INITIAL STUDY
for the
8th STREET & WILLIAM STREET
MIXED USE DEVELOPMENT

City File No. PDC09-019

CITY OF SAN JOSE

November 2012

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement
JOSEPH HORWEDEL, DIRECTOR

PUBLIC NOTICE
INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
CITY OF SAN JOSÉ, CALIFORNIA

File No. and Project Name/Description:
File No. PDC 09-019. Planned Development (PD) Rezoning to allow a mixed-use development of 28 condominiums and 1,780 square feet of retail space. The 0.57 project site is located at the southwest corner of 8th Street and William Street in the City of San Jose. (346 East William Street and 515; 521; and 535 South 8th Street). (Council District 3).

The mixed-use development is proposed as a podium-style structure containing one level of subterranean parking, with the retail uses at ground level surrounding an interior at-grade parking level and combination of two and three levels of wood-frame residential above. The project includes preservation of an onsite, locally-important structure referred to as the Cooper Residence and conversion of the residence into a multi-purpose center and garden. All other structures will be demolished. The project also includes the removal of six ordinance size trees.

The City has performed environmental review on the project. Environmental review examines the nature and extent of any adverse effects on the environment that could occur if a project is approved and implemented. Based on the review, the City has prepared a draft Mitigated Negative Declaration (MND) for this project. An MND is a statement by the City that the project will not have a significant effect on the environment if protective measures (mitigation measures) are included in the project.

The public is welcome to review and comment on the draft Mitigated Negative Declaration.

The public comment period for this draft Mitigated Negative Declaration begins on **November 9, 2012,** and ends on **December 10, 2012.**

The draft Mitigated Negative Declaration, initial study, and reference documents are available online at: http://www.sanjoseca.gov/planning/eir/MND.asp .

The documents are also available for review from 9:00 a.m. to 5:00 p.m. Monday through Friday at the City of San Jose Department of Planning, Building & Code Enforcement, located at City Hall, 200 East Santa Clara Street; and at the Dr. Martin Luther King, Jr. Main Library, located at 150 E. San Fernando Street.

For additional information, please contact Rebekah Ross at (408) 535-8448, or by e-mail at rebekah.ross@sanjoseca.gov .

Joseph Horwedel, Director
Planning, Building and Code Enforcement

John Davidson
Deputy

Circulated on: November 9, 2012

MITIGATED NEGATIVE DECLARATION

The Director of Planning, Building and Code Enforcement has reviewed the proposed project described below to determine whether it could have a significant effect on the environment as a result of project completion. "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 significance.

NAME OF PROJECT: 8th & William Street Mixed Use Development

PROJECT FILE NUMBER: PDC09-019

PROJECT DESCRIPTION: Planned Development (PD) Rezoning to allow a mixed-use development of 28 condominiums and 1,780 square feet of retail space. The mixed-use development is proposed as a podium-style structure containing one level of subterranean parking, with the retail uses at ground level surrounding an interior at-grade parking level and combination of two and three levels of wood-frame residential above. The project includes preservation of an onsite, locally-important structure referred to as the Cooper Residence and conversion of the residence into a multi-purpose center and garden. All other structures will be demolished. The project also includes the removal of six ordinance size trees.

PROJECT LOCATION & ASSESSORS PARCEL NO.: The 0.57 project site is located at the southwest corner of 8th Street and William Street in the City of San Jose. (346 East William Street, and 515; 521; and 535 South 8th Street). APNs: 472-22: 054, 055, 056, and 057.

COUNCIL DISTRICT: 3

APPLICANT CONTACT INFORMATION: Sherwin South Campus LLC, Attention Paulo Hernandez and or Anthony Ho, 139 North 13th Street, San Jose, CA 95112 (408) 390-1397

FINDING: The Director of Planning, Building & Code Enforcement finds the project described above will not have a significant effect on the environment in that the attached initial study identifies one or more potentially significant effects on the environment for which the project applicant, before public release of this draft Mitigated Negative Declaration, has made or agrees to make project revisions that clearly mitigate the effects to a less than significant level.

MITIGATION MEASURES INCLUDED IN THE PROJECT TO REDUCE POTENTIALLY SIGNIFICANT EFFECTS TO A LESS THAN SIGNIFICANT LEVEL

I. AESTHETICS. The project will not have a significant impact on aesthetics or visual resources, therefore no mitigation is required.

II. AGRICULTURE AND FOREST RESOURCES. The project will not have a significant impact on agriculture or forest resources, therefore no mitigation is required.

III. AIR QUALITY. The project will not have a significant air quality impact, therefore no mitigation is required.

IV. BIOLOGICAL RESOURCES.

MM BIO1. If possible, construction should be scheduled between October and December (inclusive) to avoid the raptor nesting season. If this is not possible, pre-construction surveys for nesting raptors shall be conducted by a qualified ornithologist to identify active raptor 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 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 raptor nests. If an active raptor nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist, shall, in consultation with the State of California, Department of Fish & Game (CDFG), designate a construction-free buffer zone (typically 250 feet) around the nest. The applicant shall submit a report to the City's Environmental Principal Planner indicating the results of the survey and any designated buffer zones to the satisfaction of the Director of Planning prior to the issuance of any grading or building permit.

V. CULTURAL RESOURCES. The project will not have a significant impact on cultural resources, therefore no mitigation is required.

VI. GEOLOGY AND SOILS. The project will not have a significant impact due to geology and soils, therefore no mitigation is required.

VII. GREENHOUSE GAS EMISSIONS. The project will not have a significant impact due to greenhouse gas emissions, therefore no mitigation is required.

VIII. HAZARDS AND HAZARDOUS MATERIALS.

MM HAZ1. Prior to initiation of earthwork activities, the project proponent shall perform soil testing on the project site and analytically test for pesticide residuals and related metals arsenic, lead, and mercury. Sampling activities shall be coordinated with the San Jose Environmental Services Department. If contamination is identified in the soil samples above applicable levels, the project proponent shall prepare a Site Management Plan (SMP) to establish protocols/guidelines for the contractor including: identification of appropriate health and safety measures while working in contaminated areas; soil reuse; handling and disposal of any contaminated soils; and agency notification requirements. The SMP shall be subject to the review and approval of the appropriate regulatory agency.

IX. HYDROLOGY AND WATER QUALITY. The project will not have a significant hydrology and water quality impact, therefore no mitigation is required.

X. LAND USE AND PLANNING. The project will not have a significant land use impact, therefore no mitigation is required.

XI. MINERAL RESOURCES. The project will not have a significant impact on mineral resources, therefore no mitigation is required.

XII. NOISE.

MM NSE1. Final project design plans shall show exterior windows and doors with sound insulation ratings in the range of STC7 28 to 30 along William Street and STC 26 to 28 along 8th Street and in other portions of the site are expected to reduce traffic noise to DNL 45 dBA indoors. This assumes exterior walls will consist of Hardi siding or shakes over plywood sheathing, insulation in stud cavities and at least 1 layer of gypsum board on unit interiors.

MM NSE2. Where windows will need to be closed to meet the interior noise criteria, which apply to the units facing William and 8th Streets, final project design plans shall include a ventilation or air conditioning system to provide a habitable interior environment.

MM NSE3. Final design plans shall show 42-inch tall noise barriers at elevated balconies or decks facing William and 8th Streets to reduce future traffic noise to approximately DNL 60 dBA or lower for seated residents. Effective barriers may be comprised of a variety of materials, including glass or plastic, should be solid from bottom to top with no cracks or gaps, and should have a minimum surface density of three pounds per square foot.

XIII. POPULATION AND HOUSING. The project will not have a significant population and housing impact, therefore no mitigation is required.

XIV. PUBLIC SERVICES. The project will not have a significant impact on public services, therefore no mitigation is required.

XV. RECREATION. The project will not have a significant impact on recreation, therefore no mitigation is required.

XVI. TRANSPORTATION / TRAFFIC. The project will not have a significant traffic impact, therefore no mitigation is required.

XVII. UTILITIES AND SERVICE SYSTEMS. The project will not have a significant impact on utilities and service systems, therefore no mitigation is required.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE. The project will not substantially reduce the habitat of a fish or wildlife species, be cumulatively considerable, or have a substantial adverse effect on human beings, therefore no mitigation is required.

PUBLIC REVIEW PERIOD

Before 5:00 p.m. on December 10, 2012, any person may:

1. Review the Draft Mitigated Negative Declaration (MND) as an informational document only; or

2. Submit written comments regarding the information, analysis, and mitigation measures in the Draft MND. Before the MND is adopted, Planning staff will prepare written responses to any comments, and revise the Draft MND, if necessary, to reflect any concerns raised during the public review period. All written comments will be included as part of the Final MND.

Joseph Horwedel, Director
Planning, Building and Code Enforcement

Circulation period, from November 9, 2012 to December 10, 2012

John Davidson
Deputy

Environmental Impacts	Mitigation Measures	Responsibility for Monitoring Compliance	Method of Compliance	Timing of Compliance
Biological Resources				
Impact BIO-1: Mature trees on the project site may provide nesting habitat for raptors (birds of prey). Raptors and their nests are protected under the Migratory Bird Treaty Act of 1918 and California Department of Fish and Game (CDFG) Code Sections 3503 and 3503.5. Although no raptors or nests were observed on the site, mature trees suitable for raptor nesting occur on the site. Despite the disturbed nature of the site, there remains the potential for raptors to nest in these trees. Mitigation is identified below to reduce this potential impact to a less-than-significant level.	**MM BIO -1.** If possible, construction should be scheduled between October and December (inclusive) to avoid the raptor nesting season. If this is not possible, pre-construction surveys for nesting raptors shall be conducted by a qualified ornithologist to identify active raptor 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 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 raptor nests. If an active raptor nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist, shall, in consultation with the State of California, Department of Fish & Game (CDFG), designate a construction-free buffer zone (typically 250 feet) around the nest.	Director of Planning, Building, and Code Enforcement	Pre-construction surveys conducted no more than 14 days prior to the initiation of construction activities or tree relocation or removal shall be provided electronically for review to the satisfaction of the Director of Planning, Building and Code Enforcement. If an active raptor nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist, shall, in consultation with the State of California, Department of Fish & Game (CDFG), designate a construction-free buffer zone (typically 250 feet) around the nest. The applicant shall submit a report to the City's Environmental Principal Planner indicating the results of the survey and any designated buffer zones to the satisfaction of the Director of Planning prior to the issuance of any grading or building permit. All measures shall be printed on all construction documents, contracts, and project plans.	Prior to the issuance of Grading Permits or Building Permits.

Environmental Impacts	Mitigation Measures	Responsibility for Monitoring Compliance	Method of Compliance	Timing of Compliance
Hazards and Hazardous Materials				
<u>Impact HAZ-1</u>: Development of the project will require the export of approximately 10,000 cubic yards of material. Pesticides may have been historically used on the project site. In addition, lead may be present in soil from historic use of lead-containing paint for onsite structures. This represents a potentially significant impact that can be reduced to a less-than-significant level with the following mitigation.	**MM HAZ-1.** Prior to initiation of earthwork activities, the project proponent shall perform soil testing on the project site and analytically test for pesticide residuals and related metals arsenic, lead, and mercury. Sampling activities shall be coordinated with the San Jose Environmental Services Department. If contamination is identified in the soil samples above applicable levels, the project proponent shall prepare a Site Management Plan (SMP) to establish protocols/guidelines for the contractor including: identification of appropriate health and safety measures while working in contaminated areas; soil reuse; handling and disposal of any contaminated soils; and agency notification requirements. The SMP shall be subject to the review and approval of the appropriate regulatory agency.	Director of Planning, Building, and Code Enforcement	Pre-construction soil test conducted no more than 14 days prior to the initiation of construction activities shall be provided electronically for review to the satisfaction of the Director of Planning, Building and Code Enforcement. The applicant shall submit a report to the City's Environmental Principal Planner indicating the results of the soil tests and any designated mitigation measures to the satisfaction of the Director of Planning prior to the issuance of any grading or building permit. All measures shall be printed on all construction documents, contracts, and project plans.	Prior to the issuance of Grading Permits or Building Permits.

Environmental Impacts	Mitigation Measures	Responsibility for Monitoring Compliance	Method of Compliance	Timing of Compliance
Impact NOI: Estimated future noise levels at the proposed residential uses are forecast to range from DNL 56 dBA in the western (shielded) portion of the site to DNL 68 dBA along William Street.	**MM NOI -1**. Final project design plans shall show exterior windows and doors with sound insulation ratings in the range of STC7 28 to 30 along William Street and STC 26 to 28 along 8th Street and in other portions of the site are expected to reduce traffic noise to DNL 45 dBA indoors. This assumes exterior walls will consist of Hardi siding or shakes over plywood sheathing, insulation in stud cavities and at least 1 layer of gypsum board on unit interiors. **MM NOI -2.** Where windows will need to be closed to meet the interior noise criteria, which apply to the units facing William and 8th Streets, final project design plans shall include a ventilation or air conditioning system to provide a habitable interior environment. **MM NOI-3.** Final design plans shall show 42-inch tall noise barriers at elevated balconies or decks facing William and 8th Streets to reduce future traffic noise to approximately DNL 60 dBA or lower for seated residents. Effective barriers may be comprised of a variety of materials, including glass or plastic, should be solid from bottom to top with no cracks or gaps, and should have a minimum surface density of three pounds per square foot.	Director of Planning, Building, and Code Enforcement	Specific details shall be determined during the design phase when the site plan, floor plans and elevations have been finalized. The project shall incorporate the recommendations of the noise assessment into final design as set forth in the noise assessment.	Prior to the issuance of a Planned Development Permit. .

Table of Contents

Chapter 1. Background Information 1
Chapter 2. Project Description 3
Chapter 3. Environmental Evaluation 13
A. Aesthetics 15
B. Agricultural and Forest Resources 16
C. Air Quality 18
D. Biological Resources 20
E. Cultural Resources 24
F. Geology and Soils 27
G. Greenhouse Gas Emissions 30
H. Hazards and Hazardous Materials 31
I. Hydrology and Water Quality 35
J. Land Use 40
K. Mineral Resources 41
L. Noise 42
M. Population and Housing 46
N. Public Services 47
O. Recreation 49
P. Transportation 50
Q. Utilities & Service Systems 51
R. Mandatory Findings of Significance 53
Chapter 4. References 55

List of Figures

Figure 1. Regional Map 6
Figure 2. APN Map 7
Figure 3. Aerial Map 8
Figure 4. Site Plan 9
Figure 5. Elevations 10
Figure 6. Visual Simulations 11
Figure 7. Site Photos 12
Figure 8. Storm Water Control Plan 38

List of Tables

Table 1. Existing Tree Summary 21
Table 2. Noise Measurement Results 43

Appendices

A. Tree Plan
B. Historic Evaluation
C. Geotechnical Exploration
D. Phase I & II Assessments
E. Noise Assessment

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Chapter 1. Background Information

PROJECT DATA

1. **Project Title**: 8th Street & William Street Mixed Use Development.

2. **Lead Agency Name and Address:** City of San Jose Planning, Building and Code Enforcement, 200 E. Santa Clara Street, San Jose, CA 95113. Contact: John Davidson, (408) 535-7895, John. Davidson@sanjoseca.gov.

3. **Project Proponent:** Sherwin South Campus, LLC, 137 Amanda Lane, Los Gatos, CA 95030. Representative: JPH Consulting, Paulo Hernandez, (408) 390-1397.

4. **Project Location:** A 0.57-acre site located at the southwest corner of 8th Street and William Street, in the City of San Jose.

5. **Project Description:** Construct 28 residential units and 1,780 square feet of retail space in a single, four-story building, and preserve the Cooper Residence onsite and convert into a multi-purpose center (accessible to community).

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Chapter 2. Project Description

PROJECT LOCATION

The project site is located on approximately 0.57 acres at the southwest corner of 8th and William Streets the City of San Jose in Santa Clara County. The project site is currently occupied by three existing houses and a small restaurant. The property is located on Assessor Parcels (APNs) 472-28-054, 056, 057, and 058 (refer to Figures 1 and 2). An aerial of the project site and surrounding area is presented in Figure 3.

PROJECT DESCRIPTION

The project proponent is applying for a Planned Development (PD) Rezoning to allow a mixed-use development of 28 condominiums and 1,780 square feet of retail space. The mixed-use development is proposed as a podium-style structure containing one level of subterranean parking, with the retail uses at ground level surrounding an interior at-grade parking level and combination of two and three levels of wood-frame residential above. The project includes preservation of an onsite, locally-important structure referred to as the Cooper Residence and conversion of the residence into a multi-purpose center and garden. All other structures will be demolished. A site plan of the proposed project is presented in Figure 4. Additional project details are presented below.

Residential Component. The project proposes 28 for-sale condominium units, with a mix of product types, ranging from 650 square foot studios, 1,000 square foot one bedroom units, 1,200 square foot two bedroom units; and 1,300 square foot three bedroom units. This includes 20% affordable housing. The condos would be constructed above the ground floor retail space.

Retail Component. Development of the project includes approximately 1,780 square feet of commercial retail space at the corner of S. 8th Street and E. William Street, below the residential units.

Cooper Residence. The project proposes to retain and rehabilitate the existing 2,200 square foot Cooper Residence on the project site into a multi-use center and garden for use by the local community and project residents.

Access/Parking. The project proposes a single access from 8th Street into a podium parking garage. The podium parking garage would provide a total of 56 spaces.

Demolition. Development of the site would require the removal of all buildings, pavement, and other structures on the site with the exception of the Cooper Residence. A demolition plan would be implemented during construction, including a program to safely remove any hazardous materials and salvage/recycle waste during demolition activities.

Grading. Construction of the project would require the movement of approximately 15,000 cubic yards of cut and 5,000 cubic yards of fill. Approximately 10,000 cubic yards of material would require export to an approved location.

Landscaping. The project proposes landscaping along the site's perimeter as well as within the garden area of the rehabilitated Cooper Residence. Three existing trees will be removed and replaced in accordance with the City's requirements.

Lighting. Exterior lighting is proposed for the building for security and access. All outdoor lighting would conform to the City's Outdoor Lighting Requirements.

Public Improvements. The project includes improvements to the public sidewalks and curb/gutter fronting the property on 8th and William Streets.

Utilities. The project includes the provision of services and utilities to serve the proposed uses, including storm drainage, water, wastewater, and electricity.

PROJECT SCHEDULE

There is no schedule for project development at this time. Development will proceed in accordance with market conditions as per economic indicators.

PROJECT OBJECTIVES

The project proponent is seeking approval of a Planned Development Rezoning to allow construction of project that accomplishes the following objectives:

- Provide market-rate and affordable ownership housing to increase ownership inventory:
  a. Mix ownership opportunities including 20% affordable housing

- Preservation & Adaptive Re-Use of Cooper Residence:
  a. Rehabilitate Cooper Residence
  b. Increase density in balance of site to allow financing of rehabilitation work
  c. Adaptive re-use of rehabilitated Cooper Residence and adjacent area into multi-purpose neighborhood center to provide opportunities for the following:

    - Project resident recreation and passive area
    - Neighborhood center (community meeting, etc.)
    - Outdoor active or passive community garden
    - After school activities and homework center
    - Community gardening classes
    - City of San Jose Community Use Agreement

- Activation of Intersection with Neighborhood-Serving Retail:
  a. Re-establish retail at East William Street corner – Redevelopment of S. 8th and E. William Street corner

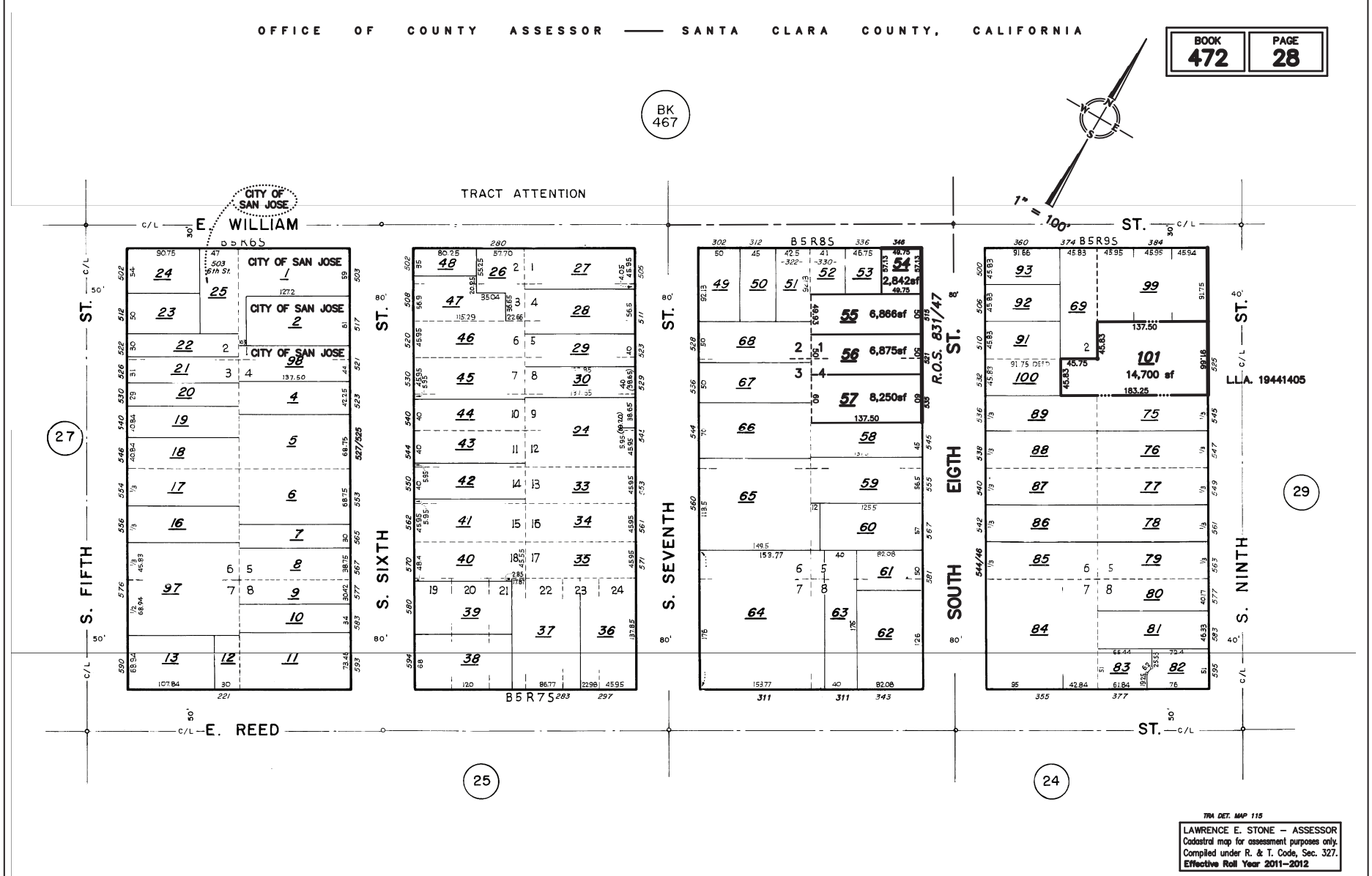
- Development of High Quality and Well-Designed Project:
  a. Consistent with Mayor's Green Vision – particularly use of solar energy sources
  b. Mix of ownership housing, active neighborhood-serving retail, neighborhood center, community garden
  c. Unique to Downtown Frame Area

PROJECT APPROVALS

The project will require the following approvals:

- City of San Jose – Environmental Clearance, Planned Development Rezoning, Planned Development Permit, tree removal permit, grading permit, building permit

N	Location Map	Figure 1

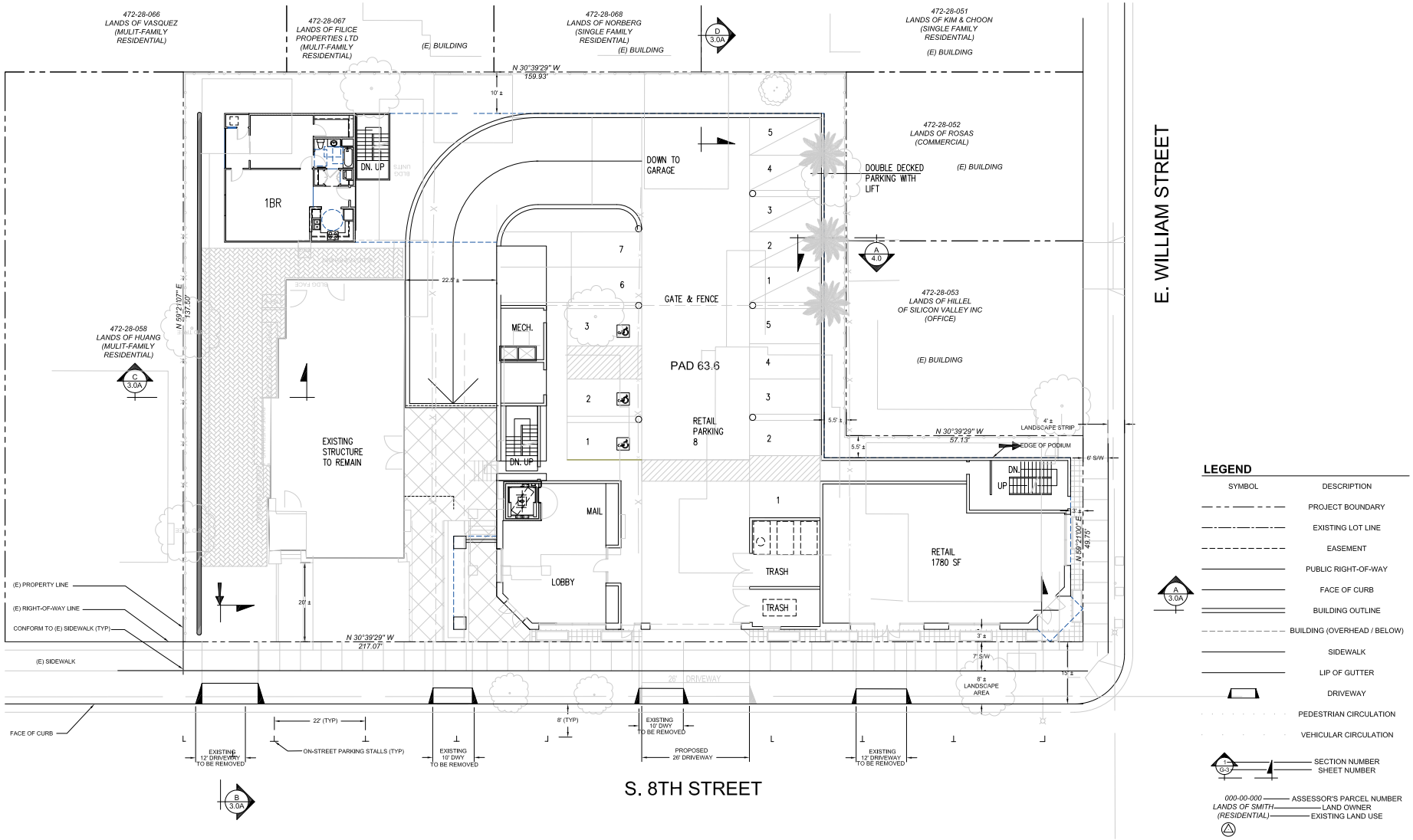


N

APN Map

Figure 2

N	Aerial Map	Figure 3

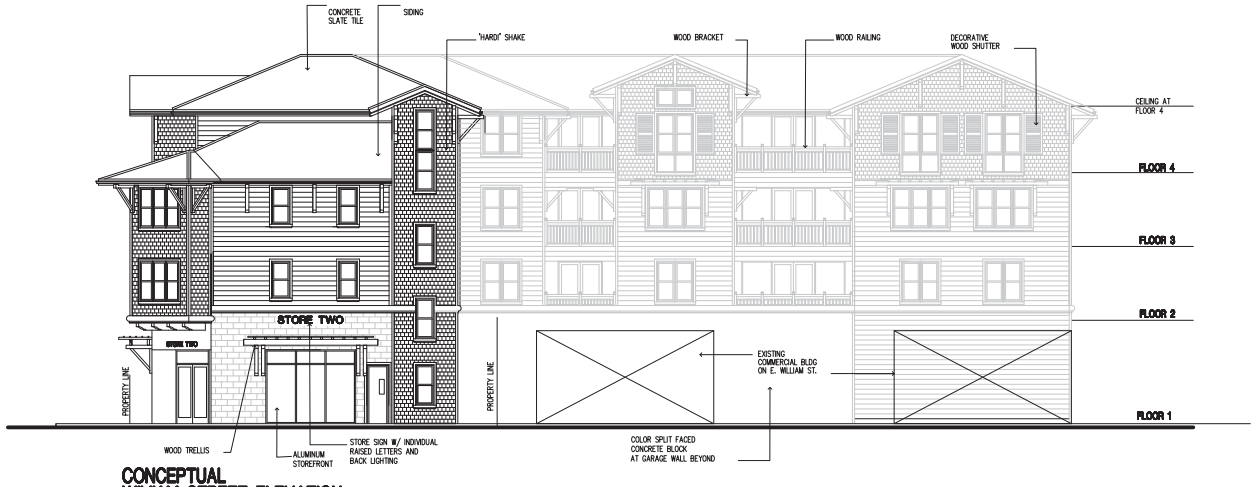


Source: LPMD Architects, 2012

N

Site Plan

Figure 4



CONCEPTUAL
WILLIAM STREET ELEVATION
SCALE : 1/8" = 1'-0"

CONCEPTUAL
8TH STREET ELEVATION
SCALE : 1/8" = 1'-0"

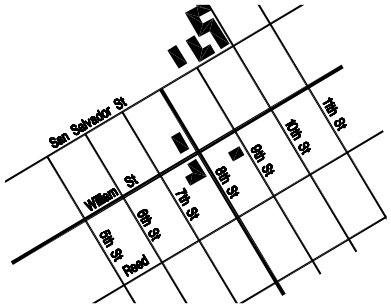
Source: LPMD Architects, 2011

Elevations

Figure
5

CONCEPTUAL WILLIAM STREET STREETSCAPE

SCALE : 1" = 20'



VICINITY MAP

NO SCALE

CONCEPTUAL 8TH STREET STREETSCAPE

SCALE : 1" = 20'

Source: LPMD Architects, 2012

	Visual Simulations	Figure 6

Photo 1. View of site from 8th Street looking west.

Photo 2. View of two existing houses on the south portion of the property.

Photo 3. View of the existing house and restaurant on the north portion of the property.

Photo 4. View of the Cooper Residence, to be retained.

Site Photos

Figure 7

Chapter 3. Environmental Evaluation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors identified below are discussed within Chapter 3. Environmental Setting and Impacts. Sources used for analysis of environmental effects are cited in parenthesis after each discussion, and are listed in Chapter 4. References.

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

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

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

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

Leianne Humble
Signature

11/8/12
date

Leianne Humble
Printed Name

for
Denise Duffy & Associates, Inc.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project-specific screening analysis).

2. All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level mitigation measures from Section XVII, “Earlier Analyses,” may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

a) Earlier Analysis Used. Identify and state where they are available for review.
b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

a) The significance criteria or threshold, if any, used to evaluate each question; and
b) The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL SETTING AND IMPACTS

The following section describes the environmental setting and identifies the environmental impacts anticipated from implementation of the proposed project. The criteria provided in the CEQA environmental checklist was used to identify potentially significant environmental impacts associated with the project. Sources used for the environmental analysis are cited in the checklist and listed in Chapter 4 of this Initial Study.

A. AESTHETICS

Setting

The project site is located within an urbanized area of San Jose. The site is bordered by William Street to the north, residential uses to the south and west, and 8th Street and residential uses to the east. The visual/aesthetic character of the project site is of three existing homes, a small restaurant, some trees, pavement, and landscaping. The north side of the property contains a small restaurant. The remainder of the site is occupied by three homes, one referred to as the "Cooper Residence," which is locally important but not deemed historically significant (refer to E. Cultural Resources). Photographs of the property are presented in Figure 7, and an aerial of the project area is provided in Figure 3.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
1. AESTHETICS. Would the project:					
a) Have a substantial adverse effect on a scenic vista?			X		1, 2
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?			X		1, 2
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X		1, 2
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X		1, 2
e) Increase the amount of shade in public or private open space on adjacent sites?			X		1, 2

Explanation

a) **Less Than Significant Impact**. The project site is located in central San Jose and would not impact any scenic vistas.

b) **Less Than Significant Impact**. The project site is not located within any City or state-designated scenic routes. The project would remove trees on the site, which would be replaced in accordance with the City's requirements. The Cooper Residence on the site would be preserved and a garden and courtyard provided south of the structure.

c) **Less Than Significant Impact**. The proposed project would alter the existing visual character of the site and its surroundings by removing two existing buildings and constructing a new four-story building. Elevations of the project are presented in Figure 5. Visual simulations of the project are presented in the streetscapes provided in Figure 6. The proposed building has articulated rooflines with exterior building materials that include siding, shake, and tile in neutral tones. Balconies are provided for most units. The maximum building height would be50 feet.

The Cooper Residence would be retained on the site as part of the project and rehabilitated. The project proposes to incorporate a garden and courtyard into the landscaping for this structure.

The project would increase the intensity of development on the site, which is surrounded mostly by one and two-story residential and commercial structures as well as a three-story apartment building directly across project site on E. William Street. However, the project is not expected to significantly degrade the existing visual character of the area, since it would 1) provide landscaping along the perimeter and surrounding the Cooper Residence, 2) conform to the City's *Residential Design Guidelines* and *Commercial Design Guidelines*, and 3) undergo design review to ensure scale and mass are compatible with the surrounding neighborhood.

d) **Less Than Significant Impact**. Exterior lighting is proposed for security and access. Outdoor lighting would utilize low-pressure sodium fixtures and wall-mounted luminaries that are fully shielded, in accordance with the City's requirements. The project does not propose any major sources of glare. The project would not result in significant lighting/glare impacts.

e) **Less Than Significant Impact**. The proposed three story building would not substantially increase the amount of shade or result in any shade impacts on adjacent public or private open space areas.

As a part of the development permit approval, the project proponent and/or contractor shall implement the following standard conditions:

- Design of the project shall be consistent with the City's *Residential Design Guidelines* and *Commercial Design Guidelines.*
- Lighting on the site shall be consistent with the City's Outdoor Lighting Policy (4-3).

B. AGRICULTURAL AND FOREST RESOURCES

Setting

In California, agricultural land is given consideration under CEQA. According to Public Resources Code §21060.1, "agricultural land" is identified as prime farmland, farmland of statewide importance, or unique farmland, as defined by the U.S. Department of Agriculture land inventory and monitoring criteria, as modified for California. CEQA also requires consideration of impacts on lands that are under Williamson Act contracts. The project area is identified as "urban/built-up land" on the Santa Clara County Important Farmlands Map (2006).

CEQA requires the evaluation of forest and timber resources where they are present. The project site is located in an urban area that has been historically used for industrial uses. The site does not contain any forest land as defined in Public Resources Code section 12220(g), timberland as defined by Public Resources Code section 4526, or property zoned for Timberland Production as defined by Government Code section 51104(g).

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
2. AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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	3
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	2
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X	2
d) Result in the loss of forest land or conversion of forest land to non-forest uses?				X	2
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	2

Explanation

a) **No Impact**. The project site is designated as urban land on the Important Farmlands Map for Santa Clara County and does not contain any prime farmland, unique farmland, or farmland of statewide importance. The project will not affect agricultural land.

b) **No Impact**. The project site is not zoned for agricultural use and does not contain lands under Williamson Act contract; therefore no conflicts with agricultural uses will occur.

c) **No Impact**. No other changes to the environment will occur from the proposed project that will result in conversion of farmland to non-agricultural uses.

d) **No Impact**. The project would not impact forest resources since the site does not contain any forest land as defined in Public Resources Code section 12220(g), timberland as defined by Public Resources Code section 4526, or property zoned for Timberland Production as defined by Government Code section 51104(g).

e) **No Impact**. As per the discussion above, the proposed project will not involve changes in the existing environment which, due to their location or nature, could result in conversion of farmland or agricultural land, since none are present on this previously developed infill property.

C. AIR QUALITY

Setting

The project is located within the San Francisco Bay Area Air Basin. The Bay Area Air Quality Management District (BAAQMD) is the local agency authorized to regulate stationary air quality sources in the Bay Area. The Federal Clean Air Act and the California Clean Air Act mandate the control and reduction of specific air pollutants. Under these Acts, the U.S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for specific "criteria" pollutants, designed to protect public health and welfare. Primary criteria pollutants include carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_X), particulate matter (PM_{10}), sulfur dioxide (SO_2), and lead (Pb). Secondary criteria pollutants include ozone (O_3), and fine particulate matter.

The BAAQMD defines sensitive receptors as facilities where sensitive population groups are located, including residences, schools, childcare centers, convalescent homes, and medical facilities. The project is located in a residential area and the nearest sensitive receptors (existing homes) are located directly adjacent to the site to the south and west.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?				X	1, 2, 4
b) Violate any air quality standard or contribute to an existing or projected air quality violation?			X		1, 2, 4
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?			X		1, 2, 4
d) Expose sensitive receptors to substantial pollutant concentrations?			X		1, 2, 4
e) Create objectionable odors affecting a substantial number of people?			X		1, 2

Explanation

a) **No Impact**. The proposed project would not increase regional population growth or cause changes in vehicle travel that would affect implementation of the Bay Area 2010 Clean Air Plan.

b) **Less Than Significant Impact**. The City of San Jose uses the threshold of significance established by the Bay Area Air Quality Management District (BAAQMD) to assess air quality impacts. The BAAQMD CEQA Guidelines (May 2011) include screening levels and thresholds for evaluating air quality impacts in the Bay Area.

The BAAQMD screening levels are based on project size and thresholds of significance for air pollutant emissions. The applicable land use category from the BAAQMD's screening criteria tables for the proposed project is "condo/townhouse, general." For operational impacts for criteria pollutants, the screening size triggering a need for analysis is 451 units. For construction impacts, the screening size is 240 units. Due to the project size, which consists of 28 units with 1,780 square feet of retail, construction and operational emissions would be well below the BAAQMD significance thresholds for residential uses. The addition of 1,780 square feet of retail is not expected to exceed the screening level since the number of residential units is so far below the screening criteria. The project, therefore, would result in a less-than-significant air quality impact.

Operation of the project is not expected to generate any localized emissions that could cause or contribute to violations of ambient air quality standards. Construction activities would generate dust and equipment exhaust on a temporary basis. The BAAQMD identifies best management practices for all projects to limit air quality impacts during construction. The short-term air quality effects during project construction would be avoided with implementation of the measures prescribed by the BAAQMD.

c) **Less Than Significant Impact**. See discussion b) above.

d) **Less Than Significant Impact**. Operation of the project is not expected to cause any localized emissions that could expose sensitive receptors to unhealthy air pollutant levels because there are no significant operational sources of pollutants onsite. Construction activities would result in localized emissions of dust and diesel exhaust that could result in temporary impacts to adjacent land uses. Sensitive receptors (existing residences) are located directly adjacent to the project site to the south and west. Existing residences are also located east of the site across 8th Street, within about 50 feet of the project site. Implementation of "Basic" mitigation measures for construction period emissions identified below would ensure that this impact is less-than-significant.

e) **Less Than Significant Impact**. Operation of the proposed mixed use development would not create any new sources of odor. During construction, use of diesel powered vehicles and equipment could create localized odors.

As a part of the development permit approval, the project proponent and/or contractor will implement the following standard abatement measures recommended for all projects by BAAQMD:

- 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 the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). 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 shall be posted at the site with the telephone number and person to contact at the Lead Agency regarding dust complaints. 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.

D. BIOLOGICAL RESOURCES

Setting

The project site is located within an urbanized area of San Jose. The existing property contains three houses and a small restaurant, pavement, and some landscaping. The project site contains 12 trees. A list of these trees, including size, condition, and status is presented in Table 1. The City of San Jose's Tree Removal Controls (San Jose City Code, Sections 13.31.010 to 13.32.100) serve to protect all trees having a trunk measuring 56 inches or more in circumference (i.e., 18 inches in diameter) at the height of 24 inches above natural grade. This ordinance applies to native and non-native species. One of the trees on the project site if of ordinance size, and will be retained. A total of six trees will be removed, as presented in Table 1 below.

Any tree found by the City Council to have special significance can be designated as a heritage tree, regardless of tree species or size, and it is unlawful to vandalize, mutilate, remove, or destroy a heritage tree. There are no City-designated heritage trees in the project area, as per the City's heritage tree list (City of San Jose, 2004).

The project site may provide habitat for wildlife species associated with urban areas. Trees in urban areas provide food and cover for wildlife adapted to this environment, including birds such as house finch, mourning dove, house sparrow, and Brewer's blackbird. In addition, mature trees on the project site may provide nesting habitat for raptors (birds of prey). Raptors and their nests are protected under the Migratory Bird Treaty Act of 1918 and California Department of Fish and Game (CDFG) Code Sections 3503 and 3503.5. Although no raptors or nests were observed on the site, mature trees suitable for raptor nesting occur on the site. Despite the disturbed nature of the site, there remains the potential for raptors to

nest in these trees. No other rare, threatened, or endangered animal species were observed on the project site, nor are any expected to occur since the area is developed.

Table 1
Existing Tree Summary

No.	Scientific Name	Common Name	Size (diameter)	Condition	Status
1	*Alnus glutinosa*	Alder	14”	Fair	Remove
2	*Alnus glutinosa*	Alder	16”	Poor	Remove
3	*Liquidambar styraciflua*	Sweetgum	Multi- trunk 7”,6,”,4”	Poor	Remove
4	*Platanus racemosa*	Sycamore	16”	Good	Retain
5	*Platanus racemosa*	Sycamore	18”	Good	Retain
6	*Platanus racemosa*	Sycamore	17”	Good	Remove
7	*Diospyros virginiana*	Persimmon	6”	Good	Remove
8	*Feijoa sellowiana*	Guava	14”	Good	Relocate Onsite
9	*Syagrus romanzoffiana*	Palm	13”	Good	Relocate Onsite
10	*Syagrus romanzoffiana*	Palm	15”	Good	Relocate Onsite
11	*Syagrus romanzoffiana*	Palm	10”	Good	Relocate Onsite
12	*Diospyros virginiana*	Persimmon	9”	Fair	Remove

Diameter measured at two feet above existing grade.
Numbers correspond to tree locations provided in Appendix A.
Source: Ver-Consultants, 2010.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
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			1, 2
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X		1, 2
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	1

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
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		1, 2
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X		1, 5
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		1

Explanation

a) **Less Than Significant with Mitigation**. Mature trees on the project site may provide nesting habitat for raptors (birds of prey). Raptors and their nests are protected under the Migratory Bird Treaty Act of 1918 and California Department of Fish and Game (CDFG) Code Sections 3503 and 3503.5. Although no raptors or nests were observed on the site, mature trees suitable for raptor nesting occur on the site. Despite the disturbed nature of the site, there remains the potential for raptors to nest in these trees. Mitigation is identified below to reduce this potential impact to a less-than-significant level.

Mitigation

BIO1. If possible, construction should be scheduled between October and December (inclusive) to avoid the raptor nesting season. If this is not possible, pre-construction surveys for nesting raptors shall be conducted by a qualified ornithologist to identify active raptor 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 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 raptor nests. If an active raptor nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist, shall, in consultation with the State of California, Department of Fish & Game (CDFG), designate a construction-free buffer zone (typically 250 feet) around the nest. The applicant shall submit a report to the City's Environmental Principal Planner indicating the results of the survey and any designated buffer zones to the satisfaction of the Director of Planning prior to the issuance of any grading or building permit.

b) **Less Than Significant Impact.** See discussion a) above.

c) **No Impact.** The project site is highly disturbed and does not contain any wetland resources and, therefore, will not adversely affect federally protected wetlands as defined by Section 404 of the Clean Water Act.

d) **Less Than Significant Impact**. See a) above. With the possible exception of nesting raptors, the project would not substantially interfere with the movement of any native resident or migratory

fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) **Less Than Significant Impact.** The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The project would replace all trees to be removed in accordance with the City's requirements and tree ordinance.

f) **Less Than Significant Impact**. Six local partners (the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the Cities of San Jose, Gilroy and Morgan Hill) and three wildlife agencies (the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service) have prepared a multispecies habitat conservation plan. The study area of the Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) primarily covers southern Santa Clara County, which includes the City of San Jose with the exception of the bayland areas. The HCP/NCCP addresses listed species and species that are likely to become listed during the plan's 50-year permit term. The project site is located within the boundaries of the Santa Clara Valley HCP/NCCP; however, since the project would not affect listed species, it would not conflict with the provisions of the HCP/NCCP. As a part of the development permit approval, the project will conform to the following standards:

- All trees that are to be removed shall be replaced at the following 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 - <18 inches	3:1	2:1	none	24-inch box
less than 12 inches	1:1	1:1	none	15-gallon container
x:x = tree replacement to tree loss ratio **Note:** Trees greater that 18" diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such 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.
  - A donation of $300 per mitigation tree to Our City Forest for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for

off-site tree planting shall 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

1. The applicant shall retain a consulting arborist. The construction superintendent shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection.
2. Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by consulting arborist. Fences are to remain until all grading and construction is completed.
3. Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall 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 treatments

1. No grading, construction, demolition or other work shall occur within the TREE PROTECTION ZONE. Any modifications must be approved and monitored by the consulting arborist.
2. Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the consulting arborist.
3. Supplemental irrigation shall be applied as determined by the consulting arborist.
4. If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
5. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the TREE PROTECTION ZONE.
6. Any additional tree pruning needed for clearance during construction must be performed or supervised by an Arborist and not by construction personnel.
7. 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 shall be designed to withstand differential displacement.

E. CULTURAL RESOURCES

Setting

Historical Resources

The project site contains three residences constructed between circa 1907-1913. These properties are located at 515 S. 8th Street, 521 S. 8th Street, and 535 S. 8th Street. These properties were evaluated by Urban Programmers and the results are summarized in the California Department of Parks & Recreation (DPR) forms contained in Appendix B.

The block that contains the project site was divided in half, and then quarters, before being subdivided into lots of varying dimensions after 1900 when the three bungalows were constructed. The block currently contains a variety of residential styles and building sizes.

515 8th Street. This house was constructed circa 1913 and is of Craftsman architectural style. This property was individually evaluated in the most recent historical evaluation by Urban Programmers using the criteria of the City of San Jose Historic Preservation Ordinance, the California Register, and the National Register of Historic Places. When evaluated by these criteria, the property was found not

significant to the history or architectural heritage of San Jose because it is not associated with individuals or events of significance. In addition, the original architecture was not an important example of Craftsman design and the structure has been altered with contemporary design, materials, and features that erode the original design features.

Prior to the preparation of the most recent historic evaluation, this property was included in at least three previous studies to determine historical and architectural significance. In 2002, a historic district study was undertaken by Architectural Resources Group (ARG). The property was individually evaluated during this study using the criteria of the City of San Jose Historic Preservation Ordinance, the California Register and the National Register of Historic Places. When evaluated by these criteria the building was found to be not significant to the history or architectural heritage of San Jose. The study area included the subject property and the block on S. 8th Street. The subject property was not considered important enough to evaluate as eligible for listing in the Californian Register or the San Jose Inventory. A second study was conducted by ARG in January 2004, and did not identify the subject property. Subsequent to those studies, Archives and Architecture conducted another study of the South Campus Area that provided an in-depth study of the area, including the relationship to housing for students attending San Jose State University. Again the study did not find the building at 515 S. 8th Street historically significant.

521 8th Street. This house was constructed circa 1913 and is of Craftsman architectural style. This property was individually evaluated in the most recent historical evaluation using the criteria of the City of San Jose Historic Preservation Ordinance, the California Register, and the National Register of Historic Places. When evaluated by these criteria the building was found not significant to the history or architectural heritage of San Jose.

Prior to the preparation of this most recent historic evaluation, the property was included in at least three previous studies to determine historical and architectural significance. As described above, a historic district study was undertaken by ARG in 2002. The building was found not significant to the history or architectural heritage of San Jose. The study area included the subject property and the block on S. 8th Street. The recommended historic district did not include the block. The subject property was evaluated using the former City of San Jose rating system for historic significance and found this house to be a Structure of Merit. A second study was conducted by ARG in January 2004, and did not change the rating for the subject property. Subsequent to those studies, Archives and Architecture conducted another study of the South Campus Area that provided an in-depth review of the area, including the relationship to housing for students attending San Jose State University. This study did not update the status of the building at 521 S. 8th Street.

535 S. 8th Street. This property, referred to as the "Cooper Residence," was constructed circa 1907-1910 and is of Craftsman architectural style. The property has diminished architectural integrity and is not associated with individuals or events of significance. The original Craftsman Bungalow architecture has been significantly altered by removal of the original siding and replacement with heavily textured stucco, a recent large addition to the south façade that extends to the front altering the front door area, and replacing the front door with one that is not compatible with the design of the house.

Prior to the preparation of this most recent historic evaluation, the property was included in at least three previous studies to determine historical and architectural significance. As described above, a historic district study was undertaken by ARG in 2002, which included the subject property and the 500 block of S. 8th Street. The recommended historic district did not include this block but found the house at 535 S. 8th Street to be eligible for listing in the National Register as a fine example of the Craftsman architectural style. Since that time, however, an addition to the south side of the building and alterations to the porch and front entry have diminished the architectural integrity to the level that it no longer qualifies for the National Register, the California Register, or as a San Jose City Landmark. A second study was

conducted by ARG in January 2004, but did not update the evaluation of the building at 535 S. 8th Street. Subsequent to those studies, Archives and Architecture performed the study of the South Campus Area that provided an in-depth study of the area, including the relationship to housing for students attending San Jose State University. The building at 535 S. 8th Street, and the rest of the block, was not included in the subsequent Reed City Historic District.

Archaeological Resources

The site has been highly disturbed by previous development. No evidence of archaeological resources are present, since the site is occupied by buildings, pavement, or landscaping.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
5. CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA 15064.5?			X		1, 2
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA 15064.5?			X		1, 2, 6
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X	1, 2
d) Disturb any human remains, including those interred outside of formal cemeteries?			X		1, 2

Explanation

a) **Less Than Significant Impact**. The project proposes to remove two of the existing houses on the site at 515 S. 8th Street and 521 S. 8th Street, including the garages and other outbuildings in order to develop the mixed uses. CEQA defines historic resources as those that are eligible for listing in the California Register of Historic Resources or the National Register of Historic Places. The City of San Jose considers a resource listed as a Candidate City Landmark to be eligible for the California Register.

None of the three properties at 515 S. 8th Street, 521 S. 8th Street, and 535 S. 8th Street are eligible for listing in the California Register of Historic Resources, individually or as a contributing element in a historic district. Removal the three houses, which are not historically significant structures, would not create a substantial adverse change; therefore, their removal is not considered an adverse impact under CEQA and no mitigation is required.

The historical evaluation prepared by Urban Programmers indicated that if the addition were removed from the Cooper Residence located at 535 S. 8th Street and the building rehabilitated in accordance with the *Secretary of the Interior's Standards for Rehabilitation*, the building could be considered for designation as a San Jose Landmark and eligible for listing in the California Register of Historic Resources. In addition to the rehabilitation, eligibility would be further strengthened if the architect is factually identified. The project proposes to rehabilitate the Cooper

Residence at 535 S. 8th Street (house only) and convert it into a community center and garden. Rehabilitation of this structure in accordance with the *Secretary of the Interior's Standards* would represent a beneficial effect on historical resources.

b) **Less Than Significant Impact**. The site has been highly disturbed; however, it is possible that cultural resources may be encountered during construction activities. Standard measures are identified below to avoid impacts associated with disturbance to buried archaeological resources during construction.

c) **No Impact**. The project site is disturbed and not known to contain any paleontological resources.

d) **Less Than Significant Impact**. Though unlikely, human remains may be encountered during construction activities. Standard measures are identified below to avoid impacts associated with disturbance to human remains.

As a part of the development permit approval, the project will conform to the following standards:

- Should evidence of prehistoric cultural resources be discovered during construction, work within 50 feet of the find shall be stopped to allow adequate time for evaluation and mitigation by a qualified professional archaeologist. The material shall be evaluated and if significant, a mitigation program including collection and analysis of the materials at a recognized storage facility shall be developed and implemented under the direction of the City's Environmental Principal Planner.

- As required by County ordinance, this project has incorporated the following guidelines. 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 shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall 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 shall notify the Native American Heritage Commission who shall 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 land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

F. GEOLOGY AND SOILS

Setting

A geotechnical investigation was completed for the project by ENGEO (July 2011) and is contained in Appendix C. The geotechnical investigation included literature research, subsurface exploration (three cone penetrometer test probes and three soil borings), laboratory testing of sampled materials, and recommendations for proposed development.

The project site is relatively level at an approximate elevation of 95 feet above mean sea level (msl). The property is underlain by floodplain deposits of the Holocene period. Generally, the ground covering at the study locations within existing driveways consisted of approximately 3 - 4 inches of concrete over soil subgrade. Ground covering at explored locations outside the driveways consisted of landscaped soil or grass surfaces. The soils encountered in the borings were alluvial and relatively variable. The materials

encountered in the upper 32 feet of borings were typically made up of inter-bedded layers of clay, silt and sand. Beneath the inter-bedded alluvial soils was plastic clay to a depth of approximately 61 feet. Beneath the plastic clay was silty to clayey sand to the maximum depth explored of approximately 65½ feet. The sand layer varied from loose to dense, increasing in density with depth. One sample of sandy clay at a depth of 14 feet was tested for plasticity, which indicated a low to moderate expansion potential. The measured groundwater level for the borings and probes ranged from depths of approximately 10½ to 14 feet.

Based on the results of the geotechnical investigation, the project site appears suitable for the proposed development from a geologic and geotechnical perspective. The primary geologic/geotechnical issues to the project site are as follows:

- Liquefaction, liquefaction-induced settlement, and liquefaction-induced surface rupture hazards
- Load-induced settlement
- Expansive soils
- Existing fill and below grade structures
- Differential fill thickness for the at-grade building and Cooper Residence
- Shallow groundwater
- Proximity of Cooper Residence and existing off-site structures to the proposed subsurface garage

The project site is located in a region that contains active earthquake faults. However, the site is not located within a State of California Earthquake Fault Hazard Zone (1982) for active faulting, a City of San Jose Fault Hazard Zone (1983), or a Santa Clara County Geologic Hazard Zone for potential fault rupture hazard (2002). The nearest known active faults are the Monte Vista – Shannon fault and the Calaveras fault, located approximately 7.5 miles southwest and 7.9 miles northeast of the site, respectively. Although not zoned by the State of California, Bortugno (1991) and Jennings (1994) map the Silver Creek fault and San Jose fault as concealed potentially active faults. The San Jose fault is located approximately three miles southwest of the site, and the Silver Creek fault is mapped about one mile northeast of the site.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
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:					
i) Rupture of a know earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X	1, 2, 7
ii) Strong seismic ground shaking?			X		1, 2, 7
iii) Seismic-related ground failure, including liquefaction?			X		1, 2, 7
iv) Landslides?				X	1, 2

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
b) Result in substantial soil erosion or the loss of topsoil?			X		1, 2, 7
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		1, 2, 7
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		1, 2, 7
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	1, 2

Explanation

ai) **No Impact**. The site is not located within a State of California Earthquake Fault Hazard Zone and no known active faults cross the site. The risk of ground rupture within the subject site is considered low. The project is not mapped within an Alquist-Priolo Earthquake Fault Zone.

aii) **Less Than Significant Impact**. Due to its location in a seismically active region, the proposed mixed use development may be subject to strong seismic ground shaking during its design life in the event of a major earthquake on any of the region's active faults. This could pose a risk to proposed buildings and infrastructure. Seismic impacts will be minimized by using standard engineering and construction techniques in compliance with the requirements of the California and Uniform Building Codes for Seismic Zone 4.

aiii) **Less Than Significant Impact**. As described above, the project site may be subject to strong ground shaking in the event of a major earthquake. According to the State of California Seismic Hazard Zones Map and the Santa Clara County Geologic Hazard Zone Map, the site is located within an area mapped as being potentially susceptible to liquefaction. Liquefaction analyses were performed as part of the geotechnical investigation that indicated that potentially liquefiable deposits with a cumulative thickness ranging from approximately 4 to 11 feet are located within the project site. It is estimated that approximately 1½ to 3½ inches of total and up to 1¾ inches of differential liquefaction-induced settlement may occur based on existing conditions at the site as a result of a large seismic event. To avoid potential effects from liquefaction-related settlements at the site, the project proposes the following measures: 1) use of gravity utilities that maintain a design slope gradient of at least ½ percent, and 2) pavements and surface drainage elements that maintain minimum design drainage gradient of ½ percent.

The results of the geotechnical investigation also indicated that there is risk for liquefaction-induced surface rupture or sand boils during a strong seismic event below the proposed garage. Due to the lack of steep slopes and nearby open channels, the potential for lateral spreading on the project site is low.

aiv) **No Impact**. The proposed project site has no appreciable vertical relief and will not be subject to landsliding.

b) **Less Than Significant Impact**. Development of the project will require demolition, pavement removal, and grading that could result in a temporary increase in erosion. This increase in erosion is expected to be relatively minor due to the flatness of the site. The project will implement the standard measures identified in I. Hydrology and Water Quality of this Initial Study to minimize erosion impacts.

c) **Less Than Significant Impact**. The project site is not subject to landslide, lateral spreading, subsidence, or collapse. However, the site is subject to liquefaction and related settlement, as described in aiii) above. In addition, load-induced settlement is expected for native soils for the proposed structures. The anticipated settlement amounts are identified in the geotechnical investigation in Appendix C. Impacts associated with expansive soils will be minimized by applying the recommendations identified in the geotechnical study.

d) **Less Than Significant Impact**. Near-surface soils and soils at the proposed basement level displayed a low to moderate expansion potential, which can potentially damage proposed improvements. Construction of improvements near existing grades and at the proposed garage basement level will need to consider the potential impacts of expansive soils. Impacts associated with expansive soils will be minimized by applying the recommendations identified in the geotechnical study. Conventional grading operations, incorporating fill placement specifications tailored to the expansive characteristics of the soil, and use of a mat foundation are common measures that may be utilized to address the expansive potential of the foundation soils.

e) **No Impact**. The project does not include any septic systems. The project would tie into the City's existing sanitary sewer system.

As a part of the development permit approval, the project will conform to the following standards:

- The proposed structures on the site would 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.

- The project shall implement the recommendations identified in the Geotechnical Exploration (ENGEO, July 2011) into final project and foundation design plans (refer to Appendix C).

G. GREENHOUSE GAS EMISSIONS

Setting

Various gases in the earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

Among the prominent GHGs contributing to the greenhouse effect, or climate change, are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for enhancing the greenhouse effect. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS		Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
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		1, 4
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		1, 4

Explanation

a) **Less Than Significant Impact**. The City of San Jose recently adopted a GHG Strategy that includes policies and measures to reduce GHG emissions. Adoption of the GHG Strategy provides environmental clearance for GHG impacts of proposed development as per the BAAQMD CEQA Guidelines and CEQA Guidelines Section 15183.5. The project is consistent with the GHG Strategy; therefore, it would have a less-than-significant impact for GHG emissions.

b) **Less Than Significant Impact**. The project will not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, since the proposed project is consistent with the City's GHG Reduction Strategy.

H. HAZARDS AND HAZARDOUS MATERIALS

Setting

The following discussion is based on a Phase I Environmental Site Assessment (ENGEO, March 2009) and a follow-up Phase II Environmental Site Assessment (ENGEO, June 2011) to determine the potential for onsite contamination. These reports are contained in Appendix D.

The project site is currently occupied by a commercial building with a restaurant tenant, and three residential buildings. The restaurant appears to have typical utilities including heating/cooling system, sewage system, and a dishwashing station. The residential houses also have typical utilities including heating/cooling system and sewage system, as well as basement facilities used primarily as a laundry room or extra storage. In addition, the houses have independent structures such as sheds and/or garages where typical household supplies are stored. The surrounding area is mixed-use development including residential and commercial such as markets, apartments, and both single- and multi-family residences.

The Phase I Assessment included the following: 1) review of local agency files, 2) examination of historic aerials and maps of the area, 3) a regulatory database search, and 4) survey of the site and immediate project area. Results of the Phase I reconnaissance and records research did not find documentation or physical evidence of soil or groundwater impairments associated with the current or past use of the Property. A review of regulatory databases maintained by county, state, and federal agencies found no documentation of hazardous materials violations or discharge on the Property. No documented soil or groundwater contamination associated with abutting properties was found from the records research.

The project site is known to have had one historic dry cleaner, Ace Launderette, located at 346 E. William Street from approximately 1957 to 1980. Automotive repairs and/or gasoline services were conducted from approximately 1930 to 1970 at the nearby listed addresses of 349 E. William Street, 360 E. William Street, and 532 S. 8th Street. No regulatory documentation was discovered for these addresses. According to the historical records reviewed, there appears to be a grease trap of unknown size and location in the proximity of the current restaurant located in the northeast corner of the property. Based on the findings of the Phase I Assessment, ENGEO recommended a limited Phase II Environmental Site Assessment be performed for site.

The Phase II Assessment was conducted to address potential environmental concerns associated with historic use of the project site related to groundwater and soil vapor. The Phase II work included the following:

- Four geoprobes, two at each sample location, to an approximate depth of 5-15 feet bgs with the collection of groundwater and soil vapor samples.
- Soil cores were screened in the field using an Organic Vapor Meter.
- Laboratory analysis of the two groundwater samples for: total petroleum hydrocarbons as gasoline, diesel and motor oil (TPH-g, TPH-d and TPH-mo); benzene, toluene, ethylbenzene and xylenes (BTEX); methyl tert-buytl ether (MTBE); and volatile organic compounds (VOCs).
- Laboratory analysis of the two soil vapor samples for VOCs.

Both of the two groundwater samples showed non-detect levels for the target constituents (listed above). However, various volatile organic compounds were detected in the soil vapor samples (refer to Appendix D). The reported concentrations were compared to the applicable Environmental Screening Levels (ESLs) developed by the San Francisco Regional Water Quality Control Board for shallow soil gas concentrations for residential uses. There were a few constituents with detectable concentrations; such as 4-Methyl-2-Pentanone (MIBK), for which there is no specific ESL. Given the associated data, these sample concentrations are not considered significant.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
7. 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		1, 2, 8
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			1, 2, 8
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?			X		1, 2, 8
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	1, 2, 8
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	1, 2
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	1, 2
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X	1, 2
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	1, 2

Explanation

a) **Less Than Significant Impact**. Development of the proposed project would require the demolition of two houses, a restaurant, and a garage on the site. Due to their age, these structures may contain asbestos building materials and/or lead-based paint. Standard measures are identified below to avoid release of such contaminants during demolition and removal. Demolition conducted in conformance with federal, state and local regulations will avoid significant exposure of construction workers and/or the public to asbestos and lead-based paint.

b) **Less Than Significant Impact with Mitigation**. Based on the results of the Phase II assessment, laboratory results for the sampled groundwater and soil vapor samples, and previous available studies, it is concluded that groundwater beneath the project site has not been adversely impacted. In addition, the reported VOCs in soil vapor do not pose an environmental concern for the current land use or future developments. See also a) above.

Development of the project will require the export of approximately 10,000 cubic yards of material. Pesticides may have been historically used on the project site. In addition, lead may be present in soil from historic use of lead-containing paint for onsite structures. This represents a potentially significant impact that can be reduced to a less-than-significant level with the following mitigation.

Mitigation

HAZ1 Prior to initiation of earthwork activities, the project proponent shall perform soil testing on the project site and analytically test for pesticide residuals and related metals arsenic, lead, and mercury. Sampling activities shall be coordinated with the San Jose Environmental Services Department. If contamination is identified in the soil samples above applicable levels, the project proponent shall prepare a Site Management Plan (SMP) to establish protocols/guidelines for the contractor including: identification of appropriate health and safety measures while working in contaminated areas; soil reuse; handling and disposal of any contaminated soils; and agency notification requirements. The SMP shall be subject to the review and approval of the appropriate regulatory agency.

c) **Less Than Significant Impact**. The project is located within ¼ mile of the California State University of San Jose (one block to the north). As described in the responses above, the project will not result in the release of hazardous materials with implementation of appropriate mitigation as needed.

d) **No Impact**. The project site is not located on a site that is included on a list of hazardous materials sites as per Government Code Section 65962.5.

e) **No Impact**. The project site is not located within two miles of the San Jose Mineta International Airport.

f) **No Impact**. The project is not located within the vicinity of a private airstrip.

g) **No Impact**. The project would not interfere with any emergency response or evacuation plans.

h) **No Impact**. The project would not expose people or structures to risk from wildland fires as it is located in an urban area that is not prone to such events.

As a part of the development permit approval, the project will conform to the following standards:

- In conformance with state and local laws, a visual inspection/pre-demolition survey and sampling will be conducted prior to the demolition of the building to determine the presence of asbestos-containing materials and/or lead-based paint.

  All potentially friable asbestos-containing materials shall be removed in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines prior to building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in accordance with Cal/OSHA standards, contained in Title 8 of the California Code of Regulations (CCR), Section 1529, to protect workers from exposure to asbestos. Materials containing more than one percent asbestos are also subject to Bay Area Air Quality Management District (BAAQMD) regulations.

During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations 1532.1, including employee training, employee air monitoring and dust control. Any debris or soil containing lead-based paint or coatings will be disposed of at landfills that meet acceptance criteria for the waste being disposed.

I. HYDROLOGY AND WATER QUALITY

Setting

There are no waterways present on the project site or immediate vicinity. The nearest waterways are Guadalupe River, located approximately ¾ mile to the southwest, and Coyote Creek, located approximately ½ mile to the east of the site. The site overlies the Santa Clara groundwater basin. Depth to groundwater varies seasonally, generally located five to seven feet below ground surface. The project site currently has an on-site drainage system that ties into the City's existing drainage system. The approximate depth to groundwater is 8 to 25 feet below ground surface with flow toward the north. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project site is not located within the 100-year floodplain or any other flood hazard areas.

The City of San Jose is required to operate under a Municipal Stormwater NPDES Permit to discharge stormwater from the City's storm drain system to surface waters. On October 14, 2009, the San Francisco Bay Regional Water Quality Control Board adopted the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP) for 76 Bay Area municipalities, including the City of San Jose. The Municipal Regional Permit (NPDES Permit No. CAS612008) mandates the City of San Jose use its planning and development review authority to require that stormwater management measures are included in new and redevelopment projects to minimize and properly treat stormwater runoff. Provision C.3 of the MRP regulates the following types of development projects:

- Projects that create or replace 10,000 square feet or more of impervious surface.
- Special Land Use Categories that create or replace 5,000 square feet or more of impervious surface.

The MRP requires regulated projects to include Low Impact Development (LID) practices, such as pollutant source control measures and stormwater treatment features aimed to maintain or restore the site's natural hydrologic functions. The MRP requires that stormwater treatment measures are properly installed, operated, and maintained.

The MRP also calls for regulated projects to include measures to control hydromodification impacts where the project would cause increased erosion, silt pollutant generation, or other adverse impacts to local rivers and creeks. Development projects that create and/or replace one acre or more of impervious surface and are located in a subwatershed or catchment that is less than 65% impervious, must manage increases in runoff flow and volume so that post-project runoff does not exceed estimated pre-project rates and durations.

Any construction or demolition activity that results in land disturbance equal to or greater than one acre must comply with the Construction General Permit (CGP), administered by the State Water Resources Control Board (SWRCB). The CGP requires the installation and maintenance of Best Management Practices (BMPs) to protect water quality until the site is stabilized.

The City has developed policies that implement Provision C.3, consistent with the MRP. The City's Post-Construction Urban Runoff Management Policy (6-29) establishes specific requirements to minimize and treat stormwater runoff from new and redevelopment projects. The City's Post-Construction Hydromodification Management Policy (8-14) establishes an implementation framework for incorporating measures to control hydromodification impacts from development projects.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
8. HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements?			X		1, 2
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 ground water table level (for example, 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	1, 2
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.			X		1, 2
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		1, 2, 9
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X		1, 2, 9
f) Otherwise substantially degrade water quality?			X		1, 2, 9
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	1, 2, 10
h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows?				X	1, 2, 10
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	1, 2, 10
j) Inundation by seiche, tsunami, or mudflow?				X	1, 2

Explanation

a) **Less Than Significant Impact**. The proposed mixed use project would not violate any water quality standards or waste discharge requirements as described in c) and e) below.

b) **No Impact**. The project would not deplete or otherwise affect groundwater supplies or recharge, since the project is not located within a groundwater recharge area.

c) **Less Than Significant Impact**. Construction of the project will require demolition, pavement removal, and grading activities that could result in a temporary increase in erosion affecting the quality of storm water runoff. This increase in erosion is expected to be minimal, due to the flatness of the site. The project will also implement the standard measures identified below to minimize erosion and water quality effects. Surface runoff from proposed development may generate urban pollutants from driveway areas that could impact water quality. These pollutants include oil, grease, and trace metals from roadway pavement. These pollutants will be controlled through implementation of a Storm Water Control Plan (SWCP) as shown in Figure 8.

d) **Less Than Significant Impact**. The project would increase impervious area on the site. The project is proposing a Storm Water Control Plan for the project as shown in Figure 8 to manage storm water runoff. This plan includes 1) bioretention cells along the west and south sides of the project site, and 2) additional landscaping. Implementation of the proposed Storm Water Control Plan in addition to the standard measures identified below, consistent with NPDES Permit and City Policy requirements, will reduce potential drainage/runoff impacts to a less-than-significant level.

e) **Less Than Significant Impact**. The project proposes to connect to the City's existing storm drainage system and is not expected to contribute runoff that will exceed the capacity of existing or planned storm water drainage systems or result in substantial additional sources of polluted runoff. The proposed SWCP includes measures to collect and treat site runoff prior to discharge into the City's existing drainage system, which would improve the water quality of runoff from the site compared to existing conditions.

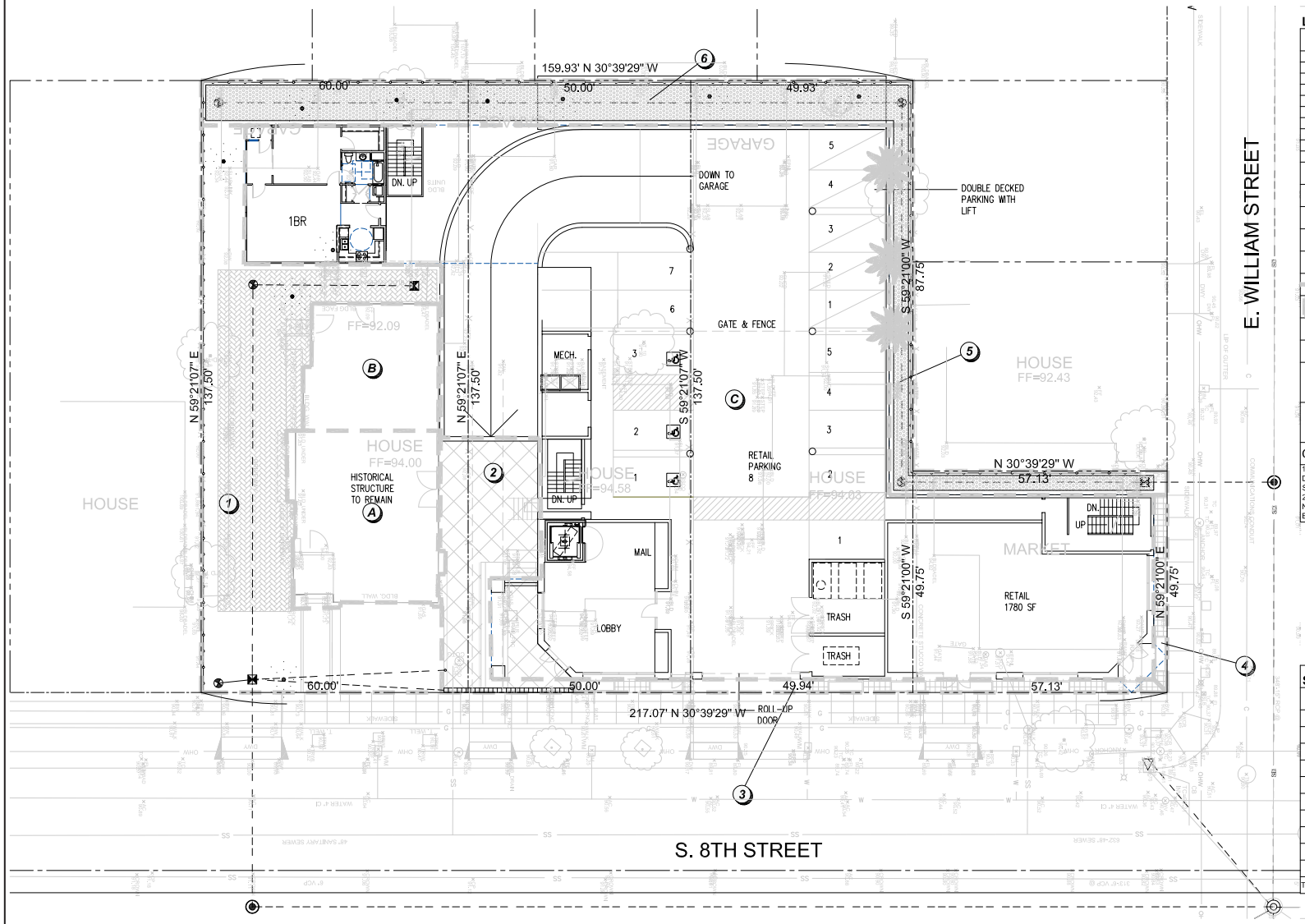
f) **Less Than Significant Impact**. The project will not substantially degrade water quality, as described above under c) and d).

g) **No Impact**. The project is not located within a floodplain or flood hazard zone.

h) **No Impact**. The project site is not located within any flood hazard zones, thus it will not impede or redirect flood flows.

i) **No Impact**. The project is not located within a floodplain or flood hazard zone.

j) **No Impact**. The project site is not located in an area subject to significant seiche, tsunami, or mudflow risk.



LEGEND

SYMBOL	DESCRIPTION
	PROJECT BOUNDARY
	LOT LINE
	EASEMENT
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN
	OVERLAND RELEASE PATH
	PROPOSED AREA DRAIN INLET
	PROPOSED ATRIUM AREA DRAIN
	EXISTING STORM MANHOLE
	PROPOSED STORM MANHOLE
	STORM WATER DRAINAGE BOUNDARY
	PROPOSED BIOSWALE
A	ROOF DRAINAGE AREA
1	SURFACE DRAINAGE AREA
	EVERGREEN TREE ELIGIBLE FOR 200 SF IMPERVIOUS SURFACE AREA CREDIT PER CITY POLICY
	DECIDUOUS TREE ELIGIBLE FOR 100 SF IMPERVIOUS SURFACE AREA CREDIT PER CITY POLICY

GENERAL NOTES

1. ROOF RAINWATER LEADERS & DOWNSPOUTS TO BE DISCONNECTED FROM UNDERGROUND DRAINAGE SYSTEM WHEREVER FEASIBLE. SEE DETAIL SHEET 4.0B
2. ALL RAINWATER LEADERS FROM THE FRONT OF THE NEW PODIUM ROOF WILL BE DIRECTED TO THE BIOSWALES AT THE BACK OF THE BUILDING.

