Anton
DEVELOPMENT COMPANY
An Affiliate of St. Anton Partners

1415 L Street, Suite 450
Sacramento, CA 95814
(916) 400-2080
anton.co

February 6, 2015

RECEIVED
By Alameda County Environmental Health at 3:59 pm, Feb 10, 2015

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Attention: Mr. Mark Detterman, Senior Hazardous Materials Specialist

TRANSMITTAL LETTER
CONCEPTUAL SITE MODEL
6701 – 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA

Dear Mr. Detterman:

Submitted herewith for your review is *Conceptual Site Model, 6701 – 6707 Shellmound Street, Emeryville, California* dated February 6, 2015, prepared by PES Environmental, Inc.

I declare, under penalty of perjury, that the information contained in the above-referenced report for the subject property are true and correct to the best of my knowledge.

Very truly yours,

ANTON EMERYVILLE, LLC

R. Green

Rachel Green
Development Manager

PES Environmental, Inc.
Engineering & Environmental Services

A Report Prepared for:

Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

CONCEPTUAL SITE MODEL
6701 – 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA
Fuel Leak Case No. RO0000548
GeoTracker Global ID T0600100894

FEBRUARY 6, 2015

By:

FOR

Mark B. Winters, R.G.
Senior Geologist

PROFESSIONAL GEOLOGIST
KYLE S. FLORY
No. 6472
STATE OF CALIFORNIA

Kyle S. Flory, P.G.
Principal Geologist

1448.001.01.003

TABLE OF CONTENTS

LIST OF TABLES iv

1.0 INTRODUCTION 1
1.1 Objective 1
1.2 Organization 1

2.0 CONCEPTUAL SITE MODEL 2
2.1 Historical Site Use 2
2.2 Current Site and Vicinity Characteristics 3
2.2.1 Current and Expected Future Land Use 3
2.3 Regional Geology and Hydrogeology 4
2.4 Site Geology and Hydrogeology 4
2.5 Institutional and Engineering Controls 6
2.5.1 Deed Notice and Land Use Covenant 6
2.5.2 Soil Management and Contingency Plan (SMP) 7
2.6 Summary of Nearby Release and LUST Site Cases 8
2.7 Summary of Previous Environmental Activities 9
2.7.1 1989 Site Inspection, Waste Characterization and Disposal, and Sampling Activities 9
2.7.2 1989 Environmental Site Assessment and Subsurface Evaluations 10
2.7.3 1989 Underground Storage Tank Removal 11
2.7.4 1989 Phase I Review of Documents and Verification of Groundwater Flow 11
2.7.5 1990 Environmental Assessment 12
2.7.6 1990 Preliminary Assessment 13
2.7.7 1991 Interim Report for Construction and Operation of the Remediation Systems 13
2.7.8 1991 Investigation of Site Conditions Near Former USTs 14
2.7.9 1992 Site Inspection 14
2.7.10 1993 Treatment System Decommissioning 15
2.7.11 1994 Supplemental MIBK Contamination Assessment 15
2.7.12 Deed Notice 16
2.7.13 Groundwater Monitoring Activities 17
2.7.14 April 2013 Phase I Site Assessment and Phase II Investigation 18
2.7.15 November 2013 Supplemental Subsurface Investigation 19
2.7.16 November 2013 Phase I Site Environmental Site Assessment 20
2.8 Distribution of Contaminants of Concern in the Subsurface 21
2.8.1 Distribution of Petroleum Hydrocarbons in Soil 22
2.8.2 Distribution of Metals in Soil 22
2.8.3 Distribution of Semivolatile Organic Compounds in Soil 25
2.8.4 Distribution of Polychlorinated Biphenyls in Soil 27
2.8.5 Distribution of Volatile Organic Compounds in Soil 27
2.8.6 Distribution of Petroleum Hydrocarbons in Groundwater 28

TABLE OF CONTENTS
(Continued)

