bedrock
clay loam
gravelly - fine sandy loam
stratified

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

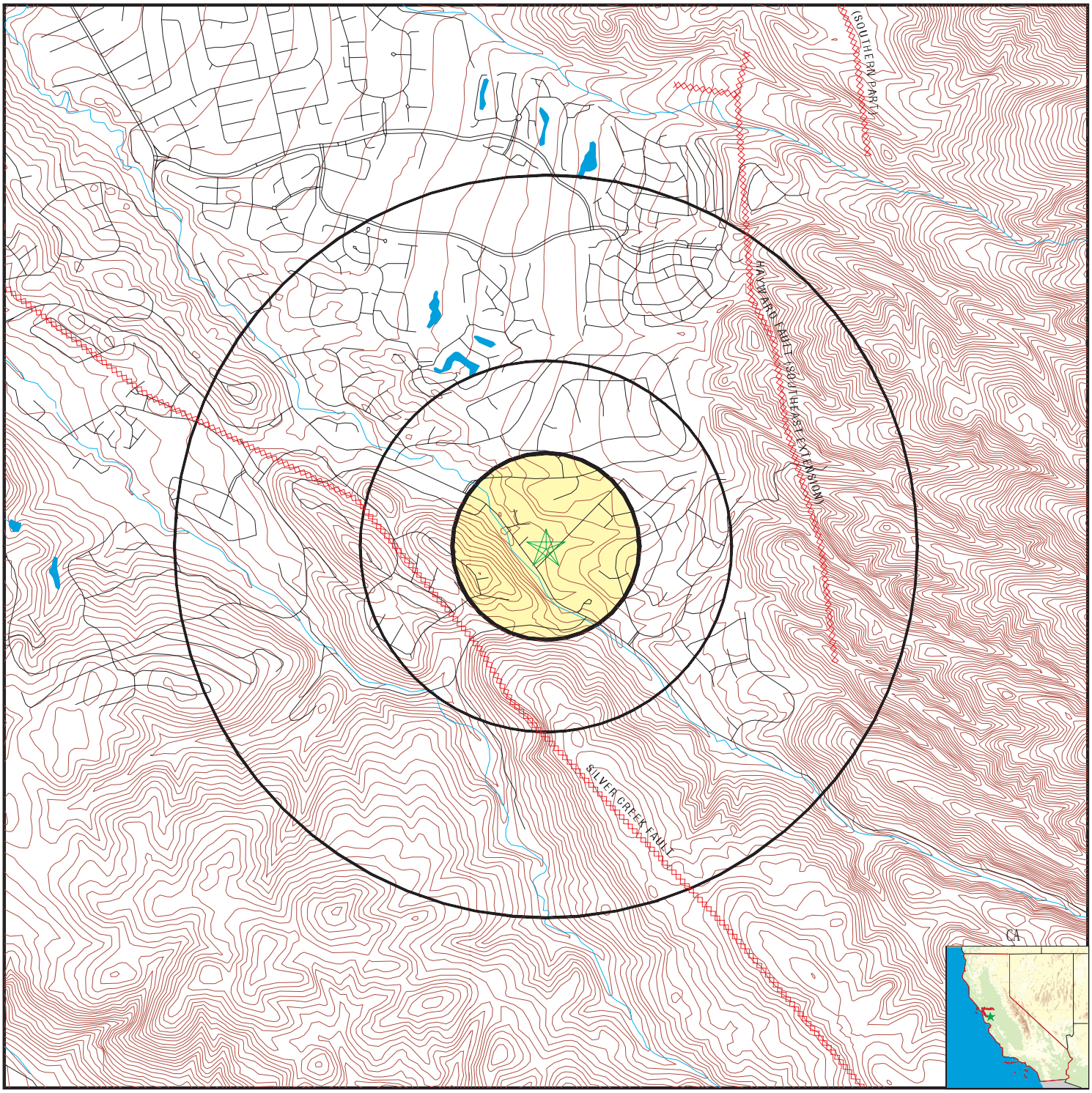
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

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 - 2925633.2s



0 1/4 1/2 1 Miles

- 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
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Phase I ESA	CLIENT: Cornerstone Earth Group
ADDRESS: 6782 San Felipe Road San Jose CA 95135	CONTACT: Stason Foster
LAT/LONG: 37.2758 / 121.7463	INQUIRY #: 2925633.2s DATE: November 18, 2010 7:50 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95135	5	0

Federal EPA Radon Zone for SANTA CLARA 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 SANTA CLARA COUNTY, CA

Number of sites tested: 70

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.363 pCi/L	91%	9%	0%
Living Area - 2nd Floor	2.100 pCi/L	100%	0%	0%
Basement	2.300 pCi/L	100%	0%	0%

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 2003 & 2009 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 and 2005 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

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

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
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

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.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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.

STREET AND ADDRESS INFORMATION

CORNERSTONE EARTH GROUP

APPENDIX C – HISTORIC AERIAL PHOTOGRAPHS AND TOPOGRAPHIC MAPS

Phase I ESA
6782 San Felipe Road
San Jose, CA 95135

Inquiry Number: 2925633.3
November 18, 2010

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

11/18/10

Site Name:
Phase I ESA
6782 San Felipe Road
San Jose, CA 95135

Client Name:
Cornerstone Earth Group
1259 Oakmead Parkway
Sunnyvale, CA 94085

EDR Inquiry # 2925633.3

Contact: Stason Foster

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Cornerstone Earth Group were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: Phase I ESA
Address: 6782 San Felipe Road
City, State, Zip: San Jose, CA 95135
Cross Street:
P.O. # 339-2-1
Project: San Felipe Road
Certification # 4DAB-429C-8869

Sanborn® Library search results
Certification # 4DAB-429C-8869

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Cornerstone Earth Group (the client) is permitted to make up to THREE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Phase I ESA
6782 San Felipe Road
San Jose, CA 95135

Inquiry Number: 2925633.5
November 23, 2010

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Date EDR Searched Historical Sources:

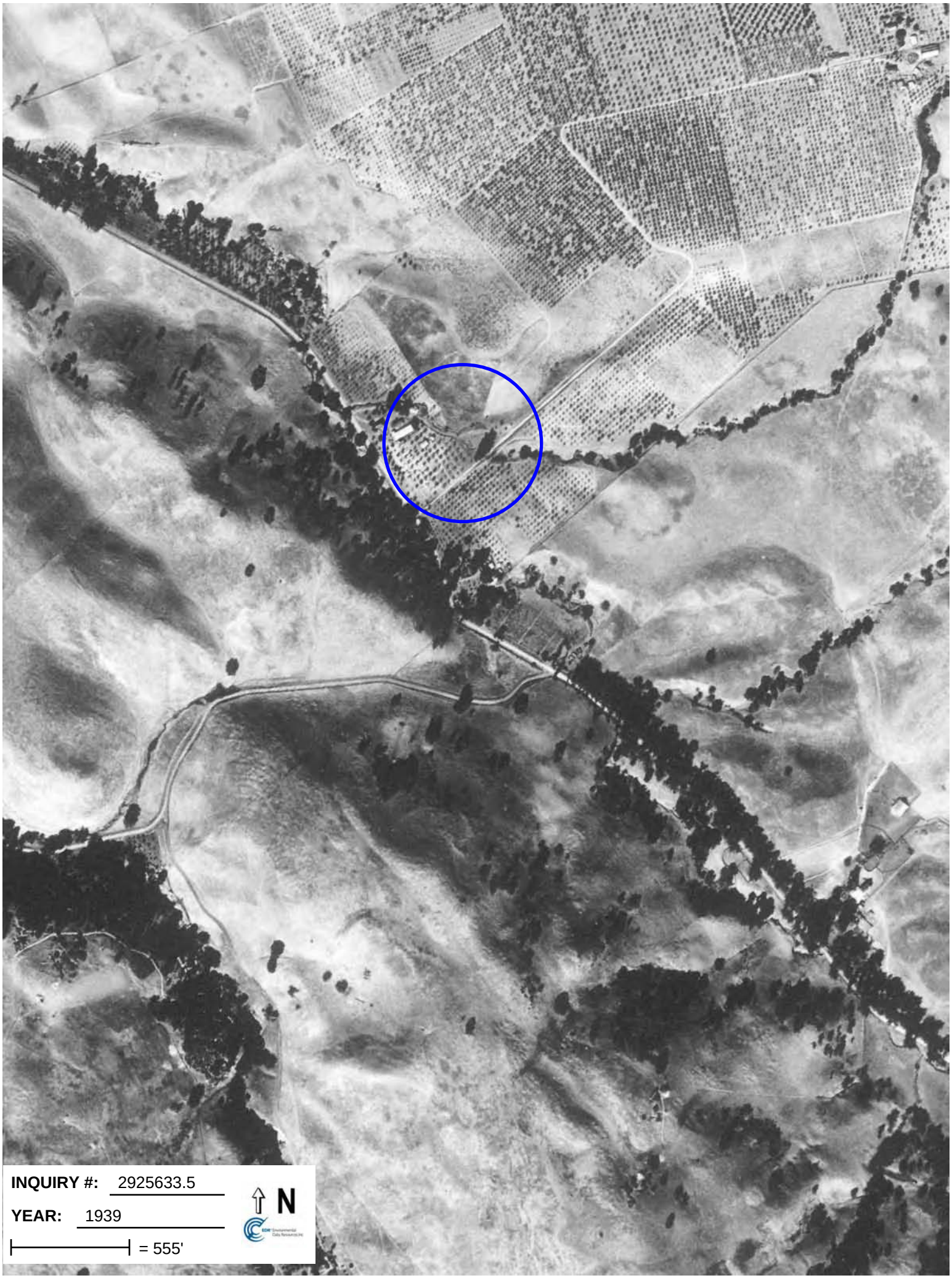
Aerial Photography November 23, 2010

Target Property:

6782 San Felipe Road

San Jose, CA 95135

Year	Scale	Details	Source
1939	Aerial Photograph. Scale: 1"=555'	Flight Year: 1939	Fairchild
1948	Aerial Photograph. Scale: 1"=655'	Flight Year: 1948	usgs
1956	Aerial Photograph. Scale: 1"=555'	Flight Year: 1956	Aero
1965	Aerial Photograph. Scale: 1"=333'	Flight Year: 1965	Cartwright
1973	Aerial Photograph. Scale: 1"=541'	Flight Year: 1973 Best Copy Available from original source	NASA
1982	Aerial Photograph. Scale: 1"=690'	Flight Year: 1982	USGS
1993	Aerial Photograph. Scale: 1"=666'	Flight Year: 1993	USGS
1998	Aerial Photograph. Scale: 1"=666'	Flight Year: 1998	USGS
2005	Aerial Photograph. Scale: 1"=604'	Flight Year: 2005	EDR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YEAR: 1939
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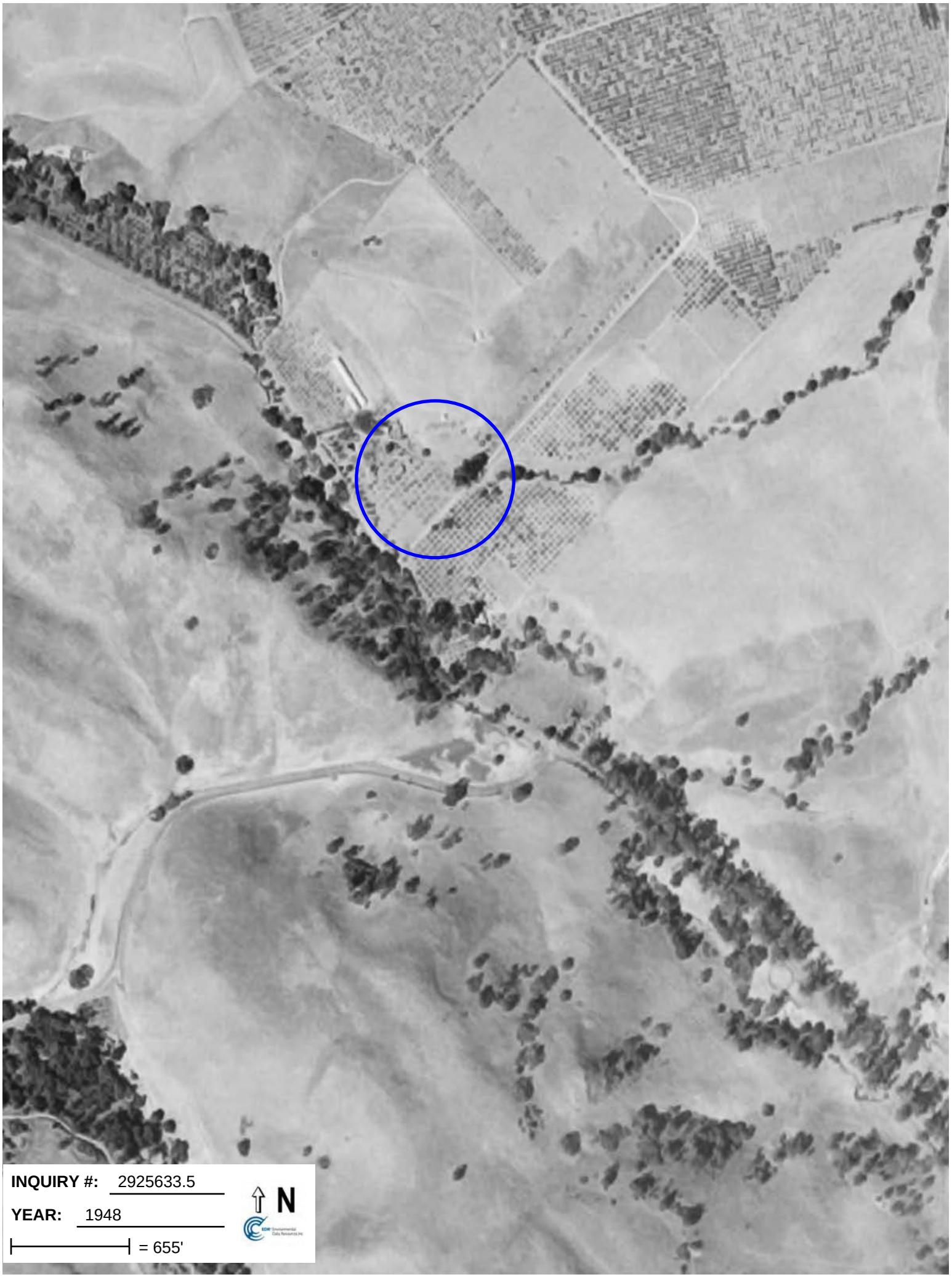
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YEAR: 1948
= 655'
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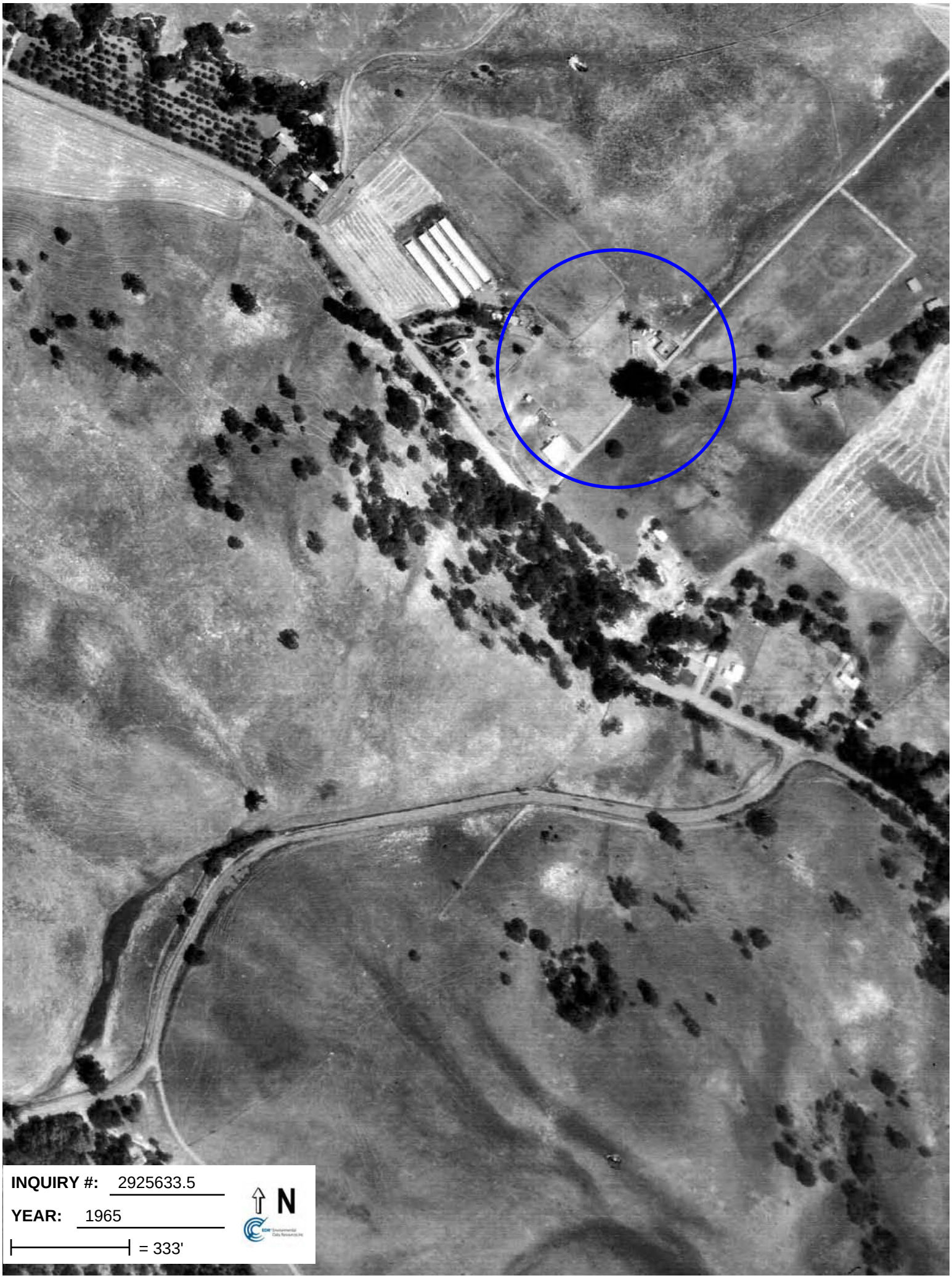
INQUIRY #: 2925633.5
YEAR: 1956
= 555'
N


INQUIRY #: 2925633.5
YEAR: 1965
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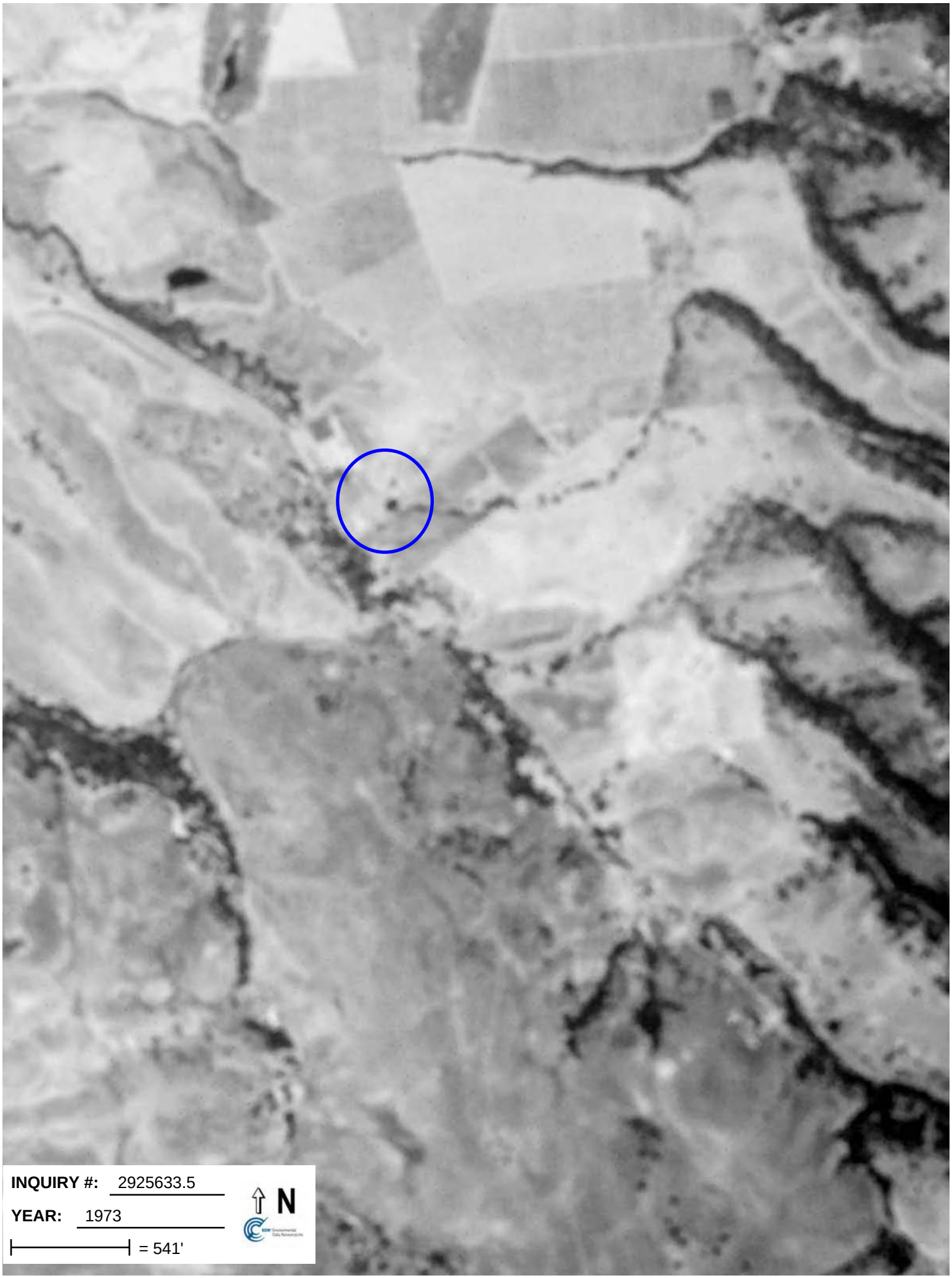
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YEAR: 1973
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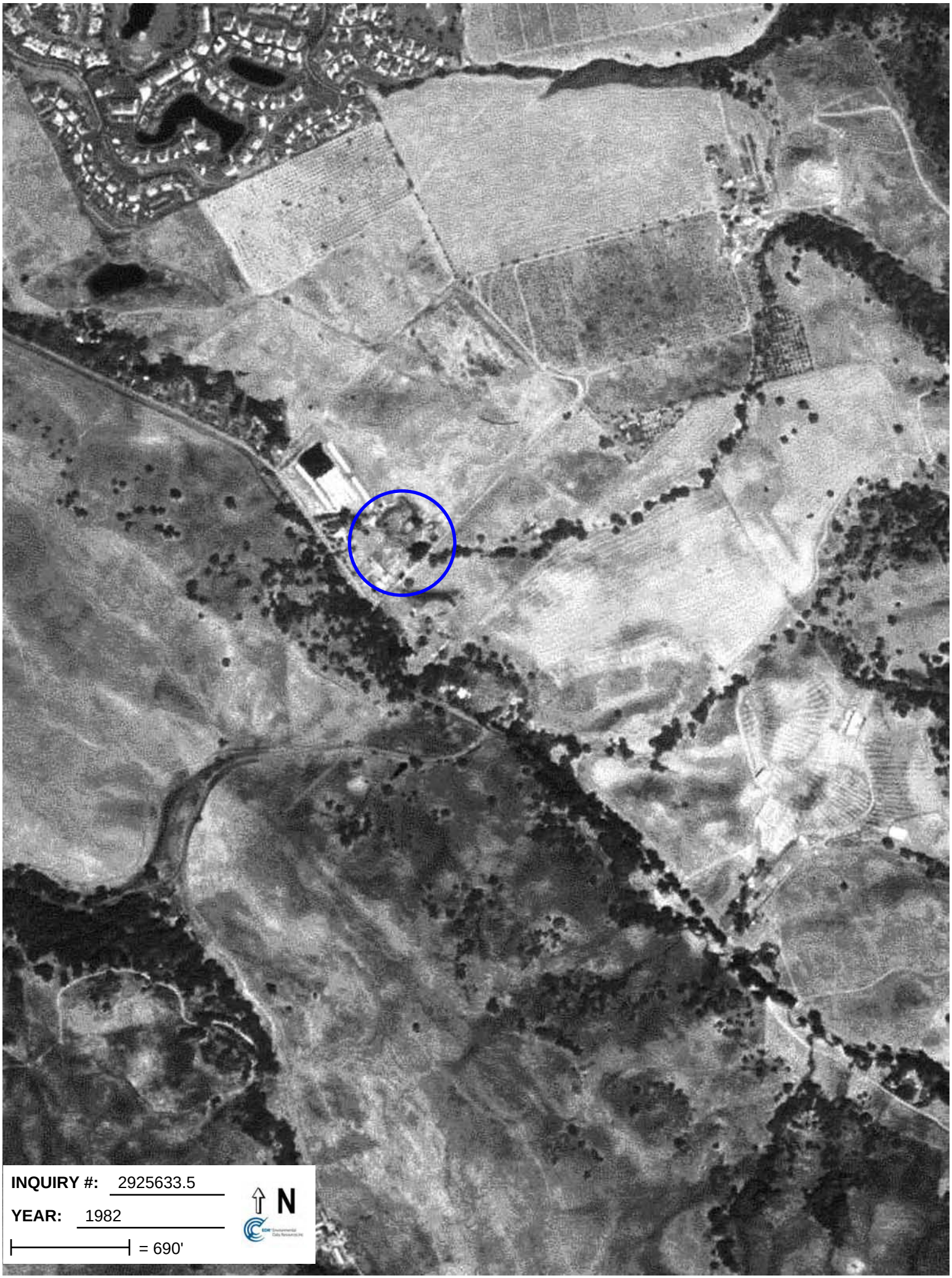
INQUIRY #: 2925633.5
YEAR: 1982
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INQUIRY #: 2925633.5
YEAR: 1993
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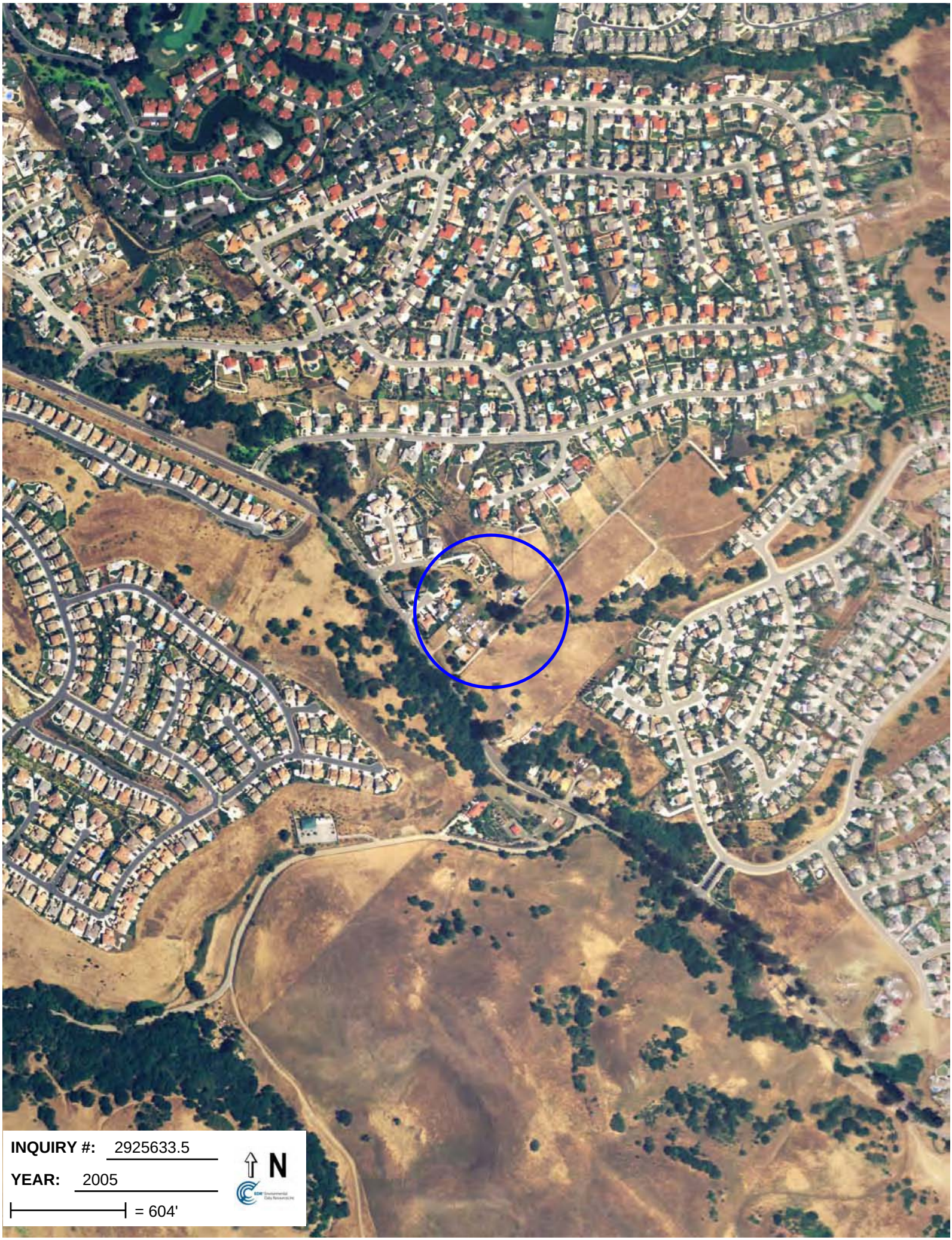
INQUIRY #: 2925633.5
YEAR: 1998
= 666'
N


INQUIRY #: 2925633.5
YEAR: 2005
= 604'
N

Phase I ESA
6782 San Felipe Road
San Jose, CA 95135

Inquiry Number: 2925633.4
November 19, 2010

EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

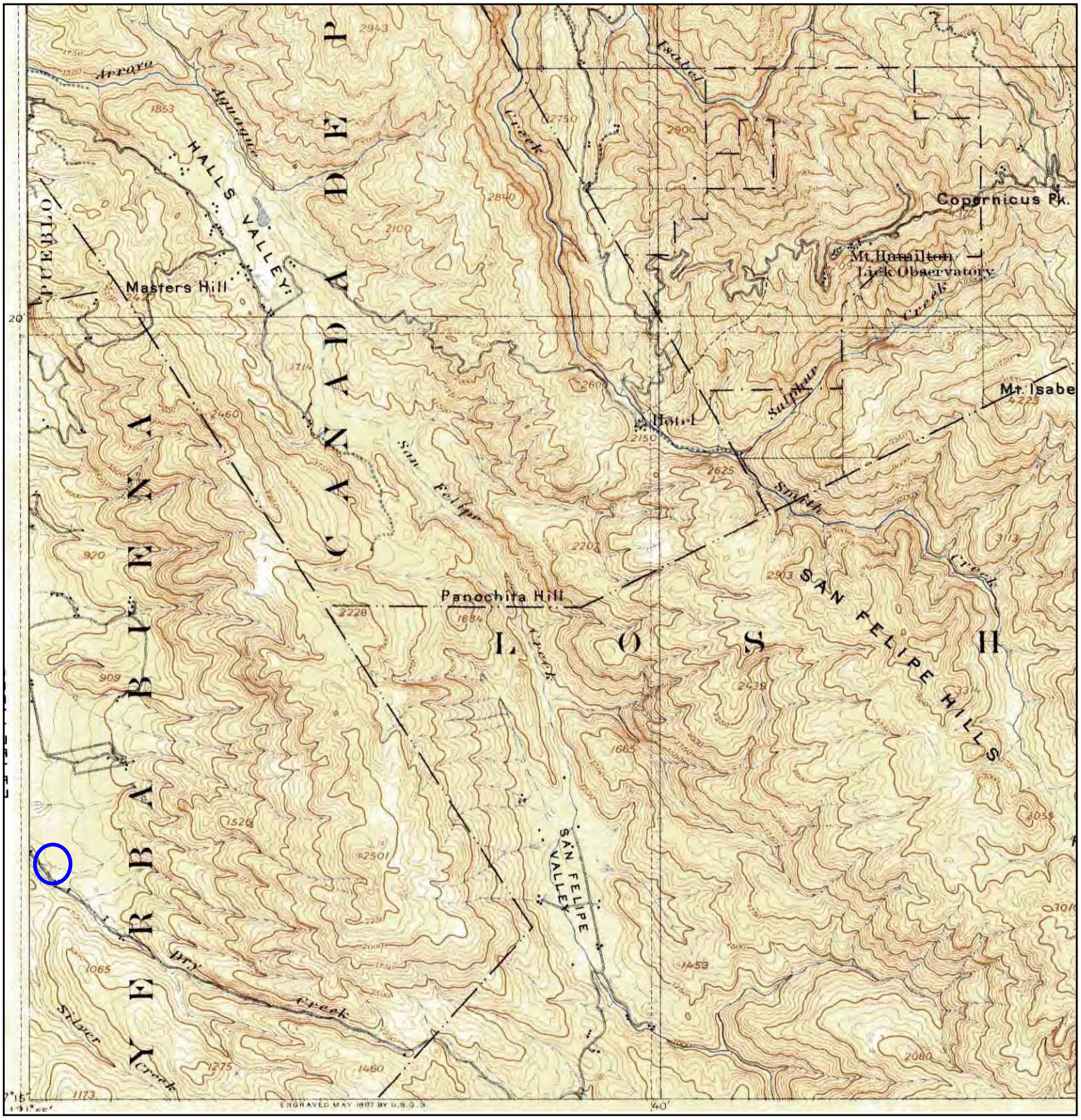
440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

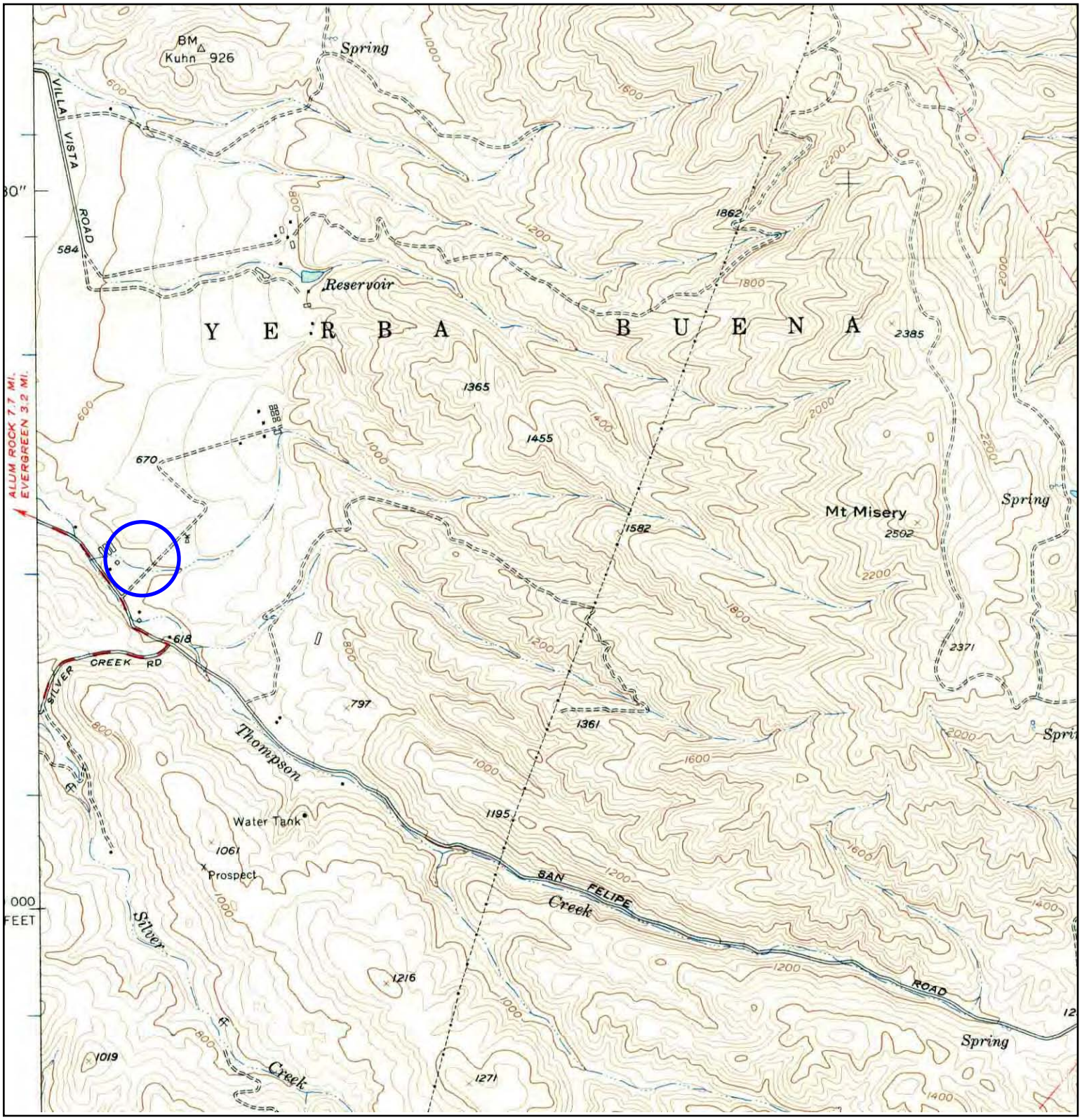
Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Historical Topographic Map



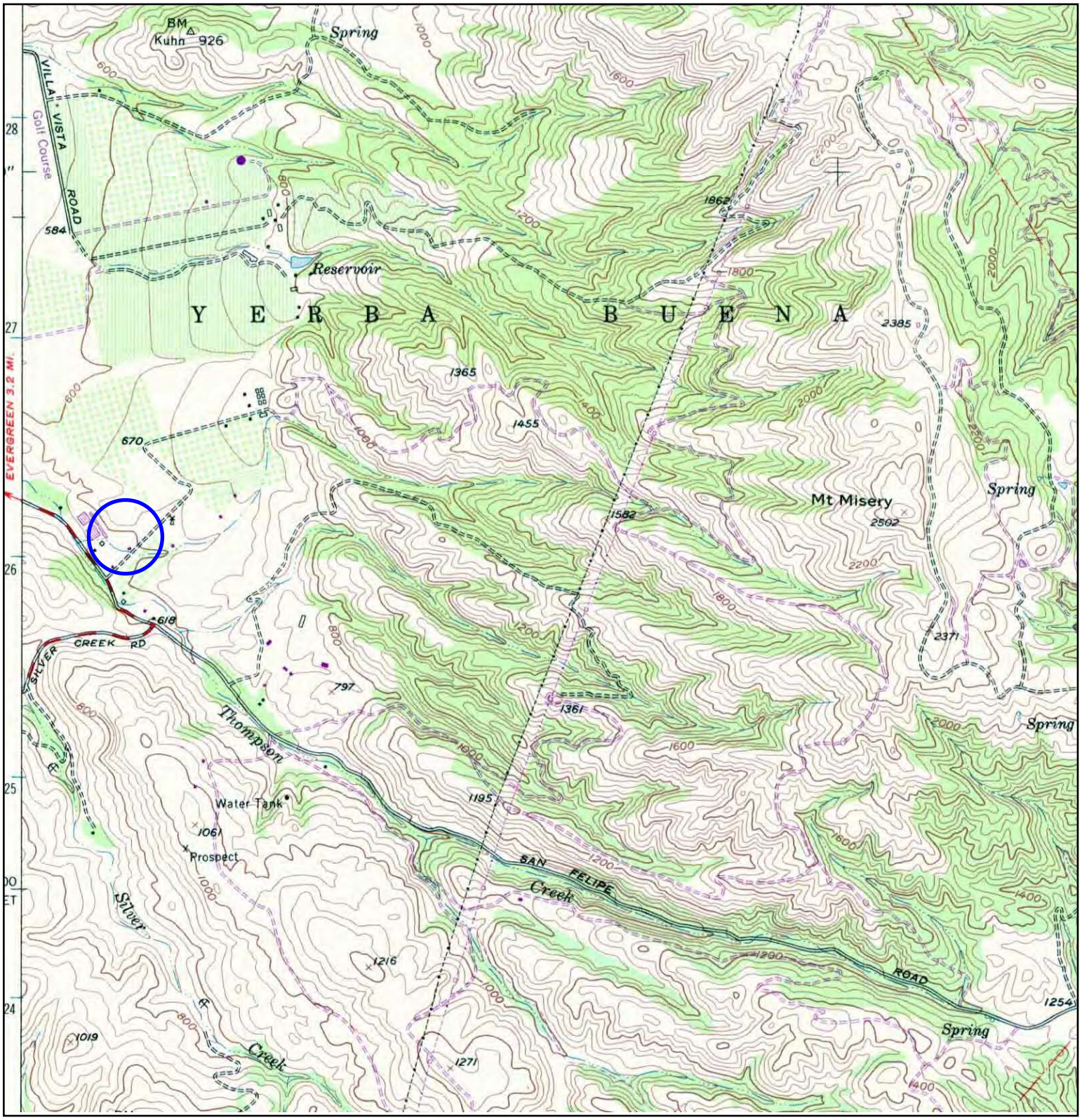
N	TARGET QUAD NAME: MOUNT HAMILTON MAP YEAR: 1897 SERIES: 15 SCALE: 1:62500	SITE NAME: Phase I ESA ADDRESS: 6782 San Felipe Road San Jose, CA 95135 LAT/LONG: 37.2758 / -121.7463	CLIENT: Cornerstone Earth Group CONTACT: Stason Foster INQUIRY#: 2925633.4 RESEARCH DATE: 11/19/2010

Historical Topographic Map



N	TARGET QUAD NAME: LICK OBSERVATORY MAP YEAR: 1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Phase I ESA ADDRESS: 6782 San Felipe Road San Jose, CA 95135 LAT/LONG: 37.2758 / -121.7463	CLIENT: Cornerstone Earth Group CONTACT: Stason Foster INQUIRY#: 2925633.4 RESEARCH DATE: 11/19/2010

Historical Topographic Map



N	TARGET QUAD NAME: LICK OBSERVATORY MAP YEAR: 1968 PHOTOREVISED:1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Phase I ESA ADDRESS: 6782 San Felipe Road San Jose, CA 95135 LAT/LONG: 37.2758 / -121.7463	CLIENT: Cornerstone Earth Group CONTACT: Stason Foster INQUIRY#: 2925633.4 RESEARCH DATE: 11/19/2010

CORNERSTONE EARTH GROUP

APPENDIX D – LOCAL STREET DIRECTORY SEARCH RESULTS

Phase I ESA
6782 San Felipe Road
San Jose, CA 95135

Inquiry Number: 2925633.6
November 18, 2010

The EDR-City Directory Abstract

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

2009 Enhancements to EDR City Directory Abstract

New for 2009, the EDR City Directory Abstract has been enhanced with additional information and features. These enhancements will make your city directory research process more efficient, flexible, and insightful than ever before. The enhancements will improve the options for selecting adjoining properties, and will speed up your review of the report.