STORM WATER DRAINAGE AREA

ID	DESCRIPTION	AREA (SF)
1	FRONT & SIDE LANDSCAPING	3,350
2	PLAZA HARDSCAPE	1,060
3	SIDEWALK	400
4	SIDEWALK	140
5	BIOSWALE LANDSCAPING	732
6	BIOSWALE LANDSCAPING	1,611
A	COMMUNITY CENTER ROOF	1,302
B	COMMUNITY CENTER ROOF	841
C	PODIUM ROOF	1,5400
TOTAL GROSS SITE AREA		24,836

Source: LPMD Architects, 2010

Stormwater Control Plan

Figure 8

As a part of the development permit approval, the project will conform to the following standards:

Construction Measures

- Prior to the commencement of any clearing, grading or excavation, the project shall 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:

    1. The applicant shall develop, implement and maintain a Storm Water Pollution Prevention Plan (SWPPP) to control the discharge of stormwater pollutants including sediments associated with construction activities.
    2. The applicant shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB).

- The project shall incorporate Best Management Practices (BMPs) into the project to control the discharge of stormwater pollutants including sediments associated with construction activities. Examples of BMPs are contained in the publication *Blueprint for a Clean Bay*, and include preventing spills and leaks, cleaning up spills immediately after they happen, storing materials under cover, and covering and maintaining dumpsters. Prior to the issuance of a grading permit, the applicant may be required to submit an Erosion Control Plan to the City Project Engineer, Department of Public Works, 200 E. Santa Clara Street, San Jose, California, 95113. The Erosion Control Plan may include BMPs as specified in ABAG's *Manual of Standards Erosion & Sediment Control Measures* for reducing impacts on the City's storm drainage system from construction activities. For additional information about the Erosion Control Plan, the NPDES Permit requirements or the documents mentioned above, please call the Department of Public Works at (408) 535-8300.

- The project applicant shall 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:

    1. Restriction of grading to the dry season (April 15 through October 15) or meet City requirements for grading during the rainy season;
    2. Utilize on-site sediment control BMPs to retain sediment on the project site;
    3. Utilize stabilized construction entrances and/or wash racks;
    4. Implement damp street sweeping;
    5. Provide temporary cover of disturbed surfaces to help control erosion during construction; and
    6. Provide permanent cover to stabilize the disturbed surfaces after construction has been completed.

Post-Construction

- The project shall comply with applicable provisions of the following City Policies: City Council Policy 6-29 Post-Construction Urban Runoff Management and City Council Policy 8-14 Post-Construction Hydromodification Management.

- Details of specific Site Design, Pollutant Source Control, and Stormwater Treatment Control Measures demonstrating compliance with Provision C.3 of the MRP (NPDES Permit Number CAS612008), shall be included in the project design, to the satisfaction of the Director of Planning, Building and Code Enforcement.

J. LAND USE

Setting

The project site is located within the City of San Jose. The City recently adopted the Envision San Jose 2040 General Plan (November 2011). According to Policy IP-1.9 of the 2040 General Plan, for an 18-month period following adoption of the 2040 General Plan, planned development zonings and discretionary development permits may be evaluated for General Plan conformance based on the land use designation on the San Jose 2020 General Plan Land Use/Transportation Diagram.[1] The site is designated in the San Jose 2020 General Plan Land Use/Transportation Diagram as *High Density Residential (25-50 du/ac)*. The project site is currently zoned Commercial Neighborhood (CN) and Multi-Family Residential (R-M).

The project does not propose any General Plan amendments for the site and the density is below 50 units per acre. The project proponent is applying for a PD Rezoning of the property to allow the mixed-use development.

The property is currently occupied by three existing houses and a small restaurant. The site is bordered by residential uses or streets on most sides. San Jose State University is located approximately one block north of the property. Surrounding properties are designated for various residential and commercial uses in the City's General Plan.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
9. LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?				X	1, 2
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	1, 5
c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?				X	1

[1] All of these "pipeline" applications must have been submitted to the City with full payment of initial application fees *prior* to adoption of the Envision San Jose 2040 General Plan, and their review completed within this same 18-month period.

Explanation

a) **No Impact**. The mixed use project is proposed on an infill site in an urban area that is currently occupied by residential and commercial uses. Surrounding uses include residential and commercial development. The proposed mixed retail/residential uses would not divide an established community.

b) **No Impact**. According to Policy IP-1.9 of the Envision San Jose 2040 General Plan, planned development permits may be evaluated for General Plan conformance based on the land use designation on the San Jose 2020 General Plan Land Use/Transportation Diagram for an 18-month period following adoption of the 2040 General Plan. The project site is designated in the 2020 General Plan Land Use/Transportation Diagram as *High Density Residential (25-50 du/ac).* The project is consistent with this designation, since it proposes a total of 28 units at a density of 28.5 du/acre.

The *University Strong Neighborhoods Revitalization Plan* and *Strong Neighborhoods Initiative Plan* were developed by the City to improve community conditions, appearance, safety, and services through a variety of policies and programs. The proposed mixed-use development would generally be consistent with the goals of the SNI to provide infill residential housing and neighborhood-oriented commercial development, improve the appearance of the neighborhood, and encourage pedestrian, bicycle, and transit travel. The project would not interfere with the Plan's goals to improve the local community.

c) **No Impact**. The project is located within the boundaries of the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan; however, the site does not contain resources protected by the Plan and will not conflict with any of the Plan requirements (refer to D. Biological Resources).

K. MINERAL RESOURCES

Setting

Under the Surface Mining and Reclamation Act of 1975 (SMARA), the State Mining and Geology Board has designated only the Communications Hill Area of San Jose as containing mineral deposits of regional significance for aggregate (Sector EE). There are no mineral resources in the project area. Neither the State Geologist nor the State Mining and Geology Board has classified any other areas in San Jose as containing mineral deposits that are of statewide significance or for which the significance requires further evaluation. Other than the Communications Hill area cited above, San Jose does not have mineral deposits subject to SMARA. The project site lies outside of the Communications Hill area.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
10. 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	1, 2
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	1, 2

Explanation

a), b) **No Impact**. The project site is located outside the Communications Hill area, the only area in San Jose containing mineral deposits subject to SMARA; therefore, the project will not result in a significant impact from the loss of availability of a known mineral resource.

L. NOISE

Setting

The following discussion is based on a noise analysis prepared for the project by Salter Associates (June 2011). This study is contained in Appendix E. This analysis evaluates the potential noise impacts of the project.

Noise is measured in decibels (dB), and is typically characterized using the A-weighted sound level or dBA. This scale gives greater weight to the frequencies to which the human ear is most sensitive. Ground vibration is generally correlated with the velocity of the ground, which is also expressed in decibels.

City of San Jose General Plan: The Noise Element of the City of San Jose's 2020 Plan identifies noise and land use compatibility standards for various land uses. The City's goal is to " ... minimize the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies." Residential land uses are considered "satisfactory" up to 60 dBA DNL as the short-range exterior noise quality level, and 55 dBA DNL as the long-range exterior noise quality level. The guidelines state that where the exterior DNL is above the "satisfactory" limit (between 60 and 70 dBA DNL), and the project requires a full EIR, an acoustical analysis should be made indicating the amount of attenuation necessary to maintain an indoor level of a DNL less than or equal to 45 dBA. Noise levels exceeding 70 dBA DNL require that new development would only be permitted if uses are entirely indoors and building design limits interior levels to less than or equal to 45 dBA DNL. Outside activity areas should be permitted if site planning and noise barriers result in levels of 60 dBA DNL or less. Applicable policies in the Noise Element are as follows:

In addition, Policy 1 of the Noise Element defines DNL 45 dB as the interior noise quality level goal, and DNL 76 dB as the maximum exterior noise levels to avoid significant adverse health effects. Policy 11 states that "when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses, non-residential land uses should mitigate noise generation to meet the 55 DNL guideline at the property line."

City of San Jose Zoning Ordinance: The City's Municipal Code contains a Zoning Ordinance that limits noise levels at any residential property to 55 dBA. The code is not explicit in terms of the acoustical descriptor associated with the noise level limit. A reasonable interpretation of this standard has been made based on similar codes of other Bay Area communities. This analysis assumes that the intent of the code is to limit noise levels at any residential property to 55 dBA Leq.

California Building Code (CBC). Title 24, Part 2, of the California Building Code limits indoor noise from outdoor sources to DNL 45 dBA in habitable rooms of attached housing. Projects exposed to an outdoor DNL greater than 60 dBA require an acoustical analysis during the design phase showing that the proposed design will limit outdoor noise to the prescribed allowable interior level. Additionally, if windows must be closed to meet the interior standard, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment. Title 24 Part 11, the CALGreen code, includes prescriptive sound insulation requirements for non-residential projects exposed to noise levels that regularly exceed 65 dBA. In summary, windows should have sound insulation ratings of STC 30 or higher, and walls should be STC 50 or higher.

The project site is located at the southwest corner of 8th Street and William Street near downtown San Jose. Sensitive receptors (existing residences) are located directly adjacent to the project site to the west and south. Additional residences are located east of the site, east of 8th Street.

To quantify the existing noise environment, two long-term monitors continuously measured noise levels at the site between the 11th and 13th of May 2011. In addition, short-term spot measurements were conducted and compared with corresponding time periods of the long-term monitors to determine how noise levels vary across the site and at different elevations. Table 2 summarizes existing noise levels at the site. The noise measurement locations are shown in Appendix E.

Table 2
Noise Measurement Results

Site	Location	Date/Time	DNL*
LT-1	William Street Monitor - approximately 20' south of roadway centerline	11 to 13 May 2011	68 dBA
LT-2	8th Street Monitor - approximately 25' west of roadway centerline		63 dBA
ST-1	William and 8th Streets Corner Spot Measurement - approximately south of 40' William Street centerline, 35' west of 8th Street centerline	10:25 – 10:40 12 May 11	66 dBA
ST-2	8th Street Spot Measurement - approximately 40' west of 8th Street centerline	11:05 – 11:20 12 May 2011	60 dBA
ST-3	Southwestern Spot Measurement - in rear yard of existing residence		56 dBA

*During the 15-minute measurement period, noise from a motorcycle passing the site generated abnormally high sound levels. Therefore, the comparison of average short and long-term monitor data omits the 1-minute interval when the motorcycle passed the site.

The San Jose Department of Transportation forecasts that peak hour traffic volumes will increase from 400 vehicles in the year 2002 to 600 vehicles in the year 2020. This represents an approximately two percent per year increase. Assuming a similar increase over the next 10 years, an approximately one-decibel increase in noise levels would be expected.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
11. 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			11
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?				X	11
c) Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X		11
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X		11
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		11
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	11

Explanation

a) **Less Than Significant Impact with Mitigation**. The noise analysis considered the potential noise impacts both on and from the project. The results of the noise analysis are presented in the discussion below.

Noise Impacts on Project. Estimated future noise levels at the proposed residential uses are forecast to range from DNL 56 dBA in the western (shielded) portion of the site to DNL 68 dBA along William Street. The project would incorporate measures to reduce indoor noise levels and address noise in outdoor use spaces. Specific details would be determined during the design phase when the site plan, floor plans and elevations have been finalized. The project would incorporate the recommendations of the noise assessment into final design as set forth in the mitigation below.

A garden/courtyard is planned for the area south of the multi-purpose neighborhood center. The estimated future noise level in this area is DNL 60 dBA or lower, except for the easternmost portion along 8th Street, where the future noise level will be DNL 61 dBA. This passive landscape area will not be used as private open space and can have exterior noise levels up to DNL 65 dBA.

For retail uses, the estimated future hourly average noise levels along William Street at the setback of the proposed retail uses would be on the order of 60 to 65 dBA, and noise levels during the loudest hours will exceed these levels. Therefore, the following sound insulation requirements, outlined in the CALGreen code, would be incorporated into the project:

- Retail windows must have STC ratings of at least 30.

- Retail exterior walls must have STC ratings of at least 50. A possible assembly may consist of stone or Hardi siding over plywood sheathing, metal or wood studs with insulation in stud cavities, and 2 layers of gypsum board mounted on resilient channels. Details should be developed during the design phase.

- Doors will likely need to be gasketed to meet the City's interior noise goal of DNL 45 dBA. This shall be confirmed during the design phase.

Traffic Noise. The San Jose Department of Public Works estimates that the project will generate 27 new peak hour vehicle trips (an increase of 5 - 7 percent). The corresponding increase in environmental noise would be less than one decibel. This is considered less-than-significant.

Mechanical Equipment Noise from Project. A garage exhaust fan ducted to the rooftop is planned for the underground parking garage. However, detailed information about this fan and other outdoor mechanical equipment is not available at this time. Equipment noise is subject to the limits of the San Jose Municipal Code, which limits noise generation to 55 and 60 dBA at residential and commercial property lines, respectively, and to Policy 11 of the City's General Plan, which limits non-residential noise to DNL 55 dBA or lower at adjacent residences. Noise reduction measures may include a combination of selecting quiet equipment, maintaining minimum distances to property lines, incorporating acoustically solid parapet walls, and/or equipment enclosures. For garage exhaust fans, noise reduction may also include duct lining and acoustical silencers or louvers.

Construction Noise. Noise will be generated on the site during construction activities. This would temporarily elevate noise levels in the immediate project area from the use of construction equipment. Typical hourly average construction generated noise levels would range from about 77 to 89 dBA L_{eq}, measured at a distance of 50 feet from the center of the construction site, during busy construction periods. These noise levels would have significant impact on the nearest sensitive uses. Implementation of standard noise abatement measures identified below will reduce the construction noise impacts to a less-than-significant level.

Mitigation

NSE1 Final project design plans shall show exterior windows and doors with sound insulation ratings in the range of STC7 28 to 30 along William Street and STC 26 to 28 along 8th Street and in other portions of the site are expected to reduce traffic noise to DNL 45 dBA indoors. This assumes exterior walls will consist of Hardi siding or shakes over plywood sheathing, insulation in stud cavities and at least 1 layer of gypsum board on unit interiors.

NSE2 Where windows will need to be closed to meet the interior noise criteria, which apply to the units facing William and 8th Streets, final project design plans shall include a ventilation or air conditioning system to provide a habitable interior environment.

NSE3 Final design plans shall show 42-inch tall noise barriers at elevated balconies or decks facing William and 8th Streets to reduce future traffic noise to approximately DNL 60 dBA or lower for seated residents. Effective barriers may be comprised of a variety of materials, including glass or plastic, should be solid from bottom to top with no cracks or gaps, and should have a minimum surface density of three pounds per square foot.

b) **No Impact.** The proposed mixed use development is subject to groundborne vibration, nor would it introduce any source of groundborne vibration at nearby sensitive receptors.

c) **Less Than Significant Impact.** Temporary noise would occur during construction of the project, which is addressed in a) above.

d) **Less Than Significant Impact with Mitigation**. Construction of the project will result in short-term noise increases in the project vicinity. This is addressed under item a) above. Implementation of standard noise abatement measures identified below will reduce the construction impacts to a less-than-significant level.

e) **Less Than Significant Impact**. The project is not located within an airport land use plan.

f) **No Impact.** The project is not located near any private airstrips.

As a part of the development permit approval, the project will conform to the following standards:

- Construction will be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday for any on-site or off-site 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 shall 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 shall be equipped with adequate mufflers and shall be in good mechanical condition to minimize noise created by faulty or poor maintained engines or other components.

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

M. POPULATION AND HOUSING

Setting

The population of the City of San Jose is approximately 989,000. The project proposes an additional 28 residential units and 1,780 square feet of retail uses.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
12. 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	1
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X	1
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X	1

Explanation

a) **No Impact**. The project consists of construction of 28 residential units and 1,780 square feet of retail use. This small mixed use development would not result in substantial population growth.

b) **No Impact**. The project would result in the demolition of two existing houses, which are occupied by several tenants. However, this would not displace substantial numbers of existing housing, necessitating the construction of replacement housing.

c) **No Impact**. See b) above.

N. PUBLIC SERVICES

Setting

Fire Protection: Fire protection services are provided to the project site by the San Jose Fire Department (SJFD). The closest fire station to the project site is Station 3, located at 98 Martha Street, approximately one mile southwest of the project site.

Police Protection: Police protection services are provided to the project site by the San Jose Police Department (SJPD). The project is located within Beat Building Block (BBB) 210 of the SJPD's service area.

Schools: The project is located within the San Jose Unified School District (K-12). The schools serving the proposed project are presented below.

School	Address
Lowell Elementary	625 S. 7th Street San Jose, CA 95112
Herbert Hoover Middle School	1635 Park Avenue San Jose, CA 95126
Lincoln High School	555 Dana Avenue San Jose, CA 95126

State law (Government Code §65996) identifies the payment of school impact fees as an acceptable method of offsetting a project's impact on school facilities. In San Jose, developers can either negotiate directly with the affected school district or make a payment of $2.97 per square foot of multi-family units (prior to the issuance of a building permit) and $0.47 per square foot of new commercial retail uses. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Parks: Parks in the project vicinity consist of William Park and Selma Olinder Park, both located about 10 blocks to the east/southeast near the corner of William Street and 16th Street.

The City of San Jose has adopted the Parkland Dedication Ordinance (PDO) and Park Impact Ordinance (PIO), which require residential developers to dedicate public park land and/or pay in-lieu fees to compensate for the increase in demand for neighborhood parks. Low, very-low, and extremely-low income restricted units are exempt from these requirements.

Libraries: The San Jose Public Library System consists of one main library and 18 branch libraries. The nearest branch to the project site is the Martin Luther King Jr. Library Branch, located less than one mile northwest of the site at 150 East San Fernando Street.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
13. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or 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:					
a) Fire protection?				X	1
b) Police protection?				X	1
c) Schools?			X		1
d) Parks?			X		1
e) Other public facilities?				X	1

Explanation

a) **No Impact**. The project would result in an incremental increase in the demand for fire protection services from the development of the soccer fields. The City will consult with the San Jose Fire Department during final project design to assure appropriate fire safety measures are incorporated. The project would not significantly impact fire protection services or require the construction of new or remodeled facilities.

b) **No Impact**. The project would result in an incremental increase in the demand for police protection services from the development of the soccer fields. The City will consult with the San Jose Police Department during final project design to assure appropriate security measures are incorporated. The project would not significantly impact police protection services or require the construction of new or remodeled facilities.

c) **Less Than Significant Impact**. The project would be subject to developer fees to accommodate the incremental demand on school services, including the state-mandated school district impact fee and City-required park dedication in-lieu fee.

d) **Less Than Significant Impact**. The project would be subject to developer fees to accommodate the incremental demand on park services, including the City-required park dedication in-lieu fee.

e) **No Impact.** The project would not impact other public services, including library services.

As a part of the development permit approval, the project will conform to the following standards:

- The developer shall pay a school impact fee to the School District in accordance with California Government Code §65996 to offset the increased demands on school facilities.
- The project shall conform to the City's Parkland Dedication Ordinance (PDO) and Park Impact Ordinance (PIO) (Municipal Code Chapter 19.38).

O. RECREATION

Setting

Parks in the project vicinity consist of William Park and Selma Olinder Park, both located about 10 blocks to the east/southeast near the corner of William Street and 16th Street.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
14. RECREATION. Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X	1

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				X	1

Explanation

a), b) **No Impact**. The development of 28 housing units on the project site could increase the number of residents in the project area by a maximum of 85 people (assuming 2.5 persons/household). This would incrementally increase the demands on recreational facilities. The City of San Jose has adopted the Parkland Dedication Ordinance and Park Impact Ordinance, which require residential developers to dedicate public park land or pay in-lieu fees (or both) to compensate for the increase in demand for neighborhood parks. The project would be required to comply with the City's park ordinances, which would offset impacts to park/recreation facilities.

As a part of the development permit approval, the project will conform to the following standards:

- The project shall conform to the City's Parkland Dedication Ordinance (PDO) and Park Impact Ordinance (PIO) (Municipal Code Chapter 19.38).

P. TRANSPORTATION

Setting

The project site is located at the southwest corner of 8th and William Streets. The City of San Jose Department of Transportation determined that the project would not require a traffic analysis due to the minor number of net new trips generated by replacement of the existing uses with the new mixed use development.

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
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		12
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		12

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
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	1, 2
d) Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?				X	1, 2
e) Result in inadequate emergency access?			X		1, 2
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		1, 2, 12

Explanation

a) **Less Than Significant Impact**. See b) below.

b) **Less Than Significant Impact**. Based on review of the project by the City of San Jose Department of Transportation, the project would generate 27 new peak hour PM trips (Norman Mascarinas, June 2, 2011). The City determined that this minor increase in traffic would not result in significant traffic impacts, including the existing level of service at the signalized intersection of 7th Street/William Street. The City also concluded that the project would be in conformance with the City of San Jose Transportation Level of Service Policy (Council Policy 5-3) and a determination for a negative declaration can be made with respect to traffic impacts.

c) **No Impact**. The project would not result in any changes to air traffic patterns.

d) **No Impact**. The proposed project will not substantially increase hazards due to a design feature or incompatible uses.

e) **Less Than Significant Impact**. The proposed project is will not result in inadequate emergency access.

f) **Less Than Significant Impact**. The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Q. UTILITIES AND SERVICE SYSTEMS

Setting

Utilities and services are furnished to the project site by the following providers:

- Wastewater Treatment: treatment and disposal provided by the San Jose/Santa Clara Water Pollution Control Plant (WPCP); sanitary sewer lines maintained by the City of San Jose
- Water Service: San Jose Water Company
- Storm Drainage: City of San Jose
- Solid Waste: Various
- Natural Gas & Electricity: PG&E

Impacts and Mitigation

Thresholds per CEQA Checklist

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
16. UTILITIES AND SERVICE SYSTEMS. Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X	1, 2
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?			X		1, 2
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		1, 2
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X		1
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		1
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X		1
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X	1

Explanation

a) **No Impact**. The proposed mixed use development would not exceed or impact wastewater treatment requirements of the applicable Regional Water Quality Control Board.

b) **Less Than Significant Impact**. The development of 28 multi-family residential units and 1,780 square feet of retail uses may incrementally increase water demands and wastewater generation; however, this minor increase would not require or result in the construction of new water or wastewater treatment facilities or any expansion of existing facilities.

c) **Less Than Significant Impact**. The project proposes to connect to the City's existing storm drainage system and is not expected to contribute runoff that will exceed the capacity of existing or planned storm water drainage systems. A Storm Water Control Plan will be developed and implemented as part of the proposed project.

d) **Less Than Significant Impact**. See b) above.

e) **Less Than Significant Impact**. See items a) and b) above.

f), g) **No Impact**. The project will not generate substantial solid waste compared to existing conditions that would adversely affect any landfills.

R. MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
17. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X			1, 2, 6
b) 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 the past projects, the effects of other current projects, and the effects of probable future projects.			X		1, 2, 6
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X		1

Explanation

a) **Less Than Significant Impact with Mitigation**. Based on the analysis provided in this Initial Study, the proposed mixed use development will not substantially degrade or reduce wildlife species or habitat, or impact historic or other cultural resources with the standard measures and mitigation identified within the body of this Initial Study.

b), c) **Less Than Significant Impact**. Based on the analysis provided in this Initial Study, the proposed mixed use development will not significantly contribute to cumulative impacts, nor will it cause substantial adverse effects on humans.

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Chapter 4. References

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4. BAAQMD CEQA Guidelines, 2010
5. San Jose 2020 General Plan
6. Historic Evaluation, 2011
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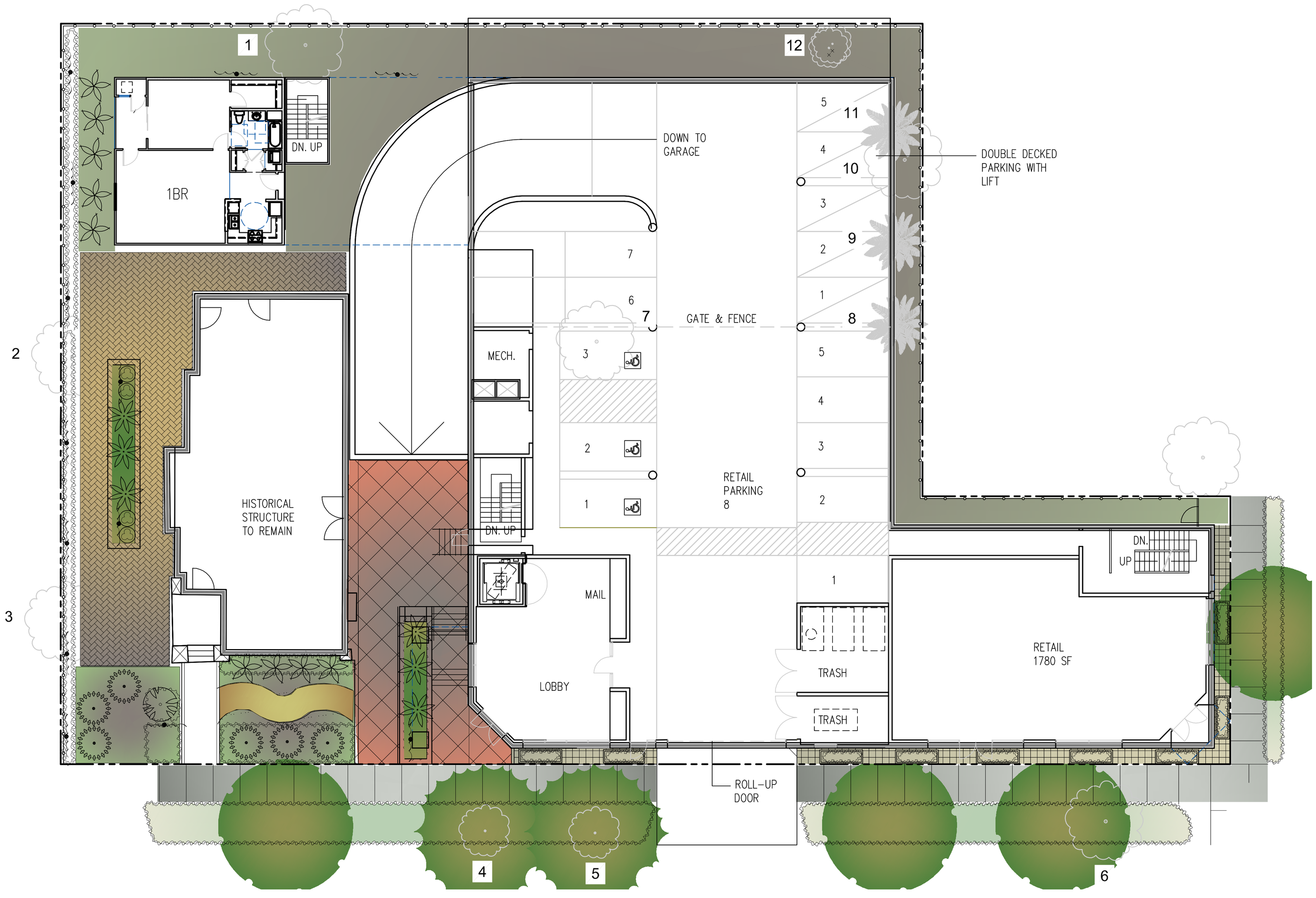
Appendix A

Tree Plan



EXISTING TREES				
NUMBER	CONDITION	DISPOSITION	SPECIES	SIZE AT B.H.D.
1	FAIR	RETAIN	Alnus glutinosa	14"
2	FAIR	RETAIN	Alnus glutinosa	16"
3	FAIR	RETAIN	Liquidambar styraciflua	MULTI-TRUNK 7",6",4"
4	GOOD	RETAIN	Platanus racemosa	16"
5	GOOD	RETAIN	Platanus racemosa	18"
6	GOOD	REMOVE	Platanus racemosa	17"
7	POOR	REMOVE	Diospyros virginiana	6"
8	GOOD	RELOCATE ON SITE	Feijoa sellowiana	`14"
9	GOOD	RELOCATE ON SITE	Syagrus romanzoffiana	13"
10	GOOD	RELOCATE ON SITE	Syagrus romanzoffiana	15"
11	GOOD	RELOCATE ON SITE	Syagrus romanzoffiana	10"
12	FAIR	REMOVE	Diospyros virginiana	9"

JPH Consulting
Land Planning • Project Management • Development Entitlement

SHERWIN SOUTH CAMPUS, LLC
CLIENT

- DEC. 17, 2010
REVISIONS

PROJECT:	2008.124
DRAWN:	YC
DESIGN:	CCT/DRR
SCALE:	1" = 10'
DATE:	DEC. 17, 2010

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PROJECT DATA

CONCEPTUAL LANDSCAPE TREE DISPOSITION PLAN

8TH & WILLIAM STREET MIXED USE DEVELOPMENT

GENERAL DEVELOPMENT PLAN - EXHIBIT C | PLANNED DEVELOPMENT ZONING - PDC09-019

0 1 5 10 20 FEET
GRAPHIC SCALE

6.0D
SHEET NUMBER

LPMD Architects
1288 Kifer Road, Suite 206
Sunnyvale, CA 94086
Telephone : 408-992-0280
Fax : 408-992-0281

VER consultants
Planning | Engineering | Landscape Architecture
www.ver-consultants.com

Appendix B

Historic Evaluation

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code NA

Other Listings _____
Review Code _____ Reviewer _____ Date

Page 1 **of** 15 ***Resource Name or #:** (Assigned by recorder) 535 S. 8th Street - Update

P1. Other Identifier:

***P2. Location: Not for Publication** X **Unrestricted**

***a. County** Santa Clara **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** San Jose East **Date** 1978 **T** __; **R** __; __ **3 of** __ **3 of Sec** __; _____ **B.M.**

c. Address 535 S 8th Street City San Jose Zip 95112

d. UTM: (Give more than one for large and/or linear resources) Zone mE/ __mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
APN 472-28-057

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

A one-and –a-half story house in a rectangular plan of 1880 square foot with a side-facing gabled roof with flared ridgeline. A large stucco addition dominates the south side with alterations to the front porch and entry. The design of the front façade represents the Craftsman style with Asian features. A low shed-roof dormer is in the center of the slopping roof accentuated by sharply pointed exposed rafters and bargeboards that extend past the eaves of the main and dormer roofs. Brackets are seen in the gable ends. The building has been covered in stucco on the ground level (alteration) with wood shingles in the gable ends. The front porch is recessed on the southeast corner with open rafter below a stucco box that is part of the addition leading to the second level. Three battered river rock columns support a beam that extends beyond the wall line to support open sharp pointed rafters. This beam extends across the front façade and is above tripartite window sets centered in the wall of the façade. Each window consists of a pair of casement windows topped by small square multi-pane transoms. A river rock chimney on the north façade extends through the gable. (Continued on page 3)

***P3b. Resource Attributes:** (List attributes and codes) HP 3 Multi- family (former HP2 single family detached) house

P4. Resources Present: X Building Structure Object Site District Element of District Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) East-Front Façade, 7/11/2011

***P6. Date Constructed/Age and Source:** X Historic Prehistoric Both
Constructed: 1907-10 City directories

***P7. Owner and Address:**
Brian Ho, Jean Ho Trustees
3621 Bareclaw LA
San Jose CA 95124

***P8. Recorded by:** (Name, affiliation, and address)
Bonnie Bamburg
Urban Programmers
10710 Ridgeview Avenue
San Jose CA 95127

***P9. Date Recorded:** 1/20/2011

***P10. Survey Type:** (Describe) Survey Update

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.") City of San Jose Downtown Frame Survey phases 1 and 2; Reed Historic District Survey

***Attachments:** NONE Location Map Continuation Sheet X Building, Structure, and Object Record
Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
Artifact Record X Photograph Record Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

 ***Resource Name or #** (Assigned by recorder) 535 S.8th St. San Jose CA 95112

B1. Historic Name:

B2. Common Name: Willis Cooper House

B3. Original Use: single family residence **B4. Present Use:** multi-family residential

***B5. Architectural Style:** Craftsman Bungalow

***B6. Construction History:** (Construction date, alterations, and date of alterations)

Constructed c.1910-1913 Alterations c. 1960 and 2005

***B7. Moved?** X **No** **Yes** **Unknown** **Date:** _____ **Original Location:**

***B8. Related Features:**

None that are significant

B9a. Architect: Unknown b. Builder: unknown

***B10. Significance: Theme** residential Architecture **Area** San Jose

Period of Significance 1910-1930 **Property Type** house **Applicable Criteria** NA (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The property has diminished architectural integrity and is not associated with individuals or events of significance. The original artistic Craftsman Bungalow architecture has been significantly altered by an older alteration that removed the original siding and replaced it with heavily textured stucco and recent the large addition to the south façade that extends to the front altering the front door area and replacing the front door with one that is not compatible with the design of the house. If the addition was to be removed in conformance with the Secretary of the Interiors Standards, the house could regain eligibility for San Jose Historic Landmark status because much of the original design elements remain. In addition to the rehabilitation, eligibility would be further strengthened if the architect is factually identified. The design has elements favored by Charles McKenzie (McKenzie & Wolfe) or possibly Wolfe and Wolfe.

The house appears to have been constructed for Willis and Elizabeth Cooper. Willis Cooper was a principal in the Cooper-Chellen Real Estate, Mortgage and Insurance firm with offices at 25-27 E. Santa Clara Street (1923) . Willis died between 1920 when he is listed in the U.S. Census and 1923 when Elizabeth is listed as a widow In the City Directory. During the years he was working it appears that Willis was a successful businessman and after his death Elizabeth is listed for a while as the Vice President of Cooper-Chellen Real Estate Company. (Continued sheet 3)

B11. Additional Resource Attributes: (List attributes and codes) HP2,HP3

***B12. References:** City & County public documents, see attached list of sources consulted

B13. Remarks:

***B14. Evaluator:** Bonnie Bamburg

***Date of Evaluation:** 7/11/2011

(Sketch Map with north arrow required.)

See attached map

(This space reserved for official comments.)

P3.Description Continued:

The house retains many of the features of a Craftsman Bungalow with Asian influences in the flared ridgeline and pointed exposed rafter ends and bargeboards. However, the design has been altered and is diminished in overall character by a large wood-frame, stucco covered addition to the south façade that extends from the rear of the house to an upper level entrance culminating in large box elements facing the front that covers the entry and porch with the alterations extending to fill in the porch and replace the original entry with a commercial door. The element is modern in style with slanted trapezoidal glass windows and dominates the entire south façade of the building.

In the rear are multiple residential units. It appears the former garage has been converted and a linear single-story apartment building is along the north property line.

Since the 2002 survey conducted by Architectural Resources Group found the building appeared to be eligible for the National Register of Historic Places, the California Register of Historic Resources and as a San Jose City Landmark for the high quality architectural design, the property has sustained significantly diminished integrity . The addition (no permit was located), alters the original design and quality of a low-profile house. In addition to the architecture of the main building, gardens and landscaping were an important part of the setting creating the “natural” features that distinguish the style. The front yard has slightly sculptured bushes in front, however the additional paving and loss of side and rear landscaping detracts from the overall setting.

Significance B 10- Continued:

By 1935, Elizabeth Cooper had moved and the house rented and then sold in 1942, to Adolph W. Otterstein and Margaret H Otterstein. He was a teacher. The next owner, Albert Morthland who rented to Lottie Morthland a teacher at Woodrow Wilson High School. By 1960, after the death of Albert Morthland, Lottie modified the property and the first renters appear listed “in rear”. From that time the number of units has grown, most of the tenants stay a relatively short time and many have been students at San Jose State University. The house has expanded to several apartments in three buildings on the property. Research did not uncover any significant events or associations with people who were influential in the history or development of San Jose

Historical context

By 1870, commercial development began to fill the spaces and replace small houses, including a large concentration of Chinese immigrants in China Town- where the Fairmont Hotel is today. The development of Notre Dame College was a boundary on west Santa Clara Street, and San Jose Normal School in Washington Square drew residential development east on San Carlos Street. In the popular architectural styles, Italianate (1870’s) Queen Anne (1980-

1900) and bungalows (1900-1930's), continued to fill the lots in San Jose. Around San Jose Normal School (San Jose State University), the lots followed this patter as development moved south creating a neighborhood that included the Reed Addition (James Frasier Reed of the Donner Party), and is now bounded on the south by I-280. After WWII, development patters changed to include dividing the single family houses into apartments and developing apartment buildings to accommodate the increase in population and the students attending San Jose State College. An infill style that proliferated is referred to as "box car apartments" due to their two-story, linear shape fitting onto one or two lots of the former single family homes, often these had a blank end wall facing the street. The style interrupted the rhythm of the former streetscape and destroyed the integrity of single family neighborhoods. The block of S. 8th Street is a block that has a variety of architectural styles; single family houses (many altered to multifamily) that are mixed with "box car apartments" and other forms of multi-family residential. To the east etof the block is the border of the Reed Historic District. Where the district abuts the subject property the buildings within the historic district are multi-family. [1]

The history of the property describes the home for a family involved in local business or teaching until the 1960's-70's when it became more densely occupied appealing to students and immigrants. The property has not been associated with individual events or persons significant in the history of San Jose.

Evaluation

Prior to the preparation of this evaluation, the property has been included in at least three previous studies to determine historical and architectural significance. In 2002, a historic district study was undertaken by Architectural Resources Group (ARG) from San Francisco.[2] The study area included the subject property and the 500 block of S 8th Street. The recommended historic district did not include this block although the subject house, 535 S. 8th St. was found eligible for listing in the National Register as a fine example of the Craftsman style of architecture. Since that time, an addition on the south side and alterations to the porch and front entry, have diminished the architectural integrity to the level that it does not qualify for the National Register, the California Register or as a San Jose City Landmark. A second study was conducted by ARG, concluding in January 2004, and did not update the subject property. Subsequent to those studies, Archives and Architecture, San Jose, conducted another study of the South

[1] *Landscape plan*

[2] *ARG, East Downtown Frame Historic Resources Survey ,November 2002 & University Neighborhood Character Study January 2004*

Campus Area, that provided an in depth study of the area, including the relationship to housing for students attending San Jose State University. The building at 353 S. 8th Street, or the entire block was not included in the subsequent Reed City Historic District. While not meeting the standard for designation at this time, the building retains very interesting architectural elements and if the addition were removed and the building rehabilitated following the Secretary of the Interiors Standards for Rehabilitation , the building could be considered for designation as a San Jose Landmark and eligible for listing in the California Register of Historic Resources.

For this update to the previous studies, the property was individually evaluated using the criteria of the City of San Jose Historic Preservation Ordinance; the California Register and the National Register of Historic Places. When evaluated by these criteria the building was found not significant to the history or architectural heritage of San Jose.

San Jose Historic Landmark Criteria:

The San Jose Historic Preservation Ordinance #17927, as amended, contains the criteria that were used to evaluate the property and building. The criteria are as follows in italics.

1. Identification or association with persons, eras or events that have contributed to local, regional, state or national history, heritage or culture in a distinctive, significant or important way;

   The house at 535 S. 8th Street , the residence of the Willis and Elizabeth Cooper and later the Morthlands family is not identified or associated with persons or events that have contributed in a significant way to the history of San Jose.

2. Identification as, or association with, a distinctive, significant or important work or vestige;
   a. Of an architectural style, design or method of construction;
   b. Of a master architect, builder, artist or craftsman;
   c. Of high artistic merit
   d. The totality of which comprises a distinctive, significant or important work of vestige whose component parts may lack the same attributes;
   e. That has yielded or is substantially likely to yield information of value about history, architecture, engineering, culture or aesthetics, or that provides for existing and future generations an example of the physical surroundings in which past generations lived or worked; or
   f. The factor of age alone does not necessarily confer a special historical, architectural cultural aesthetic or engineering significance, value or interest upon a structure or site, but it may have such effect if a more distinctive, significant or important example thereof no longer exists.

   The house may have been designed by a local architect, possible George McKenzie (McKenzie & Wolfe) in the Craftsman Style with Asian influences. Research was not conclusive in identifying the architect. Until recently, when an addition was placed on the south side - extending to the front of the house, the building

was considered to be of high artistic value that was distinctive. Currently many of the architectural features exist, however the overall quality is significantly diminished by the addition and alterations to the front entry area. Evaluating the building using the San Jose Historic Preservation Tally resulted in an adjusted point total of 36.08, which is within the range to be considered for City Landmark, however the building as it is today, does not meet the criteria above. [3]

San Jose Historic Landmarks Commission's Evaluation for Significance establishes the following levels of significance:

33-above evaluate for City Landmark Status
32-Below non- significant

The buildings rated an adjusted total of: 36.08

This rating confirms that the building is not significant to the history of San Jose. The San Jose Planning Department's Historic Evaluation Sheet and Evaluation Tally Form are attached.

California Register- Eligibility Statement

The criteria for listing historical resources in the California Register are consistent with those developed by the National Park Service for listing resources in the National Register of Historic Places, but have been modified for state use in order to include a range of historical resources which better reflect the history of California. An historical resource must be significant at the local, state or national level under one or more of the following four criteria;

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or is likely to yield, information important to the prehistory or history of the local area, California, or the nations.

In addition, the resource must retain enough of its historic character or appearance to be recognizable as a historic property, and to convey the reason for its significance.

As described above, the property is re not associated with significant events or people.. With the architectural

[1]. *Archives & Architecture, Historic District Study, South Campus Area 2005 P 9*

alterations and large addition on the building the house no longer retains the level of design, materials, setting and feeling that are necessary to achieve integrity. Further, without a significant event or person associated with the property, the aspect of association is not present.

The subject building does not achieve significance under any of the four criteria, thus it is not eligible for listing in the California Register of Historic Resources.

National Register of Historic Places – Standards (Criteria)

The National Register of Historic Places has established standards for evaluating the significance of resources that are important in the heritage of the nation. Historic resources may be considered important at the local level, state level or national level. To apply the standards the resource must be considered within significant historical contexts. The standards, age and integrity statements follow;

1. A property must be fifty years old
2. The resource must retain architectural and historical integrity.
3. The resources must meet at least one of the following criteria
   a. are associated with events that have made a significant contribution to the broad patterns of our history; or
   b. are associated with the lives of persons significant in our past; or
   c. embody the distinctive characteristics of a type, period, or method that possess high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or
   d. have yielded, or may be likely to yield, information important in prehistory or history.

Properties that are not eligible for designation as a San Jose Historic Landmark and are not eligible for listing in the California Register of Historic Resources are not significant to the history of San Jose and are not eligible for listing in the National Register of Historic Places. The house at 535 S. 8th Street is not eligible for listing in the National Register of Historic Places, the State Register or as a city landmark- individually and has been evaluated several times and is not a contributing element in a historic district.

Impacts of the proposed project:

A development proposal has been submitted to the City of San Jose that would develop a mixed use development of four-stories, over parking, for a multi-family residential and commercial complex consisting of 34 residential units, a 2,221 Sq Ft Community Facility in the architecturally interesting house (535 S. 8th St) and 1,750 Sq.Ft. of commercial space. The California Environmental Quality Act (CEQA) defines historic resources as those that are eligible for listing in the California Register of Historic Resources, or the National

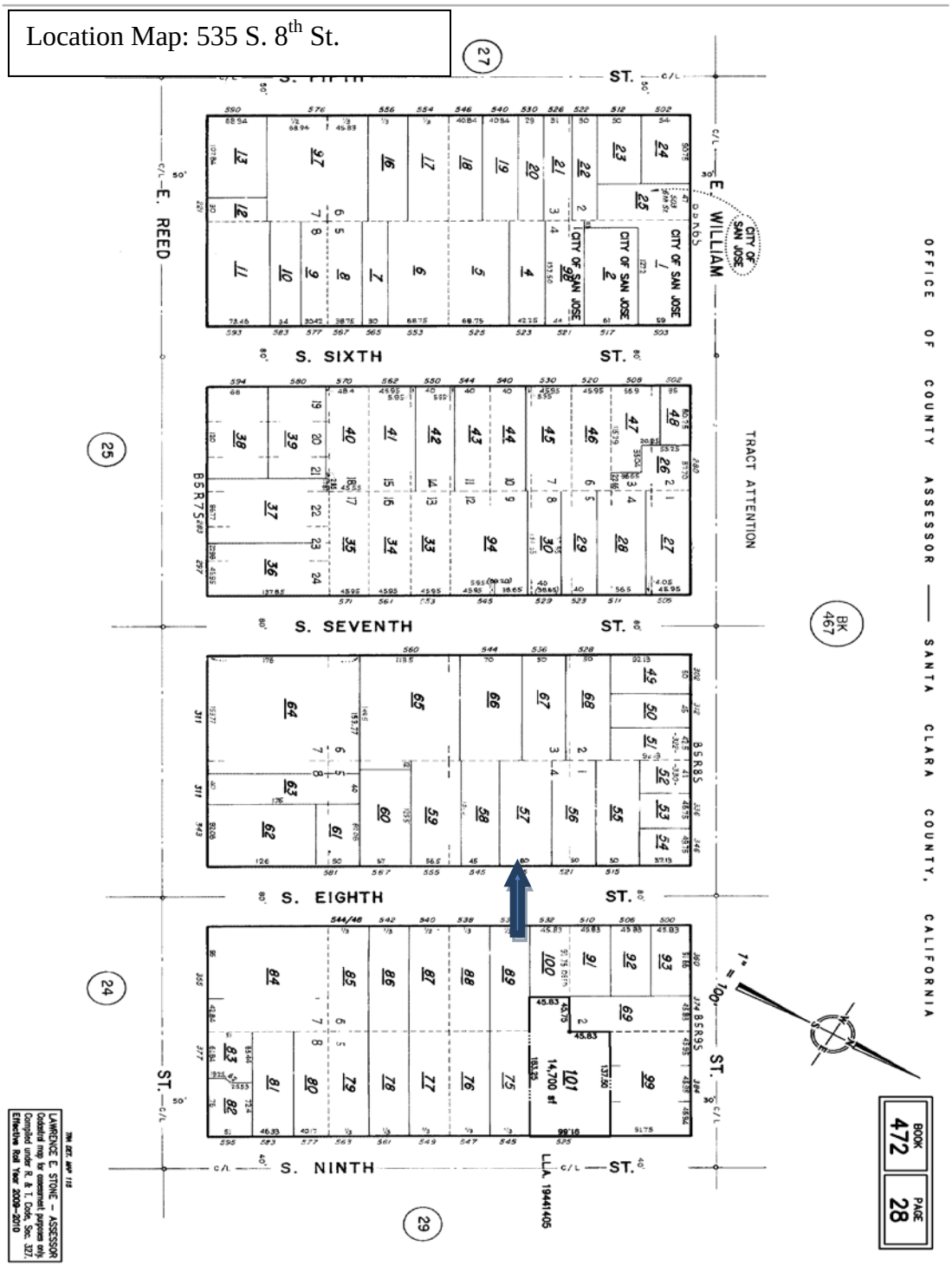
Register of Historic Places. The City of San Jose considers a resource listed as a Candidate City Landmark to be eligible for the California Register.

The proposal creates a garden/ open space area and retains the subject building as a quasi- public meeting and community space. Rehabilitation of the building that is consistent with the Secretary of the Interior's Standards is highly recommended to return this building to a condition that would allow it to be eligible for San Jose City Landmark designation and for the California Register of Historic Resources. The appropriate rehabilitation of the building would be an important benefit for the South Campus Area and the City as a whole.

CONTINUATION SHEET

Trinomial

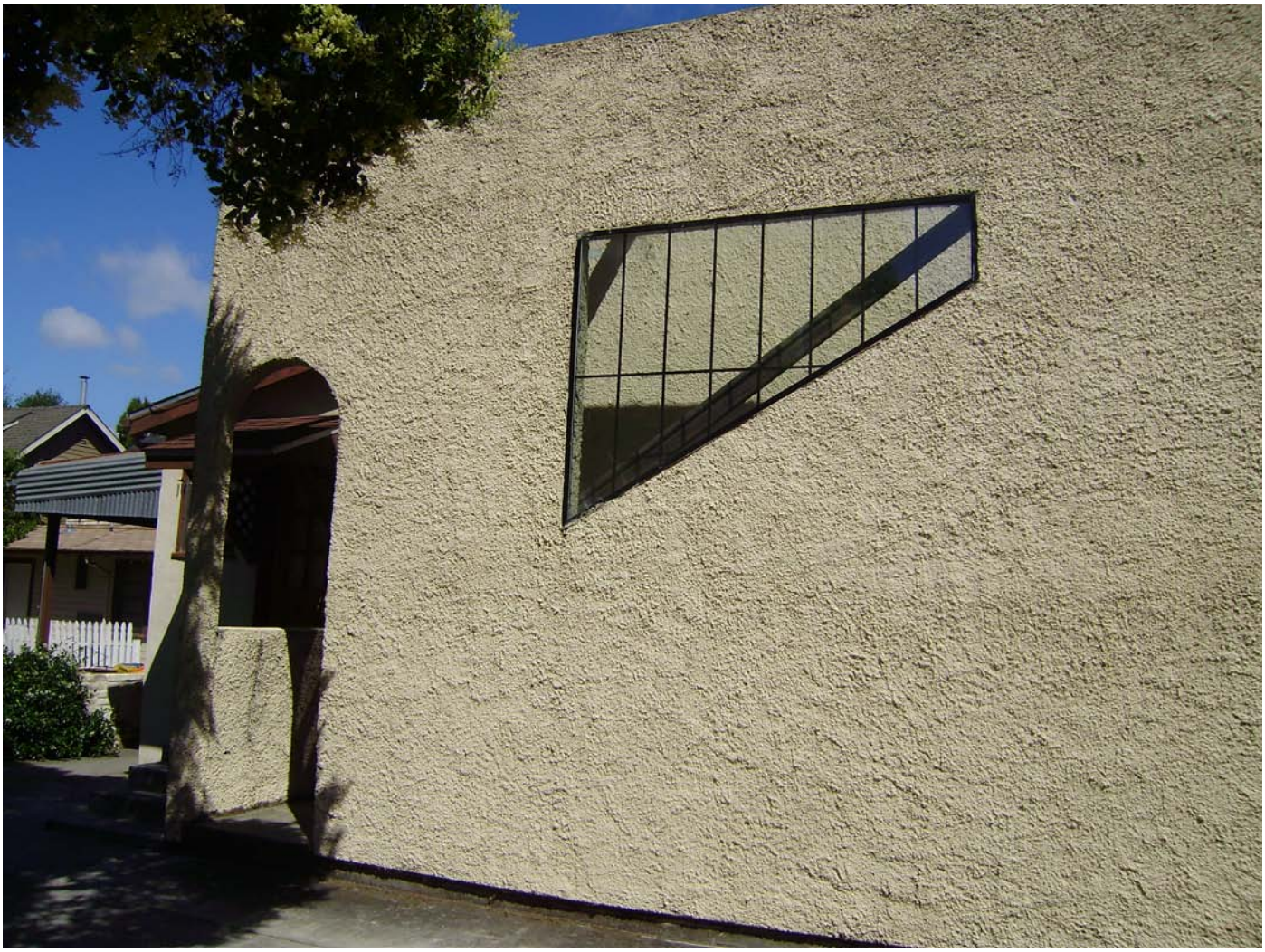
Location Map: 535 S. 8th St.



Photographs of the buildings at 535 S. 8th Street, San Jose. Photographs were taken on July 11, 2011 using digital format.

Photograph # 1 Front façade showing relatively original materials on the right and the addition on the left over front porch and on south side.

Photograph # 2 South façade of the house showing the additions as it wrapps around tothe front façade. Modifications to the front entry porch (enclosed) and door.



Photograph # 3 sourh façade comtemporary addition, staircase wall and entry door arch. .

Photograph # 4 Former garage, remodeled. Remainder of rear yard is concrete paving with small areas of garden or landscaping. Clapboard siding may represent what was on the house before it was stuccoed.

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HISTORIC EVALUATION SHEET

HISTORIC RESOURCE NAME: Cooper House
HISTORIC RESOURCE ADDRESS: 535 S. 8th Street, San Jose

A. VISUAL QUALIFICATIONS

1	EXTERIOR The altered Craftsman style house is behind a small lawn where a section is paved for additional parking in the front yard	E	VG	**G**	FP
2	STYLE Craftsman Bungalow	E	**VG**	G	FP
3	DESIGNER may be Wolf & Wolf	E	**VG**	G	FP
4	CONSTRUCTION - wood frame, tripartite window and river stone work	E	**VG**	G	FP
5	SUPPORTIVE ELEMENTS mature trees, lkandscaping	E	VG	**G**	FP

B. HISTORY/ASSOCIATION

6	PERSON/ORGANIZATION Willis Cooper - Realtor, businessman	E	VG	G	**FP**
7	EVENT none of individual significance	E	VG	G	**FP**
8	PATTERNS urban infill	E	VG	**G**	FP
9	AGE c.1910-13	E	VG	**G**	FP

C. ENVIRONMENTAL/CONTEXT

10	CONTINUITY within the mixed styles of the neighborhood	E	VG	**G**	FP
11	SETTING: typical residential setting	E	VG	**G**	FP
12	FAMILIARITY River Rock and style stand out	E	VG	**G**	FP

D. INTEGRITY

13	CONDITION Appears in good condition	E	**VG**	G	FP
14	EXTERIOR ALTERATIONS to the rear	E	**VG**	G	FP
15	STRUCTURAL REMOVALS addition to the side and rear remove side features	E	**VG**	G	FP
16	SITE original location	**E**	VG	G	FP

E. REVERSIBILITY

17	EXTERIOR large stucco addition	E	VG	**G**	FP

F. ADDITIONAL CONSIDERATIONS/BONUS POINTS

18	NATIONAL OR CALIFORNIA REGISTER	E	VG	G	**FP**

REVIEWED BY: Bonnie Bamburg DATE:1/18/2011

EVALUATION TALLY SHEET
(PART 1)

HISTORIC RESOURCE ADDRESS: 535 S. 8th Street, San Jose

			E	VG	G	FP	
A	VISUAL QUALITY/DESIGN						
	1	EXTERIOR	16	12	6	0	6
	2	STYLE	10	8	4	0	8
	3	DESIGNER	6	4	2	0	4
	4	CONSTRUCTION	10	8	4	0	8
	5	SUPPORTIVE ELEMENTS	8	6	3	0	3
					Subtotal:		29
B.	HISTORY/ASSOCIATION						
	6	PERSON/ORGANIZATION	20	15	7	0	0
	7	EVENT	20	15	7	0	0
	8	PATTERNS	12	9	5	0	5
	9	AGE	8	6	3	0	3
					Subtotal:		8
C.	ENVIRONMENTAL/ CONTEXT						
	10	CONTINUITY	8	6	3	0	3
	11	SETTING	6	4	2	0	2
	12	FAMILIARITY	10	8	4	0	4
					SUBTOTAL:		9

A & C SUBTOTAL:	38
B SUBTOTAL:	8
PRELIMINARY TOTAL: (sum of A. B. & C.)	46

EVALUATION TALLY SHEET
(PART II)

HISTORIC RESOURCE ADDRESS: 535 S. 8th Street, San Jose

		E	VG	G	FP				
D.	**INTEGRITY**								
13	CONDITION		0.03	0.05	0.1	46	X	0.03 =	1.38
	SUBTOTAL A,B&C								
14	EXTERIOR ALTERATIONS		0.05	0.1	0.2	38	X	0.05 =	1.9
	SUBTOTAL A&C								
			0.03	0.05	0.1	8	X	0.03 =	0.24
	FROM B								
15	STRUCTURAL REMOVALS		0.2	0.3	0.4	38	X	0.2 =	7.6
	SUBTOTAL: A & C								
			0.1	0.2	0.4	8	X	0.1 =	0.8
	FROM B								
16	SITE		0.1	0.2	0.4	8	X	0 =	0
	FROM B								
		INTEGRITY DEDUCTIONS SUBTOTAL							11.92
		ADJUSTED SUBTOTAL:				46	-	11.9	34.08
		(Preliminary Total minus Integrity Deductions)							

						VALUE
E	**REVERSIBILITY**	**E**	**VG**	**G**	**FP**	
17	EXTERIOR	3	3	2	2	2
				Total:	2	

F.	**ADDITIONAL CONSIDERATIONS BONUS POINTS**					**VALUE**
18	NATIONAL OR CALIFORNIA REGISTER	20	15	10	0	0
		BONUS POINTS SUBTOTAL:				0
		ADJUSTED TOTAL:				36.08

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code NA

Other Listings _____
Review Code _____ Reviewer _____ Date

Page 1 **of** 15 ***Resource Name or #:** (Assigned by recorder) 515 S. 8th St. San Jose

P1. Other Identifier:

***P2. Location: Not for Publication** X **Unrestricted**

***a. County** Santa Clara **and** P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** San Jose West **Date** 1980 **T** __; **R** __; __ **3 of** __ **3 of Sec** __; _____ **B.M.**

c. Address 515 S. 8th Street City San Jose Zip 95112

d. UTM: (Give more than one for large and/or linear resources)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
APN 472-28-055

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The block that contains the subject property 515 S. 8th St., was divided in half, and then quarters, before the infill subdivision into lots of varying dimensions occurred after 1900, when bungalows were constructed filling the block, and the commercial lots along William Street.

The block has a variety of residential styles and buildings of different sizes. The subject parcel is located at the north end of the block adjacent to commercial parcels that face onto William. On the south side, it is next to a similar style bungalow residence and across the street from a mix of building types that include "box car" apartments. Further south on the block are finer examples of the bungalow style and other notable buildings. (Continued on page 3)

***P3b. Resource Attributes:** (List attributes and codes) HP 2 Single family detached house; HP3 Multi-family building

P4. Resources Present: X Building Structure Object Site District Element of District Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) View N Front Façade, 1/15/2011

***P6. Date Constructed/Age and Source:** X Historic Prehistoric Both
Constructed c.: 1913 City directories

***P7. Owner and Address:**
Brian Ho & Jean Shih
3621 Bearclaw Ln.,San Jose 95124

***P8. Recorded by:** (Name, affiliation, and address)
Bonnie Bamburg
Urban Programmers
10710 Ridgeview Avenue
San Jose CA 95127

***P9. Date Recorded:** 1/20/2011

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") None

***Attachments:** NONE X Location Map X Continuation Sheet X Building, Structure, and Object Record
Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
Artifact Record X Photograph Record Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

 ***Resource Name or #** (Assigned by recorder) 515 S.8th St. San Jose CA 95112

B1. Historic Name:

B2. Common Name: Moellinger House

B3. Original Use: single family residence **B4. Present Use:** multi-family residential

***B5. Architectural Style:** Craftsman Bungalow

***B6. Construction History:** (Construction date, alterations, and date of alterations)

Constructed c.1913 Alterations c. 1960-1991

***B7. Moved?** X **No** **Yes** **Unknown** **Date:** _____ **Original Location:**

***B8. Related Features:**
none

B9a. Architect: Unknown b. Builder: unknown

***B10. Significance: Theme** residential Architecture **Area** San Jose

Period of Significance 1910-1930 **Property Type** house **Applicable Criteria** NA (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The property is not significant to the history or architectural heritage of San Jose because it is not associated with individuals or events of significance. Further the original architecture was not an important example of Craftsman design and it has been altered with contemporary design, materials and features that erode the original design features..

The subject building at 535 S. 8th, is a wood-frame, two-story, house. It is designed in the Craftsman Bungalow style, subcategory of side facing gable, that has been enlarged and altered on three facades. The front façade is divided into three bays created by porch columns constructed with river stone encased in brick edges. The column to the south is an addition that extends the façade by the extra bay. Originally the building had a recessed porch between the two northern columns; however the façade is now straight flush across with the entry door in the center of the façade. To the north is what appears to be an original tripartite window with a band of double square panes above. Below the window, a window box is supported by slanted brackets detailed with pyramidal end caps.

The front door and window to the south are contemporary styles. Part of the original building is a gable dormer that likely had glazing in the recessed opening but now is a vent screen. The sides are sheathed in cut shingles. Heavy beam ends support the dormer which is further accented with pyramidal end caps extending below the dormer and on the bargeboard which is accented with a deep cut-out end.
(Continued sheet 3)

(Sketch Map with north arrow required.)

See attached map

B11. Additional Resource Attributes: (List attributes and codes)
HP2, HP3

***B12. References:** City & County public documents, see attached list of sources consulted

B13. Remarks:

***B14. Evaluator:** Bonnie Bamburg

***Date of Evaluation:** 1/20/2011

(This space reserved for official comments.)

P3.Description Continued:

The façade sheathing varies from the original beveled siding on the north and recycled beveled siding under the addition and wider horizontal siding for the remainder of the addition. The exposed eaves are straight cut with a plain bargeboard on the end of the porch roof and a carved on the north edge of the roof (original building). The chimney replicates the design on the original porch columns with a brick form filled with side and front facing river rocks. This is in contrast to the additions which uses front facing river rocks.

The south façade is altered by the addition described on the front façade that continues around the corner with a second brick and stone column and an entry door. The remaining façade appears relatively original with a tripartite window that matches the one on the front, and a variety of window sizes set in the beveled siding of the first floor or the cut shingle siding of the second floor. Also on the south side is a recessed entrance under a projecting canopy cover. Above the first level is a row of beams that also continue a design element with pyramidal end caps. The roof is supported by wide eaves with slanted brackets. Turning to the rear façade, the rear porch has been enclose and a door added. The rear façade has been altered on the first level with a variety of siding. A large gabled dormer has changed from a recessed opening and now has a plywood wall with a metal frame window that is flush with the outer side walls. The structure of the gable is similar to the one on the front façade. The north façade is relatively unchanged with, random placed windows, the chimney and a narrow setback from the adjacent commercial property.

The front yard is a solid concrete parking area that continues into a side driveway without landscaping.

The secondary building is a former garage in the rear against the property line. Originally a front facing gable (pitched roof), the building has been extended forward with a flat roof addition. Facing the street is a vehicle door and a pedestrian door with a sign “office”. The original garage appears to have been converted into an apartment. The materials of the addition are horizontal grooved siding, the peak of the garage beveled siding. The building lacks architectural integrity and is not an enhancement to the main house.

Also in the rear is a wooden structure with a gambrel roof. The materials are combination of plywood panels and reclaimed wood. Much of the structure is covered with a builder’s paper. At the west end is a plywood door. The function is unknown.

The rear yard is a combination of structures and parking. There is no garden or other landscape feature.

The property lacks integrity of a Craftsman style home. In addition to the architecture of the main building, gardens and landscaping were an important part of the setting creating the “natural” features that distinguish the style. The main building has been altered with a substantial diminution of integrity. At one time the building represented a good

example of the Craftsman Bungalow but alterations have merged with the structure of the original building and have destroyed diminished the creditability of the original design The over-all condition of the property is fair-good,

Significance B 10- Continued:

By 1870, commercial development began to fill the spaces and replace small houses, including a large concentration of Chinese immigrants in China Town- where the Fairmont Hotel is today. The development of Notre Dame College was a boundary on west Santa Clara Street, and San Jose Normal School in Washington Square drew residential development east on San Carlos Street. In the popular architectural styles, Italianate (1870's) Queen Anne (1980-1900) and bungalows (1900-1930's), continued to fill the lots in San Jose. Around San Jose Normal School (San Jose State University), the lots followed this patter as development moved south creating a neighborhood that included the Reed Addition (James Frasier Reed of the Donner Party), and is now bounded on the south by I-280. After WWII, development patters changed to include dividing the single family houses into apartments and developing apartment buildings to accommodate the increase in population and the students attending San Jose State College. A style that proliferated is referred to as "box car apartments" due to their linear shape fitting onto one or two lots of the former single family homes, often these had a blank end wall facing the street. The style interrupted the rhythm of the former streetscape and destroyed the integrity of single family neighborhoods.

515 S. 8th, St was constructed c. 1910 and is shown on the 1915 Sanborn Fire Insurance map. The from and shape of the building have changed as the building was enlarged.

The first owner listed in the City directory was John H. and Mary Moellering. John, born in 1850, and Mary came from Buena Vista, Iowa where he had been a farmer, an occupation he continued in the Santa Clara Valley. At the time the house was constructed John was retired. His eldest son, Edward Moellering was partners with J.A. Goodwin in the firm of Moellering & Goodwin, Real Estate Loans and General Insurance with offices at 64 E. Santa Clara Street. It appears the firm was involved in the development of the two houses at 515 & 521 S. 8th Street and that John owned both renting the one at 521 S 8th St., while living in the one at 515 S. 8th St.. After John died in 1924, Mary continued to live in the house until her death after which their daughter Mary lived in the house. By 1943, Granddaughter Margaret Huckby is listed as a co-owner with Mary. By 1950, the house is listed with the address of 515-517 and is rented. From that time to the present, the occupants have renting small apartments in the building. Most of the occupants stay a relatively short time and are often students at San Jose State University.

The history of the property describes the home for generations of the John Moellering family. The property is not associated with events or persons significant in the history of San Jose.

Evaluation

Prior to the preparation of this evaluation, the property has been included in at least three previous studies to determine historical and architectural significance. In 2002, a historic district study was undertaken by Architectural Resources Group (ARG) from San Francisco.[1] The study area included the subject property and the block on S 8th Street. The recommended historic district did not include the block although at least one house, 535 S. 8th St. was found eligible for listing in the National Register as a fine example of the Craftsman style of architecture. The subject property was not considered important enough to generate a DPR form (eligible for listing in the Californian Register or the San Jose Inventory). A second study was conducted by ARG, concluding in January 2004, and did not identify the subject property. Subsequent to those studies, Archives and Architecture, San Jose, conducted another study of the South Campus Area, that provided an in depth study of the area, including the relationship to housing for students attending San Jose State University. Again the study did not find importance in the building at 515 S. 8th Street.

The property was individually evaluated during this study using the criteria of the City of San Jose Historic Preservation Ordinance; the California Register and the National Register of Historic Places. When evaluated by these criteria the building was found not significant to the history or architectural heritage of San Jose.

San Jose Historic Landmark Criteria:

The San Jose Historic Preservation Ordinance #17927, as amended, contains the criteria that were used to evaluate the property and building. The criteria are as follows in italics.

1. Identification or association with persons, eras or events that have contributed to local, regional, state or national history, heritage or culture in a distinctive, significant or important way;

   The house at 515 S. 8th Street , the residence of the John Moellering family is not identified or associated with persons or events that have contributed in a significant way to the history of San Jose.

2. Identification as, or association with, a distinctive, significant or important work or vestige;
   a. Of an architectural style, design or method of construction;
   b. Of a master architect, builder, artist or craftsman;

[1] *ARG, East Downtown Frame Historic Resources Survey ,November 2002 & University Neighborhood Character Study January 2004*

c. Of high artistic merit
d. The totality of which comprises a distinctive, significant or important work of vestige whose component parts may lack the same attributes;
e. That has yielded or is substantially likely to yield information of value about history, architecture, engineering, culture or aesthetics, or that provides for existing and future generations an example of the physical surroundings in which past generations lived or worked; or
f. The factor of age alone does not necessarily confer a special historical, architectural cultural aesthetic or engineering significance, value or interest upon a structure or site, but it may have such effect if a more distinctive, significant or important example thereof no longer exists.

The Moellering house has extensive modifications including the significantly altered front façade that extends to the south side of the building and is a substantial factor leading to the a loss of architectural integrity. However, prior to the additions it was only a minor example of the Craftsman style. It is not identified or associated with a master architect or builder and is not (was nor) of high artistic value. The building does not represent a significant or important architectural work. It was previously considered during two Historic District Studies, and not found to have sufficient importance to be considered significant and or a contributor to a potential historic district. [2]

San Jose Historic Landmarks Commission's Evaluation for Significance establishes the following levels of significance:

33-above evaluate for City Landmark Status
32-0 non-significant

The buildings rated an adjusted total of: 15.54

This rating confirms that the building is not significant to the history of San Jose. The San Jose Planning Department's Historic Evaluation Sheet and Evaluation Tally Form are attached.

California Register- Eligibility Statement

The criteria for listing historical resources in the California Register are consistent with those developed by the National Park Service for listing resources in the National Register of Historic Places, but have been modified for state use in order to include a range of historical resources which better reflect the history of California. An historical resource must be significant at the local, state or national level under one or more of the following four criteria;

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional

[1]. *Archives & Architecture, Historic District Study, South Campus Area 2005 P 9*

history or the cultural heritage of California or the United States.

2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or is likely to yield, information important to the prehistory or history of the local area, California, or the nations.

In addition, the resource must retain enough of its historic character or appearance to be recognizable as a historic property, and to convey the reason for its significance.

As described above, the property is re not associated with significant events or people. The building is not a significant example of fine or important architectural style or of high quality construction. The house has been extensively remodeled and no longer retains integrity.

The subject building does not achieve significance under any of the four criteria, thus it is not eligible for listing in the California Register of Historic Resources.

National Register of Historic Places – Standards (Criteria)

The National Register of Historic Places has established standards for evaluating the significance of resources that are important in the heritage of the nation. Historic resources may be considered important at the local level, state level or national level. To apply the standards the resource must be considered within significant historical contexts. The standards, age and integrity statements follow;

1. A property must be fifty years old
2. The resource must retain architectural and historical integrity.
3. The resources must meet at least one of the following criteria
   a. are associated with events that have made a significant contribution to the broad patterns of our history; or
   b. are associated with the lives of persons significant in our past; or
   c. embody the distinctive characteristics of a type, period, or method that possess high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or
   d. have yielded, or may be likely to yield, information important in prehistory or history.

Properties that are not eligible for designation as a San Jose Historic Landmark and are not eligible for listing in the California Register of Historic Resources are not significant to the history of San Jose and are not eligible for listing in the National Register of Historic Places. The house at 515 S. 8th Street is not eligible for listing in the National Register of Historic Places individually or as a contributing element in a historic district.

Impacts of the proposed project:

A development proposal has been submitted to the City of San Jose that would remove the existing house, garage and out building and develop a mixed use development that would be four-stories, over parking, with multi-family residential and commercial complex consisting of 34 residential units, a 2,221 Sq Ft Community Facility in the architecturally important house at 535 S. 8th Street- APN-47228057) and 1,750 Sq.Ft. of commercial space on this and adjacent parcels.

The California Environmental Quality Act (CEQA) defines historic resources as those that are eligible for listing in the California Register of Historic Resources, or the National Register of Historic Places. The City of San Jose considers a resource listed as a Candidate City Landmark to be eligible for the California Register.

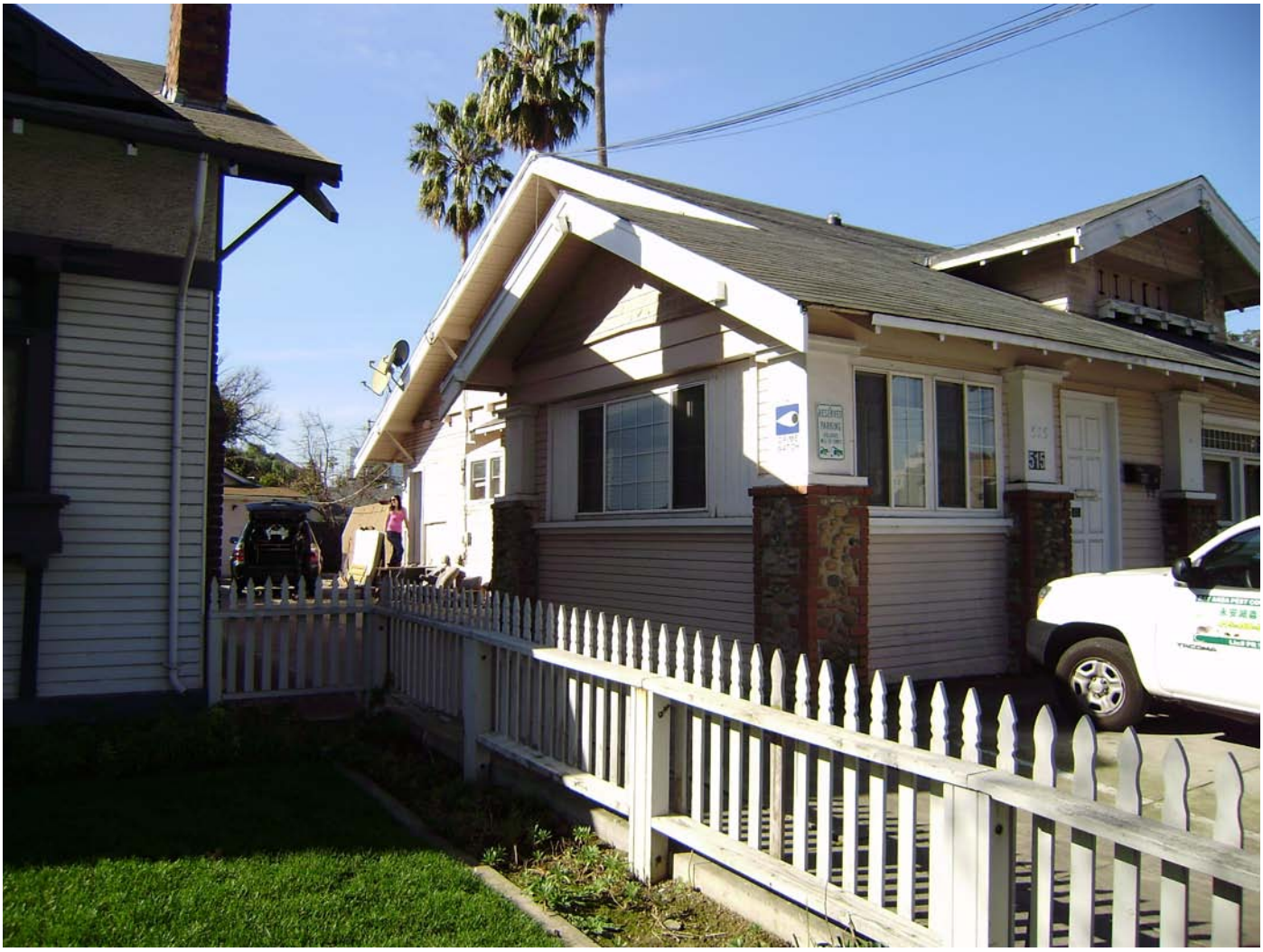
The property that is the subject of this evaluation is not eligible for listing in the California Register of Historic Resources, individually or as a contributing element in a historic district. Removal the house at 515 S. 8th Street, a non-significant building, does not create a "substantial adverse change" therefore the removal is not considered an adverse impact under the CEQA Guidelines. No mitigation is required.

The potential for impacts to other historic recourses by the proposed project is considered in the Environmental Study including an assessment of the development proposal on the Reed Hisoric District and the property at 535 S. 8th street that is eligible for Candidate City Landmark status.

Location Map: 515 S. 8th St.

Photographs of the buildings at 515 S. 8th Street, San Jose. Photographs were taken on January 12, 2011 using digital format.

Photograph # 1 Front façade showing relatively original materials on the right and the addition on the left.



Photograph # 2 South façade of the house showing the additions as it wrapps around from the front façade.

Photograph # 3 Rear façade and south façade showing infill construction on the corner (former porch) and in the dormer. The wood structure in the rear yard is placed close to the rear façade. Addition is on the right.

Photograph # 4 Former garage, remodeled and enlarged with a flat roof section in the front. Remainder of rear yard is concrete paving.