2.8.7 Distribution of Metals in Groundwater 29
2.8.8 Distribution of Volatile Organic Compounds in Groundwater 30
2.8.9 Distribution of Volatile Organic Compounds in Vapor 32
2.8.10 Residual COC Transport Mechanisms and Attenuation 32
2.9 Evaluation of Potential Preferential Migration Pathways 32
2.10 Site Redevelopment Plans and Evaluation of Potential Receptors 32
2.11 Evaluation of Exposure Pathways 33
2.11.1 Direct Exposure 33
2.11.2 Indirect Exposure 34
2.11.3 Potential Ecological Receptors 35
2.11.4 Summary of Potential Exposure Pathways 35
2.12 Assessment of Potential Public Health Concerns from Residual Constituents 35
2.12.1 Assessment of Potential Human Health Concerns - Groundwater Volatilization 36
2.12.2 Assessment of Potential Human Health Concerns - Direct Contact with Soil 36
3.0 SUMMARY OF CURRENT SITE CONDITIONS AND CONCLUSIONS 36
4.0 REFERENCES 37

TABLES

ILLUSTRATIONS

APPENDICES (PROVIDED ON CD-ROM)

A BORING LOGS FROM PRIOR INVESTIGATIONS

B PERTINENT DATA FROM PREVIOUS ENVIRONMENTAL REPORTS PREPARED BY PES AND OTHERS

C SITE REDEVELOPMENT PLANS

DISTRIBUTION

LIST OF TABLES

Table 1 Prior Environmental Documents

LIST OF ILLUSTRATIONS

Plate 1 Site Location Map

Plate 2 Site Vicinity

Plate 3 Site Plan

Plate 4 Site Plan and Boring, Well and Cross Section Location Map

Plate 5 Cross Section A – A'

Plate 6 Cross Section B – B'

Plate 7 Cross Section C – C'

Plate 8 Cross Section D – D'

Plate 9 Site Conceptual Model Diagram

1.0 INTRODUCTION

This Conceptual Site Model (CSM) has been prepared by PES Environmental, Inc (PES) on behalf of Anton Emeryville, LLC (Anton) in support of planned redevelopment of commercial property located at 6701-6707 Shellmound Street, in Emeryville, California (subject property or site). The site location is shown on Plate 1, the site vicinity is shown on Plate 2, and a Site Plan is shown on Plate 3. The redevelopment plans for the site include: demolition of existing buildings; grading and soil excavation for utilities and foundations; and construction of new multi-story residential buildings and associated parking and landscaped areas. The current site owner is John Nady, Trustee, Nady Trust, dated January 21, 1997, as his sole and separate property. The property is leased to Nady Systems, Inc. (Nady). Anton is currently seeking acquisition of the site from Nady.

The subject property is currently listed as an open Spills, Leaks, Investigation and Cleanup (SLIC) case with Alameda County Environmental Health Services (ACEH) as the lead environmental regulatory agency. The case is listed under Mike Roberts Color Production (6707 Bay Street), and the database lists other solvents and non-petroleum hydrocarbons as the potential contaminants of concern. PES is assisting Anton in working with ACEH to obtain SLIC case closure as part of the site redevelopment process.

The site is also listed under Mike Roberts Color Production (6707 Bay Street) in the Leaking Underground Storage Tank (LUST) database due to the reported release from the former USTs discussed in Section 2.7. The LUST case (ACEH fuel leak case number RO0000548) has been closed by ACEH under conditions associated with a deed notice (see Section 2.5, Engineering and Institutional Controls).

1.1 Objective

The objective of this report is to develop and present a CSM based on a synthesis of data from previous environmental investigations and site characteristics to identify potential human receptors and evaluate potentially complete exposure pathways at the site for analytes present in soil, soil gas, and groundwater. This CSM includes: (1) identification of the contaminants of concern (COCs); (2) a summary of the hydrogeologic conditions and distribution of contaminants in the subsurface; and (3) an evaluation of potential contaminant exposure pathways.

Where pertinent to the subject case, additional environmental conditions, including nearby LUST cases and other environmental conditions at or near the site, are discussed.