City Directory Report. Three important enhancements have been made to the EDR City Directory Abstract:

1. *Executive Summary.* The report begins with an Executive Summary that lists the sources consulted in the preparation of the report. Where available, a parcel map is also provided within the report, showing the locations of properties researched.

2. *Page Images.* Where available, the actual page source images will be included in the Appendix, so that you can review them for information that may provide additional insight. EDR has copyright permission to include these images.

3. *Findings Listed by Location.* Another useful enhancement is that findings are now grouped by address. This will significantly reduce the time you need to review your abstracts. Findings are provided under each property address, listed in reverse chronological order and referencing the source for each entry.

Options for Selecting Adjoining Properties. Ensuring that the right adjoining property addresses are searched is one of the biggest challenges that environmental professionals face when conducting city directory historical research. EDR's new enhancements make it easier for you to meet this challenge. Now, when you place an order for the EDR City Directory Abstract, you have the following choices for determining which addresses should be researched.

1. *You Select Addresses and EDR Selects Addresses.* Use the "Add Another Address" feature to specify the addresses you want researched. Your selections will be supplemented by addresses selected by EDR researchers using our established research methods. Where available, a digital map will be shown, indicating property lines overlaid on a color aerial photo and their corresponding addresses. Simply use the address list below the map to check off which properties shown on the map you want to include. You may also select other addresses using the "Add Another Address" feature at the bottom of the list.

2. *EDR Selects Addresses.* Choose this method if you want EDR's researchers to select the addresses to be researched for you, using our established research methods.

3. *You Select Addresses.* Use this method for research based solely on the addresses you select or enter into the system.

4. *Hold City Directory Research Option.* If you choose to select your own adjoining addresses, you may pause production of your EDR City Directory Abstract report until you have had a chance to look at your other EDR reports and sources. Sources for property addresses include: your Certified Sanborn Map Report may show you the location of property addresses; the new EDR Property Tax Map Report may show the location of property addresses; and your field research can supplement these sources with additional address information. To use this capability, simply click "Hold City Directory research" box under "Other Options" at the bottom of the page. Once you have determined what addresses you want researched, go to your EDR Order Status page, select the EDR City Directory Abstract, and enter the addresses and submit for production.

Questions? Contact your EDR representative at 800-352-0050. For more information about all of EDR's 2009 report and service enhancements, visit www.edrnet.com/2009enhancements

EXECUTIVE SUMMARY

DESCRIPTION

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. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2006. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2006	Haines Company, Inc.	X	X	X	-
2001	Haines Company, Inc.	-	-	-	-
2000	Haines & Company	X	X	X	-
1996	Pacific Bell	-	X	X	-
1991	PACIFIC BELL WHITE PAGES	-	X	X	-
1986	Pacific Bell	-	X	X	-
1985	Pacific Bell	-	X	X	-
1982	Pacific Telephone	-	-	-	-
1980	Pacific Telephone	-	X	X	-
1978	R. L. Polk & Co.	-	-	-	-
1975	Pacific Telephone	-	-	-	-
1974	R. L. Polk & Co.	-	-	-	-
1970	R. L. Polk & Co.	-	-	-	-
1968	R. L. Polk & Co.	-	-	-	-
1966	R. L. Polk & Co.	-	-	-	-
1965	R. L. Polk & Co.	-	-	-	-
1964	R. L. Polk Co.	-	-	-	-
1963	Pacific Telephone	-	-	-	-
1962	R. L. Polk & Co.	-	-	-	-
1960	R. L. Polk & Co.	-	-	-	-
1957	R. L. Polk Co.	-	-	-	-
1955	R.L. Polk and Co Publishers	-	-	-	-
1950	R. L. Polk Co.	-	-	-	-
1946	R. L. Polk Co.	-	-	-	-
1945	R. L. Polk & Co.	-	-	-	-
1942	R. L. Polk Co.	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1940	R. L. Polk & Co.	-	-	-	-
1936	R. L. Polk Co.	-	-	-	-
1935	R. L. Polk Co. of California	-	-	-	-
1931	R. L. Polk Co.	-	-	-	-
1930	R. L. Polk Co. of California	-	-	-	-
1926	R. L. Polk Co.	-	-	-	-
1925	R. L. Polk Co. of California	-	-	-	-
1922	R. L. Polk Co.	-	-	-	-

EXECUTIVE SUMMARY

MAP INFORMATION

The Overview Map provides information on nearby property parcel boundaries. Properties on this map that were selected for research are listed below the map.

SELECTED ADDRESSES

The following addresses were selected by the client. Detailed findings are contained in the findings section. An "X" indicates where information was identified.

Address	*Type*	*Findings*
6782 San Felipe Road	Map ID: 1	X
6784 SAN FELIPE RD	Map ID: 2	X
6788 SAN FELIPE RD	Map ID: 26	X
6790 SAN FELIPE RD	Map ID: 4	X

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

6782 San Felipe Road
San Jose, CA 95135

MapID: 1

FINDINGS DETAIL

Target Property research detail.

Year	*Uses*	*Source*
2006	HUNT Mary	Haines Company, Inc.
	HUNT Mary	Haines Company, Inc.
2000	HUNTThomas	Haines & Company
	HUNTThomas	Haines & Company

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

SAN FELIPE RD

6776 SAN FELIPE RD

Year	Uses	Source
2006	a SIDHU Kulwant	Haines Company, Inc.
2000	SIDHUKulwanI	Haines & Company
	SIDHUKulwanI	Haines & Company
1991	Home Delivery Cleaners	PACIFIC BELL WHITE PAGES
	HOME DELIVERY CLEANERS	PACIFIC BELL WHITE PAGES

6780 SAN FELIPE RD

Year	Uses	Source
1986	Stellman Bev & Jim	Pacific Bell
1985	STELLMAN BEV & JIM	Pacific Bell
1980	Tiaylor James B	Pacific Telephone
	Taylor James A	Pacific Telephone

Map ID: 2

6784 SAN FELIPE RD

Year	Uses	Source
2006	MURPHY Ron	Haines Company, Inc.
2000	MURPHY Ronald	Haines & Company
	MURPHY Ronald	Haines & Company

6786 SAN FELIPE RD

Year	Uses	Source
2006	OLVERIMERICAN	Haines Company, Inc.
2000	OLVERIMERICANPaul	Haines & Company
	OLVERIMERICANPaul	Haines & Company
1996	OLVERIMERICAN PAUL	Pacific Bell
1991	Olverimerican Paul	PACIFIC BELL WHITE PAGES
	OLVERIMERICAN PAUL	PACIFIC BELL WHITE PAGES
1986	Olverimerican Paul	Pacific Bell
1980	Mason Earl E	Pacific Telephone

FINDINGS

6788 SAN FELIPE RD Map ID: 26

Year	*Uses*	*Source*
2000	HIATTJohn	Haines & Company
	HIATTJohn	Haines & Company

6790 SAN FELIPE RD Map ID: 4

Year	*Uses*	*Source*
2006	a HUNTBOdan K	Haines Company, Inc.
2000	HUNTThomas	Haines & Company
	HUNTThomas	Haines & Company

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
6782 San Felipe Road	2001, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
6776 SAN FELIPE RD	2001, 1996, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
6780 SAN FELIPE RD	2006, 2001, 2000, 1996, 1991, 1982, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
6784 SAN FELIPE RD	2001, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
6786 SAN FELIPE RD	2001, 1985, 1982, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
6788 SAN FELIPE RD	2006, 2001, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
6790 SAN FELIPE RD	2001, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

CORNERSTONE EARTH GROUP

APPENDIX E – QUESTIONNAIRE

CORNERSTONE EARTH GROUP

6782 and 6790 San Felipe Road, San Jose, CA
General Environmental Questionnaire

Cornerstone Earth Group is performing a Phase I environmental site assessment (ESA). The purpose of the ESA is to evaluate current and historic uses of the property that may have involved the use, generation, or storage of hazardous materials. Please respond to these questions to the best of your knowledge.

Return the completed, signed questionnaire by fax at (408) 245-4620 or by mail to the address below (attention Ron Helm). Alternatively, a scanned copy can be emailed to rhelm@cornerstoneearth.com. The completed questionnaire will be attached to the ESA report. Thank you for your assistance and timely response.

GENERAL PROPERTY INFORMATION

1) **Site Address(es) and Assessor's Parcel Number(s):** Please list all current and former addresses. Some sites have multiple addresses; all are needed, even if they are not in current use.

Address(es)	APN Number(s)
6782 San Felipe Road	660-05-002
6790 San Felipe Road	660-05-001

2) **Property Size:** 2.04 (Sq. Ft. or (Acres) [circle one])

3) **Current site owner(s) and purchase date:**

Current Owner Name	Year Purchased
The Hunt Family Trust	

4) **Previous site owner(s) and dates of ownership:**

Prior Owner Name	Year Purchased	Year Sold
Mary B. Hunt (6782 San Felipe)	approx. 1955	
Thomas C. & Mary B. Hunt (6790 San Felipe)	approx 1955	

CORNERSTONE EARTH GROUP

STRUCTURES AND OCCUPANTS

5) Please describe all on-site buildings:

Building Size (sq. ft)	Building Use	Date of Construction
1800 (6782 San Felipe)	SFD	1977
1064 (6790 San Felipe)	SFD	1945

Potable Water Source (*e.g.*, city or other water agency, on-site well, etc.): City Water (on-site well not used)

Sewage Disposal System (*e.g.*, city sewer, septic tank, etc.): septic tank

Heating/Cooling System and Fuel Source (*e.g.*, electric, natural gas, fuel oil, etc.): electric and propane

6) Current site tenant(s), site use, and years of occupancy:

Tenant	Site Use	Years of Occupancy (e.g., From 1995 to 2007)
Brian K. Hunt	SFD	2009 - current
Tom Hunt	SFD	2009 - current

7) Prior site tenant(s), site use, and years of occupancy:

	Tenant	Site Use	Years of Occupancy (e.g., From 1975 to 1983)
6782	Mary B. Hunt	SFD	1977 - 2009
	Tom E. Hunt	SFD	1992 - 2009
6790	Brian K. Hunt	SFD	1984 - 2009
	Tom. E. Hunt	SFD	1981 - 2009

CORNERSTONE EARTH GROUP

OTHER SITE FEATURES AND INFORMATION

8) **Please indicate if you are aware of any of the following structures, features, or activities <u>currently or formerly</u> at the site.**

	Structure/Feature	Yes	No	Do Not Know
(1)	Aboveground Storage Tanks (USTs)	X		
	Agricultural fields		X	
	Agricultural or drinking water supply wells		X	
	Air emission control systems		X	
	Areas where garbage or other wastes have been disposed on-site		X	
(2)	Boilers	X		
	Burn Pits/Agricultural Waste Disposal Areas		X	
	Chemical mixing or processing activities		X	
	Chemical storage areas		X	
(3)	Current or former drainage ditches, ponds, or streams	X		
	Dry cleaning equipment		X	
	Dry wells		X	
	Elevators		X	
	Emergency generators		X	
	Equipment maintenance or repair areas		X	
	Fill materials placed on-site (*i.e.*, fill used to build up the site elevation to current level)		X	
	Ground water monitoring wells		X	
	Ground water or soil remediation systems		X	
	Hydraulic lifts		X	
	Incinerators		X	
	Manufacturing machinery		X	
	Medical Waste		X	
	Oil or gas wells		X	
	Petroleum pipelines		X	
	Railroad lines		X	
(4)	Septic tanks	X		
(5)	Stockpiles of soil or debris	X		
(6)	Storage sheds	X		
	Sumps, clarifiers, oil/water separators, or similar structures		X	
	Transformers		X	
	Underground Storage Tanks (USTs)		X	
	Vapor or dust control hoods and ducting		X	
	Waste burning areas (i.e. burn pit) or ash disposal area		X	

If you checked yes to any of the above, please provide additional information here or attach to this questionnaire.

(1) well; currently not used
(2) old boiler - last used approx. 1981 - make jams/jellies
(3) Misery Creek
(4) both homes have septic tanks
(5) Debris on property to be removed prior to sale.
(6) there is a storage garage. Also a portable storage shed and 2 storage trailers to be removed prior to sale

CORNERSTONE EARTH GROUP

9) Please indicate if, to your knowledge, any of the following documents exist:

Document	Yes	No	Do Not Know
Environmental site assessments		X	
Environmental permits or violation notices		X	
Underground or above ground storage tank documents/permits		X	
Geotechnical reports or hydrogeologic studies		X	
Risk assessments		X	
Hazardous materials management plans or chemical inventories		X	
Safety/emergency response plans or spill prevention plans		X	
Compliance audits or community right-to-know plans		X	
Asbestos or lead based paint surveys		X	

If you checked yes to any of the above, please summarize and provide copies of documentation.

10) Have significant quantities of hazardous materials been used, stored, or generated on-site?

Yes _____ No X

If so, please list types and quantities and where these materials are or were located.

11) Have herbicides or pesticides been mixed or applied to the site?

Yes _____ No X

If so, please list types and quantities and where these materials are or were located.

12) Have pesticides been applied to structures?

Yes ? No _____

If so, please list types and quantities and where these materials are or were located.

Unsure if termite pesticide used several years ago at 6782 site.

CORNERSTONE EARTH GROUP

13) How are agricultural wastes handled?

If buried or burned on-site, please list where these materials are located. If off-hauled for disposal, please list name and contact information for the disposal contractor.

Have local garbage service. Branches, weeds, etc are placed at curbside & removed by garbage service

14) Are you aware of commonly known or reasonably ascertainable information about the site that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, do you know of past uses of the site, specific chemicals that were or are present at the site, have knowledge of spills or other chemical releases at the site, or any environmental cleanups at the site.

Yes _____ No X

If so, please briefly describe below, including whether reports documenting the activities are available for review by Cornerstone Earth Group.

15) Are you aware of any environmental cleanup liens against the site that are filed or recorded under federal, tribal, state, or local law?

Yes _____ No X

16) Are you aware of any activity or use limitations (UALs), such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

Yes _____ No X

If so, please briefly describe below.

17) Are you aware of 1) any pending, threatened or past litigation, or administrative proceedings relevant to hazardous substances or petroleum products at the site, or 2) any notices from any governmental entity regarding possible violations of environmental laws or possible liability related to hazardous substances or petroleum products?

Yes _____ No X

If so, please briefly describe below.

18) Completed by:

Brian Hunt			11-10-10
Name (print)	Signature	Company	Date

APPENDIX F – SOIL SAMPLING PROTOCOL, DATA SUMMARY TABLE, AND LABORATORY REPORTS

Sampling Protocol: Soil samples for laboratory analyses were colleted in clean stainless steel liners using hand sampling equipment. The ends of the liners were covered in a Teflon film, fitted with plastic end caps, taped, and labeled with a unique sample identification number. The samples were then placed in an ice-chilled cooler and transported to a state-certified laboratory with chain of custody documentation.

Cornerstone Earth Group
1259 Oakmead Parkway
Sunnyvale, California 94035
Tel: (408) 245-4600
Fax: (408) 245-4620

RE: San Felipe Rd, San Jose

Work Order No.: 1012006

Dear Stason Foster:

Torrent Laboratory, Inc. received 9 sample(s) on December 02, 2010 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

Patti Sandrock

December 09, 2010
Date

Date: 12/9/2010

Client: Cornerstone Earth Group

Project: San Felipe Rd, San Jose

Work Order: 1012006

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

SS-1 1012006-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	11	mg/Kg
Lead	SW6010B	1	0.13	1.0	9.5	mg/Kg
Mercury	7471B	1	0.01	0.10	0.36	mg/Kg
gamma-Chlordane	SW8081A	4	1.7	8.0	170	ug/Kg
alpha-Chlordane	SW8081A	4	1.4	8.0	210	ug/Kg
Chlordane	SW8081A	4	40	80	1900	ug/Kg

SS-2 1012006-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	12	mg/Kg
Lead	SW6010B	1	0.13	1.0	13	mg/Kg
Mercury	7471B	1	0.01	0.10	0.22	mg/Kg
gamma-Chlordane	SW8081A	200	84	400	11000	ug/Kg
alpha-Chlordane	SW8081A	200	72	400	8900	ug/Kg
Chlordane	SW8081A	200	2000	4000	88000	ug/Kg

SS-3 1012006-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	11	mg/Kg
Lead	SW6010B	1	0.13	1.0	13	mg/Kg
Mercury	7471B	1	0.01	0.10	0.17	mg/Kg
4,4'-DDE	SW8081A	1	0.48	2.0	13	ug/Kg
4,4'-DDT	SW8081A	1	0.81	2.0	2.5	ug/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

SS-4 1012006-004

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	12	mg/Kg
Lead	SW6010B	1	0.13	1.0	13	mg/Kg
Mercury	7471B	1	0.01	0.10	0.18	mg/Kg
4,4'-DDE	SW8081A	1	0.48	2.0	2.7	ug/Kg
4,4'-DDT	SW8081A	1	0.81	2.0	4.3	ug/Kg

SS-5 1012006-005

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	10	mg/Kg
Lead	SW6010B	1	0.13	1.0	16	mg/Kg
Mercury	7471B	1	0.01	0.10	0.16	mg/Kg
4,4'-DDE	SW8081A	4	1.9	8.0	12	ug/Kg

SS-6 1012006-006

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	8.9	mg/Kg
Lead	SW6010B	1	0.13	1.0	42	mg/Kg
Mercury	7471B	1	0.01	0.10	0.42	mg/Kg
4,4'-DDE	SW8081A	4	1.9	8.0	16	ug/Kg
4,4'-DDT	SW8081A	4	3.2	8.0	9.9	ug/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

SS-7 1012006-007

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	11	mg/Kg
Lead	SW6010B	1	0.13	1.0	110	mg/Kg
Mercury	7471B	1	0.01	0.10	0.55	mg/Kg

SS-8 1012006-008

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	12	mg/Kg
Lead	SW6010B	1	0.13	1.0	27	mg/Kg
Mercury	7471B	1	0.01	0.10	0.25	mg/Kg
gamma-Chlordane	SW8081A	4	1.7	8.0	120	ug/Kg
alpha-Chlordane	SW8081A	4	1.4	8.0	130	ug/Kg
4,4'-DDE	SW8081A	4	1.9	8.0	52	ug/Kg
4,4'-DDT	SW8081A	4	3.2	8.0	80	ug/Kg
Chlordane	SW8081A	4	40	80	890	ug/Kg

SS-9 1012006-009

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Arsenic	SW6010B	1	0.28	1.7	8.1	mg/Kg
Lead	SW6010B	1	0.13	1.0	77	mg/Kg
Mercury	7471B	1	0.01	0.10	0.26	mg/Kg
alpha-Chlordane	SW8081A	10	3.6	20	27	ug/Kg
4,4'-DDE	SW8081A	10	4.8	20	39	ug/Kg
4,4'-DDT	SW8081A	10	8.1	20	42	ug/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-1	**Lab Sample ID:**	1012006-001A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	11		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	9.5		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.36		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	4	1.5	8.0	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	4	4.4	8.0	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	4	1.3	8.0	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	4	1.7	8.0	170		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	4	1.4	8.0	210		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	4	2.4	8.0	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	4	1.9	8.0	ND		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	4	2.3	8.0	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	4	1.9	8.0	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	4	6.1	8.0	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	4	3.2	8.0	ND		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	4	4.1	8.0	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	4	2.5	20	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	4	40	80	1900		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	4	40	400	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	4	52.5	139	83.4		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	4	50.2	139	90.0		%	403218	1657

NOTE: Reporting limits increased due to the nature of the sample matrix (dark color extract).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-2	**Lab Sample ID:**	1012006-002A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	12		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	13		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.22		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
alpha-BHC	SW8081A	12/3/10	12/06/10	200	88	400	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	200	79	400	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	200	73	400	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	200	98	400	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	200	220	400	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	200	88	400	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	200	63	400	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	200	84	400	11000		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	200	72	400	8900		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	200	120	400	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	200	95	400	ND		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	200	85	400	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	200	110	400	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	200	94	400	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	200	310	400	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	200	160	400	ND		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	200	210	400	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	200	98	400	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	200	120	1000	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	200	80	400	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	200	2000	4000	88000		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	200	2000	20000	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	200	52.5	139	0.000	S,D	%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	200	50.2	139	0.000	S,D	%	403218	1657

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-2	**Lab Sample ID:**	1012006-002A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch

NOTE: D - Surrogates not recoverable due to dilution of the sample. Reporting limits increased due to matrix interference.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-3	**Lab Sample ID:**	1012006-003A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	11		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	13		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.17		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	1	0.44	2.0	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	1	0.40	2.0	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	1	0.36	2.0	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	1	0.49	2.0	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	1	1.1	2.0	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	1	0.44	2.0	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	1	0.32	2.0	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	1	0.42	2.0	ND		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	1	0.36	2.0	ND		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	1	0.59	2.0	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	1	0.48	2.0	13		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	1	0.43	2.0	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	1	0.57	2.0	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	1	0.47	2.0	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	1	1.5	2.0	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	1	0.81	2.0	2.5		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	1	1.0	2.0	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	1	0.49	2.0	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	1	0.62	5.0	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	1	0.40	2.0	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	1	10	20	ND		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	1	10	100	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	1	52.5	139	82.7		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	1	50.2	139	72.9		%	403218	1657

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-4	**Lab Sample ID:**	1012006-004A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	12		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	13		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.18		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	1	0.44	2.0	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	1	0.40	2.0	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	1	0.36	2.0	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	1	0.49	2.0	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	1	1.1	2.0	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	1	0.44	2.0	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	1	0.32	2.0	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	1	0.42	2.0	ND		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	1	0.36	2.0	ND		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	1	0.59	2.0	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	1	0.48	2.0	2.7		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	1	0.43	2.0	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	1	0.57	2.0	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	1	0.47	2.0	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	1	1.5	2.0	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	1	0.81	2.0	4.3		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	1	1.0	2.0	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	1	0.49	2.0	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	1	0.62	5.0	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	1	0.40	2.0	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	1	10	20	ND		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	1	10	100	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	1	52.5	139	80.7		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	1	50.2	139	72.2		%	403218	1657

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-5	**Lab Sample ID:**	1012006-005A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	10		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	16		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.16		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	4	1.5	8.0	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	4	4.4	8.0	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	4	1.3	8.0	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	4	1.4	8.0	ND		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	4	2.4	8.0	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	4	1.9	8.0	12		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	4	2.3	8.0	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	4	1.9	8.0	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	4	6.1	8.0	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	4	3.2	8.0	ND		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	4	4.1	8.0	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	4	2.5	20	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	4	40	80	ND		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	4	40	400	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	4	52.5	139	94.6		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	4	50.2	139	76.3		%	403218	1657

NOTE: Reporting limits increased due to the nature of the sample matrix (dark color extract).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-6	**Lab Sample ID:**	1012006-006A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	8.9		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	42		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.42		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	4	1.5	8.0	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	4	4.4	8.0	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	4	1.3	8.0	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	4	1.4	8.0	ND		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	4	2.4	8.0	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	4	1.9	8.0	16		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	4	2.3	8.0	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	4	1.9	8.0	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	4	6.1	8.0	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	4	3.2	8.0	9.9		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	4	4.1	8.0	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	4	2.5	20	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	4	40	80	ND		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	4	40	400	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	4	52.5	139	96.2		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	4	50.2	139	80.5		%	403218	1657

NOTE: Reporting limits increased due to the nature of the sample matrix (dark color extract).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-7	**Lab Sample ID:**	1012006-007A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	11		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	110		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.55		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	4	1.5	8.0	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	4	4.4	8.0	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	4	1.3	8.0	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	4	1.4	8.0	ND		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	4	2.4	8.0	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	4	1.9	8.0	ND		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	4	2.3	8.0	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	4	1.9	8.0	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	4	6.1	8.0	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	4	3.2	8.0	ND		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	4	4.1	8.0	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	4	2.5	20	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	4	40	80	ND		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	4	40	400	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	4	52.5	139	79.5		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	4	50.2	139	113		%	403218	1657

NOTE: Reporting limits increased due to the nature of the sample matrix (dark color extract).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-8	**Lab Sample ID:**	1012006-008A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	12		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	27		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.25		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	4	1.5	8.0	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	4	4.4	8.0	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	4	1.8	8.0	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	4	1.3	8.0	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	4	1.7	8.0	120		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	4	1.4	8.0	130		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	4	2.4	8.0	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	4	1.9	8.0	52		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	4	1.7	8.0	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	4	2.3	8.0	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	4	1.9	8.0	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	4	6.1	8.0	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	4	3.2	8.0	80		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	4	4.1	8.0	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	4	2.0	8.0	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	4	2.5	20	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	4	1.6	8.0	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	4	40	80	890		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	4	40	400	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	4	52.5	139	88.2		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	4	50.2	139	80.7		%	403218	1657

NOTE: Reporting limits increased due to the nature of the sample matrix (dark color extract).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Stason Foster
Cornerstone Earth Group

Date Received: 12/02/10
Date Reported: 12/09/10

Client Sample ID:	SS-9	**Lab Sample ID:**	1012006-009A
Project Name/Location:	San Felipe Rd, San Jose	**Sample Matrix:**	Soil
Project Number:	336-2-1		
Date/Time Sampled:	12/02/10 /		
Tag Number:	San Felipe Rd, San Jose		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Arsenic	SW6010B	12/3/10	12/06/10	1	0.28	1.7	8.1		mg/Kg	403191	1661
Lead	SW6010B	12/3/10	12/06/10	1	0.13	1.0	77		mg/Kg	403191	1661

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Mercury	7471B	12/6/10	12/03/10	1	0.01	0.10	0.26		mg/Kg	403180	1654

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
alpha-BHC	SW8081A	12/3/10	12/06/10	10	4.4	20	ND		ug/Kg	403218	1657
gamma-BHC	SW8081A	12/3/10	12/06/10	10	4.0	20	ND		ug/Kg	403218	1657
beta-BHC	SW8081A	12/3/10	12/06/10	10	3.6	20	ND		ug/Kg	403218	1657
delta-BHC	SW8081A	12/3/10	12/06/10	10	4.9	20	ND		ug/Kg	403218	1657
Heptachlor	SW8081A	12/3/10	12/06/10	10	11	20	ND		ug/Kg	403218	1657
Aldrin	SW8081A	12/3/10	12/06/10	10	4.4	20	ND		ug/Kg	403218	1657
Heptachlor epoxide	SW8081A	12/3/10	12/06/10	10	3.2	20	ND		ug/Kg	403218	1657
gamma-Chlordane	SW8081A	12/3/10	12/06/10	10	4.2	20	ND		ug/Kg	403218	1657
alpha-Chlordane	SW8081A	12/3/10	12/06/10	10	3.6	20	27		ug/Kg	403218	1657
Endosulfan I	SW8081A	12/3/10	12/06/10	10	5.9	20	ND		ug/Kg	403218	1657
4,4'-DDE	SW8081A	12/3/10	12/06/10	10	4.8	20	39		ug/Kg	403218	1657
Dieldrin	SW8081A	12/3/10	12/06/10	10	4.3	20	ND		ug/Kg	403218	1657
Endrin	SW8081A	12/3/10	12/06/10	10	5.7	20	ND		ug/Kg	403218	1657
4,4'-DDD	SW8081A	12/3/10	12/06/10	10	4.7	20	ND		ug/Kg	403218	1657
Endosulfan II	SW8081A	12/3/10	12/06/10	10	15	20	ND		ug/Kg	403218	1657
4,4'-DDT	SW8081A	12/3/10	12/06/10	10	8.1	20	42		ug/Kg	403218	1657
Endrin aldehyde	SW8081A	12/3/10	12/06/10	10	10	20	ND		ug/Kg	403218	1657
Endosulfan sulfate	SW8081A	12/3/10	12/06/10	10	4.9	20	ND		ug/Kg	403218	1657
Methoxychlor	SW8081A	12/3/10	12/06/10	10	6.2	50	ND		ug/Kg	403218	1657
Endrin Ketone	SW8081A	12/3/10	12/06/10	10	4.0	20	ND		ug/Kg	403218	1657
Chlordane	SW8081A	12/3/10	12/06/10	10	100	200	ND		ug/Kg	403218	1657
Toxaphene	SW8081A	12/3/10	12/06/10	10	100	100	ND		ug/Kg	403218	1657
TCMX (S)	SW8081A	12/3/10	12/06/10	10	52.5	139	99.1		%	403218	1657
DCBP (S)	SW8081A	12/3/10	12/06/10	10	50.2	139	136		%	403218	1657

NOTE: Reporting limits increased due to the nature of the sample matrix (dark color extract). Toxaphene reported to the MDL.

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1012006	**Prep Method:**	7471	**Prep Date:**	12/06/10	**Prep Batch:**	1654
Matrix:	Soil	**Analytical Method:**	7471AB	**Analyzed Date:**	12/03/10	**Analytical Batch:**	403180
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Mercury	0.01	0.10	0.0567	

Work Order:	1012006	**Prep Method:**	3545_OCP	**Prep Date:**	12/03/10	**Prep Batch:**	1657
Matrix:	Soil	**Analytical Method:**	SW8081A	**Analyzed Date:**	12/06/10	**Analytical Batch:**	403218
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
alpha-BHC	0.44	2.0	ND	
gamma-BHC	0.40	2.0	ND	
beta-BHC	0.36	2.0	ND	
delta-BHC	0.49	2.0	ND	
Heptachlor	1.1	2.0	ND	
Aldrin	0.44	2.0	ND	
Heptachlor epoxide	0.32	2.0	ND	
gamma-Chlordane	0.42	2.0	ND	
alpha-Chlordane	0.36	2.0	ND	
Endosulfan I	0.59	2.0	ND	
4,4'-DDE	0.48	2.0	ND	
Dieldrin	0.43	2.0	ND	
Endrin	0.57	2.0	ND	
4,4'-DDD	0.47	2.0	ND	
Endosulfan II	1.5	2.0	ND	
4,4'-DDT	0.81	2.0	ND	
Endrin aldehyde	1.0	2.0	ND	
Endosulfan sulfate	0.49	2.0	ND	
Methoxychlor	0.62	5.0	ND	
Endrin Ketone	0.40	2.0	ND	
Chlordane	10	20	ND	
Toxaphene	10	100	ND	
TCMX (S)			86.4	
DCBP (S)			88.8	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1012006	**Prep Method:**	3545_OCP	**Prep Date:**	12/03/10	**Prep Batch:**	1657
Matrix:	Soil	**Analytical Method:**	SW8081A	**Analyzed Date:**	12/06/10	**Analytical Batch:**	403218
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
alpha-BHC	0.44	2.0	ND	
gamma-BHC	0.40	2.0	ND	
beta-BHC	0.36	2.0	ND	
delta-BHC	0.49	2.0	ND	
Heptachlor	1.1	2.0	ND	
Aldrin	0.44	2.0	ND	
Heptachlor epoxide	0.32	2.0	ND	
gamma-Chlordane	0.42	2.0	ND	
alpha-Chlordane	0.36	2.0	ND	
Endosulfan I	0.59	2.0	ND	
4,4'-DDE	0.48	2.0	ND	
Dieldrin	0.43	2.0	ND	
Endrin	0.57	2.0	ND	
4,4'-DDD	0.47	2.0	ND	
Endosulfan II	1.5	2.0	ND	
4,4'-DDT	0.81	2.0	ND	
Endrin aldehyde	1.0	2.0	ND	
Endosulfan sulfate	0.49	2.0	ND	
Methoxychlor	0.62	5.0	ND	
Endrin Ketone	0.40	2.0	ND	
Chlordane	10	20	ND	
Toxaphene	10	100	ND	
TCMX (S)			88.1	
DCBP (S)			93.2	

Work Order:	1012006	**Prep Method:**	3050	**Prep Date:**	12/03/10	**Prep Batch:**	1661
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	12/06/10	**Analytical Batch:**	403191
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Arsenic	0.28	1.7	ND	
Lead	0.13	1.0	0.43	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1012006	**Prep Method:**	7471	**Prep Date:**	12/06/10	**Prep Batch:**	1654
Matrix:	Soil	**Analytical Method:**	7471B	**Analyzed Date:**	12/03/10	**Analytical Batch:**	403180
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Mercury	0.01	0.10	0.0567	1.25	96.0	91.3	4.98	80.5 - 133	30	

Work Order:	1012006	**Prep Method:**	3545_OCP	**Prep Date:**	12/03/10	**Prep Batch:**	1657
Matrix:	Soil	**Analytical Method:**	SW8081A	**Analyzed Date:**	12/06/10	**Analytical Batch:**	403218
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
gamma-BHC	0.40	2.0	ND	20	77.1	88.7	14.0	56.9 - 120	30	
Heptachlor	1.1	2.0	ND	20	79.3	92.3	15.1	63.6 - 117	30	
Aldrin	0.44	2.0	ND	20	89.0	97.5	9.13	53 - 123	30	
Dieldrin	0.43	2.0	ND	20	90.8	97.9	7.53	44 - 130	30	
Endrin	0.57	2.0	ND	20	91.8	97.9	6.41	44.1 - 121	30	
4,4'-DDT	0.81	2.0	ND	20	89.1	97.1	8.58	52.8 - 134	30	
TCMX (S)			ND	350	84.4	91.3		52.5 - 139		
DCBP (S)			ND	350	85.0	89.8		50.2 - 139		

Work Order:	1012006	**Prep Method:**	3050	**Prep Date:**	12/03/10	**Prep Batch:**	1661
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	12/06/10	**Analytical Batch:**	403191
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.28	1.7	ND	50	103.9	102	1.65	71 - 121	30	
Lead	0.13	1	0.43	50	101.3	101	0.496	67.9 - 118	30	

Torrent LABORATORY, INC.

MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1012006	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	**Soil**	**Analytical Method:**	7471B	**Analyzed Date:**	12/03/10	**Analytical Batch:**	403180
Spiked Sample:	1012006-001A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Mercury	0.01	0.10	0.00428	1.25	74.8	108	27.8	60 - 140	30	

Work Order:	1012006	**Prep Method:**	3050	**Prep Date:**	12/03/10	**Prep Batch:**	1661
Matrix:	**Soil**	**Analytical Method:**	SW6010B	**Analyzed Date:**	12/06/10	**Analytical Batch:**	403191
Spiked Sample:	1012006-001A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.28	1.7	0.22	50	96.3	112	12.8	71 - 121	30	
Lead	0.13	1	0.19	50	95.1	105	8.00	67.9 - 118	30	

Work Order:	1012006	**Prep Method:**	3545_OCP	**Prep Date:**	12/03/10	**Prep Batch:**	1657
Matrix:	**Soil**	**Analytical Method:**	SW8081A	**Analyzed Date:**	12/06/10	**Analytical Batch:**	403218
Spiked Sample:	1012006-003A						
Units:	ug/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Aldrin	0.44	2.0	0	20	84.2	91.8	8.60	53 - 123	30	
gamma-BHC	0.40	2.0	0.0762	20	86.1	92.8	7.48	56.9 - 120	30	
Heptachlor	1.1	2.0	0	20	78.2	89.2	13.2	63.6 - 117	30	
Dieldrin	0.43	2.0	0.141	20	83.2	94.2	12.4	44 - 130	30	
Endrin	0.57	2.0	0	20	88.5	100	12.4	44.1 - 121	30	
4,4'-DDT	0.81	2.0	2.488	20	90.8	96.4	5.30	52.8 - 134	30	
TCMX (S)				350	85.3	90.4		52.5 - 139		
DCBP (S)				350	83.4	86.6		50.2 - 139		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Cornerstone Earth Group

Project Name: San Felipe Rd, San Jose

Work Order No.: 1012006

Date and Time Received: 12/2/2010 13:00

Received By: NG

Physically Logged By: NG

Checklist Completed By: NG

Carrier Name: Client Droped off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	7	°C
Water-VOA vials have zero headspace?	No VOA vials submitted			
Water-pH acceptable upon receipt?				
pH Checked by:	pH Adjusted by:			

Login Summary Report

Client ID: TL5119 Cornerstone Earth Group
Project Name: San Felipe Rd, San Jose
Project # : 336-2-1
Report Due Date: 12/9/2010

QC Level:
TAT Requested: 5+ day:0
Date Received: 12/2/2010
Time Received: 13:00

Comments: 5 day TAT!!! REcv'd 9 soils for Lead ; Arsenic ; Mercury ; and 8081.

Work Order # : ***1012006***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1012006-001A	SS-1	12/02/10	Soil	05/31/11			S_7471BHG S_6010BCAM17 S_8081AOCP	
Sample Note:	Pb,As,Hg and 8081 for all samples.							
1012006-002A	SS-2	12/02/10	Soil	05/31/11			S_7471BHG S_8081AOCP S_6010BCAM17	
1012006-003A	SS-3	12/02/10	Soil	05/31/11			S_7471BHG S_6010BCAM17 S_8081AOCP	
1012006-004A	SS-4	12/02/10	Soil	05/31/11			S_7471BHG S_6010BCAM17 S_8081AOCP	
1012006-005A	SS-5	12/02/10	Soil	05/31/11			S_7471BHG S_6010BCAM17 S_8081AOCP	
1012006-006A	SS-6	12/02/10	Soil	05/31/11			S_7471BHG S_8081AOCP S_6010BCAM17	
1012006-007A	SS-7	12/02/10	Soil	05/31/11			S_7471BHG S_8081AOCP S_6010BCAM17	
1012006-008A	SS-8	12/02/10	Soil	05/31/11			S_7471BHG S_8081AOCP S_6010BCAM17	
1012006-009A	SS-9	12/02/10	Soil	05/31/11			S_7471BHG S_8081AOCP	

Torrent LABORATORY, INC.

Login Summary Report

Client ID:	TL5119	Cornerstone Earth Group	**QC Level:**	
Project Name:	San Felipe Rd, San Jose		**TAT Requested:**	5+ day:0
Project # :	336-2-1		**Date Received:**	12/2/2010
Report Due Date:	12/9/2010		**Time Received:**	13:00

Comments: 5 day TAT!!! REcv'd 9 soils for Lead ; Arsenic ; Mercury ; and 8081.

Work Order # : ***1012006***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
							S_6010BCAM17	

Torrent LABORATORY, INC.

CORNERSTONE EARTH GROUP

Chain of Custody Record

1012006
~~1012206~~

	Project Manager: Stason Foster	Site Contact:	Date: 12-2-10
Cornerstone Earth Group, Inc.	email: sfoster@cornerstoneearth.com		Carrier:
1259 Oakmead Parkway	Analysis Turnaround Time		
Sunnyvale, California 94085			
Phone (408) 245-4600	TAT if different from Below ____		
Fax (408) 245-4620	☒ 1 week		
Project Name: SAN FELIPE Rd	☐ 3 days		
Site: SAN JOSE	☐ 2 days		
Project Number: 336-2-1	☐ 1 day		

COC No: 1 of 1 COCs

Laboratory's Job No.

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Lead, Arsenic & Mercury	PCBs - 8082	Pesticides - 8081	TPHd and TPHmo w/ silica gel cleanup	TPHgas / BTEX	CAM 17 Metals	Laboratory's Sample Specific Notes:
SS-1	12/2/10		Soil		1		X	X					001A
SS-2	"		"		1		X	X					002A
SS-3	"		"		1		X	X					003A
SS-4	"		"		1		X	X					004A
SS-5	"		"		1		X	X					005A
SS-6	"		"		1		X	X					006A
SS-7	"		"		1		X	X					007A
SS-8	"		"		1		X	X					008A
SS-9	"		"		1		X	X					009A
													Temp. 7°C Chilling has begun.

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	CEG	12/2/10 1:00	NAVIN G. Thodasara	Torrent Lab	12-2-10 1:00 P.M.
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

D/O.

Flood Plain Analysis
HEC-RAS

Misery Creek Study at Proposed Culvert
San Felipe Road
San Jose, California

CHARLES W. DAVIDSON CO.

August 25, 2011
Authored by: Oscar Osuna, P.E.

Flood Plain Analysis HEC-RAS

Misery Creek Study at Proposed Culvert
San Felipe Road
San Jose, California

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IV. CONCLUSIONS

A. Site Map with 10-year Storm Delineation

B. Site Map with 100-year Storm Delineation

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I. INTRODUCTION

A. Site Description

Misery Creek is an ephemeral creek, which is located in the county of Santa Clara California (see Location Map in Section II.A), it currently crosses an existing road with a culvert in poor condition; this culvert will be replaced with a double barrel culvert that can adequately handle the storm flow. For this project we will focus on the portion of the creek within the property of DAL properties, LLC, more specifically from STA 500+50 to STA 507+00 as shown in the Site Map herein. The watershed above Misery Creek is about 0.91 square miles. The 10-year flow is 208 cubic feet per second and the 100-year flow is 370 cubic feet per second (as shown on the Schaaf and Wheeler Memo). Vegetation on the banks of the creek generally consists of grasses with sparse trees. The slope of the creek at the upstream portion is relatively flat, then as flow travels downstream it goes under an existing culvert in poor condition, and then continues downstream turning sharply a few times with a flat slope, and then the flow continues downstream with a relatively flat slope and smoother turns again until the end of the reach. The proposed improvements within the creek will include a double barrel culvert, and re-alignment of the creek approximately 50 feet upstream and about 50 feet downstream from the culvert to provide overall better alignment and reduce erosion concerns.

B. Scope of Project

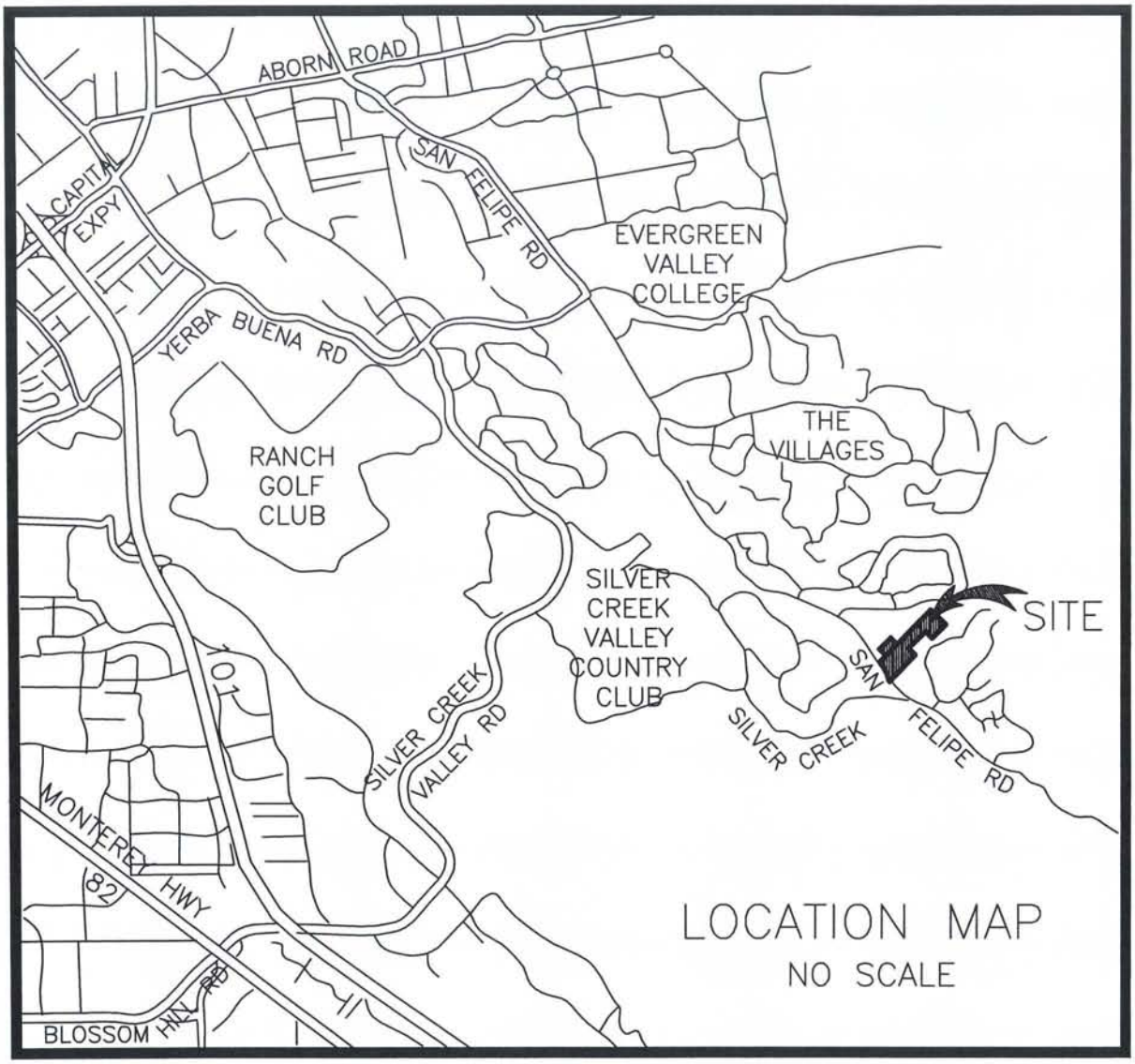
The purpose of this report is to analyze and delineate the water surface elevation for two hydrologic model scenarios along Misery Creek within the limits of our project as the flow passes through the proposed culvert and continues down the creek. To model these scenarios we used the HEC-RAS software by the Army Corps of Engineers, all data and assumptions are presented in this report.

The two scenarios are the following:

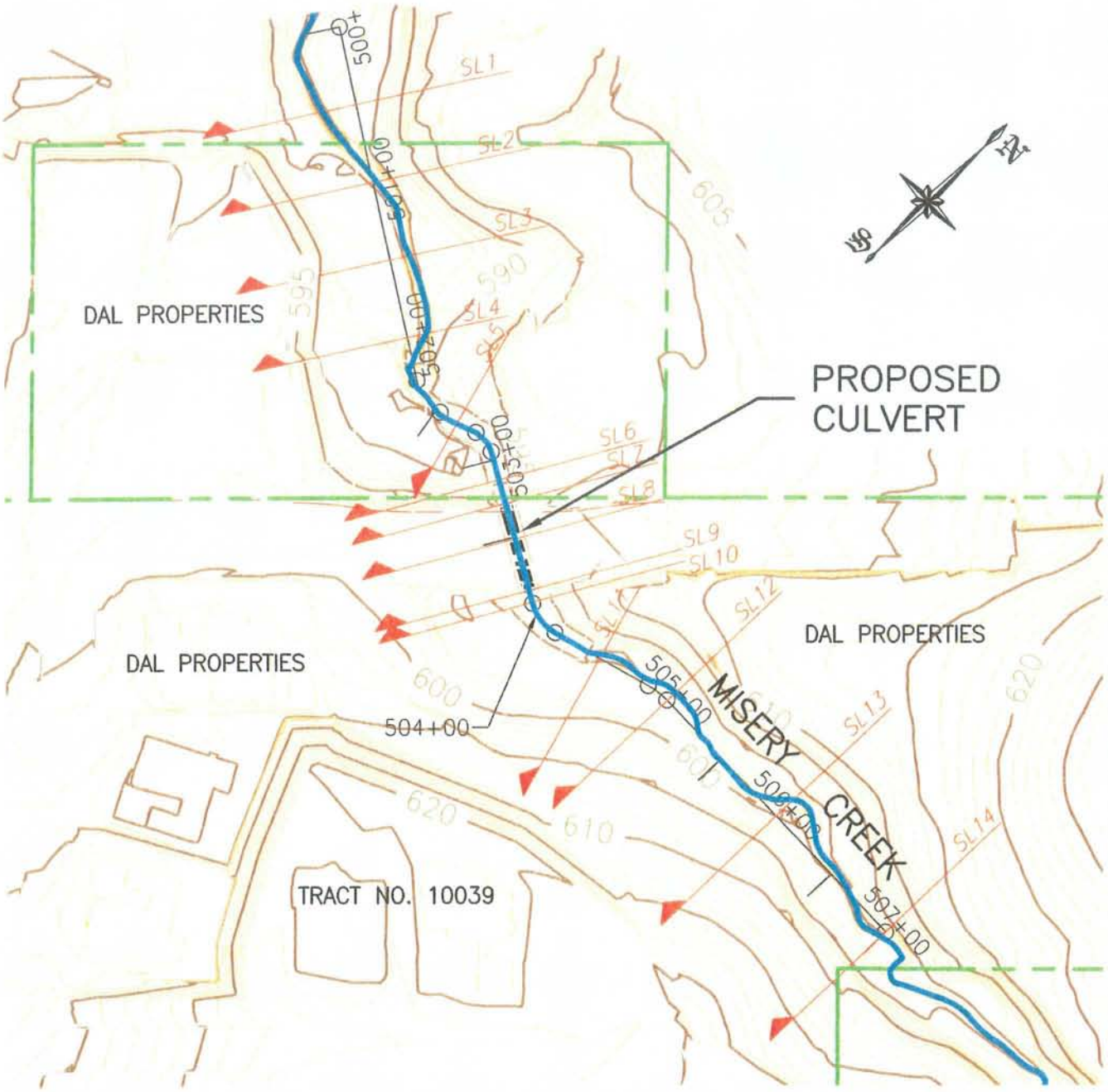
- First Scenario, Model 1: Calculate water surface elevations for the 10-year flow as it passes through the proposed double barrel culvert and realigned creek.
- Second Scenario, Model 2: Calculate water surface elevations for the 100-year flow as it passes through the proposed double barrel culvert and realigned creek.

II. SITE IDENTIFICATION

A. Location Map


ABORN ROAD
SAN FELIPE RD
CAPITAL EXPY
EVERGREEN VALLEY COLLEGE
YERBA BUENA RD
THE VILLAGES
RANCH GOLF CLUB
SILVER CREEK VALLEY COUNTRY CLUB
SITE
SILVER CREEK VALLEY RD
SAN FELIPE RD
SILVER CREEK
MONTEREY HWY
82
101
BLOSSOM HILL RD
LOCATION MAP
NO SCALE

B. Site Map



SITE MAP
MISERY CREEK FLOOD STUDY

SAN JOSE, CALIFORNIA

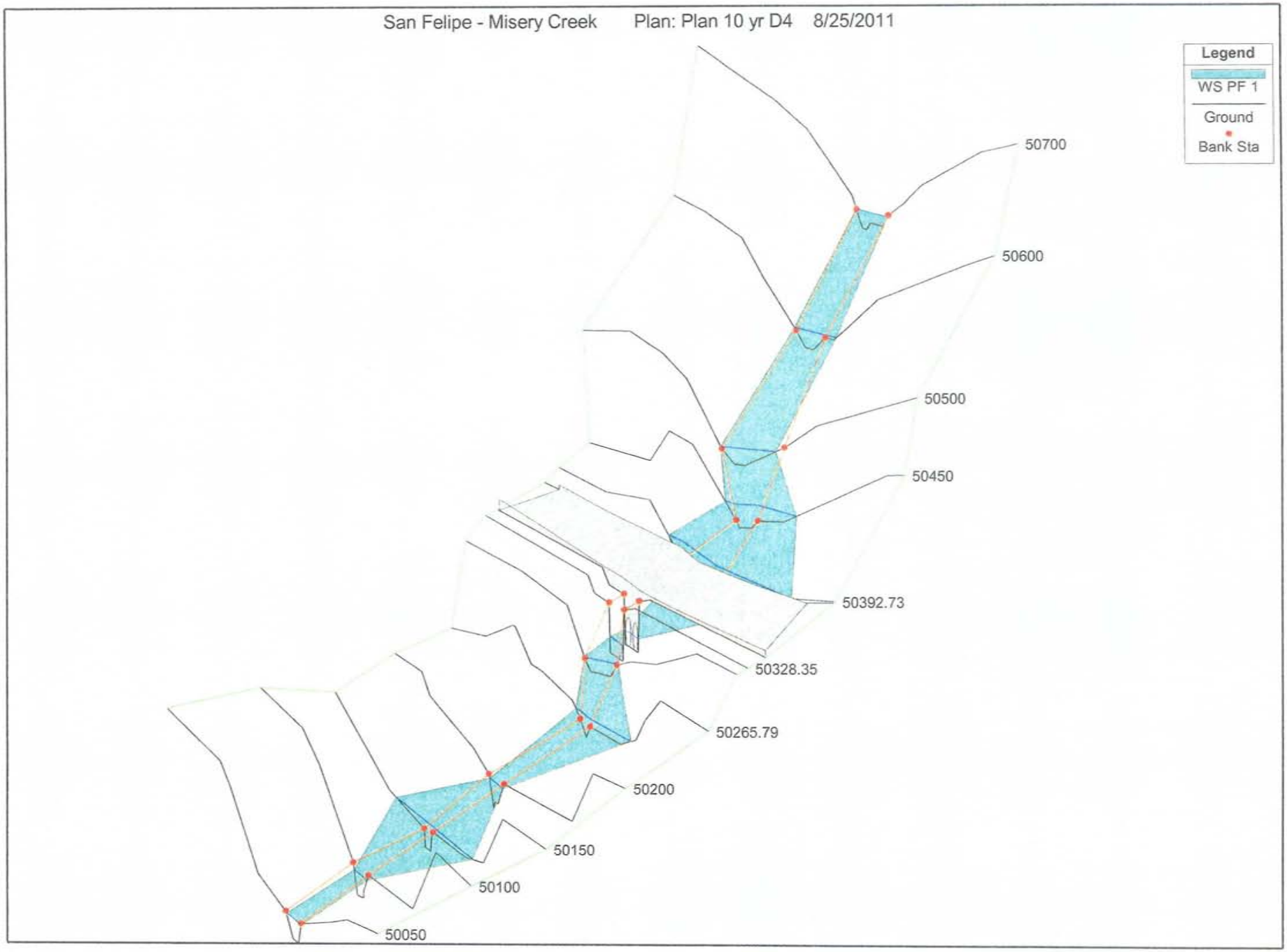
DATE:	8-25-11
SCALE:	1"=100'
DRAWN BY:	O.O.
CHECKED BY:	
JOB NO.:	1688

Charles W. Davidson Co.
A CALIFORNIA CORPORATION
CONSULTING CIVIL ENGINEERS
255 W. JULIAN ST. #200, SAN JOSE, CA.
PH. (408) 295-9162

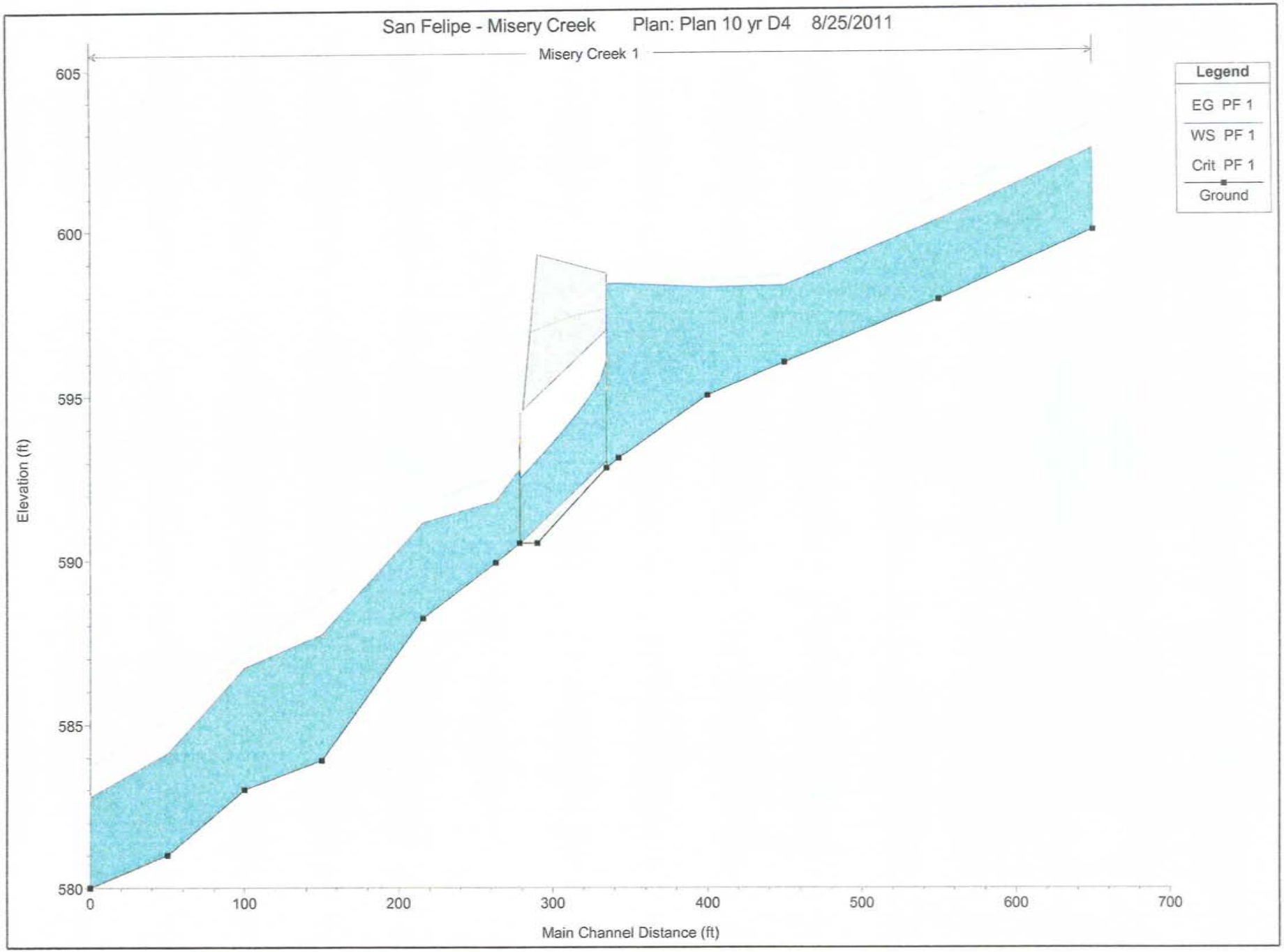
III. HEC-RAS MODELING

A. Model 1: 10-year Storm

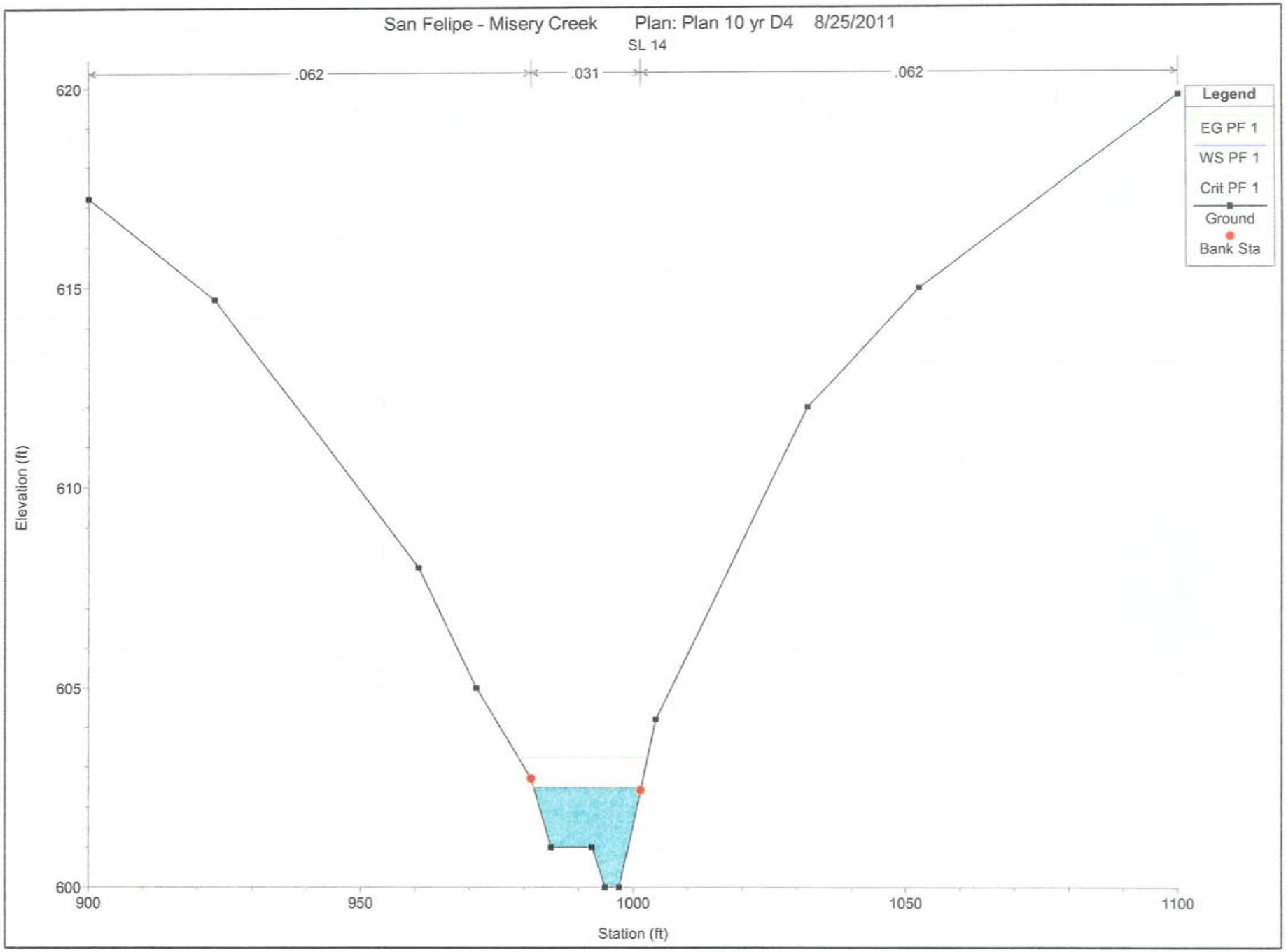
i. HEC-RAS Isometric View

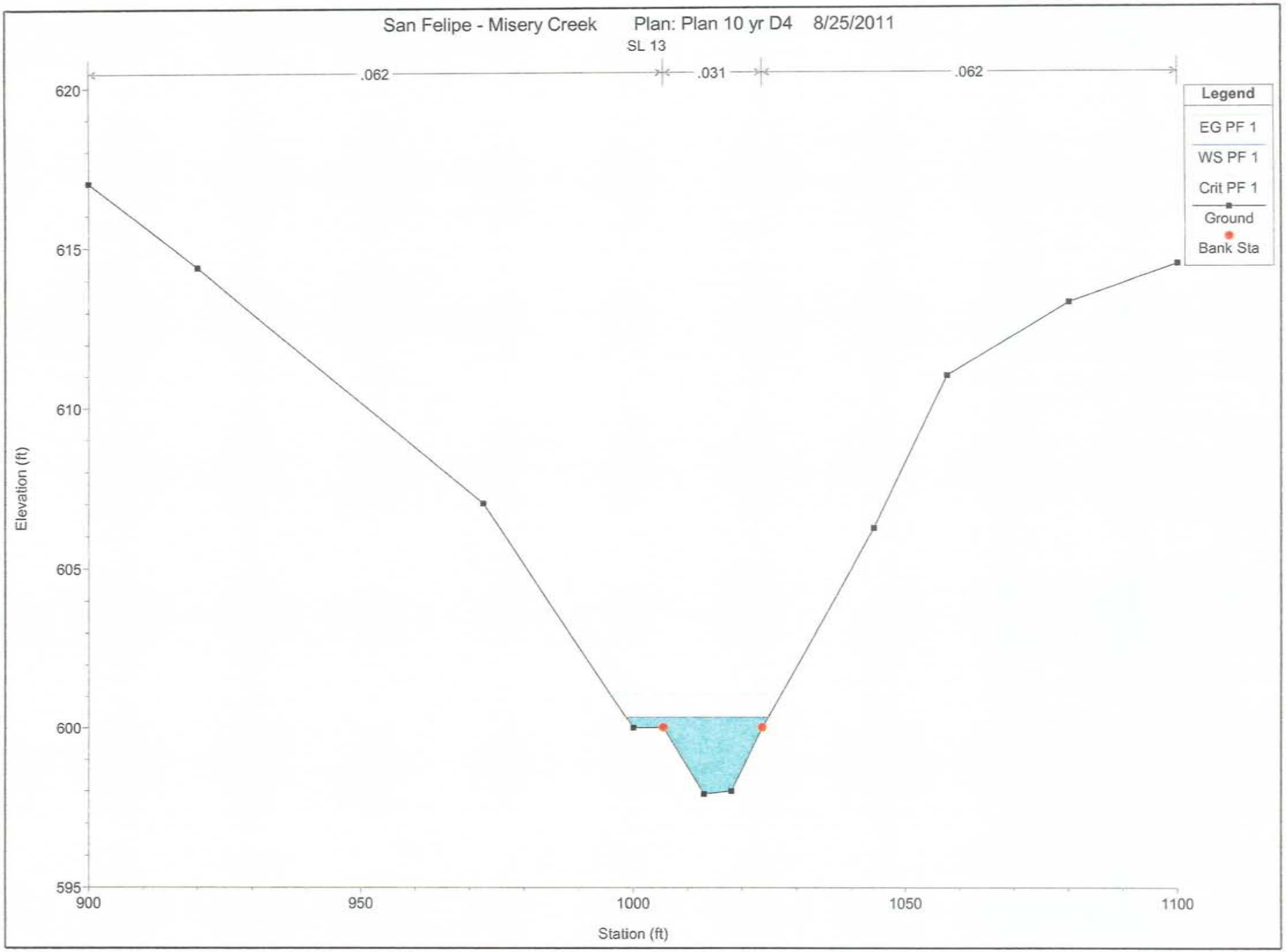

San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
Legend
WS PF 1
Ground
Bank Sta
50700
50600
50500
50450
50392.73
50328.35
50265.79
50200
50150
50100
50050

ii. HEC-RAS Profile View


San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
Misery Creek 1
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Elevation (ft)
605
600
595
590
585
580
0
100
200
300
400
500
600
700
Main Channel Distance (ft)