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HISTORIC EVALUATION SHEET

HISTORIC RESOURCE NAME: John Moellering House
HISTORIC RESOURCE ADDRESS: 515 S. 8th Street, San Jose

A. VISUAL QUALIFICATIONS

1	EXTERIOR The site composition is a concrete yard and altered Craftsman style house that is undistinguished	E	VG	G	**FP**
2	STYLE Craftsman Bungalow	E	VG	**G**	FP
3	DESIGNER unknown	E	VG	G	**FP**
4	CONSTRUCTION - wood frame, tripartite window and brick/stone work	E	VG	**G**	FP
5	SUPPORTIVE ELEMENTS none	E	VG	G	**FP**

B. HISTORY/ASSOCIATION

6	PERSON/ORGANIZATION John Moellering	E	VG	G	**FP**
7	EVENT none of individual significance	E	VG	G	**FP**
8	PATTERNS urban infill	E	VG	**G**	FP
9	AGE c.1913	E	VG	**G**	FP

C. ENVIRONMENTAL/CONTEXT

10	CONTINUITY within the mixed styles of the neighborhood	E	VG	**G**	FP
11	SETTING: no landscaping or other enhancement to the building	E	VG	G	**FP**
12	FAMILIARITY does not stand out in the streetscape	E	VG	G	**FP**

D. INTEGRITY

13	CONDITION Appears in good condition	E	**VG**	G	FP
14	EXTERIOR ALTERATIONS addition and alteration of front façade	E	**VG**	G	FP
15	STRUCTURAL REMOVALS front and rear additions	E	**VG**	G	FP
16	SITE original location	**E**	VG	G	FP

E. REVERSIBILITY

17	EXTERIOR difficult to remove addition	E	VG	**G**	FP

F. ADDITIONAL CONSIDERATIONS/BONUS POINTS

18	NATIONAL OR CALIFORNIA REGISTER	E	VG	G	**FP**

REVIEWED BY: Bonnie Bamburg

DATE: January 15,

2011

EVALUATION TALLY SHEET
(PART 1)

HISTORIC RESOURCE ADDRESS: 515 S. 8th Street, San Jose

			E	VG	G	FP	
A	VISUAL QUALITY/DESIGN						
	1	EXTERIOR	16	12	6	0	0
	2	STYLE	10	8	4	0	4
	3	DESIGNER	6	4	2	0	0
	4	CONSTRUCTION	10	8	4	0	4
	5	SUPPORTIVE ELEMENTS	8	6	3	0	0
					Subtotal:		8
B.	HISTORY/ASSOCIATION						
	6	PERSON/ORGANIZATION	20	15	7	0	0
	7	EVENT	20	15	7	0	0
	8	PATTERNS	12	9	5	0	5
	9	AGE	8	6	3	0	3
					Subtotal:		8
C.	ENVIRONMENTAL/ CONTEXT						
	10	CONTINUITY	8	6	3	0	3
	11	SETTING	6	4	2	0	0
	12	FAMILIARITY	10	8	4	0	0
					SUBTOTAL:		3

A & C SUBTOTAL:	11
B SUBTOTAL:	8
PRELIMINARY TOTAL: (sum of A. B. & C.)	19

EVALUATION TALLY SHEET
(PART II)

HISTORIC RESOURCE ADDRESS: 515 S. 8th Street, San Jose

D.	**INTEGRITY**	**E**	**VG**	**G**	**FP**				
	13 CONDITION		0.03	0.05	0.1	19	X	0.03 =	0.57
		SUBTOTAL A,B&C							
	14 EXTERIOR ALTERATIONS		0.05	0.1	0.2	11	X	0.05 =	0.55
		SUBTOTAL A&C							
			0.03	0.05	0.1	8	X	0.03 =	0.24
		FROM B							
	15 STRUCTURAL REMOVALS		0.2	0.3	0.4	11	X	0.3 =	3.3
		SUBTOTAL: A & C							
			0.1	0.2	0.4	8	X	0.1 =	0.8
		FROM B							
	16 SITE		0.1	0.2	0.4	8	X	0 =	0
		FROM B							
		INTEGRITY DEDUCTIONS SUBTOTAL							5.46
		ADJUSTED SUBTOTAL:				19	-	5.46	13.54
		(Preliminary Total minus Integrity Deductions)							

E	**REVERSIBILITY**	**E**	**VG**	**G**	**FP**		
				VALUE			
	17 EXTERIOR	3	3	2	2		2
				Total:		2	

F.	**ADDITIONAL CONSIDERATIONS**						
	BONUS POINTS			**VALUE**			
		E	**VG**	**G**	**FP**		
	18 INTERIOR HISTORY ASSOCIATION	3	3	1	0	0	
	19 INTERIOR VISUAL QUALITY	3	3	1	0	0	
	20 INTERIOR ALTERATIONS	4	4	3	1	0	
	21 INTERIOR REVERSIBILITY	4	4	2	0	0	
	22 NATIONAL OR CALIFORNIA REGISTER	20	15	10	0	0	
		BONUS POINTS SUBTOTAL:					0
		ADJUSTED TOTAL:					15.54

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code NA

Other Listings _____
Review Code _____ Reviewer _____ Date

Page 1 **of** 14 ***Resource Name or #:** (Assigned by recorder) 521 S. 8th St. San Jose

P1. Other Identifier:

***P2. Location: Not for Publication** X **Unrestricted**

***a. County** Santa Clara **and** P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** San Jose East **Date** 1978 **T** __; **R** __; __ **3 of** __ **3 of Sec** __; _____ **B.M.**

c. Address 521 S. 8th Street City San Jose Zip 95112

d. UTM: (Give more than one for large and/or linear resources)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
APN 472-28-056

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The block that contains the subject property 521 S. 8th St., was divided in half, and then quarters, before the infill subdivision into lots of varying dimensions occurred after 1900, when bungalows were constructed filling the block, and the commercial lots along William Street.

The block has a variety of residential styles and buildings of different sizes. The subject parcel is located at the north end of the block and was almost a twin design with the one to the north which is now significantly altered. Across the street is a mix of building types that include "box car" apartments. Further south on the block are finer examples of the bungalow style and other notable buildings. (Continued on page 3)

***P3b. Resource Attributes:** (List attributes and codes) HP 2 Single family detached house; HP3 Multi-family building

P4. Resources Present: X Building Structure Object Site District Element of District Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) View N
Front Façade, 1/15/2011

***P6. Date Constructed/Age and Source:** X Historic Prehistoric Both
Constructed c.: 1913 City directories

***P7. Owner and Address:**
Brian Ho & Jean Shih
3621 Bearclaw Ln.,San Jose 95124

***P8. Recorded by:** (Name, affiliation, and address)
Bonnie Bamburg
Urban Programmers
10710 Ridgeview Avenue
San Jose CA 95127

***P9. Date Recorded:** 1/20/2011

***P10. Survey Type:** (Describe) Update

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") San Jose East Downtown Frame Survey, Phase 1 & 2, Reed City Historic District Survey

***Attachments:** NONE X Location Map X Continuation Sheet X Building, Structure, and Object Record
Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
Artifact Record X Photograph Record Other (List):

State of California The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

Page 2 **of 14** ***Resource Name or #** (Assigned by recorder) 521 S.8th St. San Jose CA 95112

B1. Historic Name:

B2. Common Name: Willis Cooper House

B3. Original Use: single family residence **B4. Present Use:** multi-family residential

***B5. Architectural Style:** Craftsman Bungalow

***B6. Construction History:** (Construction date, alterations, and date of alterations)

Constructed c.1910-1913

***B7. Moved?** X **No** **Yes** **Unknown** **Date:** _____ **Original Location:**

***B8. Related Features:**

Barn in rear

B9a. Architect: Unknown b. Builder: unknown

***B10. Significance: Theme** residential Architecture **Area** San Jose

Period of Significance 1910-1930 **Property Type** house **Applicable Criteria** NA (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The property at 521 S. 8th Street is a good example of the Craftsman style of architecture that was the dominate style in San Jose during the first quarter of the 1900's. The property retains integrity of the original design and materials. In a City with many fine Craftsman Bungalows this one is not of Landmark stature. The neighborhood has radically changed including the much altered bungalow to the north that was almost a twin to this one creating a streetscape of pleasant bungalows. The area has been surveyed several times and although this house has remained intact, it was not included in either the Reed City Landmark District or considered for City Landmark Status. This update agrees with the previous conclusions.

The history reported in the 2002 Architectural Resources Survey has not changed except for a new owner. The owners and tenants have all been working families with no unusual or significant associations. The property is not associated with events of people in a significant way.

(Continued sheet 3)

B11. Additional Resource Attributes: (List attributes and codes) HP2,HP3

***B12. References:** City & County public documents, see attached list of sources consulted

B13. Remarks:

***B14. Evaluator:** Bonnie Bamburg

***Date of Evaluation:** 1/20//2011

(Sketch Map with north arrow required.)

See attached map

(This space reserved for official comments.)

P3.Description Continued:

The building is a Craftsman Bungalow constructed as a one-and –a- half story building of 1.597 square feet with a side-facing gable roof. A large gabled dormer with a deep eave is on the east slope. The fascia board is sheathed in stucco while the inner portion has narrowly spaced vertical slats inset with an octagonal window. The is a long window box that span the length of the vertical slats. The bargeboards on the gables are notched at the end. There are exposed rafters at the eaves of the front façade. This wood frame structure is sheathed in clapboards. There is a recessed porch on the southeast corner of the front façade. Three brick and stucco piers support the porch with two on either side of the stairs. The third is free standing. The three piers support a lentil. Four beams, two per pier, rest on the lentil. Two more beams extend from the third pier to a fourth pier , delineating the eastern edge of the porch. There are two windows on the front façade, each with a fixed transom and single-hung lower sash. Brackets extend form either side of each transom supporting decorative horizontal trim. A flower box, supported by brackets, extends across the base of both windows. The low-pitched roof, recessed porch, porch piers, dormer, brackets, horizontal lines and exposed rafter ends make this house a good example of the Craftsman style. The description is taken from the 202 survey by Architectural Resources Group and does not need to be updated.

The secondary building on the property is a barn in the rear against the west property line. A front facing gable (pitched roof), style the building appears to be used for storage. The driveway is double strips of concrete with red rock in the center and along the side next to the fence. The barn and driveway are enhancements to the setting and main house.

The front yard has lawn and a low picket fence around the yard, while the rear has a large parking surface and garden areas along the side of the house and fence line.

The property retains the integrity of a Craftsman style home with a barn and appropriate landscaping in the front. The over-all condition of the property is very good,

Significance B 10- Continued:

By 1870, commercial development began to fill the spaces and replace small houses, including a large concentration of Chinese immigrants in China Town- where the Fairmont Hotel is today. The development of Notre Dame College was a boundary on west Santa Clara Street, and San Jose Normal School in Washington Square drew residential development east on San Carlos Street. In the popular architectural styles, Italianate (1870's) Queen Anne (1980-1900) and bungalows (1900-1930's), continued to fill the lots in San Jose. Around San Jose Normal School (San Jose State University), the lots followed this patter as development moved south creating a neighborhood that included the Reed Addition (James Frasier Reed of the Donner Party), and is now bounded on the south by I-280.

After WWII, development patters changed to include dividing the single family houses into apartments and developing apartment buildings to accommodate the increase in population and the students attending San Jose State College. A style that proliferated is referred to as "box car apartments" due to their linear shape fitting onto one or two lots of the former single family homes, often these had a blank end wall facing the street. The style interrupted the rhythm of the former streetscape and destroyed the integrity of single family neighborhoods.

521 S. 8th, St was constructed c. 1910 and is shown on the 1915 Sanborn Fire Insurance map. The from and shape of the building have not changed.

The history of the property describes the home for working families. The property is not associated with events or persons significant in the history of San Jose.

Evaluation

Prior to the preparation of this evaluation, the property has been included in at least three previous studies to determine historical and architectural significance. In 2002, a historic district study was undertaken by Architectural Resources Group (ARG) from San Francisco.[1] The study area included the subject property and the block on S 8th Street. The recommended historic district did not include the block. The subject property was evaluated using the former rating system and found to be a Structure of Merit.. A second study was conducted by ARG, concluding in January 2004, and did not change the rating for the subject property. Subsequent to those studies, Archives and Architecture, San Jose, conducted another study of the South Campus Area, that provided an in depth study of the area, including the relationship to housing for students attending San Jose State University. Again the study did not update the status of the building at 521 S. 8th Street.

The property was individually evaluated during this study using the criteria of the City of San Jose Historic Preservation Ordinance; the California Register and the National Register of Historic Places. When evaluated by these criteria the building was found not significant to the history or architectural heritage of San Jose.

[1] *ARG, East Downtown Frame Historic Resources Survey ,November 2002 & University Neighborhood Character Study January 2004*

San Jose Historic Landmark Criteria:

The San Jose Historic Preservation Ordinance #17927, as amended, contains the criteria that were used to evaluate the property and building. The criteria are as follows in italics.

1. Identification or association with persons, eras or events that have contributed to local, regional, state or national history, heritage or culture in a distinctive, significant or important way;

   The house at 521 S. 8th Street , is not identified or associated with persons or events that have contributed in a significant way to the history of San Jose.

2. Identification as, or association with, a distinctive, significant or important work or vestige;
   a. Of an architectural style, design or method of construction;
   b. Of a master architect, builder, artist or craftsman;
   c. Of high artistic merit
   d. The totality of which comprises a distinctive, significant or important work of vestige whose component parts may lack the same attributes;
   e. That has yielded or is substantially likely to yield information of value about history, architecture, engineering, culture or aesthetics, or that provides for existing and future generations an example of the physical surroundings in which past generations lived or worked; or
   f. The factor of age alone does not necessarily confer a special historical, architectural cultural aesthetic or engineering significance, value or interest upon a structure or site, but it may have such effect if a more distinctive, significant or important example thereof no longer exists.

   The Craftsman style house is a good example of the style It is not identified or associated with a master architect or builder and is not of high artistic value. The building is enhanced by the setting, including the barn in the rear but does not represent a significant or important architectural work. It was previously considered during two Historic District Studies, and not found to have sufficient importance to be considered significant and or a contributor to a potential historic district. [2]

San Jose Historic Landmarks Commission's Evaluation for Significance establishes the following levels of significance:

33-above evaluate for City Landmark Status
32-0 non-significant

---

[1]. *Archives & Architecture, Historic District Study, South Campus Area 2005 P 9*

The buildings rated an adjusted total of: 30.76

This rating confirms that the building is a good example but is not significant to the history of San Jose. The San Jose Planning Department's Historic Evaluation Sheet and Evaluation Tally Form are attached.

California Register- Eligibility Statement

The criteria for listing historical resources in the California Register are consistent with those developed by the National Park Service for listing resources in the National Register of Historic Places, but have been modified for state use in order to include a range of historical resources which better reflect the history of California. An historical resource must be significant at the local, state or national level under one or more of the following four criteria;

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or is likely to yield, information important to the prehistory or history of the local area, California, or the nations.

In addition, the resource must retain enough of its historic character or appearance to be recognizable as a historic property, and to convey the reason for its significance.

As described above, the property is re not associated with significant events or people. The building is not a significant example of fine or important architectural style or of high quality construction.

The subject building does not achieve significance under any of the four criteria, thus it is not eligible for listing in the California Register of Historic Resources.

National Register of Historic Places – Standards (Criteria)

The National Register of Historic Places has established standards for evaluating the significance of resources that are important in the heritage of the nation. Historic resources may be considered important at the local level, state level or national level. To apply the standards the resource must be considered within significant historical contexts. The standards, age and integrity statements follow;

1. A property must be fifty years old
2. The resource must retain architectural and historical integrity.

3. The resources must meet at least one of the following criteria
   a. are associated with events that have made a significant contribution to the broad patterns of our history; or
   b. are associated with the lives of persons significant in our past; or
   c. embody the distinctive characteristics of a type, period, or method that possess high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or
   d. have yielded, or may be likely to yield, information important in prehistory or history.

Properties that are not eligible for designation as a San Jose Historic Landmark and are not eligible for listing in the California Register of Historic Resources are not significant to the history of San Jose and are not eligible for listing in the National Register of Historic Places. The house at 521 S. 8th Street is not eligible for listing in the National Register of Historic Places individually or as a contributing element in a historic district.

Impacts of the proposed project:

A development proposal has been submitted to the City of San Jose that would remove the existing house, garage and out building and develop a mixed use development that would be four-stories, over parking, with multi-family residential and commercial complex consisting of 34 residential units, a 2,221 Sq Ft Community Facility in the architecturally interesting house at 535 S. 8th Street- APN-47228057) and 1,750 Sq.Ft. of commercial space on this and adjacent parcels.

The California Environmental Quality Act (CEQA) defines historic resources as those that are eligible for listing in the California Register of Historic Resources, or the National Register of Historic Places. The City of San Jose considers a resource listed as a Candidate City Landmark to be eligible for the California Register.

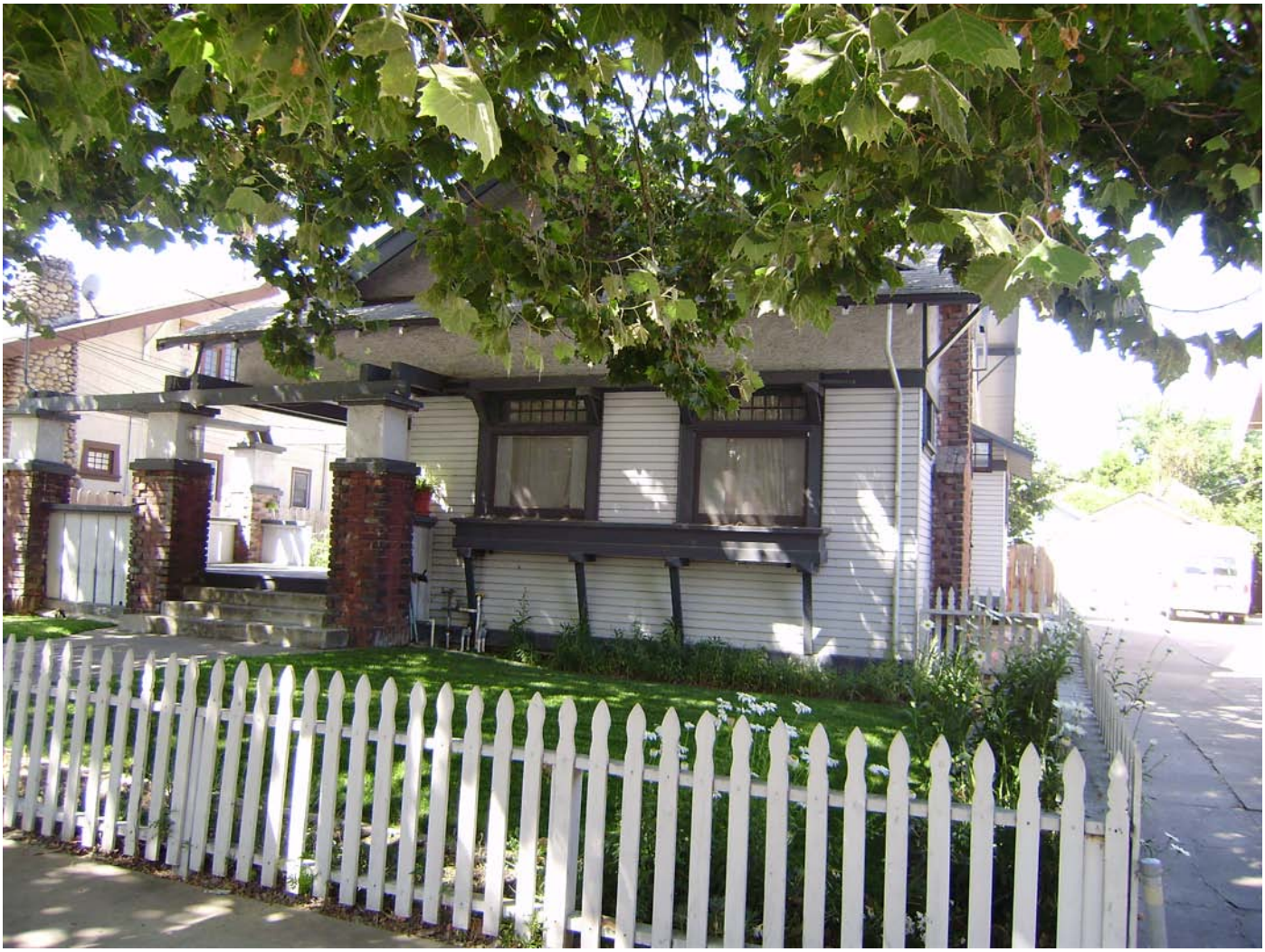
The property that is the subject of this evaluation is not eligible for listing in the California Register of Historic Resources, individually or as a contributing element in a historic district. Removal the house at 521 S. 8th Street, a non-significant building, does not create a “substantial adverse change” therefore the removal is not considered an adverse impact under the CEQA Guidelines. No mitigation is required.

CONTINUATION SHEET

Trinomial

Location Map: 521 S. 8th St.

Photographs of the buildings at 521 S. 8th Street, San Jose. Photographs were taken on July 11, 2011 using digital format.



Photograph # 1 Front façade showing relatively original materials on the right and the addition on the left.

Photograph # 2 North façade of the house showing the inset in the gable, brackets and brick chimney

Photograph # 3 South façade driveway and barn that enhance the setting.

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HISTORIC EVALUATION SHEET

HISTORIC RESOURCE NAME: Cooper House
HISTORIC RESOURCE ADDRESS: 535 S. 8th Street, San Jose

A. VISUAL QUALIFICATIONS

1	EXTERIOR The altered Craftsman style house is behind a small lawn where a section is paved for additional parking in the front yard	E	VG	**G**	FP
2	STYLE Craftsman Bungalow	E	**VG**	G	FP
3	DESIGNER may be Wolf & Wolf	E	**VG**	G	FP
4	CONSTRUCTION - wood frame, tripartite window and river stone work	E	**VG**	G	FP
5	SUPPORTIVE ELEMENTS mature trees, lkandscaping	E	VG	**G**	FP

B. HISTORY/ASSOCIATION

6	PERSON/ORGANIZATION Willis Cooper - Realtor, businessman	E	VG	G	**FP**
7	EVENT none of individual significance	E	VG	G	**FP**
8	PATTERNS urban infill	E	VG	**G**	FP
9	AGE c.1910-13	E	VG	**G**	FP

C. ENVIRONMENTAL/CONTEXT

10	CONTINUITY within the mixed styles of the neighborhood	E	VG	**G**	FP
11	SETTING: typical residential setting	E	VG	**G**	FP
12	FAMILIARITY River Rock and style stand out	E	VG	**G**	FP

D. INTEGRITY

13	CONDITION Appears in good condition	E	**VG**	G	FP
14	EXTERIOR ALTERATIONS to the rear	E	**VG**	G	FP
15	STRUCTURAL REMOVALS addition to the side and rear remove side features	E	**VG**	G	FP
16	SITE original location	**E**	VG	G	FP

E. REVERSIBILITY

17	EXTERIOR large stucco addition	E	VG	**G**	FP

F. ADDITIONAL CONSIDERATIONS/BONUS POINTS

18	NATIONAL OR CALIFORNIA REGISTER	E	VG	G	**FP**

REVIEWED BY: Bonnie Bamburg DATE:1/18/2011

EVALUATION TALLY SHEET
(PART 1)

HISTORIC RESOURCE ADDRESS: 535 S. 8th Street, San Jose

			E	VG	G	FP	
A	VISUAL QUALITY/DESIGN						
	1	EXTERIOR	16	12	6	0	6
	2	STYLE	10	8	4	0	8
	3	DESIGNER	6	4	2	0	4
	4	CONSTRUCTION	10	8	4	0	8
	5	SUPPORTIVE ELEMENTS	8	6	3	0	3
					Subtotal:		29
B.	HISTORY/ASSOCIATION						
	6	PERSON/ORGANIZATION	20	15	7	0	0
	7	EVENT	20	15	7	0	0
	8	PATTERNS	12	9	5	0	5
	9	AGE	8	6	3	0	3
					Subtotal:		8
C.	ENVIRONMENTAL/ CONTEXT						
	10	CONTINUITY	8	6	3	0	3
	11	SETTING	6	4	2	0	2
	12	FAMILIARITY	10	8	4	0	4
					SUBTOTAL:		9

A & C SUBTOTAL:	38
B SUBTOTAL:	8
PRELIMINARY TOTAL: (sum of A. B. & C.)	46

EVALUATION TALLY SHEET
(PART II)

HISTORIC RESOURCE ADDRESS: 535 S. 8th Street, San Jose

		E	VG	G	FP				
D.	**INTEGRITY**								
13	CONDITION		0.03	0.05	0.1	46	X	0.03 =	1.38
	SUBTOTAL A,B&C								
14	EXTERIOR ALTERATIONS		0.05	0.1	0.2	38	X	0.05 =	1.9
	SUBTOTAL A&C								
			0.03	0.05	0.1	8	X	0.03 =	0.24
	FROM B								
15	STRUCTURAL REMOVALS		0.2	0.3	0.4	38	X	0.2 =	7.6
	SUBTOTAL: A & C								
			0.1	0.2	0.4	8	X	0.1 =	0.8
	FROM B								
16	SITE		0.1	0.2	0.4	8	X	0 =	0
	FROM B								
		INTEGRITY DEDUCTIONS SUBTOTAL							11.92
		ADJUSTED SUBTOTAL:				46	-	11.9	34.08
		(Preliminary Total minus Integrity Deductions)							

						VALUE
E	**REVERSIBILITY**	**E**	**VG**	**G**	**FP**	
17	EXTERIOR	3	3	2	2	2
				Total:	2	

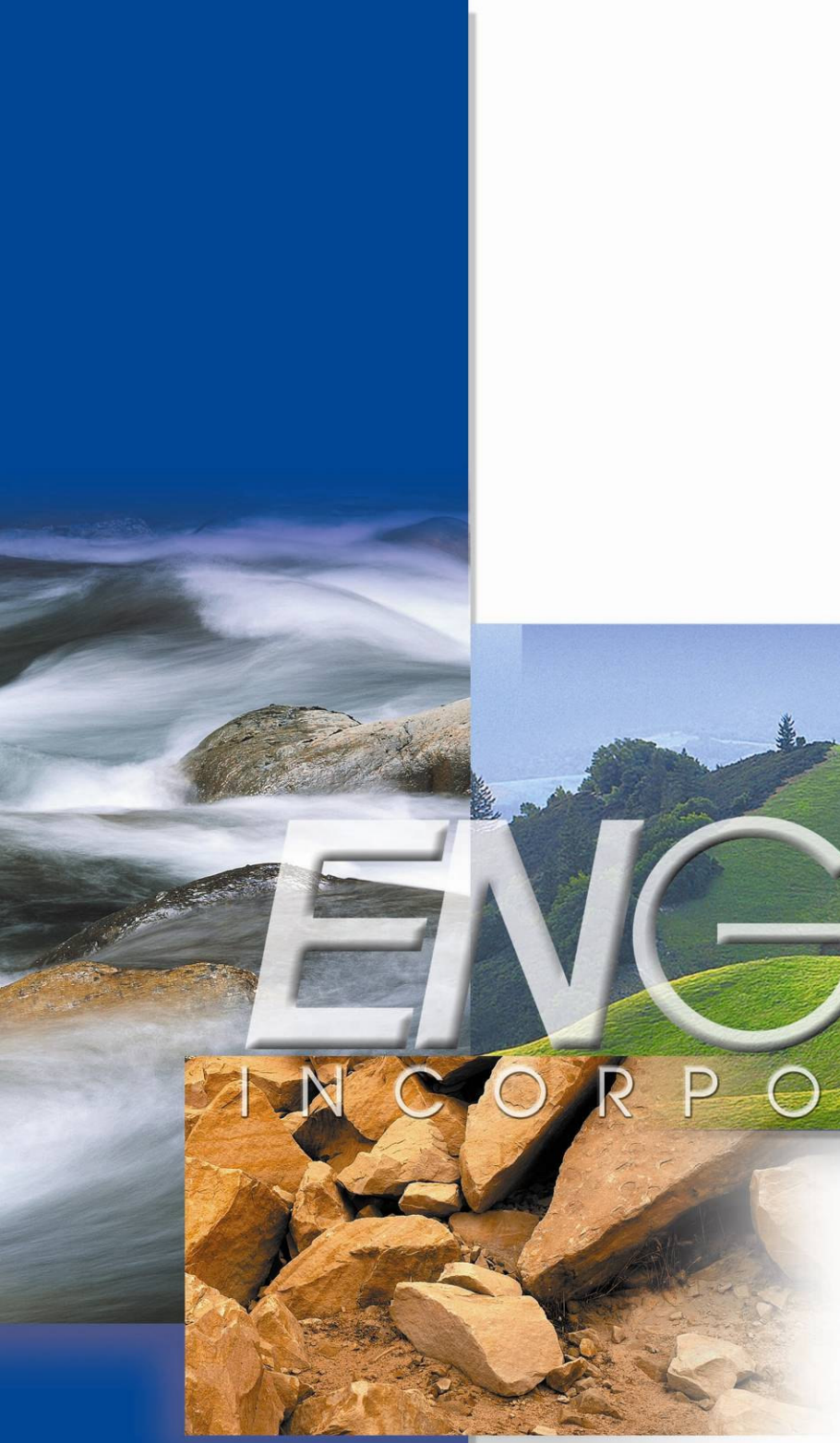
F.	**ADDITIONAL CONSIDERATIONS BONUS POINTS**					**VALUE**
18	NATIONAL OR CALIFORNIA REGISTER	20	15	10	0	0
		BONUS POINTS SUBTOTAL:				0
		ADJUSTED TOTAL:				36.08

Appendix C

Geotechnical Exploration

GEOTECHNICAL EXPLORATION

8TH AND WILLIAM STREET
MIXED USE DEVELOPMENT
SAN JOSE, CALIFORNIA



Submitted to:

Mr. Paulo Hernandez
Sherwin South Campus, LLC
137 Amanda Lane
Los Gatos, CA 95032

Prepared by:
ENGEO Incorporated

July 13, 2011
Project No. 8643.000.000

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ENGEO INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
WATER RESOURCES
CONSTRUCTION SERVICES

Project No.
8643.000.000

July 13, 2011

Mr. Paulo Hernandez
Sherwin South Campus, LLC
137 Amanda Lane
Los Gatos, CA 95032

Subject: 8th and William Street Mixed Use Development
San Jose, California

GEOTECHNICAL EXPLORATION

Dear Mr. Hernandez:

As requested, we completed this geotechnical exploration for the proposed 8th and William Street Mixed Use project in San Jose, California. The accompanying report presents our field exploration and laboratory testing with our conclusions and recommendations regarding mixed-use development at the site.

Our findings indicate that the site is suitable for the proposed development provided the recommendations and guidelines provided in this report are implemented during project planning and construction. We are pleased to have been of service to you on this project and are prepared to consult further with you and your design team as the project progresses.

Sincerely,

ENGEO Incorporated

Andrew H. Firmin, PE
ahf/pcg/rc

Paul C. Guerin, GE

REGISTERED PROFESSIONAL ENGINEER
PAUL C. GUERIN
No. 2099
Exp. 3/31/2013
GEOTECHNICAL
STATE OF CALIFORNIA

TABLE OF CONTENTS

Letter of Transmittal

1.0 INTRODUCTION 1

1.1 PURPOSE AND SCOPE 1
1.2 SITE LOCATION AND DESCRIPTION 1
1.3 PROPOSED DEVELOPMENT 2
1.4 HISTORY OF SITE 3
1.5 PREVIOUS ENVIRONMENTAL STUDY 3

2.0 GEOLOGIC CONDITIONS 3

2.1 REGIONAL AND LOCAL GEOLOGY 3
2.2 FAULTING AND SEISMICITY 4

3.0 FIELD EXPLORATION 5

3.1 FIELD LOGGING 5
3.1.1 Exploratory Borings 5
3.1.2 Cone Penetration Test Probes 5
3.2 LABORATORY TESTING 6
3.3 SUBSURFACE CONDITIONS 6
3.4 GROUNDWATER 7

4.0 GEOLOGIC AND GEOTECHNICAL HAZARDS 7

4.1 SEISMIC HAZARDS 7
4.1.1 Ground Rupture 7
4.1.2 Ground Shaking 7
4.1.3 Ground Lurching 8
4.1.4 Soil Liquefaction 8
4.1.4.1 Liquefaction-Induced Ground Settlement 9
4.1.4.2 Liquefaction-Induced Surface Rupture 9
4.1.5 Lateral Spreading 9
4.2 EXISTING FILL 10
4.3 LOAD-INDUCED SETTLEMENT 10
4.4 EXPANSIVE SOILS 11
4.5 DIFFERENTIAL FILL THICKNESS 11
4.6 SHALLOW GROUNDWATER 11
4.7 FLOODING 11
4.8 2010 CALIFORNIA BUILDING CODE SEISMIC PARAMETERS 12
4.9 CORROSIVITY CONSIDERATIONS 12
4.10 CONCLUSIONS 14

5.0 RECOMMENDATIONS 14

5.1 GRADING 14
5.1.1 Selection of Materials 15
5.1.2 Demolition and Stripping 15

TABLE OF CONTENTS (Continued)

5.2 EXISTING FILLS AND COMPRESSIBLE SOILS 16
5.3 DIFFERENTIAL FILL THICKNESS....16
5.4 FILL PLACEMENT....16
5.5 BUILDING TO REMAIN....17
5.6 FOUNDATION CONSIDERATIONS....17
5.6.1 Building Pad Treatment 18
5.6.2 Differential Settlement....19
5.6.3 Driven Pile Foundation 19
5.6.3.1 Allowable Compressive Pile Capacities 19
5.6.3.2 Pile Downdrag 20
5.6.3.3 Lateral Loading....20
5.6.3.4 Load Test Program....21
5.6.4 Ground Improvement....21
5.6.4.1 Stone Columns 22
5.6.5 Structural Mat Foundation Recommendations 22
5.6.5.1 Hydrostatic Uplift Loading 23
5.6.5.2 Double-Slab Drainage System....23
5.6.5.3 Subgrade Treatment 24
5.7 SECONDARY SLAB-ON-GRADE CONSTRUCTION....24
5.8 RETAINING WALLS....24
5.9 EXCAVATION AND SHORING....25
5.10 DEWATERING CONSIDERATIONS....26
5.11 PRELIMINARY PAVEMENT DESIGN 26
5.11.1 Flexible Pavement....26
5.11.2 Rigid Pavement....27
5.11.3 Pavement Subgrade Preparation 28
5.12 DRAINAGE....28
5.13 STORMWATER INFILTRATION OPPORTUNITIES AND SELECT SEDIMENT RISK FACTORS FOR SWPPP 29
5.14 REQUIREMENTS FOR LANDSCAPING IRRIGATION....29
5.15 UTILITIES 29

6.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS....31

LIST OF SELECTED REFERENCES
FIGURES
APPENDIX A – Boring Logs
APPENDIX B – Laboratory Test Results
APPENDIX C – Cone Penetration Test Logs and Data (California Push Technologies, Inc.)
APPENDIX D – Liquefaction Analyses
APPENDIX E – CERCO Analytical, Inc., Corrosivity Report
APPENDIX F – Guide Contract Specifications

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

The purpose of this geotechnical report, as described in our proposal dated February 28, 2011, is to provide a design-level geotechnical report containing recommendations for grading, drainage, and foundation design associated with the podium-style, mixed-use redevelopment of the site.

We performed the following services.

- Review of available literature, previous reports, and geologic maps for the study area.
- Subsurface exploration consisting of three cone penetrometer test (CPT) probes and three soil borings.
- Laboratory testing of materials sampled during the field exploration.
- Geotechnical data analyses.
- Report preparation summarizing our conclusions and recommendations for the proposed development.

We prepared this report exclusively for Sherwin South Campus, LLC and their design team consultants. ENGEO should review any changes made in the character, design or layout of the development to modify the conclusions and recommendations contained in this report, as necessary. This document may not be reproduced in whole or in part by any means whatsoever, nor may it be quoted or excerpted without the express written consent of ENGEO.

1.2 SITE LOCATION AND DESCRIPTION

The roughly 0.57-acre irregular-shaped site consists of four parcels located southwest of the intersection of East William Street and South 8th Street; specifically 346 East William Street, and 515, 521, and 535 South Eighth Street (Assessor's Parcel Numbers 472-28-054, 472-28-055, 472-28-056, and 472-28-057) in San Jose, California (Figures 1 and 2).

At the time of our field exploration, the northernmost parcel (346 East William Street) was occupied by a commercial building with a restaurant tenant, and the three parcels to the south (515, 521, and 535 South Eighth Street) comprised single-family residences with ancillary sheds, garages, and a cottage, concrete flatwork and landscape areas. The site was surrounded by commercial and residential structures to the northwest, west and south, and existing streets to the northeast and east.

Guadalupe Creek is located approximately ¾ mile to the southwest and Coyote Creek is located approximately ½ mile to the east of the site. Based on available topographic mapping, the site appears to be relatively flat and situated at an approximate elevation of 95 feet above mean sea level (msl).

1.3 PROPOSED DEVELOPMENT

According to the conceptual plan set prepared by LPMD Architects and dated December 17, 2010 (Project No. 2008.124), the proposed development will include a mixed-use, podium-style structure containing one level of subterranean parking, ground level retail surrounding an interior at-grade parking level, and three levels of wood-frame residential above.

The ramp between the parking levels appears to extend outside the southern side of the proposed podium building footprint. The existing residence at 535 South Eighth Street will remain onsite and will abut the ramp between parking levels. In addition, a portion of the 4-story footprint extends outside the subterranean level at the southwestern corner. This will create a multi-level building pad with the southwestern corner constructed at grade with no subterranean parking level. Other site improvements will include a bioswale along the western site boundary, utilities, and exterior pavement and flatwork.

The podium building is shown to be 3 to 10 feet away from the property boundary and as a result is roughly 14 to 18 feet away from the existing street curb, and roughly 8 to 12 feet away from offsite existing buildings.

With exception to the southernmost building to remain at 535 South Eighth Street, we anticipate the remaining existing structures and improvements will be demolished as part of the redevelopment. The southeastern residential building will be preserved and restored as a neighborhood center with proposed landscaping around the building. We understand that the building may remain in place or be temporarily removed during construction. We anticipate that proposed grades for the at-grade levels and the building to remain will roughly match existing site grades.

For ease and clarity, we will refer to the proposed improvements based on the following table throughout this report.

TABLE 1.3-1
List of Improvements

Proposed Improvement	Description of proposed improvement
Main podium structure	Main portion of podium structure with one below grade level and four levels above grade
At-grade building	Southwestern portion of podium structure extending outside the subterranean level
Parking ramp	Southern portion of parking ramp extending outside the podium structure footprint
Building to remain	Existing residence at 535 South Eighth Street to remain onsite

1.4 HISTORY OF SITE

We reviewed individual aerial photographs of the site dated 1939, 1956, 1965, 1974, 1982, 1993, 1998, and 2005; and Sanborn fire insurance maps dated 1884, 1891, 1915, 1950 and 1969 that were provided by Environmental Data Resources, Inc. (EDR) during our previous environmental studies at the site.

Review of the aerial photos indicates the four existing parcels within the site were developed by 1939 with several structures present, including three residential houses aligned with South Eighth Street and associated garage/storage units in the rear of the houses. Review of the 1915 Sanborn fire insurance maps indicates three dwelling units were present along South Eighth Street with associated auto and shed structures in the rear of the units. The northeastern corner of the site was still unoccupied. Review of the 1950 Sanborn map indicates the northeastern corner of the site had a store unit.

1.5 PREVIOUS ENVIRONMENTAL STUDY

We previously performed phase I and phase II environmental site assessments for the project in March 2009 and June 2011, respectively. In the documents, we provided the following opinions that affect geotechnical aspects of design and construction.

- No Recognized Environmental Conditions (RECs) and no historical RECs were identified for the site.

- According to the historical records reviewed, there appears to be a grease trap of unknown size and location in the proximity of the current restaurant at 346 East William Street located in the northeast corner of the site.

- According to the historical records reviewed, some of the structures were constructed at a time when asbestos-containing building materials (ACBM) and lead-based paints may have been used. We recommend that a CAL-OSHA certified ACBM and lead-based paint contractor be retained to assess the structures prior to any renovation or demolition activities so that the ACBM and lead-based painted materials may be properly segregated for disposal.

- Based on the laboratory results for sampled groundwater and soil vapor samples from the Phase Two environmental site assessment, and previous available studies, we conclude that it does not appear that groundwater beneath the subject site has been adversely impacted.

2.0 GEOLOGIC CONDITIONS

2.1 REGIONAL AND LOCAL GEOLOGY

Regional geologic maps locate the site in the broad, north-south trending, alluvial-filled Santa Clara Valley. Geologic mapping by Wentworth (1999) indicates the site is underlain by

Holocene-age flood plain deposits (Qhfp) (Figure 3). CDMG (1974) indicates the alluvial deposits are in excess of 500 feet thick.

2.2 FAULTING AND SEISMICITY

The project site is located in a region that contains active[1] earthquake faults. However, the site is not located within a State of California Earthquake Fault Hazard Zone (1982) for active faulting, a City of San Jose Fault Hazard Zone (1983), or a Santa Clara County Geologic Hazard Zone for potential fault rupture hazard (2002).

Large earthquakes have historically occurred in the Bay Area and many earthquakes of low magnitude occur every year. The nearest known active faults are the Monte Vista – Shannon fault and the Calaveras fault, located approximately 7.5 miles southwest and 7.9 miles northeast of the site, respectively. Figure 5 shows the approximate locations of these faults with respect to the site and significant historic earthquakes mapped within the San Francisco Bay Region.

Although not zoned by the State of California, Bortugno (1991) and Jennings (1994) map the Silver Creek fault and San Jose fault as concealed, potentially active faults. The San Jose fault is located approximately three miles southwest of the site, and the Silver Creek fault is mapped approximately one mile northeast of the site.

Ground motions are expressed as a fraction of the acceleration due to gravity (g). According to ground motions published on the California Geological Survey's Probabilistic Seismic Hazards Mapping website, the local faults are capable of causing a peak ground acceleration (pga) of 0.49g at the site (10 percent probability of being exceeded in 50 years).

The table below lists distances to the closest known active faults within 25 miles of the site (EQFault, Version 3.00).

TABLE 2.2-1
Regional Faults

Fault Name	Approximate Distance (miles)
Monte Vista – Shannon	7.5
Calaveras	7.9
Hayward	8.6
San Andreas	12.3
Zayante-Vergeles	17.6
Greenville	21.3

[1]Active faults are defined by the State Geologist as having had surface displacement during the last 11,000 years (Hart, 1997). Potentially active or Quaternary faults are defined as those faults that have had surface displacement during the last 1.6 million years. Inactive faults show no history of Quaternary movement.

3.0 FIELD EXPLORATION

The sections below summarize our field exploration activities and laboratory testing; as well as ground surface, subsurface, and groundwater conditions.

3.1 FIELD LOGGING

The field exploration included drilling three exploratory borings and advancing three cone penetration test (CPT) probes. Figure 2 presents the approximate locations of the exploratory borings and CPT probes obtained by taping or pacing from existing features. As a result, the mapped locations should be considered only as accurate as the methods used to determine them.

3.1.1 Exploratory Borings

The exploratory borings were performed on May 27, 2011, and consisted of drilling three borings to a maximum depth of approximately 65½ feet below existing grade at the approximate locations shown on Figure 2. The borings were performed using a track-mounted rig equipped with 8-inch-diameter hollow stem augers.

The borings were logged in the field and soil samples were collected using either a 2½-inch inside diameter (I.D.) California-type split-spoon sampler fitted with 6-inch-long brass liners or a 2-inch outside diameter (O.D.) Standard Penetration Test split-spoon sampler. The penetration of the samplers into the native materials was recorded as the number of blows needed to drive the sampler 18 inches in 6-inch increments. The boring logs record blow count results as the actual number of blows required for the last one foot of penetration; no conversion factors have been applied. The samplers were driven with a 140-pound hammer falling a distance of 30 inches employing an automatic trip system. We also collected three soil samples using 3-inch O.D. Shelby tubes advanced using the hydraulics of the drill rig. The field logs were then used to develop the report boring logs, which are presented in Appendix A.

The boring logs depict subsurface conditions within the borings at the time the exploration was conducted. Subsurface conditions at other locations may differ from conditions occurring at these boring locations, and the passage of time may result in altered subsurface conditions. In addition, stratification lines represent the approximate boundaries between soil types, and the transitions may be gradual.

3.1.2 Cone Penetration Test Probes

Three CPT probes were advanced at the site on May 20, 2011. One probe was advanced to a planned depth of approximately 60 feet and two probes were advanced to rig refusal at a depth of approximately 68 feet below existing grade. The CPT equipment has a 20-ton compression-type cone with a 10-square-centimeter (cm^2) base area and a friction sleeve with a surface area of 150 cm^2. The cone, connected with a series of rods, is pushed into the ground at a constant rate of 2 cm per second. Cone readings are taken at approximately 2-cm intervals. Measurements include the tip resistance to penetration of the cone (Qc), the resistance of the surface sleeve (Fs),

and pore pressure (U) (Robertson and Campanella, 1988). A report summarizing the CPT data was provided by California Push Technologies and is attached as Appendix C.

3.2 LABORATORY TESTING

We performed the following laboratory tests on select samples recovered during drilling operations:

TABLE 3.2-1
Laboratory Testing

Soil Characteristic	Testing Method	Location of Results
Natural Unit Weight and Moisture Content	ASTM D2216	Appendix A
Atterberg Limits	ASTM D4318	Appendix B
Grain Size Distribution	ASTM D422	Appendix B
Unconfined Compression	ASTM D2166	Appendix B
Triaxial Compression	ASTM D-4767	Appendix B
Incremental Consolidation	ASTM D-2435	Appendix B
Sulfate Content	Caltrans 417	Appendix B

3.3 SUBSURFACE CONDITIONS

Generally, the ground covering at the explored locations within existing driveways consisted of approximately 3 to 4 inches of concrete over soil subgrade. Ground covering at explored locations outside the driveways consisted of landscaped soil or grass surfaces.

The soils encountered in the borings were alluvial and, therefore, relatively variable. In general, the materials encountered in the upper 32 feet of our borings included interbedded layers of clay, silt and sand. Clay and silt layers were soft to stiff, and sand layers were very loose to medium dense. Beneath the interbedded alluvial soils, we encountered plastic clay to a depth of approximately 61 feet. The clay varied from soft near the top of the layer to very stiff near the bottom of the layer and generally increased in consistency with increasing depth. Beneath the plastic clay, we encountered silty to clayey sand to the maximum depth explored of approximately 65½ feet. The sand layer varied from loose to dense, increasing in density with increasing depth.

One sample of sandy clay at a depth of 14 feet was tested for Plasticity Index (PI) and yielded a PI value of 16, indicating a low to moderate expansion potential for that soil layer.

The CPT probes encountered similar soil conditions to the exploratory borings. Two of the CPT probes encountered rig refusal at a depth of approximately 68 feet, and the other CPT probe was advanced to a planned depth of 60 feet.

3.4 GROUNDWATER

Groundwater was measured in the borings and CPT probes prior to grouting of the holes. The measured groundwater level for the borings ranged from depths of approximately 10½ to 14 feet. The measured groundwater level for the CPT probes ranged from depths of approximately 12 to 14 feet.

CDMG (1974) indicates historical groundwater levels range from approximately 10 to 20 feet in proximity to the site. Seismic hazard reports for the San Jose East and West Quadrangles (CGS, 2000 and 2002) similarly indicate historical groundwater levels at approximately 10 feet in proximity to the site.

Fluctuations in groundwater levels occur seasonally and over a period of years because of variations in precipitation, temperature, irrigation, or other factors. For design purposes, a groundwater level of 10 feet below the ground surface (bgs) has been selected.

4.0 GEOLOGIC AND GEOTECHNICAL HAZARDS

The site was evaluated with respect to known geologic and other hazards common to the greater San Francisco Bay Region. The primary hazards and the risks associated with these hazards with respect to the planned development are discussed in the following sections of this report.

4.1 SEISMIC HAZARDS

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking, ground lurching, soil liquefaction, and lateral spreading. These hazards are discussed in the following sections. Based on topographic and lithologic data, risk from earthquake-induced regional subsidence/uplift, tsunamis, and seiches is considered low to negligible at the site.

4.1.1 Ground Rupture

The site is not located within a State of California Earthquake Fault Hazard Zone and no known active faults cross the site. It is our opinion that the risk of ground rupture within the subject site is considered low.

4.1.2 Ground Shaking

An earthquake of moderate to high magnitude generated within the San Francisco Bay Region, similar to those, which have occurred in the past, could cause considerable ground shaking at the site. To mitigate the shaking effects, all structures should be designed using sound engineering judgment and the 2010 California Building Code (CBC) requirements as a minimum.

Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally substantially smaller than the expected peak forces that would be associated with a major earthquake. Therefore, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural, as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake (SEAOC, 1996).

4.1.3 Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion can cause ground cracks to form. The potential for the formation of these cracks is considered greater at contacts between deep alluvium or fill and bedrock. Such an occurrence does not appear likely at this site and any offset or strain is expected to be minor.

4.1.4 Soil Liquefaction

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary, but essentially total, loss of shear strength because of pore pressure build-up under the reversing cyclic shear stresses associated with earthquakes. According to the State of California Seismic Hazard Zones Map (2002) and the Santa Clara County Geologic Hazard Zone Map (2002), the site is located within an area mapped as being potentially susceptible to liquefaction (Figure 4). Maps prepared by the Association of Bay Area Governments (ABAG, 2011) indicate that the site has a moderate potential for liquefaction.

As discussed above, layers of sandy and silty deposits were encountered at the site. Liquefaction analyses were performed on the CPT probes using the computer program CLiq Version 1.3, with visual soil classification and laboratory testing of samples from the borings used as confirmation of potentially liquefiable layers. Our analyses were based on guidelines provided in DMG Special Publication 117A (2008) and the NCEER method (Youd et al, 2001). The scaled Cyclic Resistance Ratio (CRR) is divided by the calculated Cyclic Stress Ratio (CSR) to determine the factor of safety (F.S.) against liquefaction within the given soil profile layer. Our analyses consider a peak ground acceleration of 0.49g and a groundwater level at 10 feet bgs.

Based on the CPT soundings, potentially liquefiable sandy and silty deposits with a cumulative thickness ranging from approximately 4 to 11 feet are identified within the site. Liquefaction analyses are included in Appendix D.

4.1.4.1 Liquefaction-Induced Ground Settlement

Based on the results of our liquefaction assessment, and according to methods outlined in Zhang et al. (2002), we estimate approximately 1½ to 3½ inches of total and up to 1¾ inches of differential liquefaction-induced settlement may occur based on existing conditions at the project site as a result of a large seismic event.

To mitigate potential effects from liquefaction-related settlements at the site, it is recommended that the following measures be incorporated into the design:

- Gravity utilities should maintain a design slope gradient of at least ½ percent.
- Pavements and surface drainage elements should maintain minimum design drainage gradient of ½ percent.

4.1.4.2 Liquefaction-Induced Surface Rupture

In addition to the above liquefaction analysis, we also evaluated the capping effect of any overlying non-liquefiable soils. In order for liquefaction-induced ground failure to occur, the pore water pressure generated within the liquefied strata must exert a sufficient enough force to break through the overlying soil and vent to the surface resulting in sand boils or fissures.

In 1985, Ishihara presented preliminary empirical criteria to assess the potential for ground surface disruption at liquefiable sites based on the relationship between thickness of liquefiable sediments and thickness of overlying non-liquefiable soil. A more recent study by Youd and Garris (1995) expanded on the work of Ishihara to include data from over 308 exploratory borings, 15 different earthquakes, and several ranges of recorded peak ground acceleration.

Based on our analyses and review, the project site currently has a thick enough cap of non-liquefiable soil to prevent venting of liquefiable soil. However, considering approximately 10 to 12 feet of existing soil will be excavated within the main podium structure footprint for construction of one level of below grade parking, it is our opinion that there is risk for liquefaction-induced surface rupture or sand boils during a strong seismic event below the proposed garage level.

4.1.5 Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone (possibly due to liquefaction) that causes the overlying soil mass to move toward a free face or down a gentle slope. Generally, effects of lateral spreading are most significant at the free face or the crest of a slope and diminishes with distance from the slope.

Due to the lack of steep slopes and nearby open channels, it is our opinion that the potential for lateral spreading is low.

4.2 EXISTING FILL

Evidence of existing fill was not apparent in our borings or CPT probes. However, minor existing fill is anticipated across the site within utility trenches and landscape mounds. Existing fills that are not removed by planned cuts should be removed as part of project grading.

4.3 LOAD-INDUCED SETTLEMENT

Soils are subject to settlement when a new loading scenario is introduced by structures or equipment. Consolidation settlement is highly dependent on the permeability of the deposit. Consequently, sandy soils will settle almost immediately, whereas clayey soils will settle much more slowly.

We tested one subsurface sample of soft, plastic clay at a depth of 36 feet for compressibility and extrapolated the results to other soft to medium stiff clayey layers encountered in the borings and CPT probes. We assessed the potential for static densification of sandy and silty layers above the groundwater level based on the density of the materials encountered during our field exploration.

Preliminary building loads for the proposed structures were provided by Biggs Cardosa Associates, Inc. (BCA). We also incorporated typical average and concentrated bearing capacity values for structural mat and continuous footing foundations to determine a range of estimated settlement. We assumed that the foundation level for the basement of the main podium structure will be approximately 10 to 12 feet below existing grade, and the foundation level for the at-grade building will roughly match existing grade.

Based on our analyses, we provide the following settlement estimates of native soils for the proposed structures.

TABLE 4.3-1
Estimated Settlement Due to Proposed Loading

Proposed Improvement	Estimated Total Settlement Average (inches)	Estimated Total Settlement at Areas of Concentrated Loading (e.g., walls, footings, columns) (inches)	Estimated Differential Settlement (inches)
Main podium structure	Up to 2	1 - 3	2
At-grade building	1½ - 3	1½ - 3	1½

For the main podium structure, estimated differential settlement should be assumed to act over a horizontal distance of 40 feet or between adjacent building columns, whichever is less. For the at-grade building, differential settlement should be assumed to act over the building width.

4.4 EXPANSIVE SOILS

Near-surface soils and soils at the proposed basement level displayed a low to moderate expansion potential with one sample of sandy clay at a depth of 14 feet yielding a PI value of 16. Expansive soils shrink and swell as a result of moisture changes. This can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Therefore, construction of improvements near existing grades and at the proposed basement level will need to consider the potential impacts of expansive soils.

Successful construction on expansive soils requires special attention during construction. It is imperative to keep exposed soils moist. It is extremely difficult to remoisturize dry soil (because of its clayey nature) without excavation, moisture conditioning, and recompaction.

Conventional grading operations, incorporating fill placement specifications tailored to the expansive characteristics of the soil, and use of a mat foundation are common generally cost-effective measures to address the expansive potential of the foundation soils.

4.5 DIFFERENTIAL FILL THICKNESS

Our site reconnaissance and previous environmental studies identified the presence of at least one building with a basement and other below-ground structures associated with the existing buildings. In addition, subsurface facilities, such as septic tank systems, leach fields and utilities, may be present. Depending upon the depths of excavations required for removal of basements and existing fill, and the location of excavations for the below-grade parking level, a differential fill condition may arise that could adversely impact the performance of the foundation for the at-grade building and rehabilitated foundation for the building to remain. Recommendations to address this potential condition are presented in a subsequent section.

4.6 SHALLOW GROUNDWATER

As previously discussed, shallow groundwater is present at the site, and we recommend a design groundwater level of 10 feet be utilized. The current development plan includes one level of below-grade garage. Excavations for the podium and for utility installation will likely encounter groundwater, depending upon the time of year of construction. Temporary dewatering should be anticipated. Recommendations are provided in a subsequent section.

4.7 FLOODING

The project Civil Engineer should be consulted on the potential for localized flooding at the subject site. The review should also include a determination of whether the site falls below the 100-year flood plain elevation.

4.8 2010 CALIFORNIA BUILDING CODE SEISMIC PARAMETERS

Based on the subsurface conditions encountered and local seismic sources, the following 2010 California Building Code (CBC) seismic design parameters should be used for design.

TABLE 4.8-1
2010 CBC Seismic Information

Parameter	Design Value
Site Class	D
0.2 second Spectral Response Acceleration, S_S	1.50
1.0 second Spectral Response Acceleration, S_1	0.60
Site Coefficient, F_A	1.00
Site Coefficient, F_V	1.50
Maximum considered earthquake spectral response accelerations for short periods, S_{MS}	1.50
Maximum considered earthquake spectral response accelerations for 1-second periods, S_{M1}	0.90
Design spectral response acceleration at short periods, S_{DS}	1.00
Design spectral response acceleration at 1-second periods, S_{D1}	0.60
Long period transition-period, T_L	12

Latitude = 37.33166; Longitude = -121.87754

4.9 CORROSIVITY CONSIDERATIONS

One selected soil sample was collected and transported under proper chain-of-custody to CERCO Analytical, Inc. for laboratory testing. The sample was tested for redox potential, soluble sulfate concentrations, pH, resistivity, sulfide, soluble sulfate, and chloride ion concentration. These tests provide an indication of the corrosion potential of the soil environment on buried concrete structures and metal pipes. The results are summarized below. A detailed description of the laboratory results is contained in the attached report prepared by CERCO Analytical, Inc. (Appendix E).

TABLE 4.9-1
Soil Corrosivity Test Results

Sample Number and Depth	Redox Potential (mV)	pH	Resistivity* (OHM-CM)	Sulfide* (mg/kg)	Soluble Sulfate* (mg/kg)	Chloride Ion* (mg/kg)
1-B3 @ 3.5-4'	490	7.8	5,000	N.D.	N.D.	N.D.

*Results reported on a wet weight basis

As indicated in the CERCO laboratory letter (Appendix E), because of the resistivity measurements, buried metal and steel should be protected against corrosion. A corrosion

consultant should provide specific design recommendations on corrosion protection for any buried metallic lines.

According to the sulfate test results, the sulfate ion concentration was reported as non-detectable with a detection limit of 15 mg/kg of water-soluble sulfate (SO_4) concentration levels. Two additional samples were tested for sulfate ion concentration and yielded values of 2 and 9 mg/kg of water soluble sulfate concentration levels. The CBC references the 2008 American Concrete Institute Manual, ACI 318 (Chapter 4, Sections 4.2 and 4.3) for concrete requirements. ACI Tables 4.2.1 and 4.3.1 provide the following sulfate exposure categories and classes and concrete requirements in contact with soil based upon the exposure risk.

TABLE 4.9-2
Sulfate Exposure Categories and Classes

Sulfate Exposure Category S	Exposure Class	Water- Soluble Sulfate in Soil % by Weight	Dissolved Sulfate in Water mg/kg (ppm)
Not Applicable	S0	$SO_4 < 0.10$	$SO_4 < 150$
Moderate	S1	$0.10 \leq SO_4 < 0.20$	$150 \leq SO_4 \leq 1{,}500$ seawater
Severe	S2	$0.20 \leq SO_4 \leq 2.00$	$1{,}500 \leq SO_4 \leq 10{,}000$
Very Severe	S3	$SO_4 > 2.00$	$SO_4 > 10{,}000$

TABLE 4.9-3
Requirements for Concrete by Exposure Class

Exposure Class	Max w/cm	Min f'c (psi)	Cement Type			Calcium Chloride Admixture
			ASTM C150	ASTM C595	ASTM C1157	
S0	N/A	2500	No Type restriction	No Type restriction	No Type restriction	No restriction
S1	0.5	4000	II†‡	IP(MS), IS(<70), (MS)	MS	No restriction
S2	0.45	4500	V‡	IP(HS), IS(<70), (HS)	HS	Not permitted
S3	0.45	4500	V + pozzolan or slag§	IP(HS) + pozzolan or slag or IS(<70) (HS) + pozzolan or slag§	HS + pozzolan or slag§	Not permitted

Notes:
† For seawater exposure, other types of portland cements with tricalcium aluminate (C_3A) contents up to 10 percent are permitted if the w/cm does not exceed 0.40.
‡ Other available types of cement such as Type III or Type I are permitted in Exposure Classes S1 or S2 if the C_3A contents are less than 8 or 5 percent, respectively.
§ The amount of the specific source of the pozzolan or slag to be used shall not be less than the amount that has been determined by service record to improve sulfate resistance when used in concrete containing Type V cement. Alternatively, the amount of the specific source of the pozzolan or slag to be used shall not be less than the amount tested in accordance with ASTM C1012 and meeting the criteria in ACI 4.5.1.

In accordance with the criteria presented above, the test results are classified in the S0 sulfate exposure class. Cement type, maximum water-cement ratio and minimum concrete strength for this exposure class are specified by the CBC in the table above. As minimum requirements, we recommend that Type II cement be used in foundation concrete for structures at the project site and concrete should incorporate a maximum water cement ratio of 0.5 and a minimum compressive strength of 3,000 psi. It should be noted, however, that the structural engineering design requirements for concrete might result in more stringent concrete specifications.

Testing was not completed for all depths of potential embedment. Once more specifics of the proposed improvements are known, we can provide additional testing and/or guidance regarding the exposure risk for sulfates.

4.10 CONCLUSIONS

From a geologic and geotechnical standpoint, the study area appears to be suitable for the proposed development. As discussed above and based on this geotechnical exploration, the main geologic/geotechnical issues to be addressed at the site include the following. The recommendations in subsequent sections consider the hazards and concerns listed below.

- Liquefaction, liquefaction-induced settlement, and liquefaction-induced surface rupture hazards.
- Load-induced settlement.
- Expansive soils.
- Existing fill and below grade structures.
- Differential fill thickness for the at-grade building and building to remain.
- Shallow groundwater.
- Proximity of building to remain and existing offsite structures to proposed below grade level.

5.0 RECOMMENDATIONS

The recommendations included in this report, along with other sound engineering practices, should be incorporated in the design and construction of the project.

5.1 GRADING

We anticipate that grading will be associated with excavating the proposed building footprint as well as minor cuts and fills within the remaining areas of the site. Grading operations should meet the requirements of the Guide Contract Specifications included in Appendix F and should

be observed and tested by ENGEO's field representative. ENGEO should be notified a minimum of three days prior to grading in order to coordinate its schedule with the grading contractor.

According to the historical records reviewed, some of the existing structures were constructed at a time when asbestos-containing building materials (ACBM) and lead-based paints may have been used. We recommend that a CAL-OSHA certified ACBM and lead-based paint contractor be retained to assess the structures prior to renovation or demolition activities so that the ACBM and lead-based painted materials may be properly segregated for disposal.

5.1.1 Selection of Materials

With the exception of construction debris (wood, brick, asphalt, concrete, metal, etc.), trees, organically contaminated materials (soil which contains more than 3 percent organic content by weight), and environmentally impacted soils (if any), we anticipate the site soils are suitable for use as engineered fill. Unsuitable materials and debris, including trees with their root balls, should be removed from the project site.

Subject to approval by the Landscape Architect, organically contaminated soil may be stockpiled in approved areas located outside of the grading limits for future placement within landscape areas. Oversized soil or rock materials (those exceeding two-thirds of the lift thickness or 6 inches in dimension, whichever is less) should be removed from the fill and broken down to meet this requirement or otherwise off-hauled.

The Geotechnical Engineer should be informed when import materials are planned for the site. Import materials should be submitted to, and approved by, the Geotechnical Engineer prior to delivery at the site and should conform to the requirements provided in the Guide Contract Specifications (Appendix F).

5.1.2 Demolition and Stripping

Site preparation should commence with removal of site vegetation (trees and shrubs), structures and surface and subsurface improvements. Based on conversations with you, we anticipate the existing structures are supported on a shallow foundation system. Following the demolition of existing improvements, site development should include removal of debris, loose soil, and soft compressible materials and undocumented fill in any location to be graded. Any soft compressible soils should be removed from areas to receive fill or structures, or those areas to serve as borrow. Subject to approval by the Landscape Architect, strippings and organically contaminated soils can be used in landscape areas. Otherwise, such soils should be removed from the project site. Any topsoil that will be retained for future use in landscape areas should be stockpiled in areas where it will not interfere with grading operations.

All excavations from demolition and stripping below design grades should be cleaned to a firm undisturbed soil surface determined by the Geotechnical Engineer. For areas to receive fill or remain at-grade, this surface should then be scarified, moisture conditioned, and backfilled with compacted engineered fill. The requirements for backfill materials and placement operations are

the same as for engineered fill. No loose or uncontrolled backfilling of depressions resulting from demolition or stripping is permitted.

5.2 EXISTING FILLS AND COMPRESSIBLE SOILS

Existing fills are unsuitable to remain and should be subexcavated to expose underlying competent native soils that are approved by the Geotechnical Engineer. The base of the excavations should be processed, moisture conditioned, as needed, and compacted in accordance with the subsequent recommendations for engineered fill.

5.3 DIFFERENTIAL FILL THICKNESS

For subexcavation activities that create a differential fill thickness across individual building pads for the at-grade building and building to remain, mitigation to achieve a similar fill thickness across the pad is beneficial for the performance of the foundation system. We recommend that a differential fill thickness of up to 5 feet is acceptable across individual building pads. For a differential fill thickness exceeding 5 feet across an individual pad, we recommend performing subexcavation activities to bring this vertical distance to within the 5-foot tolerance and that the material is replaced as engineered fill. As a minimum, the subexcavation area should include the entire structure footprint plus 5 feet beyond the edges of the building footprint.

5.4 FILL PLACEMENT

Once a suitable firm base is achieved, the exposed non-yielding native surface should be scarified to a depth of 10 inches, moisture conditioned, and recompacted to provide adequate bonding with the initial lift of fill. All fills should be placed in thin lifts, with the lift thickness not to exceed 10 inches or the depth of penetration of the compaction equipment used, whichever is less.

The following compaction control requirements should be applied to onsite expansive materials (PI>12 and PI<30):

Test Procedures:	ASTM D-1557.
Required Moisture Content:	Not less than 3 percentage points above optimum moisture content.
Required Relative Compaction:	Not less than 90 percent.

The following compaction control requirements should be applied to import or other non-expansive materials (PI<12):

Test Procedures:	ASTM D-1557.
Required Moisture Content:	Not less optimum moisture content.
Minimum Relative Compaction:	Not less than 92 percent.

Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material.

As noted above, it is important that all site preparation, including demolition and stripping, be performed under the observation of the Geotechnical Engineer, or their qualified field representative, and should be carried out according to the requirements contained herein and within the Guide Contract Specifications, Appendix F.

The final grading plans should be submitted to the Geotechnical Engineer for review.

5.5 BUILDING TO REMAIN

As previously discussed, the existing residence at 535 South Eighth Street is to remain onsite after construction of the project. The building will abut the ramp between parking levels.

We provide two alternatives to address the building to remain during construction.

- The building can remain onsite during construction of the project. For this option, we do not anticipate that the foundation for the structure will be improved or renovated. Considering the structure has been in place for nearly 100 years and has not shown visible signs of distress, we believe this is acceptable. During adjacent excavation of the below grade level of the main podium building, shoring of the building to remain should be provided.

- The building and its foundation can be removed during demolition activities. For this option, a new foundation system should be constructed in accordance with recommendations provided in the subsequent section for the at-grade building.

5.6 FOUNDATION CONSIDERATIONS

Major considerations in foundation design for the main podium structure and at-grade building include the following:

- Liquefaction-induced settlement.
- Liquefaction-induced sand boils and fissures.
- Load-induced settlement.
- Differential settlement between main podium structure, at-grade building, and parking ramp.

- Loose/soft soil conditions at building pad grade levels.
- Expansive soils at the proposed building foundation levels.
- Shallow groundwater conditions.
- Proximity of the building to remain and existing offsite structures to proposed below grade level.

As noted in previous sections and based on existing soil conditions and proposed loading, we estimate up to 3½ inches of liquefaction-induced settlement and up to 3 inches of load-induced settlement (up to 6½ inches total settlement) may occur beneath the main podium structure and at-grade building. Differential settlement is assumed to be up to 3½ inches acting over a distance of 40 feet or between column supports. We also believe that there is risk for liquefaction-induced surface rupture or sand boils during a strong seismic event below the proposed garage level of the main podium structure.

In addition, based on the results of our field exploration, we anticipate loose/soft native soils may be encountered at the below grade and at-grade pad elevations, resulting in low allowable bearing capacity values for design. An additional reduction in bearing capacity would be also be considered associated with earthquake-induced liquefaction.

Based on the above geotechnical concerns, it is our opinion that building loads for the main podium structure and at-grade building should be transferred to below the level of the loose/compressible and liquefiable soils. We believe this can be accomplished with either of the alternatives below.

- A deep foundation system consisting of driven piles with a structural mat foundation; or

- Ground improvement methods such as stone columns with a structural mat foundation or conventional footing system with slab-on-grade.

The following sections contain general discussion and recommendations for foundations considering a driven pile or ground improvement alternative. In the event that it is preferred to use a different foundation solution, additional recommendations may be provided at a later date. In addition, once a foundation alternative is selected, we should be provided an opportunity to review recommendations provided herein, and provide additional and/or specific recommendations in a supplemental report if needed.

The foundation system should be designed by a licensed Structural Engineer. The final foundation plans should be reviewed by the Geotechnical Engineer when they become available to check for conformance with these and future supplemental recommendations.

5.6.1 Building Pad Treatment

Site soils at proposed pad grades for the main podium structure and at-grade building have moderate expansion potential and are likely to be loose and/or compressible. We recommend the upper 18 to 36 inches of pad subgrade be removed and replaced with a low-expansive import

material meeting the guidelines provided in Appendix F, or chemically treated with 3 to 5 percent high calcium lime. The use of soil additives, such as lime, should be evaluated based on soil conditions exposed at the level of the foundations. We believe this will improve shallow bearing capacity, reduce the potential for uplift pressures, improve pad performance, and create a more workable construction surface.

5.6.2 Differential Settlement

Differential settlement between the proposed main podium structure, at-grade building, and parking ramp is a geotechnical concern. These structures will abut each other and have different loading conditions and varying building pad grades. Therefore, we recommend that these improvements be constructed structurally independent of each other to reduce potential distress between each element.

5.6.3 Driven Pile Foundation

The proposed structures may be supported on a deep foundation system consisting of driven piles that will carry the building loads to competent soils. We anticipate that 14-inch-square, precast, pre-stressed, driven concrete piles or 14-inch, driven steel H-piles will gain support through skin friction in the stiff to very stiff clay encountered below the upper loose/soft soils which generally extend to depths of approximately 40 feet. End bearing may be considered if the piles extend into dense sands below a depth of 65 feet. However, additional field exploration should be performed to confirm soil conditions below this depth because the maximum explored depth to date is approximately 68 feet.

Considering the project site location, noise and vibration concerns may be an issue. In this case, vibratory driven H-piles may become advantageous.

5.6.3.1 Allowable Compressive Pile Capacities

We provide the following allowable compressive capacities for the main podium structure and at-grade building. We provide both pile length and tip elevations values. For the main podium structure, we assume piles will be driven from a depth of 15 feet below existing grade (elevation of 80 feet above msl). For the at-grade building, we assume piles will be driven from the existing ground surface (elevation 95 feet above msl). The capacities can be increased by a factor of 1.33 for total load conditions, which include wind and/or seismic forces.

TABLE 5.6.3.1-1
Allowable Pile Capacities for Main Podium Structure

Pile Length (feet)	Pile Tip Elevation (feet above msl)	14-inch-square concrete pile capacity (kips)	14-inch steel H-pile capacity (kips)
35	45	35	30
45	35	50	40

TABLE 5.6.3.1-2
Allowable Pile Capacities for At-Grade Building

Pile Length (feet)	Pile Tip Elevation (feet above msl)	14-inch square concrete pile capacity (kips)	14-inch steel H-pile capacity (kips)
50	45	50	40
60	35	60	50

5.6.3.2 Pile Downdrag

It will be necessary to account for the reduction in pile capacity due to downdrag loads caused by potential settlement of liquefiable soils in the upper 30 feet. Resistance to downdrag loads will be developed in friction along the face of the pile. For preliminary design, we recommend a downdrag load of 300 pounds per square foot (psf) be applied along the sides of the pile. The downdrag load should be applied over portions of piles within 30 feet of the existing ground surface. Additional consultation with the Structural Engineer may be appropriate to address these potential loads.

5.6.3.3 Lateral Loading

Lateral resistance to wind and seismic loads can be developed by bending resistance of the pile foundation. Based upon our exploration, we developed representative soil criteria for the required variables used in the computer program L-Pile for lateral passive pressure calculations.

TABLE 5.6.3.3-1
Lateral Pile Analysis Parameters

Elevation (feet)	Generalized Soil Type	L-Pile Soil Type	Undrained Shear Strength (psf)	Friction Angle (ϕ)	Modulus of Soil Reaction K (pci)	Soil Strain Parameter E_{50} (%)	Effective Unit Weight (pcf)
95 to 85	SC	SAND	--	30	20	--	115
85 to 80	SC	SAND	--	30	20	--	60
80 to 75	CL	CLAY	250	--	30	2	60
75 to 72	SC	SAND	--	30	20	--	60
72 to 69	CL	CLAY	250	--	30	2	65
69 to 63	SC	SAND	--	30	20	--	65
63 to 55	CL	CLAY	250	--	30	2	65
55 to 45	CL	CLAY	1,000	--	500	0.7	65
45 to 35	CL	CLAY	2,000	--	1,000	0.5	65

Design groundwater table at 10 feet below ground surface.

We have not performed lateral pile analysis for proposed piles to determine lateral capacities and deflection limits. If this foundation alternative is selected, we can perform these analyses upon request.

5.6.3.4 Load Test Program

A load test program for the piles is recommended. We should observe the installation and load testing of the piles and confirm the deflection limits are not exceeded. The contractor should provide piles which are capable of resisting the design loads specified on the project plans with an appropriate safety factor. The load tests should be performed in accordance with ASTM D-1143, Standard Loading Procedure and ASTM D-3689 for compression and tension tests respectively.

5.6.4 Ground Improvement

The proposed structures may also be supported on shallow foundations with ground improvement performed to mitigate previously described geotechnical concerns. The shallow foundation system may consist of a structural mat foundation or possibly a conventional footing system with slab-on-grade.

It is expected that ground improvement will increase the allowable bearing pressure and limit the amount of anticipated settlement. Based on our review, we believe stone columns are the most feasible ground improvement alternative.

5.6.4.1 Stone Columns

The stone columns are typically constructed by creating an approximately 30-inch-diameter shaft through excavation and/or vibration, and replacing the removed soil with compacted aggregate fill. The aggregate generally consists of clean, open-graded, crushed rock below the water table and Class 2 aggregate base above the water table. Stone columns develop vertical foundation support through a combination of frictional resistance along the shaft of the pier and improvement of the surrounding soil matrix, allowing use of significantly larger bearing capacities than feasible with the unimproved soil. Stone columns can also be designed to resist transient uplift loads by installing steel rods in the center of the stone column; the rod is attached to a flat plate at the base of the pier. Lateral loads are typically resisted through a combination of passive pressure on the face of the foundation and friction along the base of the foundation.

Stone columns are typically constructed through a design-build contract. Because the columns are designed and installed under a design-build contract, we have not analyzed this foundation alternative in detail and cannot provide recommendations regarding spacing, costs, vertical and lateral capacities, or estimated settlement. The design capacity should be verified by at least one load test in compression and one test in tension if uplift elements are used. We should review the design submittal prior to construction.