1.2 Organization

This document is organized as follows:

- **Section 1.0 – Introduction** – presents objectives and organization of the CSM;

- **Section 2.0 – Conceptual Site Model** – presents: (1) local and regional geology and hydrogeology; (2) describes site history, and engineering and institutional controls in place at the site; (3) describes prior environmental actions performed at and near the site; and (4) describes the potential for exposure to hazardous chemicals based on the identified presence of contaminants, transport media, exposure pathways, and potential human receptors;

- **Section 3.0 – Summary of Current Site Conditions and Conclusions** – presents a summary and conclusions based on the assessment of potential exposures to hazardous chemicals developed within the CSM; and

- **Section 4.0 – References** – presents references utilized in the development of this CSM.

2.0 CONCEPTUAL SITE MODEL

The CSM was developed using information and data from previous environmental investigations and actions that have been conducted at the site since 1989. The most recent investigations were conducted in 2013 and 2014. ENVIRON International Corporation (ENVIRON) conducted a Phase I ESA and Phase II investigation of the site in April 2013 (ENVIRON, 2013a and 2013b). In November 2013, PES conducted a supplemental subsurface investigation at the subject property (PES, 2014a), and PES completed a Phase I Environmental Site Assessment (ESA) for the subject property in January 2014 (PES, 2014b). Information from these previous investigation reports is incorporated into the CSM as appropriate. The findings of these previous investigations are summarized in Section 2.7.

2.1 Historical Site Use

The land on which the site is located historically consisted of San Francisco Bay tidal mud flats and was below sea level until the mid- to late 1930's. In the mid- to late 1930's, a levee was built west of the subject property and a highway (Eastshore Highway, now Interstate 80) was constructed on the levee. From that time until the early to mid-1950s the area between the highway and the former shoreline including the subject property and vicinity were filled in by non-native soils to create buildable land. The existing site buildings were constructed over fill materials in approximately 1963.

Dymo Industries, Inc. (Dymo) operated at the site from approximately 1963 to 1979. Dymo manufactured label tape and label tape punchers and used methyl isobutyl ketone (MIBK, which is also known as 4-methyl-2-pentanone) and methyl ethyl ketone (MEK, which is also known as 2-butanone) in the manufacturing processes (Bechtel, 1992). These chemicals were stored in three USTs that were located in the eastern portion of the site near Shellmound Street (UST locations shown on Plate 3). As discussed in Section 2.7, the USTs were removed in 1989. Discovery and reporting of impacts related to these USTs led to the LUST case (ACEH fuel leak case number RO0000548) that has been closed by ACEH.

Mike Roberts Color Productions (MRCP) operated at the site from 1979 to 1989, and initially manufactured and printed colored postcards. They later expanded into color printing, lithography, and off-set printing operations (Bechtel, 1992). These operations produced waste that included printing ink, solvent cleaning compounds, volatile and semi-volatile hydrocarbons, and color pigments, which were stored in 55-gallon drums on the west side of the warehouse building (i.e., in the former drum storage area shown on Plate 3). Nady purchased the property from MRCP in 1990 and has continued to operate at the site to the present. Nady packages and distributes communication systems, such as wireless microphones and specialty audio systems, from the facility. The site is currently used for offices and for storage of electronic sound equipment, product shipping and receiving, and minor equipment repair. Nady has used very limited amounts of chemicals in its operations.

2.2 Current Site and Vicinity Characteristics

The site is located at 6701, 6705, and 6707 Shellmound Street (previously known as Bay Street), in a mixed industrial, commercial, and residential area of Emeryville, Alameda County, California. The site buildings consist of a two-story office building and a warehouse building. A second story mezzanine-level area is located in the northern portion of the warehouse. The warehouse and office building are connected by a 1-story lobby/receptionist area. The footprints of the office and warehouse buildings occupy approximately 7,470 and 43,850 square feet, respectively, and both buildings have slab-on-grade foundations. The exterior of the subject property consists of landscaped areas and asphalt paved parking and driving areas. The site consists of a single legal parcel covering approximately 2.27 acres and identified by Alameda County Assessor's Parcel Number (APN) 049-1490-002.