iii. HEC-RAS Cross Sections


San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
SL 14
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
620
615
610
605
600
Elevation (ft)
900
950
1000
1050
1100
Station (ft)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.062
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WS PF 1
Crit PF 1
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Bank Sta
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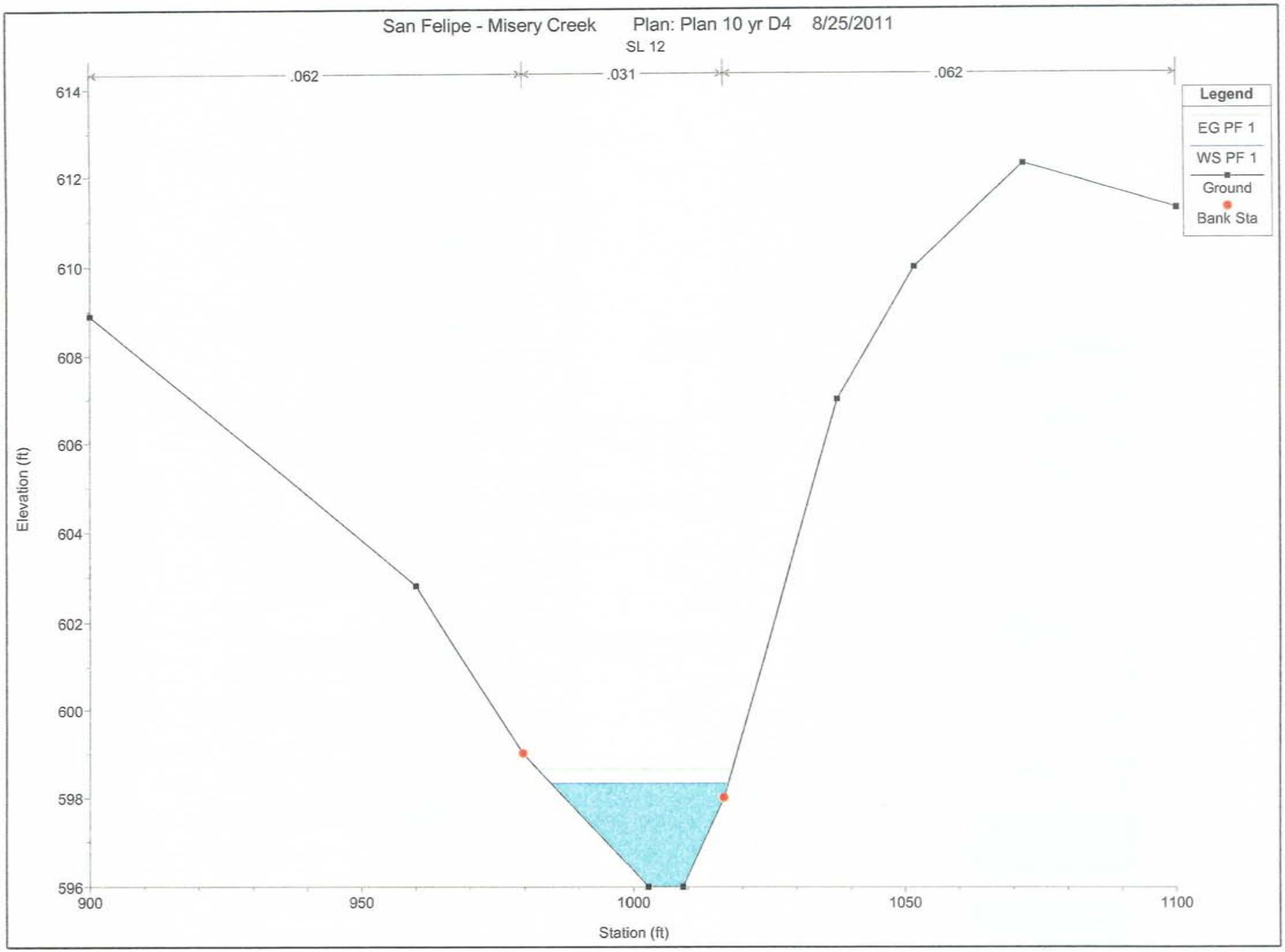
600
595
Elevation (ft)
900
950
1000
1050
1100
Station (ft)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.062
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WS PF 1
Ground
Bank Sta
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608
606
604
602
600
598
596
Elevation (ft)
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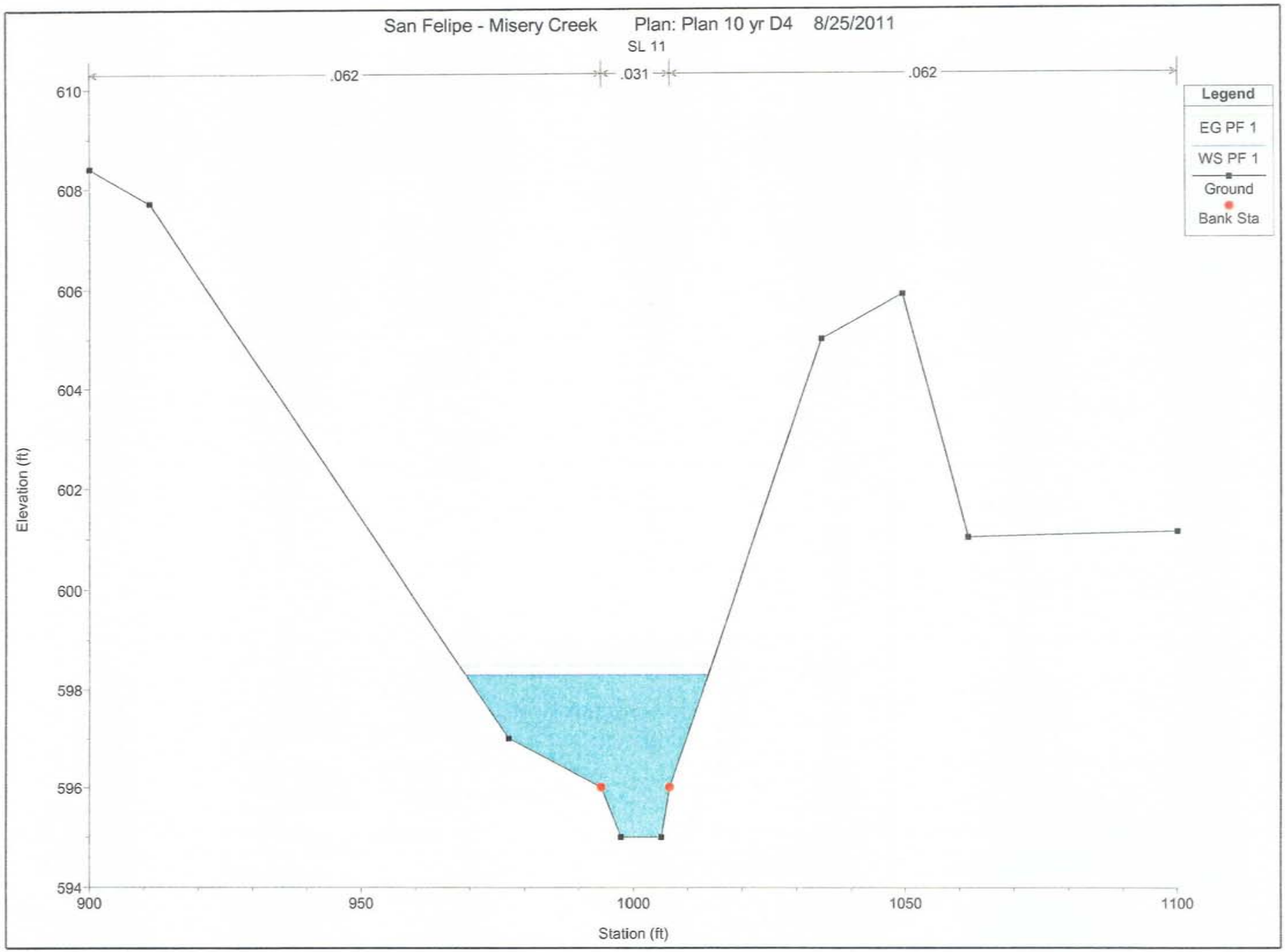
950
1000
1050
1100
Station (ft)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Legend
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WS PF 1
Ground
Bank Sta
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606
604
602
600
598
596
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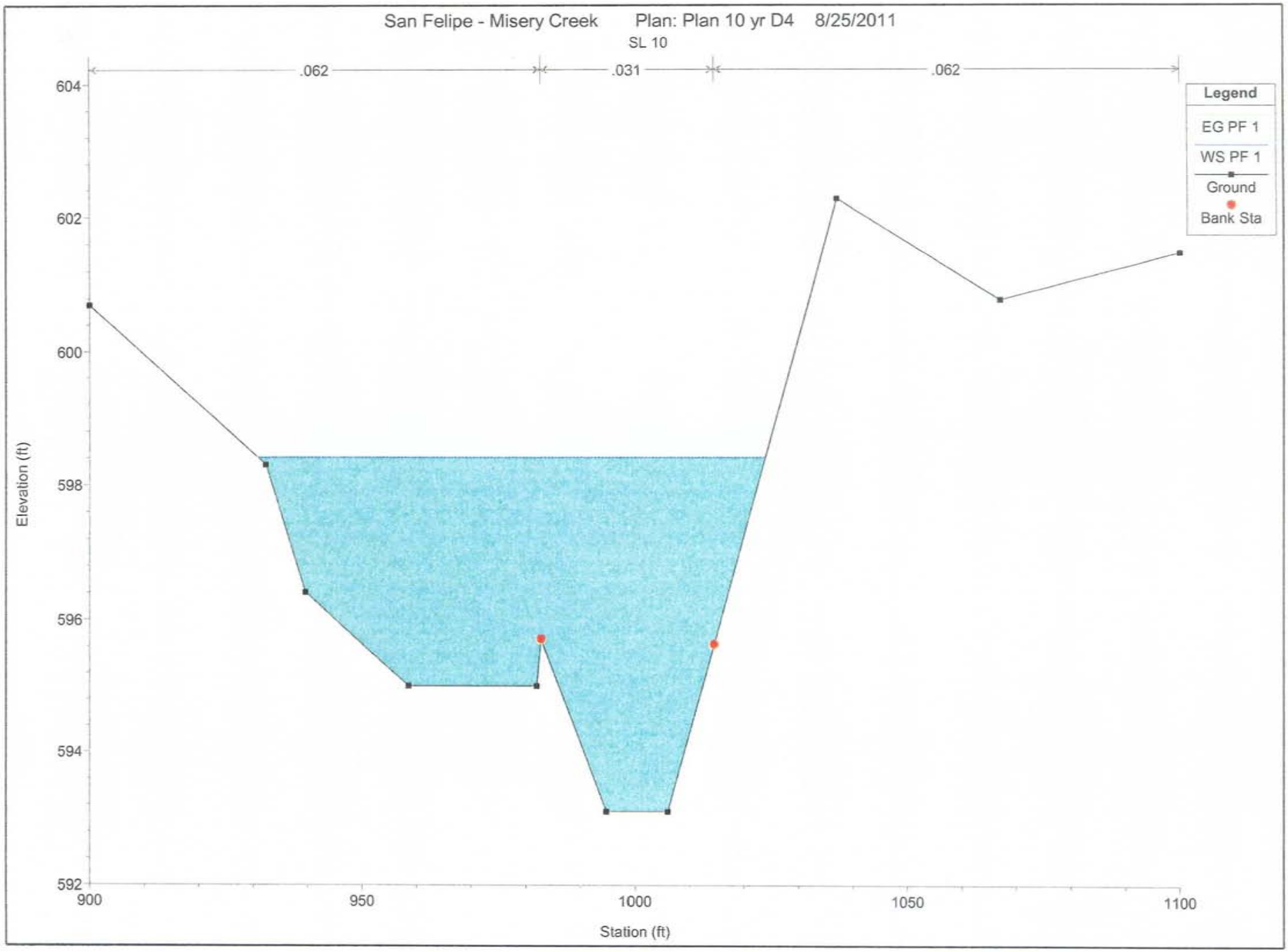
Elevation (ft)
900
950
1000
1050
1100
Station (ft)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Bank Sta
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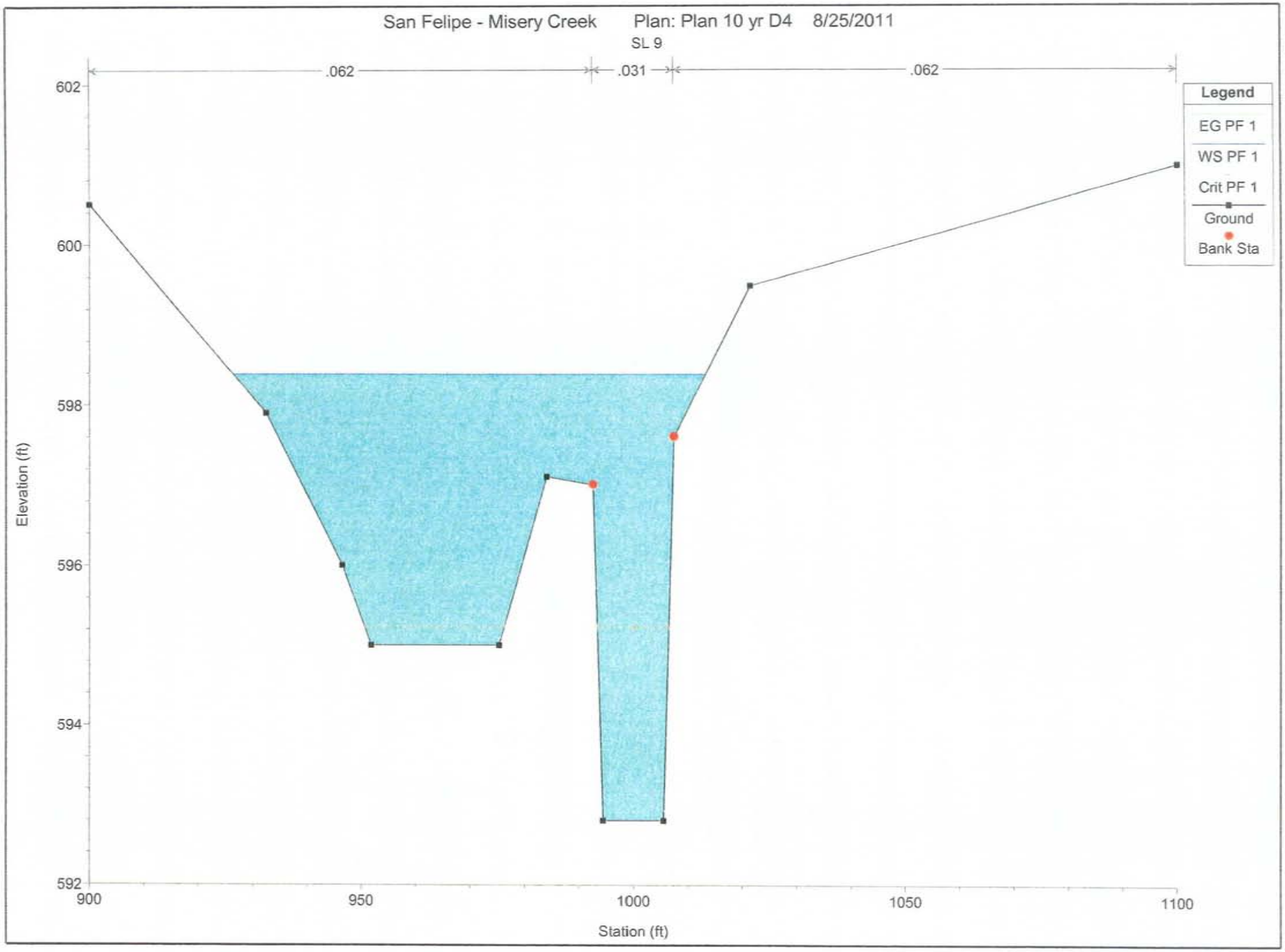
602
600
598
596
594
592
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
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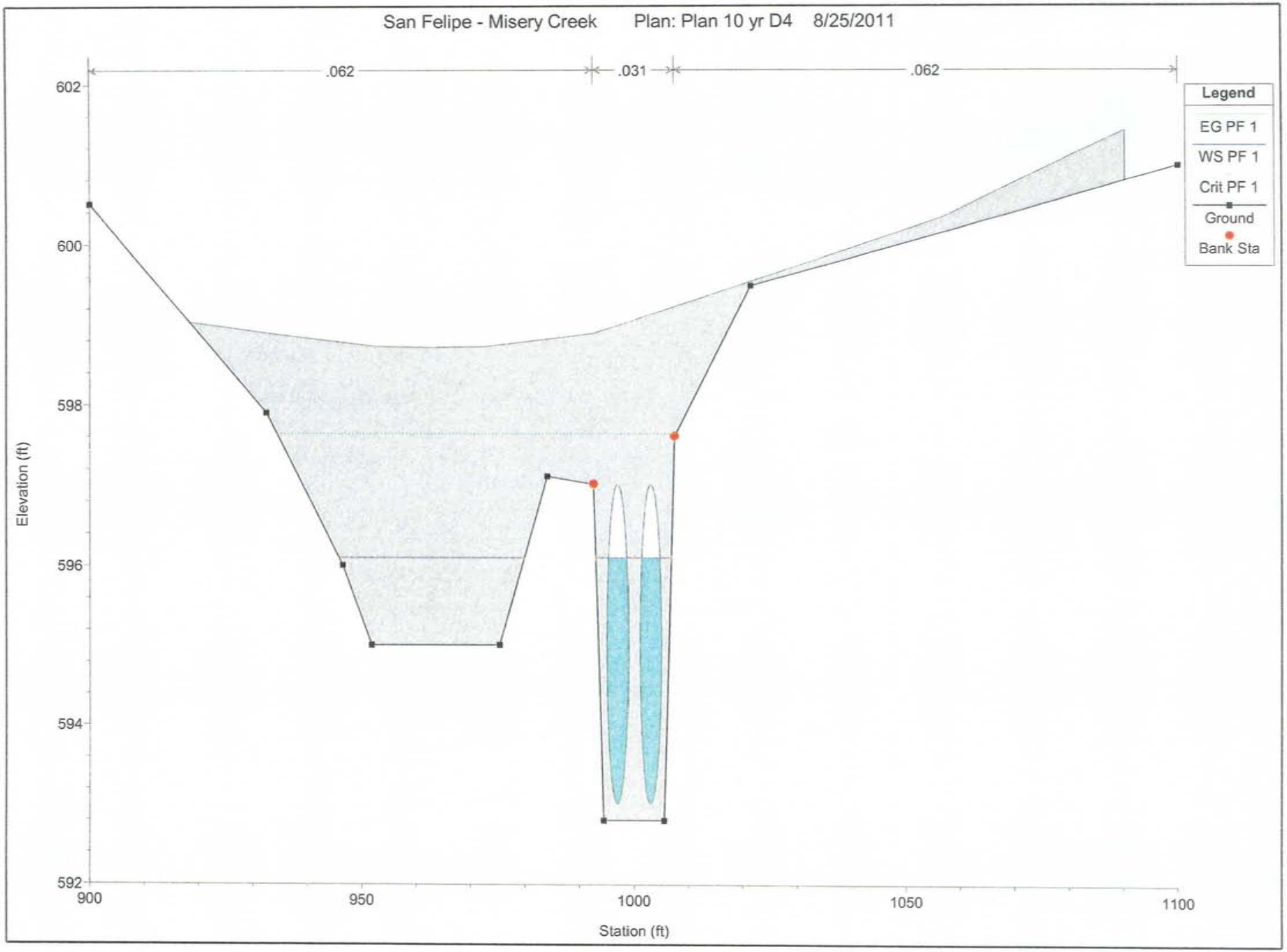
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
602
600
598
596
594
592
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
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.062
Legend
EG PF 1
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Crit PF 1
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Bank Sta
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600
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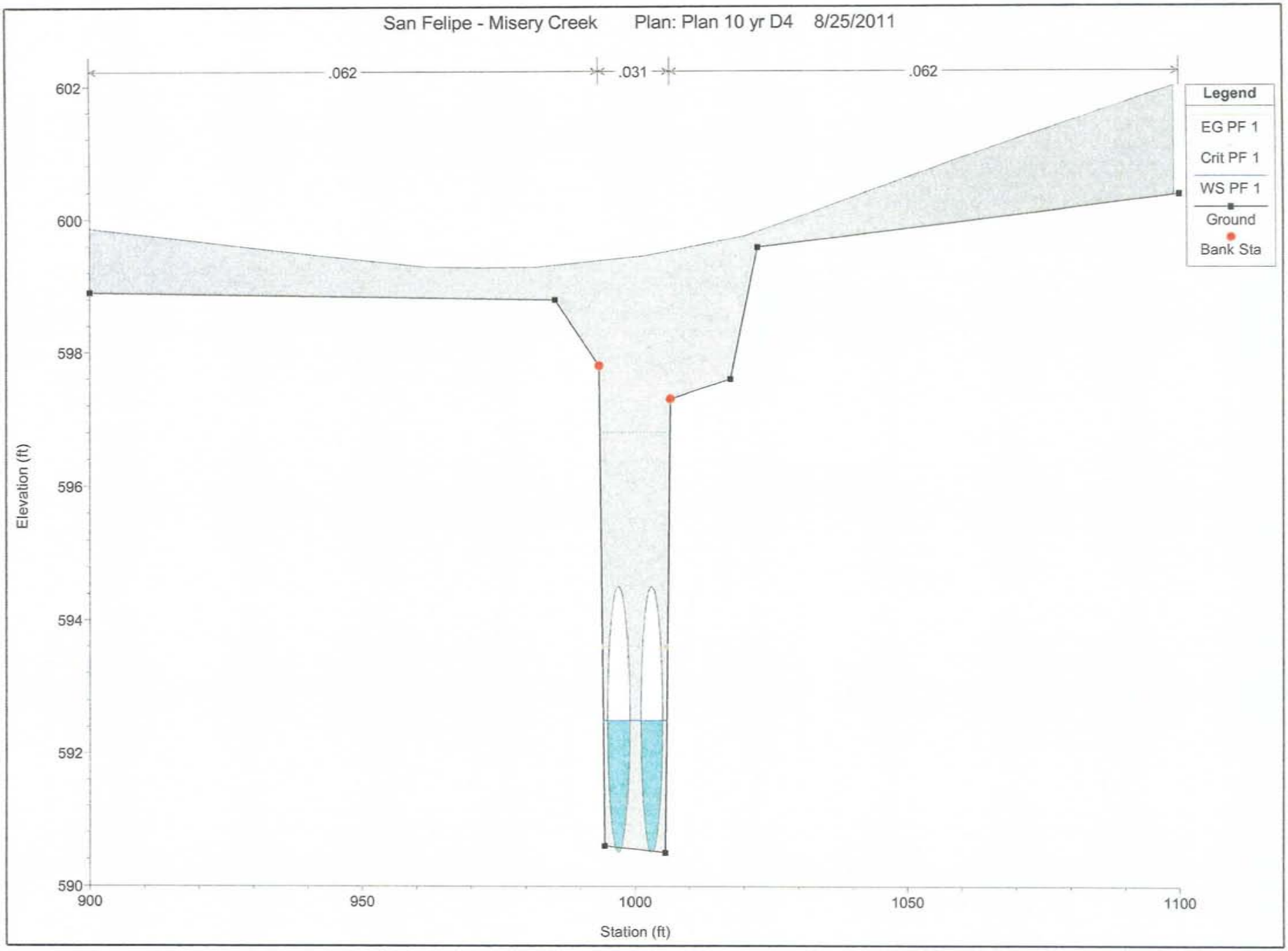
596
594
592
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
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Crit PF 1
WS PF 1
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Bank Sta
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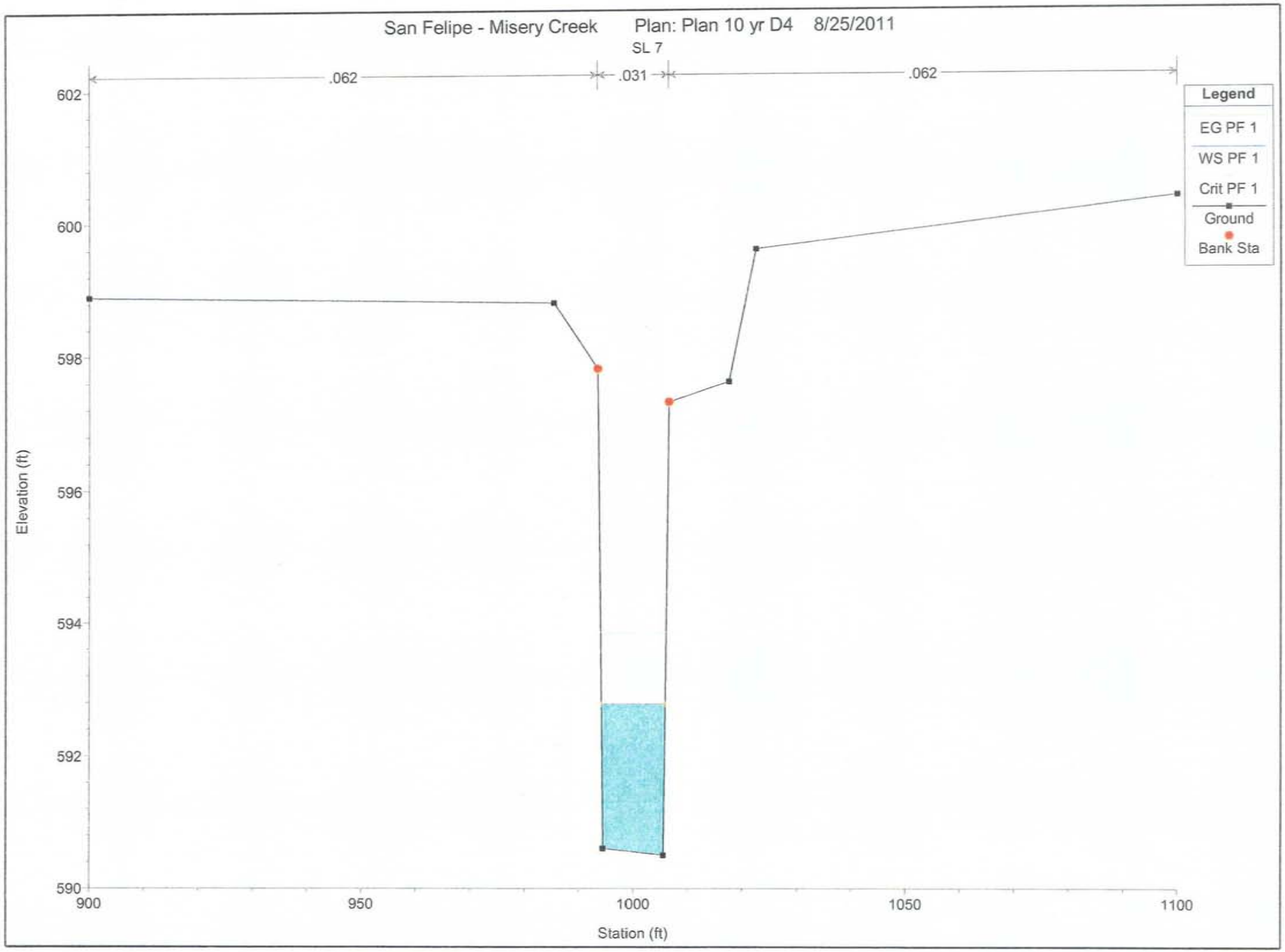
592
590
Elevation (ft)
900
950
1000
1050
1100
Station (ft)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Legend
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WS PF 1
Crit PF 1
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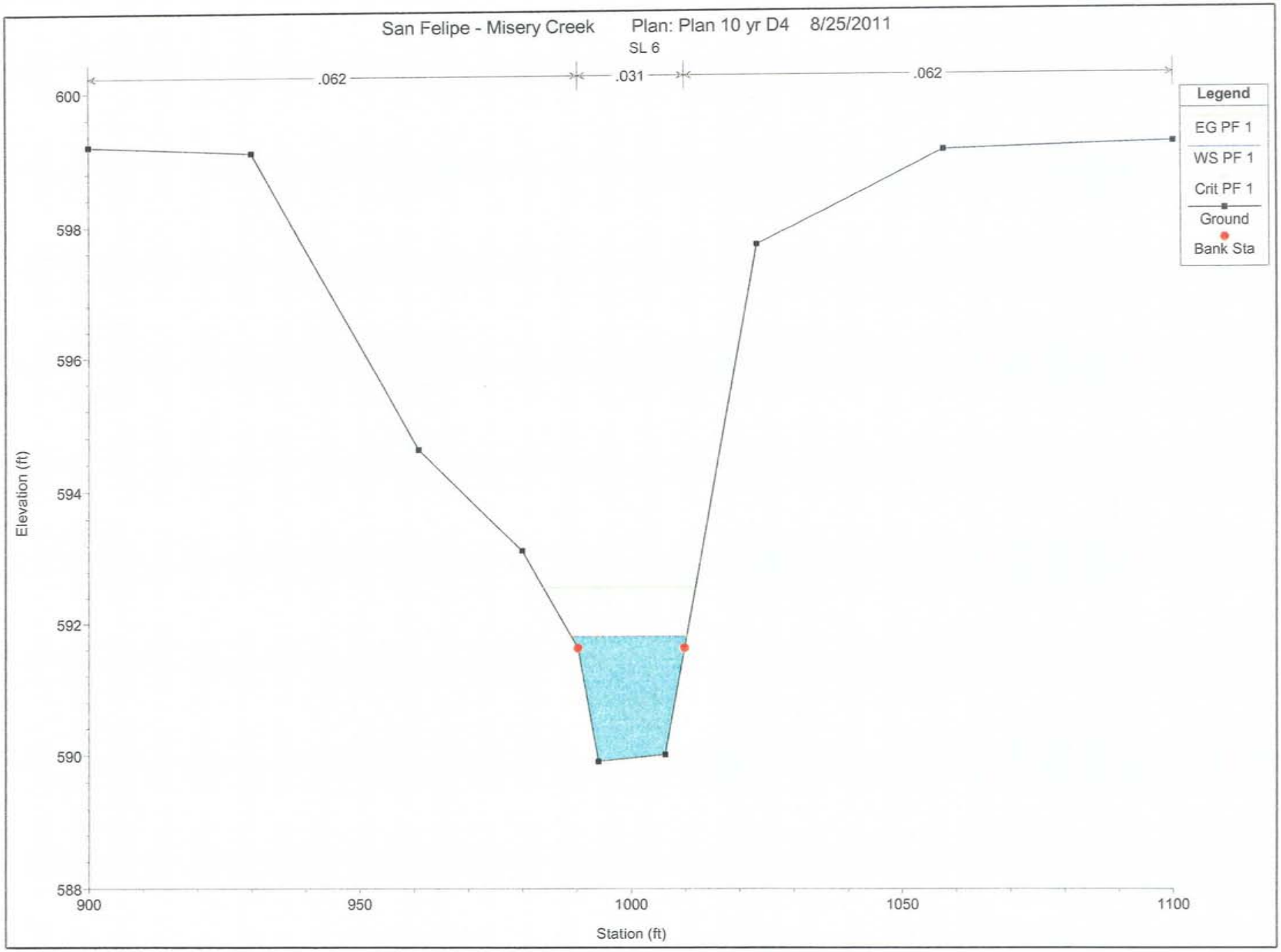
594
592
590
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
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.031
.062
Legend
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WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
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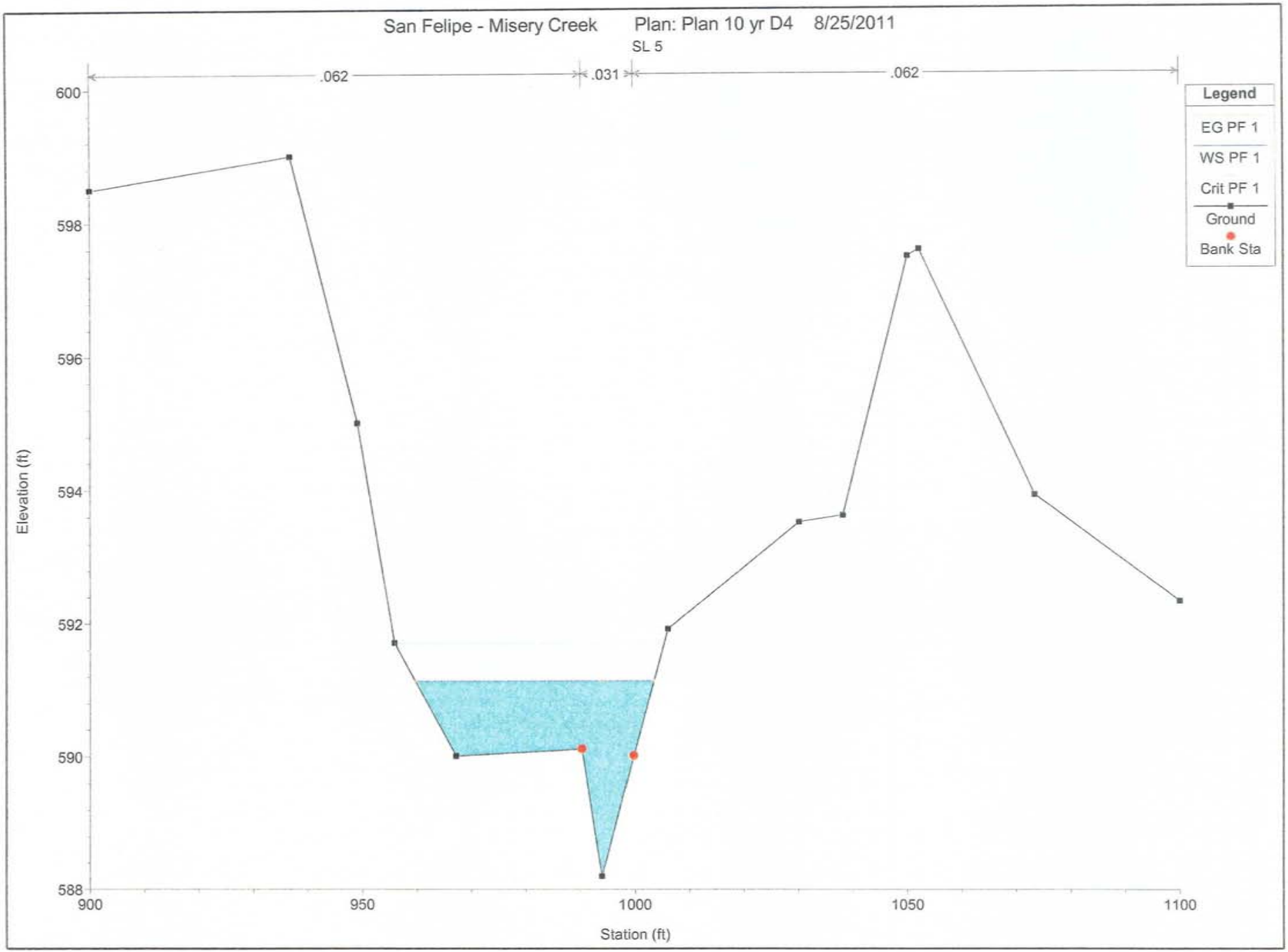
598
596
594
592
590
588
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 10 yr D4
8/25/2011
SL 5
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.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
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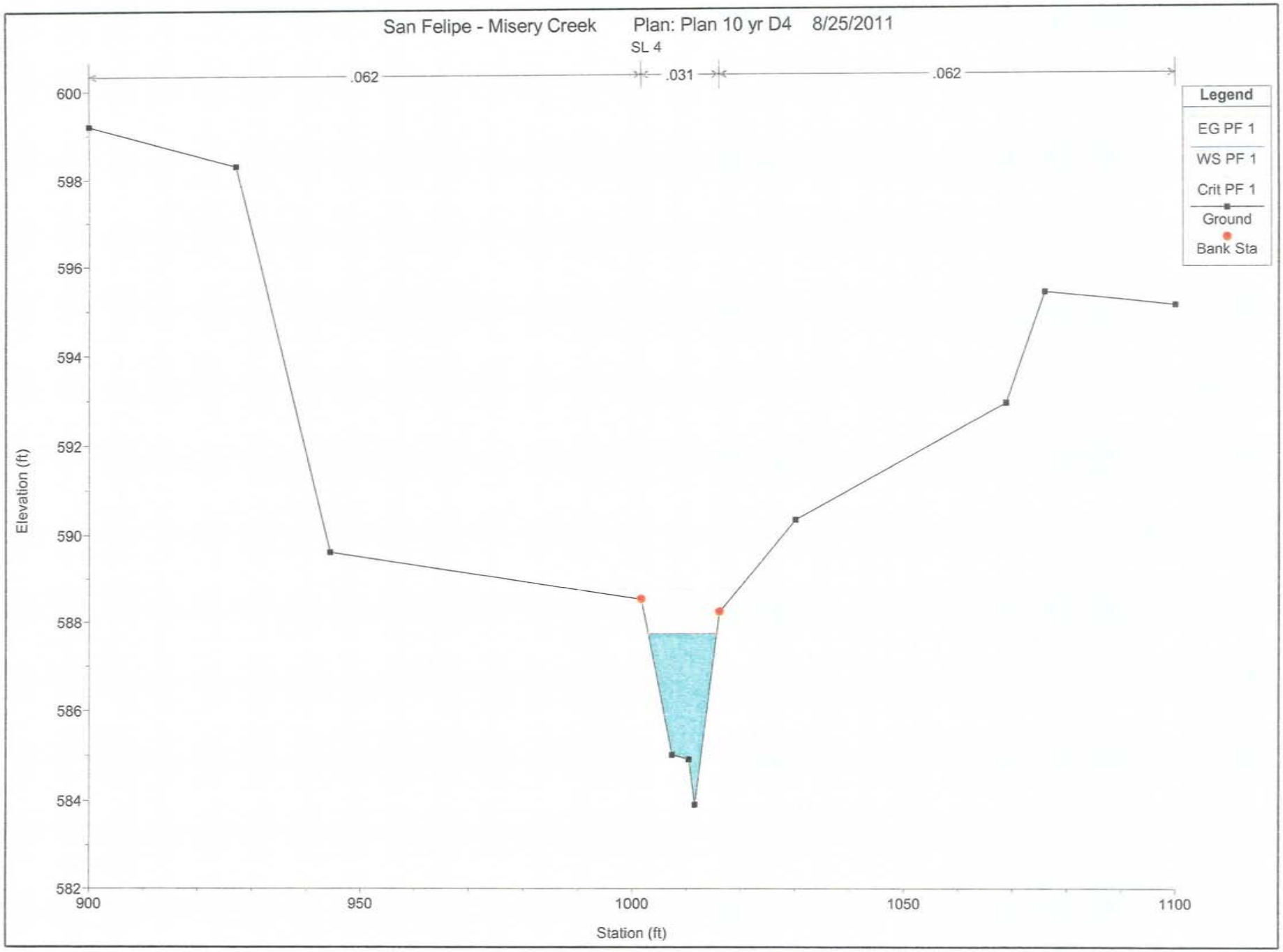
598
596
594
592
590
588
900
950
1000
1050
1100
Station (ft)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Crit PF 1
Ground
Bank Sta
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590
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584
582
Elevation (ft)
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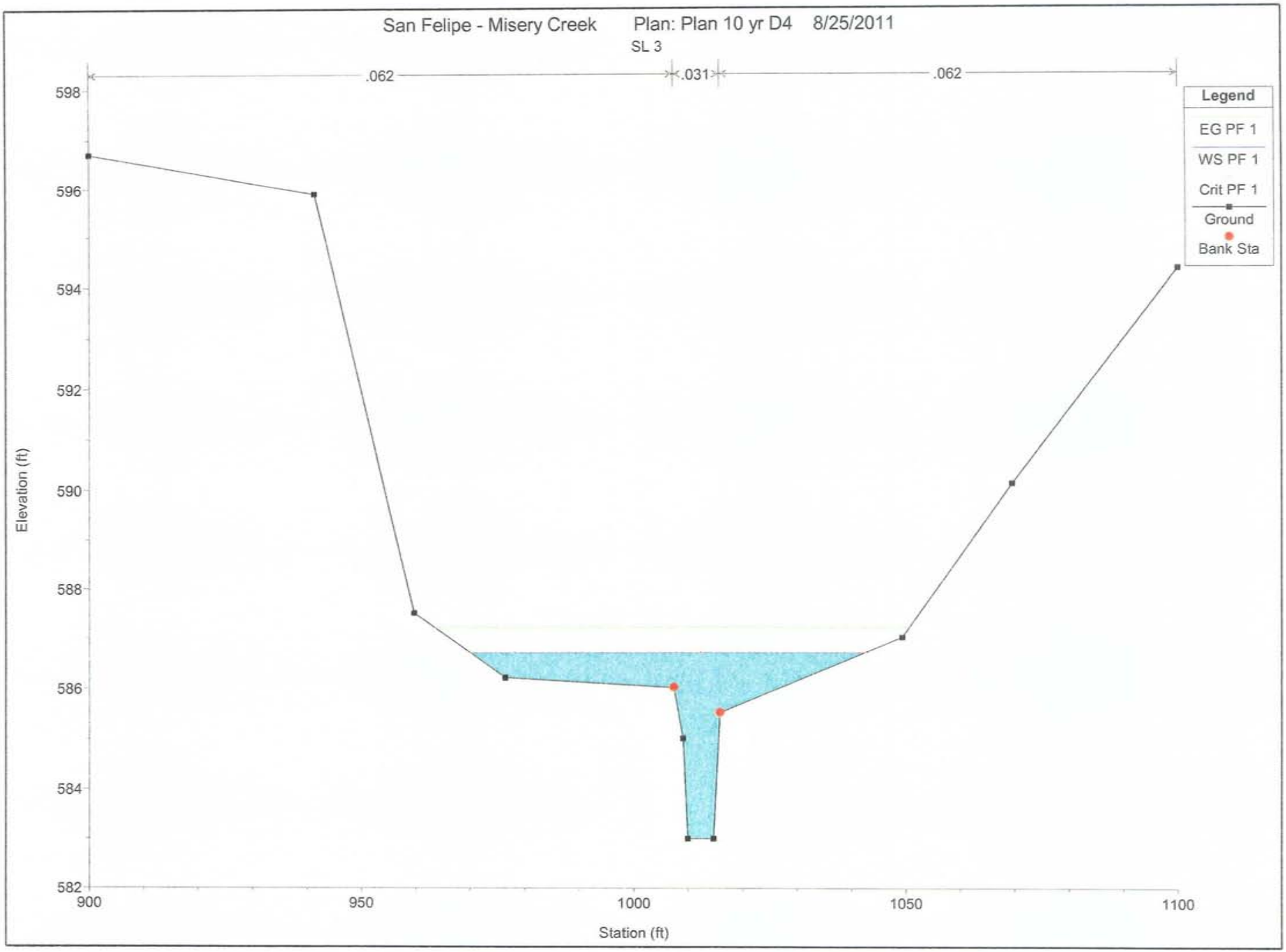
950
1000
1050
1100
Station (ft)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WS PF 1
Crit PF 1
Ground
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Elevation (ft)
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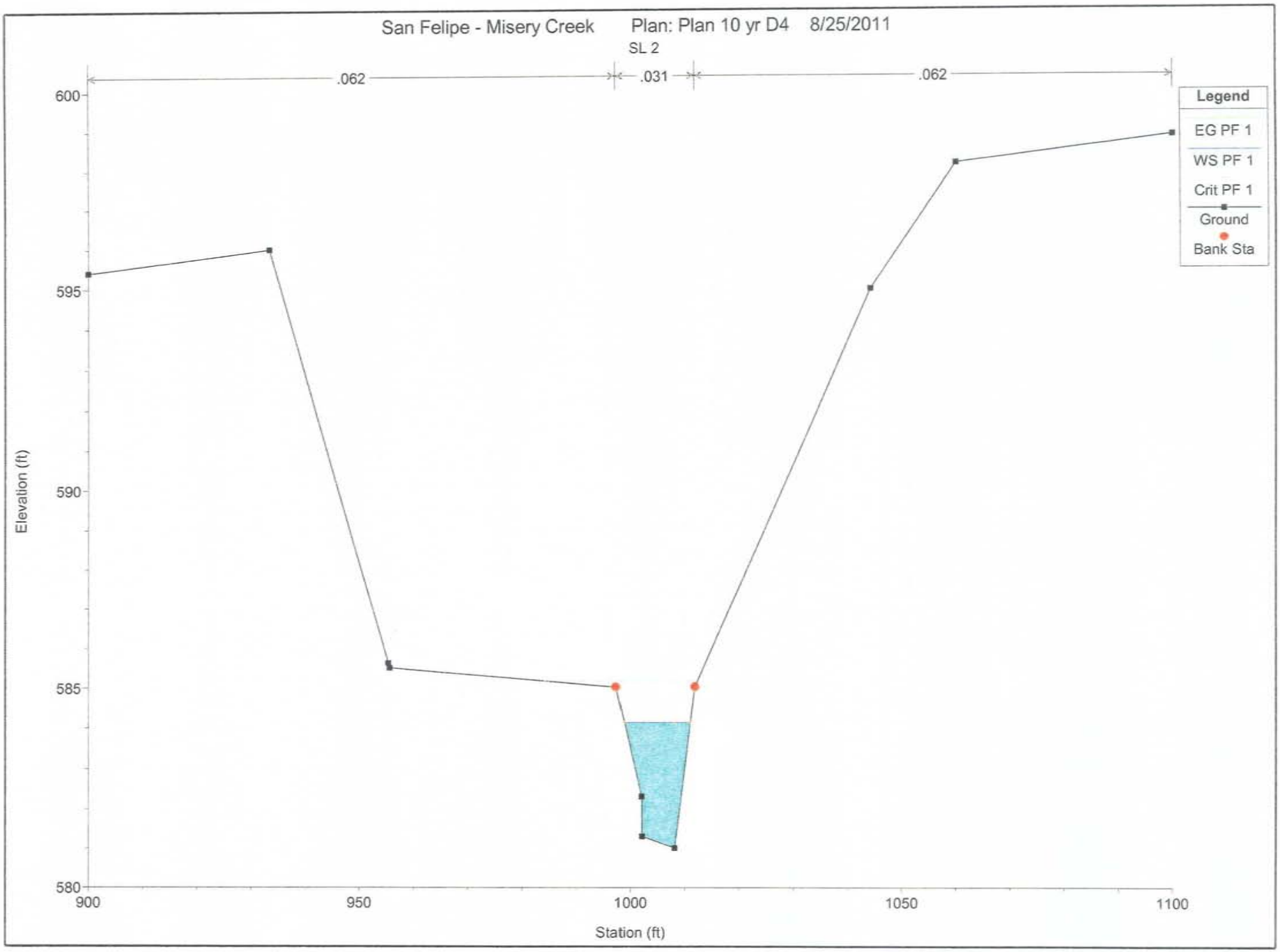
1100
Station (ft)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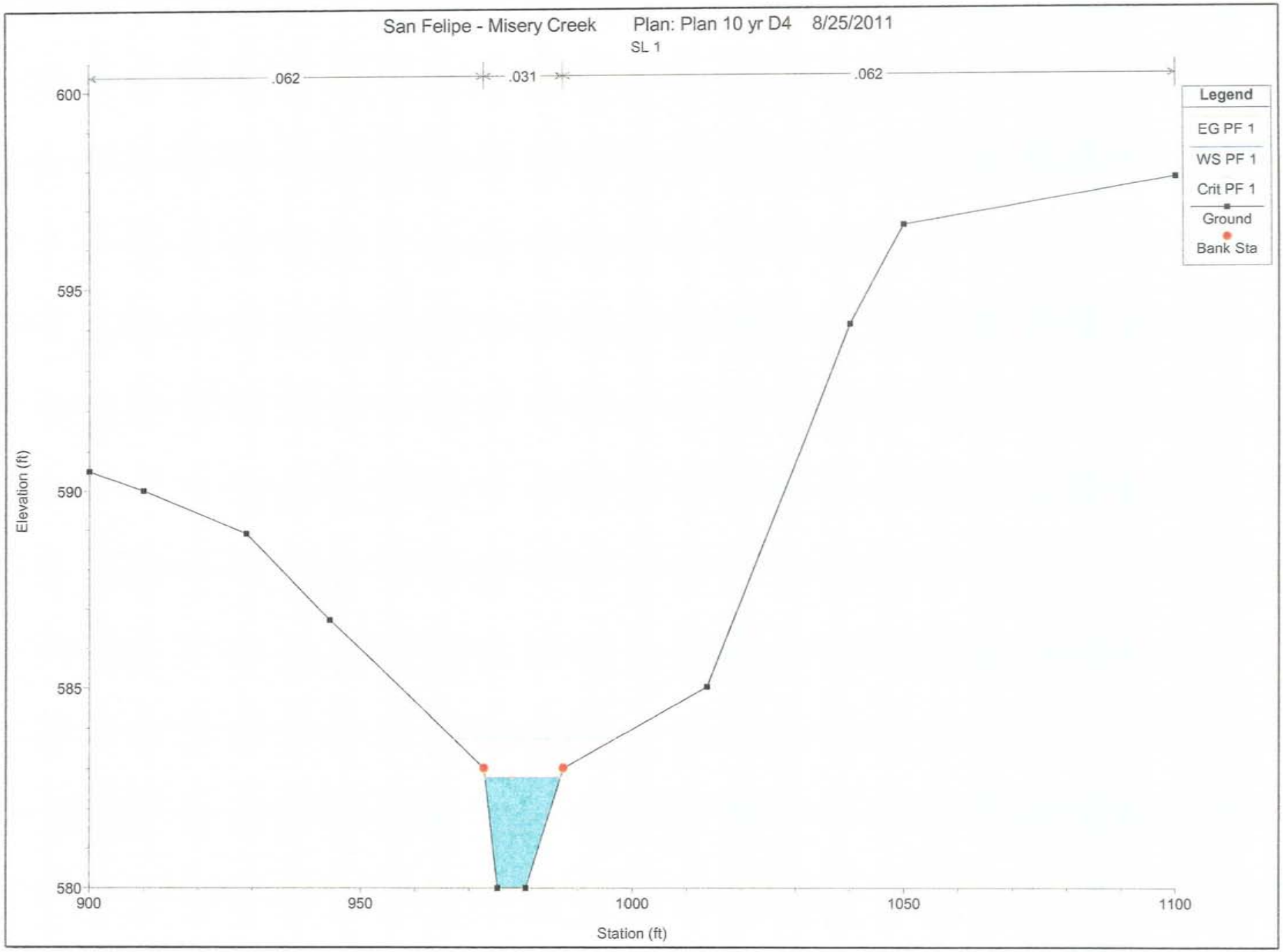
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
600
595
590
585
580
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek Plan: Plan 10 yr D4 8/25/2011
SL 1
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
600
595
590
585
580
Elevation (ft)
900
950
1000
1050
1100
Station (ft)