Construction of stone columns will require excavation and disposal/conditioning of a relatively large volume of soil. It may be feasible to condition and re-use this amount of soil excavated during drilling onsite, otherwise it will be necessary to dispose it offsite. In addition, groundwater will likely be encountered during construction of the stone columns

The shallow foundation system may consist of a structural mat foundation or conventional footing system with slab-on-grade. We provide recommendations for a structural mat foundation below.

5.6.5 Structural Mat Foundation Recommendations

If a driven pile foundation is used for the main podium structure and at-grade building, liquefaction-induced settlement will still be a geotechnical concern. The mat foundation should be structurally connected to the driven piles and should be designed to transfer the design loads to the driven piles. The foundation should be designed as fully spanning between adjacent foundation supports.

If ground improvement is used for the main podium structure and at-grade building, the anticipated liquefaction-induced and load-induced settlement should be reduced to tolerable levels. We should coordinate with the design-build contractor to determine acceptable anticipated settlement values. As a minimum, structural mats should be design to withstand ½-inch of differential movement over a 40-foot distance without experiencing distress to the structure and should be designed to transfer the design loads to the stone columns. The transfer of the building loads to the stone columns should be evaluated by the Structural Engineer in consultation with ENGEO and the design-build contractor for the stone columns.

We recommend a minimum mat thickness of 12 inches for the driven pile alternative and 18 inches for the ground improvement alternative.

Resistance to lateral loads may be provided by frictional resistance between the foundation concrete and the subgrade soils and by passive earth pressure acting against the side of the foundation. A coefficient of friction of 0.35 can be used between concrete and the subgrade. Passive pressures can be taken as equivalent to the pressure developed by a fluid having a weight of 250 pounds per cubic foot (pcf). The subgrade material under the mat foundation should be uniform prior to concrete placement.

Additional structural mat foundation recommendations that apply to both driven pile and ground improvement foundation alternatives are provided below.

5.6.5.1 Hydrostatic Uplift Loading

Foundation elements and walls for the main podium structure with a below grade parking level that extends below the design groundwater level will be subject to hydrostatic uplift loads equal to the depth in feet below the design elevation times the unit weight of water. Uplift resistance can be provided by the dead weight of the structural elements. Additional resistance to uplift may be provided by installing hold-down piers or anchors and by friction acting on the vertical faces of the structural slab and basement walls.

5.6.5.2 Double-Slab Drainage System

Due to the shallow groundwater conditions, a double-slab drainage system could be considered for the main podium structure to reduce the risk of water ponding on the garage floor. This includes a structural slab overlain by a gravel collection system and a topping slab. The top of the structural mat should be sloped to drain with a gradient of at least 0.5 percent. It should be overlain by at least 6 inches of clean, free draining crushed rock or gravel (Section 2.04B in Appendix F). Four-inch-diameter, perforated collector pipes should be embedded in the drain material on about 40-foot centers to enhance drainage. The pipes should be placed with perforations down and lead to sumps where the water can be collected and removed. A 4-inch-thick topping slab should be constructed over the drain rock. The reinforcement for the topping slab should be designed using the guidance for secondary slabs provided below.

If moisture vapor transmission would be considered objectionable, a tough, water vapor retarding membrane (Section 2.05D, Part I of Guide Contract Specifications) could be placed above the drain rock to reduce moisture transmission through the topping slab. The vapor retarder should meet ASTM E 1745 – 97 Class A requirements for water vapor permeance, tensile strength, and puncture resistance.

5.6.5.3 Subgrade Treatment

The 18- to 36-inch-thick, low- to non-expansive or chemically treated subgrade material under the structural slabs should be uniform. The pad subgrade should be moisture conditioned, as necessary, to regain the moisture content of at least 2 percentage points above optimum for a low-expansive or chemically treated material (or optimum moisture for non-expansive material), which should be checked by a representative of ENGEO prior to steel and concrete placement. The subgrade should not be allowed to dry prior to concrete placement. The contractor may elect to place a thin layer of concrete, angular clean crushed rock, or compacted baserock over the prepared subgrade to provide a stable working surface.

Foundation subgrade soils should be protected from seepage by providing impermeable plugs within utility trenches.

5.7 SECONDARY SLAB-ON-GRADE CONSTRUCTION

This section provides guidelines for secondary slabs such as exterior walkways, steps, and approach ramps. Secondary slabs-on-grade should be constructed structurally independent of the foundation system. This allows slab movement to occur with a minimum of foundation distress. Where secondary slab-on-grade construction is anticipated, care must be exercised in attaining a near-saturation condition of the subgrade soil before concrete placement.

Secondary slabs-on-grade should be designed specifically for their intended use and loading requirements. Cracking of conventional slabs should be expected as a result of concrete shrinkage and the expansive soils at the site. Slabs-on-grade should be reinforced for control of cracking, and frequent control joints should be provided to control the cracking. Such reinforcement should be designed by the Structural Engineer. In our experience, welded wire mesh may not be sufficient to control slab cracking. There are numerous measures that can be implemented to improve the performance of exterior slabs. We would be pleased to consult with you in this regard if desired.

Secondary slabs-on-grade should have a minimum thickness of 4 inches. A 4-inch-thick layer of clean crushed rock or gravel should be placed under slabs. Exterior slabs should be constructed with thickened edges extending at least beneath the crushed rock or gravel into compacted soil to reduce water infiltration. Slabs should slope away from the buildings at a slope of at least 2 percent to prevent water from flowing toward the building.

5.8 RETAINING WALLS

Unrestrained drained retaining walls constructed on level ground may be designed using an active equivalent fluid weight of 55 pounds per cubic foot (pcf). The basement walls should be designed as restrained with the use of an at-rest equivalent fluid weight of 90 pounds per cubic foot (pcf) for those portions situated above the design groundwater elevation. The portions of the basement walls situated below the design groundwater elevation should be designed with a full hydrostatic at-rest pressure of 120 pcf and be waterproofed.

A consultant that specializes in waterproofing should provide recommendations related to appropriate waterproofing products for the foundation walls.

Walls constructed as part of the building should be designed using an allowable bearing capacity of 2,000 psf. Passive pressures acting on foundations may be assumed as 250 pcf provided that the area in front of the retaining wall is level for a distance of at least 10 feet or three times the depth of foundation, whichever is greater. Unless the surface in front of the wall is confined by a slab or pavement, the upper one foot of soil should be neglected when calculating passive resistance.

Drainage facilities should be installed behind the buried garage walls and above the design groundwater level of 10 feet to prevent the build-up of hydrostatic pressures on the walls above the groundwater level. Wall drainage may be provided using 4-inch-diameter perforated (SDR 35 or approved equivalent) pipe encapsulated in either Class 2 permeable material (Appendix F, Part I - Guide Contract Specifications, Section 2.05B), or free-draining gravel surrounded by synthetic filter fabric. The width of the gravel-type drain blanket should be at least 12 inches. The drain blanket should extend from the design groundwater level or the base of the wall, whichever is higher, to about one foot below the finished grade. The upper one foot of wall backfill should consist of onsite clayey soil. If preapproved by the Geotechnical Engineer, prefabricated wall drain panels could be considered in lieu of the granular drain blanket above the pipe system. Drainage should be collected by solid pipes and directed to an outlet approved by the Civil Engineer.

Wall backfill should be placed in accordance with recommendations provided above for engineered fill. Light equipment should be used during backfill compaction to reduce possible overstressing of the walls.

5.9 EXCAVATION AND SHORING

All excavations, including utility trenches, should be properly excavated, and shored as applicable, to create a stable and safe condition. It is the responsibility of the Contractor to provide such stable, safe trench and construction slope conditions and to follow OSHA safety requirements. Since excavation procedures may be very dangerous, it is also the responsibility of the Contractor to provide a trained “competent person” as defined by OSHA to supervise all excavation operations, ensure that all personnel are working in safe conditions, and have thorough knowledge of OSHA excavation safety requirements.

Excavations for the below-grade portions of the parking garage will require the use of shoring. Typical shoring including driven sheet piles or soldier piles with lagging may be appropriate for the main podium building excavation. If the building at 535 South Eighth Street remains onsite during construction, a tieback shoring system or underpinning pits to support the building should be considered.

Considering the proximity to existing onsite and offsite improvements, the design of the shoring should be sufficiently rigid to prevent detrimental movement of the shoring and possible damage of pavements, or other improvements. Applicable loading including surcharges due to traffic, buildings, stockpiles, construction equipment, etc. should be incorporated into shoring design. Appropriate safety factors against overturning and sliding should also be incorporated into the design calculations.

Supplemental recommendations for shoring design will be provided if needed. The contractor should be responsible for the design and construction of all shoring systems and the safety of all workers within the excavation.

5.10 DEWATERING CONSIDERATIONS

Based on the anticipated depths of the building excavations and shallow groundwater levels, it is anticipated that groundwater may be encountered at the bottom of the excavation and temporary dewatering during construction might be necessary. Assessment of dewatering and subsurface water migration and rates should be made during initial construction excavation procedures to determine level of groundwater control and dewatering necessary to address long-term conditions for the depressed portions of the structure at this site.

Temporary dewatering during construction may be necessary to keep the excavation and working areas reasonably dry. If necessary, dewatering should be performed in a manner such that water levels are maintained not less than 2 feet below the bottom of excavation prior to and continuously during shoring and foundation installation. As the excavations progress, it may be necessary to dewater the soils ahead of the excavation, such as by continuous pumping from sumps, to control the tendency for the bottom of the excavation to heave under hydrostatic pressures and to reduce inflow of water or soil from beneath temporary shoring.

5.11 PRELIMINARY PAVEMENT DESIGN

Preliminary pavement design is provided based on assumed Traffic Index and subgrade resistance values (R-value). The Traffic Index should be determined by the Civil Engineer or appropriate public agency. The sections provided above should be revisited and revised, if applicable, based on R-value tests performed on samples of actual subgrade materials recovered at the time of grading.

5.11.1 Flexible Pavement

Based on our field exploration and laboratory testing, we estimate that site soil will have a resistance (R-value) value of 5. The following preliminary pavement sections have been determined based on an assumed R-value of 5 according to the method contained in Topic 608 of Highway Design Manual by CALTRANS (revised August 5, 1988).

TABLE 5.11.1-1
Preliminary Flexible Pavement Design

Traffic Index (TI)	R-Value of 5 (untreated subgrade)	
	AC (inches)	AB (inches)
5.0	3.0	10.0
6.0	3.5	13.0
7.0	4.0	16.5

Notes: AC is asphalt concrete
AB is aggregate base Class 2 Material with minimum R = 78

5.11.2 Rigid Pavement

The following rigid pavement sections were determined using the Caltrans Highway Design Manual:

TABLE 5.11.2-1
Rigid Pavement
Jointed Plain Concrete Pavement (JPCP) Sections

Traffic Index	Section	
	JPCP (inches)	Class 2 Aggregate Base (inches)
5 to 7	6.0	12.0

AB is aggregate base Class 2 Material with minimum R = 78

For an unreinforced plain concrete pavement section, a minimum 28-day concrete compressive strength of 3,500 psi should be utilized, as well as incorporating longitudinal and transverse joints and tie bars/dowel bars in conformance with Caltrans Highway Design Manual. Transverse joints should be spaced every 12 to 15 feet.

As an alternative to the conventional pavement sections noted above, the following pavement options may be deemed feasible on a case by case basis if desired:

- Utilize a deep lift asphaltic concrete on a treated or untreated subgrade soil.
- Utilize a thickened JPCP section placed directly on a treated or untreated subgrade soil.

5.11.3 Pavement Subgrade Preparation

Pavement construction and all materials (hot mix asphalt and aggregate base) should comply with the requirements of the Standard Specifications of the State of California Division of Highways, City of San Jose requirements and the following minimum requirements.

- All pavement subgrades should be scarified to a depth of 10 to 12 inches below finished subgrade elevation, moisture conditioned to 2 percentage points above optimum moisture content, and compacted to at least 95 percent relative compaction and in accordance with City of San Jose requirements.

- Subgrade soils should be in a stable, non-pumping condition at the time aggregate baserock materials are placed and compacted. Proof-rolling with a heavy wheel-loaded piece of construction equipment should be implemented. Yielding materials should be appropriately mitigated, with suitable mitigation measures developed in coordination with the client, contractor and Geotechnical Engineer.

- Adequate provisions must be made such that the subgrade soils and aggregate baserock materials are not allowed to become saturated.

- Aggregate baserock materials should meet current Caltrans specifications for Class 2 aggregate baserock and should be compacted to at least 95 percent of maximum dry density at a moisture content of at least optimum. Proof-rolling with a heavy wheel-loaded piece of construction equipment should be implemented after placement and compaction of the aggregate base. Yielding materials should be appropriately mitigated, with suitable mitigation measures developed in coordination with the client, contractor and Geotechnical Engineer.

- Hot mix asphalt paving materials should meet current Caltrans specifications and City requirements.

- All concrete curbs separating pavement and irrigated landscaped areas should extend into the subgrade and below the bottom of adjacent aggregate baserock materials. An undercurb drain could also be considered to help collect and transport subsurface seepage.

5.12 DRAINAGE

The building pads should be positively graded at all times to provide for rapid removal of surface water runoff away from the foundation systems and to prevent ponding of water under foundations or seepage toward the foundation systems at any time during or after construction. Ponded water may cause undesirable soil swell and loss of strength. As a minimum requirement, finished grades should have slopes of at least 3 percent within 5 feet from the exterior walls and at right angles to allow surface water to drain positively away from the structure. For paved areas, the slope gradient can be reduced to 2 percent.

All surface water should be collected and discharged into outlets approved by the Civil Engineer. Landscape mounds must not interfere with this requirement.

All roof stormwater should be collected and directed to downspouts. Stormwater from roof downspouts should not be allowed to discharge directly onto the ground surface in close proximity to the foundation system, such as through the use of spashblocks. Rather, stormwater from roof downspouts should be directed to a solid pipe that discharges into the street or to an outlet approved by the Civil Engineer. If this is not acceptable, we recommend downspouts discharge at least 5 feet away from foundations and the minimum gradient within 5 feet from the foundation should be increased from 3 to 5 percent. Alternatively, engineered stormwater systems can be developed under the guidance of ENGEO.

5.13 STORMWATER INFILTRATION OPPORTUNITIES AND SELECT SEDIMENT RISK FACTORS FOR SWPPP

Due to the planned density of the site soils and variable fines content (that amount passing the No. 200 sieve) generally exceeding 30 percent, the site soils are expected to have a low to moderately low permeability value for stormwater infiltration in grassy swales or permeable pavers, unless subdrains are installed. Therefore, best management practices should assume that very limited stormwater infiltration will occur at the site unless an engineered system is designed.

Site-specific analysis was not performed. Based on the GIS maps provided by the State Water Resource Control Board, a k-factor of 0.24 and an LS-factor of 5.39 could be utilized.

5.14 REQUIREMENTS FOR LANDSCAPING IRRIGATION

The geotechnical foundation design parameters contained in this report have considered the swelling potential of some of the site soils; however, it is important to recognize that swell in excess of that anticipated is possible under adverse drainage or irrigation conditions. Therefore, planted areas should be avoided immediately adjacent to the buildings. If planting adjacent to a structure is desired, the use of watertight planter boxes with controlled discharge or the use of plants that require very little moisture is recommended.

Sprinkler systems should not be installed where they may cause ponding or saturation of foundation soils within 3 feet from walls. Such ponding or saturation could result in undesirable soil swell, loss of compaction and consequent foundation and slab movements. Irrigation of landscaped areas should be strictly limited to that necessary to sustain vegetation. The Landscape Architect and prospective owners should be informed of the surface drainage and irrigation requirements included in this report.

5.15 UTILITIES

It is recommended that utility trench backfilling be done under the observation of a Geotechnical Engineer. Ideally, pipe zone backfill (i.e. material beneath and immediately

surrounding the pipe) should consist of native material less than ¾ inch in maximum dimension compacted in accordance with recommendations provided above for engineered fill. Trench zone backfill (i.e. material placed between the pipe zone backfill and the ground surface) should also consist of native soil compacted in accordance with recommendations for engineered fill. Controlled density fill is also suitable for pipe zone and trench zone backfill.

If required by local agencies, where import material is used for pipe zone backfill, we recommend it consist of quarry fines, fine- to medium-grained sand, or a well-graded mixture of sand and gravel and that this material not be used within 2 feet of finish subgrades. This material should be compacted to at least 90 percent relative compaction at a moisture content of not less than optimum.

In general, uniformly graded gravel should not be used for pipe or trench zone backfill due to the potential for migration of soil into the relatively large void spaces present in this type of material and for movement of water along trenches backfilled with this type of material. If uniformly graded gravel is used, we recommend that it be encapsulated in 6-ounce filter fabric. Providing outlet locations into manholes or catch basins for water collected in granular trench backfill should also be considered.

All utility trenches entering the buildings and paved areas should be provided with an impervious seal where the trenches pass under or through the building perimeter or curb lines. The impervious plug should extend at least 3 feet to both sides of the crossing and should be placed below, around, and above the utility pipe such that it is entirely in contact with the trench walls and pipe. This is to prevent surface water percolation into the import sand or gravel pipe zone backfill under foundations and pavements where such water would remain trapped in a perched condition.

Care should be exercised where utility trenches are located beside foundation areas. Utility trenches constructed parallel to foundations should be located entirely above a plane extending down from the lower edge of the footing at an angle of 45 degrees. Utility companies and Landscape Architects should be made aware of this information.

Utility trenches in areas to be paved should be constructed in accordance with the City of San Jose requirements or approved alternatives. Compaction of backfill by jetting should not be allowed at this site. If there appears to be a conflict between the City or other Agency requirements and the recommendations contained in this report, this should be brought to the Owner's attention for resolution prior to submitting bids.

6.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

This report is issued with the understanding that it is the responsibility of the owner to transmit the information and recommendations of this report to developers, contractors, buyers, architects, engineers, and designers for the project so that the necessary steps can be taken by the contractors and subcontractors to carry out such recommendations in the field. The conclusions and recommendations contained in this report are solely professional opinions.

The professional staff of ENGEO Incorporated strives to perform its services in a proper and professional manner with reasonable care and competence but is not infallible. There are risks of earth movement and property damages inherent in land development. We are unable to eliminate all risks or provide insurance; therefore, we are unable to guarantee or warrant the results of our services.

This preliminary report is based upon field and other conditions discovered at the time of preparation of ENGEO's documents of service. This document must not be subject to unauthorized reuse, that is, reuse without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time. Actual field or other conditions will necessitate clarifications, adjustments, modifications or other changes to ENGEO's documents. Therefore, ENGEO must be engaged to prepare the necessary clarifications, adjustments, modifications or other changes before construction activities commence or further activity proceeds. If ENGEO's scope of services does not include onsite construction observation, or if other persons or entities are retained to provide such services, ENGEO cannot be held responsible for any or all claims, including, but not limited to claims arising from or resulting from the performance of such services by other persons or entities, and any or all claims arising from or resulting from clarifications, adjustments, modifications, discrepancies or other changes necessary to reflect changed field or other conditions.

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FIGURES

Figure 1 - Vicinity Map
Figure 2 - Site Plan
Figure 3 - Regional Geologic Map
Figure 4 - Seismic Hazard Zone Map
Figure 5 - Regional Faulting and Seismicity

FIGURES

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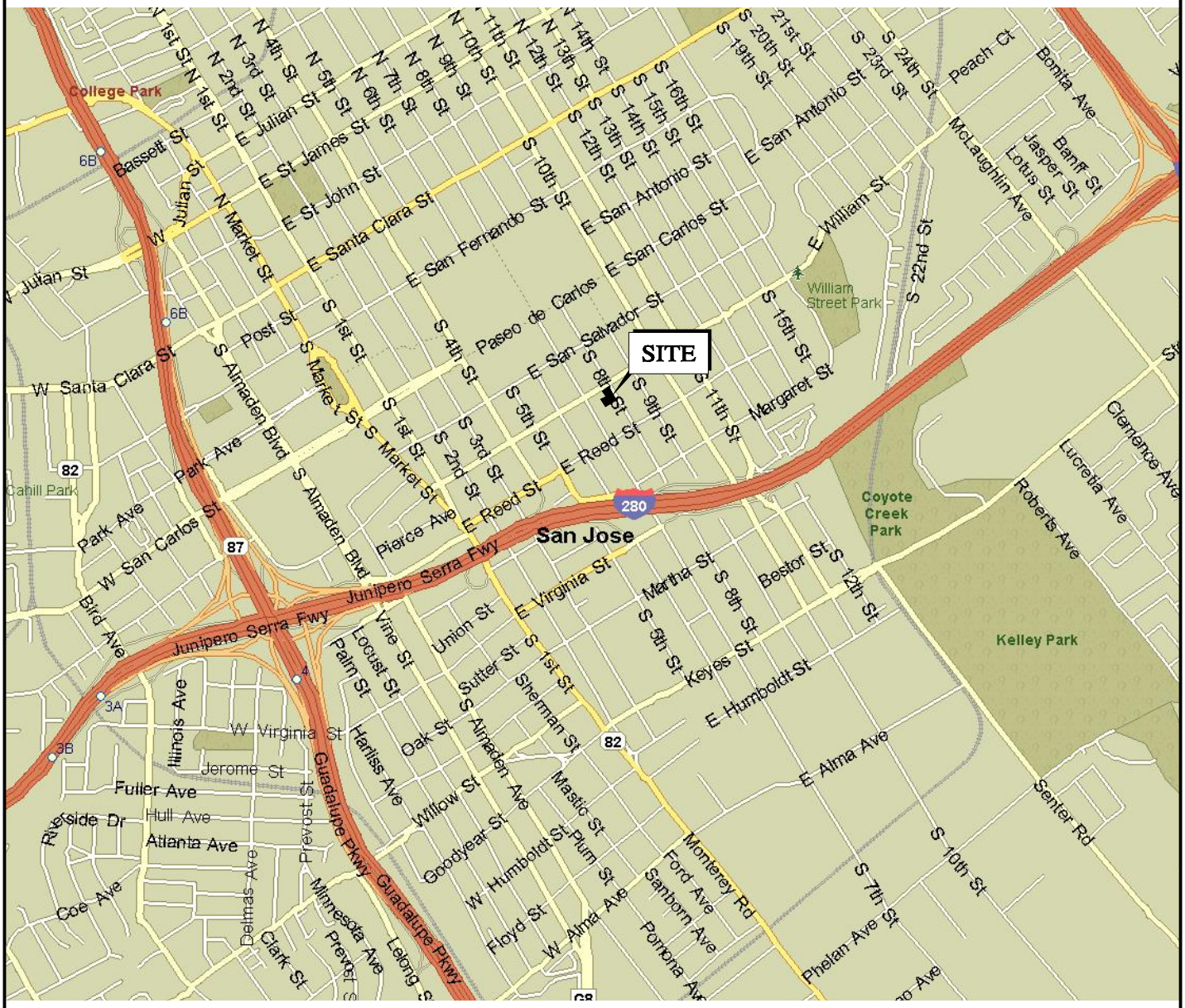

0 FEET 2000

0 METERS 1000

BASE MAP SOURCE: MS STREETS AND TRIPS 2009

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VICINITY MAP

EIGHTH AND WILLIAM STREET MIXED USE DEVELOPMENT

SAN JOSE, CALIFORNIA

PROJECT NO.:	8643.000.000
SCALE:	AS SHOWN
DRAWN BY: PC	CHECKED BY: PCG

FIGURE NO. 1

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ORIGINAL FIGURE PRINTED IN COLOR

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EXPLANATION

1-B3 APPROXIMATE LOCATION OF BORING

1-CPT3 APPROXIMATE LOCATION OF CONE PENETRATION TEST

N

0 FEET 40

0 METERS 20

BASE MAP SOURCE: GOOGLE EARTH, 2007, LPMD ARCHITECTS

ENGEO Expect Excellence

SITE PLAN

EIGHTH AND WILLIAM STREET MIXED USE DEVELOPMENT

SAN JOSE, CALIFORNIA

PROJECT NO.:	8643.000.000
SCALE:	AS SHOWN
DRAWN BY: SRP	CHECKED BY: PCG

FIGURE NO. 2

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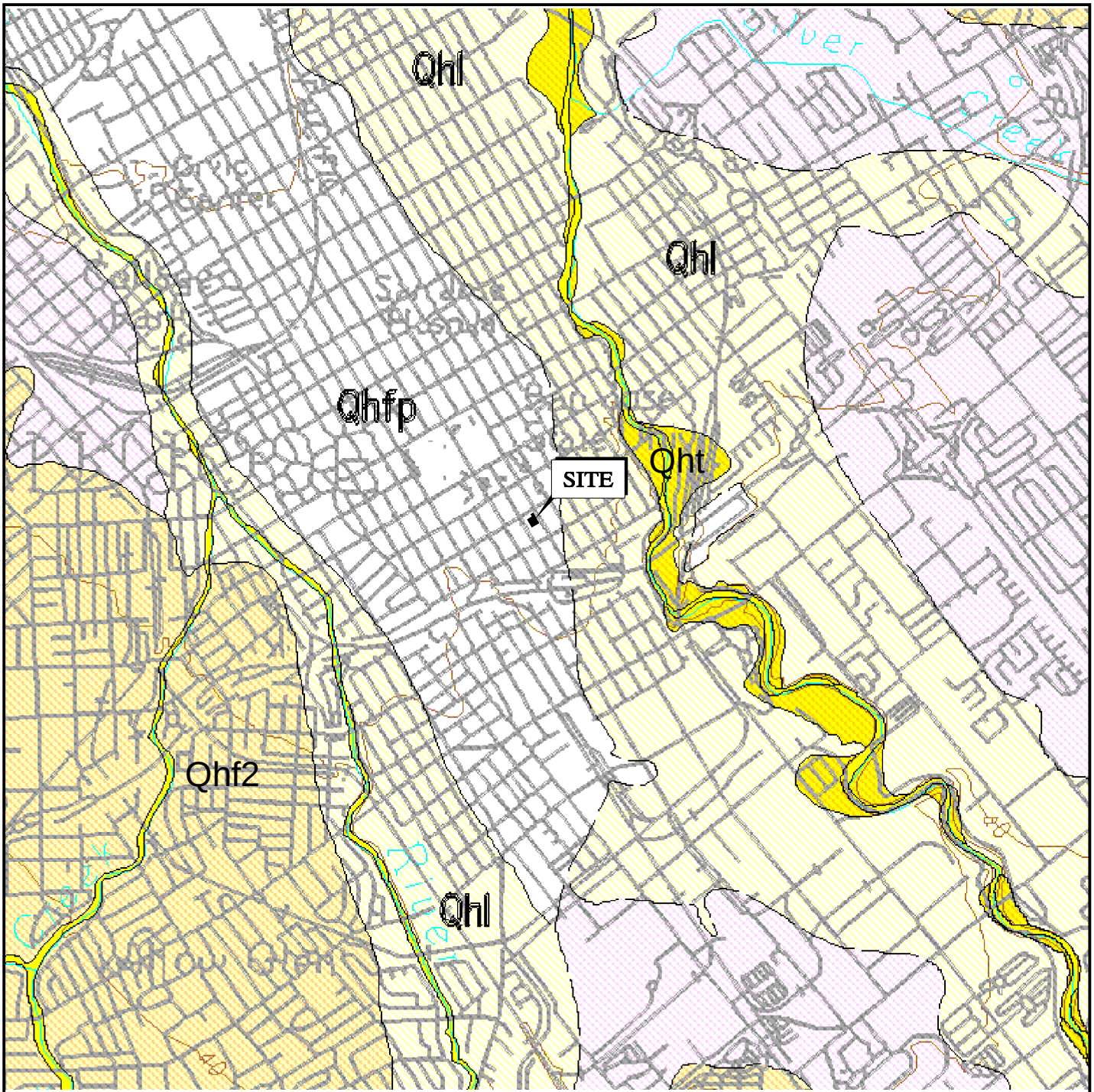

EXPLANATION

Qhfp	FLOOD PLAIN DEPOSITS (HOLOCENE)
Qhl	LEVEE DEPOSITS (HOLOCENE)
Qht	STREAM TERRACE DEPOSITS (HOLOCENE)
Qhf2	ALLUVIAL FAN DEPOSITS (UPPER PLEISTOCENE)

N

0 FEET 3000

0 METERS 1500

BASE MAP SOURCE: WENTWORTH, 1999

ENGEO Expect Excellence

REGIONAL GEOLOGIC MAP

EIGHTH AND WILLIAM STREET MIXED USE DEVELOPMENT

SAN JOSE, CALIFORNIA

PROJECT NO.: 8643.000.000		FIGURE NO.
SCALE: AS SHOWN		3
DRAWN BY: SRP	CHECKED BY: PCG	

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ORIGINAL FIGURE PRINTED IN COLOR

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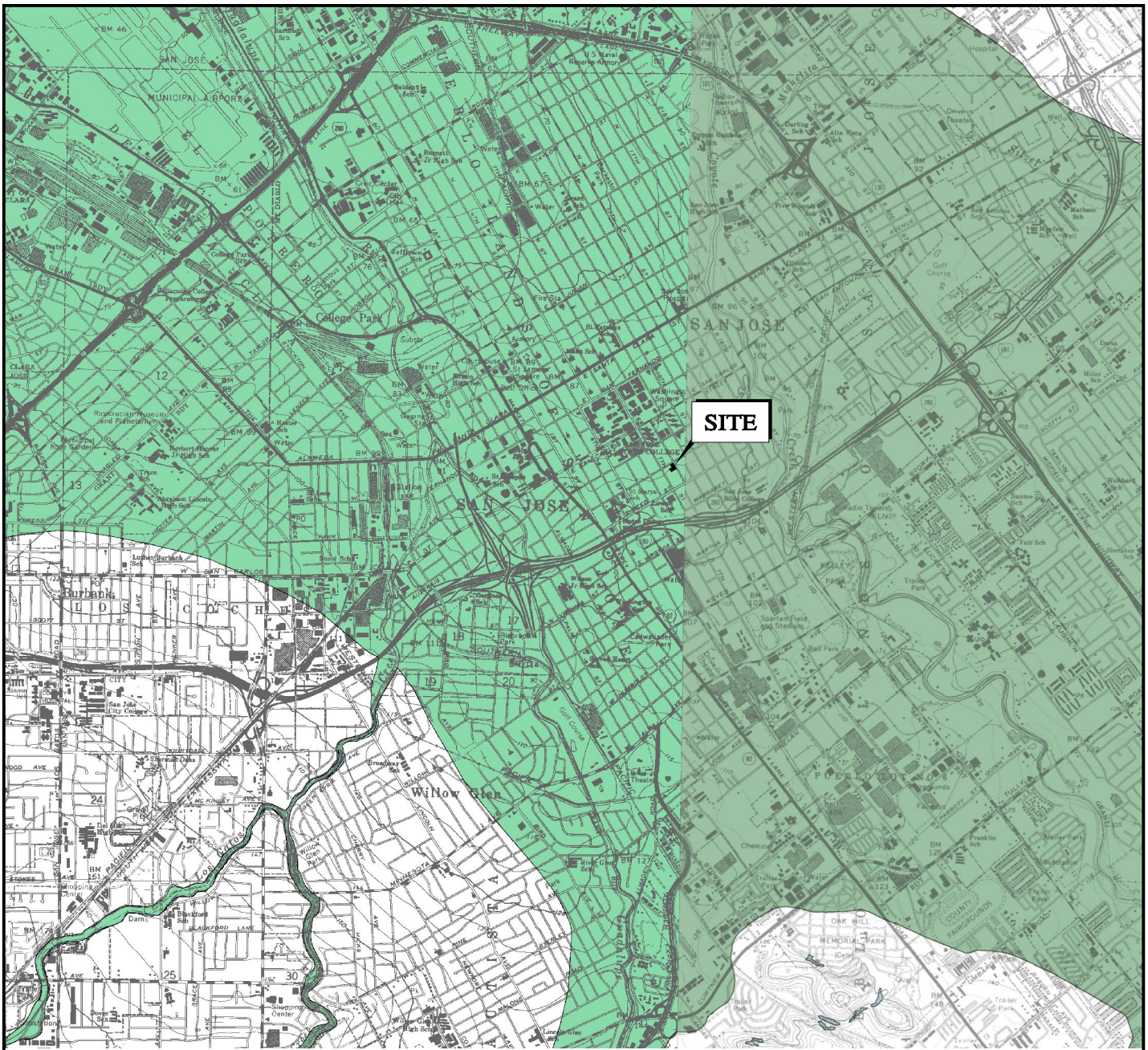


EXPLANATION

LIQUEFACTION

AREAS WHERE HISTORIC OCCURRENCE OF LIQUEFACTION, OR LOCAL GEOLOGICAL, GEOTECHNICAL AND GROUNDWATER CONDITIONS INDICATE A POTENTIAL FOR PERMANENT GROUND DISPLACEMENTS SUCH THAT MITIGATION AS DEFINED IN PUBLIC RESOURCES CODE SECTION 2693(c) WOULD BE REQUIRED

EARTHQUAKE-INDUCED LANDSLIDES

AREAS WHERE PREVIOUS OCCURRENCE OF LANDSLIDE MOVEMENT, OR LOCAL TOPOGRAPHIC, GEOLOGICAL, GEOTECHNICAL AND SUBSURFACE WATER CONDITIONS INDICATE A POTENTIAL FOR PERMANENT GROUND DISPLACEMENTS SUCH THAT MITIGATION AS DEFINED IN PUBLIC RESOURCES CODE SECTION 2693(c) WOULD BE REQUIRED

N

0 FEET 4000

0 METERS 2000

BASE MAP SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION, CALIFORNIA GEOLOGICAL SURVEY, 2006

ENGEO Expect Excellence

SEISMIC HAZARD ZONE MAP

EIGHTH AND WILLIAM STREET MIXED USE DEVELOPMENT

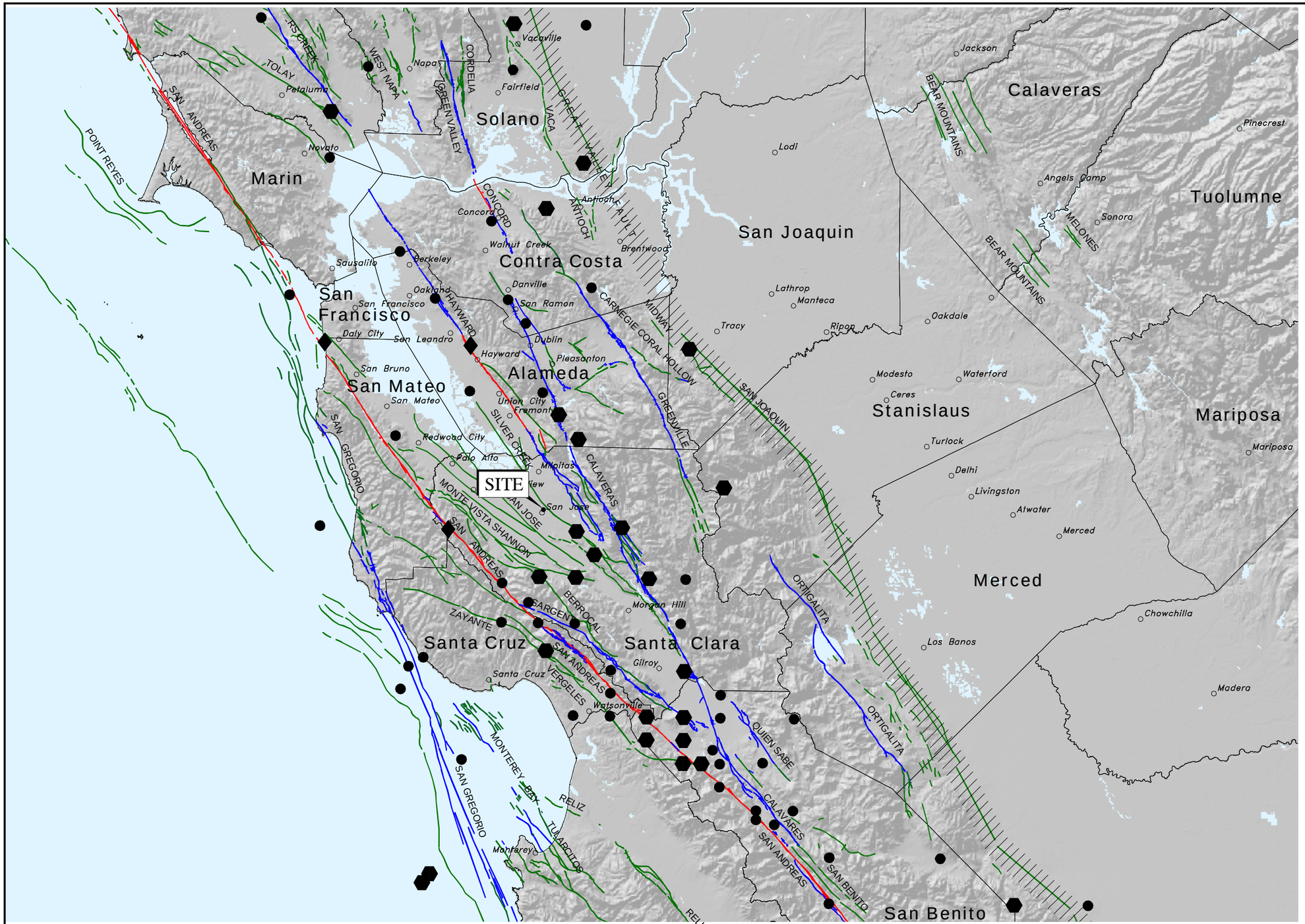
SAN JOSE, CALIFORNIA

PROJECT NO.:	8643.000.000
SCALE:	AS SHOWN
DRAWN BY: SRP	CHECKED BY: PCG

FIGURE NO. 4

G:\Drafting\DRAFTING2_Dwg\8643\000\GEX\8643000000-GEX-4-SeismicHazardZonesMap-0711.dwg Plot Date: 7-08-11 spatters

ORIGINAL FIGURE PRINTED IN COLOR



BASE MAP SOURCE:
U.S.G.S. 1-ARC SECOND S.R.T.M. DATABASE
U.S.G.S. QUATERNARY FAULT DATABASE, MARCH, 2006
U.S.G.S. HISTORIC EARTHQUAKE DATABASE (1800-2000)

ENGEO Expect Excellence

REGIONAL FAULTING AND SEISMICITY
EIGHTH AND WILLIAM STREET MIXED USE DEVELOPMENT
SAN JOSE, CALIFORNIA

PROJECT NO.: 8643.000.000	FIGURE NO
SCALE: AS SHOWN	5
DRAWN BY: SRP / CHECKED BY: PCG	

ORIGINAL FIGURE PRINTED IN COLOR

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APPENDIX A

Key to Boring Logs
Exploration Logs

APPENDIX A

KEY TO BORING LOGS

MAJOR TYPES			DESCRIPTION
COARSE-GRAINED SOILS MORE THAN HALF OF MAT'L LARGER THAN #200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LESS THAN 5% FINES	GW - Well graded gravels or gravel-sand mixtures GP - Poorly graded gravels or gravel-sand mixtures
		GRAVELS WITH OVER 12 % FINES	GM - Silty gravels, gravel-sand and silt mixtures GC - Clayey gravels, gravel-sand and clay mixtures
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 5% FINES	SW - Well graded sands, or gravelly sand mixtures SP - Poorly graded sands or gravelly sand mixtures
		SANDS WITH OVER 12 % FINES	SM - Silty sand, sand-silt mixtures SC - Clayey sand, sand-clay mixtures
FINE-GRAINED SOILS MORE THAN HALF OF MAT'L SMALLER THAN #200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50 % OR LESS		ML - Inorganic silt with low to medium plasticity CL - Inorganic clay with low to medium plasticity OL - Low plasticity organic silts and clays
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50 %		MH - Elastic silt with high plasticity CH - Fat clay with high plasticity OH - Highly plastic organic silts and clays
	HIGHLY ORGANIC SOILS		PT - Peat and other highly organic soils

For fine-grained soils with 15 to 29% retained on the #200 sieve, the words "with sand" or "with gravel" (whichever is predominant) are added to the group name.

For fine-grained soil with >30% retained on the #200 sieve, the words "sandy" or "gravelly" (whichever is predominant) are added to the group name.

GRAIN SIZES

U.S. STANDARD SERIES SIEVE SIZE				CLEAR SQUARE SIEVE OPENINGS			
200	40	10	4	3/4 "		3"	12"
SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

RELATIVE DENSITY

SANDS AND GRAVELS	BLOWS/FOOT (S.P.T.)
VERY LOOSE	0-4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	OVER 50

CONSISTENCY

SILTS AND CLAYS	STRENGTH*
VERY SOFT	0-1/4
SOFT	1/4-1/2
MEDIUM STIFF	1/2-1
STIFF	1-2
VERY STIFF	2-4
HARD	OVER 4

SAMPLER SYMBOLS

- Modified California (3" O.D.) sampler
- California (2.5" O.D.) sampler
- S.P.T. - Split spoon sampler
- Shelby Tube
- Continuous Core
- Bag Samples
- Grab Samples
- NR No Recovery

MOISTURE CONDITION

DRY	Dusty, dry to touch
MOIST	Damp but no visible water
WET	Visible freewater

LINE TYPES

- Solid - Layer Break
- Dashed - Gradational or approximate layer break

GROUND-WATER SYMBOLS

- Groundwater level during drilling
- Stabilized groundwater level

(S.P.T.) Number of blows of 140 lb. hammer falling 30" to drive a 2-inch O.D. (1-3/8 inch I.D.) sampler

* Unconfined compressive strength in tons/sq. ft., asterisk on log means determined by pocket penetrometer

ENGEO INCORPORATED

LOG OF BORING 1-B1

ENGEO INCORPORATED

Geotechnical Exploration
8th and William Street
San Jose, California
8643.000.000 Phase 003

DATE DRILLED: 5/27/2011
HOLE DEPTH: Approx. 65½ ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 92 ft.

LOGGED / REVIEWED BY: A. Firmin / JAM
DRILLING CONTRACTOR: Britton Exploration
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
			Soil surface										
			SANDY LEAN CLAY (CL), brown, stiff, moist, fine- to coarse-grained sand			8					11.9	107.3	1.46
	1												
			SANDY SILT (ML), brown, medium stiff, moist, fine- to coarse-grained sand			12					15.7	102.4	0.865
5													
	2												
			SILTY SAND (SM), brown, very loose, moist, fine- to coarse-grained sand Interbedded thin silt and sand layers at 8 - 11 feet.			6					17.3	94.5	
10	3				▽	2							
	4		SANDY LEAN CLAY (CL), dark brown, soft, wet, fine- to coarse-grained sand										
15			Pocket torvane = 471 psf			5					26.5	99.6	0.25*
	5		Pocket torvane = 303 psf			100 - 250 psi							0.25*
			SANDY SILT (ML), yellowish brown and gray, soft, wet, fine- to coarse-grained sand										
20	6		SILTY SAND (SM), brown, medium dense, wet, fine- to coarse-grained sand No recovery			12							
	7		FAT CLAY (CH), brown and gray, soft, moist, < 5% fine-grained sand			2							0.25*
25													

LOG OF BORING 1-B1

ENGEO INCORPORATED

Geotechnical Exploration
8th and William Street
San Jose, California
8643.000.000 Phase 003

DATE DRILLED: 5/27/2011
HOLE DEPTH: Approx. 65½ ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 92 ft.

LOGGED / REVIEWED BY: A. Firmin / JAM
DRILLING CONTRACTOR: Britton Exploration
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
			FAT CLAY (CH), brown and gray, soft, moist, < 5% fine-grained sand										
	8		SANDY SILT (ML), dark brownish gray, very stiff, moist, fine- to coarse-grained sand			29					19.3	110.9	2.5*
	9		SILTY SAND (SM), very dark bluish gray, very loose, wet, fine- to coarse-grained sand			4							
30						2				32			
						3							
	10		FAT CLAY (CH), dark bluish gray, soft, moist, 5 - 10% fine-grained sand, trace organics										0.25*
35													
	11		Pocket torvane = 573 psf			150 - 300 psi					50.1	77.4	0.25*
	12												
40													
	13												
45			FAT CLAY (CH), dark bluish gray, stiff, moist, < 5% fine-grained sand, trace organics Pocket torvane = 1,372 psf			12							1.25*
	14												
	15												
50													

LOG OF BORING 1-B1

ENGEO INCORPORATED

Geotechnical Exploration
8th and William Street
San Jose, California
8643.000.000 Phase 003

DATE DRILLED: 5/27/2011
HOLE DEPTH: Approx. 65½ ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 92 ft.

LOGGED / REVIEWED BY: A. Firmin / JAM
DRILLING CONTRACTOR: Britton Exploration
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
	16		FAT CLAY (CH), dark bluish gray, very stiff, moist, 5 - 10% fine-grained sand, trace organics Pocket torvane = 1,843 psf			18							2.5*
55	17												
	18												
60			No recovery			16							
	19		CLAYEY SAND (SC), dark bluish gray and dark yellowish brown, loose, wet, fine- to coarse-grained sand Interbedded sand and clay layers at 61.5 - 63 feet.			7							
65			SILTY SAND (SM), dark yellowish brown, medium dense to dense, wet, fine- to coarse-grained sand			30							
			Bottom of boring at approximately 65.5 feet below existing grade. Groundwater encountered at approximately 10.5 feet below existing grade during drilling.										

LOG OF BORING 1-B2

ENGEO INCORPORATED

Geotechnical Exploration
8th and William Street
San Jose, California
8643.000.000 Phase 003

DATE DRILLED: 5/27/2011
HOLE DEPTH: Approx. 37 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 92 ft.

LOGGED / REVIEWED BY: A. Firmin / JAM
DRILLING CONTRACTOR: Britton Exploration
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
			3 inches concrete										
	1		CLAYEY SAND (SC), dark brown, loose to medium dense, moist, 5 - 10% fine gravel, fine- to coarse-grained sand										
5	2		SANDY SILT (ML), yellowish brown, medium stiff to stiff, moist, fine- to coarse-grained sand			9					14.4	106.5	0.99
			SILTY SAND (SM), brown and yellowish brown, loose, moist, fine- to coarse-grained sand			9							
10	3		Interbedded thin silt and sand layers at 10 - 11.5 feet.			6				44	23.5	95.7	
	4		SANDY LEAN CLAY (CL), dark black, soft, wet, fine- to coarse-grained sand		▽								
15	5		TxUU test results - Cohesion = 622 psf Pocket torvane = 451 psf			50 - 125 psi	33	17	16	63	26.7	105.5	
			SANDY SILT (ML), yellowish brown and gray, soft, wet, fine- to coarse-grained sand										
20	6		SILTY SAND (SM), dark yellowish brown, loose, wet, fine- to coarse-grained sand No recovery			7							
						17					13.4	124.8	
25	7		FAT CLAY (CH), yellowish brown and gray, soft, moist, 5 - 10% fine- to medium-grained sand			2							

LOG OF BORING 1-B2

Geotechnical Exploration
8th and William Street
San Jose, California
8643.000.000 Phase 003

DATE DRILLED: 5/27/2011
HOLE DEPTH: Approx. 37 ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 92 ft.

LOGGED / REVIEWED BY: A. Firmin / JAM
DRILLING CONTRACTOR: Britton Exploration
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
	8		FAT CLAY (CH), yellowish brown and gray, soft, moist, 5 - 10% fine- to medium-grained sand										
	9		SILTY SAND (SM), very dark bluish gray, loose, wet, fine- to coarse-grained sand			4							
30													
	10		FAT CLAY (CH), dark blackish gray, soft, moist, < 5% fine-grained sand, trace organics										
35			No recovery			9							
	11		Grades to medium stiff Pocket torvane = 942 psf			9					33.9	88.4	0.4
			Bottom of boring at approximately 37 feet below existing grade. Groundwater encountered at approximately 14 below existing grade during drilling.										

LOG OF BORING 1-B3

ENGEO INCORPORATED

Geotechnical Exploration
8th and William Street
San Jose, California
8643.000.000 Phase 003

DATE DRILLED: 5/27/2011
HOLE DEPTH: Approx. 25½ ft.
HOLE DIAMETER: 8.0 in.
SURF ELEV (MSL): Approx. 92 ft.

LOGGED / REVIEWED BY: A. Firmin / JAM
DRILLING CONTRACTOR: Britton Exploration
DRILLING METHOD: Hollow Stem Auger
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Depth in Meters	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
			4 inches concrete										
			SANDY LEAN CLAY (CL), dark brown, medium stiff, moist, fine- to coarse-grained sand										
	1		SANDY SILT (ML), brown, medium stiff to stiff, moist, fine- to coarse-grained sand			4							1.0*
5													
	2		Interbedded thin silt and sand layers at 6 - 7.5 feet.			9				59			0.5*
			SILTY SAND (SM), brown, very loose, moist, fine- to coarse-grained sand Interbedded thin silt and sand layers at 9 - 10.5 feet.										
10	3					2							
	4				▽	4							
			SANDY LEAN CLAY (CL), dark brown, medium stiff, wet, fine- to coarse-grained sand Pocket torvane = 1,065 psf										0.25*
15	5		SANDY SILT (ML), yellowish brown and gray, soft, wet, fine- to coarse-grained sand			3					24.5	102.9	0.25*
20	6		SILTY SAND (SM), yellowish brown, loose, wet, fine- to coarse-grained sand			4				22			
	7		FAT CLAY (CH), dark yellowish brown, soft, moist to wet, 10% fine- to coarse-grained sand Pocket torvane = 492 psf			4				90	31.5 27.3	91.9 100.5	0.25*
25			Bottom of boring at approximately 25.5 feet below existing grade. Groundwater encountered at approximately 13 feet below existing grade during drilling.										

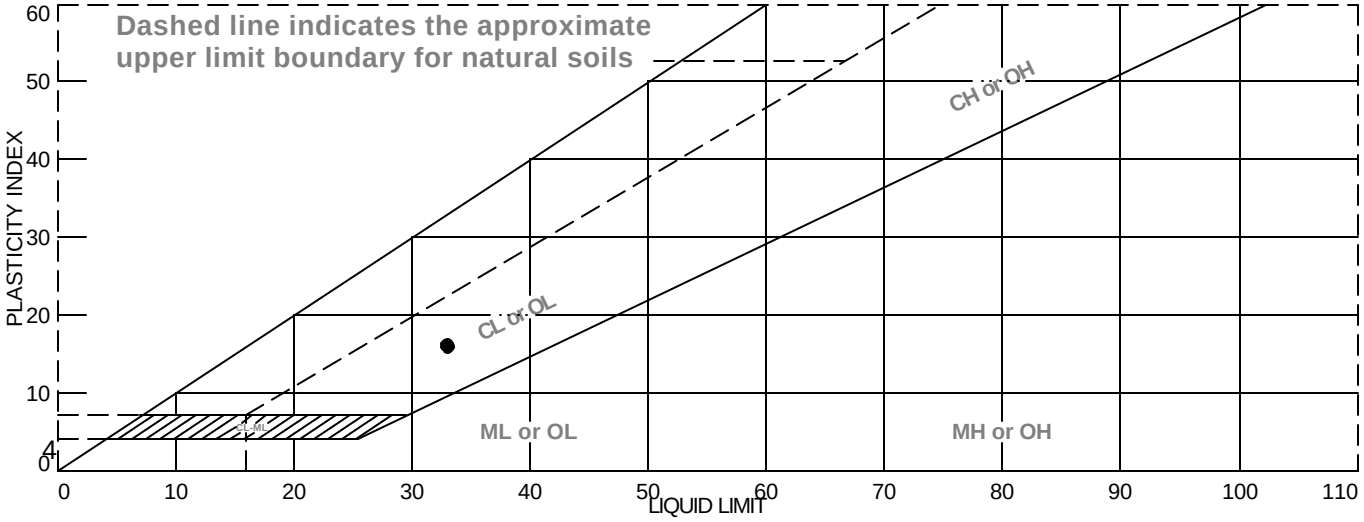
APPENDIX B

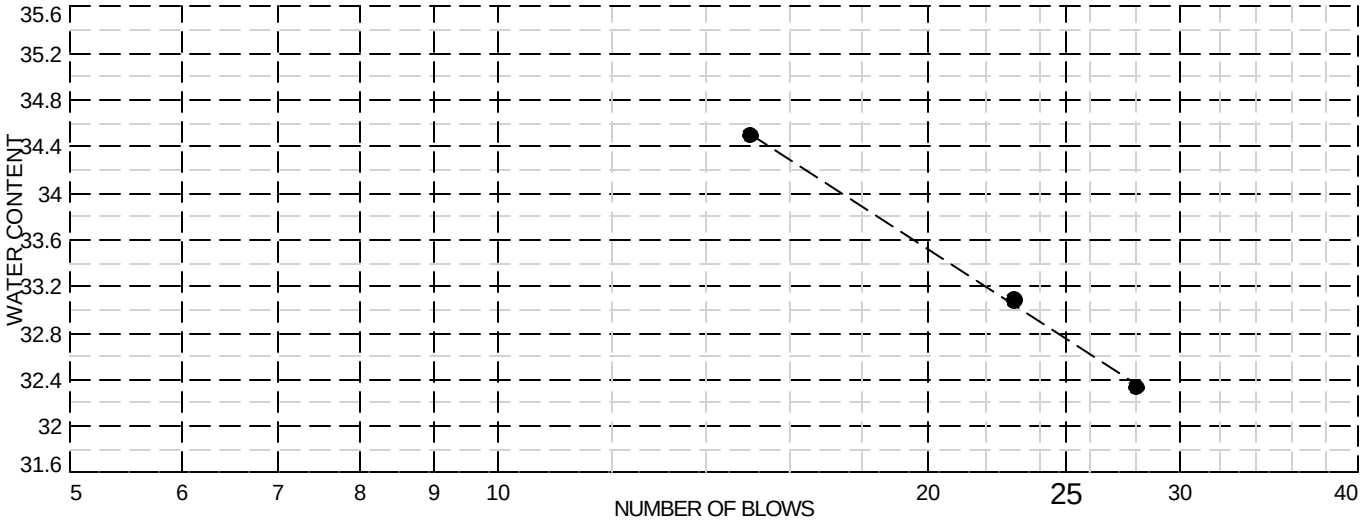
ENGEO INCORPORATED

Laboratory Test Results

APPENDIX B

LIQUID AND PLASTIC LIMITS TEST REPORT





	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	See exploration logs.	33	17	16		63.0	

Project No. 8643.000.000 **Client:** Sherwin South Campus LLC

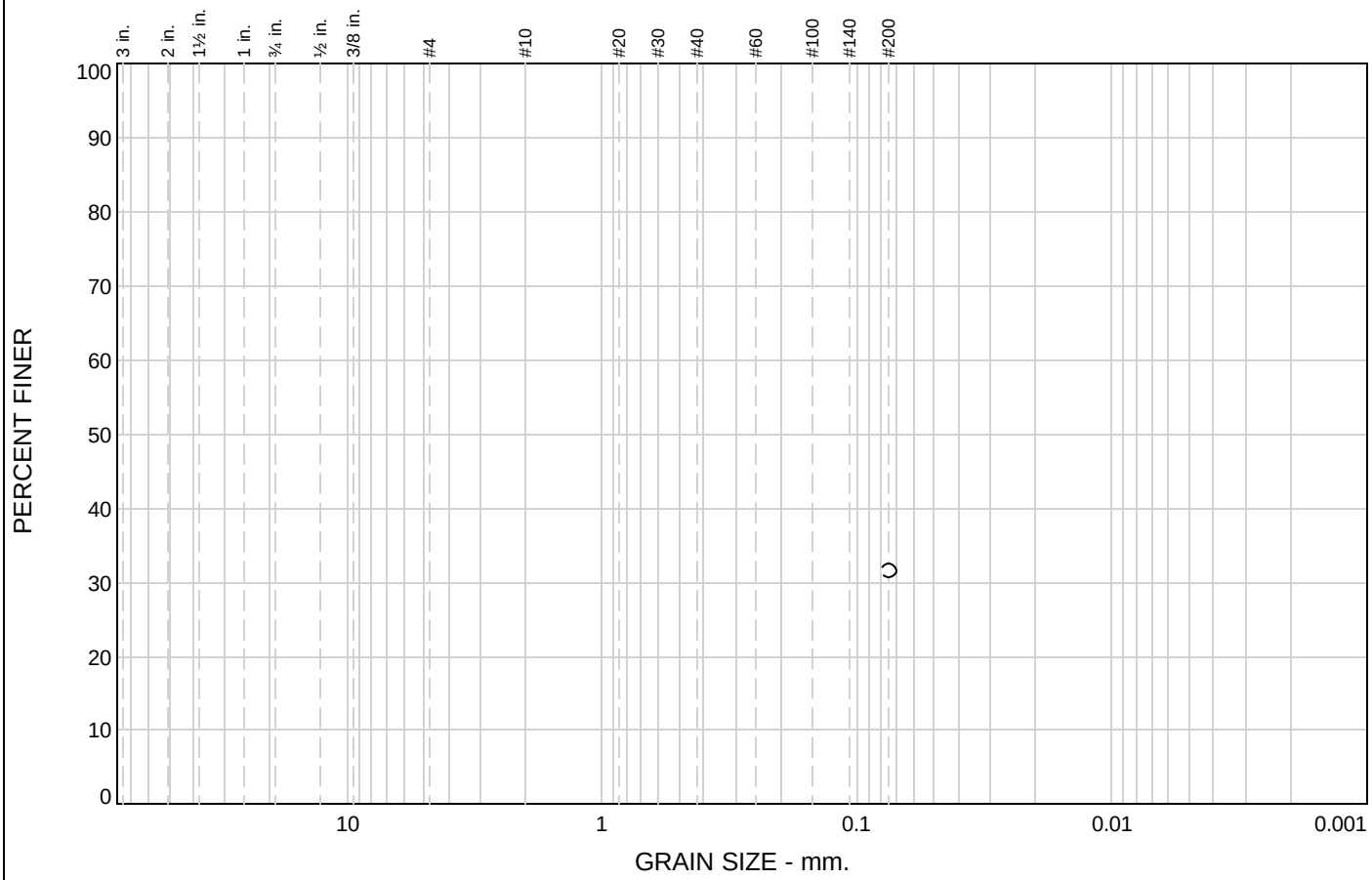
Project: 8th and William Street

● **Depth:** 14-16.5 feet **Sample Number:** 1-B2 @ 14-16.5

Remarks:

ENGEO INCORPORATED GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS MATERIALS TESTING

Particle Size Distribution Report



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						31.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#200	31.6		

* (no specification provided)

Soil Description

See exploration logs.

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

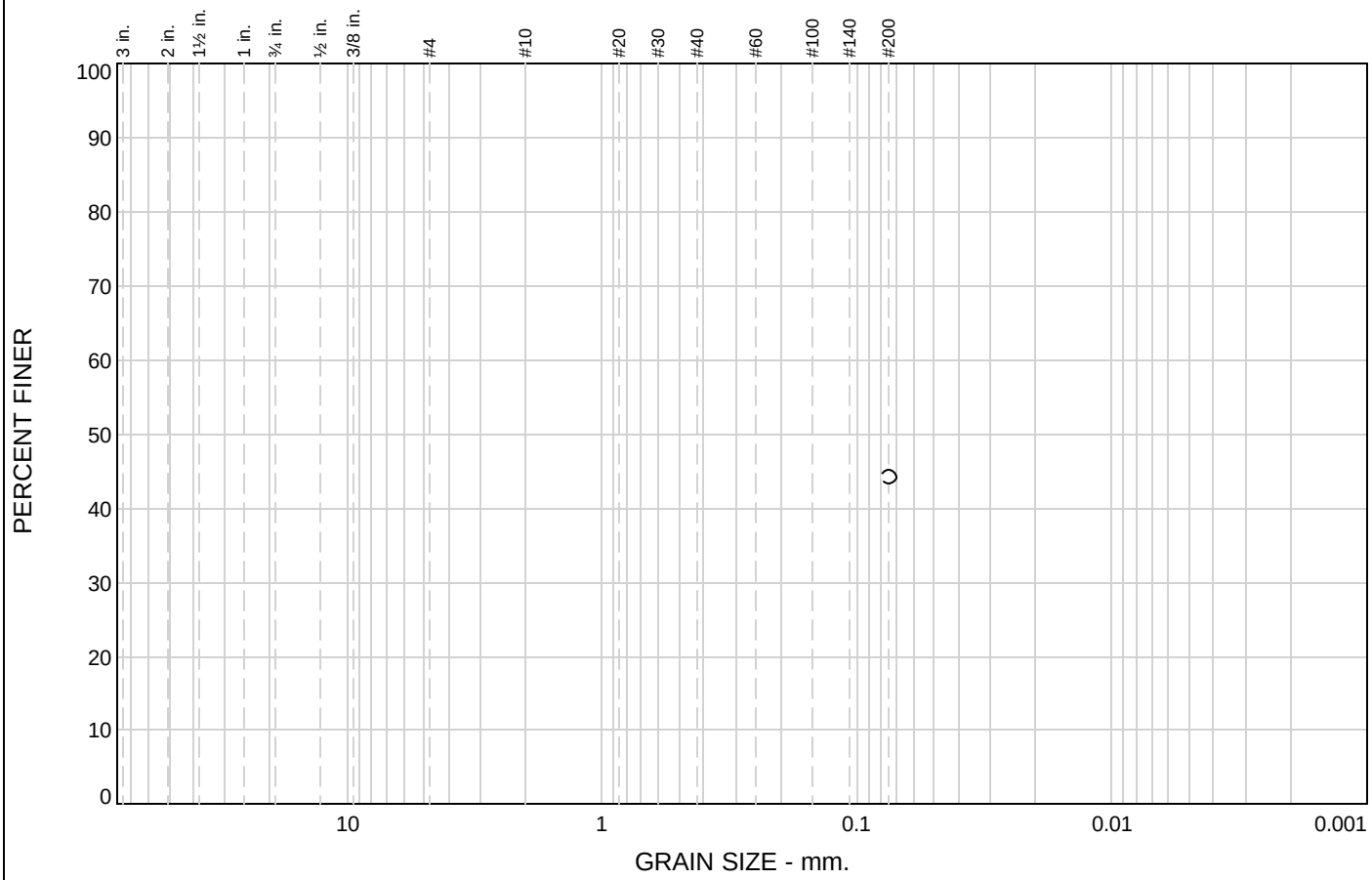
Sample No.: 1-B1 @ 30-31.5 **Source of Sample:** **Date:** 06/23/11
Location: **Elev./Depth:** 30-31.5 feet

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MATERIALS TESTING

Client: Sherwin South Campus LLC
Project: 8th and William Street

Project No: 8643.000.000

Particle Size Distribution Report



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						44.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#200	44.2		

* (no specification provided)

Soil Description

See exploration logs.

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

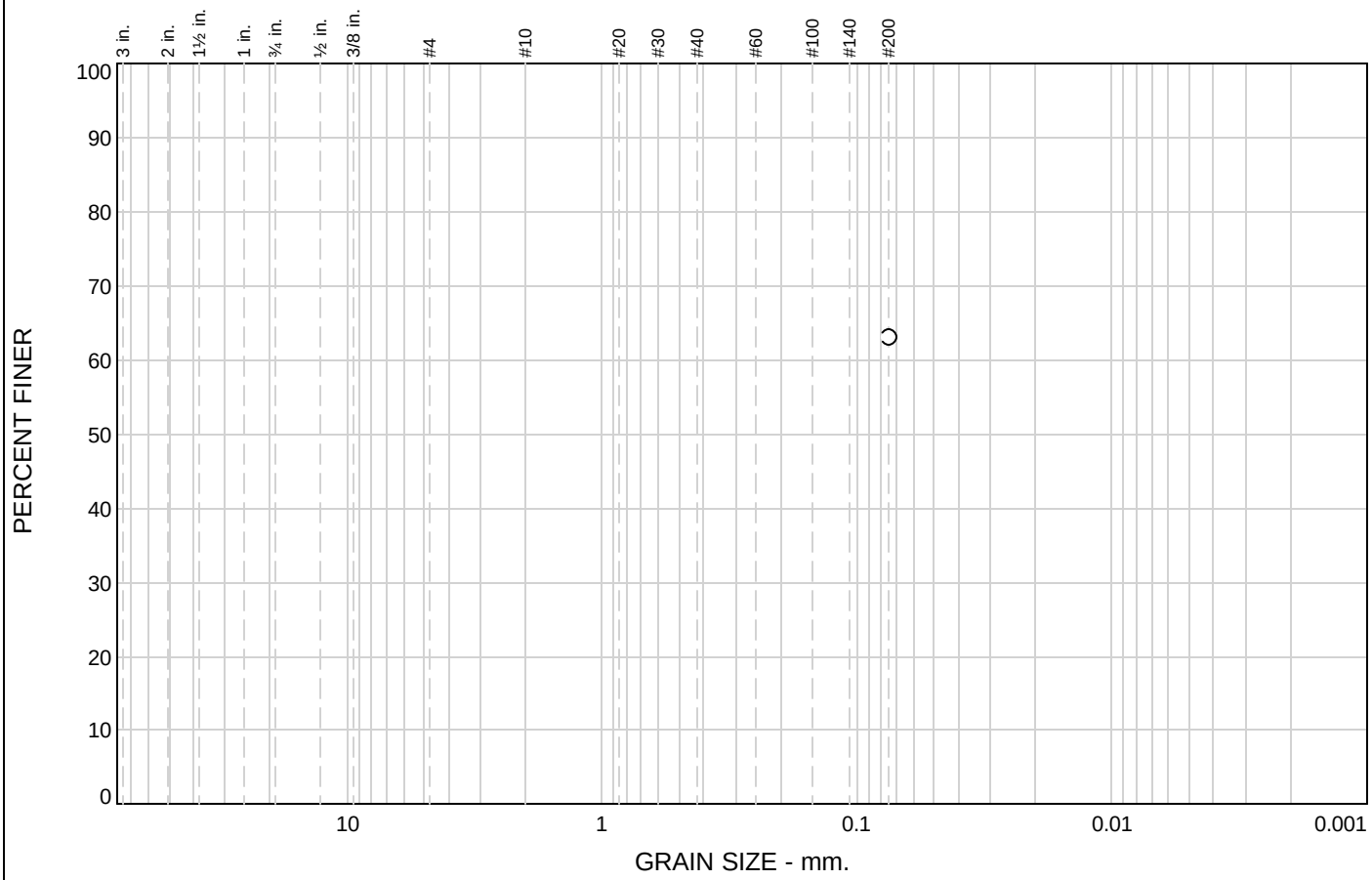
Sample No.: 1-B2 @ 11-11.5 **Source of Sample:** **Date:** 06/23/11
Location: **Elev./Depth:** 11-11.5 feet

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MATERIALS TESTING

Client: Sherwin South Campus LLC
Project: 8th and William Street

Project No: 8643.000.000

Particle Size Distribution Report



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						63.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#200	63.0		

* (no specification provided)

Soil Description

See exploration logs.

Atterberg Limits

PL= 17 LL= 33 PI= 16

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

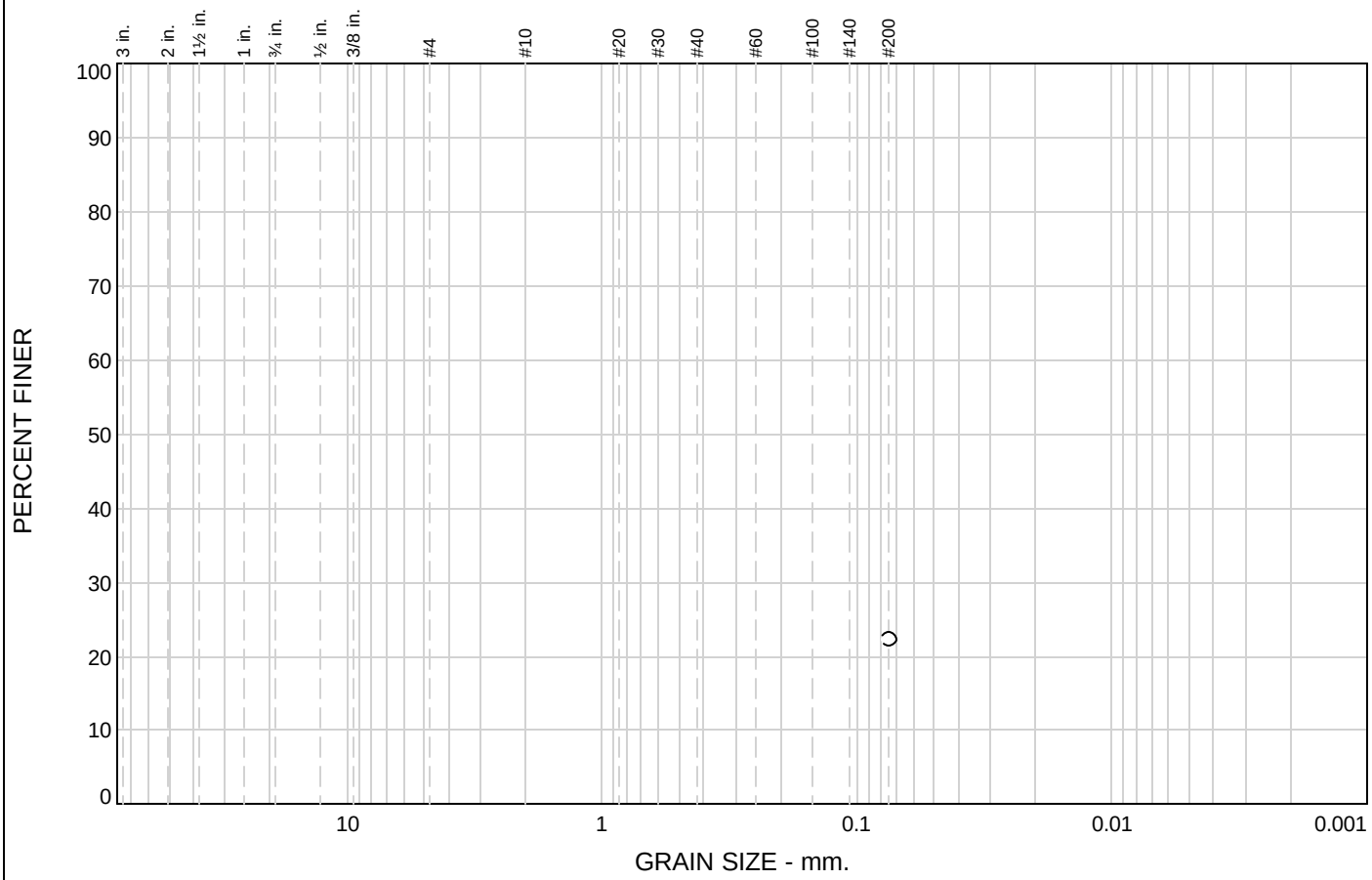
Sample No.: 1-B2 @ 14-16.5 **Source of Sample:** **Date:** 06/23/11
Location: **Elev./Depth:** 14-16.5 feet

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MATERIALS TESTING

Client: Sherwin South Campus LLC
Project: 8th and William Street

Project No: 8643.000.000

Particle Size Distribution Report



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						22.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#200	22.4		

* (no specification provided)

Soil Description

See exploration logs.

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

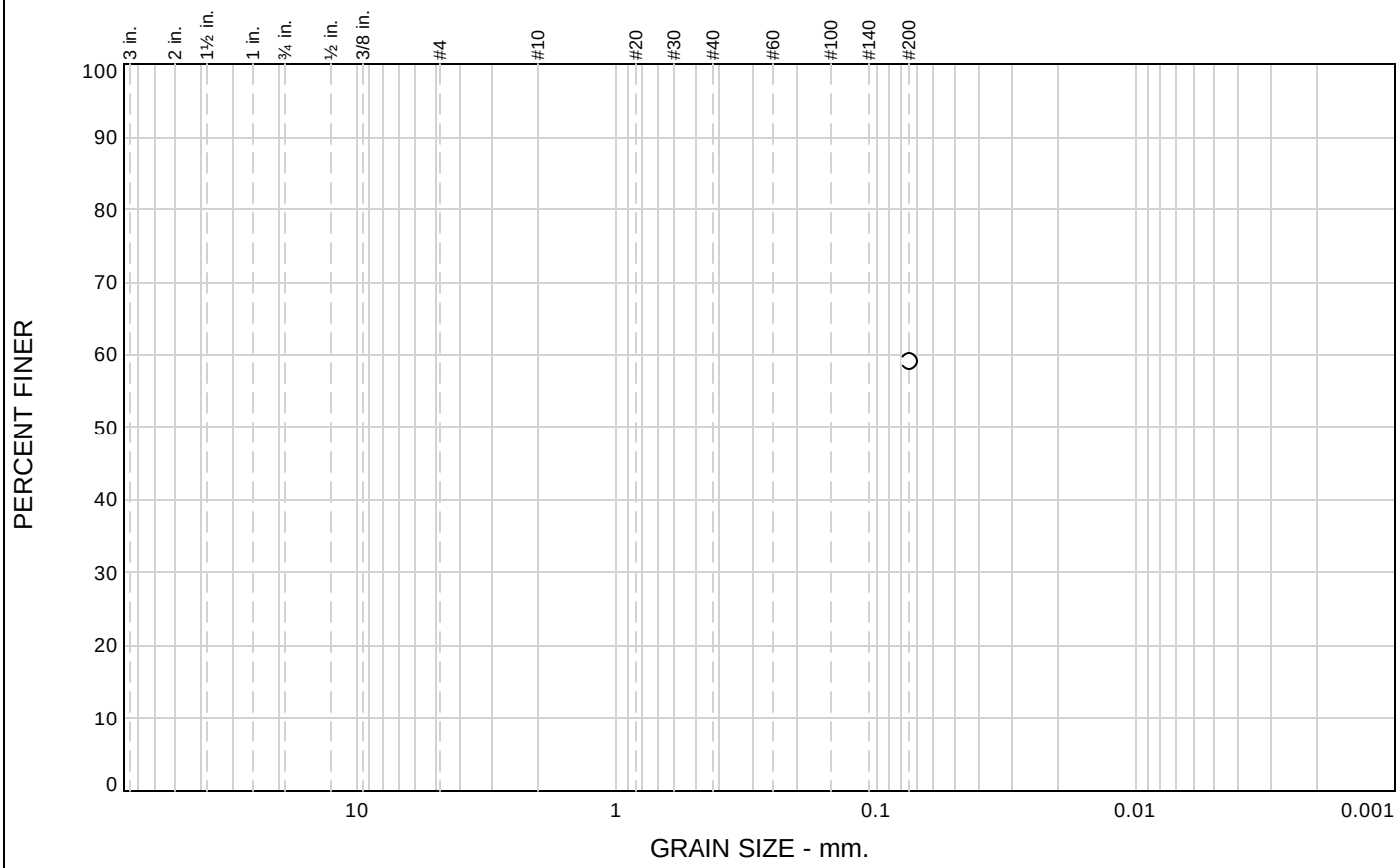
Sample No.: 1-B3 @ 21-22.5 **Source of Sample:** **Date:** 06/23/11
Location: **Elev./Depth:** 21-22.5 feet

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MATERIALS TESTING

Client: Sherwin South Campus LLC
Project: 8th and William Street

Project No: 8643.000.000

Particle Size Distribution Report



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						59.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#200	59.2		

* (no specification provided)

Soil Description

See exploration logs.