The site is bounded to the west and north by the Ashby Avenue off-ramp from Interstate 80, to the south by a commercial building, and to the east by Shellmound Street and a railroad right-of-way. The site buildings and the adjacent areas are shown on Plates 2 and 3.

According to the United States Geological Survey (USGS) *Oakland West, California* Quadrangle 7.5-minute series topographic map dated 1993, the site is situated at an elevation of approximately 18 feet above mean sea level. The site is relatively flat, but the vicinity slopes gently to the west/southwest. The nearest surface water body is San Francisco Bay, located approximately 1,000 feet west of the subject property.

2.2.1 Current and Expected Future Land Use

Currently the site is predominantly covered with the office and warehouse buildings and paved parking/driving areas. The site is used for commercial purposes.

Future plans are for a new multi-story, multi-family residential development to be constructed on the subject property. Existing buildings and related improvements will be demolished and removed followed by grading and excavation for new construction. Planned development includes a seven-story building comprising the majority of the subject property with open

parking garage, lobby, and amenities spaces occupying the first (on-grade) and second floors of the building. A limited portion of the first and second floors will be developed as residential units. After redevelopment, the entire site will be covered by the building, and associated paved parking and driving areas with the exception of planter and landscaped areas.

2.3 Regional Geology and Hydrogeology

The San Francisco Bay Area is in the California Coastal Range Province, a region characterized by northwest-trending ridges and valleys that generally parallel the major geologic structures, such as the San Andreas and the Hayward Fault systems. Bedrock is composed of highly-consolidated and tectonically-deformed sedimentary, volcanic, and metamorphic rocks of the Franciscan Formation (Jurassic to Cretaceous age). Franciscan rocks commonly consist of pervasively sheared shale and sandstone that include isolated masses of other types of rocks including serpentinite and are referred to as melange. As much as 540 feet of thick sequences of poorly consolidated late Tertiary/early Quaternary alluvial fan deposits are overlain by unconsolidated surficial deposits of Pleistocene to Quaternary age. These surficial deposits include colluvium, alluvium, dune sands, bay mud and marsh deposits.

Historical development of the San Francisco Bay area also resulted in placement of non-native artificial fill material over substantial portions of modern estuaries, marshlands, tributaries, and creek beds in an effort to reclaim land (Nichols and Wright, 1971). As noted below, the subject site is comprised entirely of land that was reclaimed from San Francisco Bay by placement of fill during the 1940s and 1950s.

The City of Emeryville is located along the southwestern margin of the Berkeley Alluvial Plain, which is a sub-area of the East Bay Plain. The two main water-bearing zones beneath Emeryville include a shallow aquifer (less than 60 feet below the surface) and a deep aquifer (200 to 300 feet below the surface). Shallow groundwater in the region flows generally west to southwesterly, toward San Francisco Bay.

2.4 Site Geology and Hydrogeology

Based on the results of investigations performed on the subject property and in the vicinity, the site is underlain by imported fill material overlying deposits of native silts and clays known locally as Bay Mud. Beneath the Bay Mud deposits are deposits of stiffer sand, silts, and clays that likely represent alluvial deposits of the Temescal Formation (URS, 2005). During the later part of the 1930s through the early to mid-1950s, the subject property and vicinity were filled in by non-native soils to create buildable land. A former unregulated landfill (Emeryville Ashby/Point Emery) is located west of the site where the current I-80 and Ashby Avenue interchange exists, and portions of the site may be situated over the former landfill. The fill material generally consists of coarse-grained sands and gravels that contain varying amounts of fines, and fine-grained silts and clays. Fill material debris[1] has been encountered throughout

[1] Debris material includes brick, wood, concrete rubble, asphalt, metal debris, glass, fabric, and rubber.

the site (PES, 2014a). According to the Survey Geographic Database (SSURGO), the U.S. Department of Agriculture, Soil Conservation Service classifies these soils as urban land soils.