iv. HEC-RAS Report Output

SanFelipe-Misery 10yr D4.rep

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X       X
X     X  X        X    X      X   X    X    X       X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: San Felipe - Misery Creek
Project File : SanFelipe-Misery.prj
Run Date and Time: 8/25/2011 2:51:52 PM

Project in English units

Project Description:
Misery Creek at Proposed Culvert

PLAN DATA

Plan Title: Plan 10 yr D4
Plan File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.p10

Geometry Title: Misery Creek Geom D4FT
Geometry File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.g04

Flow Title : Misery Creek Flow 10 yr
Flow File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.f04

Plan Summary Information:

Number of:	Cross Sections	= 13	Multiple Openings	=	0
	Culverts	= 1	Inline Structures	=	0
	Bridges	= 0	Lateral Structures	=	0

Computational Information

Water surface calculation tolerance	= 0.01
Critical depth calculation tolerance	= 0.01
Maximum number of iterations	= 20
Maximum difference tolerance	= 0.3
Flow tolerance factor	= 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: Misery Creek Flow 10 yr
Flow File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.f04

Flow Data (cfs)

River	Reach	RS	PF 1
Misery Creek	1	50700	208

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Misery Creek	1	PF 1	Normal S = 0.022	Normal S = 0.019

GEOMETRY DATA

Geometry Title: Misery Creek Geom D4FT
Geometry File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.g04

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50700

INPUT
Description: SL 14
SL 3
Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	617.2	923.1	614.7	960.6	608	971.2	605	981.3	602.7
985	601	992.5	601	994.9	600	997.5	600	1001.3	602.418
1004.1	604.2	1031.9	612	1052.3	615	1100	619.8		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	981.3	.031	1001.3	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
981.3	1001.3	100	100	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50600

INPUT
Description: SL 13
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	617	920	614.4	972.5	607	1000	600	1005.5	600
1013	597.9	1018	598	1023.7	600	1044.2	606.2	1057.6	611
1080	613.3	1100	614.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	1005.5	.031	1023.7	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
1005.5	1023.7	100	100	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50500

INPUT
Description: SL 12
SL 3
Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	608.9	960	602.8	979.7	599	1002.7	596	1009.1	596
1016.6	598	1037.5	607	1051.7	610	1071.8	612.3	1100	611.3

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	979.7	.031	1016.6	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
979.7	1016.6	20	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50450

INPUT
Description: SL 11
SL 3
Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	608.4	911	607.7	977.1	597	994.1	596	997.8	595
1005.1	595	1006.6	596	1034.5	605	1049.4	605.9	1061.5	601
1100	601.1								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	994.1	.031	1006.6	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
994.1	1006.6	117	57.27	5	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50392.73

INPUT
Description: SL 10
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	600.7	932.3	598.3	939.6	596.4	958.5	595	982	595
982.8	595.7	994.8	593.1	1006	593.1	1014.5	595.623	1037	602.3
1067	600.8	1100	601.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	982.8	.031	1014.5	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
982.8	1014.5	7.79	7.79	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50384.94

INPUT
Description: SL 9
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	600.5	932.5	597.9	946.5	596	951.8	595	975.3	595
984.1	597.1	992.6	597	994.5	592.8	1005.5	592.8	1007.4	597.6
1021.4	599.5	1100	601						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	992.6	.031	1007.4	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
992.6	1007.4	56.59	56.59	.1	.3

CULVERT

RIVER: Misery Creek
REACH: 1 RS: 50384.9

INPUT
Description:
Distance from Upstream XS = .04
Deck/Roadway Width = 45
Weir Coefficient = 2.6
Upstream Deck/Roadway Coordinates
num= 9

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
856.2	599.66		890.2	599.3		932.7	598.9	
952.7	598.73		962.7	598.72		972.7	598.73	
992.7	598.9		1056.5	600.36		1090.2	601.44	

Upstream Bridge Cross Section Data
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	600.5	932.5	597.9	946.5	596	951.8	595	975.3	595

984.1	597.1	992.6	597	994.5	592.8	1005.5	592.8	1007.4	597.6
1021.4	599.5	1100	601						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	992.6	.031	1007.4	.062

Bank Sta: Left	Right	Coeff Contr.	Expan.
992.6	1007.4	.1	.3

Downstream Deck/Roadway Coordinates num= 10

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
865.3	599.48		899.4	599.87		941.8	599.47	
961.8	599.3		971.8	599.29		981.8	599.3	
1001.8	599.47		1020.4	599.78		1060	600.93	
1099	602							

Downstream Bridge Cross Section Data
Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	598.9	985.4	598.8	993.5	597.8	994.5	590.6	1005.5	590.5
1006.5	597.3	1017.5	597.6	1022.5	599.6	1100	600.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	993.5	.031	1006.5	.062

Bank Sta: Left	Right	Coeff Contr.	Expan.
993.5	1006.5	.1	.3

Upstream Embankment side slope = 2 horiz. to 1.0 vertical
Downstream Embankment side slope = 2 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span
Culvert #1	Circular	4	

FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
	.04	56	.013	.013	0	.5	1

Number of Barrels = 2
Upstream Elevation = 593
Centerline Stations

Sta.	Sta.
997	1003

Downstream Elevation = 590.5
Centerline Stations

Sta.	Sta.
997	1003

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50328.35

INPUT
Description: SL 7
SL 3
Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	598.9	985.4	598.8	993.5	597.8	994.5	590.6	1005.5	590.5
1006.5	597.3	1017.5	597.6	1022.5	599.6	1100	600.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	993.5	.031	1006.5	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
993.5	1006.5	15.43	15.43	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50312.92

INPUT
Description: SL 6
SL 3
Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	599.2	930	599.1	960.8	594.6	979.9	593.1	990.2	591.6
994	589.9	1006.2	590	1009.8	591.6	1023.1	597.7	1057.6	599.1
1100	599.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	990.2	.031	1009.8	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
990.2	1009.8	5	47.13	100	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50265.79

INPUT
Description: SL 5
SL 3
Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	598.5	936.8	599	949.1	595	955.9	591.7	967.2	590
990.3	590.1	994	588.2	999.7	590	1006	591.9	1030.1	593.5
1038.1	593.6	1050	597.5	1052.1	597.6	1073.3	593.9	1100	592.3

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	990.3	.031	999.7	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
990.3	999.7	105	65.79	5	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50200

INPUT
Description: SL 4
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	599.2	927	598.3	944.4	589.6	1001.6	588.5	1007.3	585
1010.4	584.9	1011.5	583.9	1016	588.2	1030	590.3	1068.8	592.9
1075.9	595.4	1100	595.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	1001.6	.031	1016	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
1001.6	1016	50	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50150

INPUT
Description: SL 3
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	596.7	941.4	595.9	959.7	587.5	976.4	586.2	1007.3	586
1009	585	1009.9	583	1014.6	583	1015.8	585.5	1049.3	587
1069.5	590.1	1100	594.4						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	1007.3	.031	1015.8	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
1007.3	1015.8	50	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50100

INPUT
Description: SL 2
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	595.4	933.4	596	955.35	585.618	955.6	585.5	997.3	585
1002	582.3	1002.1	581.3	1008.1	581	1011.8	585	1044.2	595
1060	598.2	1100	598.9						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	997.3	.031	1011.8	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
997.3	1011.8	50	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50050

INPUT
Description: SL 1
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	590.5	910	590	928.9	588.9	944.3	586.7	972.7	583
975.2	580	980.4	580	987.3	583	1013.7	585	1040	594.1
1049.9	596.6	1100	597.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	972.7	.031	987.3	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
972.7	987.3	0	0	.1	.3

SUMMARY OF MANNING'S N VALUES

River:Misery Creek

Reach	River Sta.	n1	n2	n3
1	50700	.062	.031	.062
1	50600	.062	.031	.062
1	50500	.062	.031	.062
1	50450	.062	.031	.062
1	50392.73	.062	.031	.062
1	50384.94	.062	.031	.062
1	50384.9	Culvert		
1	50328.35	.062	.031	.062
1	50312.92	.062	.031	.062
1	50265.79	.062	.031	.062
1	50200	.062	.031	.062
1	50150	.062	.031	.062
1	50100	.062	.031	.062
1	50050	.062	.031	.062

SUMMARY OF REACH LENGTHS

River: Misery Creek

Reach	River Sta.	Left	Channel	Right
1	50700	100	100	100
1	50600	100	100	100
1	50500	20	50	68
1	50450	117	57.27	5
1	50392.73	7.79	7.79	7.79
1	50384.94	56.59	56.59	56.59
1	50384.9	Culvert		
1	50328.35	15.43	15.43	15.43
1	50312.92	5	47.13	100

1	50265.79	105	65.79	5
1	50200	50	50	50
1	50150	50	50	50
1	50100	50	50	50
1	50050	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Misery Creek

Reach	River Sta.	Contr.	Expan.
1	50700	.1	.3
1	50600	.1	.3
1	50500	.1	.3
1	50450	.1	.3
1	50392.73	.1	.3
1	50384.94	.1	.3
1	50384.9 Culvert		
1	50328.35	.1	.3
1	50312.92	.1	.3
1	50265.79	.1	.3
1	50200	.1	.3
1	50150	.1	.3
1	50100	.1	.3
1	50050	.1	.3

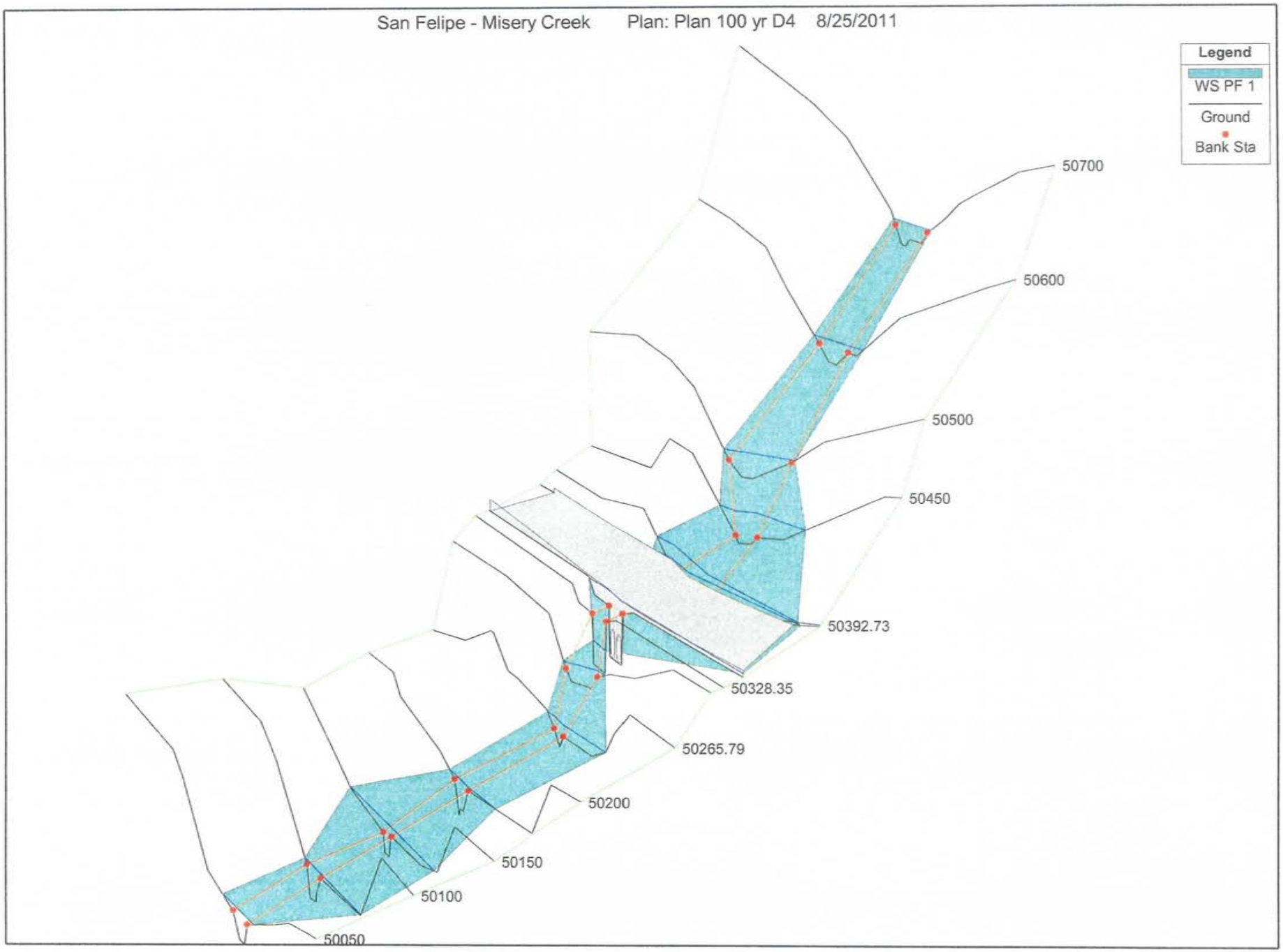
Profile Output Table - Standard Table 1

Reach	River Sta	Profile	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)		
1	50700	PF 1	208.00	600.00	602.49	602.49
603.25	0.013210	7.00	29.74	19.66	1.00	
1	50600	PF 1	208.00	597.90	600.33	600.33
601.06	0.011286	6.91	31.94	26.06	0.95	
1	50500	PF 1	208.00	596.00	598.33	
598.65	0.005611	4.54	45.92	32.56	0.67	
1	50450	PF 1	208.00	595.00	598.29	
598.48	0.001666	4.05	82.11	44.54	0.41	
1	50392.73	PF 1	208.00	593.10	598.40	
598.42	0.000069	1.06	295.94	92.93	0.09	
1	50384.94	PF 1	208.00	592.80	598.39	595.23
598.41	0.000209	1.62	224.86	86.79	0.13	
1	50384.9		Culvert			
1	50328.35	PF 1	208.00	590.50	592.76	592.76
593.83	0.015846	8.31	25.02	11.63	1.00	
1	50312.92	PF 1	208.00	589.90	591.78	591.78
592.54	0.012645	6.97	29.99	21.26	1.00	
1	50265.79	PF 1	208.00	588.20	591.13	591.13
591.70	0.010013	7.26	50.14	43.74	0.90	
1	50200	PF 1	208.00	583.90	587.70	587.70
588.72	0.014271	8.10	25.67	12.58	1.00	
1	50150	PF 1	208.00	583.00	586.70	586.70

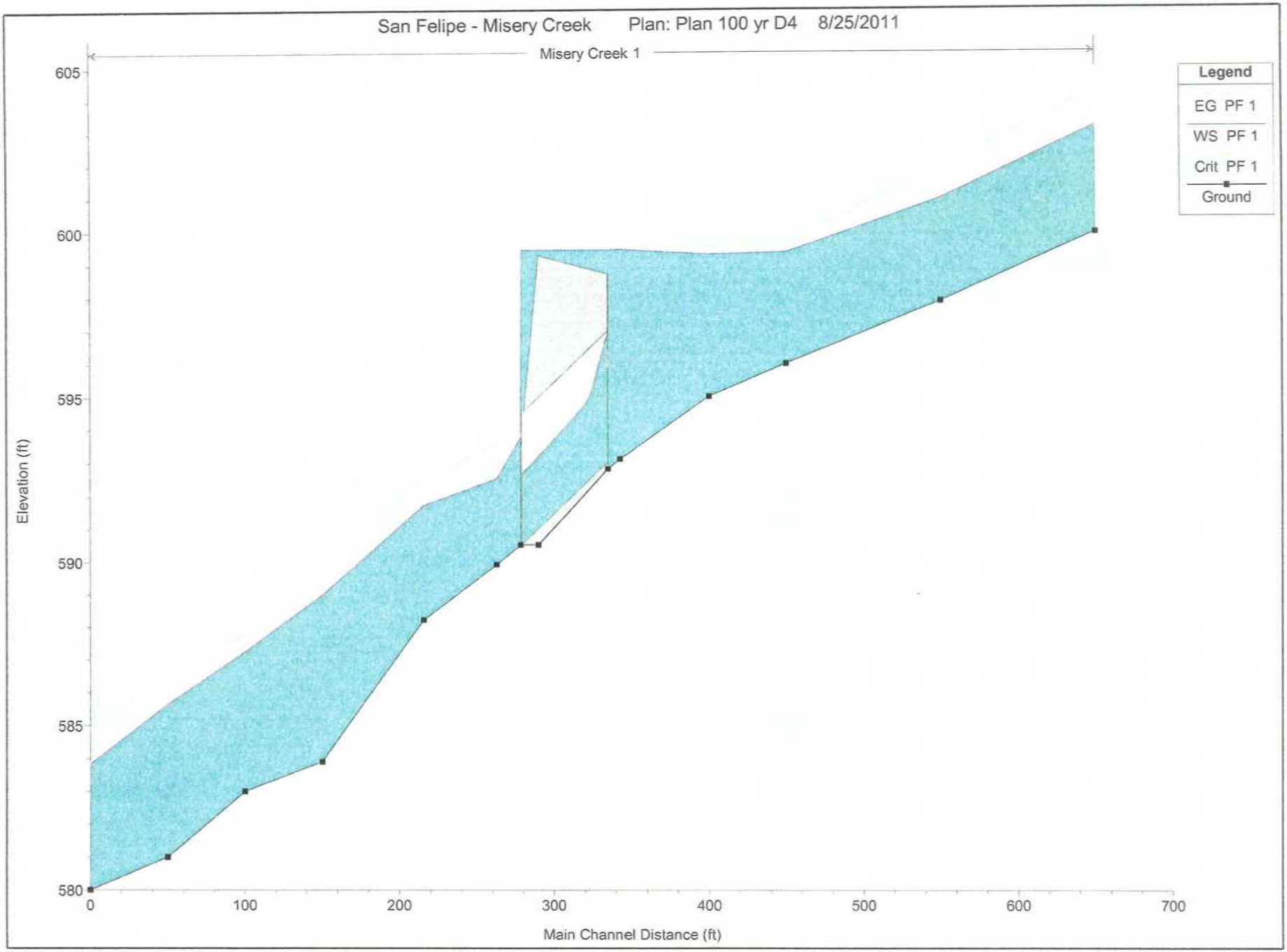
	587.20	0.006617	6.45	60.88	72.55	0.67	
1		50100	PF 1	208.00	581.00	584.12	584.12
	585.16	0.014349	8.19	25.39	12.14	1.00	
1		50050	PF 1	208.00	580.00	582.78	582.78
	583.73	0.013405	7.84	26.51	13.90	1.00	

B. Model 2: 100-year Storm

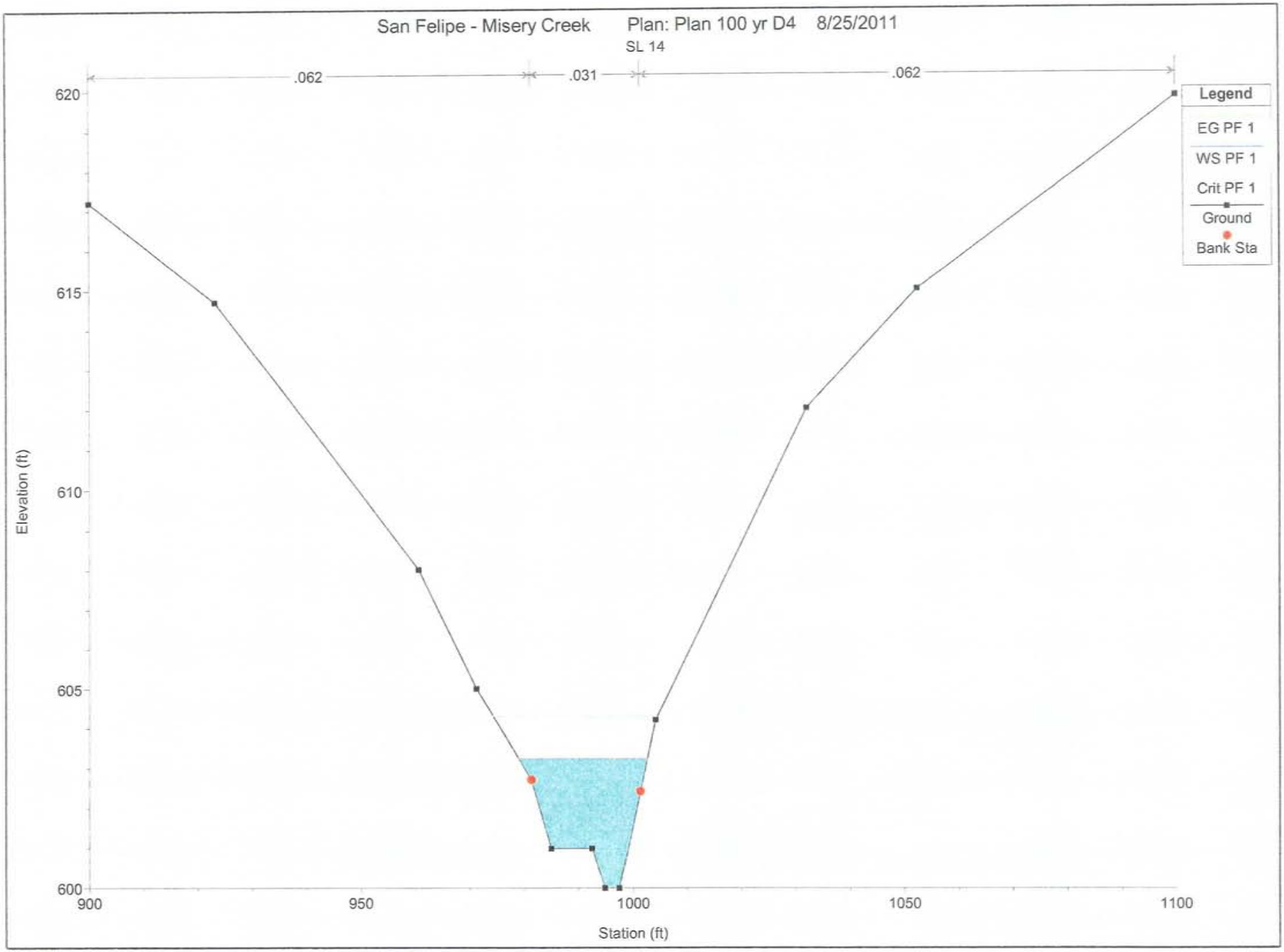
i. HEC-RAS Isometric View

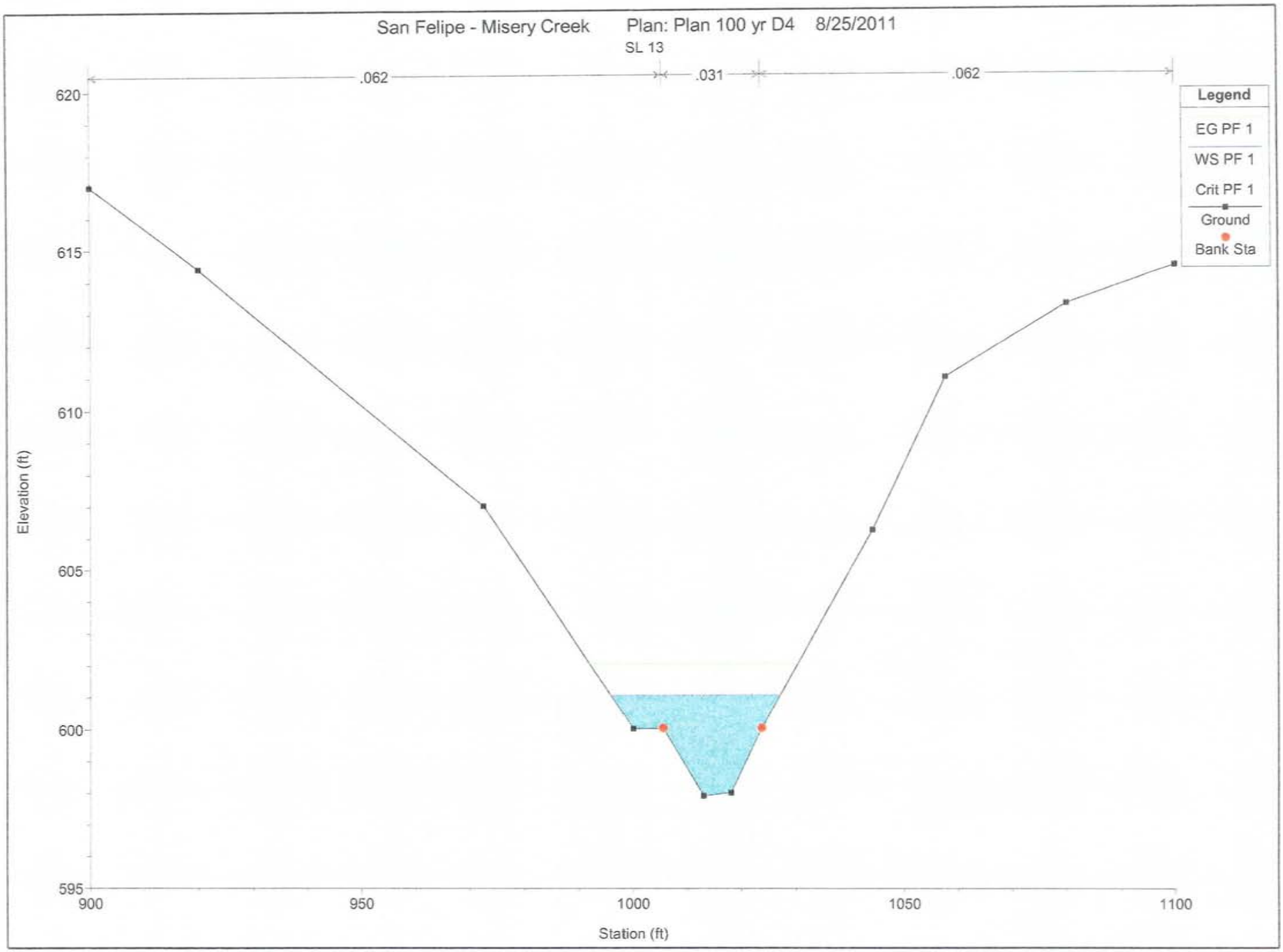

San Felipe - Misery Creek
Plan: Plan 100 yr D4
8/25/2011
Legend
WS PF 1
Ground
Bank Sta
50700
50600
50500
50450
50392.73
50328.35
50265.79
50200
50150
50100
50050