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

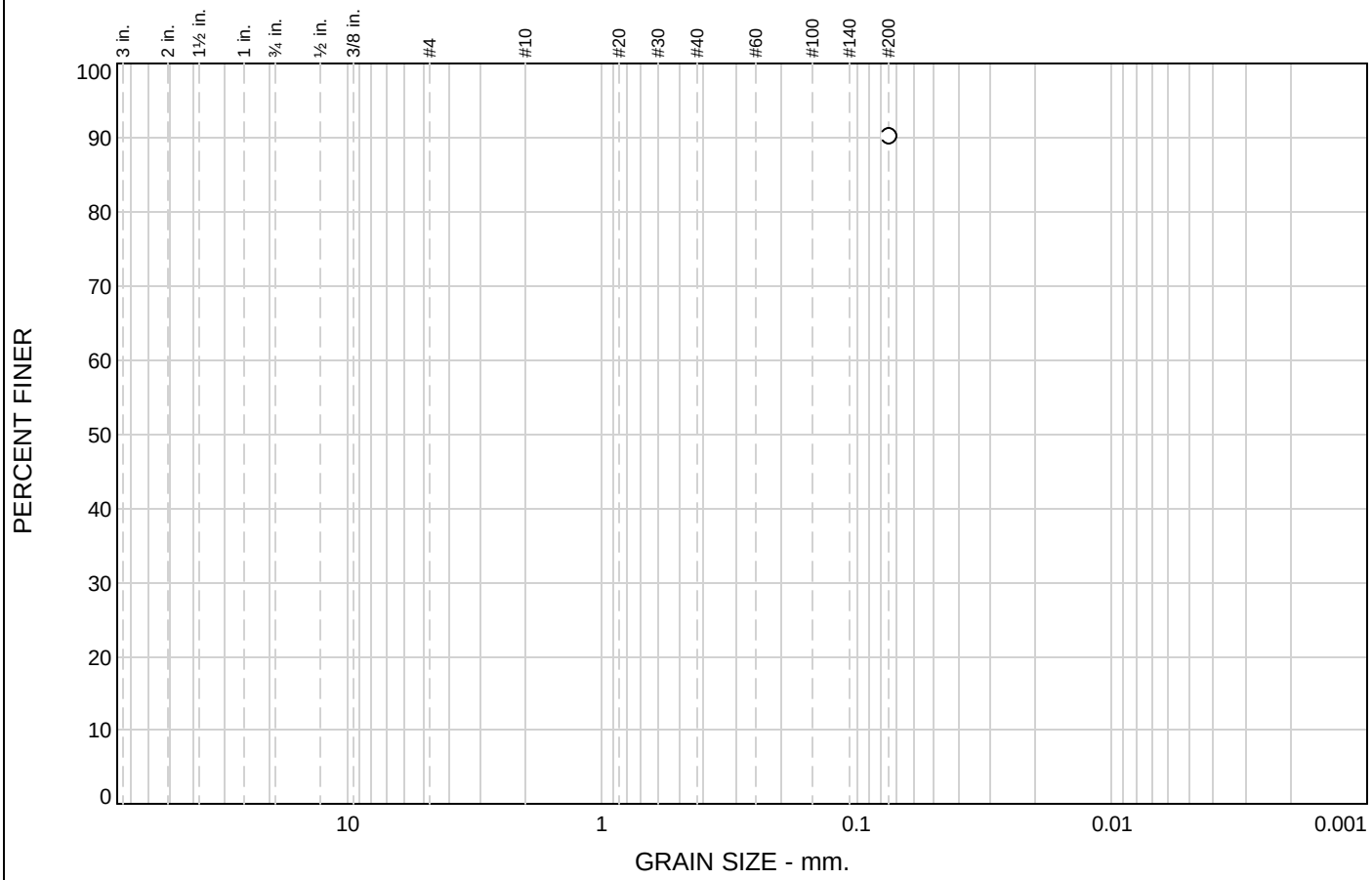
Sample No.: 1-B3 @ 7-7.5 **Source of Sample:** **Date:** 6/19/11
Location: **Elev./Depth:** 7-7.5 feet

ENGEO INCORPORATED GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS MATERIALS TESTING

Client: Sherwin South Campus LLC
Project: 8th and William Street
Project No: 8643.000.000

Tested By: DS **Checked By:** GC

Particle Size Distribution Report



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
						90.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#200	90.3		

* (no specification provided)

Soil Description

See exploration logs.

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: 1-B3 @ 25-25.5 **Source of Sample:** **Date:** 06/23/11
Location: **Elev./Depth:** 25-25.5 feet

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MATERIALS TESTING

Client: Sherwin South Campus LLC
Project: 8th and William Street

Project No: 8643.000.000

ENGEO Incorporated

Unconfined Compression Test Report (ASTM D2166)

Date 6/17

Checked By D. Seibold

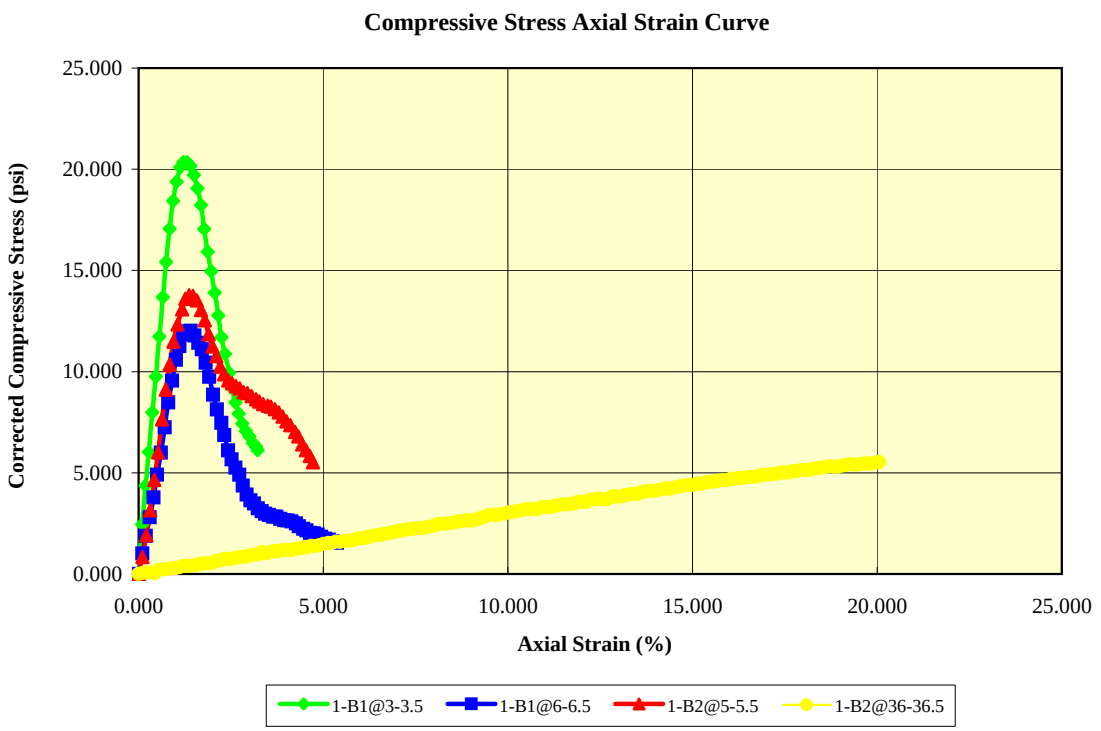
Date 6/17

Computed By G. Criste

#

Date

Tested By G. Criste



Before Test	Specimen			
	1-B1@3-3.5	1-B1@6-6.5	1-B2@5-5.5	1-B2@36-36.5
Water Content (%)	11.92	15.74	14.40	33.89
Dry Density (pcf)	107.300	102.400	106.500	88.402
Saturation (%)	58.36	67.70	68.94	103.07
Void Ratio	0.54	0.62	0.55	0.87
Diameter (in)	2.400	2.428	2.433	2.425
Height (in)	6.020	5.580	5.350	5.060
Test Data	**1-B1@3-3.5**	**1-B1@6-6.5**	**1-B2@5-5.5**	**1-B2@36-36.5**
Unconfined Compressive Strength (psi)	20.351	12.023	13.775	5.525
Unconfined Compressive	1.464	0.865	0.991	0.398
Undrained Shear Strength (psi)	10.175	6.011	6.887	2.763
Rate of Strain (in/min)	0.050000	0.050000	0.050000	0.050000
Strain at Failure (%)	1.22	1.41	1.37	20.05
Description	See Specimen Description below			

Project Information		Specimen Description	
Project Num	8643.000.000	Specimen A	See exploration logs
Project	8th and William Street	Specimen B	See exploration logs
Sampling Date		Specimen C	See exploration logs
		Specimen D	See exploration logs
Client	Sherwin South Campus LLC	**Test Variables**	
		Specific Gravity	2.65
		Liquid Limit:	
		Plastic Limit:	

Remarks

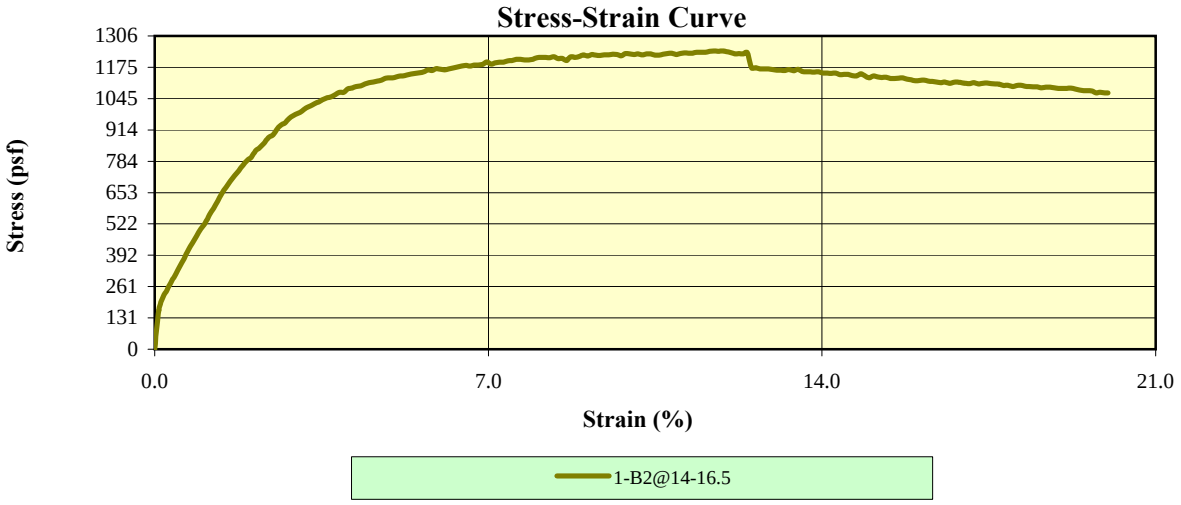
ENGEO Incorporated

Unconsolidated Undrained Triaxial Test (ASTM D2850)

Project Information	
Project Name:	8th and William Street
Project Number:	8643.000.000
Location:	San Jose, California
Client:	Sherwin South Campus LLC
Boring Number:	B2
Sample Number:	1-B2@14-16.5
Sample Description:	See Boring Logs

	Test 1	Test 2	Test 3	
Before Test				
Water Content (%)	26.7	0.0	0.0	
Dry Density (pcf)	105.5	0.0	0.0	
Saturation (%)	124.3	0.0	0.0	
Void Ratio	0.57	0.00	0.00	
Diameter (in)	2.80	0.00	0.00	
Height (in)	6.38	0.00	0.00	
Liquid Limit	--	--	--	
Plastic Limit	--	--	--	
Specific Gravity	2.65			
After Test				
Water Content (%)	26.7	0.0	0.0	
Test Data				
Strain Rate (in/min)	0.05	0.00	0.00	
Peak Deviator Stress (psf)	1,244	0	0	
Cell Pressure (psf)	2,002	0	0	
At Failure				
σ_1 (psf)	3,245	0	0	
σ_3 (psf)	2,002	0	0	
Axial Strain @ Failure (%)	11.8	0.0	0.0	
Cohesion, c (psf)*	622	0	0	

Remarks: * Assuming a horizontal failure envelope



Tested By: D. Seibold Date: 6.22.11 Checked By: G. Criste Date: 06/23/11

ENGEO Incorporated

Consolidated Undrained Triaxial Test (ASTM D4767)

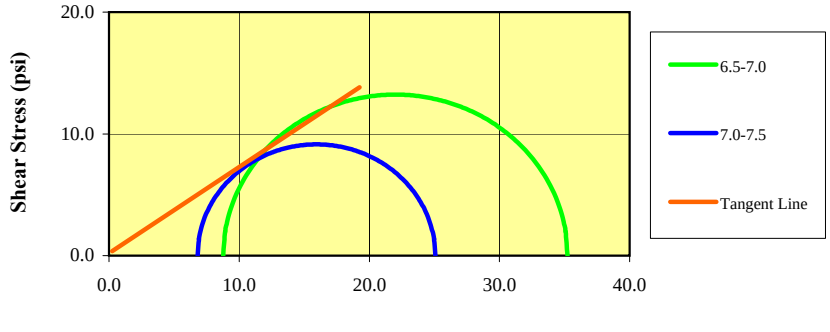
Date: 7.5.11

Checked By: J. Fippin

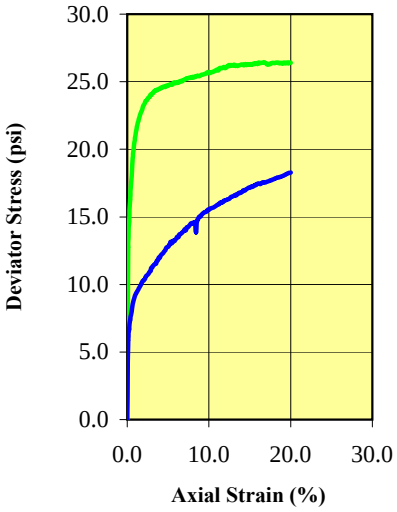
Date : 7.5.11

Tested By: D. Seibold

Effective Stress at Maximum Deviator Stress Criterion



Deviator Stress Vs. Axial Strain



Initial	Specimen 6.5-7.0	7.0-7.5		
Water Content (%)	18.1	19.8		
Dry Density (pcf)	89.2	96.0		
Saturation (%)	56.10	72.43		
Void Ratio	0.506	0.686		
Diameter (in)	2.390	2.390		
Height (in)	4.990	5.000		
Specific Gravity	2.65	2.65		
Liquid Limit	0	0		
Plastic Limit	0	0		
After Consolidation	**6.5-7.0**	**7.0-7.5**		
B-Value	0.98	0.97		
Water Content (%)	16.7	18.6		
Dry Density (pcf)	93.90	96.66		
Saturation (%)	100.00	100.00		
Void Ratio	0.762	0.712		
Effective Stress (psi)	17.5	7.0		
Back Press. (psi)	63.2	50.7		
Rate of Strain	0.00075	0.00075		

Maximium Deviator Stress Criterion		After Shear	6.5-7.0	7.0-7.5		
C (psi)	5.1	σ'1 at Failure (psi)	35.22	25.07		
C' (psi)	0.2	σ'3 at Failure (psi)	8.78	6.80		
Ø (deg)	15.9					
Ø' (deg)	35.3					

Project:	8th and William Street	N/A	N/A	N/A	N/A
Location:	San Jose, California				
Project Number:	8643.000.000				
Boring Number:	B3				
Sample Number:	1-B3@7.5 & 1-B3@6.5-7.0				
Depth:	7.0-7.5 ft.				
Sample Type:	Undisturbed	Failure Photographs			
Description:	See Boring Logs				
Test Type	Consolidated Undrained				
Remarks					

ENGEO Incorporated

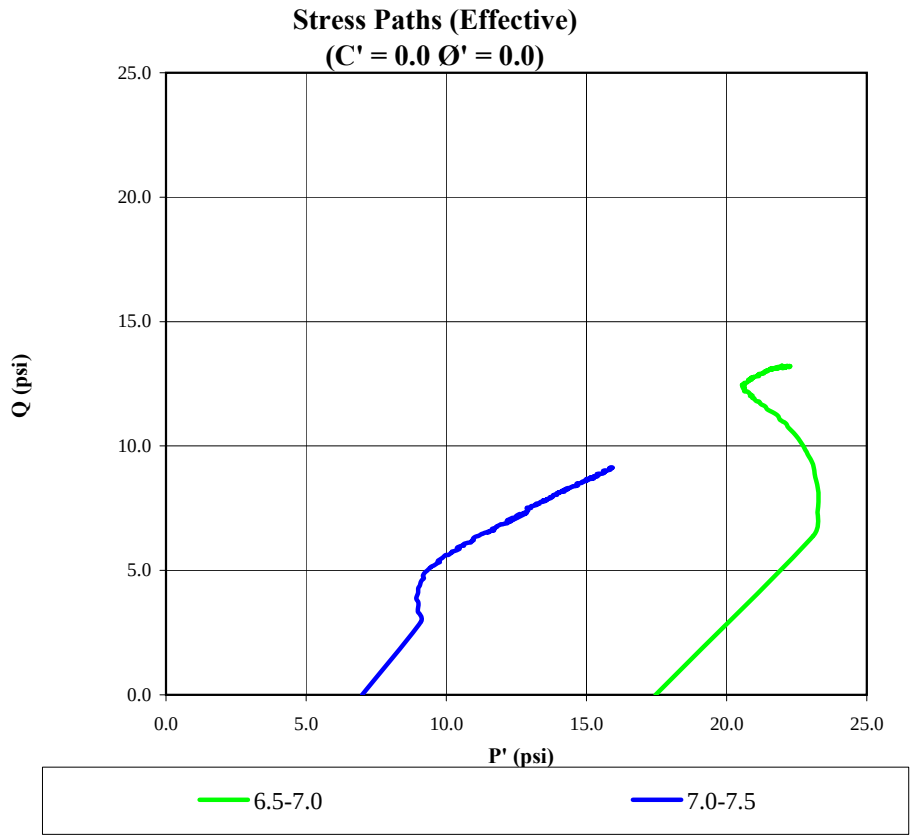
Consolidated Undrained Triaxial Test (ASTM D4767)

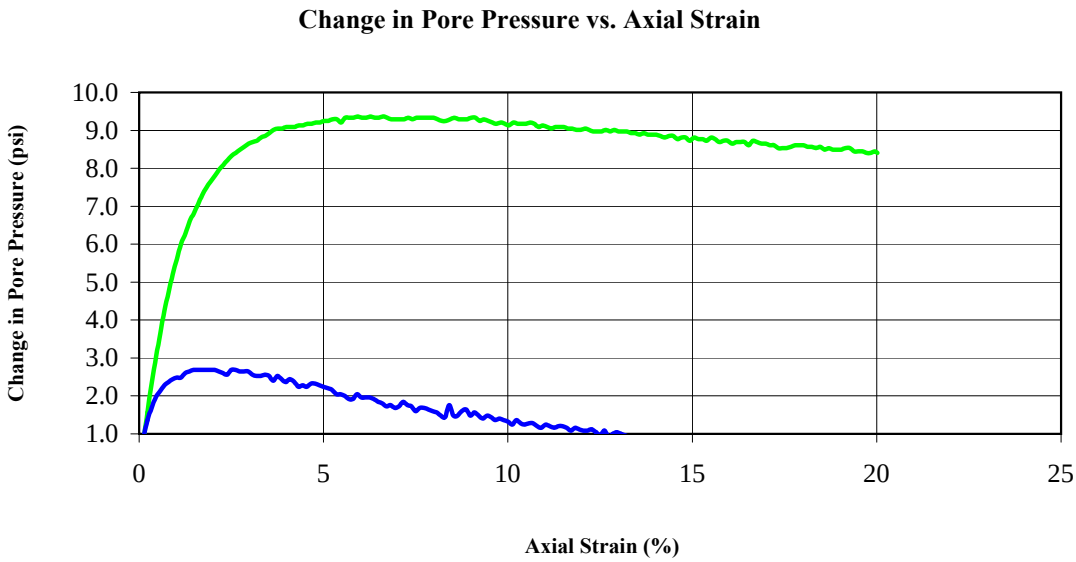
Date:

Checked By:

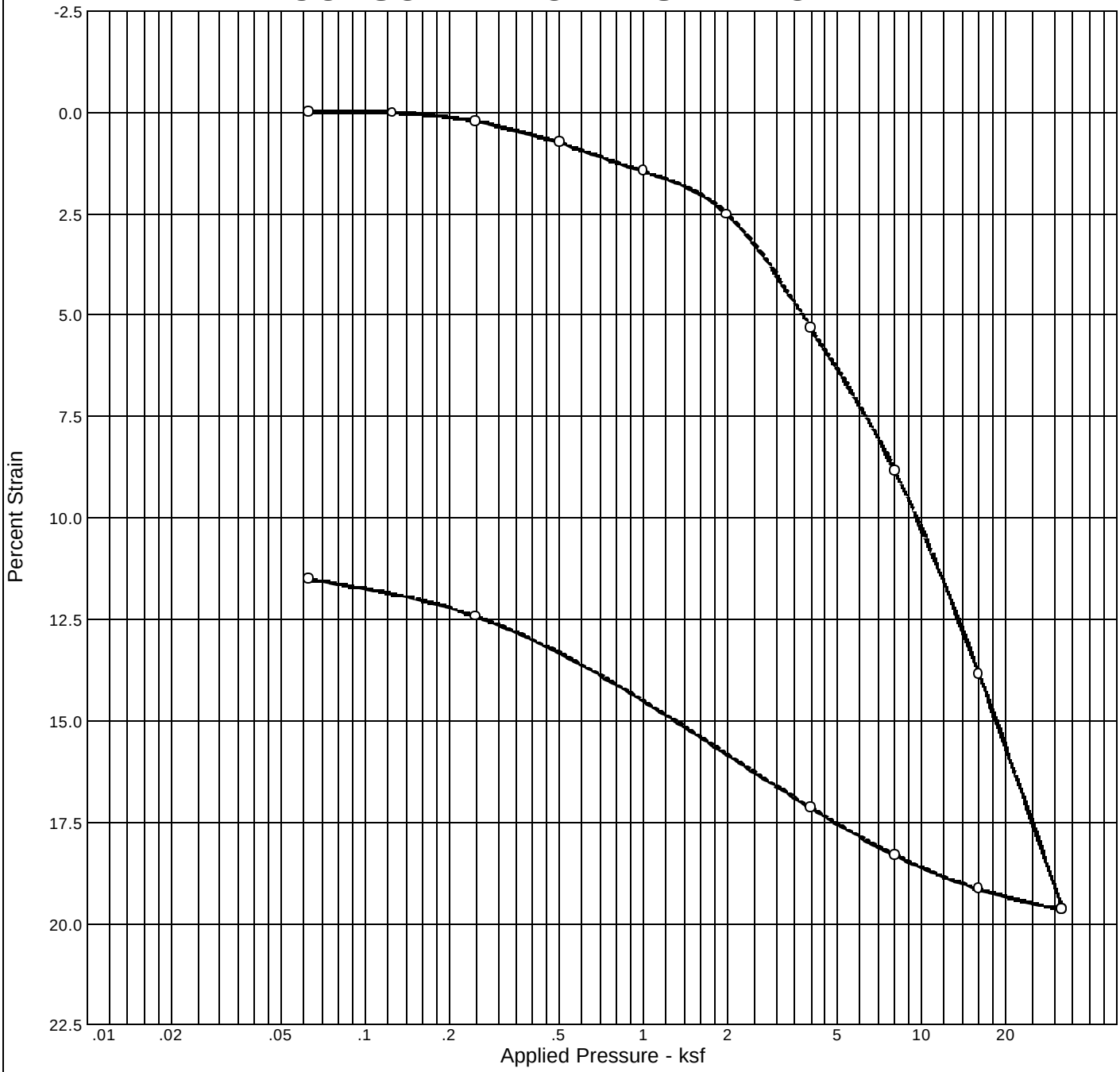
Date:

Tested By:





CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
110.1 %	50.1 %	77.4			2.843			1.294

MATERIAL DESCRIPTION

See exploration logs.

Project No. 8643.000.000 **Client:** Sherwin South Campus LLC

Project: 8th and William Street

Source: **Sample No.:** 1-B1 @ 36-38.5

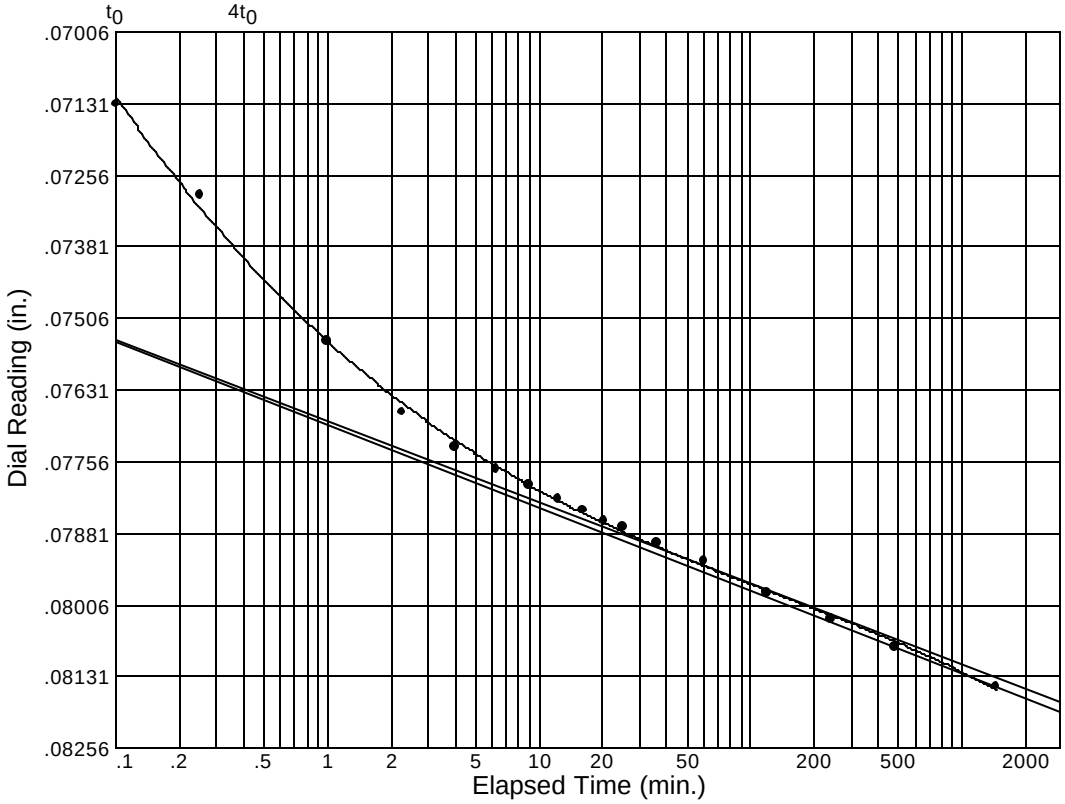
Remarks:

ENGEO INCORPORATED
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MATERIALS TESTING

Dial Reading vs. Time

Project No.: 8643.000.000
Project: 8th and William Street

Source: Sample No.: 1-B1 @ 36-38.5



Load No.= 7

Load= 4.00 ksf

D_0 = 0.06842

D_{50} = 0.07175

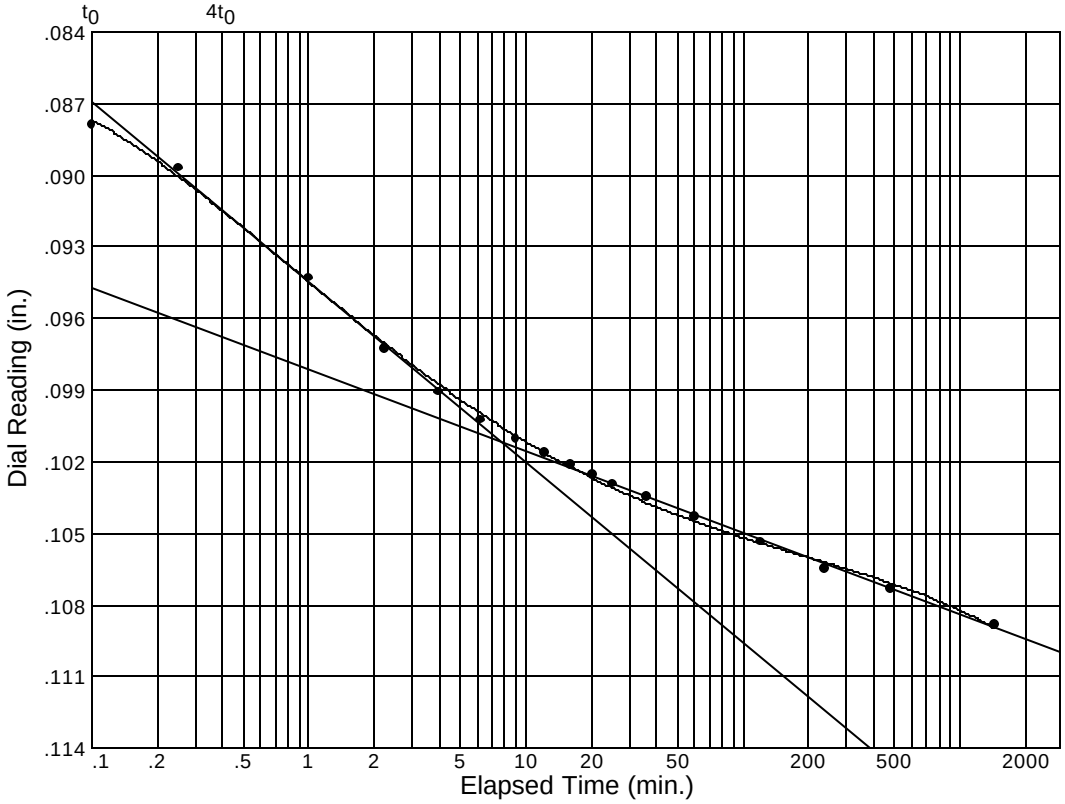
D_{100} = 0.07509

T_{50} = 0.13 min.

C_v @ T_{50}

2.16 ft.^{2}/day

C_α = 0.002



Load No.= 8

Load= 8.00 ksf

D_0 = 0.08390

D_{50} = 0.09254

D_{100} = 0.10118

T_{50} = 0.55 min.

C_v @ T_{50}

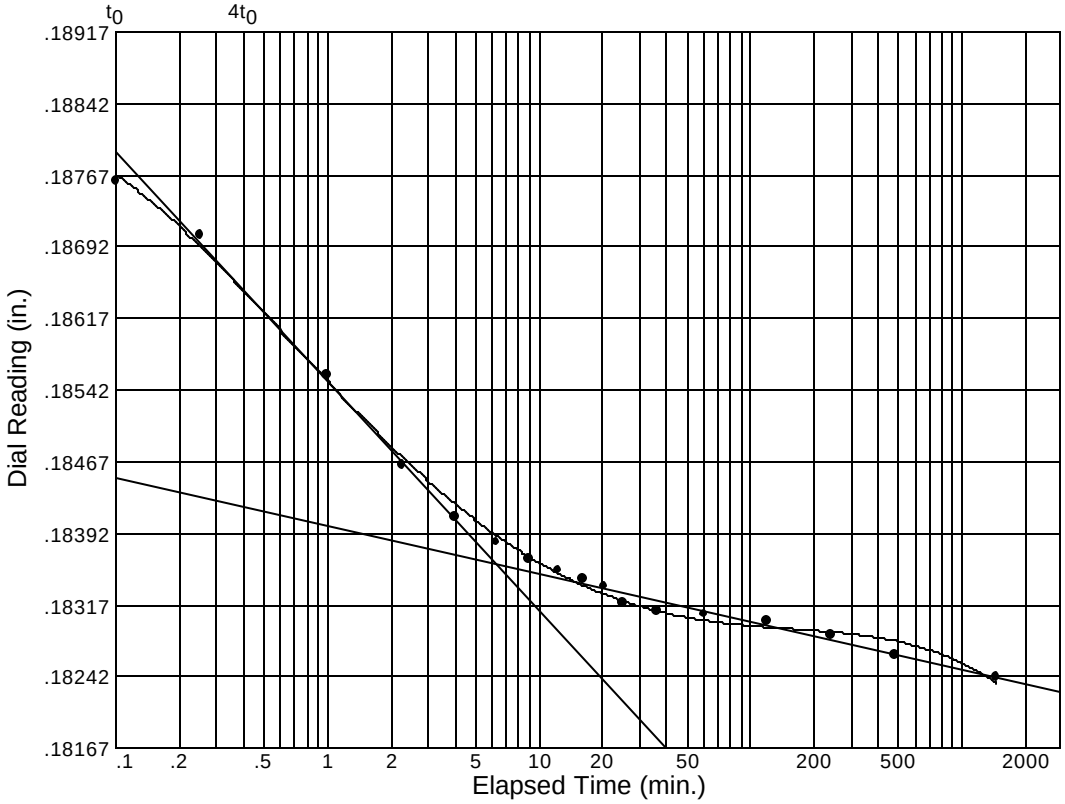
0.46 ft.^{2}/day

C_α = 0.005

Dial Reading vs. Time

Project No.: 8643.000.000
Project: 8th and William Street

Source: Sample No.: 1-B1 @ 36-38.5



Load No.= 12

Load= 8.00 ksf

D_0 = 0.18888

D_{50} = 0.18624

D_{100} = 0.18360

T_{50} = 0.52 min.

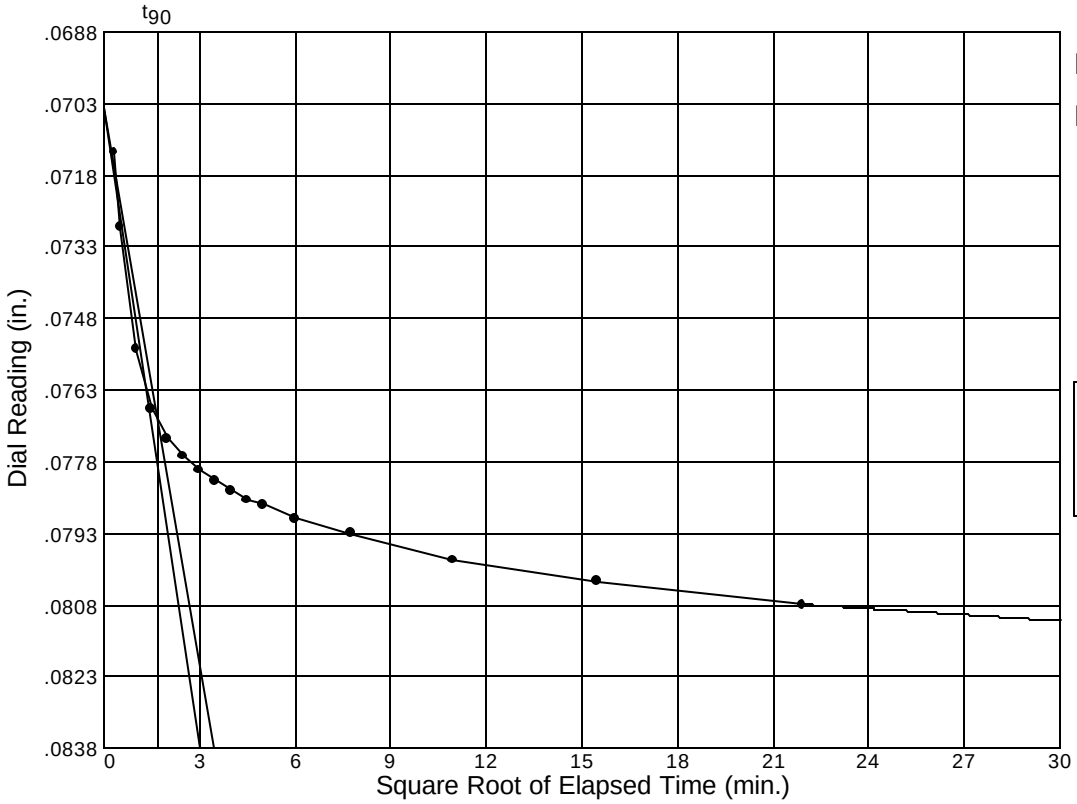
C_v @ T_{50}

0.38 ft.^{2}/day

Dial Reading vs. Time

Project No.: 8643.000.000
Project: 8th and William Street

Source: Sample No.: 1-B1 @ 36-38.5



Load No.= 7

Load= 4.00 ksf

D_0 = 0.07040

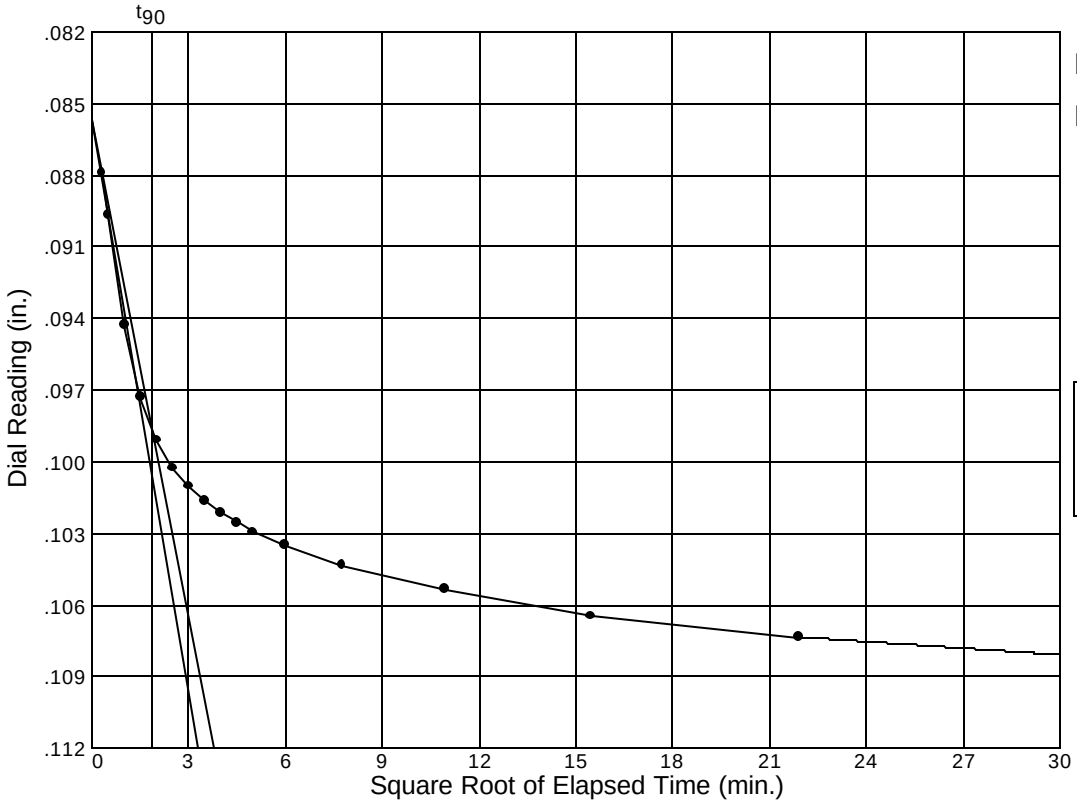
D_{90} = 0.07692

D_{100} = 0.07764

T_{90} = 2.83 min.

C_v @ T_{90}

0.42 ft.^{2}/day



Load No.= 8

Load= 8.00 ksf

D_0 = 0.08566

D_{90} = 0.09855

D_{100} = 0.09998

T_{90} = 3.43 min.

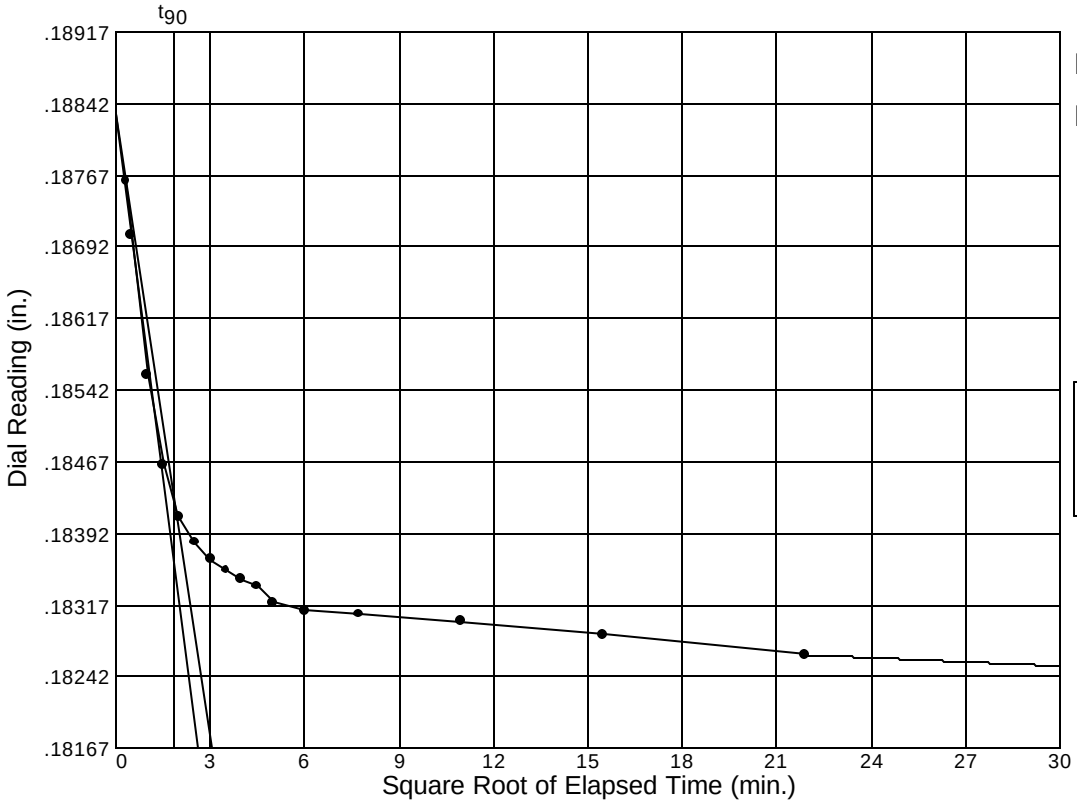
C_v @ T_{90}

0.32 ft.^{2}/day

Dial Reading vs. Time

Project No.: 8643.000.000
Project: 8th and William Street

Source: Sample No.: 1-B1 @ 36-38.5



Load No.= 12

Load= 8.00 ksf

D_0 = 0.18831

D_{90} = 0.18428

D_{100} = 0.18383

T_{90} = 3.37 min.

C_v @ T_{90}
0.25 ft.^{2}/day

EN GEO Incorporated

SULFATE TEST RESULTS

CALTRANS Test Method 417

Project Name: 8th and William Street Project Number: 8643.000.000

Tested By: GC Date: June 23, 2011

Sample Number	Sample Location	Matrix	Water Soluble Sulfate (SO_4) in Soil	
			mg/kg	% by Weight
1	1-B1@5.5-6	soil	2	0.000
2	1-B2@10.5-11	soil	9	0.001

APPENDIX C

CALIFORNIA PUSH TECHNOLOGIES, INC.

Cone Penetration Test Logs and Data

APPENDIX C

CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

California Push Technologies Inc.
104 Constitution Drive Suite 2
Menlo Park CA 94025
(C-57 License #884827)

office: 650 854 0300
fax: 650 854 0301

www.cptinc.com

Cone penetration testing and soil sampling methods description.

Rig Description

Our services are based on the state-of-the-art, Geoprobe Model 6625CPT rig, a limited-access, self-anchoring, 20-ton push capacity, track-mounted push platform for dedicated Geotechnical CPT applications with the unique and valuable added ability to quickly perform intermittent or continuous soil sampling.

Weight = ~ 9,500 pounds
Surface load = ~ 4.5 psi
Push capacity = ~ 20 tons; self-anchoring achieved using 10- or 15-inch diameter helical soil anchors driven 4- to 10-feet into the soil
Sampling hammer percussion rate = 32 Hz & 20,000 lbs force/blow
Length = ~ 12 feet; Width = ~ 7 feet
Height (folded) = 7 feet; Height (unfolded) = 14 feet

CPT Description

Our Geoprobe 6625CPT incorporates the Swedish-made Geotech AB Cone Penetration Testing tools which meet the ASTM D-5778 Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils. Cones have 10 cm^2 tips and 150 cm^2 friction sleeves, and include a porous filter and pressure sensor located in the u_2 position directly behind the cone. The cone and porous filter are saturated under vacuum with glycerin to promote rapid equilibration with in-situ pore pressures. Cones are advanced at the ASTM standard rate of 2 cm/second. Baseline readings are performed both before and after each push to check for load cell drift. The cone measures bearing (max load = 100 MPa ~ 1044 TSF), friction sleeve (max load = 1.0 MPa ~ 10.4 TSF), and dynamic pore pressure (max load = 2.5 MPa ~ 363 psi) at 2 cm or 4 cm intervals (client's choice) and this data is plotted in real-time and recorded on a laptop computer adjacent to the push platform. Holes are grouted upon completion of each push, or at the end of each day, as site conditions and regulations warrant.

The basic equation to determine the depth to the free water surface from the pore pressure dissipation test is;

Depth to phreatic surface = [Dissipation depth] – [equilibrium pore pressure / unit weight of H2O x unit conversation factor]

…where;

1) Surface elevation is always assumed to be 0 feet
2) Dissipation depth = the depth (feet) below surface elevation where the cone advancement was paused while waiting for equilibrium pore pressure to be achieved
3) Equilibrium pore pressure = the pore pressure after an elapsed time where no increase or decrease in pore pressure is occurring, in pounds per square inch (psi)
4) Unit weight of water = 62.3 pounds per cubic foot (lb/ft^3)
5) Unit conversion factor (for dimensional analysis): 1 psi = 144 lb/ft^3

From the dissipation plots, simply read the dissipation depth and dissipated pressure for the values to plug into the equation above. On the plots, pore pressure (psi) is on the abscissa and log time (seconds) is on the ordinate.

Sampling Description

Geoprobe® brand Dual Tube Sampling Systems are efficient methods of collecting continuous soil cores with the added benefit of a cased hole. Dual tube sampling uses two sets of probe rods to collect continuous soil cores. One set of rods is driven into the ground as an outer casing (2.2 or 3.25 inches in diameter). These rods receive the driving force from the hammer and provide a sealed hole from which soil samples may be recovered without the threat of cross contamination. The second, smaller set of rods are placed inside the outer casing. The smaller rods hold a sample liner in place as the outer casing is driven one sampling interval. The small rods are then retracted to retrieve the filled liner. Soil samples are collected in 1.85-inch diameter or 1.125-inch diameter clear PVC sample sheaths.

Interpretations

Soil behavior type (SBT), SPT N60 energy ratio, undrained shear strength, OCR, and unit weights are calculated and/or are interpretations generated by the CPT-Pro software based on empirical relationships derived in the following references;

P.K. Robertson, R.G. Campanella, D. Gillespie, and J. Greig, 1986, Use of Piezometer Cone Data, Proceedings of the ASCE Specialty Conference In Situ '86: Use of In Situ Tests in Geotechnical Engineering; pp. 1263-1280.

P.K. Roberston, 1990, Soil Classification Using the Cone Penetration Test, Canadian Geotechnical Journal, 27(1), pp. 151-158.

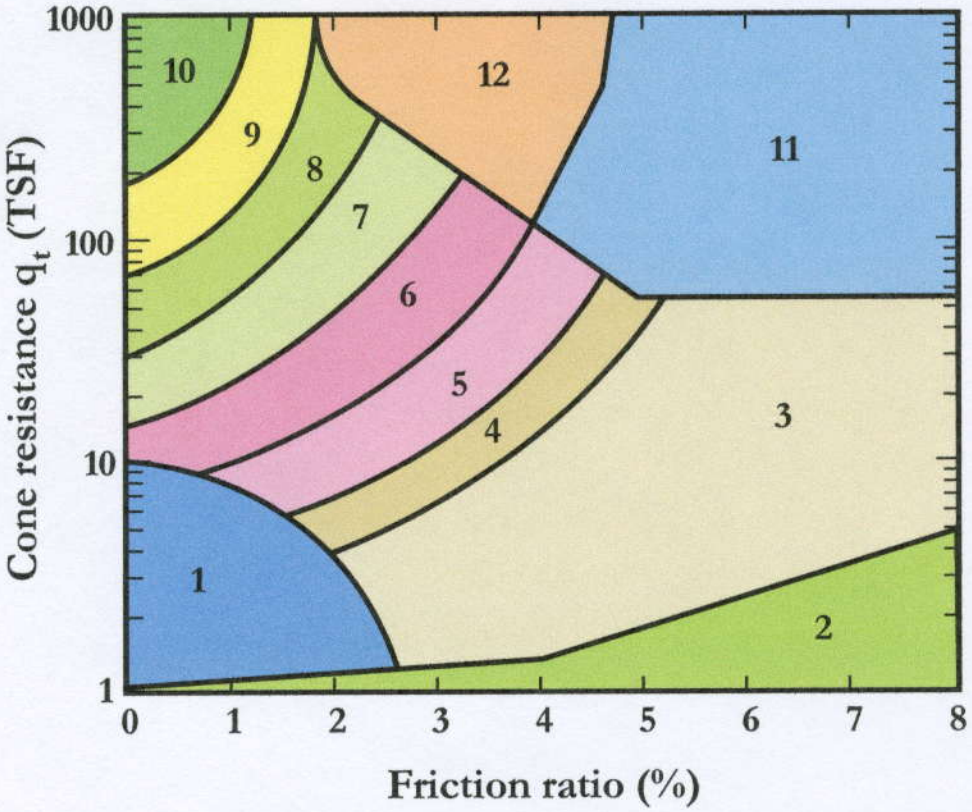
T. Lunne, P.K. Robertson, and J.J.M. Powell, 1997, Cone Penetration in Geotechnical Practice, Taylor and Francis Publishing.

CPT Inc. makes no recommendation on which soil behavior type analysis is "most-correct". The engineer should be aware of the limitations of using CPT data to derive soil behavior type and other engineering parameters and is encouraged to review the above references to better understand the applicability and limitations of CPT data. It is sometimes not possible to determine soil type based solely on tip resistance, sleeve friction, and dynamic pore pressure response, and confirmatory samples may be required.

Please do not hesitate to contact CPT Inc. if you have questions.

Sincerely,
John Rogie

President
California Push Technologies, Inc.



Zone	Soil Behavior Type
1	sensitive fine grained
2	organic material
3	clay
4	silty clay to clay
5	clayey silt to silty clay
6	sandy silt to clayey silt
7	silty sand to sandy silt
8	sand to silty sand
9	sand
10	gravelly sand to sand
11	very stiff fine grained (overconsolidated or cemented)
12	sand to clayey sand (overconsolidated or cemented)

Source: Robertson, P.K., Campanella, R.G., Gillespie, D., and Greig, J., 1986, Use of Piezometer Cone Data. Proceedings of the ASCE Specialty Conference In Situ 86: Use of In Situ Tests in Geotechnical Engineering.

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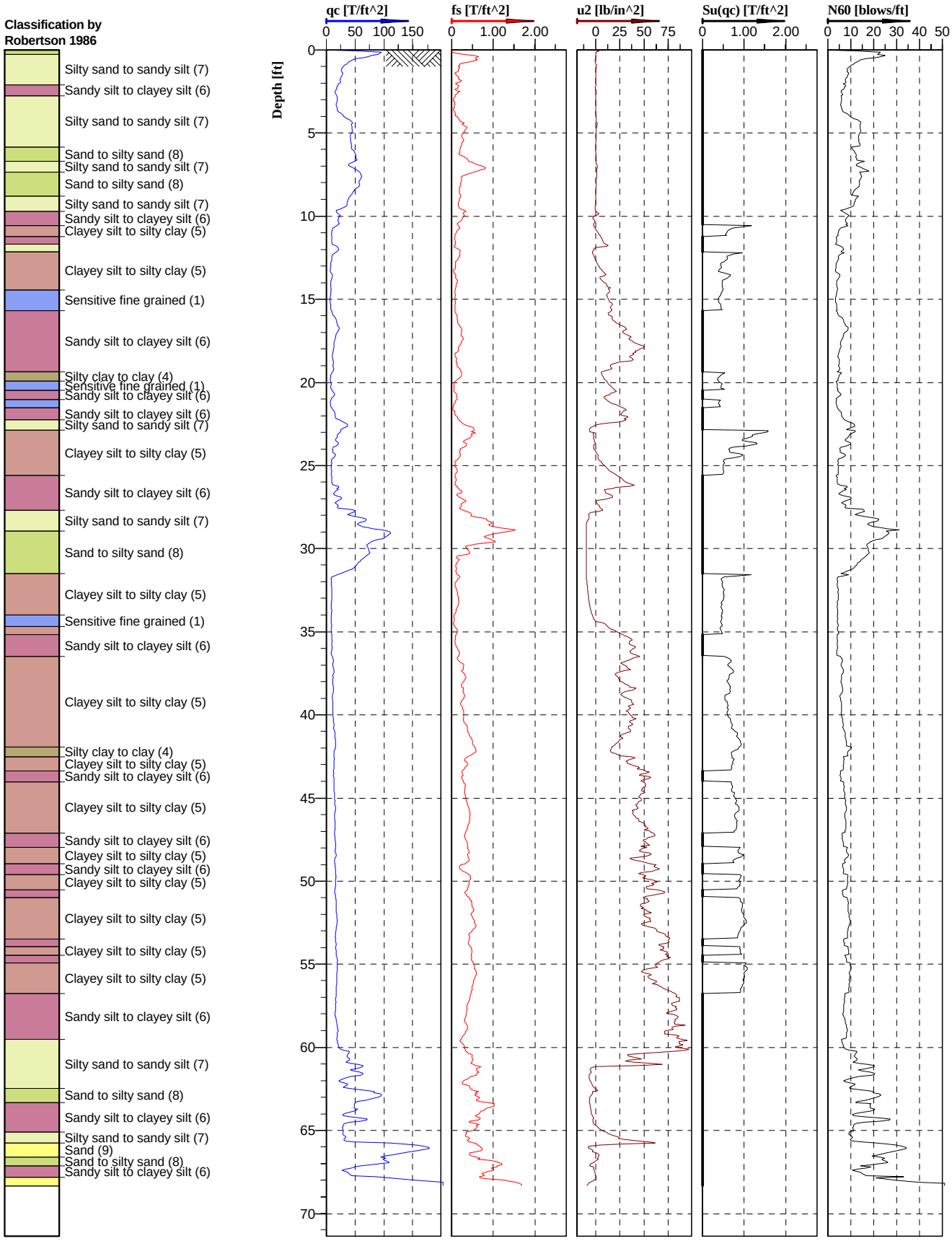
Soil Behavior Type (SBT) Model

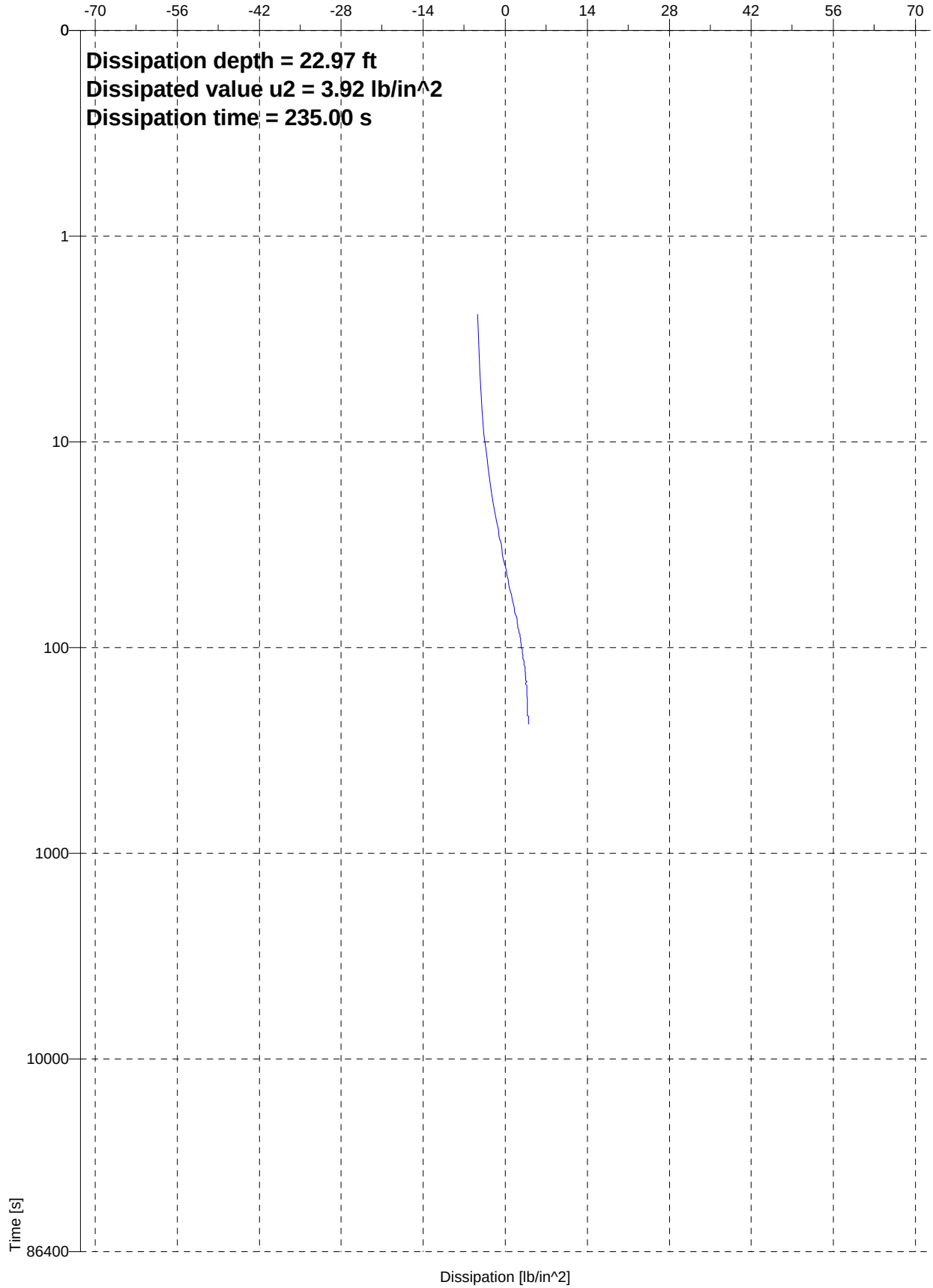


CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

U2

Cone No: 3794
Tip area [cm2]: 10
Sleeve area [cm2]: 150

Location: San Jose, California	Position:	Ground level:	Test no: CPT-1
Project ID: 8643	Client: Engeo	Date: 5/20/2011	Scale: 1 : 100
Project: 8th Street & William Street Development		Page: 1/1	Fig:
		File: CPT-1.cpd	

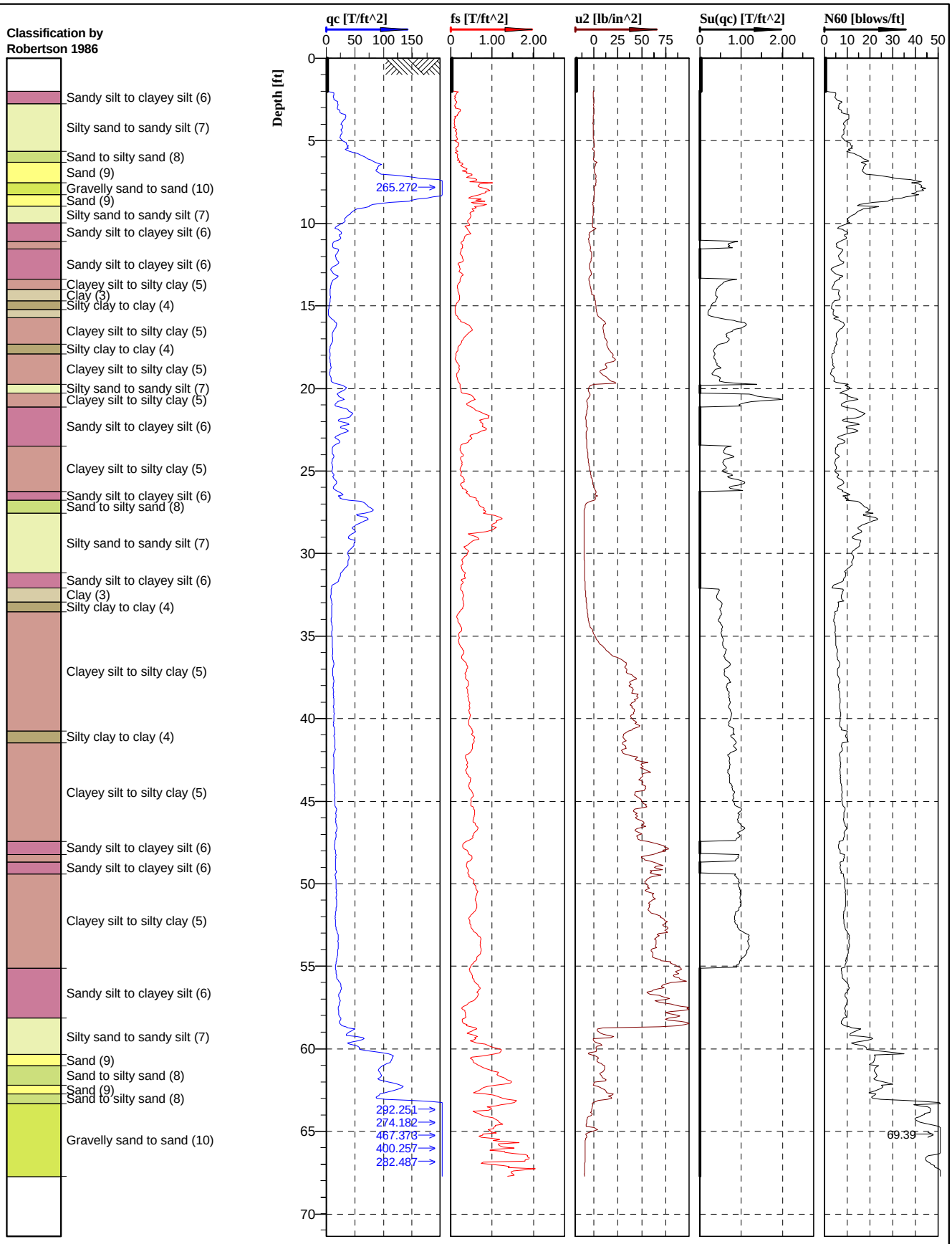


CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

U2

Cone No: 3794
Tip area [cm2]: 10
Sleeve area [cm2]: 150

Location: San Jose, California	Position:	Ground level:	Test no: CPT-1
Project ID: 8643	Client: Engeo	Date: 5/20/2011	Scale: 1 : 100
Project: 8th Street & William Street Development		Page: 1/1	Fig:
		File: CPT-1.cpd	

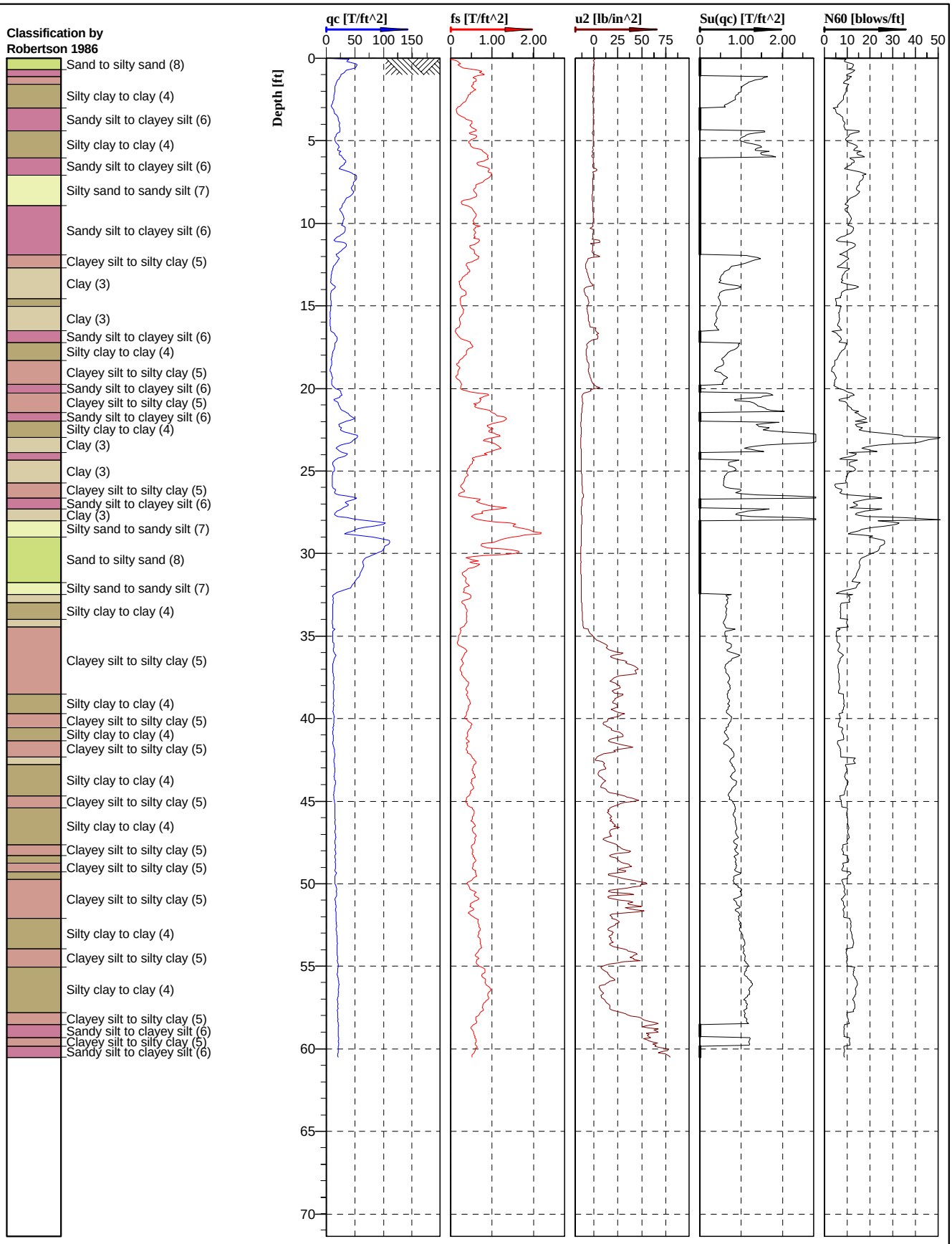


CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

U2

Cone No: 3794
Tip area [cm2]: 10
Sleeve area [cm2]: 150

Location: San Jose, California	Position:	Ground level:	Test no: CPT-2
Project ID: 8643	Client: Engeo	Date: 5/20/2011	Scale: 1 : 100
Project: 8th Street & William Street Development		Page: 1/1	Fig:
		File: CPT-2.cpd	



CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

U2

Cone No: 3794
Tip area [cm2]: 10
Sleeve area [cm2]: 150

Location: San Jose, California	Position:	Ground level:	Test no: CPT-3
Project ID: 8643	Client: Engeo	Date: 5/20/2011	Scale: 1 : 100
Project: 8th Street & William Street Development		Page: 1/1	Fig:
		File: CPT-3.cpd	

APPENDIX D

Liquefaction Analyses

APPENDIX D

ENGEO Incorporated
6399 San Ignacio Avenue
Suite 150
San Jose, California 95128

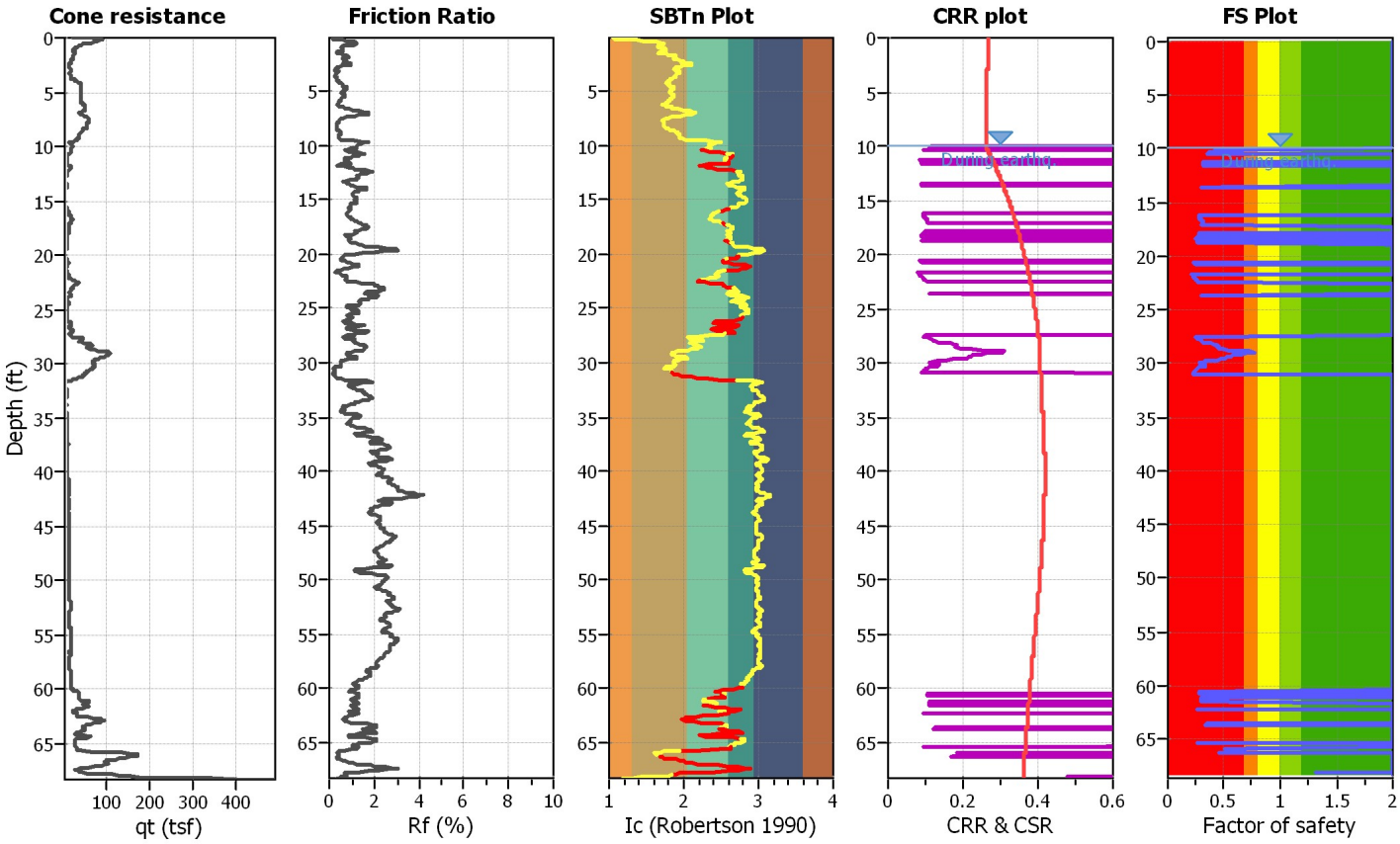
LIQUEFACTION ANALYSIS REPORT

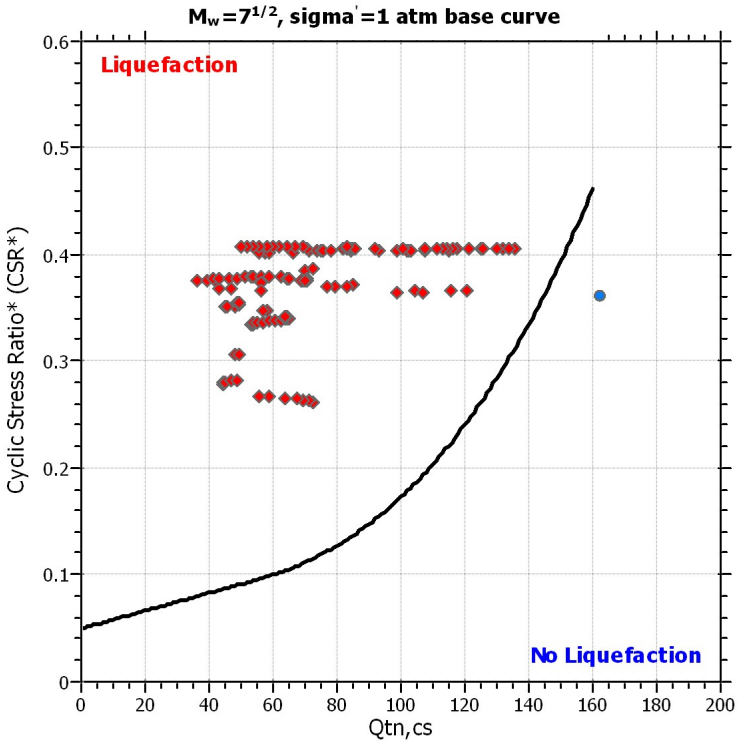
Project title : 8th and William Mixed Use **Location : San Jose, California**

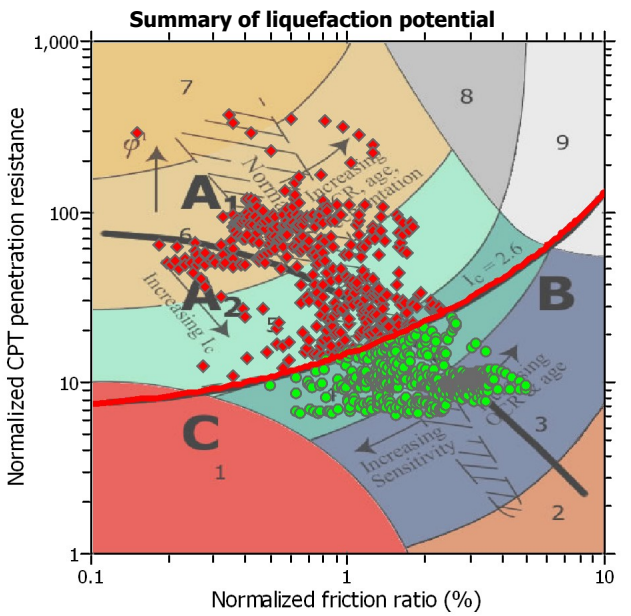
CPT file : 1-CPT1

Input parameters and analysis data

Analysis method:	NCEER 1998	G.W.T. (in-situ):	10.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	Robertson & Wride	G.W.T. (earthq.):	10.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.00	Ic cut-off value:	2.60	Trans. detect. applied:	Yes		
Peak ground acceleration:	0.49	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

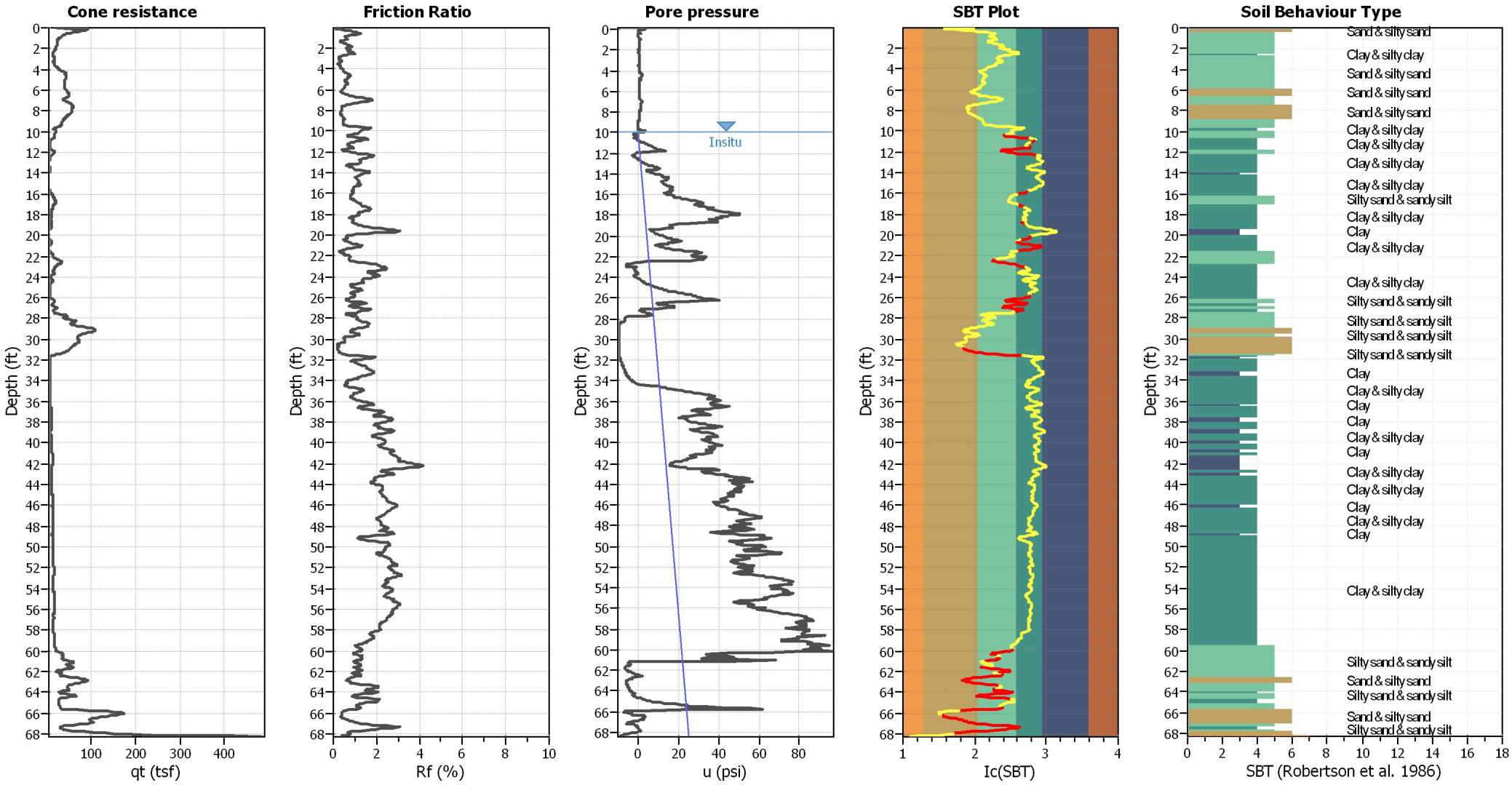






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



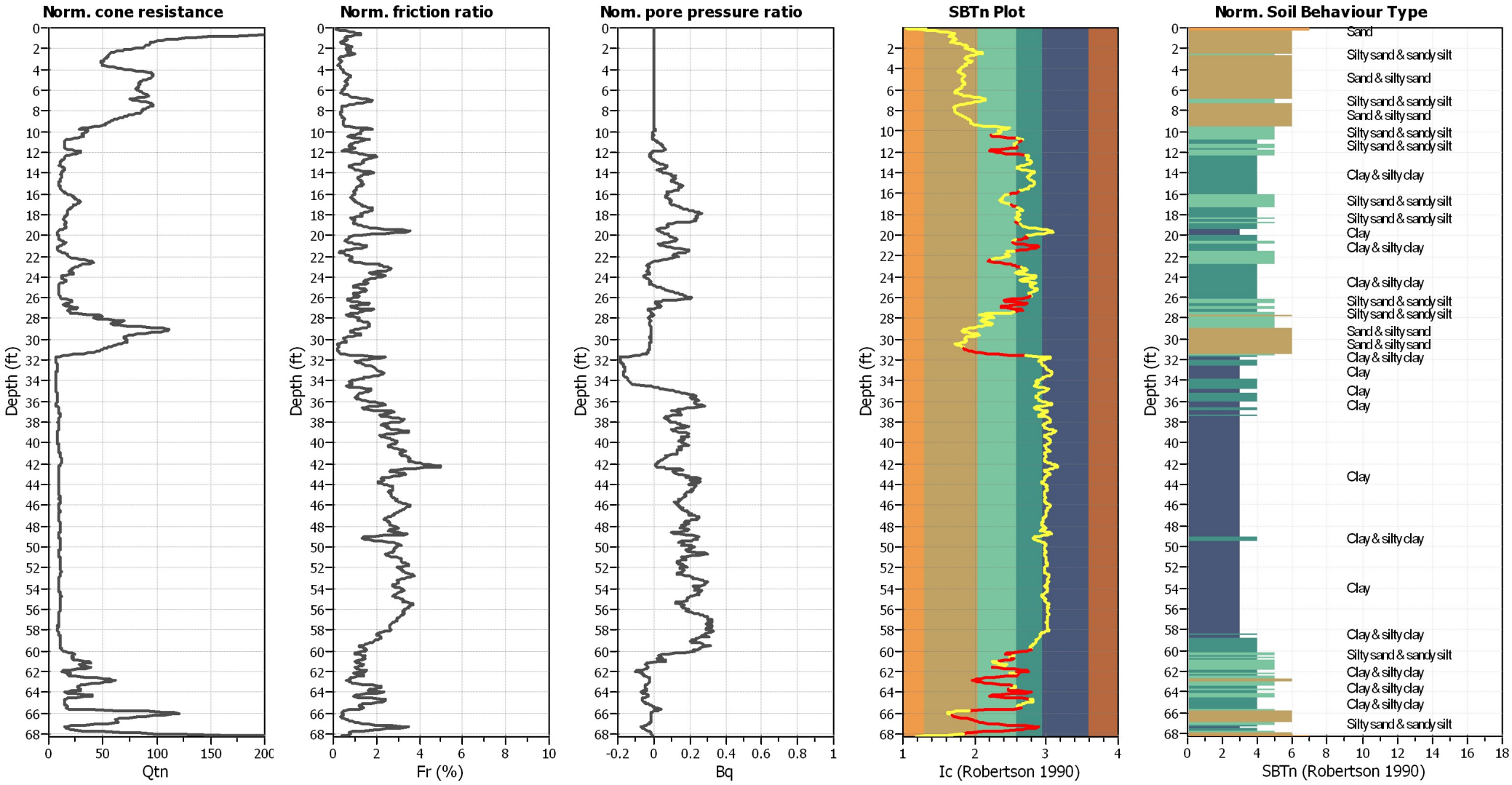
Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



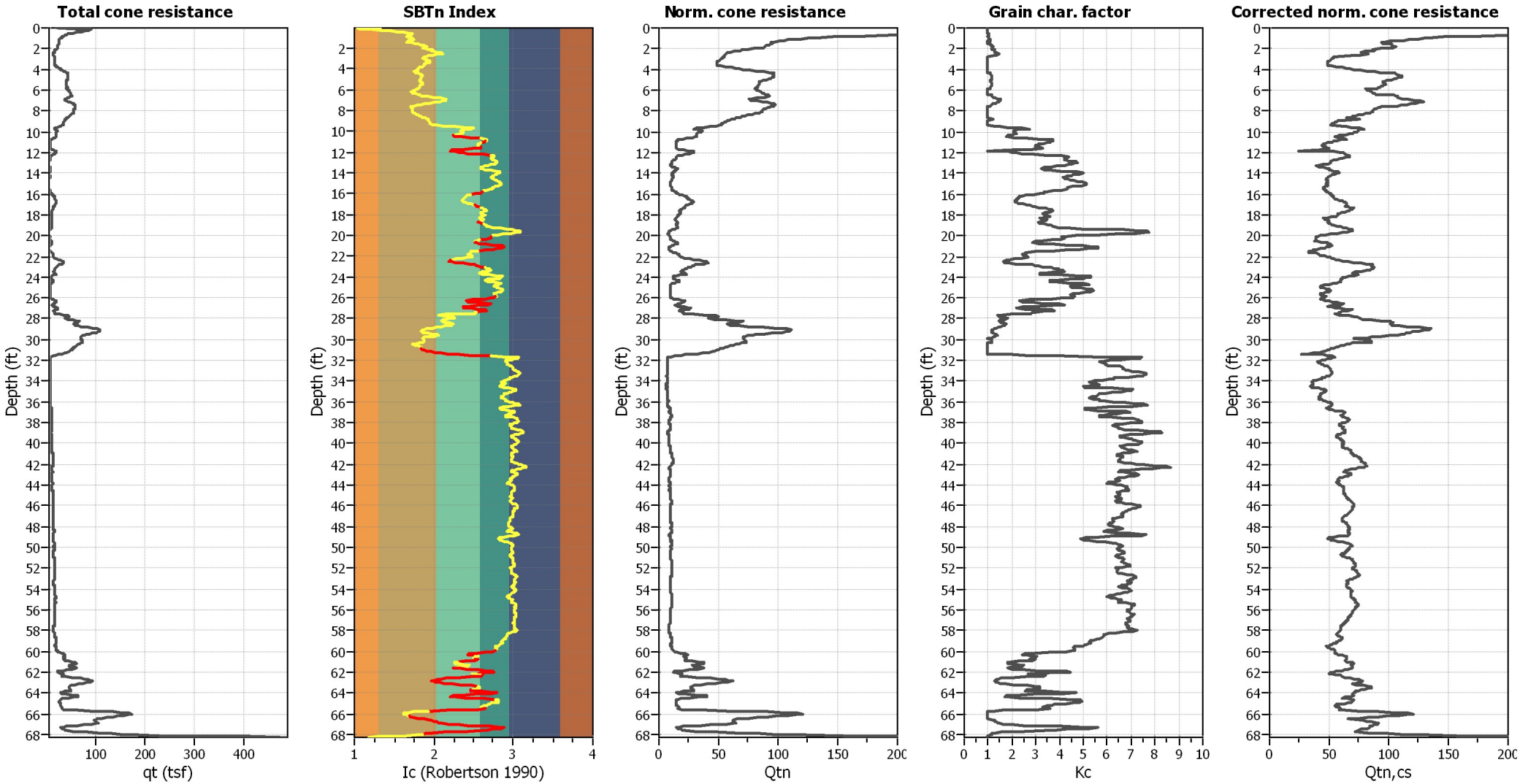
Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

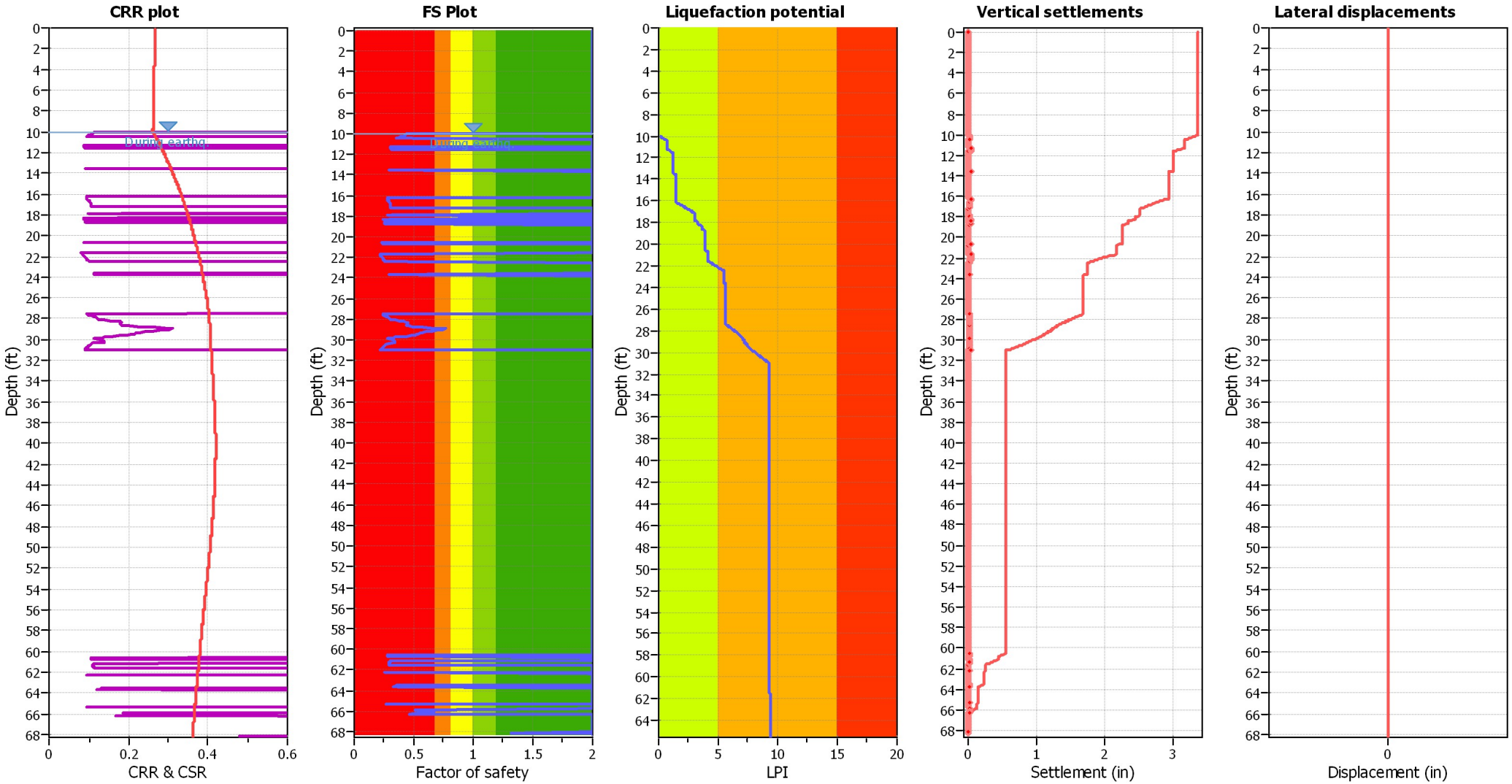
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

ENGEO Incorporated
6399 San Ignacio Avenue
Suite 150
San Jose, California 95128

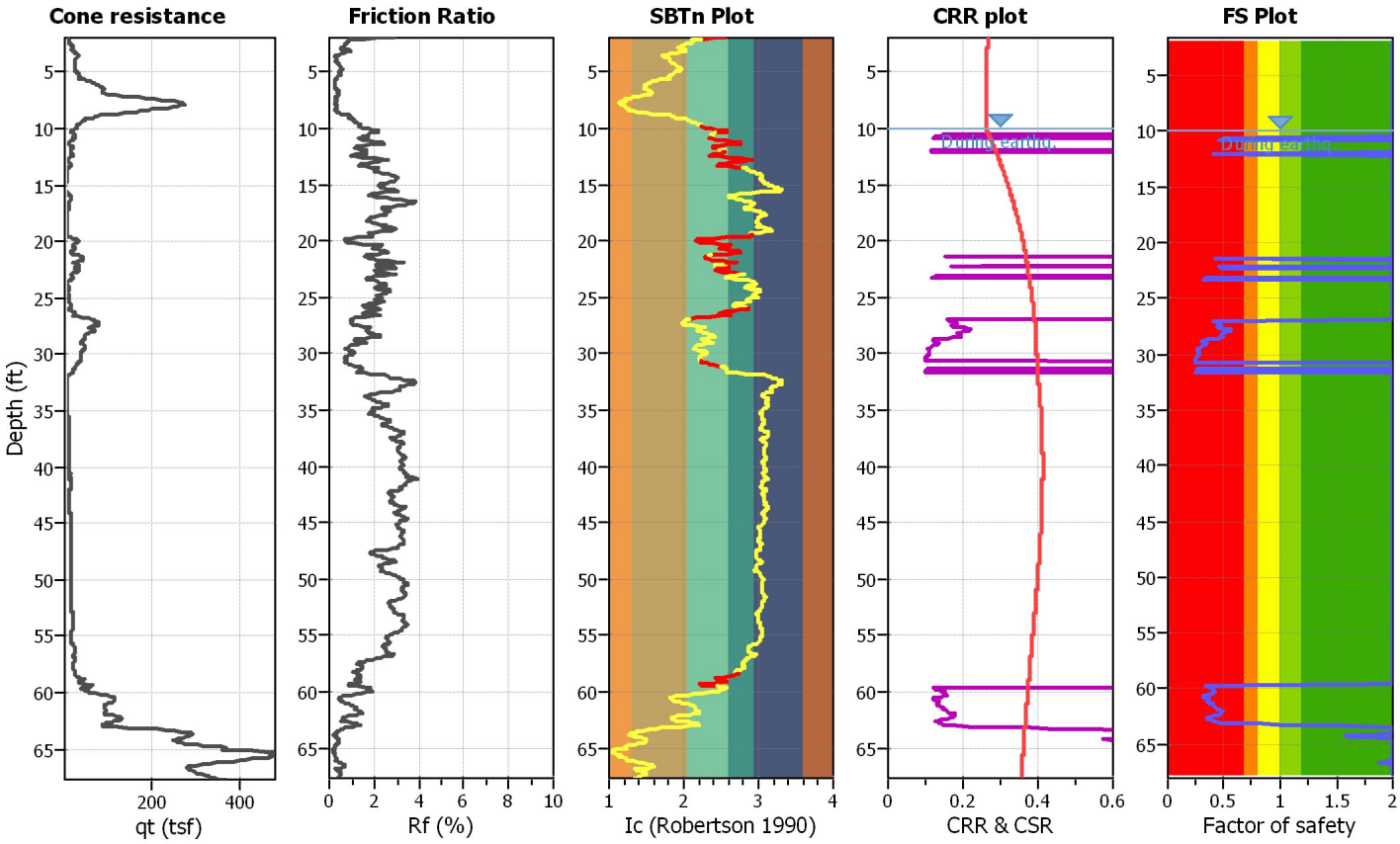
LIQUEFACTION ANALYSIS REPORT

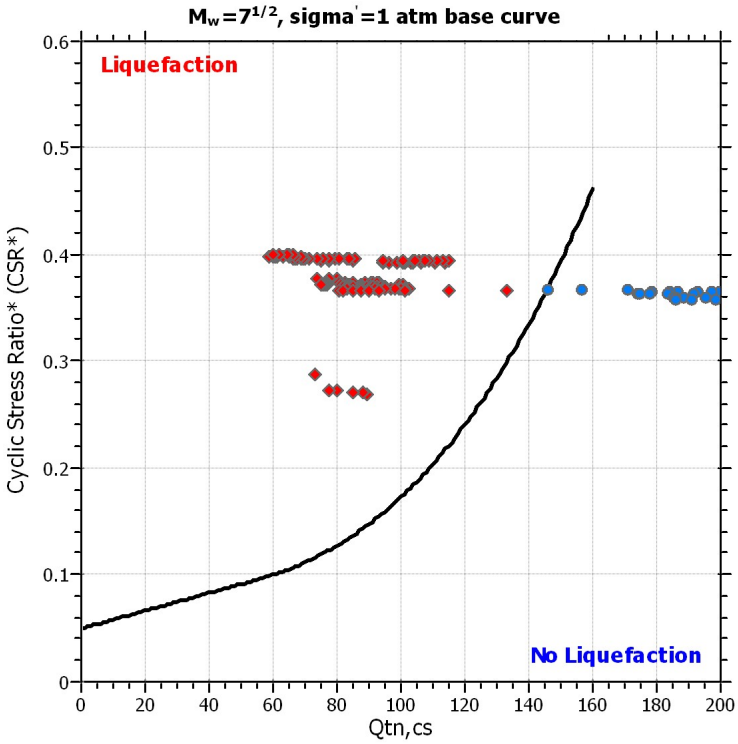
Project title : 8th and William Mixed Use **Location : San Jose, California**

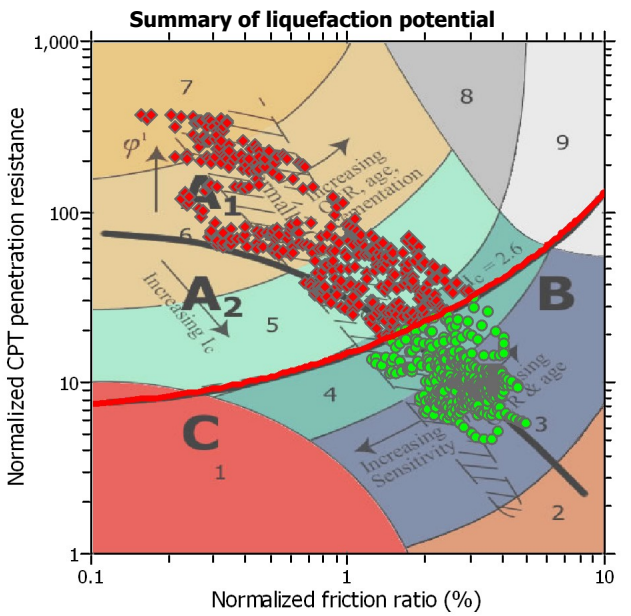
CPT file : 1-CPT2

Input parameters and analysis data

Analysis method:	NCEER 1998	G.W.T. (in-situ):	10.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	Robertson & Wride	G.W.T. (earthq.):	10.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.00	Ic cut-off value:	2.60	Trans. detect. applied:	Yes		
Peak ground acceleration:	0.49	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

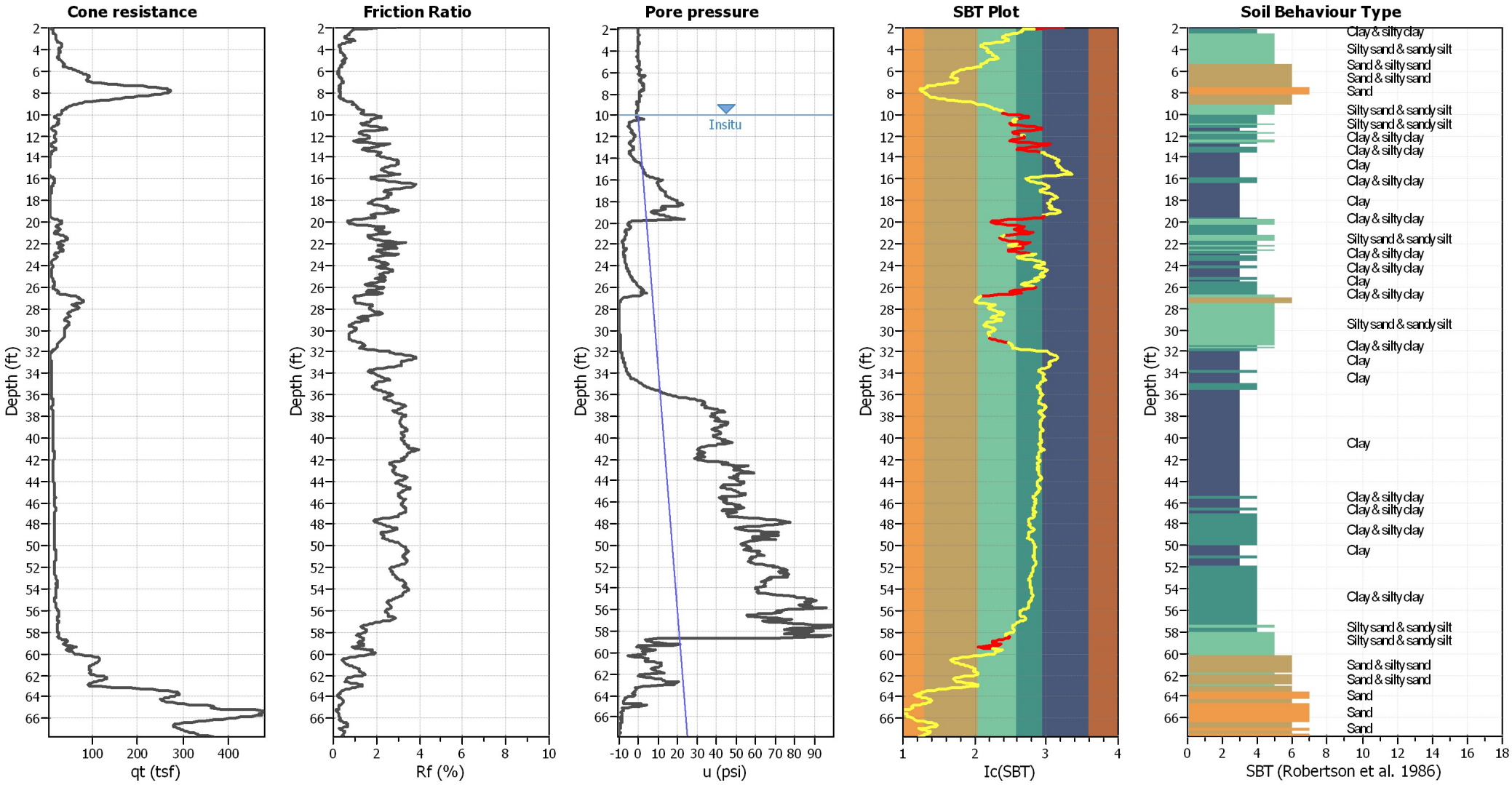






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



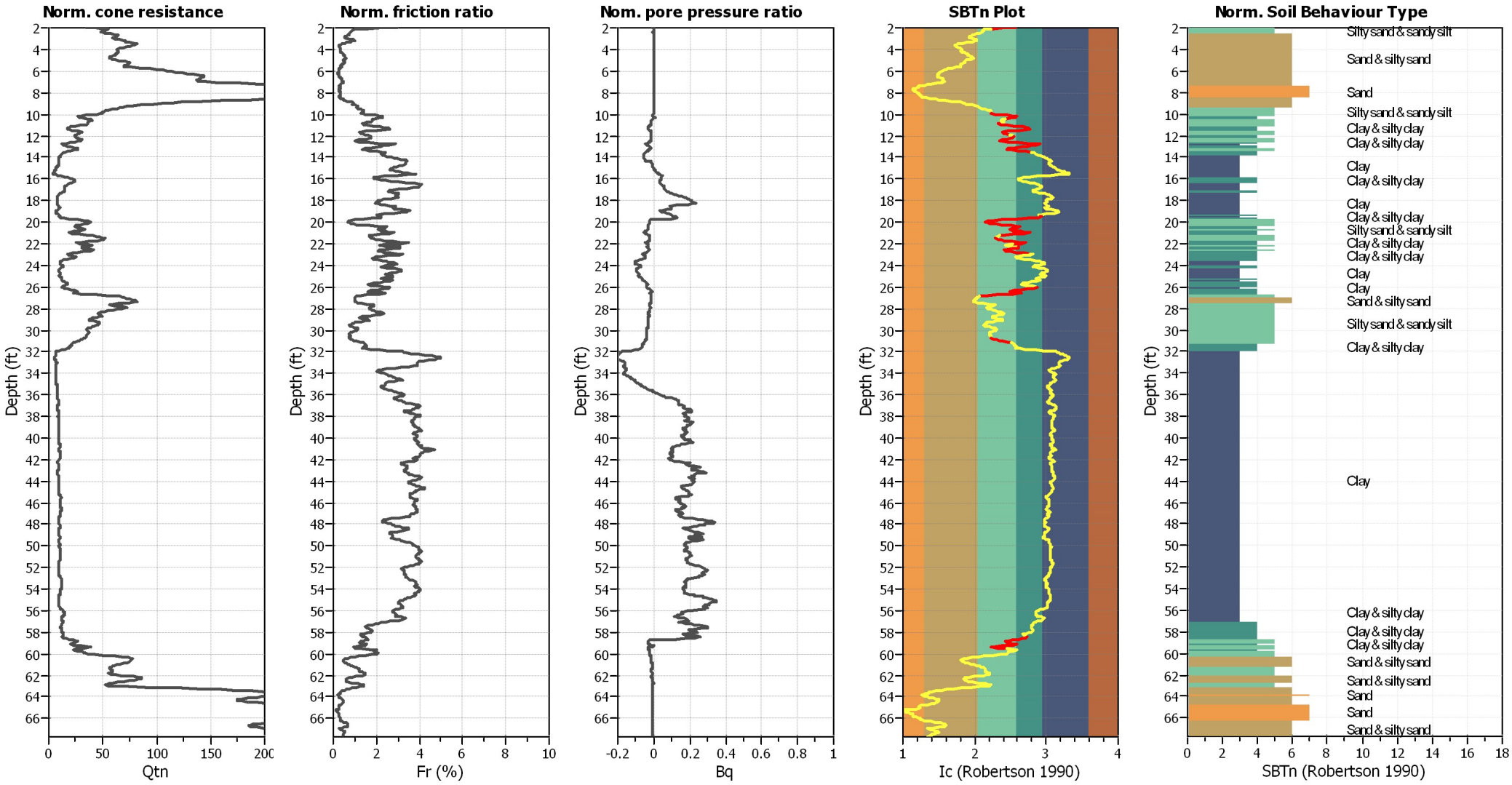
Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT basic interpretation plots (normalized)



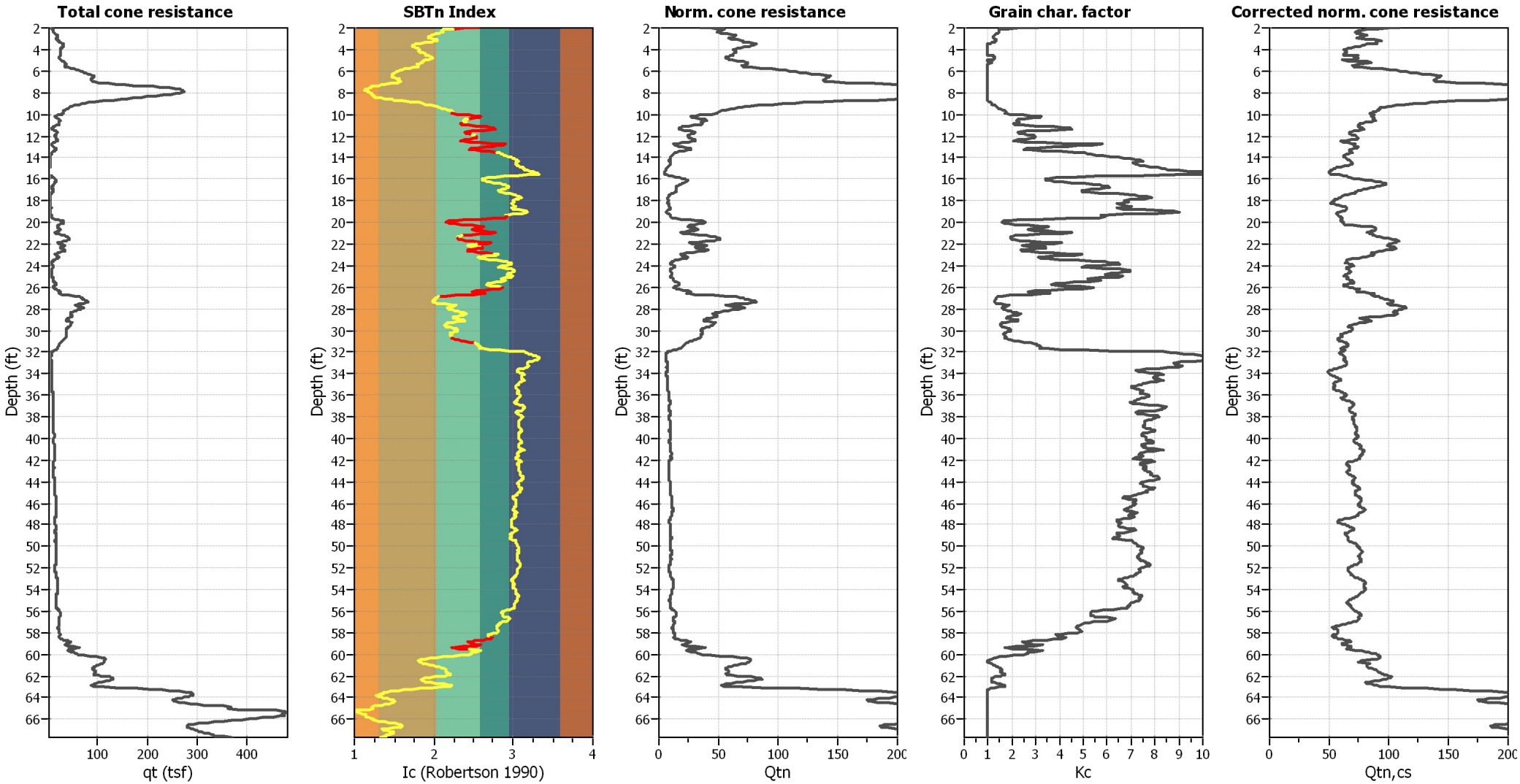
Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

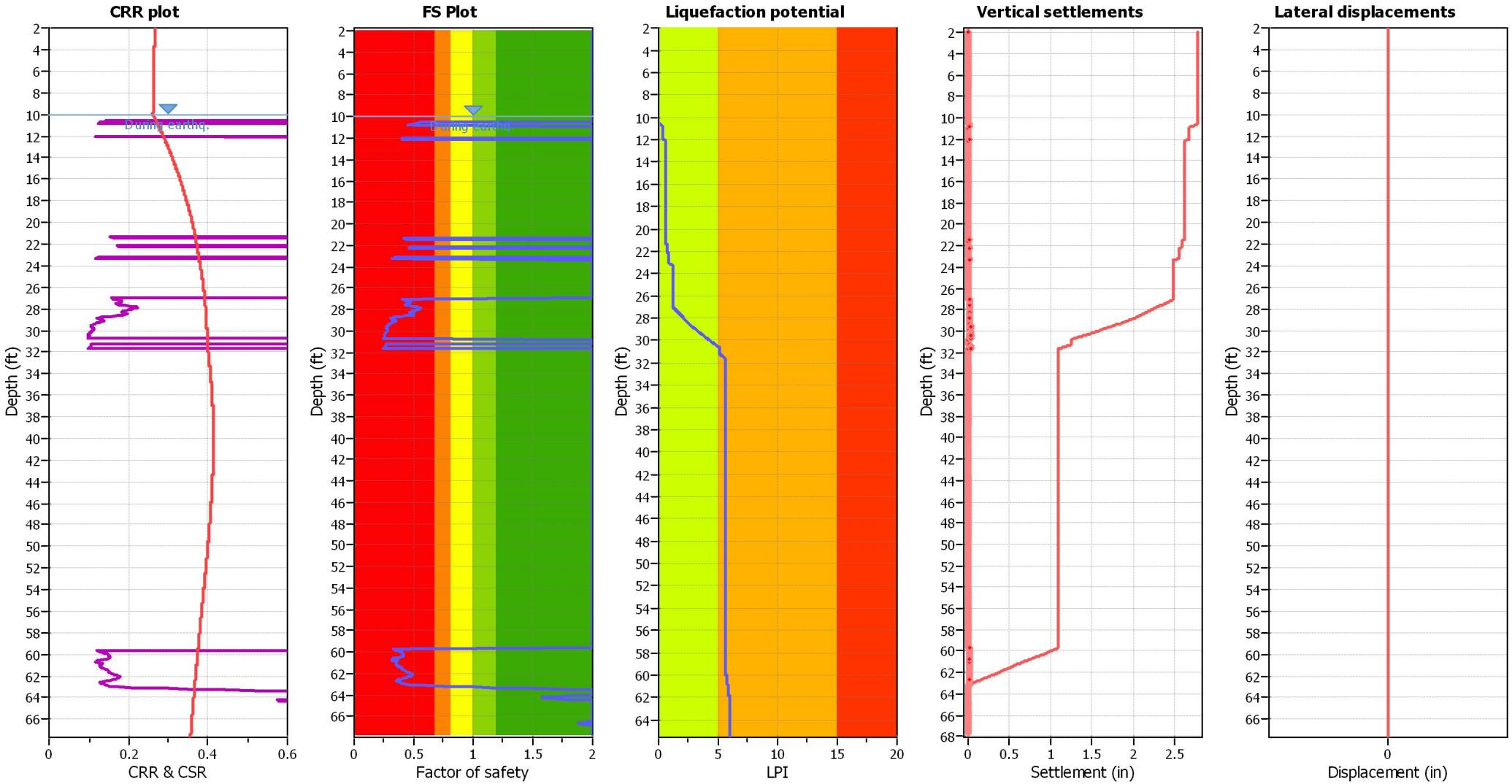
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

ENGEO Incorporated
6399 San Ignacio Avenue
Suite 150
San Jose, California 95128

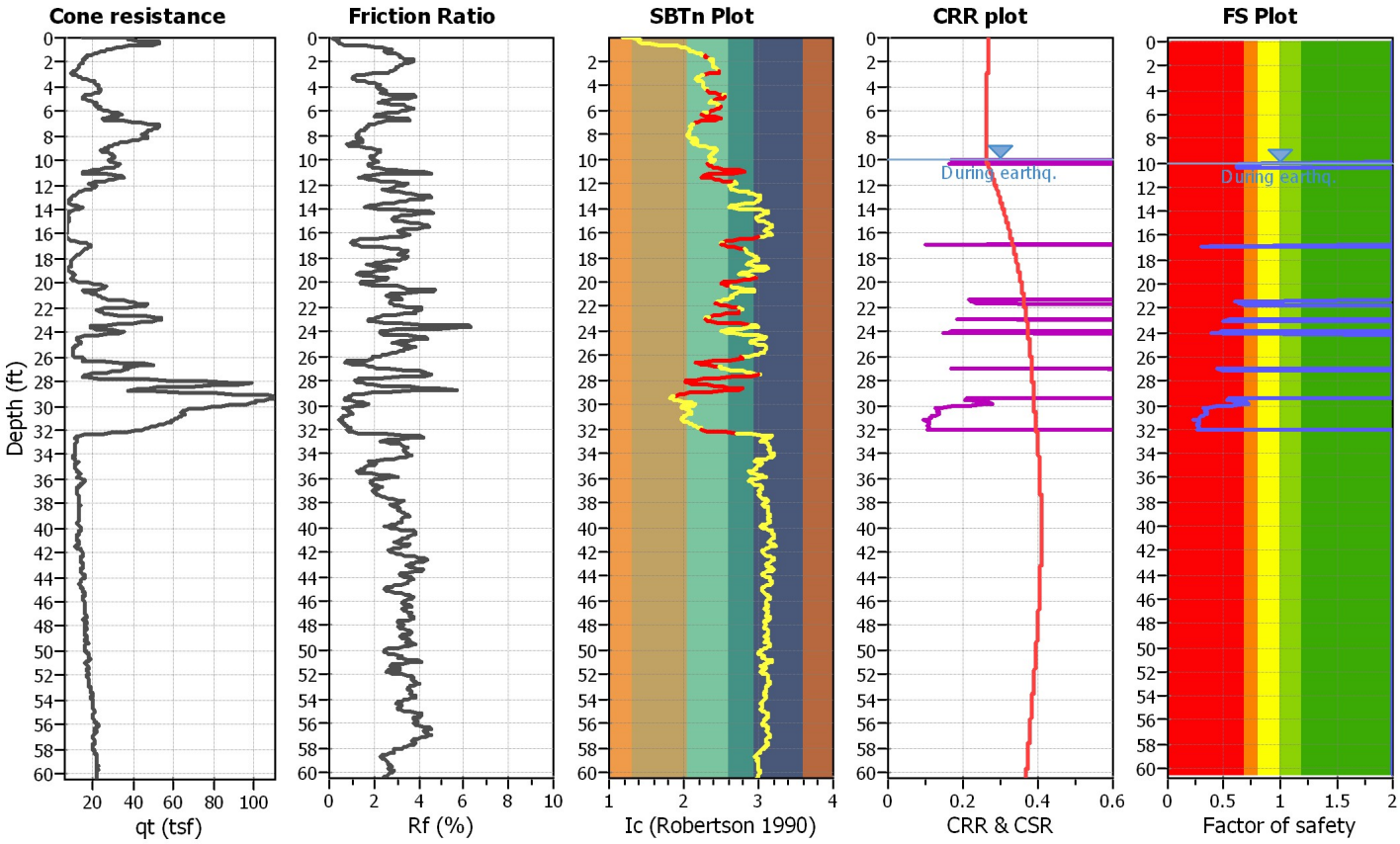
LIQUEFACTION ANALYSIS REPORT

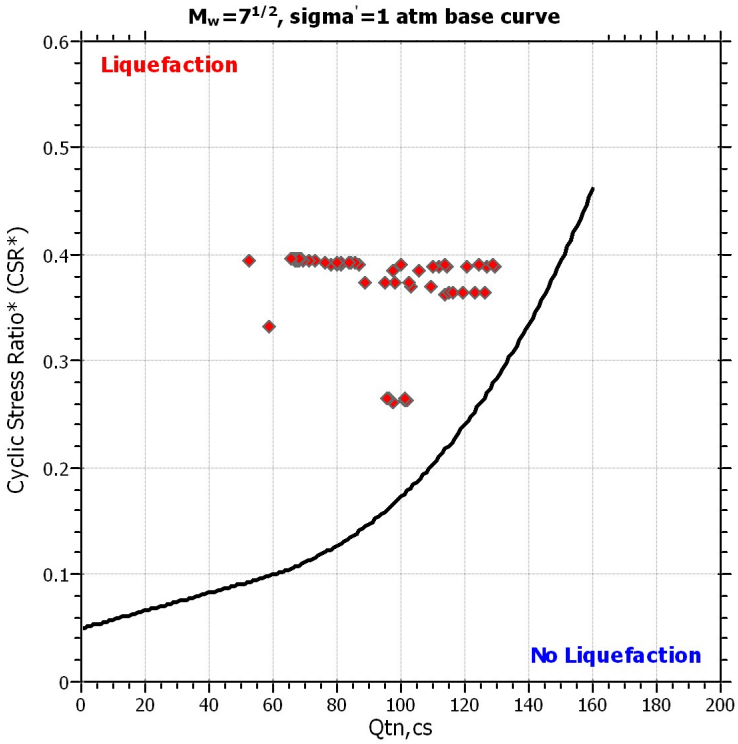
Project title : 8th and William Mixed Use **Location : San Jose, California**

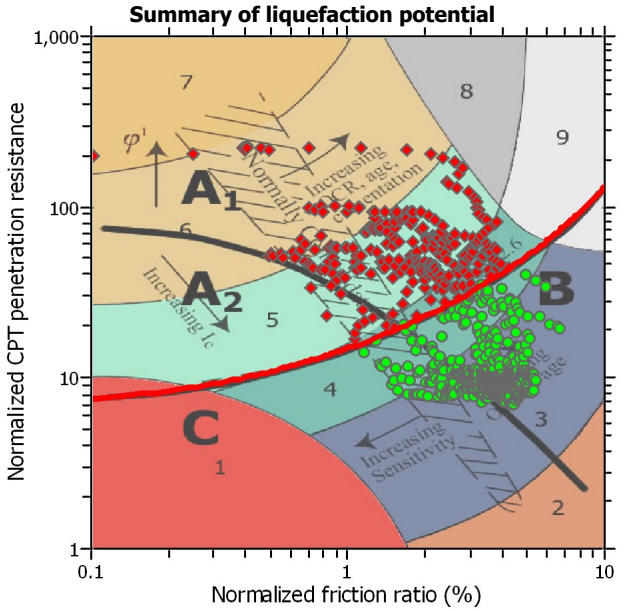
CPT file : 1-CPT3

Input parameters and analysis data

Analysis method:	NCEER 1998	G.W.T. (in-situ):	10.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	Robertson & Wride	G.W.T. (earthq.):	10.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.00	Ic cut-off value:	2.60	Trans. detect. applied:	Yes		
Peak ground acceleration:	0.49	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

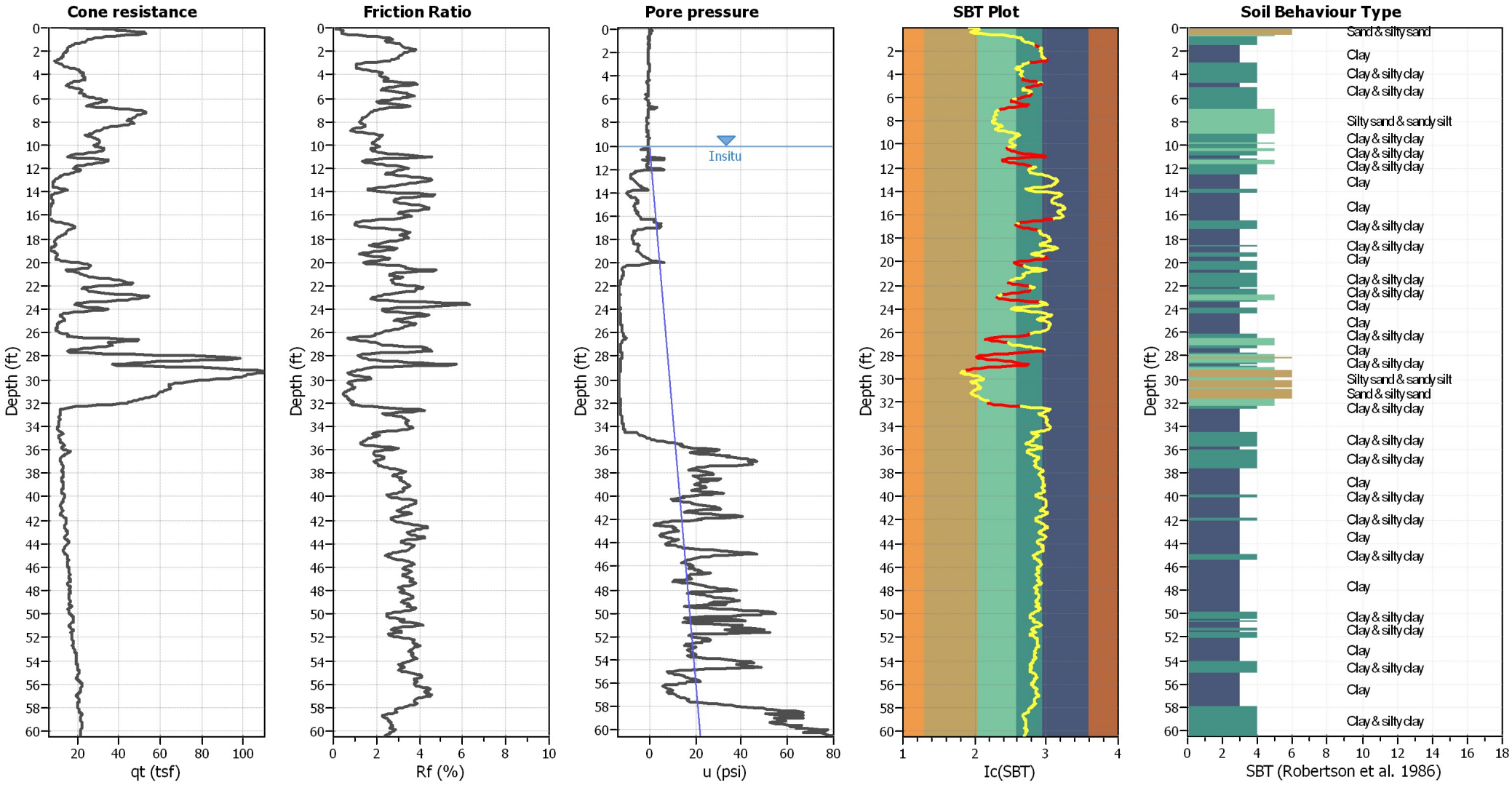






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



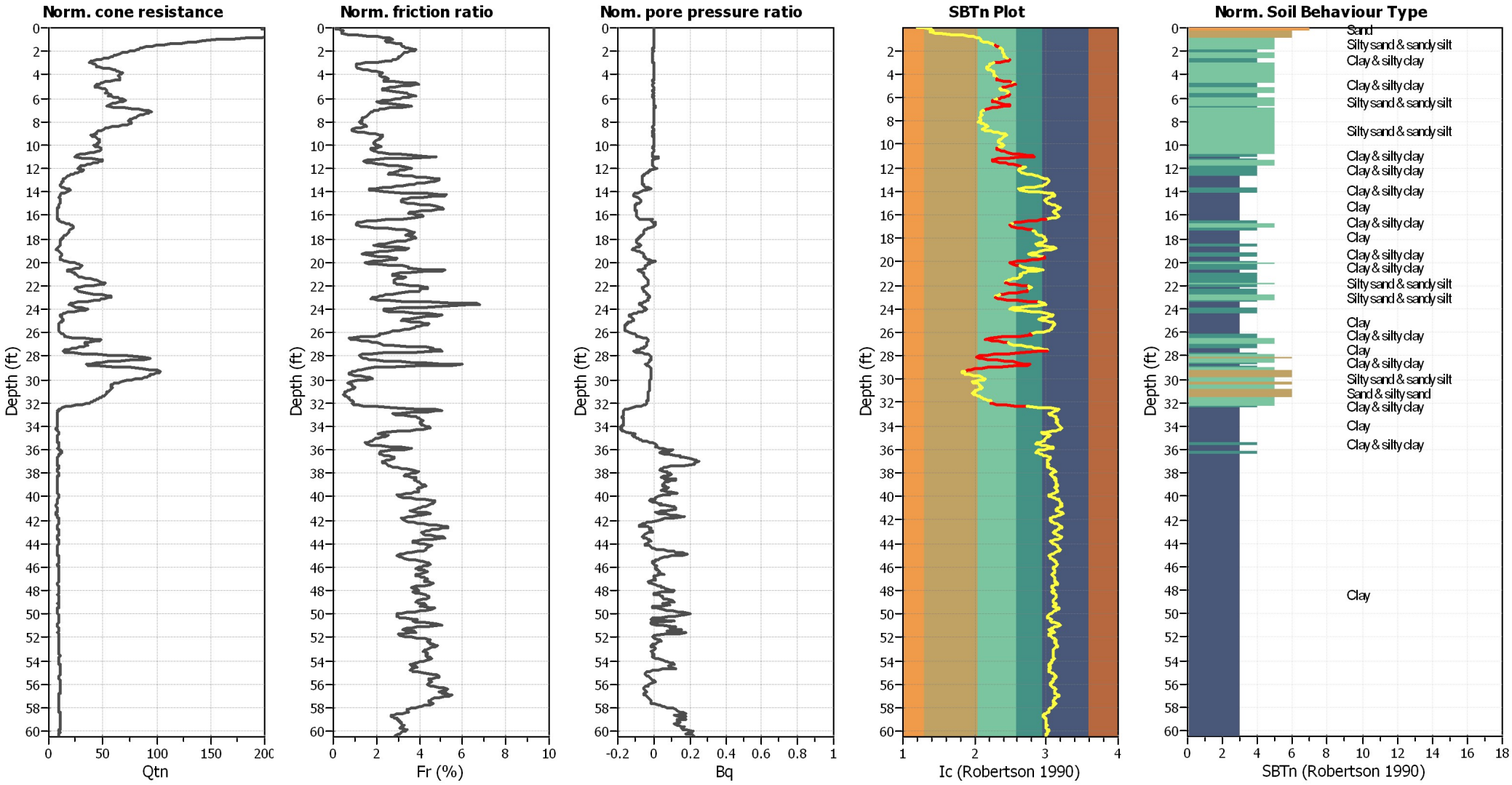
Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



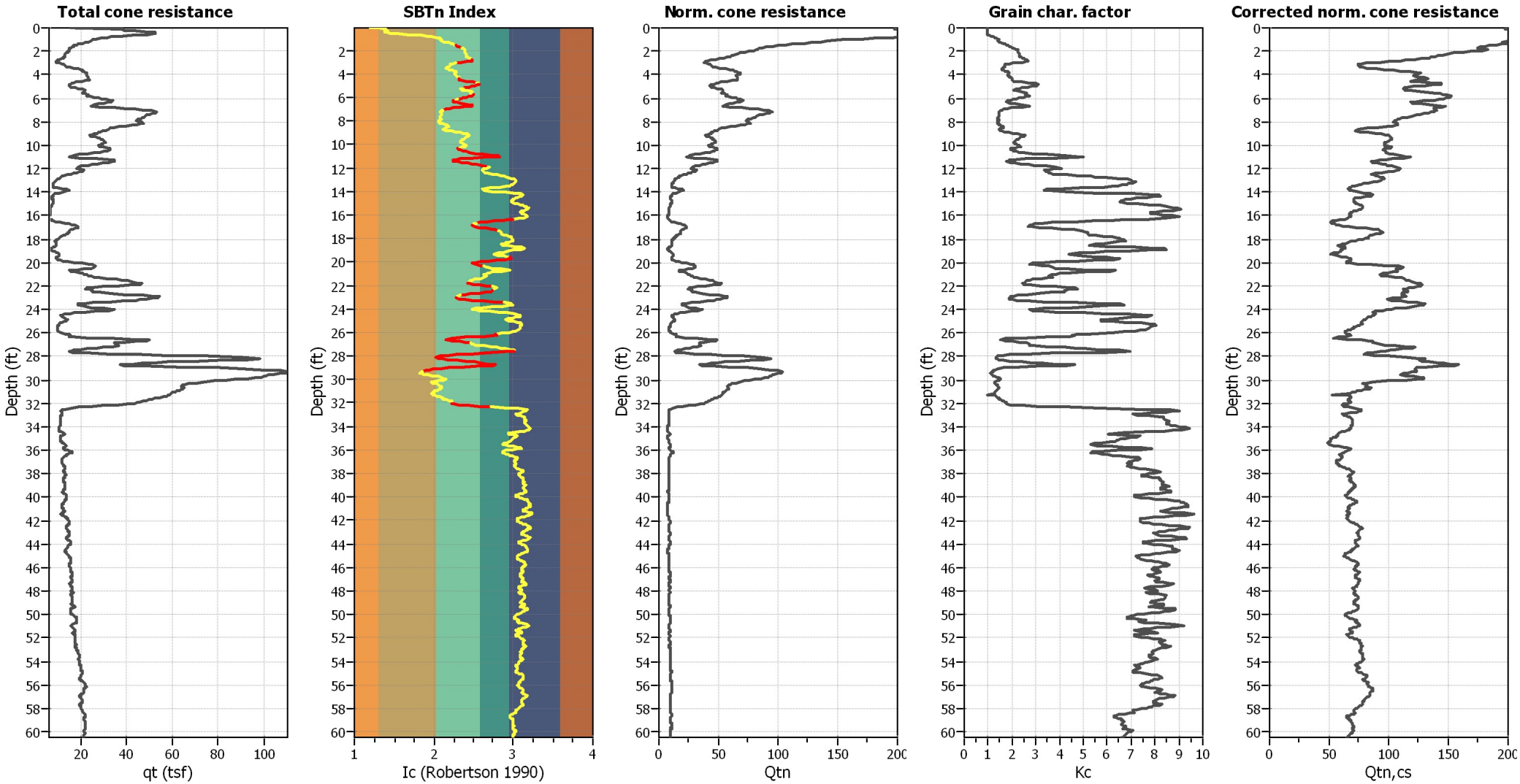
Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

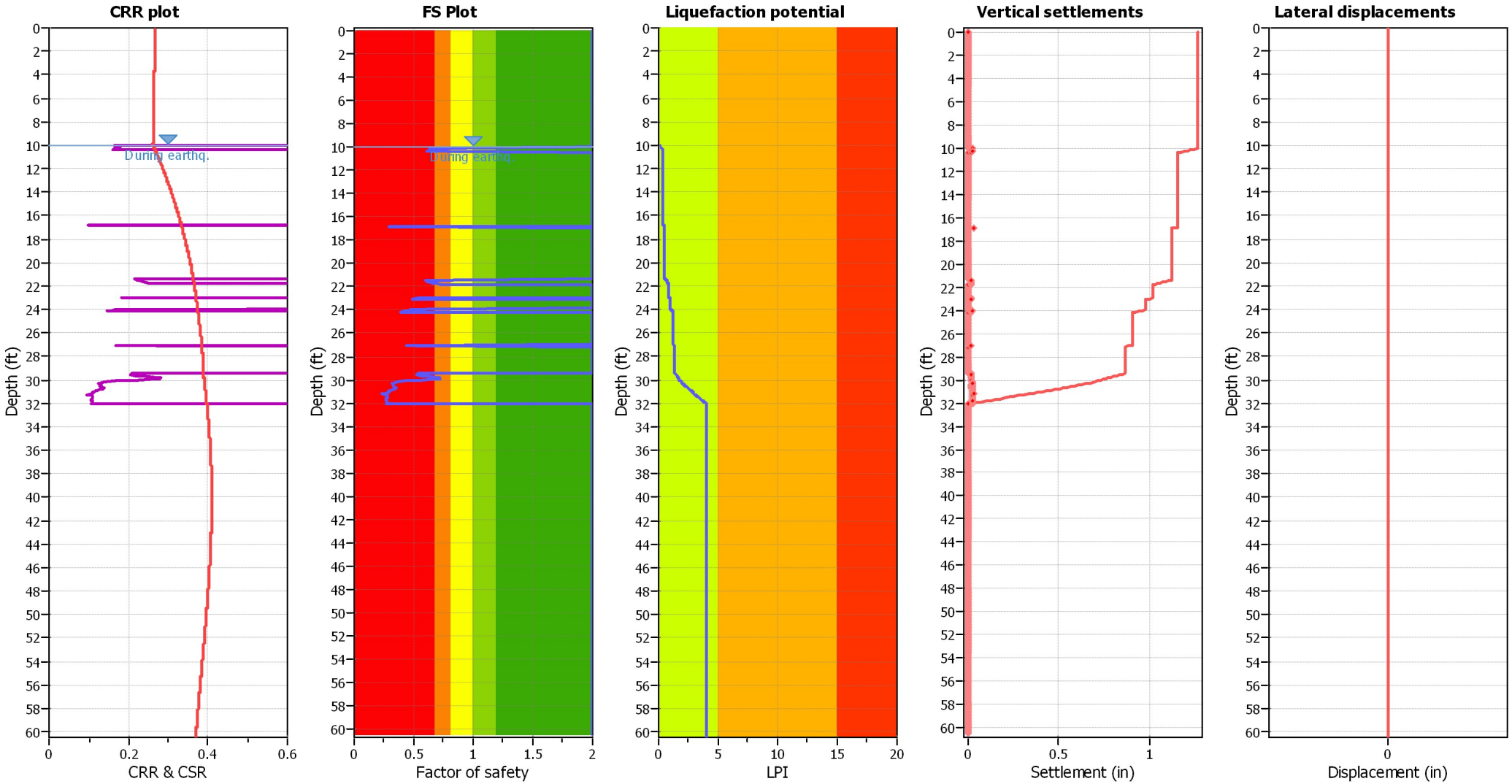
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER 1998	Depth to water table (erthq.):	10.00 ft	Fill weight:	N/A
Fines correction method:	Robertson & Wride	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.49	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	10.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

APPENDIX E

CERCO ANALYTICAL, INC.

Corrosivity Report

APPENDIX E

California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

28 June, 2011

Job No.1106102
Cust. No.10169

Mr. Andy Firmin
ENGEO Inc.
2010 Crow Canyon Place, Suite 250
San Ramon, CA 94583

Subject: Project No.: 8643.000.000 Phase 003
Project Name: 8th and William Street
Corrosivity Analysis – ASTM Test Methods

Dear Mr. Firmin:

Pursuant to your request, CERCO Analytical has analyzed the soil sample submitted on June 14, 2011. Based on the analytical results, a brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurement, this sample is classified as "moderately corrosive". All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentration reflects none detected with a detection limit of 15 mg/kg.

The sulfate ion concentration reflects none detected with a detection limit of 15 mg/kg.

The sulfide ion concentration reflects none detected with a detection limit of 50 mg/kg.

The pH of the soil is 7.8, which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potential is 490-mV, which is indicative of aerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call JDH Corrosion Consultants, Inc. at (925) 927-6630.

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require further information, please do not hesitate to contact us.

Very truly yours,
CERCO ANALYTICAL, INC.

Cheryl McMillan for
J. Darby Howard, Jr., P.E.
President

JDH/jdl
Enclosure

California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax: 925 462 2775
www.cercoanalytical.com

Client: ENGEO Incorporated
Client's Project No.: 8643.000.000 Phase 003
Client's Project Name: 8th and William Street
Date Sampled: 27-May-11
Date Received: 14-Jun-11
Matrix: Soil
Authorization: Signed Chain of Custody

Date of Report: 28-Jun-2011

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Conductivity (umhos/cm)*	Resistivity (100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
1106102-001	1-B3 @ 3.5-4	490	7.8	-	5,000	N.D.	N.D.	N.D.

Method:	ASTM D1498	ASTM D4972	ASTM D1125M	ASTM G57	ASTM D4658M	ASTM D4327	ASTM D4327
Detection Limit:	-	-	10	-	50	15	15
Date Analyzed:	22-Jun-2011	22-Jun-2011	-	20-Jun-2011	28-Jun-2011	22-Jun-2011	22-Jun-2011

Cheryl McMillen
Laboratory Director

* Results Reported on "As Received" Basis
N.D. - None Detected

Quality Control Summary - All laboratory quality control parameters were found to be within established limits

APPENDIX F

Guide Contract Specifications

APPENDIX F

GUIDE CONTRACT SPECIFICATIONS

PART I - EARTHWORK

PREFACE

These specifications are intended as a guide for the earthwork performed at the subject development project. If there is a conflict between these specifications (including the recommendations of the geotechnical report) and agency or code requirements, it should be brought to the attention of ENGEO and Owner prior to contract bidding.

PART 1 - GENERAL

1.01 WORK COVERED

A. Grading, excavating, filling and backfilling, including trenching and backfilling for utilities as necessary to complete the Project as indicated on the Drawings.

B. Subsurface drainage as indicated on the Drawings.

1.02 CODES AND STANDARDS

A. Excavating, trenching, filling, backfilling, and grading work shall meet the applicable requirements of the Uniform Building Code and the standards and ordinances of state and local governing authorities.

1.03 SUBSURFACE SOIL CONDITIONS

A. The Owners' Geotechnical Exploration report is available for inspection by bidder or Contractor. The Contractor shall refer to the findings and recommendations of the Geotechnical Exploration report in planning and executing his work.

1.04 DEFINITIONS

A. Fill: All soil, rock, or soil-rock materials placed to raise the grades of the site or to backfill excavations.

B. Backfill: All soil, rock or soil-rock material used to fill excavations and trenches.

C. Onsite Material: Soil and/or rock material which is obtained from the site.

D. Imported Material: Soil and/or rock material which is brought to the site from offsite areas.

E. Select Material: Onsite and/or imported material which is approved by ENGEO as a specific-purpose fill.

F. Engineered Fill: Fill upon which ENGEO has made sufficient observations and tests to confirm that the fill has been placed and compacted in accordance with specifications and requirements.

G. Degree of Compaction or Relative Compaction: The ratio, expressed as a percentage, of the in-place dry density of the fill and backfill material as compacted in the field to the maximum dry density of the same material as determined by ASTM D-1557 or California 216 compaction test method.

H. Optimum Moisture: Water content, percentage by dry weight, corresponding to the maximum dry density as determined by ASTM D-1557.

I. ENGEO: The project geotechnical engineering consulting firm, its employees or its designated representatives.

J. Drawings: All documents, approved for construction, which describe the Work.

1.05 OBSERVATION AND TESTING

A. All site preparation, cutting and shaping, excavating, filling, and backfilling shall be carried out under the observation of ENGEO, employed and paid for by the Owners. ENGEO will perform appropriate field and laboratory tests to evaluate the suitability of fill material, the proper moisture content for compaction, and the degree of compaction achieved. Any fill that does not meet the specification requirements shall be removed and/or reworked until the requirements are satisfied.

B. Cutting and shaping, excavating, conditioning, filling, and compacting procedures require approval of ENGEO as they are performed. Any work found unsatisfactory or any work disturbed by subsequent operations before approval is granted shall be corrected in an approved manner as recommended by ENGEO.

C. Tests for compaction will be made in accordance with test procedures outlined in ASTM D-1557, as applicable. Field testing of soils or compacted fill shall conform with the applicable requirements of ASTM D-2922.

D. All authorized observation and testing will be paid for by the Owners.

1.06 SITE CONDITIONS

A. Excavating, filling, backfilling, and grading work shall not be performed during unfavorable weather conditions. When the work is interrupted by rain, excavating, filling, backfilling, and grading work shall not be resumed until the site and soil conditions are suitable.

B. Contractor shall take the necessary measures to prevent erosion of freshly filled, backfilled, and graded areas until such time as permanent drainage and erosion control measures have been installed.

PART 2 - PRODUCTS

2.01 GENERAL

A. Contractor shall furnish all materials, tools, equipment, facilities, and services as required for performing the required excavating, filling, backfilling, and grading work, and trenching and backfilling for utilities.

2.02 SOIL MATERIALS

A. Fill

1. Material to be used for engineered fill and backfill shall be free from organic matter and other deleterious substances, and of such quality that it will compact thoroughly without excessive voids when watered and rolled. Excavated onsite material will be considered suitable for engineered fill and backfill if it contains no more than 3 percent organic matter, is free of debris and other deleterious substances and conforms to the requirements specified above. Rocks of maximum dimension in excess of two-thirds of the lift thickness shall be removed from any fill material to the satisfaction of ENGEO.

2. Excavated earth material which is suitable for engineered fill or backfill, as determined by ENGEO, shall be conditioned for reuse and properly stockpiled as required for later filling and backfilling operations. Conditioning shall consist of spreading material in layers not to exceed 8 inches and raking free of debris and rubble. Rocks and aggregate exceeding the allowed largest dimension, and deleterious material shall be removed from the site and disposed off site in a legal manner.

3. ENGEO shall be immediately notified if potential hazardous materials or suspect soils exhibiting staining or odor are encountered. Work activities shall be discontinued within the area of potentially hazardous materials. ENGEO environmental personnel will conduct an assessment of the suspect hazardous material to determine the appropriate response and mitigation. Regulatory

agencies may also be contacted to request concurrence and oversight. *ENGEO will rely on the Owner, or a designated Owner's representative, to make necessary notices to the appropriate regulatory agencies. The Owner may request ENGEO's assistance in notifying regulatory agencies, provided ENGEO receives Owner's written authorization to expand its scope of services.*

4. ENGEO shall be notified at least 48 hours prior to the start of filling and backfilling operations so that it may evaluate samples of the material intended for use as fill and backfill. All materials to be used for filling and backfilling require the approval of ENGEO.

B. Import Material: Where conditions require the importation of fill material, the material shall be an inert, nonexpansive soil or soil-rock material free of organic matter and meeting the following requirements unless otherwise approved by ENGEO.

Gradation (ASTM D-421):	Sieve Size	Percent Passing
	2-inch	100
	#200	15 - 70
Plasticity (ASTM D-4318):	Liquid Limit	Plasticity Index
	< 30	< 12
Swell Potential (ASTM D-4546B):	Percent Heave	Swell Pressure
(at optimum moisture)	< 2 percent	< 300 psf
Resistance Value (ASTM D-2844):	Minimum 25	
Organic Content (ASTM D-2974):	Less than 2 percent	

A sample of the proposed import material should be submitted to ENGEO for evaluation prior to delivery at the site.

2.03 SAND

A. Sand for sand cushion under slabs and for bedding of pipe in utility trenches shall be a clean and graded, washed sand, free from clay or organic material, suitable for the intended purpose with 90 to 100 percent passing a No. 4 U.S. Standard Sieve, not more than 5 percent passing a No. 200 U.S. Standard Sieve, and generally conforming to ASTM C33 for fine aggregate.

2.04 AGGREGATE DRAINAGE FILL

A. Aggregate drainage fill under concrete slabs and paving shall consist of broken stone, crushed or uncrushed gravel, clean quarry waste, or a combination thereof. The aggregate shall be free from fines, vegetable matter, loam, volcanic tuff, and other deleterious substances. It shall be of such quality that the absorption of water in a saturated surface dry condition does not exceed 3 percent of the oven dry weight of the samples.

B. Aggregate drainage fill shall be of such size that the percentage composition by dry weight as determined by laboratory sieves (U. S. Series) will conform to the following grading:

Sieve Size	Percentage Passing Sieve
1½-inches	100
1-inch	90 - 100
#4	0 - 5

2.05 SUBDRAINS

A. Perforated subdrain pipe of the required diameter shall be installed as shown on the drawings. The pipe(s) shall also conform to these specifications unless otherwise specified by ENGEO in the field.

Subdrain pipe shall be manufactured in accordance with one of the following requirements:

Design depths less than 30 feet
- Perforated ABS Solid Wall SDR 35 (ASTM D-2751)
- Perforated PVC Solid Wall SDR 35 (ASTM D-3034)
- Perforated PVC A-2000 (ASTM F949)
- Perforated Corrugated HDPE double-wall (AASHTO M-252 or M-294, Caltrans Type S, 50 psi minimum stiffness)

Design depths less than 50 feet
- Perforated PVC SDR 23.5 Solid Wall (ASTM D-3034)
- Perforated Sch. 40 PVC Solid Wall (ASTM-1785)
- Perforated ABS SDR 23.5 Solid Wall (ASTM D-2751)
- Perforated ABS DWV/Sch. 40 (ASTM D-2661 and D-1527)
- Perforated Corrugated HDPE double-wall (AASHTO M-252 or M-294, Caltrans Type S, 70 psi minimum stiffness)

Design depths less than 70 feet

- Perforated ABS Solid Wall SDR 15.3 (ASTM D-2751)
- Perforated Sch. 80 PVC (ASTM D-1785)
- Perforated Corrugated Aluminum (ASTM B-745)

B. Permeable Material (Class 2): Class 2 permeable material for filling trenches under, around, and over subdrains, behind building and retaining walls, and for pervious blankets shall consist of clean, coarse sand and gravel or crushed stone, conforming to the following grading requirements:

Sieve Size	Percentage Passing Sieve
1-inch	100
¾-inch	90 - 100
3/8-inch	40 - 100
#4	25 - 40
#8	18 - 33
#30	5 - 15
#50	0 - 7
#200	0 - 3

C. Filter Fabric: All filter fabric shall meet the following Minimum Average Roll Values unless otherwise specified by ENGEO.

Grab Strength (ASTM D-4632).....180 lbs
Mass Per Unit Area (ASTM D-4751).....6 oz/yd^2
Apparent Opening Size (ASTM D-4751).....70-100 U.S. Std. Sieve
Flow Rate (ASTM D-4491).....80 gal/min/ft^2
Puncture Strength (ASTM D-4833) .....80 lbs

D. Vapor Retarder: Vapor Retarders shall consist of PVC, LDPE or HDPE impermeable sheeting at least 10 mils thick..

2.06 PERMEABLE MATERIAL (Class 1; Type A)

A. Class 1 permeable material to be used in conjunction with filter fabric for backfilling of subdrain excavations shall conform to the following grading requirements:

Sieve Size	Percentage Passing Sieve
¾-inch	100
½-inch	95 - 100
⅜-inch	70 - 100
#4	0 - 55
#8	0 - 10
#200	0 – 3

PART 3 - EXECUTION

3.01 STAKING AND GRADES

A. Contractor shall lay out all his work, establish all necessary markers, bench marks, grading stakes, and other stakes as required to achieve design grades.

3.02 EXISTING UTILITIES

A. Contractor shall verify the location and depth (elevation) of all existing utilities and services before performing any excavation work.

3.03 EXCAVATION

A. Contractor shall perform excavating as indicated and required for concrete footings, drilled piers, foundations, floor slabs, concrete walks, and site leveling and grading, and provide shoring, bracing, underpinning, cribbing, pumping, and planking as required. The bottoms of excavations shall be firm undisturbed earth, clean and free from loose material, debris, and foreign matter.

B. Excavations shall be kept free from water at all times. Adequate dewatering equipment shall be maintained at the site to handle emergency situations until concrete or backfill is placed.

C. Unauthorized excavations for footings shall be filled with concrete to required elevations, unless other methods of filling are authorized by ENGEO.

D. Excavated earth material which is suitable for engineered fill or backfill, as determined by ENGEO, shall be conditioned for reuse and properly stockpiled for later filling and backfilling operations as specified under Section 2.02, "Soil Materials."

E. Abandoned sewers, piping, and other utilities encountered during excavating shall be removed and the resulting excavations shall be backfilled with engineered fill as required by ENGEO.

F. Any active utility lines encountered shall be reported immediately to the Owner's Representative and authorities involved. The Owner and proper authorities shall be permitted free access to take the measures deemed necessary to repair, relocate, or remove the obstruction as determined by the responsible authority or Owner's Representative.

3.04 SUBGRADE PREPARATION

A. All brush and other rubbish, as well as trees and root systems not marked for saving, shall be removed from the site and legally disposed of.

B. Any existing structures, foundations, underground storage tanks, or debris must be removed from the site prior to any building, grading, or fill operations. Septic tanks, including all drain fields and other lines, if encountered, must be totally removed. The resulting depressions shall be properly prepared and filled to the satisfaction of ENGEO.

C. Vegetation and organic topsoil shall be removed from the surface upon which the fill is to be placed and either removed and legally disposed of or stockpiled for later use in approved landscape areas. The surface shall then be scarified to a depth of at least eight inches until the surface is free from ruts, hummocks, or other uneven features which would tend to prevent uniform compaction by the equipment to be used.

D. After the foundation for the fill has been cleared and scarified, it shall be made uniform and free from large clods. The proper moisture content must be obtained by adding water or aerating. The foundation for the fill shall be compacted at the proper moisture content to a relative compaction as specified herein.

3.05 ENGINEERED FILL

A. Select Material: Fill material shall be "Select" or "Imported Material" as previously specified.

B. Placing and Compacting: Engineered fill shall be constructed by approved and accepted methods. Fill material shall be spread in uniform lifts not exceeding 8 inches in uncompacted thickness. Each layer shall be spread evenly, and thoroughly blade-mixed to obtain uniformity of material. Fill material which does not contain sufficient moisture as specified by ENGEO shall be sprinkled with water; if it contains excess moisture it shall be aerated or blended with drier material to achieve the proper water content. Select material and water shall then be thoroughly mixed before being compacted.

C. Unless otherwise specified in the Geotechnical Exploration report, each layer of spread select material shall be compacted to at least 90 percent relative compaction at a moisture content of at least three percentage points above the optimum moisture content. Minimum compaction in all keyways shall be a minimum of 95 percent with a minimum moisture content of at least 1 percentage point above optimum.

D. Unless otherwise specified in the Geotechnical Exploration report or otherwise required by the local authorities, the upper 6 inches of engineered fill in areas to

receive pavement shall be compacted to at least 95 percent relative compaction with a minimum moisture content of at least 3 percentage points above optimum.

E. Testing and Observation of Fill: The work shall consist of field observation and testing to determine that each layer has been compacted to the required density and that the required moisture is being obtained. Any layer or portion of a layer that does not attain the compaction required shall be reworked until the required density is obtained.

F. Compaction: Compaction shall be by sheepsfoot rollers, multiple-wheel steel or pneumatic-tired rollers or other types of acceptable compaction equipment. Rollers shall be of such design that they will be able to compact the fill to the specified compaction. Rolling shall be accomplished while the fill material is within the specified moisture content range. Rolling of each layer must be continuous so that the required compaction may be obtained uniformly throughout each layer.