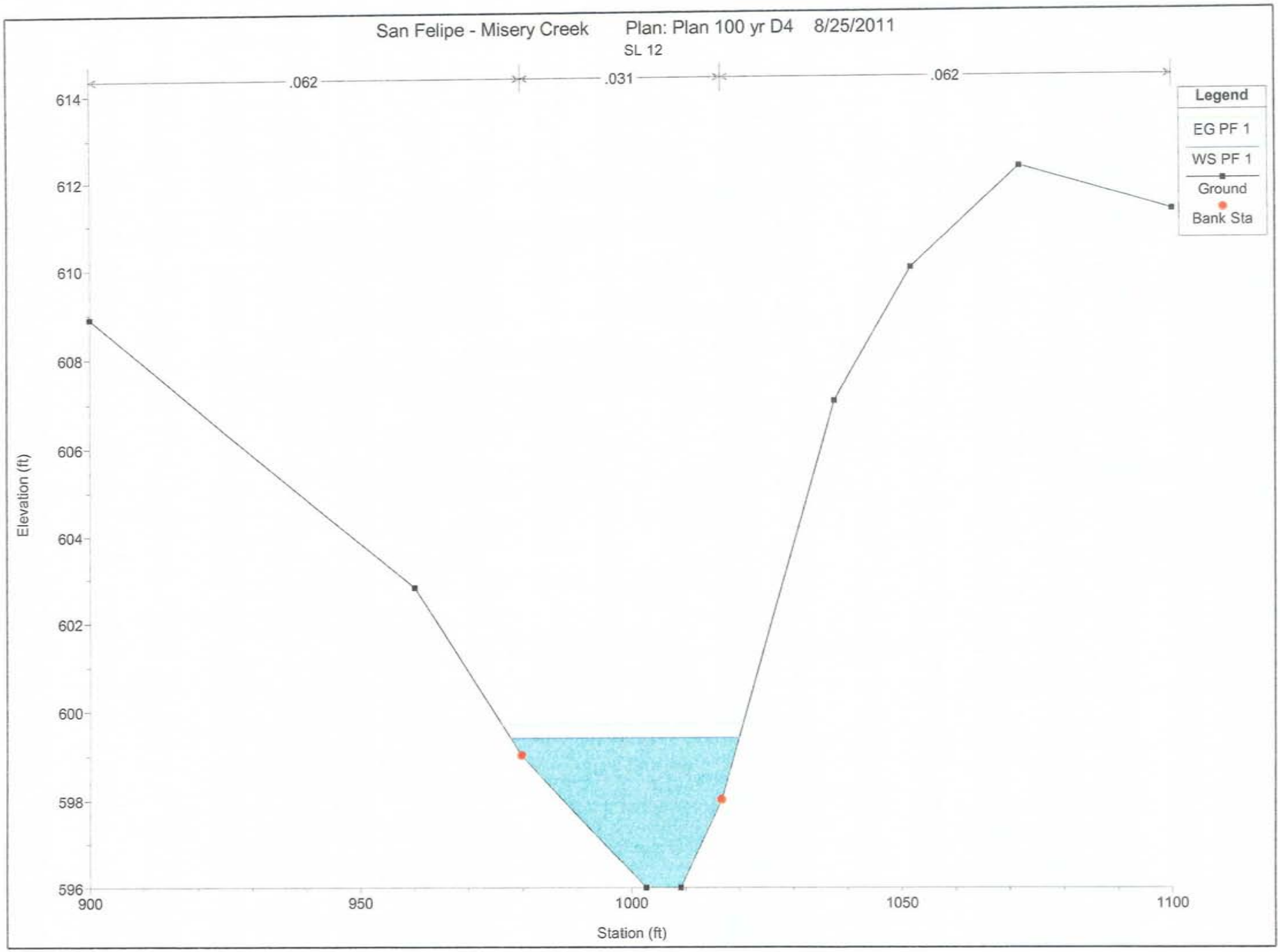
ii. HEC-RAS Profile View

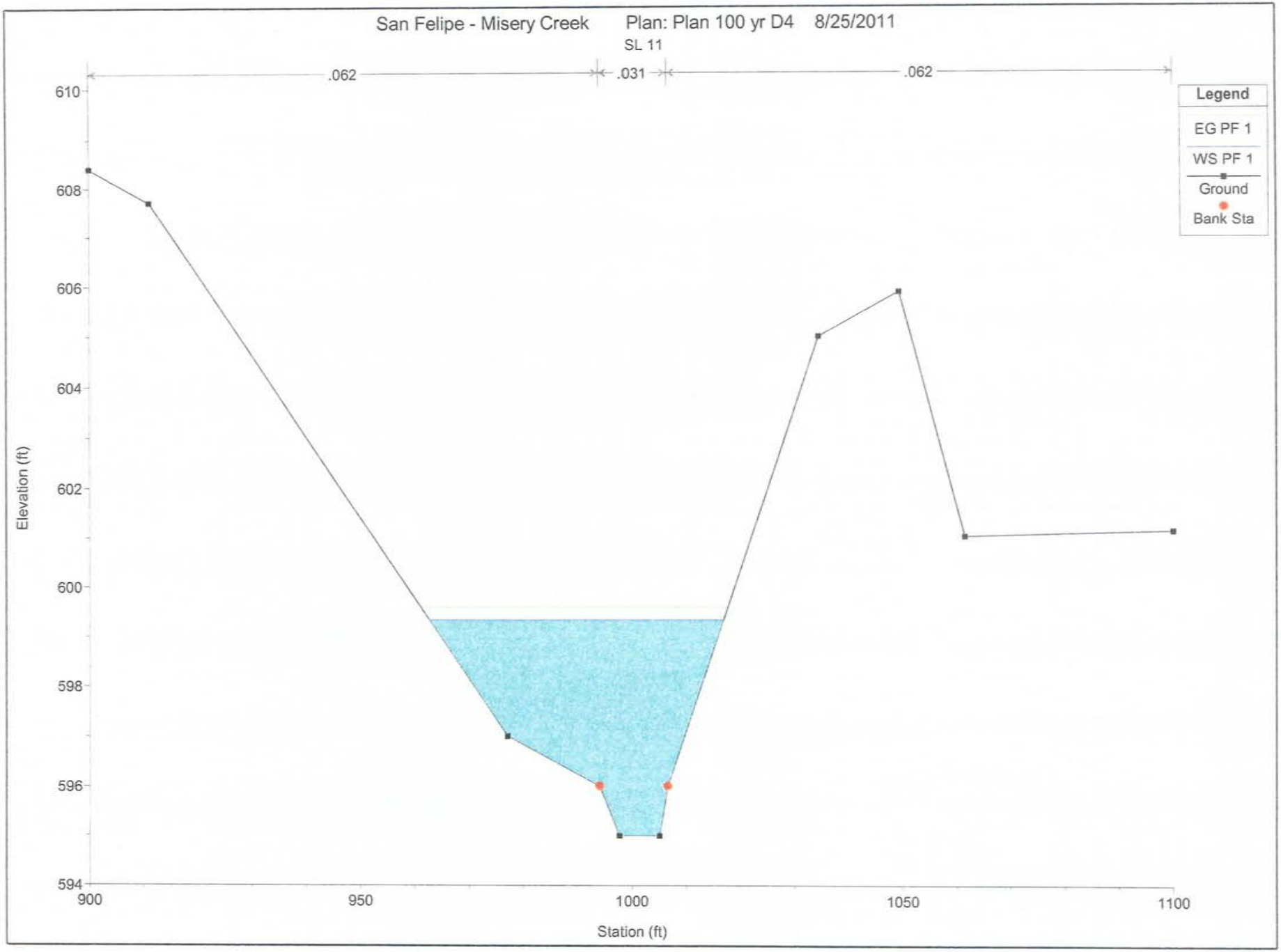

San Felipe - Misery Creek Plan: Plan 100 yr D4 8/25/2011
Misery Creek 1
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Elevation (ft)
605
600
595
590
585
580
0
100
200
300
400
500
600
700
Main Channel Distance (ft)

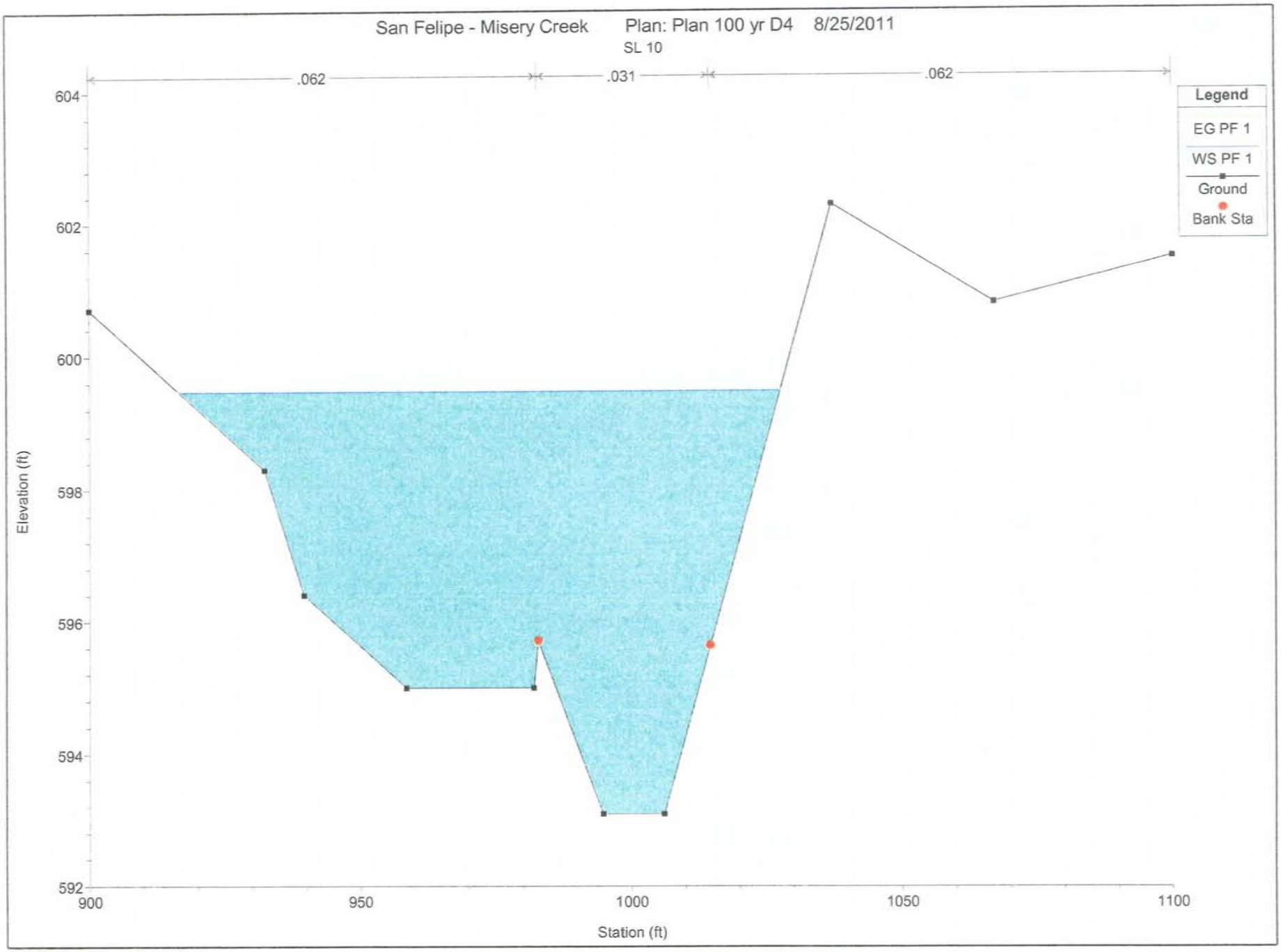
iii. HEC-RAS Cross Sections


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 14
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
620
615
610
605
600
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 13
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
620
615
610
605
600
595
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 12
.062
.031
.062
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
614
612
610
608
606
604
602
600
598
596
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 11
.062
.031
.062
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
610
608
606
604
602
600
598
596
594
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 10
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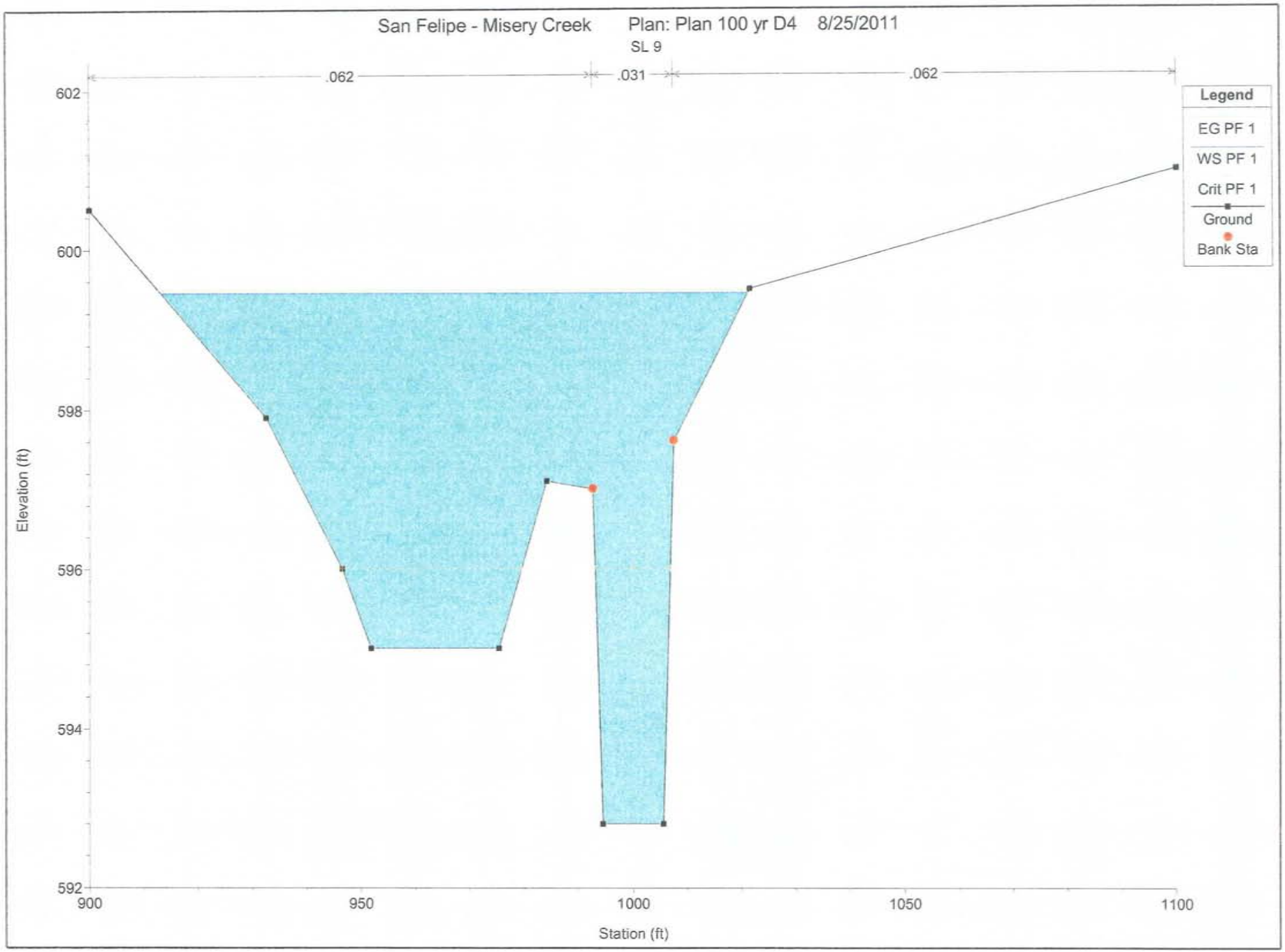
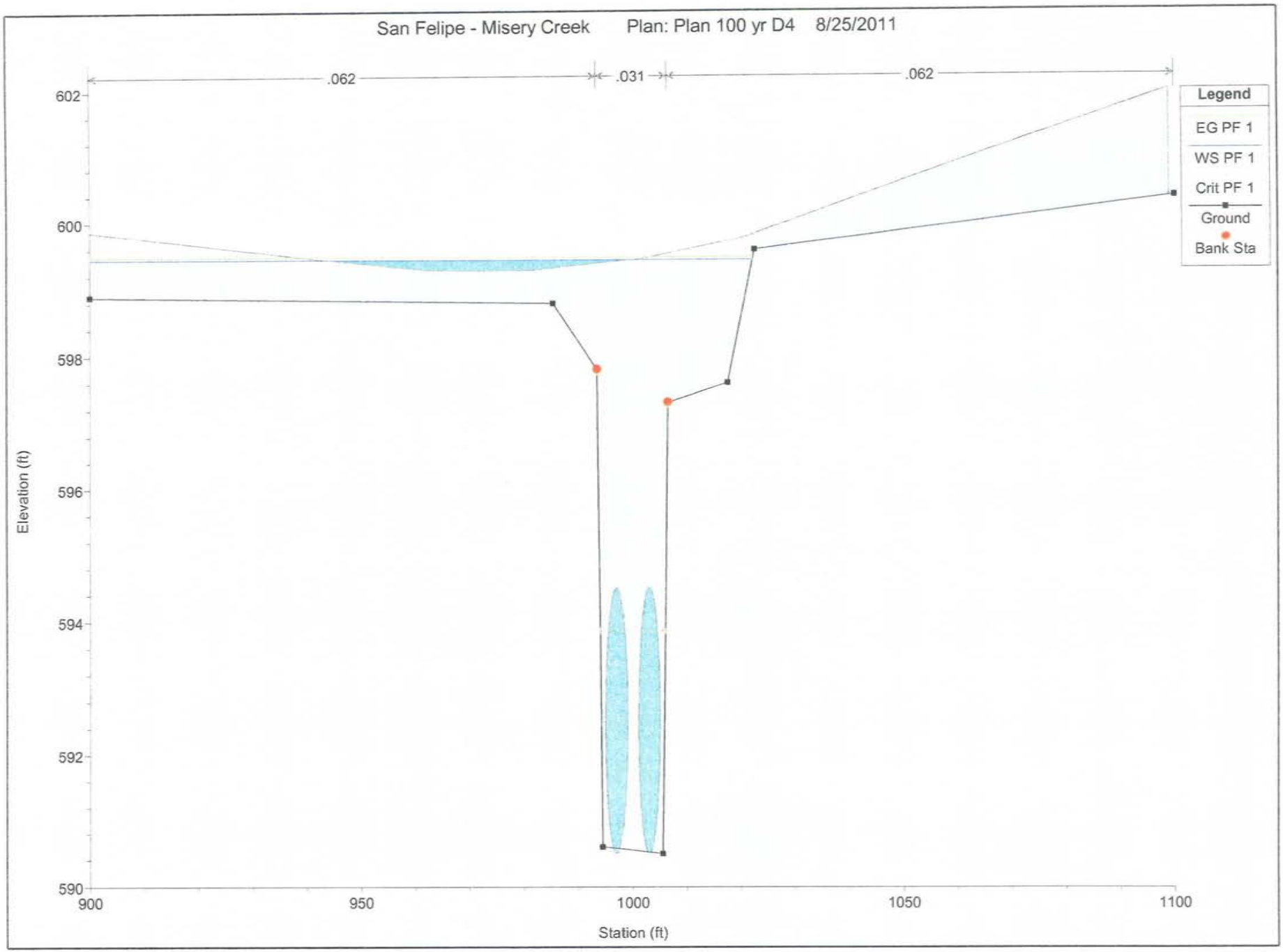
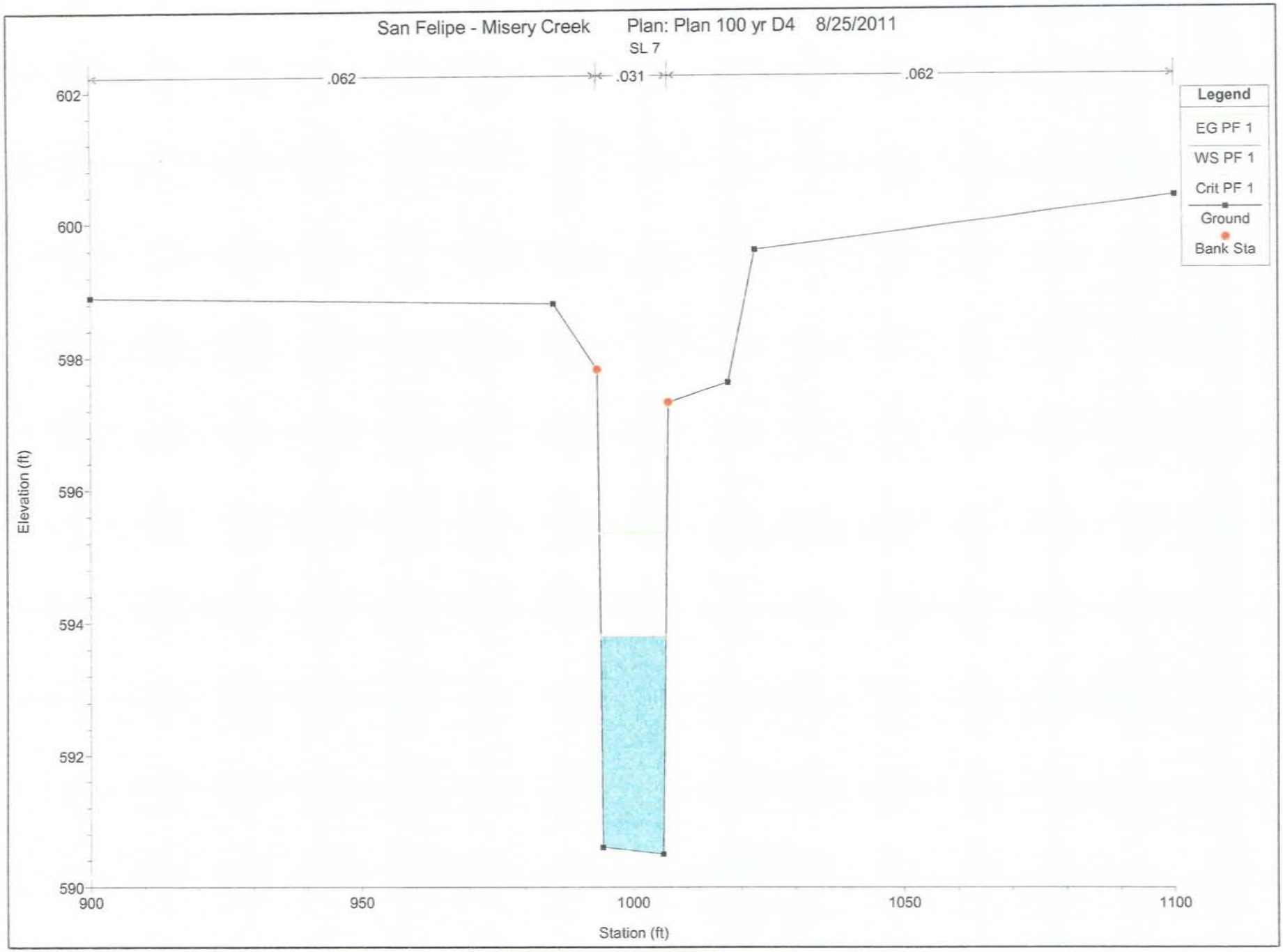
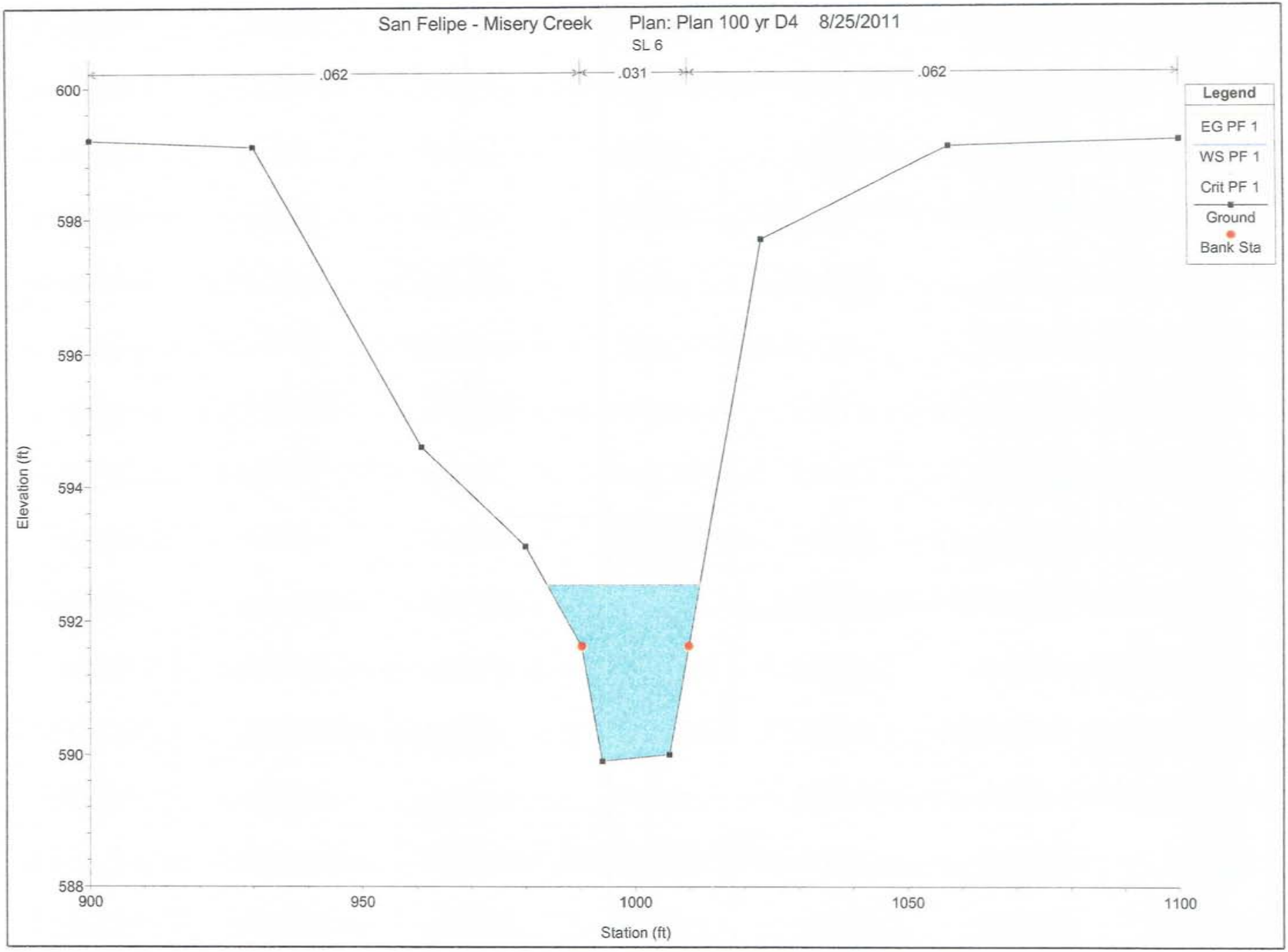
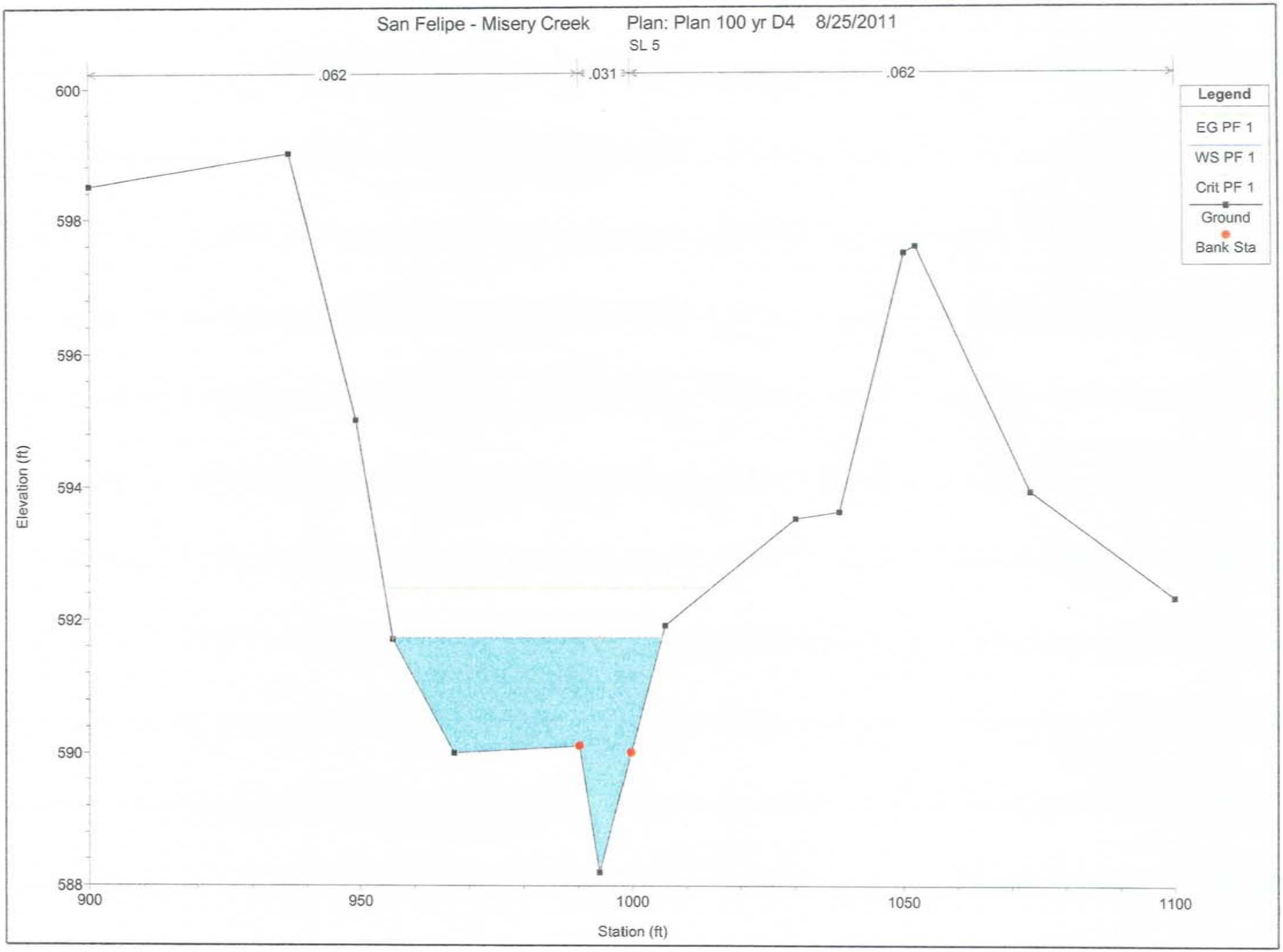
.031
.062
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
604
602
600
598
596
594
592
Elevation (ft)
900
950
1000
1050
1100
Station (ft)

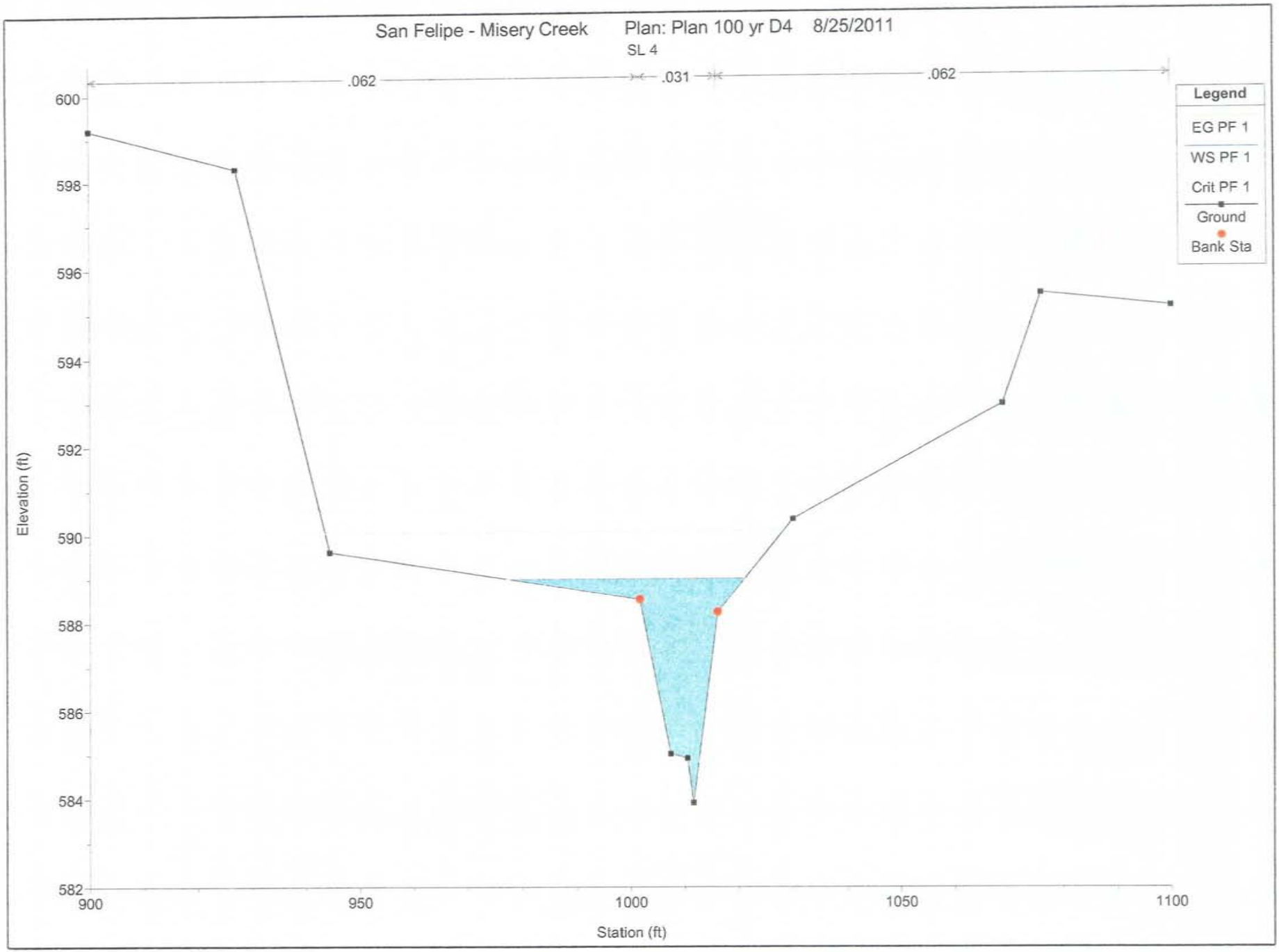

San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 9
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
602
600
598
596
594
592
Elevation (ft)
900
950
1000
1050
1100
Station (ft)

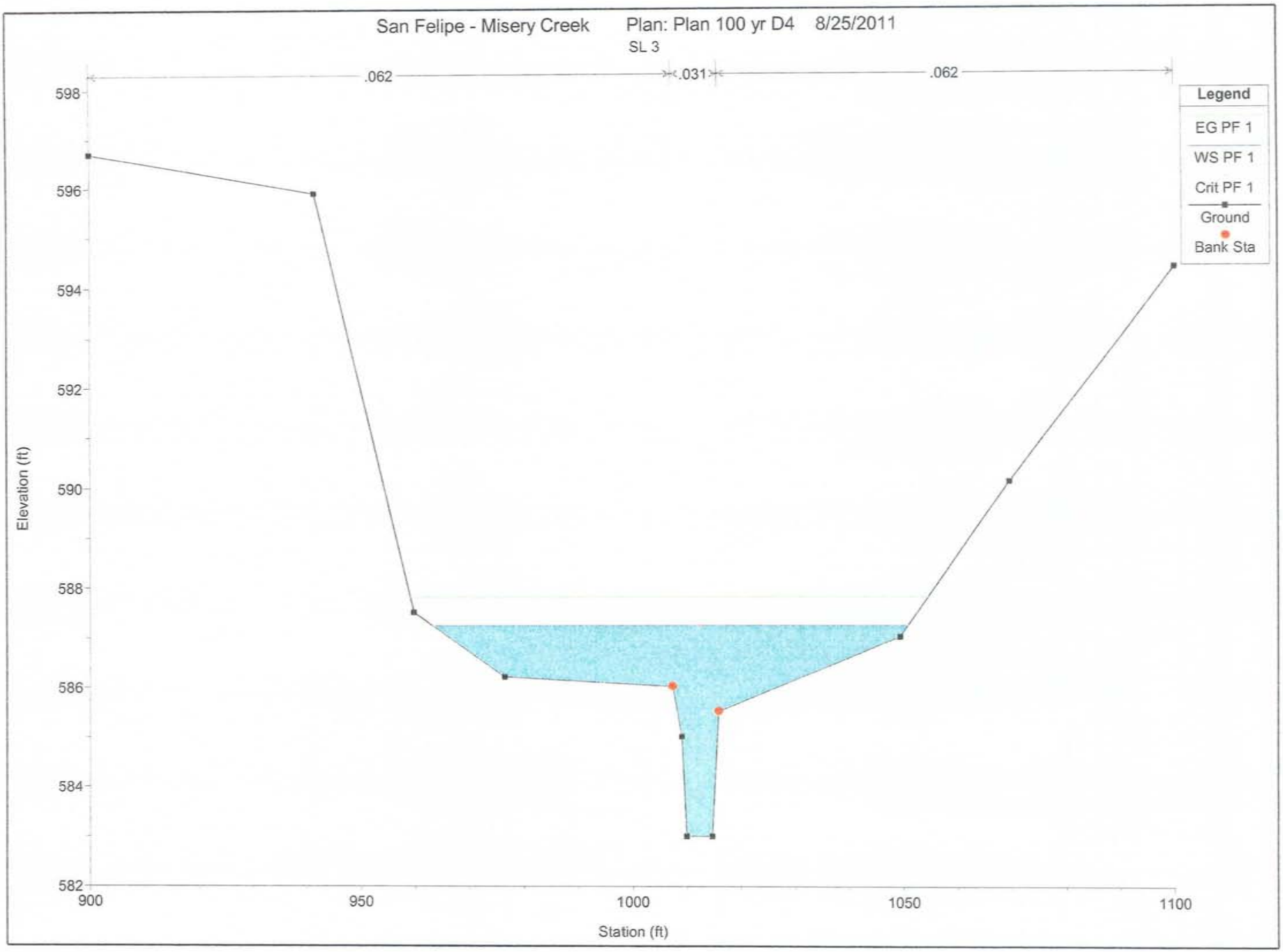

San Felipe - Misery Creek
Plan: Plan 100 yr D4
8/25/2011
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
602
600
598
596
594
592
590
Elevation (ft)
900
950
1000
1050
1100
Station (ft)

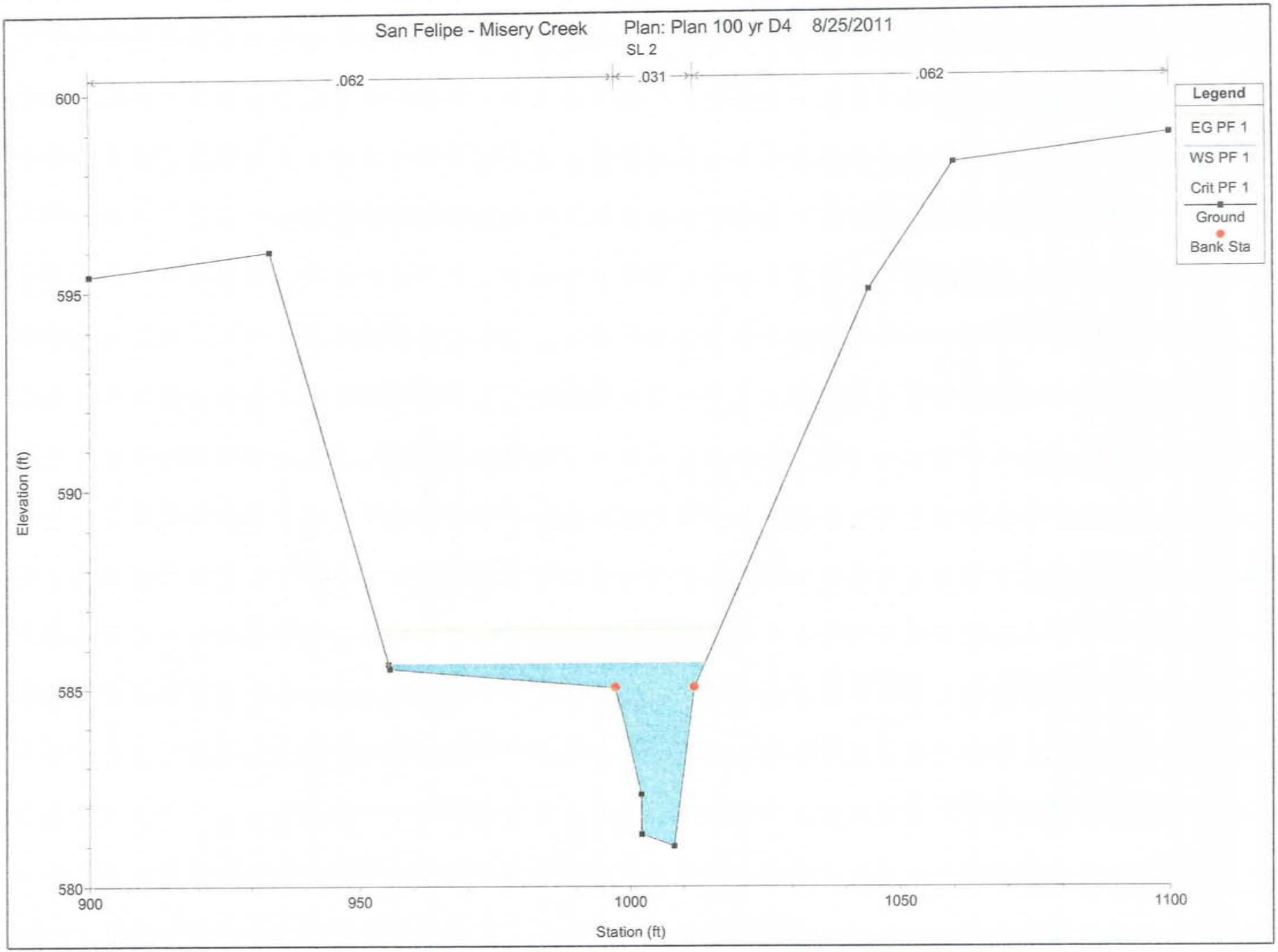

San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 7
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
602
600
598
596
594
592
590
Elevation (ft)
900
950
1000
1050
1100
Station (ft)