G. Fill slopes shall be constructed by overfilling the design slopes and later cutting back the slopes to the design grades. No loose soil will be permitted on the faces of the finished slopes.

H. Strippings and topsoil shall be stockpiled as approved by Owner, then placed in accordance with ENGEO's recommendations to a minimum thickness of 6 inches and a maximum thickness of 12 inches over exposed open space cut slopes which are 3:1 or flatter, and track walked to the satisfaction of ENGEO.

I. Final Prepared Subgrade: Finish blading and smoothing shall be performed as necessary to produce the required density, with a uniform surface, smooth and true to grade.

3.06 BACKFILLING

A. Backfill shall not be placed against footings, building walls, or other structures until approved by ENGEO.

B. Backfill material shall be Select Material as specified for engineered fill.

C. Backfill shall be placed in 6-inch layers, leveled, rammed, and tamped in place. Each layer shall be compacted with suitable compaction equipment to 90 percent relative compaction at a moisture content of at least 3 percent above optimum.

3.07 TRENCHING AND BACKFILLING FOR UTILITIES

A. Trenching:

1. Trenching shall include the removal of material and obstructions, the installation and removal of sheeting and bracing and the control of water as necessary to provide the required utilities and services.

2. Trenches shall be excavated to the lines, grades, and dimensions indicated on the Drawings. Maximum allowable trench width shall be the outside diameter of the pipe plus 24 inches, inclusive of any trench bracing.

3. When the trench bottom is a soft or unstable material as determined by ENGEO, it shall be made firm and solid by removing said unstable material to a sufficient depth and replacing it with onsite material compacted to 90 percent minimum relative compaction.

4. Where water is encountered in the trench, the contractor must provide materials necessary to drain the water and stabilize the bed.

B. Backfilling:

1. Trenches must be backfilled within 2 days of excavation to minimize desiccation.

2. Bedding material shall be sand and shall not extend more than 6 inches above any utility lines.

3. Backfill material shall be select material.

4. Trenches shall be backfilled as indicated or required and compacted with suitable equipment to 90 percent minimum relative compaction at the required moisture content.

3.08 SUBDRAINS

A. Trenches for subdrain pipe shall be excavated to a minimum width equal to the outside diameter of the pipe plus at least 12 inches and to a depth of approximately 2 inches below the grade established for the invert of the pipe, or as indicated on the Drawings.

B. The space below the pipe invert shall be filled with a layer of Class 2 permeable material, upon which the pipe shall be laid with perforations down. Sections shall be joined as recommended by the pipe manufacturer.

C. Rocks, bricks, broken concrete, or other hard material shall not be used to give intermediate support to pipes. Large stones or other hard objects shall not be left in contact with the pipes.

D. Excavations for subdrains shall be filled as required to fill voids and prevent settlement without damaging the subdrain pipe. Alternatively, excavations for subdrains may be filled with Class 1 permeable material (as defined in Section 2.06) wrapped in Filter Fabric (as defined in Section 2.05).

3.09 AGGREGATE DRAINAGE FILL

A. ENGEO shall approve finished subgrades before aggregate drainage fill is installed.

B. Pipes, drains, conduits, and any other mechanical or electrical installations shall be in place before any aggregate drainage fill is placed. Backfill at walls to elevation of drainage fill shall be in place and compacted.

C. Aggregate drainage fill under slabs and concrete paving shall be the minimum uniform thickness after compaction of dimensions indicated on Drawings. Where not indicated, minimum thickness after compaction shall be 4 inches.

D. Aggregate drainage fill shall be rolled to form a well-compacted bed.

E. The finished aggregate drainage fill must be observed and approved by ENGEO before proceeding with any subsequent construction over the compacted base or fill.

3.10 SAND CUSHION

A. A sand cushion shall be placed over the vapor retarder membrane under concrete slabs on grade. Sand cushion shall be placed in uniform thickness as indicated on the Drawings. Where not indicated, the thickness shall be 2 inches.

3.11 FINISH GRADING

A. All areas must be finish graded to elevations and grades indicated on the Drawings. In areas to receive topsoil and landscape planting, finish grading shall be performed to a uniform 6 inches below the grades and elevations indicated on the Drawings, and brought to final grade with topsoil.

3.12 DISPOSAL OF WASTE MATERIALS

A. Excess earth materials and debris shall be removed from the site and disposed of in a legal manner. Location of dump site and length of haul are the Contractor's responsibility.

PART II - GEOGRID SOIL REINFORCEMENT

1. DESCRIPTION:

Work shall consist of furnishing geogrid soil reinforcement for use in construction of reinforced soil slopes and retention systems.

2. GEOGRID MATERIAL:

2.1 The specific geogrid material shall be preapproved by ENGEO.

2.2 The geogrid shall be a regular network of integrally connected polymer tensile elements with aperture geometry sufficient to permit significant mechanical interlock with the surrounding soil or rock. The geogrid structure shall be dimensionally stable and able to retain its geometry under construction stresses and shall have high resistance to damage during construction, to ultraviolet degradation, and to all forms of chemical and biological degradation encountered in the soil being reinforced.

2.3 The geogrids shall have an Allowable Strength (T_a) and Pullout Resistance, for the soil type(s) indicated, as listed in Table I.

2.4 Certifications: The Contractor shall submit a manufacturer's certification that the geogrids supplied meet the respective index criteria set when geogrid was approved by ENGEO, measured in full accordance with all test methods and standards specified. In case of dispute over validity of values, the Contractor will supply test data from an ENGEO-approved laboratory to support the certified values submitted.

3. CONSTRUCTION:

3.1 Delivery, Storage, and Handling: Contractor shall check the geogrid upon delivery to ensure that the proper material has been received. During all periods of shipment and storage, the geogrid shall be protected from temperatures greater than 140 °F, mud, dirt, dust, and debris. Manufacturer's recommendations in regard to protection from direct sunlight must also be followed. At the time of installation, the geogrid will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. If approved by ENGEO, torn or punctured sections may be repaired by placing a patch over the damaged area. Any geogrid damaged during storage or installation shall be replaced by the Contractor at no additional cost to the owner.

3.2 Onsite Representative: Geogrid material suppliers shall provide a qualified and experienced representative on site at the initiation of the project, for a minimum of three days, to assist the Contractor and ENGEO personnel at the start of construction. If there is more than one slope on a project, this criterion will apply to construction of the initial slope only. The representative shall also be available on an as-needed basis, as requested by ENGEO, during construction of the remaining slope(s).

3.3 Geogrid reinforcement may be joined with mechanical connections or overlaps as recommended and approved by the Manufacturer. Joints shall not be placed within 6 feet of the slope face, within 4 feet below top of slope, nor horizontally or vertically adjacent to another joint.

3.4 Geogrid Placement: The geogrid reinforcement shall be installed in accordance with the manufacturer's recommendations. The geogrid reinforcement shall be placed within the layers of the compacted soil as shown on the plans or as directed.

The geogrid reinforcement shall be placed in continuous longitudinal strips in the direction of main reinforcement. However, if the Contractor is unable to complete a required length with a single continuous length of geogrid, a joint may be made with the Manufacturer's approval. Only one joint per length of geogrid shall be allowed. This joint shall be made for the full width of the strip by using a similar material with similar strength. Joints in geogrid reinforcement shall be pulled and held taut during fill placement.

Adjacent strips, in the case of 100 percent coverage in plan view, need not be overlapped. The minimum horizontal coverage is 50 percent, with horizontal spacings between reinforcement no greater than 40 inches. Horizontal coverage of less than 100 percent shall not be allowed unless specifically detailed in the construction drawings.

Adjacent rolls of geogrid reinforcement shall be overlapped or mechanically connected where exposed in a wrap around face system, as applicable.

The Contractor may place only that amount of geogrid reinforcement required for immediately pending work to prevent undue damage. After a layer of geogrid reinforcement has been placed, the next succeeding layer of soil shall be placed and compacted as appropriate. After the specified soil layer has been placed, the next geogrid reinforcement layer shall be installed. The process shall be repeated for each subsequent layer of geogrid reinforcement and soil.

Geogrid reinforcement shall be placed to lay flat and pulled tight prior to backfilling. After a layer of geogrid reinforcement has been placed, suitable means, such as pins or small piles of soil, shall be used to hold the geogrid reinforcement in position until the subsequent soil layer can be placed.

Under no circumstances shall a track-type vehicle be allowed on the geogrid reinforcement before at least six inches of soil have been placed. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and the geogrid reinforcement. If approved by the Manufacturer, rubber-tired equipment may pass over the geosynthetic reinforcement at slow speeds, less than 10 mph. Sudden braking and sharp turning shall be avoided.

During construction, the surface of the fill should be kept approximately horizontal. Geogrid reinforcement shall be placed directly on the compacted horizontal fill surface. Geogrid reinforcements are to be placed within three inches of the design elevations and extend the length as shown on the elevation view unless otherwise directed by ENGEO. Correct orientation of the geogrid reinforcement shall be verified by ENGEO.

Table I
Allowable Geogrid Strength
With Various Soil Types
For Geosynthetic Reinforcement In
Mechanically Stabilized Earth Slopes

(Geogrid Pullout Resistance and Allowable Strengths vary with reinforced backfill used due to soil anchorage and site damage factors. Guidelines are provided below.)

SOIL TYPE	MINIMUM ALLOWABLE STRENGTH, T_a (lb/ft)*		
	GEOGRID Type I	GEOGRID Type II	GEOGRID Type III
A. Gravels, sandy gravels, and gravel-sand-silt mixtures (GW, GP, GC, GM & SP)**	2400	4800	7200
B. Well graded sands, gravelly sands, and sand-silt mixtures (SW & SM)**	2000	4000	6000
C. Silts, very fine sands, clayey sands and clayey silts (SC & ML)**	1000	2000	3000
D. Gravelly clays, sandy clays, silty clays, and lean clays (CL)**	1600	3200	4800

* All partial Factors of Safety for reduction of design strength are included in listed values. Additional factors of safety may be required to further reduce these design strengths based on site conditions.
** Unified Soil Classifications.

PART III - GEOTEXTILE SOIL REINFORCEMENT

1. DESCRIPTION:

Work shall consist of furnishing geotextile soil reinforcement for use in construction of reinforced soil slopes.

2. GEOTEXTILE MATERIAL:

2.1 The specific geotextile material and supplier shall be preapproved by ENGEO.

2.2 The geotextile shall have a high tensile modulus and shall have high resistance to damage during construction, to ultraviolet degradation, and to all forms of chemical and biological degradation encountered in the soil being reinforced.

2.3 The geotextiles shall have an Allowable Strength (T_a) and Pullout Resistance, for the soil type(s) indicated as listed in Table II.

2.4 Certification: The Contractor shall submit a manufacturer's certification that the geotextiles supplied meet the respective index criteria set when geotextile was approved by ENGEO, measured in full accordance with all test methods and standards specified. In case of dispute over validity of values, the Contractor will supply the data from an ENGEO-approved laboratory to support the certified values submitted.

3. CONSTRUCTION:

3.1 Delivery, Storage and Handling: Contractor shall check the geotextile upon delivery to ensure that the proper material has been received. During all periods of shipment and storage, the geotextile shall be protected from temperatures greater than 140 °F, mud, dirt, dust, and debris. Manufacturer's recommendations in regard to protection from direct sunlight must also be followed. At the time of installation, the geotextile will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. If approved by ENGEO, torn or punctured sections may be repaired by placing a patch over the damaged area. Any geotextile damaged during storage or installation shall be replaced by the Contractor at no additional cost to the owner.

3.2 Onsite Representative: Geotextile material suppliers shall provide a qualified and experienced representative on site at the initiation of the project, for a minimum of three days, to assist the Contractor and ENGEO personnel at the start of construction. If there is more than one slope on a project, this criterion will apply to construction of the initial slope only. The representative shall also be available on an as-needed basis, as requested by ENGEO, during construction of the remaining slope(s).

3.3 Geotextile Placement: The geotextile reinforcement shall be installed in accordance with the manufacturer's recommendations. The geotextile reinforcement shall be placed within the layers of the compacted soil as shown on the plans or as directed.

The geotextile reinforcement shall be placed in continuous longitudinal strips in the direction of main reinforcement. Joints shall not be used with geotextiles.

Adjacent strips, in the case of 100 percent coverage in plan view, need not be overlapped. The minimum horizontal coverage is 50 percent, with horizontal spacings between reinforcement no greater than 40 inches. Horizontal coverage of less than 100 percent shall not be allowed unless specifically detailed in the construction drawings.

Adjacent rolls of geotextile reinforcement shall be overlapped or mechanically connected where exposed in a wrap around face system, as applicable.

The Contractor may place only that amount of geotextile reinforcement required for immediately pending work to prevent undue damage. After a layer of geotextile reinforcement has been placed, the succeeding layer of soil shall be placed and compacted as appropriate. After the specified soil layer has been placed, the next geotextile reinforcement layer shall be installed. The process shall be repeated for each subsequent layer of geotextile reinforcement and soil.

Geosynthetic reinforcement shall be placed to lay flat and be pulled tight prior to backfilling. After a layer of geotextile reinforcement has been placed, suitable means, such as pins or small piles of soil, shall be used to hold the geotextile reinforcement in position until the subsequent soil layer can be placed.

Under no circumstances shall a track-type vehicle be allowed on the geotextile reinforcement before at least six inches of soil has been placed. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and the geotextile reinforcement. If approved by the Manufacturer, rubber-tired equipment may pass over the geotextile reinforcement as slow speeds, less than 10 mph. Sudden braking and sharp turning shall be avoided.

During construction, the surface of the fill should be kept approximately horizontal. Geotextile reinforcement shall be placed directly on the compacted horizontal fill surface. Geotextile reinforcements are to be placed within three inches of the design elevations and extend the length as shown on the elevation view unless otherwise directed by ENGEO. Correct orientation of the geotextile reinforcement shall be verified by ENGEO.

Table II
Allowable Geotextile Strength
With Various Soil Types
For Geosynthetic Reinforcement In
Mechanically Stabilized Earth Slopes

(Geotextile Pullout Resistance and Allowable Strengths vary with reinforced backfill used due to soil anchorage and site damage factors. Guidelines are provided below.)

SOIL TYPE	MINIMUM ALLOWABLE STRENGTH, T_a (lb/ft)*		
	GEOTEXTILE Type I	GEOTEXTILE Type II	GEOTEXTILE Type III
A. Gravels, sandy gravels, and gravel-sand-silt mixtures (GW, GP, GC, GM & SP)**	2400	4800	7200
B. Well graded sands, gravelly sands, and sand-silt mixtures (SW & SM)**	2000	4000	6000
C. Silts, very fine sands, clayey sands and clayey silts (SC & ML)**	1000	2000	3000
D. Gravelly clays, sandy clays, silty clays, and lean clays (CL)**	1600	3200	4800

* All partial Factors of Safety for reduction of design strength are included in listed values. Additional factors of safety may be required to further reduce these design strengths based on site conditions.

** Unified Soil Classifications.

PART IV - EROSION CONTROL MAT OR BLANKET

1. DESCRIPTION:

Work shall consist of furnishing and placing a synthetic erosion control mat and/or degradable erosion control blanket for slope face protection and lining of runoff channels.

2. EROSION CONTROL MATERIALS:

2.1 The specific erosion control material and supplier shall be pre-approved by ENGEO.

2.2 Certification: The Contractor shall submit a manufacturer's certification that the erosion mat/blanket supplied meets the criteria specified when the material was approved by ENGEO. The manufacturer's certification shall include a submittal package of documented test results that confirm the property values. In case of a dispute over validity of values, the Contractor will supply property test data from an ENGEO-approved laboratory, to support the certified values submitted. Minimum average roll values, per ASTM D 4759, shall be used for conformance determinations.

3. CONSTRUCTION:

3.1 Delivery, Storage, and Handling: Contractor shall check the erosion control material upon delivery to ensure that the proper material has been received. During all periods of shipment and storage, the erosion mat shall be protected from temperatures greater than 140 °F, mud, dirt, and debris. Manufacturer's recommendations in regard to protection from direct sunlight must also be followed. At the time of installation, the erosion mat/blanket shall be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. If approved by ENGEO, torn or punctured sections may be removed by cutting OUT a section of the mat. The remaining ends should be overlapped and secured with ground anchors. Any erosion mat/blanket damaged during storage or installation shall be replaced by the Contractor at no additional cost to the Owner.

3.2 Onsite Representative: Erosion control material suppliers shall provide a qualified and experienced representative on site, for a minimum of one day, to assist the Contractor and ENGEO personnel at the start of construction. If there is more than one slope on a project, this criteria will apply to construction of the initial slope only. The representative shall be available on an as-needed basis, as requested by ENGEO, during construction of the remaining slope(s).

3.3 Placement: The erosion control material shall be placed and anchored on a smooth graded, firm surface approved by the Engineer. Anchoring terminal ends of the erosion control material shall be accomplished through use of key trenches. The material in the trenches shall be anchored to the soil on maximum 1½ foot centers. Topsoil, if required by construction drawings, placed over final grade prior to installation of the erosion control material shall be limited to a depth not exceeding 3 inches.

3.4 Erosion control material shall be anchored, overlapped, and otherwise constructed to ensure performance until vegetation is well established. Anchors shall be as designated on the construction drawings, with a minimum of 12 inches length, and shall be spaced as designated on the construction drawings, with a maximum spacing of 4 feet.

3.5 Soil Filling: If noted on the construction drawings, the erosion control mat shall be filled with a fine grained topsoil, as recommended by the manufacturer. Soil shall be lightly raked or brushed on/into the mat to fill the mat voids or to a maximum depth of 1 inch.

PART V - GEOSYNTHETIC DRAINAGE COMPOSITE

1. DESCRIPTION:

Work shall consist of furnishing and placing a geosynthetic drainage system as a subsurface drainage medium for reinforced soil slopes.

2. DRAINAGE COMPOSITE MATERIALS:

2.1 The specific drainage composite material and supplier shall be preapproved by ENGEO.

2.2 The drain shall be of composite construction consisting of a supporting structure or drainage core material surrounded by a geotextile. The geotextile shall encapsulate the drainage core and prevent random soil intrusion into the drainage structure. The drainage core material shall consist of a three dimensional polymeric material with a structure that permits flow along the core laterally. The core structure shall also be constructed to permit flow regardless of the water inlet surface. The drainage core shall provide support to the geotextile. The fabric shall meet the minimum property requirements for filter fabric listed in Section 2.05C of the Guide Earthwork Specifications.

2.3 A geotextile flap shall be provided along all drainage core edges. This flap shall be of sufficient width for sealing the geotextile to the adjacent drainage structure edge to prevent soil intrusion into the structure during and after installation. The geotextile shall cover the full length of the core.

2.4 The geocomposite core shall be furnished with an approved method of constructing and connecting with outlet pipes or weepholes as shown on the plans. Any fittings shall allow entry of water from the core but prevent intrusion of backfill material into the core material.

2.5 Certification and Acceptance: The Contractor shall submit a manufacturer's certification that the geosynthetic drainage composite meets the design properties and respective index criteria measured in full accordance with all test methods and standards specified. The manufacturer's certification shall include a submittal package of documented test results that confirm the design values. In case of dispute over validity of design values, the Contractor will supply design property test data from an ENGEO-approved laboratory, to support the certified values submitted. Minimum average roll values, per ASTM D 4759, shall be used for determining conformance.

3. CONSTRUCTION:

3.1 Delivery, Storage, and Handling: Contractor shall check the geosynthetic drainage composite upon delivery to ensure that the proper material has been received. During all periods of shipment and storage, the geosynthetic drainage composite shall be protected from temperatures greater than 140 °F, mud, dirt, and debris. Manufacturer's recommendations in regards to protection from direct sunlight must also be followed. At the time of installation, the geosynthetic drainage composite shall be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. If approved by ENGEO, torn or punctured sections may be removed or repaired. Any geosynthetic drainage composite damaged during storage or installation shall be replaced by the Contractor at no additional cost to the Owner.

3.2 Onsite Representative: Geosynthetic drainage composite material suppliers shall provide a qualified and experienced representative on site, for a minimum of one half day, to assist the Contractor and ENGEO personnel at the start of construction with directions on the use of drainage composite. If there is more than one application on a project, this criterion will apply to construction of the initial application only. The representative shall also be available on an as-needed basis, as requested by ENGEO, during construction of the remaining applications.

3.3 Placement: The soil surface against which the geosynthetic drainage composite is to be placed shall be free of debris and inordinate irregularities that will prevent intimate contact between the soil surface and the drain.

3.4 Seams: Edge seams shall be formed by utilizing the flap of the geotextile extending from the geocomposite's edge and lapping over the top of the fabric of the adjacent course. The fabric flap shall be securely fastened to the adjacent fabric by means of plastic tape or non-water-soluble construction adhesive, as recommended by the supplier. Where vertical splices are necessary at the end of a geocomposite roll or panel, an 8-inch-wide continuous strip of geotextile may be placed, centering over the seam and continuously fastened on both sides with plastic tape or non-water-soluble construction adhesive. As an alternative, rolls of geocomposite drain material may be joined together by turning back the fabric at the roll edges and interlocking the cuspidations approximately 2 inches. For overlapping in this manner, the fabric shall be lapped and tightly taped beyond the seam with tape or adhesive. Interlocking of the core shall always be made with the upstream edge on top in the direction of water flow. To prevent soil intrusion, all exposed edges of the geocomposite drainage core edge must be covered. Alternatively, a 12-inch-wide strip of fabric may be utilized in the same manner, fastening it to the exposed fabric 8 inches in from the edge and folding the remaining flap over the core edge.

3.5 Soil Fill Placement: Structural backfill shall be placed immediately over the geocomposite drain. Care shall be taken during the backfill operation not to damage the geotextile surface of the drain. Care shall also be taken to avoid excessive settlement of the backfill material. The geocomposite drain, once installed, shall not be exposed for more than seven days prior to backfilling.

Appendix D

Phase I & II Assessments

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

WILLIAM STREET AND EIGHTH STREET
SAN JOSE, CALIFORNIA

Submitted to:

Mr. Paulo Hernandez
Sherwin South Campus, LLC
137 Amanda Lane
Los Gatos, CA 95032

March 4, 2009
Project No. 8643.000.000

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- Expect Excellence -

ENGEO INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
WATER RESOURCES
CONSTRUCTION SERVICES

Project No.
8643.000.000

March 4, 2009

Mr. Paulo Hernandez
Sherwin South Campus, LLC
137 Amanda Lane
Los Gatos, CA 95032

Subject: William Street and Eighth Street
San Jose, California

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

Dear Mr. Hernandez:

ENGEO Incorporated is pleased to present our phase one environmental site assessment of the subject property, located in San Jose, California. The attached report includes a description of the site assessment activities, along with ENGEO's findings, opinions, and conclusions regarding the Property.

ENGEO has the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the Property, and has developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. We declare that, to the best of our professional knowledge and belief, the responsible charge for this study meets the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312 and ASTM 1527-05.

We are pleased to be of service to you on this project. If you have any questions concerning the contents of our report, please contact us.

Sincerely,

ENGEO Incorporated

Scott R. Johns
srj/sm/rc

Shawn Munger, CHG, REA II

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TABLE OF CONTENTS

Letter of Transmittal

Page

EXECUTIVE SUMMARY 1

1.0 INTRODUCTION 2

1.1 PURPOSE OF PHASE ONE ENVIRONMENTAL SITE ASSESSMENT 2
1.2 DETAILED SCOPE OF SERVICES 2
1.3 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT 3
1.4 SPECIAL TERMS AND CONDITIONS 4

2.0 PROPERTY INFORMATION 4

2.1 SITE LOCATION 4
2.2 SITE AND VICINITY CHARACTERISTICS 4
2.3 CURRENT USE OF PROPERTY/DESCRIPTION OF SITE IMPROVEMENTS 5
2.4 CURRENT USE OF ADJOINING PROPERTIES 5

3.0 RECORDS REVIEW 5

3.1 PROPERTY RECORDS 5
3.1.1 Title Report/Ownership 5
3.2 HISTORICAL RECORD SOURCES 5
3.2.1 Historical Topographic Maps 6
3.2.2 Aerial Photographs 6
3.2.3 Fire Insurance Maps 7
3.2.4 City Directory 8
3.2.5 Government Agencies 8
3.3 ENVIRONMENTAL RECORD SOURCES 10
3.3.1 Federal ASTM Standard/Supplemental Sources 10
3.3.1.1 Subject Property 10
3.3.1.2 Other Properties 10
3.3.2 State and Tribal ASTM Standard/Supplemental Sources 11
3.3.2.1 Subject Property 11
3.3.2.2 Other Properties 11
3.3.3 Local ASTM Supplemental Sources 12
3.3.3.1 Subject Property 12
3.3.3.2 Other Properties 13

4.0 SITE RECONNAISSANCE 13

4.1 METHODOLOGY 13
4.2 GENERAL SITE SETTING 13
4.3 EXTERIOR OBSERVATIONS 14

TABLE OF CONTENTS (Continued)

4.4 INTERIOR OBSERVATIONS 15
4.5 ASBESTOS-CONTAINING MATERIALS AND LEAD-BASED PAINT 15
4.6 INDOOR AIR QUALITY 15

5.0 INTERVIEWS 15

6.0 FINDINGS 16

7.0 OPINIONS AND DATA GAPS 16

8.0 CONCLUSIONS 16

REFERENCES

FIGURES
APPENDIX A – Environmental Data Resources, Inc., Radius Map Report
APPENDIX B – Environmental Data Resources, Inc., Sanborn Map Report
APPENDIX C – Environmental Data Resources, Inc., Historical Topographic Map Report
APPENDIX D – Old Republic, Preliminary Title Report
APPENDIX E – Environmental Data Resources, Inc., Aerial Photo Decade Package
APPENDIX F – Environmental Data Resources, Inc., City Directory
APPENDIX G – Environmental Data Site Assessment Questionnaire (1)
APPENDIX H – Qualification(s) of Environmental Professional(s)

EXECUTIVE SUMMARY

ENGEO Incorporated (ENGEO) conducted a phase one environmental site assessment for the property located at the intersection of East William Street and South Eighth Street in San Jose, California (Property). The Property is approximately 0.57 acres in area and is identified by Assessor's Parcel Numbers (APNs) 472-28-054, 472-28-055, 472-28-056, and 472-28-057 and associated past and present address of 346 East William Street, 515, 521, and 535 South Eighth Street, respectively.

The Property is currently occupied by a commercial building with a restaurant tenant, and three residential buildings. Review of historical records indicate that the Property has been occupied by three dwelling units along South Eighth Street since 1915 and a commercial store in the northeast corner of the Property around 1950.

This assessment included a review of local, state, tribal, and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources. A reconnaissance of the Property was conducted to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials. An interview was also conducted with persons knowledgeable about current and past site use of the Property.

The site reconnaissance and records review did not find documentation or physical evidence of soil or groundwater impairments associated with the use or past use of the Property. A review of regulatory databases maintained by county, state, tribal, and federal agencies found no documentation of hazardous materials violations or discharge on the Property and did not identify contaminated facilities within the appropriate American Society for Testing and Materials (ASTM) search distances that would reasonably be expected to impact the Property.

Based on the findings of this assessment, no Recognized Environmental Conditions (RECs) and no historical RECs were identified for the Property.

Based on the review of regulatory databases and site reconnaissance, we present information on features of potential environmental concern that were either contained in the databases or observed on the Property. These features were not considered to be RECs. We briefly discuss each feature below:

- The Property is known to have had one Historic Cleaner, Ace Launderette, located at 346 East William Street from approximately 1957 to 1980. The cleaner is listed as "self service". It is unknown if solvent-based dry cleaning equipment was used.

- Automotive repairs and/or gasoline services were conducted from approximately 1930 to 1970 at the nearby listed addresses of 349 East William Street, 360 East William Street, and 532 South Eighth Street. No regulatory documentation was discovered for these addresses.

- According to the historical records reviewed, there appears to be a grease trap of unknown size and location in the proximity of the current restaurant located in the northeast corner of the Property.

- According to the historical records reviewed, some of the structures were constructed at a time when asbestos-containing building materials (ACBM) and lead-based paints may have been used. We recommend that a CAL-OSHA certified ACBM and lead-based paint contractor be retained to assess the structures prior to any renovation or demolition activities so that the ACBM and lead-based painted materials may be properly segregated for disposal.

ENGEO has performed a phase one environmental site assessment of the Property in general conformance with the scope and limitations of ASTM E 1527-05 "Standard Practice for Environmental Site Assessments" and USEPA "Standards and Practices for All Appropriate Inquires", 40 CFR Part 312. Based on the findings of this assessment, ENGEO recommends a limited Phase II Environmental Site Assessment be performed for the subject Property.

1.0 INTRODUCTION

ENGEO conducted a phase one environmental site assessment for the Property located at the intersection of East William Street and South Eighth Street in San Jose, California (Figure 1). The approximately 0.57-acre Property is identified by APNs 472-28-054, 472-28-055, 472-28-056, and 472-28-057 (Figure 2) and is currently occupied by a commercial building with a restaurant tenant, and three residential buildings with addresses of 346 East William Street, 515, 521, and 535 South Eighth Street, respectively .

1.1 PURPOSE OF PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

This assessment was performed at the request of Sherwin South Campus, LLC for the purpose of environmental due diligence during property acquisition. The objective of this phase one environmental site assessment is to identify recognized environmental conditions associated with the Property. As defined in the ASTM Standard Practice E 1527-05, a REC is "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".

1.2 DETAILED SCOPE OF SERVICES

The scope of services performed included the following:

- A review of publicly available and practically reviewable standard local, state, tribal, and federal environmental record sources.

- A review of publicly available and practically reviewable standard historical sources, aerial photographs, fire insurance maps and physical setting sources.

- A reconnaissance of the Property to review site use and current conditions. The reconnaissance was conducted to check for the storage, use, production or disposal of hazardous or potentially hazardous materials.

- Interviews with owners/occupants and public sector officials.

- Preparation of this report with our findings, opinions, and conclusions.

1.3 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

The professional staff at ENGEO strives to perform its services in a proper and professional manner with reasonable care and competence but is not infallible. The recommendations and conclusions presented in this report were based on the findings of our study, which were developed solely from the contracted services. The findings of the report are based in part on contracted database research, out-of-house reports and personal communications. The opinions formed by ENGEO are based on the assumed accuracy of the relied upon data in conjunction with our relevant professional experience related to such data interpretation. ENGEO assumes no liability for the validity of the materials relied upon in the preparation of this report.

This document must not be subject to unauthorized reuse; that is, reuse without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time. The findings from a phase one environmental site assessment are valid for 1 year after completion of the report. Updates of portions of the assessment may be necessary after a period of 180 days after completion.

This phase one environmental site assessment is not intended to represent a complete soil or groundwater characterization, nor define the depth or extent of soil or groundwater contamination. It is intended to provide an evaluation of potential environmental concerns associated with the use of the Property. A more extensive assessment that would include a subsurface exploration with laboratory testing of soil and groundwater samples could provide more definitive information concerning site-specific conditions. If additional assessment activities are considered for the Property and if other entities are retained to provide such services, ENGEO cannot be held responsible for any and all claims arising from or resulting from the performance of such services by other persons or entities. ENGEO can also not be held responsible from any and all claims arising or resulting from clarifications, adjustments, modifications, discrepancies or other changes necessary to reflect changed field or other conditions.

1.4 SPECIAL TERMS AND CONDITIONS

ENGEO has prepared this report for the exclusive use of our client, Sherwin South Campus, LLC. It is recognized and agreed that ENGEO has assumed responsibility only for undertaking the study for the client. The responsibility for disclosures or reports to a third party and for remedial or mitigative action shall be solely that of the Client.

Laboratory testing of soil or groundwater samples was not within the scope of the contracted services. The assessment did not include an asbestos survey, an evaluation of lead-based paint, an inspection of light ballasts for polychlorinated biphenyls (PCBs), a radon evaluation, or a mold survey.

This report is based upon field and other conditions discovered at the time of preparation of ENGEO's assessment. Visual observations referenced in this report are intended only to represent conditions at the time of the reconnaissance. ENGEO would not be aware of site contamination, such as dumping and/or accidental spillage that occurred subsequent to the reconnaissance conducted by ENGEO personnel.

2.0 PROPERTY INFORMATION

2.1 SITE LOCATION

The Property is located at the intersection of East William Street and South Eighth Street in San Jose, California (Figure 1). The approximately 0.57-acre Property is identified by Assessor's Parcel Numbers (APNs) 472-28-054, 472-28-055, 472-28-056, and 472-28-57 and associated past and present addresses of 346 East William Street, 515, 521, and 535 South Eighth Street, respectively (Figure 2).

2.2 SITE AND VICINITY CHARACTERISTICS

According to published topographic maps, the Property is relatively level at an approximate elevation of 95 feet above mean sea level (msl). (Figure 3). Review of the Wentworth 1999 Geologic Map found that the Property is underlain by Qhfp, flood plain deposits (Holocene) which generally consists of sand, gravel, silt and/or clay.

Geocheck – Physical Setting Source Summary of the Environmental Resources Data report (Appendix A) indicated 23 Federal United States Geological Survey (USGS) wells are located within 1 mile of the Property. Based on the surrounding site information, the approximate depth to groundwater is 8 to 25 feet below ground surface with flow toward the North.

The site-specific depth to groundwater and direction of groundwater flow was not determined as part of this assessment. Fluctuations in groundwater levels may occur seasonally and over a period of years due to variations in precipitation, temperature, and other factors.

2.3 CURRENT USE OF PROPERTY/DESCRIPTION OF SITE IMPROVEMENTS

The Property is currently occupied by a commercial building with a restaurant tenant, and three residential buildings. The restaurant appears to have typical utilities including heating/cooling system, sewage system, and a dishwashing station. The residential houses also have typical utilities including heating/cooling system and sewage system, as well as basement facilities used primarily as a laundry room or extra storage. In addition, the houses have independent structures such as sheds and/or garages where typical household supplies are stored. There also appears to be a cottage associated with one of the houses where tenants currently live.

2.4 CURRENT USE OF ADJOINING PROPERTIES

The surrounding area is mixed-use development including residential and commercial such as markets, apartments, and both single- and multi-family residences.

3.0 RECORDS REVIEW

3.1 PROPERTY RECORDS

3.1.1 Title Report/Ownership

The Title Report lists recorded land title detail, ownership fees, leases, land contracts, easements, liens, deficiencies, and other encumbrances attached to or recorded against a subject property. Laws and regulations pertaining to land trusts vary from state to state and the detail of information presented in a Title Report can vary greatly by jurisdiction. As a result, ENGEO utilizes a Title Report, when provided to us, as a supplement to other historical record sources.

A Preliminary Title Report for the Property, prepared by Old Republic Title Company and dated January 8, 2009, was provided for our review. The Property title is vested in Ho Year, LLC as to APN 472-28-054; Brian Ho and Jean Shih, husband and wife, as joint tenants as to APN 472-28-055; Brian Ho and Jean Ho, husband and wife, as joint tenants as to APN 472-28-056; and Brian Ho and Jean Ho, Co-Trustees, under the Ho Family Trust, dated December 8, 2000, as to APN 472-28-057. No references to environmental liens, deed restrictions or other potential environmental issues were noted. This report is included in Appendix D.

3.2 HISTORICAL RECORD SOURCES

The purpose of the historical record review is to develop a history of the previous uses or occupancies of the Property and surrounding area in order to identify those uses or occupancies that are likely to have led to recognized environmental conditions on the Property.

3.2.1 Historical Topographic Maps

Historical USGS topographic maps were reviewed to determine if discernible changes in topography or improvements pertaining to the Property had been recorded. The following maps were provided to us through an EDR Historical Topographic Map Report, presented in Appendix C.

QUAD	YEAR	SERIES	SCALE
San Jose West	1953	7.5	1:24,000
San Jose West	1961	7.5	1:24,000
San Jose West	1968	7.5	1:24,000
San Jose West	1973	7.5	1:24,000
San Jose West	1980	7.5	1:24,000

1953 -1980 Map – No apparent map modifications, such as structures, are shown within the Property boundaries during the time span of the maps. Continued development occurs around the greater area of the site, most noticeably the expansion of San Jose State University to the north and construction of Highway 280 to the south.

3.2.2 Aerial Photographs

The following aerial photographs, provided by EDR, were reviewed for information regarding past conditions and land use at the Property and in the immediate vicinity. These photographs are presented in Appendix E.

FLYER	YEAR	SCALE
Fairchild	1939	1”=555’
Aero	1956	1”=555’
Cartwright	1965	1”=333’
NASA	1974	1”=601’
USGS	1982	1”=666’
USGS	1993	1”=666’
USGS	1998	1”=666’
EDR	2005	1”=484’

1939 Photograph – The Property has already been developed and appears to have several structures present, including three residential houses aligned with South Eighth Street and associated garage/storage units in the rear of the houses. East William Street and South Eighth Street bound the Property to the north and east, respectively. There are a few trees scattered along the boundaries of the Property. The surrounding area has had substantial development

including residential and commercial. The adjacent corners of East William Street and South Eighth Street appear to be occupied by corner shops. San Jose State University can be seen to the north.

1956 and 1965 Photograph – Property conditions appear similar to the 1939 photograph with the exception that a few trees have been removed. One of the corner shops on the northside of East William Street and South Eighth Street has been removed and replaced with apartments and parking spaces. San Jose State University Campus has expanded to the east and south.

1974 and 1982 Photograph – Property conditions appear similar to the 1965 photograph. Highway 280 is now shown to the south.

1993 Photograph – Property conditions appear similar to the 1982 photograph with the exception that there are fewer trees around the Property.

1998 Photograph – Property conditions appear similar to the 1993 photograph.

2005 Photograph – There appears to be additional structures adjacent to some of the residential houses located along South Eighth Street. The structure in the northeast corner appears to be representative of its current day location.

3.2.3 Fire Insurance Maps

EDR prepared a Sanborn Fire insurance map search for the Property and surrounding properties. Sanborn Fire insurance maps dated 1884, 1891, 1915, 1950 and 1969 were provided for review.

1884 Sanborn Map – The Property is shown as unoccupied vacant land. East William Street and South Eighth Street are shown bordering the Property. The surrounding properties are depicted primarily as residential and vacant land. There is a Flour Mill and associated warehouse structures shown to the north of William Street. There also appears to be a dwelling structure, a well, and two sheds to the south of the Property.

1891 Sanborn Map – Property conditions depicted are similar to the 1884 Sanborn Map, with the exception that the Property appears to have two APN numbers associated with the land. A dwelling and a shed have been added to the adjacent property to the southwest. The previously noted dwelling unit, well, and one shed to the south of the Property from the 1884 Sanborn Map have been removed. The Flour Mill to the north has been replaced by a Wine Company with associated structures.

1915 Sanborn Map – Three dwelling units are depicted along South Eighth Street with associated auto and shed structures in the rear of the units. There now appears to be four APN numbers associated with the Property. The northeast corner of the Property is still unoccupied. The Wine Company to the north has been replaced with several dwelling units.

1950 Sanborn Map – The northeast corner of the Property depicts a store unit with an associated structure. The Property conditions in the southern half appear similar to the 1915 Sanborn Map. Additional dwelling units are depicted around the Property in addition to an office and a store to the north. There are two Gas and Oil Shops noted on the adjacent corners of East William Street and South Eight Street. In addition, there is an Auto Repair unit in the rear of a dwelling unit located to the east of the Property at 532 South Eighth Street.

1969 Sanborn Map – Property conditions appear similar to the 1950 Sanborn Map. The Gas and Oil shop on the north corner on East William and South Eighth Street has been removed and is now a Girls Dormitory with apartments and parking spaces. In addition, the previous auto repair shop at 532 South Eighth Street is now labeled as a private garage.

3.2.4 City Directory

City Directories, published since the 18th century for major towns and cities, lists the name of the resident or business associated with each address. The city directory could account for three of the four current Property addresses since 1922 and are as follows; 515, 521 and 535 South Eighth Street. It was not until 1950 that the fourth address, 346 East William Street, was listed by R.L. Polk & Company with three listings, which are as follows: GAS STA, BERNICES ALTERATION, and PORTOLA CINRS. Based on the Sanborn Map, City Directory, and EDR Radius Report it is believed that the GAS STA listing from 1950 is erroneous and should be listed at 349 East William Street. The address of 346 East William Street was not listed until 1957 when Ace Launderette & Washette, a self service dry cleaner, occupied the address. A city directory search conducted by EDR is located in Appendix F.

3.2.5 Government Agencies

The following agencies were contacted pertaining to possible past development and/or activity at the Property.

- City of San Jose Building Department
- City of San Jose Fire Department
- Santa Clara County Department of Environmental Health
- Santa Clara Valley Water District
- Santa Clara Valley Sanitary District
- Santa Clara Valley Watershed Department
- Santa Clara Valley Grease Department
- Santa Clara County Assessor's Office

City of San Jose Building Department. The City of San Jose Building Department was contacted regarding any permits or information associated with the structures located on the Property. Review of the Building Department files found no references to hazardous material issue, storage or disposal on the Property. Permits on file include the following:

346 East William Street

- 1947 – Application for Building Permit, alter one room.
- 1954 – Application for Building Permit, alter interior to be occupied as a dental office.
- 1973 – Application for Plumbing and/or Gas Piping Permit to be used as dwelling.
- 1983 – Application for Plumbing and/or Gas Piping Permit to be used as French bakery.
- 1984 – Application for Building Permit, alter interior to be occupied as take-out food.
- 1984 – Proposed Restaurant Plans.
- 1990 – Huogn Lan Take Out Architect Drawings.
- 1994 – Application for Permits, addition, alteration and commercial inspection for restaurant.

No Permits were available prior to 1947

515 South Eighth Street

- 1986 – Application for Electrical Permit.

521 South Eighth Street

- 1970- Application for Electrical Permit.

535 South Eighth Street

- 1952 – Application for Building Permit, building addition.

City of San Jose Fire Department. Review of the Fire Department files found no references to hazardous materials issue, storage or disposal on the Property.

Santa Clara County Department of Environmental Health. The Santa Clara County Department of Environmental Health was contacted regarding files for the Property. The County replied to our inquiry and confirmed that there were no relevant records pertaining to that Property and they directed us to the City of San Jose Fire Department. In addition, the County commented that there were records for nearby sites, specifically 447 East William Street.

Santa Clara Valley Water District. The Santa Clara Valley Water District was contacted regarding any past or present wells associated with the Property. A representative confirmed that there were no records of past or present wells within the Property boundaries.

Santa Clara Valley Sanitary District. The Santa Clara Valley Sanitary District was contacted regarding any past or present permits associated with any grease interceptors/traps for the Property. They forwarded us to Watershed Department.

Santa Clara Valley Watershed Department. The Santa Clara Valley Watershed Department was contacted, but could only account for inspection dates and directed us towards the Grease Department.

Santa Clara Valley Grease Department. A representative from the Santa Clara Valley Grease Department was contacted and verified a recent grease trap inspection conducted for 346 East William Street on March 25, 2008, but could not identify the exact size or location of the grease trap.

Santa Clara County Assessor's Office. The Santa Clara County Assessor's Office was contacted regarding the acreage of the Property. A representative of the Assessor's Office verified the APN Numbers and the associated acreage.

3.3 ENVIRONMENTAL RECORD SOURCES

EDR performed a search of federal, tribal, state, and local databases regarding the Property and nearby properties. Details regarding the databases searched by EDR are provided in Appendix A. A list of the facilities documented by EDR within the approximate minimum search distance of the Property is provided below:

3.3.1 Federal ASTM Standard/Supplemental Sources

3.3.1.1 Subject Property

The Property is not listed on the Federal ASTM Standard or supplemental sources.

3.3.1.2 Other Properties

The following database(s) include(s) facilities listed within the appropriate ASTM search distances of the Property on Federal ASTM Standard or supplemental sources.

- 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.

Property Name	*Property Address*
BARRON-GREY PACKING CO	825 SOUTH 5th STREET

- RCRA-SQG – RCRA Info 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.

Property Name	*Property Address*
SAN JOSE CO GENERATION	9th & SAN CARLOS

3.3.2 State and Tribal ASTM Standard/Supplemental Sources

3.3.2.1 Subject Property

The Property is not listed on the State or Tribal ASTM Standard or supplemental sources.

3.3.2.2 Other Properties

The following database(s) include(s) facilities listed within the appropriate ASTM search distances of the Property on State and Tribal ASTM Standard or supplemental sources.

- 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.

Property Name	*Property Address*
SAN ANTIONIO PLAZA BLOCK 4 NORT	WEST SAN FERNANDO STREET
SAN JOSE STATE UNIVERSITY CHEM	125 SOUTH 7th STREET
RIVER PARK DEVEL LINCOLN PROP	333 SAN CARLOS STREET

- LUST – The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

Property Name	*Property Address*
SPARTAN GAS STATION	498 SOUTH 4TH STREET
SHELL	288 EAST VIRGINA STREET
D'AMICO PROPERTY	130 EAST MARGARET STREET
JONES/SCHAEZLEIN PROPERTY	520 SOUTH 1ST STREET
JONES/SCHAEZLEIN PROPERTY	520 SOUTH 1ST STREET

FORMER TEXACO STATION	598 SOUTH 1ST STREET
FIRESTONE BUILDING	599 SOUTH 1ST STREET
WOODCHUCKERS	901 SOUTH SIXTH STREET
MOORE INVESTMENTS	148 EAST VIRGINA STREET
MERRY OLDSMOBILE	525 SOUTH MARKET STREET
CET DEVELOPMENT	630 SOUTH 1ST STREET
PETE'S STOP INC .	447 EAST WILLIAM STREET
PETE'S STOP INC.	447 EAST WILLIAM STREET
SJSU	SAN CARLOS/7TH
APTON PROPERTY	505 EAST SAN CARLOS STREET
KAPPA SIGMA	148 SOTH 11TH STREET
SJSU-CORPORATE YARD	404 EAST SAN FERNANDO ST

- HIST LUST – 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 City of San Jose Fire Department.

Property Name	*Property Address*
SPARTAN GAS STATION	498 SOUTH 4TH STREET
SHELL	288 EAST VIRGINA STREET
D'AMICO PROPERTY	130 EAST MARGARET STREET
JONES/SCHAEZLEIN PROPERTY	520 SOUTH 1ST STREET
FORMER TEXACO STATION	598 SOUTH 1ST STREET
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PETE'S STOP INC.	447 EAST WILLIAM STREET
SJSU	SAN CARLOS/7TH
APTON PROPERTY	505 EAST SAN CARLOS STREET
KAPPA SIGMA	148 SOUTH 11TH STREET
SJSU-CORPORATE YARD	404 EAST SAN FERNANDO ST

3.3.3 Local ASTM Supplemental Sources

3.3.3.1 Subject Property

The Property was listed on one Local ASTM supplemental database.

- EDR HISTORIC CLEANER – EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researches. 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.

Property Name	*Property Address*
ACE LAUNDERETTE	346 EAST WILLIAM STREET

3.3.3.2 Other Properties

The following database(s) include(s) facilities listed within the appropriate ASTM search distances of the Property on Local ASTM Standard or supplemental sources.

- HIST UST (1)
- CORTESE (12)
- SAN JOSE HAZMAT (1)
- NOTIFY 65 (2)
- MANUFACTURED GAS PLANTS (1)
- EDR HISTORIC AUTO STATIONS (6)
- EDR HISTORIC CLEANERS (4)

Based on the distances to the identified database sites, regional topographic gradient, and the EDR findings, it is unlikely that the above-stated database sites pose an environmental risk to the Property. Properties that are on the "Orphan Summary" list appear to be located beyond the ASTM recommended radius search criteria. However, limited information is available regarding sub-surface impacts at the listed sites.

4.0 SITE RECONNAISSANCE

4.1 METHODOLOGY

ENGEO conducted a reconnaissance of the Property on February 20, 2009. The Property was viewed for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination. The site was also checked for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or preexisting underground storage tanks. Photographs taken during the site reconnaissance are presented in Figure 5.

We were unable to gain access to all of the structures located within the Property boundaries.

4.2 GENERAL SITE SETTING

The site is currently occupied by a commercial building with a restaurant tenant, and three residential buildings. The restaurant appears to have typical utilities including heating/cooling system, sewage system, and a dishwashing station. In addition, there is a paved parking space

for restaurant employees/guests in front of the restaurant. The residential houses also have typical utilities including heating/cooling system and sewage system, as well as basement facilities used primarily as a laundry room or extra storage. In addition, the houses have independent structures such as sheds and/or garages where typical household supplies are stored. There also appears to be a cottage associated with one of the houses where tenants currently live.

4.3 EXTERIOR OBSERVATIONS

Structures. There are several structures located within the Property boundaries including a restaurant, three residential houses, and associated cottages, sheds, and garages.

Hazardous Substances and Petroleum Products in Connection with Identified Uses. No hazardous substances or petroleum products were observed within the Property during the site reconnaissance.

Storage Tanks. No above-ground storage tanks or evidence of existing underground storage tanks was observed during the site reconnaissance.

Odors. No odors indicative of hazardous materials or petroleum material impacts were noted at the time of the reconnaissance.

Pools of Potentially Hazardous Liquid. No pools of potentially hazardous liquid were observed within the Property at the time of our reconnaissance.

Drums. No drums were observed on the Property at the time of the reconnaissance.

Hazardous Substance and Petroleum Product Containers. No hazardous substance and petroleum product containers were observed on the Property at the time of our reconnaissance.

Polychlorinated Biphenyls (PCBs). No PCB-containing materials were observed within the Property during the site reconnaissance, with the exception of one transformer. The noted overhead transformer is located along East William Street. No apparent leakage from the unit was noted.

Pits, Ponds and Lagoons. No pits, ponds or lagoons were observed within the Property at the time of our reconnaissance.

Stained Soil/Pavement. No stained soil or pavement was observed within the Property at the time of our reconnaissance.

Stressed Vegetation. No signs of stressed vegetation associated with environmental concerns were observed on the Property at the time of our reconnaissance.

Solid Waste/Debris. No disposal of solid waste was observed at the subject property.

Wastewater. No wastewater conveyance systems were observed at the Property during the reconnaissance.

Wells. No wells were found within the Property during our site reconnaissance.

Septic Systems. No private septic systems were found within the Property during our site reconnaissance.

4.4 INTERIOR OBSERVATIONS

The restaurant appeared to have a typical layout with tile flooring in the dining area and linoleum flooring in the kitchen area, with supplies stored in the rear adjacent to the kitchen. There were drains located in the kitchen and dishwashing station. The houses had a mix of wood and carpet flooring with concrete basements. Throughout the Property, various small quantities of household cleaning materials and a few motor oil canisters were found, although no odors or leaking was observed.

4.5 ASBESTOS-CONTAINING MATERIALS AND LEAD-BASED PAINT

An asbestos and lead-based paint survey was not conducted as part of this assessment. Given the age of the existing structures, it is conceivable that asbestos-containing materials and lead-based paint materials may exist within the structures.

4.6 INDOOR AIR QUALITY

An evaluation of indoor air quality, mold, or radon was not included as part of the contracted scope of services. The California Department of Health Services has conducted studies of radon risks throughout the state, sorted by zip code. Results of the studies indicate that 14 tests were conducted within the Property zip code, with no tests exceeding the current EPA action level of 4 picocuries per liter ([pCi/L]1).

5.0 INTERVIEWS

Mr. Paulo Hernandez, with JPH Consultants, in coordination with the Property Owner, Brian Ho, completed an environmental site assessment questionnaire pertaining to user-related applicable environmental information regarding the Property. The questionnaire did not identify potential environmentally related issues with the Property. In addition, Mr. Hernandez and Mr. Ho indicated that they were unaware of any environmental liens against the Property. The questionnaire is presented in its entirety in Appendix G. This questionnaire also serves as the "Key Site Manager" questionnaire.

---

[1] California Department of Health Services – Division of Drinking Water and Environmental Management – Radon (http://ww2.cdph.ca.gov/HealthInfo/environhealth/Documents/Radon/CaliforniaRadonDatabase.pdf).

6.0 FINDINGS

The reconnaissance and records research did not find documentation or physical evidence of soil or groundwater impairments associated with the current or past use of the Property. A review of regulatory databases maintained by county, state and federal agencies found no documentation of hazardous materials violations or discharge on the Property. No documented soil or groundwater contamination associated with abutting properties was found from the records research.

The Property is known to have had one Historic Cleaner, Ace Launderette, located at 346 East William Street from approximately 1957 to 1980.

Automotive repairs and/or gasoline services were conducted from approximately 1930 to 1970 at the nearby listed addresses of 349 East William Street, 360 East William Street, and 532 South Eighth Street. No regulatory documentation was discovered for these addresses.

According to the historical records reviewed, there appears to be a grease trap of unknown size and location in the proximity of the current restaurant located in the northeast corner of the Property.

7.0 OPINIONS AND DATA GAPS

It is our opinion that the findings of this study are based on a sufficient level of information obtained during our contracted scope of services to render a conclusion as to whether additional appropriate investigation is required to identify the presence or likely presence of a REC.

The data gaps identified during this process, if any, could affect the conclusions as to the presence or lack of presence of RECs at the Property.

- We were unable to gain access to all of the structures located within the Property boundaries.
- Lack of specific information regarding a historic cleaner on the Property, Ace Launderette, located at 346 East William Street from approximately 1957 to 1980.
- Lack of historical documents for the Property and surrounded properties in order to confirm or eliminate the past or current presence of RECs or potential RECs.

8.0 CONCLUSIONS

The study included a review of local, state and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources, a reconnaissance of the Property to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials and interview with persons knowledgeable about current and past site use.

The site reconnaissance and records review did not find documentation or physical evidence of soil or groundwater impairments associated with the use of the Property. A review of regulatory databases maintained by county, state, and federal agencies found no documentation of hazardous materials violations or discharge on the Property. A review of regulatory agency records and available databases did not identify contaminated facilities within the appropriate ASTM search distances that would be expected to impact the Property.

Based on the findings of this assessment, no Recognized Environmental Conditions (RECs) and no historical RECs were identified for the Property.

Based on the review of regulatory databases and site reconnaissance, we present information on features of potential environmental concern that were either contained in the databases or observed on the Property. These features were not considered to be RECs. We briefly discuss each feature below:

- The Property is known to have had one Historic Cleaner, Ace Launderette, located at 346 East William Street from approximately 1957 to 1980. The cleaner is listed as "self service". It is unknown if solvent-based dry cleaning equipment was used.

- Automotive repairs and/or gasoline services were conducted from approximately 1930 to 1970 at the nearby listed addresses of 349 East William Street, 360 East William Street, and 532 South Eighth Street. No regulatory documentation was discovered for these addresses.

- According to the historical records reviewed, there appears to be a grease trap of unknown size and location in the proximity of the current restaurant located in the northeast corner of the Property.

- According to the historical records reviewed, some of the structures were constructed at a time when asbestos-containing building materials (ACBM) and lead-based paints may have been used. We recommend that a CAL-OSHA certified ACBM and lead-based paint contractor be retained to assess the structures prior to any renovation or demolition activities so that the ACBM and lead-based painted materials may be properly segregated for disposal.

ENGEO has performed a phase one environmental site assessment of the Property in general conformance with the scope and limitations of ASTM E 1527-05 "Standard Practice for Environmental Site Assessments" and USEPA "Standards and Practices for All Appropriate Inquires", 40 CFR Part 312. Based on the findings of this assessment, ENGEO recommends a limited Phase II Environmental Site Assessment be performed for the subject Property.

SELECTED REFERENCES

Geologic Map of the San Jose 30 X 60-Minute Quadrangle, California, compiled by Carl M. Wentworth, M. Clark Blake, Robert J. McLaughlin, and Russell W. Graymer, 1999

Google Maps (http://maps.google.com)

California Department of Water Resources (http://wdl.water.ca.gov)

Microsoft TerraServer USA (http://www.terraserver.microsoft.com)

United States Environmental Protection Agency Indoor Air Quality Website (http://ww2.cdph.ca.gov/HealthInfo/environhealth/Documents/Radon/CaliforniaRadonDatabase.pdf)

USGS 7.5' San Jose West and East Quadrangle-Santa Clara County Maps dated 1953, 1961, 1968, 1973, and 1980

LIST OF FIGURES

Figure 1 **Vicinity Map**

Figure 2 **Assessor's Parcel Map**

Figure 3 **Topographic Map**

Figure 4 **Aerial Map**

Figure 5A-5B Site Photographs

FIGURES

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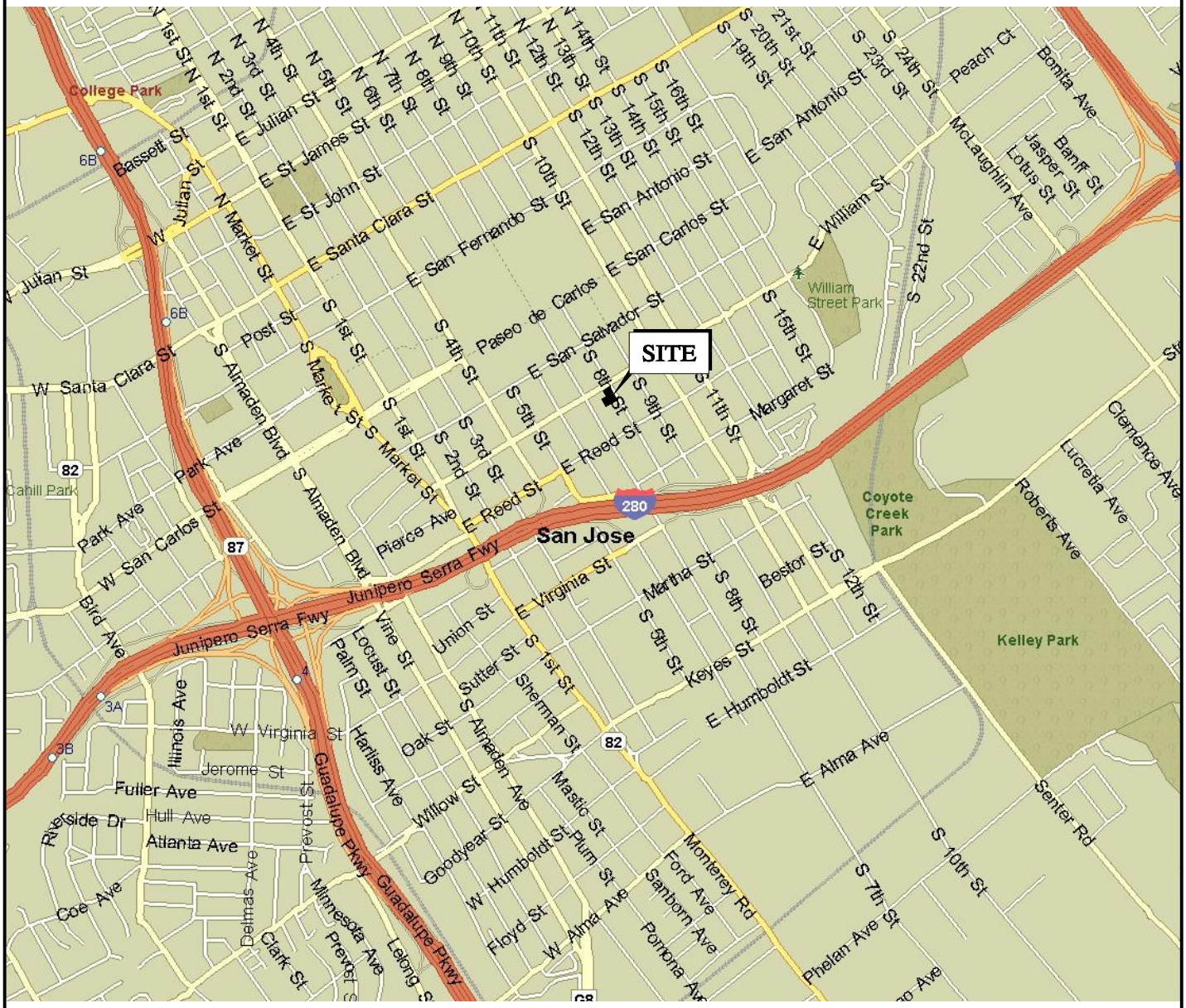

BASE MAP SOURCE: MS STREETS AND TRIPS 2009

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VICINITY MAP

WILLIAM STREET AND EIGHTH STREET

SAN JOSE, CALIFORNIA

PROJECT NO.: 8643.000.000		FIGURE NO.
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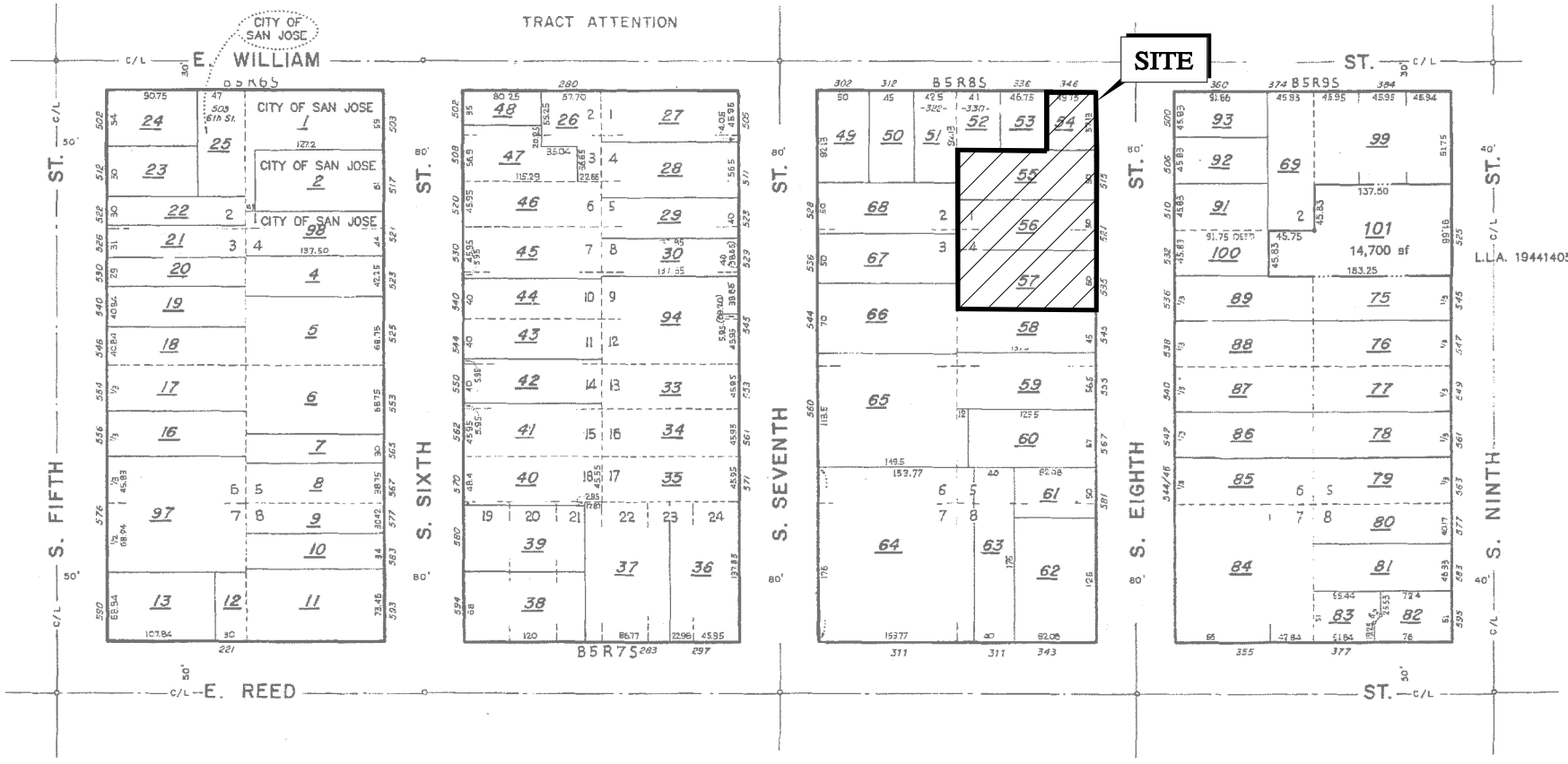

BASE MAP SOURCE: ASSESSOR'S PARCEL OFFICE SANTA CLARA COUNTY

NO SCALE

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ASSESSOR'S PARCEL MAP
WILLIAM STREET AND EIGHTH STREET
SAN JOSE, CALIFORNIA

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DATE: MARCH 2009		2
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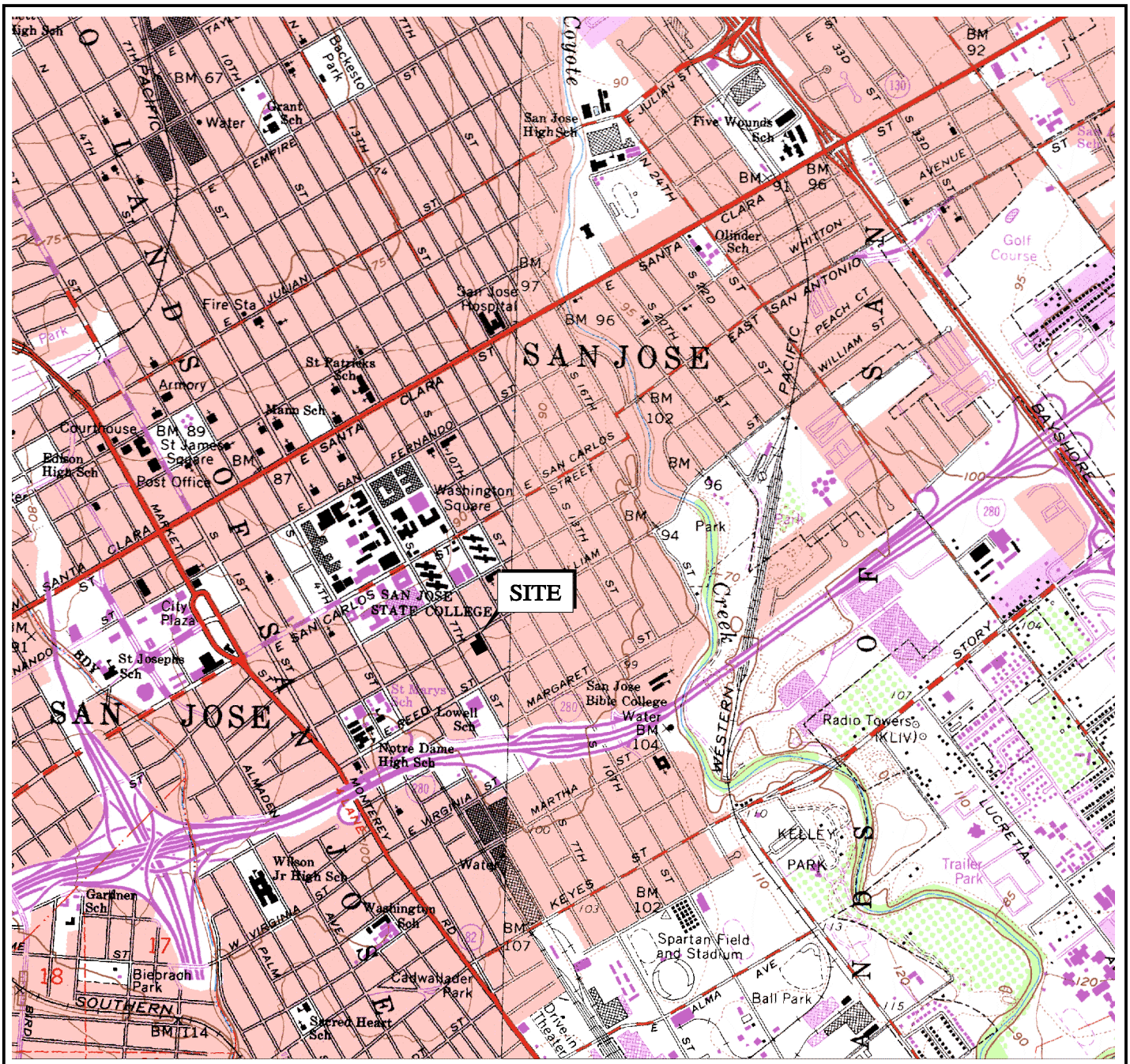

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0 FEET 2000

0 METERS 1000

BASE MAP SOURCE: USGS, 1980

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TOPOGRAPHIC MAP

WILLIAM STREET AND EIGHTH STREET

SAN JOSE, CALIFORNIA

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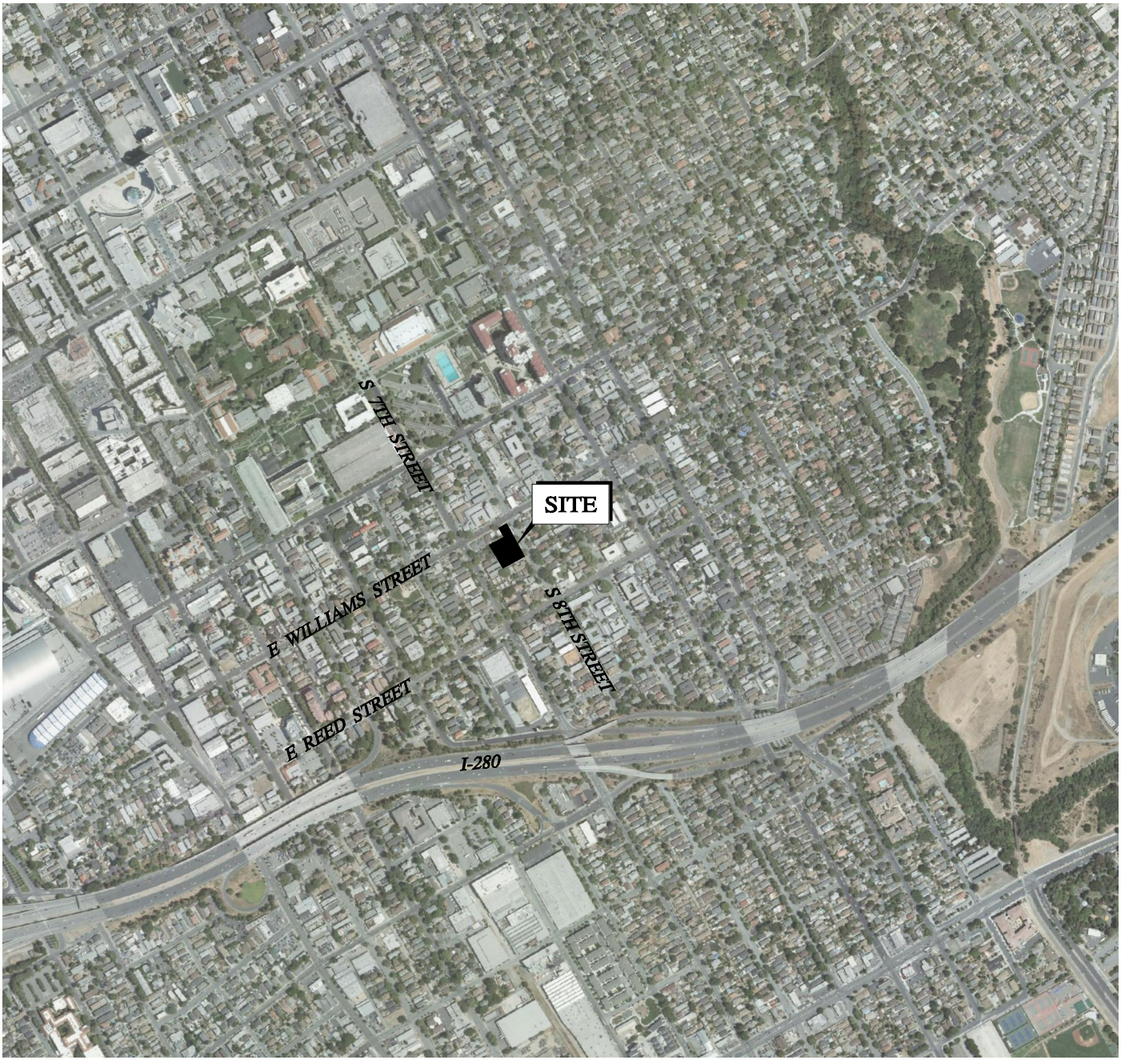

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0 FEET 1000

0 METERS 500

BASE MAP SOURCE: GOOGLE EARTH PRO, 2009

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AERIAL MAP

WILLIAM STREET AND EIGHTH STREET

SAN JOSE, CALIFORNIA

PROJECT NO.:	8643.000.000
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FIGURE NO. 4

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CORNER OF WILLIAM STREET AND EIGHTH STREET

535 EIGHTH STREET LOOKING NORTH

DISHWASHING STATION IN RESTAURANT

IN REAR OF RESTAURANT

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SITE PHOTOGRAPHS
WILLIAM STREET AND EIGHTH STREET
SAN JOSE, CALIFORNIA

PROJECT NO.: 8643.000.000		FIGURE NO.
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BACKYARD OF 515 EIGHTH STREET LOOKING EAST

BASEMENT OF 515 EIGHTH STREET

STORAGE SHED BEHIND 515 EIGHTH STREET

BACKYARD OF 535 EIGHTH STREET

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SITE PHOTOGRAPHS
WILLIAM STREET AND EIGHTH STREET
SAN JOSE, CALIFORNIA

PROJECT NO.:	8643.000.000
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FIGURE NO. 5B

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PHASE II ENVIRONMENTAL SITE ASSESSMENT

WILLIAM STREET AND EIGHTH STREET
SAN JOSE, CALIFORNIA

Submitted to:

Mr. Paulo Hernandez
Sherwin South Campus, LLC
137 Amanda Lane
Los Gatos, CA 95032

June 9, 2011
Project No. 8643.000.000

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Project No.
8643.000.000

June 9, 2011

Mr. Paulo Hernandez
Sherwin South Campus, LLC
137 Amanda Lane
Los Gatos, CA 95032

Subject: William Street and Eighth Street
San Jose, California

PHASE II ENVIRONMENTAL SITE ASSESSMENT

Reference: ENGEO; Phase One Environmental Site Assessment, William Street and Eighth Street, San Jose, California; March 4, 2009; Project No. 8643.000.000.

Dear Mr. Hernandez:

ENGEO is pleased to present our Phase II Environmental Site Assessment of the subject property (Property), located in San Jose, California. The Property is approximately 0.57 acres in area and is identified by Assessor's Parcel Numbers (APNs) 472-28-054, 472-28-055, 472-28-056, and 472-28-057 and associated past and present addresses of 346 East William Street, 515, 521, and 535 South Eighth Street, respectively (Figure 1 and 2). The purpose of our study was to address potential environmental concerns associated with the historic use of the subject Property. The scope of work included the following:

- Advancement of four Geoprobes, two at each sample location, to an approximate depth of 5 to 15 feet below ground surface (bgs) with the collection of groundwater and soil vapor samples.

- Soil cores were screened in the field using an Organic Vapor Meter.

- Laboratory analysis of the two groundwater samples for the following target constituents:
  - Total petroleum hydrocarbons as gasoline, diesel and motor oil (TPH-g, TPH-d and TPH-mo).
  - Benzene, toluene, ethylbenzene, and xylenes (BTEX).
  - Methyl tert-buytl ether (MTBE).
  - Volatile Organic Compounds (VOCs).

- Laboratory analysis of the two soil vapor samples for VOCs according to EPA Method TO-15.