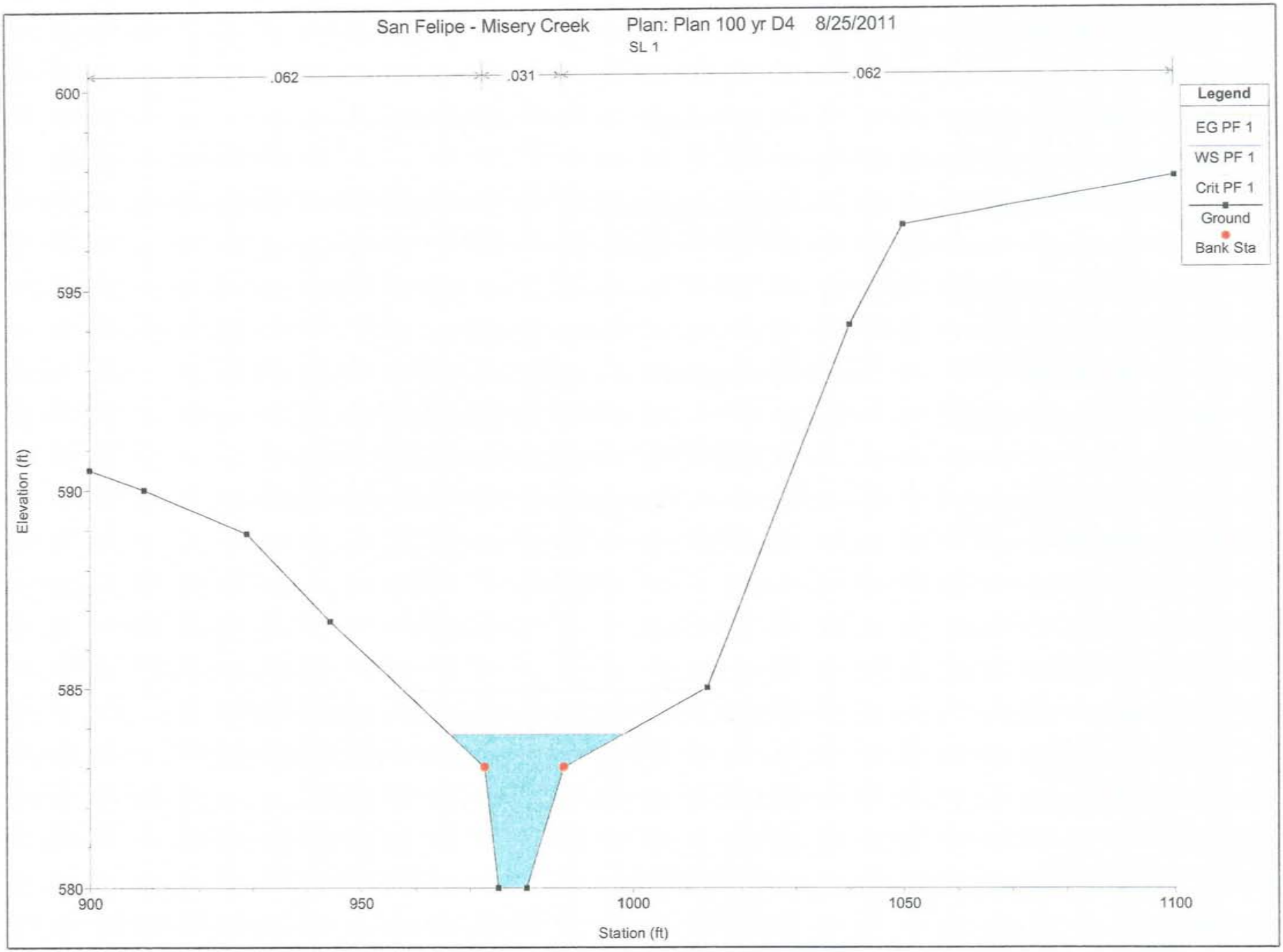

San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 6
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
600
598
596
594
592
590
588
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 5
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
600
598
596
594
592
590
588
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 4
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
600
598
596
594
592
590
588
586
584
582
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 3
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
598
596
594
592
590
588
586
584
582
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 2
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
600
595
590
585
580
Elevation (ft)
900
950
1000
1050
1100
Station (ft)


San Felipe - Misery Creek
Plan: Plan 100 yr D4 8/25/2011
SL 1
.062
.031
.062
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
600
595
590
585
580
Elevation (ft)
900
950
1000
1050
1100
Station (ft)

iv. HEC-RAS Report Output

SanFelipe-Misery 100yr D4.rep

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X   X    X    X        X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: San Felipe - Misery Creek
Project File : SanFelipe-Misery.prj
Run Date and Time: 8/25/2011 3:11:24 PM

Project in English units

Project Description:
Misery Creek at Proposed Culvert

PLAN DATA

Plan Title: Plan 100 yr D4
Plan File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.p15

Geometry Title: Misery Creek Geom D4FT
Geometry File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.g04

Flow Title : Misery Creek Flow 100 yr
Flow File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.f03

Plan Summary Information:

Number of:	Cross Sections	= 13	Multiple Openings	=	0
	Culverts	= 1	Inline Structures	=	0
	Bridges	= 0	Lateral Structures	=	0

Computational Information

Water surface calculation tolerance	= 0.01
Critical depth calculation tolerance	= 0.01
Maximum number of iterations	= 20
Maximum difference tolerance	= 0.3
Flow tolerance factor	= 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: Misery Creek Flow 100 yr
Flow File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.f03

Flow Data (cfs)

River	Reach	RS	PF 1
Misery Creek	1	50700	370

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Misery Creek	1	PF 1	Normal S = 0.022	Normal S = 0.019

GEOMETRY DATA

Geometry Title: Misery Creek Geom D4FT
Geometry File : C:\Documents and Settings\oosuna\My Documents\HEC-RAS - work\1688 San Felipe\SanFelipe-Misery.g04

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50700

INPUT
Description: SL 14
SL 3
Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	617.2	923.1	614.7	960.6	608	971.2	605	981.3	602.7
985	601	992.5	601	994.9	600	997.5	600	1001.3	602.418
1004.1	604.2	1031.9	612	1052.3	615	1100	619.8		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	981.3	.031	1001.3	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
981.3	1001.3	100	100	100	.1 .3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50600

INPUT
Description: SL 13
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	617	920	614.4	972.5	607	1000	600	1005.5	600
1013	597.9	1018	598	1023.7	600	1044.2	606.2	1057.6	611
1080	613.3	1100	614.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	1005.5	.031	1023.7	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
1005.5	1023.7	100	100	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50500

INPUT
Description: SL 12
SL 3
Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	608.9	960	602.8	979.7	599	1002.7	596	1009.1	596
1016.6	598	1037.5	607	1051.7	610	1071.8	612.3	1100	611.3

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	979.7	.031	1016.6	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
979.7	1016.6	20	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50450

INPUT
Description: SL 11
SL 3
Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	608.4	911	607.7	977.1	597	994.1	596	997.8	595
1005.1	595	1006.6	596	1034.5	605	1049.4	605.9	1061.5	601
1100	601.1								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	994.1	.031	1006.6	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
994.1	1006.6	117	57.27	5	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50392.73

INPUT
Description: SL 10
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	600.7	932.3	598.3	939.6	596.4	958.5	595	982	595
982.8	595.7	994.8	593.1	1006	593.1	1014.5	595.623	1037	602.3
1067	600.8	1100	601.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	982.8	.031	1014.5	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
982.8	1014.5	7.79	7.79	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50384.94

INPUT
Description: SL 9
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	600.5	932.5	597.9	946.5	596	951.8	595	975.3	595
984.1	597.1	992.6	597	994.5	592.8	1005.5	592.8	1007.4	597.6
1021.4	599.5	1100	601						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	992.6	.031	1007.4	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
992.6	1007.4	56.59	56.59	.1	.3

CULVERT

RIVER: Misery Creek
REACH: 1 RS: 50384.9

INPUT
Description:
Distance from Upstream XS = .04
Deck/Roadway Width = 45
Weir Coefficient = 2.6
Upstream Deck/Roadway Coordinates
num= 9

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
856.2	599.66		890.2	599.3		932.7	598.9	
952.7	598.73		962.7	598.72		972.7	598.73	
992.7	598.9		1056.5	600.36		1090.2	601.44	

Upstream Bridge Cross Section Data
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	600.5	932.5	597.9	946.5	596	951.8	595	975.3	595

984.1	597.1	992.6	597	994.5	592.8	1005.5	592.8	1007.4	597.6
1021.4	599.5	1100	601						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	992.6	.031	1007.4	.062

Bank Sta: Left	Right	Coeff Contr.	Expan.
992.6	1007.4	.1	.3

Downstream Deck/Roadway Coordinates num= 10

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
865.3	599.48		899.4	599.87		941.8	599.47	
961.8	599.3		971.8	599.29		981.8	599.3	
1001.8	599.47		1020.4	599.78		1060	600.93	
1099	602							

Downstream Bridge Cross Section Data
Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	598.9	985.4	598.8	993.5	597.8	994.5	590.6	1005.5	590.5
1006.5	597.3	1017.5	597.6	1022.5	599.6	1100	600.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	993.5	.031	1006.5	.062

Bank Sta: Left	Right	Coeff Contr.	Expan.
993.5	1006.5	.1	.3

Upstream Embankment side slope = 2 horiz. to 1.0 vertical
Downstream Embankment side slope = 2 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span
Culvert #1	Circular	4	

FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
.04	56	.013	.013	0	.5	1

Number of Barrels = 2
Upstream Elevation = 593
Centerline Stations

Sta.	Sta.
997	1003

Downstream Elevation = 590.5
Centerline Stations

Sta.	Sta.
997	1003

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50328.35

INPUT
Description: SL 7
SL 3
Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	598.9	985.4	598.8	993.5	597.8	994.5	590.6	1005.5	590.5
1006.5	597.3	1017.5	597.6	1022.5	599.6	1100	600.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	993.5	.031	1006.5	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
993.5	1006.5	15.43	15.43	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50312.92

INPUT
Description: SL 6
SL 3
Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	599.2	930	599.1	960.8	594.6	979.9	593.1	990.2	591.6
994	589.9	1006.2	590	1009.8	591.6	1023.1	597.7	1057.6	599.1
1100	599.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	990.2	.031	1009.8	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
990.2	1009.8	5	47.13	100	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50265.79

INPUT
Description: SL 5
SL 3
Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	598.5	936.8	599	949.1	595	955.9	591.7	967.2	590
990.3	590.1	994	588.2	999.7	590	1006	591.9	1030.1	593.5
1038.1	593.6	1050	597.5	1052.1	597.6	1073.3	593.9	1100	592.3

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	990.3	.031	999.7	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
990.3	999.7	105	65.79	5	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50200

INPUT
Description: SL 4
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	599.2	927	598.3	944.4	589.6	1001.6	588.5	1007.3	585
1010.4	584.9	1011.5	583.9	1016	588.2	1030	590.3	1068.8	592.9
1075.9	595.4	1100	595.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	1001.6	.031	1016	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
1001.6	1016	50	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50150

INPUT
Description: SL 3
SL 3
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	596.7	941.4	595.9	959.7	587.5	976.4	586.2	1007.3	586
1009	585	1009.9	583	1014.6	583	1015.8	585.5	1049.3	587
1069.5	590.1	1100	594.4						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	1007.3	.031	1015.8	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
1007.3	1015.8	50	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50100

INPUT
Description: SL 2
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	595.4	933.4	596	955.35	585.618	955.6	585.5	997.3	585
1002	582.3	1002.1	581.3	1008.1	581	1011.8	585	1044.2	595
1060	598.2	1100	598.9						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	997.3	.031	1011.8	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
997.3	1011.8	50	50	.1	.3

CROSS SECTION

RIVER: Misery Creek
REACH: 1 RS: 50050

INPUT
Description: SL 1
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
900	590.5	910	590	928.9	588.9	944.3	586.7	972.7	583
975.2	580	980.4	580	987.3	583	1013.7	585	1040	594.1
1049.9	596.6	1100	597.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
900	.062	972.7	.031	987.3	.062

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
972.7	987.3	0	0	0	.1	.3

SUMMARY OF MANNING'S N VALUES

River:Misery Creek

Reach	River Sta.	n1	n2	n3
1	50700	.062	.031	.062
1	50600	.062	.031	.062
1	50500	.062	.031	.062
1	50450	.062	.031	.062
1	50392.73	.062	.031	.062
1	50384.94	.062	.031	.062
1	50384.9	Culvert		
1	50328.35	.062	.031	.062
1	50312.92	.062	.031	.062
1	50265.79	.062	.031	.062
1	50200	.062	.031	.062
1	50150	.062	.031	.062
1	50100	.062	.031	.062
1	50050	.062	.031	.062

SUMMARY OF REACH LENGTHS

River: Misery Creek

Reach	River Sta.	Left	Channel	Right
1	50700	100	100	100
1	50600	100	100	100
1	50500	20	50	68
1	50450	117	57.27	5
1	50392.73	7.79	7.79	7.79
1	50384.94	56.59	56.59	56.59
1	50384.9	Culvert		
1	50328.35	15.43	15.43	15.43
1	50312.92	5	47.13	100

1	50265.79	105	65.79	5
1	50200	50	50	50
1	50150	50	50	50
1	50100	50	50	50
1	50050	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Misery Creek

Reach	River Sta.	Contr.	Expan.
1	50700	.1	.3
1	50600	.1	.3
1	50500	.1	.3
1	50450	.1	.3
1	50392.73	.1	.3
1	50384.94	.1	.3
1	50384.9 Culvert		
1	50328.35	.1	.3
1	50312.92	.1	.3
1	50265.79	.1	.3
1	50200	.1	.3
1	50150	.1	.3
1	50100	.1	.3
1	50050	.1	.3

Profile Output Table - Standard Table 1

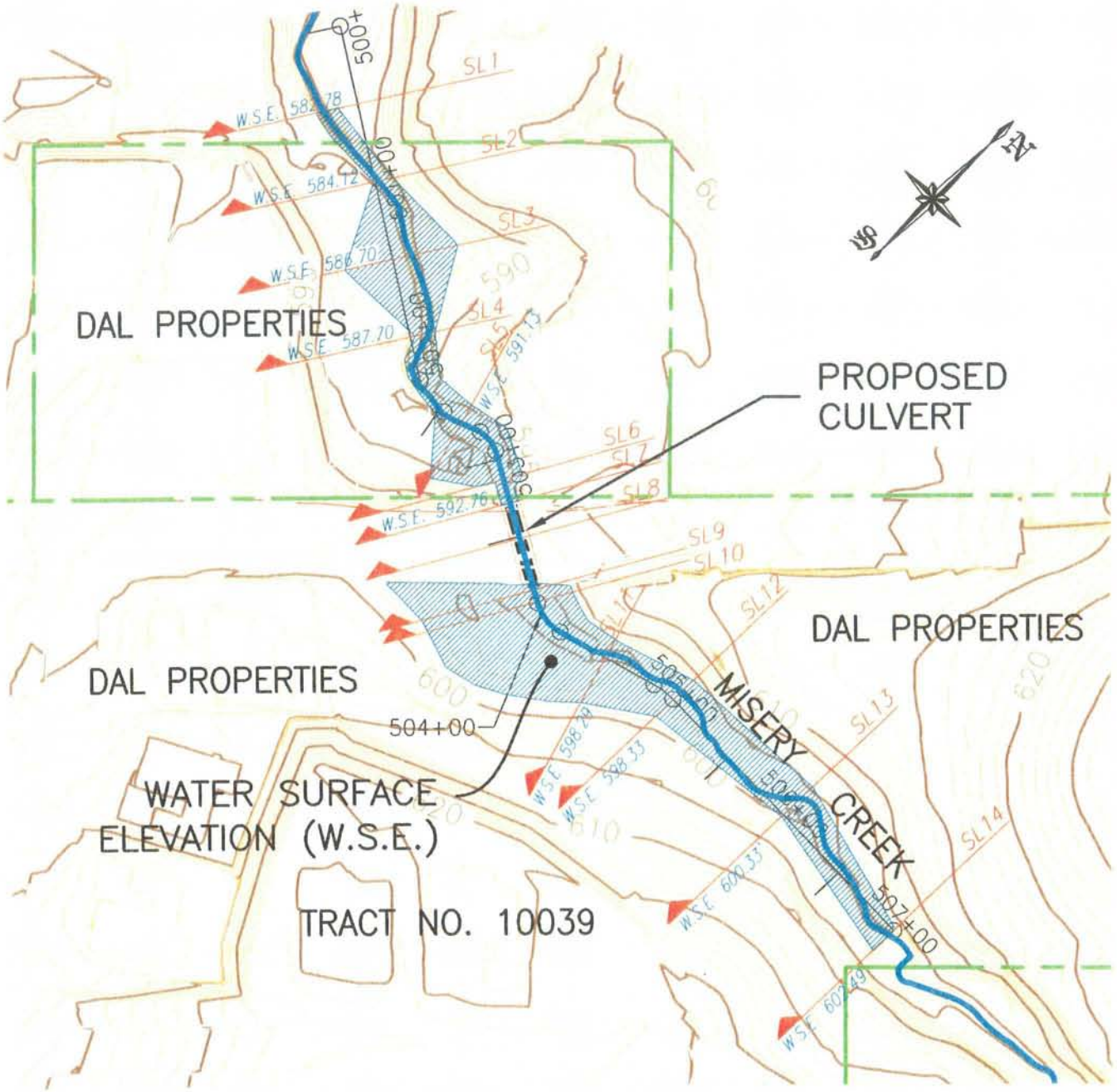
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.
E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	
			(cfs)	(ft)	(ft)	(ft)
(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		
1	50700	PF 1	370.00	600.00	603.23	603.23
604.29	0.011288	8.31	45.48	23.57	0.98	
1	50600	PF 1	370.00	597.90	601.04	601.04
602.04	0.009793	8.20	52.48	31.25	0.94	
1	50500	PF 1	370.00	596.00	599.39	
599.69	0.002936	4.43	85.72	42.15	0.52	
1	50450	PF 1	370.00	595.00	599.33	
599.58	0.001599	4.81	133.32	54.17	0.42	
1	50392.73	PF 1	370.00	593.10	599.47	
599.49	0.000099	1.47	404.37	110.84	0.11	
1	50384.94	PF 1	370.00	592.80	599.45	596.00
599.49	0.000270	2.09	328.21	107.88	0.15	
1	50384.9		Culvert			
1	50328.35	PF 1	370.00	590.50	593.77	593.77
595.33	0.016245	10.04	36.86	11.92	1.01	
1	50312.92	PF 1	370.00	589.90	592.52	592.52
593.56	0.010388	8.22	48.18	27.95	0.96	
1	50265.79	PF 1	370.00	588.20	591.72	591.72
592.46	0.010270	8.73	77.58	49.53	0.95	
1	50200	PF 1	370.00	583.90	588.97	588.97
590.04	0.009192	8.40	50.79	43.69	0.85	
1	50150	PF 1	370.00	583.00	587.23	587.23

	587.79	0.007369	7.61	103.77	87.57	0.72	
1		50100	PF 1	370.00	581.00	585.62	585.62
	586.49	0.007181	7.65	62.35	58.47	0.76	
1		50050	PF 1	370.00	580.00	583.83	583.83
	584.96	0.009452	8.62	49.05	31.96	0.90	

IV. RESULTS

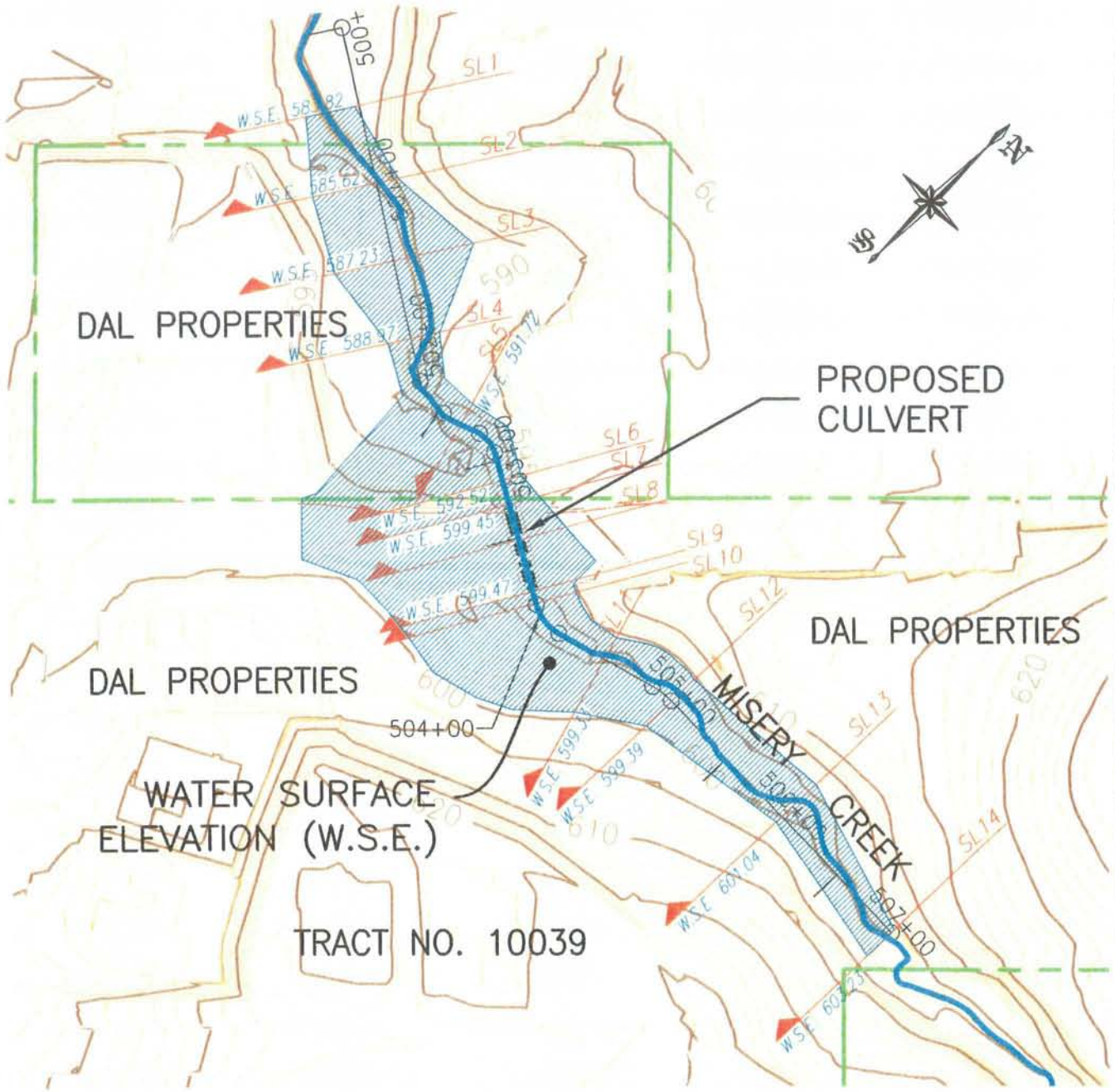
Water surface elevation results of the two modeled scenarios using HEC-RAS software are shown in the following A and B sections.

A. Site Map with 10-year Storm Delineation



WATER SURFACE ELEVATION RESULTS MISERY CREEK FLOOD STUDY 10-YEAR STORM SAN JOSE, CALIFORNIA	DATE: 8-25-11 SCALE: 1"=100' DRAWN BY: O.O. CHECKED BY: JOB NO.: 1688	Charles W. Davidson Co. A CALIFORNIA CORPORATION CONSULTING CIVIL ENGINEERS 255 W. JULIAN ST. #200, SAN JOSE, CA. PH. (408) 295-9162	

B. Site Map with 100-year Storm Delineation



WATER SURFACE ELEVATION RESULTS MISERY CREEK FLOOD STUDY 100-YEAR STORM SAN JOSE, CALIFORNIA	DATE:	8-25-11	Charles W. Davidson Co. A CALIFORNIA CORPORATION CONSULTING CIVIL ENGINEERS 255 W. JULIAN ST. #200, SAN JOSE, CA. PH. (408) 295-9162
	SCALE:	1"=100'	
	DRAWN BY:	O.O.	
	CHECKED BY:		
	JOB NO.:	1688	

VII. REFERENCES

Brunner, Gary W., HEC-RAS River Analysis User's Manual
Version 4.1, November 2010.

Floodplain Calculations on Misery Creek Property
Schaaf and Wheeler, November 14, 2006.

Santa Clara County Drainage Manual
Adopted August 2007.

Chow, Ven Te. Open Channel Hydraulics
McGraw-Hill. 1959.

CORNERSTONE
EARTH GROUP

Date:	February 17, 2012
Project No.:	336-2-3
Prepared For:	Mr. Mark Lazzarini **DAL PROPERTIES, LLC** 255 West Julian Street, Suite 502 San Jose, California 95113
Re:	Addendum to Geotechnical Investigation San Felipe Road Residential 6782 and 6790 San Felipe Road San Jose, California

Dear Mr. Lazzarini:

As requested, we reviewed the geotechnical comments received from the City of San Jose in a memorandum titled, "Preliminary Geologic Hazard Review, Proposed 4 Lot SFD, Residential Subdivision, PDC11-012, 6782 San Felipe Road, Project No. 11-034366-GC (3-09968)," prepared by Mr. Mike Shimamoto, dated November 30, 2011. As you know, we previously performed a geotechnical and geologic investigation for the project and presented our findings in our report titled, "Geotechnical Investigation, San Felipe Residential Development 6782 and 6790 San Felipe Road, San Jose, California," dated September 20, 2011. In this letter we address the comments received in the above referenced letter, and have attached the response by the project civil engineer, Charles Davidson & Company, with regarding to the flood hazard protection comments. This letter will serve as an addendum to the previous geotechnical investigation.

Response to Comments

As requested, we have reviewed the comments received from the City of San Jose, and have prepared responses to the comments. For ease of review, we have italicized the pertinent comments from the letter below, and provide our response below each comment.

Comment: *We observed evidence of active stream erosion and meanders on the subject property along the banks of Misery Creek during our site visit. The potential hazards from long-term stream bank erosion and migration, and flooding are not adequately addressed in the geotechnical report, Reference 1. A 50-foot setback from the stream bank is recommended for habitable structures based on seismic slope stability analyses. The 50-foot setback, however, does not address the potential for excessive maintenance costs or property damage/loss caused by future stream bank erosion, migration and flooding. These hazards will be of concern to the future lot owners if long term stream bank erosion advances*

toward the proposed building pad slopes or any non-habitable improvements constructed on the lots, or if 100 year flood waters erode portions of the proposed fill slopes or other improvements. A detailed evaluation of stream bank erosion/migration and flood hazard potential should be presented. The evaluation should include, but not be limited to, geologic mapping of erosion features, reviews of historic photographs and other information, the flood plain analysis of Misery Creek performed by Charles W. Davidson Company dated August 25, 2011 and the proposed grading and drainage plan, Reference 2. The impact of a 100-year flood event on site erosion and stream bank migration should be assessed. The long-term stream bank erosion/migration scenario expected for the lifetime of the proposed development should also be assessed. Based on our preliminary review of the Davidson flood plain analysis, portions of the proposed building pad fill slopes on Lots 2 and 3 may be eroded by 100-year flood waters. Appropriate measures to permanently mitigate the potential for stream bank erosion/migration and flood hazards, such as utilizing slope protection or stream channel modifications should be presented, as necessary. Due to the limited building and yard areas on the lots, we anticipate that mitigation measures will be recommended if lateral stream bank erosion/migration will exceed approximately 5 feet from the existing top of bank during the lifetime of the development, or if 100 year flood waters will encroach within 15 feet of any portion of the proposed building pads, fill slopes or other improvements.

Response: As part of our work scope, we reviewed historical aerial photos (see References) that show the site vicinity at 6 times spanning the period from 1953 to 1981. Additionally, we reviewed Google Earth® images from 1998, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, and 2011. The stereo photos covering the site prior to and post development and the Google Earth images covering the post development period show only minor erosion within the actual creek channel, which has not been sufficient enough to uproot any of the trees that grow within the creek channel. Additionally it appears that no discernable creek bank migration or retreat has occurred since at least 1943 (extending back 69 years).

Our initial reconnaissance of the site and immediate vicinity was performed by our Certified Engineering Geologist on March 31, 2011 for the purpose of observing features at the ground surface for preparation of our geotechnical investigation. We also visited the site again to re-observe site conditions on February 9, 2012. As noted in our geotechnical investigation, the site is underlain by alluvial fan deposits ("Qpf"), which have been dissected by more recent stream channel sediments ("Qhc"). The modern stream channel deposits ("Qhc") are exposed in the creek bank. The creek takes a somewhat sinuous path across the site but straightens out near the northwest property line. Here the stream channel deposits are stratified (horizontally bedded), poorly graded gravels with varying proportions of sand. Our Borings EB-3 and EB-4, the

uppermost portion of the Qpf unit, consisted of sandy clay and clayey sand with gravel. Corrected blow counts (N_{60}) obtained at the boring locations indicate this material consists of dense to very dense sands and very stiff to hard clays. The Holocene stream channel deposits were encountered at Borings EB-1 and EB-2 on a small terrace adjacent to the creek and were also exposed within the adjacent creek channel. The Qhs unit consisted of clay, sandy clay and clayey sand with gravel. Corrected blow counts (N_{60}) obtained at the boring locations indicate this material is medium stiff to hard (clays) and medium dense to very dense (sands). Although some migration of stream channels has occurred within the Holocene stream channel deposits, the current site conditions do not produce anything beyond minor erosion of the creek bank, principally through local undercutting of the stream banks. A few locations where this is evident is indicated on our revised Site Plan, Figure 2. It is noteworthy that our review of aerial photographs spanning the last seven decades indicate no discernable evidence of creek bank migration. These deposits are generally moderately resistant to erosion and increase in density with depth. Engineering setbacks are more than 50 feet to pad on Lot 1, and more than 75 feet to pad on Lots 2, 3 and 4, respectively. Therefore, based on our review of the creek channel, subsurface conditions in our explorations, our review of local geology, our review of historical aerial photo coverage of the site, and recommended engineering setbacks, it is our opinion that creek erosion should only be a few feet over the life of the structure, which is typically assumed to be 50 years for wood-frame residential structures. Therefore, erosion of the creek banks should not impact the proposed structures.

Comment: *An active spring or groundwater seepage near the proposed residence on Lot 1 is observed on aerial photographs of the site. The spring appears to originate on the adjacent property northeast of the proposed building site on Lot 1 and flow onto the subject property toward the existing bam. The spring may negatively impact future improvements on the site. The spring is not addressed in the geotechnical report, Reference ·1. The source of the spring should be investigated and measures to permanently mitigate the flow should be recommended and implemented. If the spring has already been mitigated, the mitigation measures in place should be evaluated and approved by both the project engineering geologist and geotechnical engineer. If the existing mitigation is inadequate, supplemental measures should be recommended and shown on a revised grading and drainage plan.*

Response: We were notified of the spring prior to our site reconnaissance of the site and walked the site with Mr. Mark Lazzarini of DAL Properties (owner) to review the site conditions and the location of the "spring." It was our opinion at that time that the water could be natural, but did appear quite concentrated, and other similar springs were not observed near the "spring" location. We recommended further review of the area for piping or wells. We understand that the owner uncovered

an existing pipe on the property and on the adjacent neighbors property that was damaged and leaking. The pipe was subsequently repaired as an interim measure. We understand that no further seepage or spring activity has been noted in the area since that time. As previously mentioned, we re-visited the site to observe current site conditions, including the "spring" location. No spring activity was noted at the previous location, or in the vicinity. We understand that the repaired pipe conveys water to an outfall location at the existing creek. The extent of the existing pipes upstream from the property is unknown. The source of the water carried in these pipes from neighboring properties is also unknown. The existing and repaired pipes are not considered as appropriate long-term mitigation of storm or sub-surface water. We understand and concur that water being transported from neighboring properties through existing pipes be captured at the property line and conveyed to the on-site or off-site storm drainage facilities at the time of construction as part of any site improvement plan.

Closure

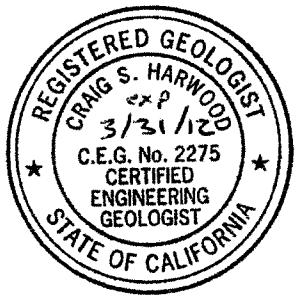
We hope this provides the information you need at this time. Recommendations presented in this letter have been prepared for the sole use of DAL Properties, LLC specifically for the property at 6782 San Felipe Road in San Jose, California. Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices at this time and location. No warranties are either expressed or implied.

If you have any questions or need any additional information from us, please call and we will be glad to discuss them with you.

Sincerely,

Cornerstone Earth Group, Inc.

C. Barry Butler, P.E., G.E.
Principal Engineer

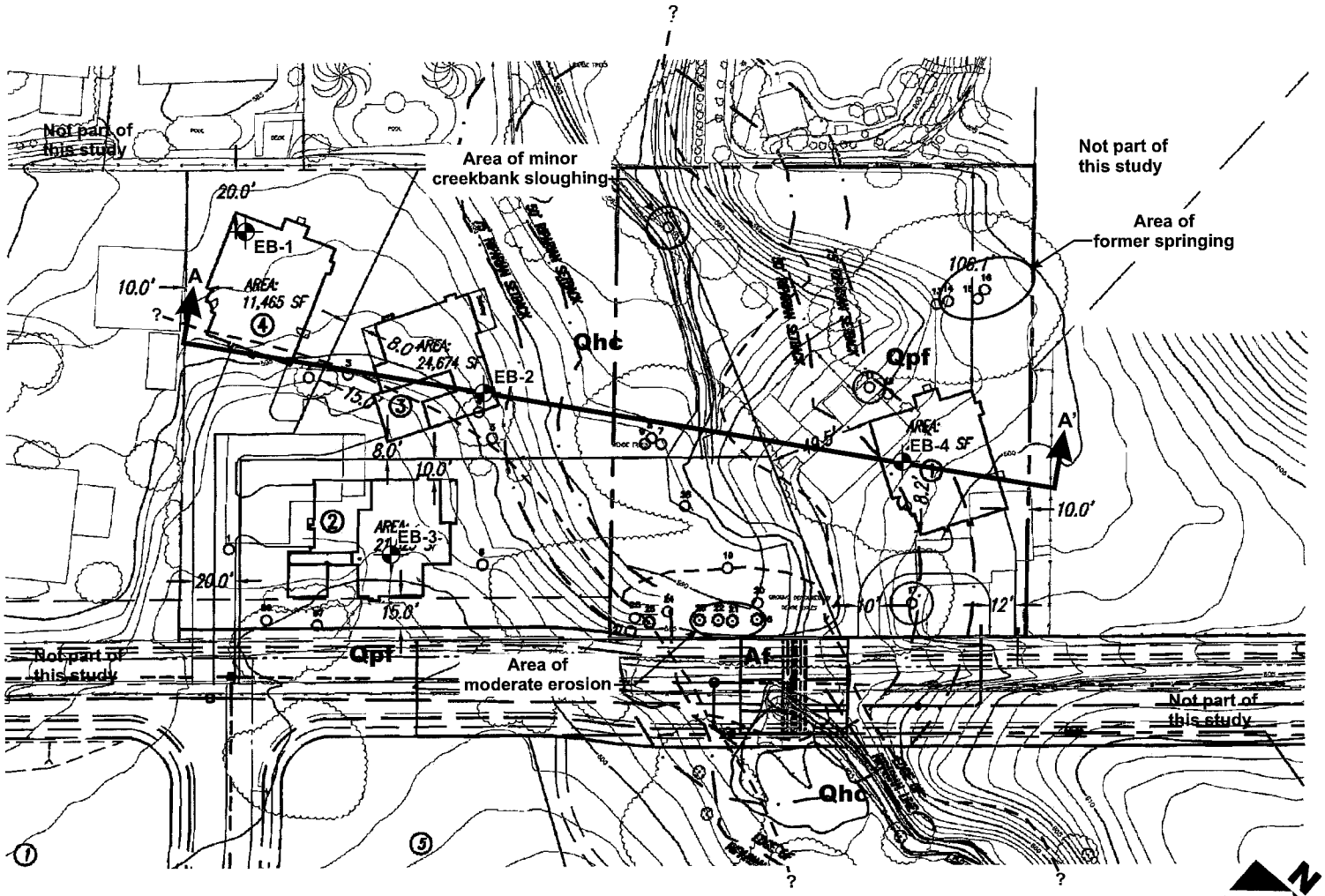


Craig Harwood, C.E.G.
Certified Engineering Geologist

CBB:CH

Copies: Addressee (1 by email)

Attachments: Revised Site Plan – Figure 2
Response to Comments – Flood Hazard Protection



Explanation

Geologic Units

Af Undocumented fill. Shown where estimated to exceeds 1.5' in thickness

Qhc Stream channel deposits (Holocene)

Qpf Packwood gravel (Plio-Pleistocene)

Symbols

Approximate location of exploratory boring

Geologic contact: actual transitions may vary

N

0 50 100

APPROXIMATE SCALE (FEET)

Site Plan

San Felipe Road Residential
San Jose, CA

Project Number 336-2-3

Figure Number Figure 2

Date September 2011

Drawn By RRN

CORNERSTONE EARTH GROUP

Charles W. Davidson Co.