The Property is currently occupied by a commercial building with a restaurant tenant, and three residential buildings. Adjacent properties are reportedly devoted to mixed-use involving both residential and commercial land use. The purpose of the Phase II Environmental Site Assessment is to address potential environmental concerns associated with historic use of the subject Property, related to groundwater and soil vapor.

FIELD ACTIVITIES

Fieldwork was conducted on May 23, 2011. A total of two groundwater and two soil vapor samples were collected using a direct push geoprobe rig. Sample locations are shown in Figure 3.

Groundwater Samples

Groundwater was encountered at approximately 10 feet below ground surface. One groundwater grab sample was collected at each of the two sample locations.

Soil Vapor Samples

One soil vapor sample was collected at each of the two sample locations. Soil vapor samples were collected in general accordance with the CAL_EPA Department of Toxic Substances Control, Advisory, Active Soil Gas Investigation, March 2010 (Draft).

Upon sample recovery, the groundwater and soil vapor samples were transported under documented Chain-of-Custody to Torrent Laboratories in Milpitas, California for analysis.

LABORATORY RESULTS

ENGEO submitted a total of two discrete groundwater samples and two soil vapor samples to Torrent Laboratory for analysis. A summary of the results is below. In addition, attached are copies of the laboratory analytical report with Chain-of-Custody documentation.

Groundwater Samples

Both of the two groundwater samples reported Non-Detect (ND) levels for the target constituents which included BTEX, MTBE, VOCs, and TPH as gasoline, -diesel, and -motor oil.

Soil Vapor Samples

Various volatile organic compounds were detected in the collected samples. The concentrations of Acetone were reported as 1,060 micrograms per cubic meters ($\mu g/m^3$) and 88.6 $\mu g/m^3$ in samples SV-1 and SV-2, respectively. Benzene and Toluene were reported as ND and 217 $\mu g/m^3$ in sample SV-1 and 12.7 $\mu g/m^3$ and 146 $\mu g/m^3$ SV-2, respectively. Ethylbenzene was reported at 184 $\mu g/m^3$ and 27.6 $\mu g/m^3$ in samples SV-1 and SV-2, respectively. The reported concentrations were compared to the applicable Environmental Screening Levels (ESLs) developed by the SFRWQCB for shallow soil gas concentrations under a residential scenario. There were a few constituents with detectable concentrations; for example, 4-Methyl-2-Pentanone (MIBK) for which there is no specific ESL. Given the associated data, these sample concentrations are not considered significant.

The reported concentrations did not exceed the current applicable ESLs.

Constituent	SV-1 (µg/m^3)	SV-2 (µg/m^3)	Table E: Shallow Soil Gas Screening Levels - Residential ESL (µg/m^3)
Acetone	**1,060**	**88.6**	660,000
Benzene	<4.4	**12.7**	84
Toluene	**217**	**146**	63,000
4-Methyl-2-Pentanone (MIBK)	<1.7	**5.74**	Not Listed
Ethyl Benzene	**184**	**27.6**	980
m,p-Xylene	**836**	**143**	21,000
o-Xylene	**275**	**48.1**	21,000
4-Ethyle Toluene	**35.3**	**41.7**	Not Listed
1,3,5-Trimethlybenzene	<1.5	**15.2**	Not Listed
1,2,4-Trimethlybenzene	**37**	**49.2**	Not Listed

CONCLUSION

Based on the laboratory results for the sampled groundwater and soil vapor samples, and previous available studies, we conclude that it does not appear that groundwater beneath the subject Property has been adversely impacted. The reported VOCs in soil vapor do not pose an environmental concern for the current land use or future developments.

If you have any question or comments regarding this letter, please call and we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated

Scott Johns

Scott R. Johns
srj/sm/rc

Shawn Munger, CHG, REA II

Attachments: Figure 1 – Vicinity Map
Figure 2 – Assessor's Parcel Map
Figure 3 – Sample Locations
Appendix A - Laboratory Analytical Report and Chain-of-Custody Record

FIGURES

Figure 1 – Vicinity Map
Figure 2 – Assessor's Parcel Map
Figure 3 – Sample Locations

F I G U R E S

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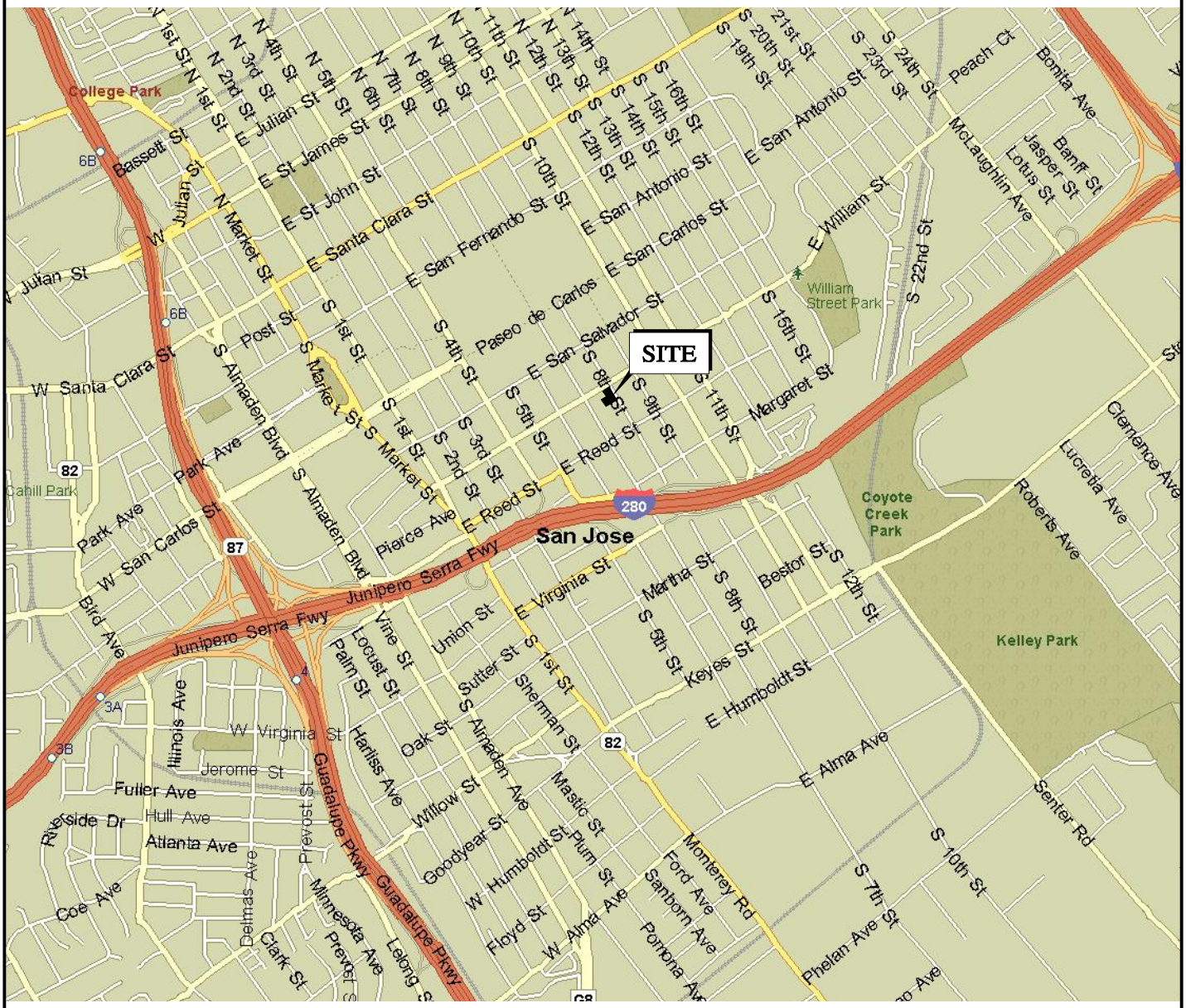

N

0 FEET 2000

0 METERS 1000

BASE MAP SOURCE: MS STREETS AND TRIPS 2009

ENGEO
Expect Excellence

VICINITY MAP

WILLIAM STREET AND EIGHTH STREET

SAN JOSE, CALIFORNIA

PROJECT NO.:	8643.000.000
SCALE:	AS SHOWN
DRAWN BY: PC	CHECKED BY: SM

FIGURE NO. 1

G:\Drafting\DRAFTING2_Dwg\8643\000\ESA Ph2\8643000000-ESA_Ph2-1-VicMap-0511.dwg 6-10-11 09:47:08 AM pcrockett

ORIGINAL FIGURE PRINTED IN COLOR

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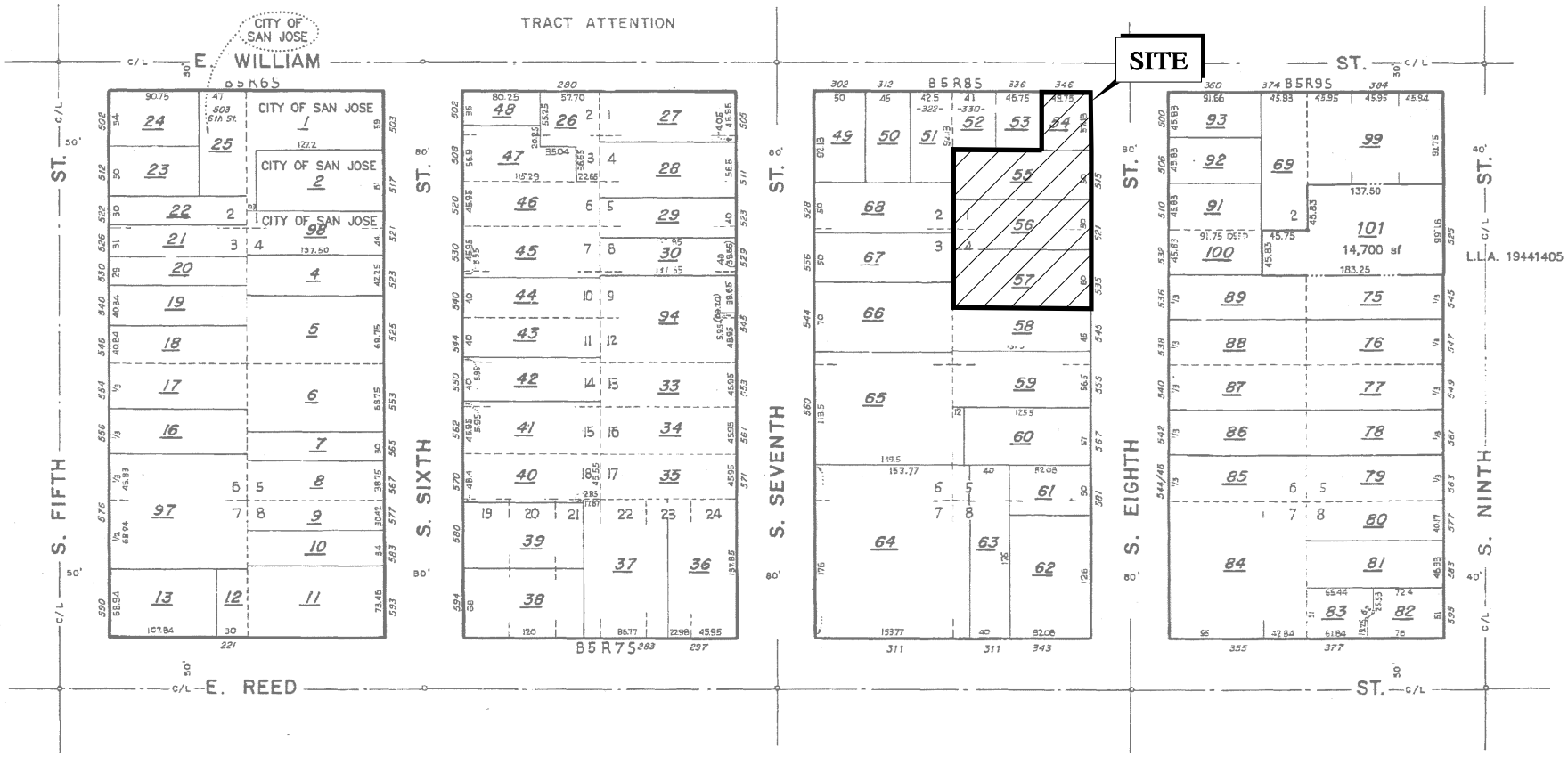

N

BASE MAP SOURCE: ASSESSOR'S PARCEL OFFICE SANTA CLARA COUNTY

ENGEO
Expect Excellence

ASSESSOR'S PARCEL MAP
WILLIAM STREET AND EIGHTH STREET
SAN JOSE, CALIFORNIA

PROJECT NO.: 8643.000.000		FIGURE NO
SCALE: NO SCALE		2
DRAWN BY: PC	CHECKED BY: SM	

ORIGINAL FIGURE PRINTED IN COLOR

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N

EXPLANATION

S2 APPROXIMATE LOCATION OF GROUNDWATER AND SOIL VAPOR SAMPLE

BASE MAP SOURCE: BING MAPS BIRD'S EYE VIEW (NAVTEQ 2011)

ENGEO Expect Excellence

SAMPLE LOCATIONS
WILLIAM STREET AND EIGHTH STREET
SAN JOSE, CALIFORNIA

PROJECT NO.: 8643.000.000	FIGURE NO. 3
SCALE: NO SCALE	
DRAWN BY: PC	CHECKED BY: SM

G:\Drafting\DRAFTING2_Dwg\8643\000\ESA Ph2\8643000000-ESA_Ph2-3-SampleLoc-0611.dwg Plot Date: 6-10-11 pcrockett

ORIGINAL FIGURE PRINTED IN COLOR

APPENDIX A

TORRENT LABORATORY, INC.

Laboratory Analytical Report
Chain-of-Custody Record

APPENDIX A

Engeo Inc (SJ)
6399 San Ignacio Ave, Suite 150
San Jose, California 95119
Tel: 408-574-4900
Fax: 888-279-2698

RE: William / 8th Street

Work Order No.: 1105179

Dear Scott Johns:

Torrent Laboratory, Inc. received 4 sample(s) on May 23, 2011 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

May 31, 2011
Date

Date: 5/31/2011

Client: Engeo Inc (SJ)

Project: William / 8th Street

Work Order: 1105179

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: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

S-1 1105179-001A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

S-2 1105179-002A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

SV-1 1105179-003A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Helium	D1946	1.83	0.0092	0.0092	1.9
Acetone	ETO15	5	4.4	48	1060
Toluene	ETO15	5	4.8	9.5	217
Ethyl Benzene	ETO15	5	5.0	11	184
m,p-Xylene	ETO15	5	8.1	22	836
o-Xylene	ETO15	5	4.0	11	275
4-Ethyl Toluene	ETO15	5	4.1	12	35.3
1,2,4-Trimethylbenzene	ETO15	5	3.4	12	37.0

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

SV-2 1105179-004A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Helium	D1946	2.08	0.010	0.010	1.8
Acetone	ETO15	2	1.8	19	88.6
Benzene	ETO15	2	1.4	3.2	12.7
Toluene	ETO15	2	1.9	3.8	146
4-Methyl-2-Pentanone (MIBK)	ETO15	2	1.7	4.1	5.74
Ethyl Benzene	ETO15	2	2.0	4.3	27.6
m,p-Xylene	ETO15	2	3.2	8.6	143
o-Xylene	ETO15	2	1.6	4.3	48.1
4-Ethyl Toluene	ETO15	2	1.6	4.9	41.7
1,3,5-Trimethylbenzene	ETO15	2	1.5	4.9	15.2
1,2,4-Trimethylbenzene	ETO15	2	1.4	4.9	49.2

483 Sinclair Frontage Rd., Milpitas, CA 95035 | tel: 408.263.5258 | fax: 408.263.8293 | www.torrentlab.com

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	S-1	**Lab Sample ID:**	1105179-001A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	05/23/11 / 14:15		
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	05/26/11	1	0.41	0.50	ND		ug/L	405207	NA
Chloromethane	SW8260B	NA	05/26/11	1	0.41	0.50	ND		ug/L	405207	NA
Vinyl Chloride	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Bromomethane	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Trichlorofluoromethane	SW8260B	NA	05/26/11	1	0.34	0.50	ND		ug/L	405207	NA
1,1-Dichloroethene	SW8260B	NA	05/26/11	1	0.29	0.50	ND		ug/L	405207	NA
Freon 113	SW8260B	NA	05/26/11	1	0.38	0.50	ND		ug/L	405207	NA
Methylene Chloride	SW8260B	NA	05/26/11	1	0.18	5.0	ND		ug/L	405207	NA
trans-1,2-Dichloroethene	SW8260B	NA	05/26/11	1	0.31	0.50	ND		ug/L	405207	NA
MTBE	SW8260B	NA	05/26/11	1	0.38	0.50	ND		ug/L	405207	NA
tert-Butanol	SW8260B	NA	05/26/11	1	1.5	5.0	ND		ug/L	405207	NA
Diisopropyl ether (DIPE)	SW8260B	NA	05/26/11	1	0.36	0.50	ND		ug/L	405207	NA
1,1-Dichloroethane	SW8260B	NA	05/26/11	1	0.28	0.50	ND		ug/L	405207	NA
ETBE	SW8260B	NA	05/26/11	1	0.40	0.50	ND		ug/L	405207	NA
cis-1,2-Dichloroethene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
2,2-Dichloropropane	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Bromochloromethane	SW8260B	NA	05/26/11	1	0.34	0.50	ND		ug/L	405207	NA
Chloroform	SW8260B	NA	05/26/11	1	0.29	0.50	ND		ug/L	405207	NA
Carbon Tetrachloride	SW8260B	NA	05/26/11	1	0.26	0.50	ND		ug/L	405207	NA
1,1,1-Trichloroethane	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
1,1-Dichloropropene	SW8260B	NA	05/26/11	1	0.40	0.50	ND		ug/L	405207	NA
Benzene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
TAME	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
1,2-Dichloroethane	SW8260B	NA	05/26/11	1	0.28	0.50	ND		ug/L	405207	NA
Trichloroethylene	SW8260B	NA	05/26/11	1	0.38	0.50	ND		ug/L	405207	NA
Dibromomethane	SW8260B	NA	05/26/11	1	0.21	0.50	ND		ug/L	405207	NA
1,2-Dichloropropane	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Bromodichloromethane	SW8260B	NA	05/26/11	1	0.23	0.50	ND		ug/L	405207	NA
2-Chloroethyl vinyl ether	SW8260B	NA	05/26/11	1	0.91	2.0	ND		ug/L	405207	NA
cis-1,3-Dichloropropene	SW8260B	NA	05/26/11	1	0.30	0.50	ND		ug/L	405207	NA
Toluene	SW8260B	NA	05/26/11	1	0.19	0.50	ND		ug/L	405207	NA
Tetrachloroethylene	SW8260B	NA	05/26/11	1	0.15	0.50	ND		ug/L	405207	NA
trans-1,3-Dichloropropene	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
1,1,2-Trichloroethane	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
Dibromochloromethane	SW8260B	NA	05/26/11	1	0.21	0.50	ND		ug/L	405207	NA
1,3-Dichloropropane	SW8260B	NA	05/26/11	1	0.18	0.50	ND		ug/L	405207	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	S-1	**Lab Sample ID:**	1105179-001A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	05/23/11 / 14:15		
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2-Dibromoethane	SW8260B	NA	05/26/11	1	0.19	0.50	ND		ug/L	405207	NA
Chlorobenzene	SW8260B	NA	05/26/11	1	0.14	0.50	ND		ug/L	405207	NA
Ethyl Benzene	SW8260B	NA	05/26/11	1	0.15	0.50	ND		ug/L	405207	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	05/26/11	1	0.10	0.50	ND		ug/L	405207	NA
m,p-Xylene	SW8260B	NA	05/26/11	1	0.20	1.0	ND		ug/L	405207	NA
o-Xylene	SW8260B	NA	05/26/11	1	0.13	0.50	ND		ug/L	405207	NA
Styrene	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
Bromoform	SW8260B	NA	05/26/11	1	0.45	1.0	ND		ug/L	405207	NA
Isopropyl Benzene	SW8260B	NA	05/26/11	1	0.28	0.50	ND		ug/L	405207	NA
Bromobenzene	SW8260B	NA	05/26/11	1	0.39	0.50	ND		ug/L	405207	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	05/26/11	1	0.26	0.50	ND		ug/L	405207	NA
n-Propylbenzene	SW8260B	NA	05/26/11	1	0.30	0.50	ND		ug/L	405207	NA
2-Chlorotoluene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
1,3,5-Trimethylbenzene	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
4-Chlorotoluene	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
tert-Butylbenzene	SW8260B	NA	05/26/11	1	0.29	0.50	ND		ug/L	405207	NA
1,2,3-Trichloropropane	SW8260B	NA	05/26/11	1	0.59	1.0	ND		ug/L	405207	NA
1,2,4-Trimethylbenzene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
sec-Butyl Benzene	SW8260B	NA	05/26/11	1	0.24	0.50	ND		ug/L	405207	NA
p-Isopropyltoluene	SW8260B	NA	05/26/11	1	0.25	0.50	ND		ug/L	405207	NA
1,3-Dichlorobenzene	SW8260B	NA	05/26/11	1	0.31	0.50	ND		ug/L	405207	NA
1,4-Dichlorobenzene	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
n-Butylbenzene	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
1,2-Dichlorobenzene	SW8260B	NA	05/26/11	1	0.39	0.50	ND		ug/L	405207	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	05/26/11	1	0.45	1.0	ND		ug/L	405207	NA
Hexachlorobutadiene	SW8260B	NA	05/26/11	1	0.22	0.50	ND		ug/L	405207	NA
1,2,4-Trichlorobenzene	SW8260B	NA	05/26/11	1	0.48	1.0	ND		ug/L	405207	NA
Naphthalene	SW8260B	NA	05/26/11	1	0.57	1.0	ND		ug/L	405207	NA
1,2,3-Trichlorobenzene	SW8260B	NA	05/26/11	1	0.52	1.0	ND		ug/L	405207	NA
(S) Dibromofluoromethane	SW8260B	NA	05/26/11	1	61.2	131	91.0		%	405207	NA
(S) Toluene-d8	SW8260B	NA	05/26/11	1	75.1	127	85.5		%	405207	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/26/11	1	64.1	120	107		%	405207	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	S-1	**Lab Sample ID:**	1105179-001A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	05/23/11 / 14:15		
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/26/11	1	22	50	ND		ug/L	405207	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/26/11	1	34	114	82.7		%	405207	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	5/25/11	05/27/11	1	0.0400	0.10	ND		mg/L	405219	2723
TPH as Motor Oil	SW8015B(M)	5/25/11	05/27/11	1	0.0900	0.20	ND		mg/L	405219	2723
Pentacosane (S)	SW8015B(M)	5/25/11	05/27/11	1	64.2	123	135	S	%	405219	2723

NOTE: Surrogate recoveries fall outside of the control limits (high bias). Sample is ND.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	S-2	**Lab Sample ID:**	1105179-002A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	05/23/11 / 12:00		
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	05/26/11	1	0.41	0.50	ND		ug/L	405207	NA
Chloromethane	SW8260B	NA	05/26/11	1	0.41	0.50	ND		ug/L	405207	NA
Vinyl Chloride	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Bromomethane	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Trichlorofluoromethane	SW8260B	NA	05/26/11	1	0.34	0.50	ND		ug/L	405207	NA
1,1-Dichloroethene	SW8260B	NA	05/26/11	1	0.29	0.50	ND		ug/L	405207	NA
Freon 113	SW8260B	NA	05/26/11	1	0.38	0.50	ND		ug/L	405207	NA
Methylene Chloride	SW8260B	NA	05/26/11	1	0.18	5.0	ND		ug/L	405207	NA
trans-1,2-Dichloroethene	SW8260B	NA	05/26/11	1	0.31	0.50	ND		ug/L	405207	NA
MTBE	SW8260B	NA	05/26/11	1	0.38	0.50	ND		ug/L	405207	NA
tert-Butanol	SW8260B	NA	05/26/11	1	1.5	5.0	ND		ug/L	405207	NA
Diisopropyl ether (DIPE)	SW8260B	NA	05/26/11	1	0.36	0.50	ND		ug/L	405207	NA
1,1-Dichloroethane	SW8260B	NA	05/26/11	1	0.28	0.50	ND		ug/L	405207	NA
ETBE	SW8260B	NA	05/26/11	1	0.40	0.50	ND		ug/L	405207	NA
cis-1,2-Dichloroethene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
2,2-Dichloropropane	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Bromochloromethane	SW8260B	NA	05/26/11	1	0.34	0.50	ND		ug/L	405207	NA
Chloroform	SW8260B	NA	05/26/11	1	0.29	0.50	ND		ug/L	405207	NA
Carbon Tetrachloride	SW8260B	NA	05/26/11	1	0.26	0.50	ND		ug/L	405207	NA
1,1,1-Trichloroethane	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
1,1-Dichloropropene	SW8260B	NA	05/26/11	1	0.40	0.50	ND		ug/L	405207	NA
Benzene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
TAME	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
1,2-Dichloroethane	SW8260B	NA	05/26/11	1	0.28	0.50	ND		ug/L	405207	NA
Trichloroethylene	SW8260B	NA	05/26/11	1	0.38	0.50	ND		ug/L	405207	NA
Dibromomethane	SW8260B	NA	05/26/11	1	0.21	0.50	ND		ug/L	405207	NA
1,2-Dichloropropane	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
Bromodichloromethane	SW8260B	NA	05/26/11	1	0.23	0.50	ND		ug/L	405207	NA
2-Chloroethyl vinyl ether	SW8260B	NA	05/26/11	1	0.91	2.0	ND		ug/L	405207	NA
cis-1,3-Dichloropropene	SW8260B	NA	05/26/11	1	0.30	0.50	ND		ug/L	405207	NA
Toluene	SW8260B	NA	05/26/11	1	0.19	0.50	ND		ug/L	405207	NA
Tetrachloroethylene	SW8260B	NA	05/26/11	1	0.15	0.50	ND		ug/L	405207	NA
trans-1,3-Dichloropropene	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
1,1,2-Trichloroethane	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
Dibromochloromethane	SW8260B	NA	05/26/11	1	0.21	0.50	ND		ug/L	405207	NA
1,3-Dichloropropane	SW8260B	NA	05/26/11	1	0.18	0.50	ND		ug/L	405207	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	S-2	**Lab Sample ID:**	1105179-002A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	05/23/11 / 12:00		
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2-Dibromoethane	SW8260B	NA	05/26/11	1	0.19	0.50	ND		ug/L	405207	NA
Chlorobenzene	SW8260B	NA	05/26/11	1	0.14	0.50	ND		ug/L	405207	NA
Ethyl Benzene	SW8260B	NA	05/26/11	1	0.15	0.50	ND		ug/L	405207	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	05/26/11	1	0.10	0.50	ND		ug/L	405207	NA
m,p-Xylene	SW8260B	NA	05/26/11	1	0.20	1.0	ND		ug/L	405207	NA
o-Xylene	SW8260B	NA	05/26/11	1	0.13	0.50	ND		ug/L	405207	NA
Styrene	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
Bromoform	SW8260B	NA	05/26/11	1	0.45	1.0	ND		ug/L	405207	NA
Isopropyl Benzene	SW8260B	NA	05/26/11	1	0.28	0.50	ND		ug/L	405207	NA
Bromobenzene	SW8260B	NA	05/26/11	1	0.39	0.50	ND		ug/L	405207	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	05/26/11	1	0.26	0.50	ND		ug/L	405207	NA
n-Propylbenzene	SW8260B	NA	05/26/11	1	0.30	0.50	ND		ug/L	405207	NA
2-Chlorotoluene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
1,3,5-Trimethylbenzene	SW8260B	NA	05/26/11	1	0.20	0.50	ND		ug/L	405207	NA
4-Chlorotoluene	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
tert-Butylbenzene	SW8260B	NA	05/26/11	1	0.29	0.50	ND		ug/L	405207	NA
1,2,3-Trichloropropane	SW8260B	NA	05/26/11	1	0.59	1.0	ND		ug/L	405207	NA
1,2,4-Trimethylbenzene	SW8260B	NA	05/26/11	1	0.33	0.50	ND		ug/L	405207	NA
sec-Butyl Benzene	SW8260B	NA	05/26/11	1	0.24	0.50	ND		ug/L	405207	NA
p-Isopropyltoluene	SW8260B	NA	05/26/11	1	0.25	0.50	ND		ug/L	405207	NA
1,3-Dichlorobenzene	SW8260B	NA	05/26/11	1	0.31	0.50	ND		ug/L	405207	NA
1,4-Dichlorobenzene	SW8260B	NA	05/26/11	1	0.37	0.50	ND		ug/L	405207	NA
n-Butylbenzene	SW8260B	NA	05/26/11	1	0.32	0.50	ND		ug/L	405207	NA
1,2-Dichlorobenzene	SW8260B	NA	05/26/11	1	0.39	0.50	ND		ug/L	405207	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	05/26/11	1	0.45	1.0	ND		ug/L	405207	NA
Hexachlorobutadiene	SW8260B	NA	05/26/11	1	0.22	0.50	ND		ug/L	405207	NA
1,2,4-Trichlorobenzene	SW8260B	NA	05/26/11	1	0.48	1.0	ND		ug/L	405207	NA
Naphthalene	SW8260B	NA	05/26/11	1	0.57	1.0	ND		ug/L	405207	NA
1,2,3-Trichlorobenzene	SW8260B	NA	05/26/11	1	0.52	1.0	ND		ug/L	405207	NA
(S) Dibromofluoromethane	SW8260B	NA	05/26/11	1	61.2	131	116		%	405207	NA
(S) Toluene-d8	SW8260B	NA	05/26/11	1	75.1	127	96.7		%	405207	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	05/26/11	1	64.1	120	104		%	405207	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	S-2	**Lab Sample ID:**	1105179-002A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	05/23/11 / 12:00		
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	05/26/11	1	22	50	ND		ug/L	405207	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	05/26/11	1	34	114	83.6		%	405207	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	5/25/11	05/27/11	1	0.0400	0.10	ND		mg/L	405219	2723
TPH as Motor Oil	SW8015B(M)	5/25/11	05/27/11	1	0.0900	0.20	ND		mg/L	405219	2723
Pentacosane (S)	SW8015B(M)	5/25/11	05/27/11	1	64.2	123	131	S	%	405219	2723

NOTE: Surrogate recoveries fall outside of the control limits (high bias). Sample is ND.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	SV-1	**Lab Sample ID:**	1105179-003A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Soil Vapor
Project Number:			
Date/Time Sampled:	05/23/11 / 10:55	**Certified Clean WO # :**	
Canister/Tube ID:	A7464	**Received PSI :**	11.5
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	05/24/11	5	7.6	25	ND	ND		405158	NA
1,1-Difluoroethane	ETO15	NA	05/24/11	5	2.5	6.8	ND	ND		405158	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	05/24/11	5	25	70	ND	ND		405158	NA
Chloromethane	ETO15	NA	05/24/11	5	1.6	5.3	ND	ND		405158	NA
Vinyl Chloride	ETO15	NA	05/24/11	5	3.3	13	ND	ND		405158	NA
1,3-Butadiene	ETO15	NA	05/24/11	5	2.2	5.5	ND	ND		405158	NA
Bromomethane	ETO15	NA	05/24/11	5	3.6	9.8	ND	ND		405158	NA
Chloroethane	ETO15	NA	05/24/11	5	2.5	6.5	ND	ND		405158	NA
Trichlorofluoromethane	ETO15	NA	05/24/11	5	9.0	28	ND	ND		405158	NA
1,1-Dichloroethene	ETO15	NA	05/24/11	5	3.1	10	ND	ND		405158	NA
Freon 113	ETO15	NA	05/24/11	5	4.2	19	ND	ND		405158	NA
Carbon Disulfide	ETO15	NA	05/24/11	5	4.1	16	ND	ND		405158	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	05/24/11	5	4.9	50	ND	ND		405158	NA
Methylene Chloride	ETO15	NA	05/24/11	5	2.9	18	ND	ND		405158	NA
Acetone	ETO15	NA	05/24/11	5	4.4	48	1060	441.67	E	405158	NA
trans-1,2-Dichloroethene	ETO15	NA	05/24/11	5	3.2	10	ND	ND		405158	NA
Hexane	ETO15	NA	05/24/11	5	2.6	8.8	ND	ND		405158	NA
MTBE	ETO15	NA	05/24/11	5	4.3	9.0	ND	ND		405158	NA
tert-Butanol	ETO15	NA	05/24/11	5	4.6	42	ND	ND		405158	NA
Diisopropyl ether (DIPE)	ETO15	NA	05/24/11	5	4.4	11	ND	ND		405158	NA
1,1-Dichloroethane	ETO15	NA	05/24/11	5	3.8	10	ND	ND		405158	NA
ETBE	ETO15	NA	05/24/11	5	3.4	11	ND	ND		405158	NA
cis-1,2-Dichloroethene	ETO15	NA	05/24/11	5	2.7	10	ND	ND		405158	NA
Chloroform	ETO15	NA	05/24/11	5	6.2	25	ND	ND		405158	NA
Vinyl Acetate	ETO15	NA	05/24/11	5	2.8	8.8	ND	ND		405158	NA
Carbon Tetrachloride	ETO15	NA	05/24/11	5	4.3	16	ND	ND		405158	NA
1,1,1-trichloroethane	ETO15	NA	05/24/11	5	4.2	14	ND	ND		405158	NA
2-Butanone (MEK)	ETO15	NA	05/24/11	5	3.1	7.5	ND	ND		405158	NA
Ethyl Acetate	ETO15	NA	05/24/11	5	3.7	9.0	ND	ND		405158	NA
Tetrahydrofuran	ETO15	NA	05/24/11	5	1.5	7.5	ND	ND		405158	NA
Benzene	ETO15	NA	05/24/11	5	3.4	8.0	ND	ND		405158	NA
TAME	ETO15	NA	05/24/11	5	1.8	11	ND	ND		405158	NA
1,2-Dichloroethane (EDC)	ETO15	NA	05/24/11	5	4.9	10	ND	ND		405158	NA
Trichloroethylene	ETO15	NA	05/24/11	5	6.9	27	ND	ND		405158	NA
1,2-Dichloropropane	ETO15	NA	05/24/11	5	6.6	23	ND	ND		405158	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	SV-1	**Lab Sample ID:**	1105179-003A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Soil Vapor
Project Number:			
Date/Time Sampled:	05/23/11 / 10:55	**Certified Clean WO # :**	
Canister/Tube ID:	A7464	**Received PSI :**	11.5
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	05/24/11	5	4.4	17	ND	ND		405158	NA
1,4-Dioxane	ETO15	NA	05/24/11	5	6.2	18	ND	ND		405158	NA
trans-1,3-Dichloropropene	ETO15	NA	05/24/11	5	4.3	11	ND	ND		405158	NA
Toluene	ETO15	NA	05/24/11	5	4.8	9.5	217	57.11		405158	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	05/24/11	5	4.2	10	ND	ND		405158	NA
cis-1,3-Dichloropropene	ETO15	NA	05/24/11	5	5.6	11	ND	ND		405158	NA
Tetrachloroethylene	ETO15	NA	05/24/11	5	4.5	17	ND	ND		405158	NA
1,1,2-Trichloroethane	ETO15	NA	05/24/11	5	4.6	14	ND	ND		405158	NA
Dibromochloromethane	ETO15	NA	05/24/11	5	8.7	21	ND	ND		405158	NA
1,2-Dibromoethane (EDB)	ETO15	NA	05/24/11	5	10	39	ND	ND		405158	NA

NOTE: E-Estimated. Value outside of calibration range.

2-Hexanone	ETO15	NA	05/24/11	5	5.6	21	ND	ND		405158	NA
Ethyl Benzene	ETO15	NA	05/24/11	5	5.0	11	184	42.79		405158	NA
Chlorobenzene	ETO15	NA	05/24/11	5	3.6	12	ND	ND		405158	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	05/24/11	5	5.2	17	ND	ND		405158	NA
m,p-Xylene	ETO15	NA	05/24/11	5	8.1	22	836	194.42		405158	NA
o-Xylene	ETO15	NA	05/24/11	5	4.0	11	275	63.95		405158	NA
Styrene	ETO15	NA	05/24/11	5	3.4	11	ND	ND		405158	NA
Bromoform	ETO15	NA	05/24/11	5	5.5	25	ND	ND		405158	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	05/24/11	5	3.5	17	ND	ND		405158	NA
4-Ethyl Toluene	ETO15	NA	05/24/11	5	4.1	12	35.3	7.20		405158	NA
1,3,5-Trimethylbenzene	ETO15	NA	05/24/11	5	3.8	12	ND	ND		405158	NA
1,2,4-Trimethylbenzene	ETO15	NA	05/24/11	5	3.4	12	37.0	7.55		405158	NA
1,4-Dichlorobenzene	ETO15	NA	05/24/11	5	3.2	15	ND	ND		405158	NA
1,3-Dichlorobenzene	ETO15	NA	05/24/11	5	4.2	15	ND	ND		405158	NA
Benzyl Chloride	ETO15	NA	05/24/11	5	3.1	13	ND	ND		405158	NA
1,2-Dichlorobenzene	ETO15	NA	05/24/11	5	4.5	15	ND	ND		405158	NA
Hexachlorobutadiene	ETO15	NA	05/24/11	5	12	28	ND	ND		405158	NA
1,2,4-Trichlorobenzene	ETO15	NA	05/24/11	5	17	37	ND	ND		405158	NA
Naphthalene	ETO15	NA	05/24/11	5	7.3	26	ND	ND		405158	NA
(S) 4-Bromofluorobenzene	ETO15	NA	05/24/11	5	65	135	103 %			405158	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	SV-1	**Lab Sample ID:**	1105179-003A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Soil Vapor
Project Number:			
Date/Time Sampled:	05/23/11 / 10:55	**Certified Clean WO # :**	
Canister/Tube ID:	A7464	**Received PSI :**	11.5
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL %	Results %	Results ppmv	Lab Qualifier	Analytical Batch	Prep Batch
Helium	D1946	NA	05/26/11	1.83	0.0092	0.0092	1.9			405175	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	SV-2	**Lab Sample ID:**	1105179-004A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Soil Vapor
Project Number:			
Date/Time Sampled:	05/23/11 / 13:20	**Certified Clean WO # :**	
Canister/Tube ID:	6332	**Received PSI :**	11.8
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	05/24/11	2	3.0	10	ND	ND		405158	NA
1,1-Difluoroethane	ETO15	NA	05/24/11	2	1.0	2.7	ND	ND		405158	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	05/24/11	2	9.9	28	ND	ND		405158	NA
Chloromethane	ETO15	NA	05/24/11	2	0.64	2.1	ND	ND		405158	NA
Vinyl Chloride	ETO15	NA	05/24/11	2	1.3	5.2	ND	ND		405158	NA
1,3-Butadiene	ETO15	NA	05/24/11	2	0.89	2.2	ND	ND		405158	NA
Bromomethane	ETO15	NA	05/24/11	2	1.4	3.9	ND	ND		405158	NA
Chloroethane	ETO15	NA	05/24/11	2	1.0	2.6	ND	ND		405158	NA
Trichlorofluoromethane	ETO15	NA	05/24/11	2	3.6	11	ND	ND		405158	NA
1,1-Dichloroethene	ETO15	NA	05/24/11	2	1.2	4.0	ND	ND		405158	NA
Freon 113	ETO15	NA	05/24/11	2	1.7	7.7	ND	ND		405158	NA
Carbon Disulfide	ETO15	NA	05/24/11	2	1.6	6.2	ND	ND		405158	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	05/24/11	2	1.9	20	ND	ND		405158	NA
Methylene Chloride	ETO15	NA	05/24/11	2	1.2	7.0	ND	ND		405158	NA
Acetone	ETO15	NA	05/24/11	2	1.8	19	88.6	36.92		405158	NA
trans-1,2-Dichloroethene	ETO15	NA	05/24/11	2	1.3	4.0	ND	ND		405158	NA
Hexane	ETO15	NA	05/24/11	2	1.1	3.5	ND	ND		405158	NA
MTBE	ETO15	NA	05/24/11	2	1.7	3.6	ND	ND		405158	NA
tert-Butanol	ETO15	NA	05/24/11	2	1.8	17	ND	ND		405158	NA
Diisopropyl ether (DIPE)	ETO15	NA	05/24/11	2	1.8	4.2	ND	ND		405158	NA
1,1-Dichloroethane	ETO15	NA	05/24/11	2	1.5	4.1	ND	ND		405158	NA
ETBE	ETO15	NA	05/24/11	2	1.4	4.2	ND	ND		405158	NA
cis-1,2-Dichloroethene	ETO15	NA	05/24/11	2	1.1	4.0	ND	ND		405158	NA
Chloroform	ETO15	NA	05/24/11	2	2.5	9.8	ND	ND		405158	NA
Vinyl Acetate	ETO15	NA	05/24/11	2	1.1	3.5	ND	ND		405158	NA
Carbon Tetrachloride	ETO15	NA	05/24/11	2	1.7	6.3	ND	ND		405158	NA
1,1,1-trichloroethane	ETO15	NA	05/24/11	2	1.7	5.5	ND	ND		405158	NA
2-Butanone (MEK)	ETO15	NA	05/24/11	2	1.3	3.0	ND	ND		405158	NA
Ethyl Acetate	ETO15	NA	05/24/11	2	1.5	3.6	ND	ND		405158	NA
Tetrahydrofuran	ETO15	NA	05/24/11	2	0.60	3.0	ND	ND		405158	NA
Benzene	ETO15	NA	05/24/11	2	1.4	3.2	12.7	3.97		405158	NA
TAME	ETO15	NA	05/24/11	2	0.72	4.2	ND	ND		405158	NA
1,2-Dichloroethane (EDC)	ETO15	NA	05/24/11	2	2.0	4.1	ND	ND		405158	NA
Trichloroethylene	ETO15	NA	05/24/11	2	2.8	11	ND	ND		405158	NA
1,2-Dichloropropane	ETO15	NA	05/24/11	2	2.6	9.2	ND	ND		405158	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	SV-2	**Lab Sample ID:**	1105179-004A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Soil Vapor
Project Number:			
Date/Time Sampled:	05/23/11 / 13:20	**Certified Clean WO # :**	
Canister/Tube ID:	6332	**Received PSI :**	11.8
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	05/24/11	2	1.8	6.7	ND	ND		405158	NA
1,4-Dioxane	ETO15	NA	05/24/11	2	2.5	7.2	ND	ND		405158	NA
trans-1,3-Dichloropropene	ETO15	NA	05/24/11	2	1.7	4.5	ND	ND		405158	NA
Toluene	ETO15	NA	05/24/11	2	1.9	3.8	146	38.42		405158	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	05/24/11	2	1.7	4.1	5.74	1.40		405158	NA
cis-1,3-Dichloropropene	ETO15	NA	05/24/11	2	2.3	4.5	ND	ND		405158	NA
Tetrachloroethylene	ETO15	NA	05/24/11	2	1.8	6.8	ND	ND		405158	NA
1,1,2-Trichloroethane	ETO15	NA	05/24/11	2	1.9	5.5	ND	ND		405158	NA
Dibromochloromethane	ETO15	NA	05/24/11	2	3.5	8.5	ND	ND		405158	NA
1,2-Dibromoethane (EDB)	ETO15	NA	05/24/11	2	4.1	15	ND	ND		405158	NA
2-Hexanone	ETO15	NA	05/24/11	2	2.2	8.2	ND	ND		405158	NA
Ethyl Benzene	ETO15	NA	05/24/11	2	2.0	4.3	27.6	6.42		405158	NA
Chlorobenzene	ETO15	NA	05/24/11	2	1.4	4.6	ND	ND		405158	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	05/24/11	2	2.1	6.9	ND	ND		405158	NA
m,p-Xylene	ETO15	NA	05/24/11	2	3.2	8.6	143	33.26		405158	NA
o-Xylene	ETO15	NA	05/24/11	2	1.6	4.3	48.1	11.19		405158	NA
Styrene	ETO15	NA	05/24/11	2	1.4	4.4	ND	ND		405158	NA
Bromoform	ETO15	NA	05/24/11	2	2.2	10	ND	ND		405158	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	05/24/11	2	1.4	6.9	ND	ND		405158	NA
4-Ethyl Toluene	ETO15	NA	05/24/11	2	1.6	4.9	41.7	8.51		405158	NA
1,3,5-Trimethylbenzene	ETO15	NA	05/24/11	2	1.5	4.9	15.2	3.10		405158	NA
1,2,4-Trimethylbenzene	ETO15	NA	05/24/11	2	1.4	4.9	49.2	10.04		405158	NA
1,4-Dichlorobenzene	ETO15	NA	05/24/11	2	1.3	6.0	ND	ND		405158	NA
1,3-Dichlorobenzene	ETO15	NA	05/24/11	2	1.7	6.0	ND	ND		405158	NA
Benzyl Chloride	ETO15	NA	05/24/11	2	1.2	5.2	ND	ND		405158	NA
1,2-Dichlorobenzene	ETO15	NA	05/24/11	2	1.8	6.0	ND	ND		405158	NA
Hexachlorobutadiene	ETO15	NA	05/24/11	2	4.8	11	ND	ND		405158	NA
1,2,4-Trichlorobenzene	ETO15	NA	05/24/11	2	6.8	15	ND	ND		405158	NA
Naphthalene	ETO15	NA	05/24/11	2	2.9	10	ND	ND		405158	NA
(S) 4-Bromofluorobenzene	ETO15	NA	05/24/11	2	65	135	109 %			405158	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 05/23/11
Date Reported: 05/31/11

Client Sample ID:	SV-2	**Lab Sample ID:**	1105179-004A
Project Name/Location:	William / 8th Street	**Sample Matrix:**	Soil Vapor
Project Number:			
Date/Time Sampled:	05/23/11 / 13:20	**Certified Clean WO # :**	
Canister/Tube ID:	6332	**Received PSI :**	11.8
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	William / 8th Street		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL %	Results %	Results ppmv	Lab Qualifier	Analytical Batch	Prep Batch
Helium	D1946	NA	05/26/11	2.08	0.010	0.010	1.8			405175	NA

MB Summary Report

Work Order:	1105179	**Prep Method:**	3510_TPH	**Prep Date:**	05/25/11	**Prep Batch:**	2723
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	05/27/11	**Analytical Batch:**	405219
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	
TPH as Motor Oil	0.0920	0.20	ND	
Pentacosane (S)			98.7	

Work Order:	1105179	**Prep Method:**	5030	**Prep Date:**	05/26/11	**Prep Batch:**	2751
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/26/11	**Analytical Batch:**	405207
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	22	50	ND	
(S) 4-Bromofluorobenzene			71.0	

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	05/24/11	**Analytical Batch:**	405158
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.30	1.00	ND	
1,1-Difluoroethane	0.18	0.500	ND	
1,2-Dichlorotetrafluoroethane	0.70	2.00	ND	
Chloromethane	0.15	0.500	ND	
Vinyl Chloride	0.26	1.00	ND	
1,3-Butadiene	0.20	0.500	ND	
Bromomethane	0.18	0.500	ND	
Chloroethane	0.19	0.500	ND	
Trichlorofluoromethane	0.32	1.00	ND	
1,1-Dichloroethene	0.15	0.500	ND	
Freon 113	0.11	0.500	ND	
Carbon Disulfide	0.26	1.00	ND	
2-Propanol (Isopropyl Alcohol)	0.39	4.00	ND	
Methylene Chloride	0.17	0.500	ND	
Acetone	0.37	4.00	ND	
trans-1,2-Dichloroethene	0.16	0.500	ND	
Hexane	0.15	0.500	ND	
MTBE	0.24	0.500	ND	

MB Summary Report

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	05/24/11	**Analytical Batch:**	405158
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
tert-Butanol	0.22	2.00	ND	
Diisopropyl ether (DIPE)	0.21	0.500	ND	
1,1-Dichloroethane	0.18	0.500	ND	
ETBE	0.16	0.500	ND	
cis-1,2-Dichloroethene	0.13	0.500	ND	
Chloroform	0.25	1.00	ND	
Vinyl Acetate	0.16	0.500	ND	
Carbon Tetrachloride	0.14	0.500	ND	
1,1,1-Trichloroethane	0.15	0.500	ND	
2-Butanone (MEK)	0.21	0.500	ND	
Ethyl Acetate	0.21	0.500	ND	
Tetrahydrofuran	0.10	0.500	ND	
Benzene	0.21	0.500	ND	
TAME	0.086	0.500	ND	
1,2-Dichloroethane (EDC)	0.24	0.500	ND	
Trichloroethylene	0.26	1.00	ND	
1,2-Dichloropropane	0.29	1.00	ND	
Bromodichloromethane	0.13	0.500	ND	
1,4-Dioxane	0.35	1.00	ND	
trans-1,3-Dichloropropene	0.19	0.500	ND	
Toluene	0.25	0.500	ND	
4-Methyl-2-Pentanone (MIBK)	0.21	0.500	ND	
cis-1,3-Dichloropropene	0.25	0.500	ND	
Tetrachloroethylene	0.13	0.500	ND	
1,1,2-Trichloroethane	0.17	0.500	ND	
Dibromochloromethane	0.20	0.500	ND	
1,2-Dibromoethane (EDB)	0.27	1.00	ND	
2-Hexanone	0.27	1.00	ND	
Ethyl Benzene	0.23	0.500	ND	
Chlorobenzene	0.15	0.500	ND	
1,1,1,2-Tetrachloroethane	0.15	0.500	ND	
m,p-Xylene	0.38	1.00	ND	
o-Xylene	0.19	0.500	ND	
Styrene	0.16	0.500	ND	
Bromoform	0.11	0.500	ND	
1,1,2,2-Tetrachloroethane	0.10	0.500	ND	
4-Ethyl Toluene	0.17	0.500	ND	
1,3,5-Trimethylbenzene	0.15	0.500	ND	
1,2,4-Trimethylbenzene	0.14	0.500	ND	
1,4-Dichlorobenzene	0.11	0.500	ND	
1,3-Dichlorobenzene	0.14	0.500	ND	

MB Summary Report

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	05/24/11	**Analytical Batch:**	405158
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Benzyl Chloride	0.12	0.500	ND	
1,2-Dichlorobenzene	0.15	0.500	ND	
Hexachlorobutadiene	0.22	0.500	ND	
1,2,4-Trichlorobenzene	0.46	1.00	ND	
Naphthalene	0.28	1.00	ND	
(S) 4-Bromofluorobenzene			111	

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	D1946	**Analyzed Date:**	05/26/11	**Analytical Batch:**	405175
Units:	%						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Helium	0.0050	0.0050	ND	

MB Summary Report

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/26/11	**Analytical Batch:**	405207
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.41	0.50	ND	
Chloromethane	0.41	0.50	ND	
Vinyl Chloride	0.37	0.50	ND	
Bromomethane	0.37	0.50	ND	
Trichlorofluoromethane	0.34	0.50	ND	
1,1-Dichloroethene	0.29	0.50	ND	
Freon 113	0.38	0.50	ND	
Methylene Chloride	0.18	5.0	ND	
trans-1,2-Dichloroethene	0.31	0.50	ND	
MTBE	0.38	0.50	ND	
tert-Butanol	1.5	5.0	1.6	
Diisopropyl ether (DIPE)	0.36	0.50	ND	
1,1-Dichloroethane	0.28	0.50	ND	
ETBE	0.40	0.50	ND	
cis-1,2-Dichloroethene	0.33	0.50	ND	
2,2-Dichloropropane	0.37	0.50	ND	
Bromochloromethane	0.34	0.50	ND	
Chloroform	0.29	0.50	ND	
Carbon Tetrachloride	0.26	0.50	ND	
1,1,1-Trichloroethane	0.32	0.50	ND	
1,1-Dichloropropene	0.40	0.50	ND	
Benzene	0.33	0.50	ND	
TAME	0.32	0.50	ND	
1,2-Dichloroethane	0.28	0.50	ND	
Trichloroethylene	0.38	0.50	ND	
Dibromomethane	0.21	0.50	ND	
1,2-Dichloropropane	0.37	0.50	ND	
Bromodichloromethane	0.23	0.50	ND	
2-Chloroethyl vinyl ether	0.91	2.0	ND	
cis-1,3-Dichloropropene	0.30	0.50	ND	
Toluene	0.19	0.50	ND	
Tetrachloroethylene	0.15	0.50	ND	
trans-1,3-Dichloropropene	0.20	0.50	ND	
1,1,2-Trichloroethane	0.20	0.50	ND	
Dibromochloromethane	0.21	0.50	ND	
1,3-Dichloropropane	0.18	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.10	0.50	ND	
m,p-Xylene	0.20	1.0	ND	

MB Summary Report

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/26/11	**Analytical Batch:**	405207
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.13	0.50	ND	
Styrene	0.20	0.50	ND	
Bromoform	0.45	1.0	ND	
Isopropyl Benzene	0.28	0.50	ND	
Bromobenzene	0.39	0.50	ND	
1,1,2,2-Tetrachloroethane	0.26	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
2-Chlorotoluene	0.33	0.50	ND	
1,3,5-Trimethylbenzene	0.20	0.50	ND	
4-Chlorotoluene	0.32	0.50	ND	
tert-Butylbenzene	0.29	0.50	ND	
1,2,3-Trichloropropane	0.59	1.0	ND	
1,2,4-Trimethylbenzene	0.33	0.50	ND	
sec-Butyl Benzene	0.24	0.50	ND	
p-Isopropyltoluene	0.25	0.50	ND	
1,3-Dichlorobenzene	0.31	0.50	ND	
1,4-Dichlorobenzene	0.37	0.50	ND	
n-Butylbenzene	0.32	0.50	ND	
1,2-Dichlorobenzene	0.39	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.45	1.0	ND	
Hexachlorobutadiene	0.22	0.50	ND	
1,2,4-Trichlorobenzene	0.48	1.0	ND	
Naphthalene	0.57	1.0	ND	
1,2,3-Trichlorobenzene	0.52	1.0	ND	
Ethanol	100	100	ND	TIC
(S) Dibromofluoromethane			90.1	
(S) Toluene-d8			99.3	
(S) 4-Bromofluorobenzene			90.2	

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1105179	**Prep Method:**	3510_TPH	**Prep Date:**	05/25/11	**Prep Batch:**	2723
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	05/27/11	**Analytical Batch:**	405219
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	1	83.4	98.5	16.7	50.3 - 125	30	
Pentacosane (S)			ND	100	101	109		57.9 - 125		

Work Order:	1105179	**Prep Method:**	5030	**Prep Date:**	05/26/11	**Prep Batch:**	2751
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	05/26/11	**Analytical Batch:**	405207
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	22	50	ND	227.27	107	98.3	8.02	52.4 - 127	30	
(S) 4-Bromofluorobenzene			71.0	11.36	94.2	78.5		58.4 - 133		

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	05/24/11	**Analytical Batch:**	405158
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.15	0.500	ND	20	88.9	88.3	0.678	65 - 135	30	
Benzene	0.21	0.500	ND	20	95.6	93.2	2.49	65 - 135	30	
Trichloroethylene	0.26	1.00	ND	20	107	110	3.59	65 - 135	30	
Toluene	0.25	0.500	ND	20	94.6	95.9	1.42	65 - 135	30	
Chlorobenzene	0.15	0.500	ND	20	97.4	101	3.78	65 - 135	30	
(S) 4-Bromofluorobenzene			ND	20	85.0	90.0		65 - 135		

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	D1946	**Analyzed Date:**	05/26/11	**Analytical Batch:**	405175
Units:	%						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Helium	0.0050	0.0050	ND	1000	90.8	90.8	0.0551	65 - 135	30	

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1105179	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	05/26/11	**Analytical Batch:**	405207
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.29	0.50	ND	17.04	102	105	3.13	61.4 - 129	30	
Benzene	0.33	0.50	ND	17.04	90.9	93.3	2.55	66.9 - 140	30	
Trichloroethylene	0.38	0.50	ND	17.04	81.6	87.4	6.94	69.3 - 144	30	
Toluene	0.19	0.50	ND	17.04	101	101	0.0582	76.6 - 123	30	
Chlorobenzene	0.14	0.50	ND	17.04	109	112	2.29	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	89.8	95.2		61.2 - 131		
(S) Toluene-d8			ND	11.36	100	106		75.1 - 127		
(S) 4-Bromofluorobenzene			ND	11.36	93.2	86.2		64.1 - 120		

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: Engeo Inc (SJ)

Project Name: William / 8th Street

Work Order No.: 1105179

Date and Time Received: 5/23/2011 15:15

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?		Temperature:	°C
Water-VOA vials have zero headspace?	Yes		
Water-pH acceptable upon receipt?			
pH Checked by:	pH Adjusted by:		

Samples received in a cooler with ice.

Login Summary Report

Client ID:	TL5224 Engeo Inc (SJ)	**QC Level:**	
Project Name:	William / 8th Street	**TAT Requested:**	5+ day:0
Project # :		**Date Received:**	5/23/2011
Report Due Date:	5/31/2011	**Time Received:**	15:15

Comments: 5 day TAT! Received 2 waters (Full VOCs, TPHD/MO/Gas) and 2 air samples (TO-15). report to Scott!

Work Order # : ***1105179***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1105179-001A	S-1	05/23/11 14:15	Water	07/07/11				
							W_GCMS-GRO W_8260Full W_TPHDO	
1105179-002A	S-2	05/23/11 12:00	Water	07/07/11				
							W_GCMS-GRO W_TPHDO W_8260Full	
1105179-003A	SV-1	05/23/11 10:55	Air					
							A_TO-15Full-B A_YD-1946FG A_TO-15Full-A	
Sample Note:	Leak check compound is Helium.							
1105179-004A	SV-2	05/23/11 13:20	Air					
							A_TO-15Full-B A_TO-15Full-A A_YD-1946FG	

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
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CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1105179

Company Name: ENGEO	Location of Sampling: William / 8th Street
Address: 6399 San Ignacio Ave	Purpose:
City: San Jose State: CA Zip Code: 95119	Special Instructions / Comments:
Telephone: (408) 574-4900 FAX:	
REPORT TO: sjohns@engeo.com SAMPLER: SS	P.O. #: 8643.000.000 EMAIL: sjohns@engeo.com

TURNAROUND TIME:
- ☐ 10 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
- ☐ 7 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours
- ☒ 5 Work Days ☐ 1 Work Day ☐ Other

SAMPLE TYPE:
- ☐ Storm Water ☒ Air
- ☐ Waste Water ☐ Other
- ☒ Ground Water
- ☐ Soil

REPORT FORMAT:
- ☐ QC Level IV
- ☐ EDF
- ☐ Excel / EDD

ANALYSIS REQUESTED

LAB ID	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	TPH E diesel / gasoline motor oil	BTEX	MTBE	VOCs	TO-15					REMARKS
001A	S-1	5/23 / 2:15	water	6	VOA Amber	X	X	X	X						
002A	S-2	5/23 / 12:00	water	7	VOA Amber	X	X	X	X						
003A	SV-1	5/23 / 10:55	Air	1	Summa					X					
004A	SV-2	5/23 / 1:20	Air	1	Summa					X					

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1	Scott John	Scott Johns	5/23/11	3:15	[illegible]	NAVING	5-23-11	3:15 PM
2								

Were Samples Received in Good Condition? ☑ Yes ☐ NO Samples on Ice? ☑ Yes ☐ NO Method of Shipment D/O. Sample seals intact? ☐ Yes ☐ NO ☑ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Page 1 of 1

Log In By: _____ Date: _____ Log In Reviewed By: _____ Date:

TORRENT LAB

Appendix E

Noise Assessment

EIGHTH AND WILLIAM
UPDATED ENVIRONMENTAL NOISE ASSESSMENT
SAN JOSE, CALIFORNIA

27 March 2012

Prepared for:

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CSA Project No. 11-0196

INTRODUCTION

This report summarizes our environmental noise assessment for a mixed-use residential and retail project at Eighth and William Streets in San Jose, California. The purpose of this study is to quantify the noise environment at the site, compare it with applicable City and State standards, and propose conceptual noise mitigation measures as needed.

Following is a summary of our findings:

1. Incorporating sound-rated windows and exterior doors at selected locations will reduce interior noise levels to DNL[1] 45 dBA[2] or lower. Preliminary estimates suggest that required window sound insulation ratings will be modest: in the range of STC 26 to STC 30.
2. Since windows must be closed to meet the indoor noise criterion at residences along William and Eighth Streets, units must incorporate a ventilation or air-conditioning system to provide a habitable interior environment.
3. Incorporating 42-inch high noise barriers at selected outdoor balconies will reduce traffic noise to DNL 60 dBA or less for seated persons.
4. The estimated future noise level in the garden/courtyard to the south of the multi-purpose neighborhood center is DNL 60 dBA or lower.
5. Since future hourly average noise levels will frequently be 65 dBA or higher at the retail storefront along William Street, the project will incorporate appropriate prescriptive or performance based measures to meet CALGreen code requirements.
6. Vehicle traffic trips associated with the project will not significantly increase environmental noise levels (DNL) from local roadways in the project vicinity.
7. Outdoor noise from mechanical equipment, including retail and residential air condensing units and garage exhaust fans, must meet the Zoning Ordinance and General Plan limits. This will be evaluated in detail when equipment types, locations, and sizes are selected.

DESCRIPTION

The project consists of 28 residential units and 1,780 square feet of retail space in a four-story building over underground parking. Outdoor use space will include individual residential balconies or decks. Mechanical equipment will be located on the rooftop. In addition, the project will include rehabilitation of an existing single-story house that will be used as a multi-purpose neighborhood center, with an outdoor garden/courtyard.

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[1] Day/Night Average Sound Level (DNL) — A descriptor established by the U.S. Environmental Protection Agency to describe the average day-night level with a penalty applied to noise occurring during the nighttime hours (10 pm - 7 am) to account for the increased sensitivity of people during sleeping hours.
[2] A-Weighted Sound Level (dBA) — A term for the A-Weighted sound pressure level. The sound level is obtained by use of a standard sound level meter and is expressed in decibels.

The 0.6-acre site is located in the southwest corner of the intersection of William Street and Eighth Street. A commercial building and three houses currently occupy the site. Surrounding land uses include single and multi-family residential, and commercial. The site is located approximately ¼-mile from Interstate 280 and 2 ½-miles from the Mineta San Jose International Airport. It is well outside the CNEL 65 dBA noise contour for the airport, and is therefore not subject to any special airport noise regulations.

ACOUSTICAL CRITERIA

City of San Jose General Plan

The Noise Element of the San Jose General Plan 2020 contains land use compatibility guidelines for environmental noise in the community. Table 1, below, summarizes these guidelines for residential and commercial land uses.

Table 1: Summary of Figure 16 – Land Use Compatibility Guidelines for Community Noise

DNL Value in Decibels		Compatibility Level
Residential	Commercial	
60 dBA or less		Satisfactory
60 to 70 dBA	60 to 76 dBA	When new development requires a full EIR, an acoustical analysis should be made indicating amount of attenuation necessary to maintain an indoor level of DNL <=45. Onsite outdoor activity limited to acoustically protected areas. Existing uses should receive remedial treatment.
Greater than 70 dBA	Greater than 76 dBA	New development permitted only if uses are entirely indoors and building design limits interior levels to <=45 DNL. Onsite activity areas should be permitted if site planning and noise barriers can achieve levels of 60 DNL or less. Existing uses have top priority for remedial treatment.

The Noise Element defines short and long-range noise quality level goals for outdoor use areas as DNL 60 and 55 dB, respectively. However, the City acknowledges that it may not be possible to attain these levels in "special noise impact areas", such as areas adjacent to major roadways, without eliminating the beneficial attributes of the exterior space.

In addition, Policy 1 of the Noise Element defines DNL 45 dB as the interior noise quality level goal, and DNL 76 dB as the maximum exterior noise levels to "avoid significant adverse health effects." Policy 11 states, "When located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses, non-residential land uses should mitigate noise generation to meet the 55 DNL guideline at the property line."

City of San Jose Municipal Code

The Zoning Ordinance of the San Jose Municipal Code contains performance standards for the generation of noise at adjacent properties. In summary, noise levels from air-conditioning or other mechanical equipment is limited to 55 dB at residential property lines, and 60 dB at commercial property lines.

California Building Code (CBC)

- Title 24, Part 2, of the California Building Code limits indoor noise from outdoor sources to DNL 45 dBA in habitable rooms of attached housing.[3] Projects exposed to an outdoor DNL greater than 60 dBA require an acoustical analysis during the design phase showing that the proposed design will limit outdoor noise to the prescribed allowable interior level. Additionally, if windows must be closed to meet the interior standard, "the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment."
- Title 24 Part 11, the CALGreen code, includes prescriptive sound insulation requirements for non-residential projects exposed to noise levels that regularly exceed 65 dBA.[4] In summary, windows should have sound insulation ratings of STC 30 or higher, and walls should be STC 50 or higher.[5]

NOISE ENVIRONMENT

Existing Noise Environment

To quantify the existing noise environment, two long-term monitors continuously measured noise levels at the site between the 11th and 13th of May 2011. In addition, short-term "spot" measurements were conducted and compared with corresponding time periods of the long-term monitors to determine how noise levels vary across the site and at different elevations. Table 2 summarizes existing noise levels at the site. Figure 1, attached, shows approximate measurement locations.

Table 2: Existing Noise Environment

Site	Location	Date / Time	DNL
LT-1	William Street Monitor Approximately 20' south of roadway centerline	11 to 13 May 2011	68 dBA
LT-2	Eighth Street Monitor Approximately 25' west of roadway centerline		63 dBA
ST-1	William and Eighth Streets Corner Spot Measurement Approximately south of 40' William Street centerline, 35' west of Eighth Street centerline	10:25 – 10:40 12 May 11	66[6] dBA
ST-2	Eighth Street Spot Measurement Approximately 40' west of Eighth Street centerline	11:05 – 11:20 12 May 2011	60 dBA
ST-3	Southwestern Spot Measurement In rear yard of existing residence		56 dBA

[3] 2010 California Building Code, California Code of Regulations, Title 24, Part 2, Chapter 12, Section 1207: Sound Transmission.
[4] 2010 California Building Code, California Code of Regulations, Title 24, Part 11 "Green Building Standards Code", Chapter 5: Nonresidential Mandatory Measures, Section 5.507.4.
[5] Effective 1 July 2012, the California Code of Regulations has adopted a supplement to provide an alternative performance standard that will limit hourly noise levels in occupied spaces to 50 dBA.
[6] During the 15-minute measurement period, noise from a motorcycle passing the site generated abnormally high sound levels. Therefore, the comparison of average short and long-term monitor data omits the 1-minute interval when the motorcycle passed the site.

Future Noise Environment

The San Jose Department of Transportation forecasts that peak hour traffic volumes will increase from 400 vehicles in the year 2002 to 600 vehicles in the year 2020.[7] This is approximately a 2-percent per year increase. Assuming a similar increase over the next ten years would result in approximately a 1-decibel increase in environmental noise. Estimated future noise levels, in terms of DNL, are summarized in Figure 1, attached.

ANALYSIS AND RECOMMENDATIONS

Environmental Noise

1. *Residences* – As shown in Figure 1 attached, estimated future environmental noise levels at the proposed residences range from DNL 56 dBA in the western (shielded) portion of the site to DNL 68 dBA along William Street. The project should incorporate measures to reduce environmental noise indoors, and address noise in outdoor use spaces. Specific details must be determined during the design phase when the site plan, floor plans and elevations have been finalized. Preliminary estimates suggest the following:
   a. Based on conceptual floor plans and elevations dated 1 March 2012, a preliminary estimate is that exterior windows and doors with sound insulation ratings in the range of STC[8] 28 to 30 along William Street, and STC 26 to 28 along Eighth Street and in other portions of the site, will reduce traffic noise to the DNL 45 dBA criterion indoors.[9] This assumes exterior walls will consist of Hardi siding or shakes over plywood sheathing, insulation in stud cavities and at least 1 layer of gypsum board on unit interiors.
   b. Where windows will need to be closed to meet the interior noise criteria, which apply to the units facing William and Eighth Streets, the design must include "… a ventilation or air conditioning system to provide a habitable interior environment." This should be discussed with the project mechanical engineer and must not compromise sound insulation.
   c. Outdoor noise levels vary with the location and orientation of outdoor use spaces.
      i. Incorporating 42-inch tall noise barriers at elevated balconies or decks facing William and Eighth Streets will reduce estimated future traffic noise to approximately DNL 60 dBA or lower for seated residents. Effective barriers may be comprised of a variety of materials, including glass or plastic, should be solid from bottom to top with no cracks or gaps, and should have a minimum surface density of three pounds per square foot.

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[7] Fax Transmittal from the City of San Jose Department of Transportation, 10 June 2011.
[8] Sound Transmission Class (STC) — A single number used to compare walls, floor/ceiling assemblies, windows and doors for their sound insulating properties with respect to speech and small household appliance noise.
[9] For reference, typical dual-pane construction-grade windows and sliding glass doors have sound insulation ratings in the range of STC 26 to 28.

ii. A garden/courtyard is planned for the area south of the multi-purpose neighborhood center. The estimated future noise level in this area is DNL 60 dBA or lower, except for the easternmost portion along Eighth Street.

2. *Retail* – Estimated future hourly average noise levels along William Street, at the setback of the proposed retail component, are on the order of 60 to 65 dBA, and noise levels during the loudest hours will exceed these levels. Therefore, the following sound insulation requirements, outlined in the CALGreen code, apply:

   a. Retail windows must have STC ratings of at least 30.

   b. Retail exterior walls must have STC ratings of at least 50. A possible assembly may consist of stone or Hardi siding over plywood sheathing, metal or wood studs with insulation in stud cavities, and 2 layers of gypsum board mounted on resilient channels. Details should be developed during the design phase.

   c. In addition, a preliminary estimate is that doors will need to be gasketed to meet the City's interior noise goal of DNL 45 dBA. This should be confirmed during the design phase.

   Alternatively, if the project is permitted and/or built after 1 July 2012, the owner may wish to adopt the alternative criterion of 50 dBA indoors. Details will be determined during the design phase.

Traffic Noise Associated with the Project

The San Jose Department of Public Works estimates that the project will generate 27 new peak hour vehicle trips along local roadways (an increase of 5 to 7-percent).[10] The corresponding increase in environmental noise would be less than 1-decibel. This is considered less than significant.

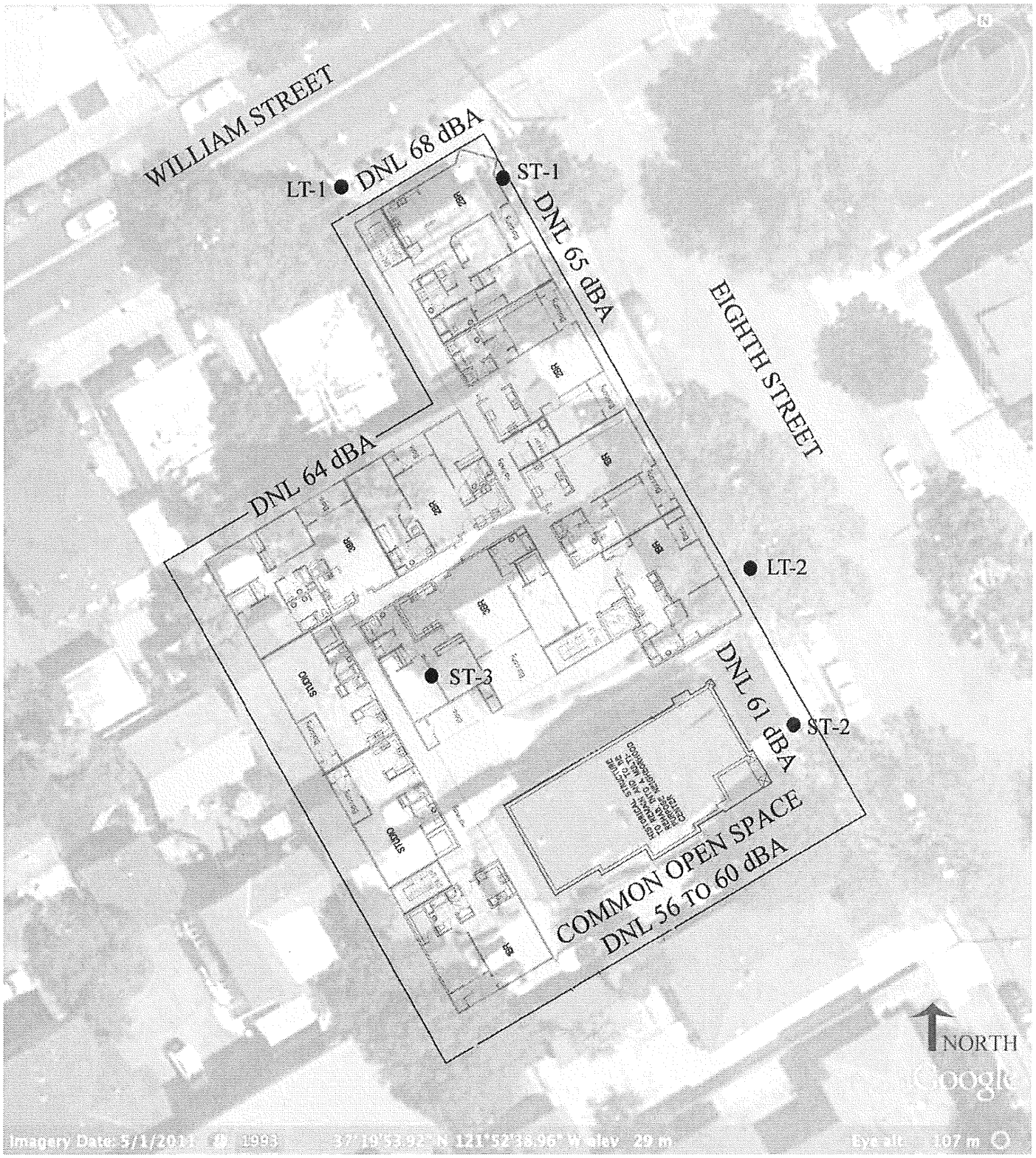
Mechanical Equipment Noise Associated with the Project

A garage exhaust fan ducted to the rooftop is planned for the underground parking garage. However, detailed information about this fan and other outdoor mechanical equipment is not available at this time. Equipment noise is subject to the limits of the San Jose Municipal Code, which limits noise generation to 55 and 60 dBA at residential and commercial property lines, respectively, and to Policy 11 of the City's General Plan which limits non-residential noise to DNL 55 dBA or lower at adjacent residences.

Noise reduction measures may include a combination of selecting quiet equipment, maintaining minimum distances to property lines, incorporating acoustically solid parapet walls, and/or equipment enclosures. For garage exhaust fans, noise reduction may also include duct lining and acoustical silencers or louvers. Details must be determined during the design phase when information about the proposed equipment is known.

* * *

[10] Email correspondence from the City of San Jose Department of Public Works, 2 June 2011.



● INDICATES APPROXIMATE NOISE MEASUREMENT LOCATION

NOTE: DRAWING PROVIDED BY OTHERS; NOT TO SCALE

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EIGHTH AND WILLIAM MIXED-USE PROJECT SITE PLAN INDICATING ESTIMATED FUTURE NOISE ENVIRONMENT

FIGURE 1

CSA PROJCT NO. 11-0196
27 MARCH 2012
JMR

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