A California Corporation
Consulting Civil Engineers

Charles W. Davidson, President
Peter B. Smith, Vice President

February 29, 2012

Job No. 1842-DV6

Mr. Mark Lazzarini
DAL Properties, LLC
255 West Julian Street, Suite 502
San Jose, California 95113

Re: Proposed 4 Lot SFD, Residential Subdivision, PDC11-012, 6782 San Felipe Road
Civil Response Letter to Michael Shimamoto's comment letter dated 11/30/2011

Mr. Lazzarini,

The purpose of this letter is to provide responses to comment letter by Michael Shimamoto, City of San Jose Geologist, dated November 30, 2011. The following portion of this letter includes the original comment followed by responses in italic font type:

> We observed evidence of active stream erosion and meanders on the subject property along the banks of Misery Creek during our site visit. The potential hazards from long-term stream bank erosion and migration, and flooding are not adequately addressed in the geotechnical report, Reference 1. A 50-foot setback from the stream bank is recommended for habitable structures based on seismic slope stability analyses. The 50-foot setback, however, does not address the potential for excessive maintenance costs or property damage/loss caused by future stream bank erosion, migration and flooding. These hazards will be of concern to the future lot owners if long term stream bank erosion advances Project No. 336-2-3 Page 2 February 17, 2012 toward the proposed building pad slopes or any non-habitable improvements constructed on the lots, or if 100 year flood waters erode portions of the proposed fill slopes or other improvements. A detailed evaluation of stream bank erosion/migration and flood hazard potential should be presented. The evaluation should include, but not be limited to, geologic mapping of erosion features, reviews of historic photographs and other information, the flood plain analysis of Misery Creek performed by Charles W. Davidson Company dated August 25, 2011 and the proposed grading and drainage plan, Reference 2.
>
> *Response: See response from Geotechnical Engineer.*

The impact of a 100-year flood event on site erosion and stream bank migration should be assessed. The long-term stream bank erosion/migration scenario expected for the lifetime of the proposed development should also be assessed. Based on our preliminary review of the Davidson flood plain analysis, portions of the proposed building pad fill slopes on Lots 2 and 3 may be eroded by 100-year flood waters. Appropriate measures to permanently mitigate the potential for stream bank erosion/migration and flood hazards, such as utilizing slope protection or stream channel modifications should be presented, as necessary. Due to the limited building and yard areas on the lots, we anticipate that mitigation measures will be recommended if lateral stream bank erosion/migration will exceed approximately 5 feet from the existing top of bank during the lifetime of the development, or if 100 year flood waters will encroach within 15 feet of any portion of the proposed building pads, fill slopes or other improvements.

Response: We have assessed the impact of a 100 year flood event passing through the site, see Exhibit A enclosed. As seen on the exhibit bank slope protection will be used to permanently mitigate the potential for stream slope erosion in portions of Lot 1, Lot 2 and Lot 3. The type and design of bank slope protection shall be presented at Improvements Plan stage.

This concludes our responses; should you need to contact me for further questions or concerns, I can be reached at (408) 491-7715.

Sincerely,

P. Oscar Osuna

Oscar Osuna, P.E.

Engineering Project Manager
Charles W. Davidson Co.

2-29-12

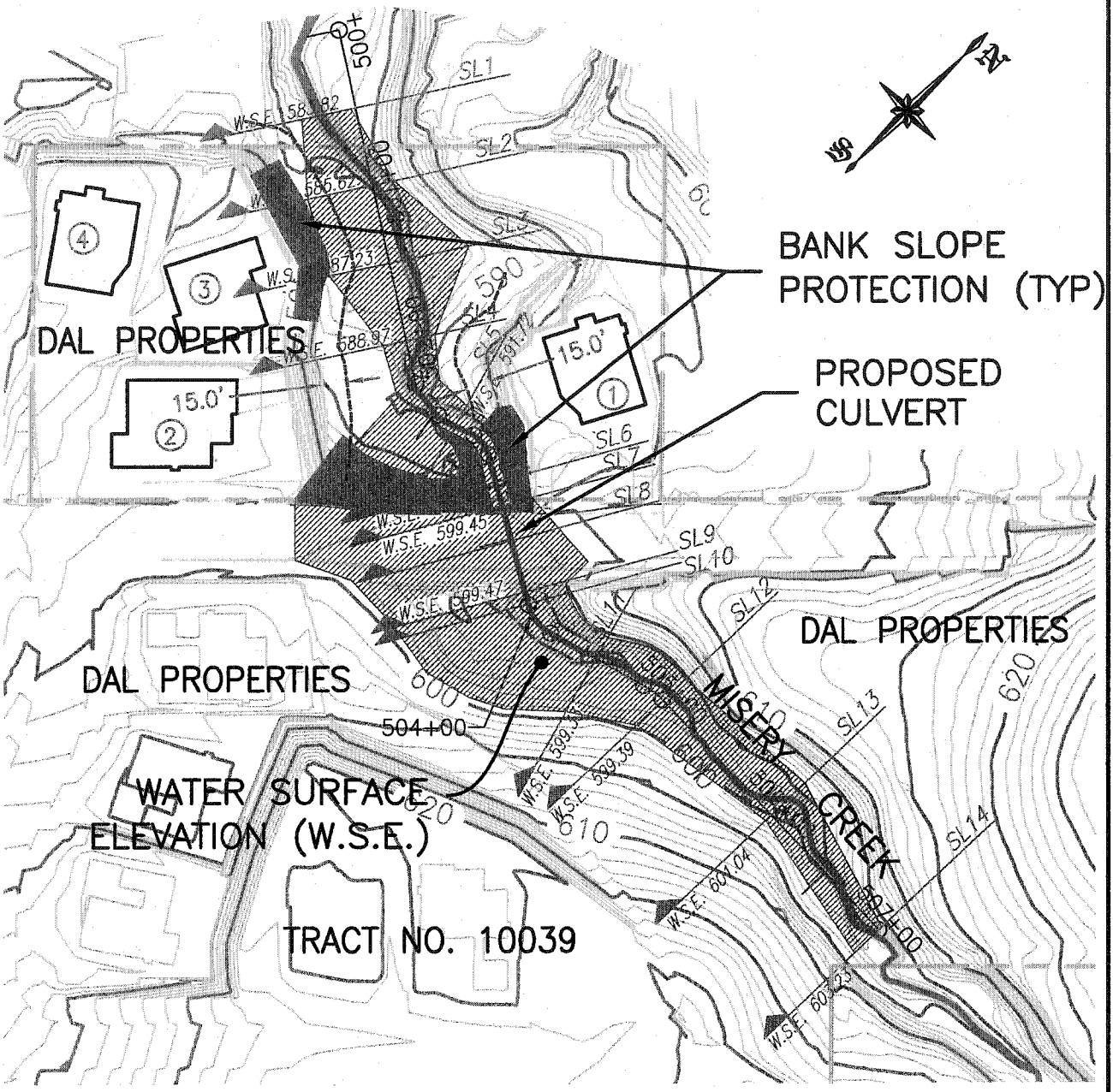


EXHIBIT A BANK SLOPE PROTECTION AREAS 100-YEAR STORM SAN JOSE, CALIFORNIA	DATE: 2-29-12 SCALE: 1"=100' DRAWN BY: O.O. CHECKED BY: JOB NO.: 1688	Charles W. Davidson Co. A CALIFORNIA CORPORATION CONSULTING CIVIL ENGINEERS 255 W. JULIAN ST. #200, SAN JOSE, CA. PH. (408) 295-9162	

PLOTTED: OSCAR OSUNA 2/29/2012 3:29 PM
F:\1688\DWG\ENGR\1688 BANK SLOPE PROTECTION EXHIBIT COLOR

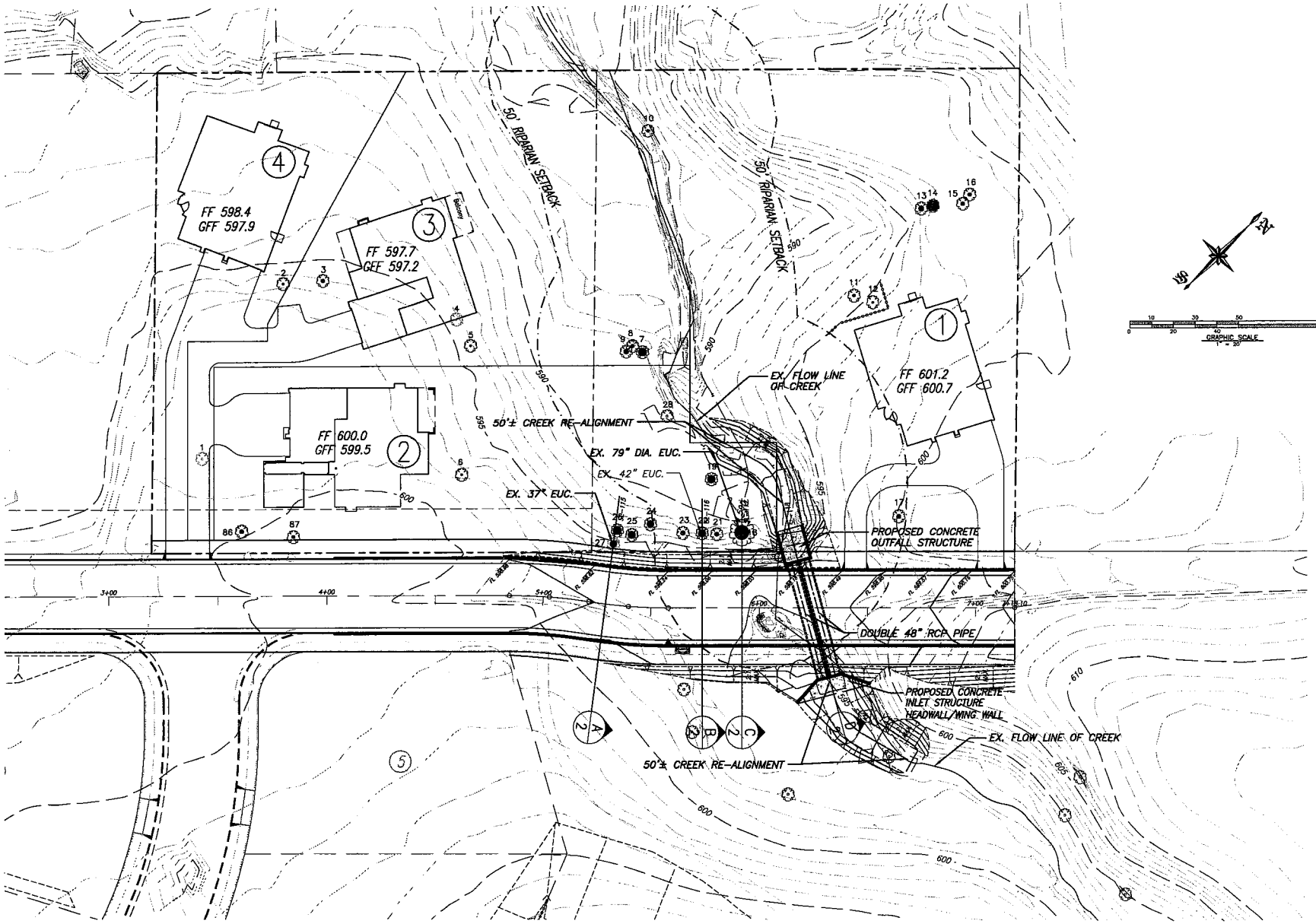


EXHIBIT 2 – STREET OFFSET WITH NO SIDEWALK ON NWLY SIDE
SLOPE PROJECTIONS AT CULVERT
TURTURICI WAY – DAL PROPERTIES
SAN JOSE, CALIFORNIA

JOB NO. 1688

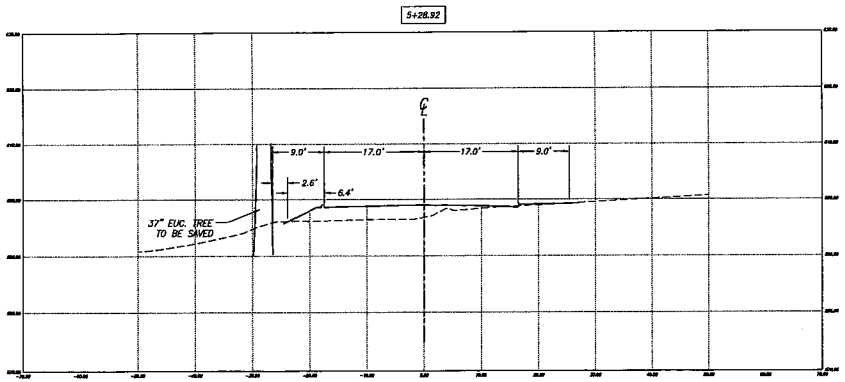
SHEET 1 OF 2

REVISIONS	DATE

DATE 8-01-11
SCALE AS SHOWN
DRAWN BY O. OSUNA
CHECKED BY

Bkandis M. Brandow & Co.
A CALIFORNIA CORPORATION
CIVIL ENGINEERS AND SURVEYORS
255 N. ALMADEN BLVD. #700 SAN JOSE, CA 95110-2409
TEL. (408) 292-2152 FAX (408) 993-1851

SUPERVISED BY
REGISTERED CIVIL ENGINEER NO. 14516
EXPIRES 3/31/09



SECTION A

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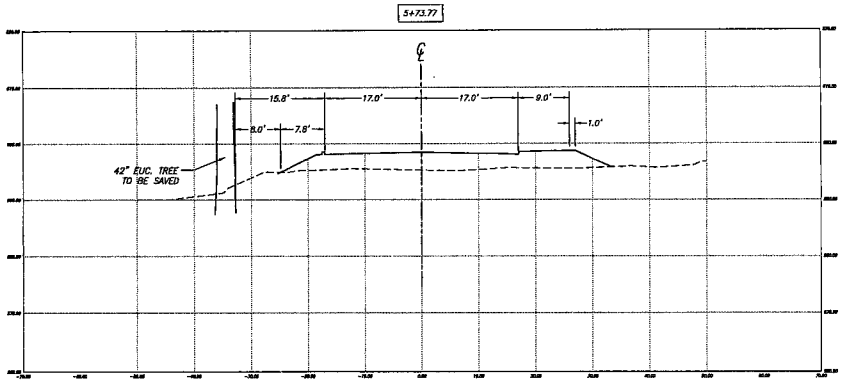

SECTION B

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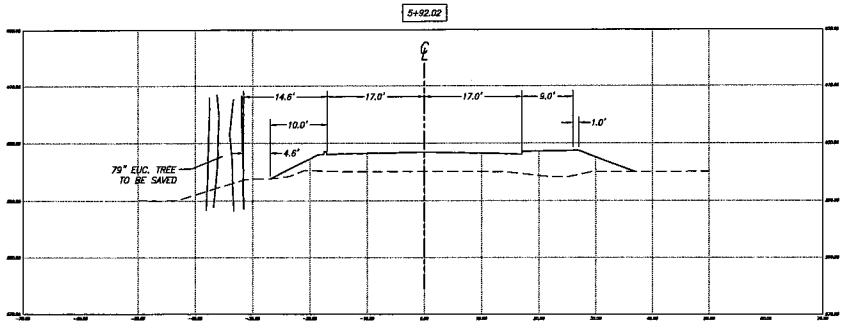

SECTION C

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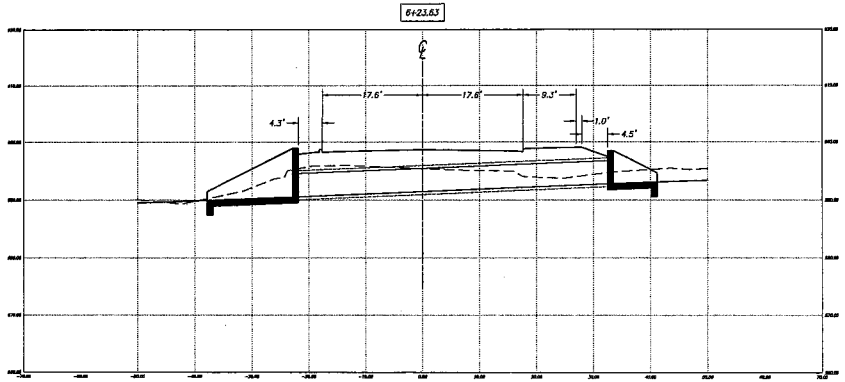

SECTION D

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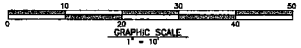


EXHIBIT 1 - STREET OFFSET WITH NO SIDEWALK ON NWLY SIDE
SLOPE PROJECTIONS AT CULVERT
TURTLROCK WAY - DAL PROPERTIES
SAN JOSE, CALIFORNIA

SURVEYED BY
SURVEYED ON: NUMBER NO. 14216
Dated: 2/20/09

Bruce B. Brandow & Co.
A CALIFORNIA CORPORATION
CONSULTING CIVIL ENGINEERS
255 W. ALMA AVE., SUITE 101 SAN JOSE, CA 95110-2406
TEL. (408) 295-4102 FAX (408) 923-1911

DATE	8-01-11
SCALE	AS SHOWN
DRAWN BY	O. OSUNA
CHECKED BY	

NO.	REVISIONS	DATE

JOB NO. 1686

SHEET 2 OF 2

LIVE OAK ASSOCIATES, INC.
an Ecological Consulting Firm

June 5, 2012

DAL Properties
Attn: Mark Lazzarini
255 W. Julian Street, Suite 502
San Jose, CA 95110-2405

RE: Conceptual Bank Stabilization Plan for Misery Creek, 6782 and 6790 San Felipe Road, City of San Jose, Santa Clara County, California.

Dear Mark:

At your request, Live Oak Associates, Inc. (LOA) has prepared this conceptual plan for how the banks of Misery Creek will be stabilized from erosion via the use of native vegetation and other erosion control materials. This plan has been prepared in response to the letter from Michael Shimamoto, Engineering Geologist for the City of San Jose (November 30, 2011) requesting measures be outlined to permanently mitigate the hazards of stream bank erosion, stream channel migration, and flood through bank stabilization and/or stream channel modifications.

LOA previously prepared the Heritage Estates Habitat Enhancement, Mitigation and Monitoring Plan (HEHEMMP) (September 29, 2011) to compensate both for encroachment into riparian corridors and impacts to regulated waters associated with Misery Creek and Thompson Creek as a result of the adjacent Heritage Estates project. The location of that proposed enhancement/mitigation is along both sides of Misery Creek to the east and upstream of the existing culvert bridge. The measures proposed in this letter could either be completed as part of the HEHEMMP or as a separate element.

This plan does not include exact locations for vegetative bank stabilization at this time, as the areas needing stabilization and/or channel modification will be identified by the project hydrologist (Schaaf and Wheeler) and project civil engineer (Charles W. Davidson Co.) who will also determine any grading or other earth work necessary prior to the installation of plantings.

Vegetative Bank Stabilization Plan

The Vegetative Bank Stabilization Plan will be comprised of two components: long-term bank stabilization via the installation of native woody and semi-woody riparian vegetation (trees and/or shrubs/subshrubs) and short-term bank stabilization of barren soils via hydroseeding and/or the installation of coconut fiber matting. These components are discussed further below.

Long-term Vegetative Bank Stabilization

We believe that the use of native vegetation as a means of bank stabilization can effectively and permanently mitigate effects including erosion and downstream water quality impacts while also retaining and enhancing riparian habitat for native species on-site.

In the HEHEMMP native riparian trees and shrubs/subshrub species suitable to the site's location, elevation and hydrologic regime are identified in Table 2 of the plan, attached for your review. These species include trees such as Fremont's cottonwood, blue elderberry, coast live oak, and valley oak; and shrubs/subshrubs such as California sagebrush, California rose, California blackberry, mugwort and snowberry. In addition to the shrubs/subshrubs included in Table 2, other suitable species might include coyote brush (*Baccharis pilularis*) and willows (*Salix laevigata* and/or *S. lasiolepis*). Ultimately, the composition of species used in the bank stabilization effort will be determined based on the location on the bank where plants will be installed (high, mid or low) and associated hydrologic regime, as well as on plant availability.

Trees and other plantings shall be selected and planted based on the criteria set forth in the HEHEMMP in Section 1.6 *Planting Materials and Plant Installation* and Section 2.2 *Planting Recommendations*. Planted areas will be maintained as set forth in Section 2.3 *Maintenance*, which includes quarterly maintenance activities over a three year period. Once stabilization areas have been planted, the project proponent shall provide a report and map of the "as built" vegetated areas to the City of San Jose. The report will include descriptions and numbers of species planted and of all irrigation and maintenance measures to be implemented. An appendix in the report will include photo documentation of the planted areas.

Should the long-term vegetative bank stabilization be included as part of the project's required riparian mitigation, then these areas will be subject to all requirements of the HEHEMMP including Sections 2.4 *Collection of Baseline Data (Year 0)*, 3.0 *Monitoring Plan*, and 4.0 *Adaptive Management Plan.*

Short-term Bank Stabilization

Should the project hydrologist and engineer determine that earth work such as grading of banks may be required in some areas along the channel, soils in these areas will end up barren and susceptible to erosion. As such, short-term soil stabilization measures will need to be implemented until roots of newly planted riparian vegetation can take hold, which could take several growing seasons. Short-term stabilization of barren soils can either be through hydroseeding of such soils with species contained in Table 2 of the HEHEMMP at the pounds per acre set forth or via the installation of erosion control such as coconut fiber matting materials. Coconut fiber matting decomposes over the course of two to three growing seasons and, therefore, serves to hold potentially erodible soils in place until the roots of riparian plantings can take hold. Another advantage of coconut fiber is the suppression of weeds that may compete with native plantings for sunlight, water and nutrients.

In summary, implementation of the above vegetative methods of bank stabilization, when combined as necessary with slope grading or other earthwork determined by the project hydrologist and project civil engineer, should be effective at avoiding hazards of potential bank erosion and channel migration.

Should you have any questions or comments regarding any of the above, please feel free to contact me.

Sincerely,

Pamela Peterson
Senior Project Manager
Plant and Wetland Ecologist
408-281-5884 (office)
408-833-5391 (cell)

Cc: Tony Arreola (DAL Properties), Kirk Wheeler (Schaaf & Wheeler), Richard Mindigo (Mindigo & Associates), Oscar Osuna (Charles W. Davidson Co.)

Attachments: Heritage Estates Habitat Enhancement, Mitigation and Monitoring Plan Table 2.

Table 2. Recommended enhancement plantings with baseline totals for trees, shrubs and recommended seed mix content for the Heritage Estates Project, San Jose, CA				
Species (From Coyote Creek Watershed Stock)		Qty	Minimum Size/Format*	Slope placement
Trees				
California buckeye	*Aesculus californica*	*6*	t-pots or larger	mid, low
California sycamore	*Platanus racemosa*	*2*	t-pots or larger	low
Fremont's cottonwood	*Populus fremontii*	*2*	t-pots or larger	mid, low
coast live oak	*Quercus agrifolia*	*12*	t-pots or larger	high, mid
valley oak	*Quercus lobata*	*10*	t-pots or larger	all
blue elderberry	*Sambucas mexicana*	*8*	t-pots or larger	all
	Baseline Tree Total	***40***		
Shrubs/subshrubs				
California sagebrush	*Artemisia californica*	*5*	1 gal	high, mid
mugwort	*Artemisia douglasiana*	*15*	1 gal	mid, low
toyon	*Heteromeles arbutifolia*	*10*	1 gal	high, mid
sticky monkey flower	*Mimulus arantiacus*	*15*	1 gal	high, mid
coffeeberry	*Rhamnus californica*	*15*	1 gal	high, mid
hillside gooseberry	*Ribes californicum*	*10*	1 gal	mid, low
California rose	*Rosa californica*	*20*	1 gal	mid, low
California blackberry	*Rubus ursinus*	*15*	1 gal	low
California snowberry	*Symphoricarpos albus*	*15*	1 gal	low
	Baseline Shrub Total	***120***		
Hydroseed/Broadcast Mix		*Per acre*		
Sterile Barley or other non-invasive		10 lbs	n/a	all
mugwort	*Artemisia douglasiana*	0.1 lbs	n/a	all
California bromegrass	*Bromus carinatus*	0.1 lbs	n/a	all
California fescue	*Festuca californica*	0.1 lbs	n/a	all
purple needle grass	*Nasella pulchra*	0.1 lbs	n/a	all

Schaaf & Wheeler

CONSULTING CIVIL ENGINEERS

James R. Schaaf, PE
Kirk R. Wheeler, PE
David A. Foote, PE
Peder C. Jorgensen, PE
Charles D. Anderson, PE
Daniel J. Schaaf, PE

1171 Homestead Road, Suite 255
Santa Clara, CA 95050-5485
408-246-4848
FAX 408-246-5624

Offices
Santa Clara
San Francisco
Salinas
Santa Rosa

June 8, 2012

Mr. Mark Lazzarini
DAL Properties
255 W. Julian Street, Suite 502
San Jose, CA 95110-2405

Re: Conceptual Bank Stabilization for Misery Creek, 6782 & 6790 San Felipe Road, San Jose, CA

Dear Mark:

Per your request, we have reviewed the channel conditions for Misery Creek at 6782 and 6790 San Felipe Road to consider potential back stabilization measures to be included in the proposed development project. This evaluation is intended to respond to comments from the City of San Jose requesting measures to mitigate the potential hazards due to stream bank erosion, stream channel migration, and flooding (Michael Shimamoto, November 30, 2011).

We have coordinated our response with the new site grading plans prepared by Charles W. Davidson Co, dated June 6, 2012, and Live Oak Associates, letter dated June 5, 2012.

Existing Conditions

Based on our field visit, it appears that the primary area of significant stream bank erosion is downstream of the existing roadway. Due to a partial blockage of the existing culvert, the creek flows spill over the roadway frequently during large storms. Weir flow over the roadway would then sheetflow overland along the creek bank and spill over the top of bank into the channel. These return flows have caused gullying and destabilized the banks.

The channel upstream of the roadway has had sediment deposition which has filled any historic low flow channel and created a broad flat channel area for 50 to 80 feet upstream of the roadway.

Schaaf & Wheeler has prepared hydrologic calculations for the creek flood flows (November 14, 2006). The estimated 10-year flow is 208 cfs, and the 100-year flow is 370 cfs. Based on the existing conditions Flood Plain Analysis prepared by Charles W. Davidson Co, (August 25, 2011), and our supplemental calculations, the flow conditions

downstream of the roadway include relatively high velocities. Typical channel velocities range from 6 to 9 fps.

Bank Stabilization

Based on our review of the stream conditions and the proposed project, we recommend that the stream banks be stabilized using vegetation to control potential erosion. The existing channel banks should be graded to reduce the slope in the areas downstream of the roadway with excessively steep slopes and even out some gullies or erosion areas. The graded areas within the 100-year flood area outside the low flow channel would be planted with riparian woody riparian vegetation to reduce the flow velocities on the channel bank slopes, and provide a root structure to bind the soil in place. We recommend that the lower slope erosion protection be supplemented during the plant establishment period with a biodegradable fiber mat blanket material. The erosion blanket would be staked in place and provide erosion protection up to approximately 10 fps. The entire graded area, including the areas with the erosion blanket, would be hydroseeded with a native plant mix for additional erosion control.

Based on our field observations, the low flow channel appears to be relatively stable farther downstream from the roadway. There was no evidence of significant down cutting or excessive bank sloughing. The low flow channel is sharply incised, which is not unusual for this type of ephemeral stream. We would not recommend that the low flow channel be disturbed for erosion protection unless new structures will be constructed close to or within the riparian area.

Conclusion

In summary, we recommend the grading and erosion protection measures as shown on the conceptual grading and drainage plan and described here and in the letter from Live Oak Associates.

If you have any questions or comments regarding these recommendations, please contact me.

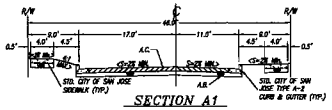
Very truly yours,

Schaaf & Wheeler

Kirk R. Wheeler, PE

Principal

cc Oscar Osuna (Charles W. Davidson Co.), Pamela Peterson, (Live Oak Associates), Richard Mindigo (Mindigo & Associates)



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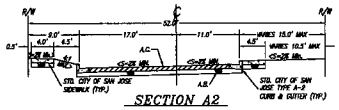

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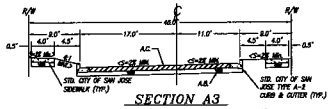

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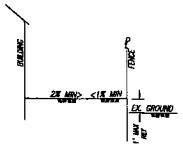

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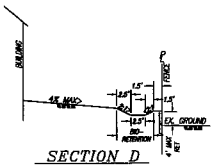

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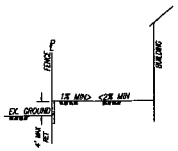

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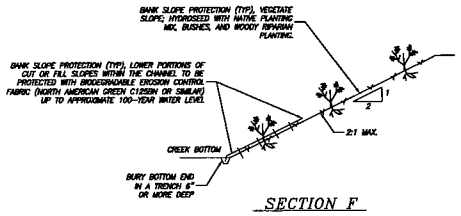

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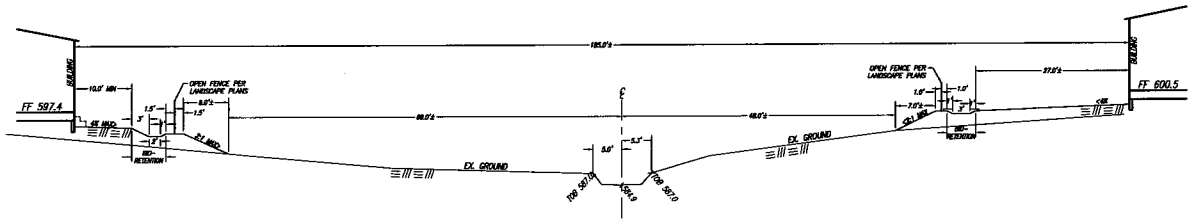


SECTION B
N.T.S.

D.A.L. PROPERTIES
255 WEST JULIAN STREET, SUITE 502
SAN JOSE, CA 95110
Telephone (408) 295-9305
Fax (408) 295-9306

CONCEPTUAL GRADING AND DRAINAGE PLAN DETAILS
LANDS OF DAL PROPERTIES, LLC
6782 AND 6790 SAN FELIPE ROAD - APPROX 400' SOUTH OF MEADOWLEAF COURT
SAN JOSE, CALIFORNIA

PDC 11-012

Revisions:

Date: 6-07-12 Job No.: 1842
Scale: AS SHOWN Drawn By: M.H.F.
Sheet No: 4.2
of Sheets

Charles W. Davidson Co.
A CALIFORNIA CORPORATION
CONSULTING CIVIL ENGINEERS
255 W. JULIAN ST., #200 SAN JOSE, CA 95110-2408
TEL (408) 295-8182 FAX (408) 993-1517

PLOTTED: Jun 07, 2012 - 8:58 PM
FILENAME: J:\1842\Dwg\Plan\1842 SHEET 4.2.dwg

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Public Works
DEVELOPMENT SERVICES DIVISION

June 13, 2012

DAL Properties
Attention: Mark Lazzarini
255 West Julian Street, Suite 502
San Jose, CA 95110-2405

Gentlemen:

SUBJECT: CERTIFICATE OF GEOLOGIC HAZARD CLEARANCE
PROPOSED 4 LOT SFD RESIDENTIAL SUBDIVISION, PDC11-012
6782 AND 6790 SAN FELIPE ROAD
Project No. 11-034366-GC (3-09968)

In response to your application, this serves as a Certificate of Geologic Hazard Clearance to construct the a 4 lot single family detached residential development on the subject site. The following reports and plans submitted in support of your application have been reviewed and accepted:

1. *"Geotechnical Investigation, San Felipe Road Residential, 6782 and 6790 San Felipe Road, San Jose, California,"* by Cornerstone Earth Group, September 20, 2011.

2. *"Addendum to Geotechnical Investigation, San Felipe Road Residential, 6782 and 6790 San Felipe Road, San Jose, California,"* by Cornerstone Earth Group, February 17, 2012.

3. *"Proposed 4 Lot SFD Residential Subdivision, PDC11-012, 6782 San Felipe Road, Civil Response Letter to Michael Shimamoto's Comment Letter dated 11/30/11,"* by Charles W. Davidson Co., February 29, 2012.

4. *"Re: Conceptual Bank Stabilization for Misery Creek, 6782 and 6790 San Felipe Road, San Jose, CA,"* by Schaaf & Wheeler Consulting Civil Engineers, June 8, 2012.

5. *RE:Conceptual Bank Stabilization Plan for Misery Creek, 6782 and 6790 San Felipe Road, City of San Jose, Santa Clara County, California,"* by Live Oak Associates, Inc., June 5, 2012.

6. *"Conceptual Grading and Drainage Plan, Lands of DAL Properties, LLC, 6782 and 6790 San Felipe Road – Approx 400' South of Meadowleaf Court, San Jose, California,"* by Charles W. Davidson Co., June 8, 2012, Sheets 4.1 and 4.2.

Conditions of Clearance

Approval of this Geologic Hazard Clearance is contingent upon the following conditions:

1. All recommendations of the project's geotechnical and civil engineering reports and consultants must be followed. All geotechnical constraints and methods of geologic hazard mitigation identified in your reports must be implemented.

2. This Clearance applies only to the project specified in References 1 through 6 above. Any changes to the geologic, geotechnical or civil engineering professionals, reports or plans of record or the project design, location, concept or use must be reviewed and approved by the City's Engineering Geologist. Significant changes may require a new Geologic Hazard Clearance or may result in the revocation of this Clearance.

3. A grading and drainage plan for the project must be reviewed and approved by the Engineering Geologist and Geotechnical Engineer of Record and City Geologist prior to issuance of a Grading Permit for the project.

4. All earthwork, foundation and drainage improvements, geologic hazard mitigation measures and related facilities must be inspected by the project engineering geologist, geotechnical engineer and civil engineer of record during each phase of site grading and construction, and documented by submission of final geologic, geotechnical and civil engineering reports to the City.

5. If any unanticipated hazardous geologic or subsurface conditions are encountered during the grading, or if there are any modifications in the grading or geologic hazard mitigation measures, the City's Engineering Geologist must be immediately notified. In such an event, a supplemental geologic/ geotechnical investigation must be performed and submitted to the City for review and approval prior to progressing further with the project.

NOTE: Failure to comply with the above conditions shall render this Certificate null and void. Non-compliance shall constitute a violation of the San Jose Municipal Code and may result in penalties as described in Sections 1.08.010 and 015 of the Municipal Code including, but not limited to: 1) suspension or revocation of any development permits obtained with this Certificate, and 2) withholding of final acceptance and release of any surety bonds deposited for the project.

LIMITATIONS

As stated in Section 17.10.400 of the San Jose Municipal Code, this Certificate of Geologic Hazard Clearance is not a determination that the site is free of geologic hazards. This Geologic Hazard Clearance is based on the geologic information provided and the proposed geologic hazard mitigation measures. On the basis of this information, it is the opinion of the Director of Public Works that the geologic hazards can be mitigated to an acceptable degree and/or that the risk from potential geologic hazards associated with the site is acceptable for the proposed project. However, the City reserves the right to revoke this Clearance at any time, if it becomes apparent that there are geologic hazards present which have not, or cannot be adequately mitigated.

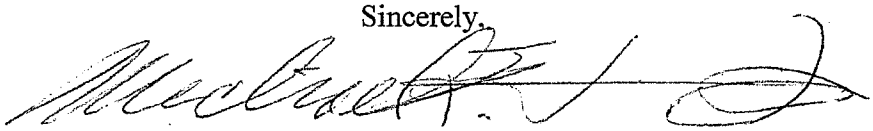
The function of the City is limited to a review of the consultants' conclusions and recommendations relative to the use of acceptable geological and geotechnical practices. The City has not directed, or in any way undertaken an independent investigation of this site. Therefore, the City of San Jose relies entirely upon the data and conclusions provided by the geological and geotechnical professionals who assume all liability for any damage resulting from their failure to obtain sufficient data, and misrepresentations or misinterpretations of the data submitted. This clearance does not pertain to assessment or mitigation of environmental hazards such as the presence of toxic substances or hazardous waste on the site.

This Certificate of Geologic Hazard Clearance is for the exclusive use of the applicant (addressee) only and is non-transferable to a second party unless it has been demonstrated to the satisfaction of the Director of Public Works that: 1) all rights to the grading plans, reports and professionals of record referenced in this Clearance have been secured/retained by the second party by contract, 2) all Conditions of Clearance will be met, and, 3) it has been established that the second party accepts full responsibility for implementing the Conditions of Clearance.

The issuance of a Geologic Hazard Clearance does not authorize the applicant to develop or begin construction. The applicant must also obtain all of the necessary additional site development permits such as planning, grading and building permits before development can take place. This Clearance expires three years from the date of issuance.

If you have any questions, please contact me at (408) 535-7646.

Sincerely,



MICHAEL K. SHIMAMOTO
Engineering Geologist
Development Services Division