Previous investigations have shown that the fill materials at the site and other similarly filled properties in the vicinity contain residual contamination with related impacts to shallow groundwater. Contamination found and attributed to the non-native fill materials originally used to create the land along the bay-shore area of Emeryville including the site and immediate vicinity includes impacts related to total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals.

Based on the results of investigations performed on the subject property and in the vicinity, the site is underlain by fill material overlying deposits of native silts and clays known locally as Bay Mud. Physical subsurface conditions at the site are presented on four cross sections; the alignments of which are shown on Plate 4. The east-west trending cross sections A-A' and B-B' are shown on Plates 5 and 6, respectively, and north-south trending cross sections C-C' and D-D' are shown on Plates 7 and 8, respectively. These cross sections were generated using the lithologic data from the soil borings advanced during the PES' 2013 supplemental subsurface investigation (PES 2014a) and from lithologic data obtained during previous site investigations. Lithologic boring logs are presented in Appendix A. As shown on the cross sections and boring logs, fill material consisting of coarse-grained sands and gravels that contain varying amounts of fines, and fine-grained silts and clays with varying amounts of sand and gravel was encountered throughout the site. The fill material ranges from 14 to 19 feet thick. Fill material debris[2] has been encountered throughout the site, but is generally most abundant on the western half of the site and at depths below approximately 8 to 10 feet bgs. The approximate percent and content of the debris encountered beneath the site is shown on the cross sections and on the lithologic logs. Fine-grained soils were encountered directly below the fill material. These soils generally consisted of very dark greenish gray to greenish gray clays and occasional silts that are soft to medium stiff. These soils represent Bay Mud deposits

Groundwater was encountered at the site at approximately 11 to 13 feet below ground surface (bgs) in November 2013 (PES, 2014a). Groundwater flow to the south/southwest has been measured from monitoring well data collected on the subject property (Subsurface Consultants, Inc., 1995b; 1995c; 1996), with localized flow toward the west in the vicinity of the former underground storage tanks (see Plate 3 for location of USTs, which are discussed in Section 2.7). The assessment that groundwater flow to the south/southwest agrees with flow directions obtained on properties to the south of the subject property (Erler & Kalinowski, Inc. [EKI], 2012 and PES, 2013).

There are currently five groundwater monitoring wells known to exist at the site that were installed during previous investigations and are consistent with locations in previous investigation reports (MW-1, MW-3, MW-7, MW-8 and MW-9). No current indications of

[2] Debris material encountered during site investigations includes brick, metal, concrete, asphalt, glass, wood, fabric, and rubber.

other monitoring wells installed during previous investigations (MW-5, MW-6 and MW-10) have been observed at the reported locations. The disposition of wells MW-5, MW-6 and MW-10 is not known. There are five existing soil vapor wells (SG-1 through SG-5) that were installed in 2013 by ENVIRON as part of their Phase II investigations. Locations of the known existing monitoring wells and soil vapor wells are shown on Plate 4 and available boring logs with well construction details are included in Appendix A.

2.5 Institutional and Engineering Controls

There is an existing deed notice on the subject property. As part of the closure for the former USTs and the related LUST case, a deed notice for the site was provided to the ACEH on February 1, 1995 as a requirement by the ACEH and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) for closure of the UST case (Pettit & Martin, 1995). In conjunction with redevelopment of the site, Anton plans to record an environmental land use covenant (LUC) with ACEH for the site. To address contaminated media that may be encountered during construction and redevelopment activities Anton also intends to submit a Soil Management and Contingency Plan (SMP) for ACEH approval. The SMP would provide procedures for handling and management of soil, and potentially groundwater, encountered during construction. The SMP will also provide a post-construction operations and management (O&M) plan to describe procedures to be followed to maintain a cap over subsurface materials.

A City of Emeryville Ordinance (No. 07-006) prohibits extraction of groundwater for drinking, industrial or irrigation purposes, and provides an additional institutional control that reduces the potential for exposure to groundwater.

As further described below, implementation of these institutional and engineering controls provide substantial benefits with respect to addressing environmental concerns at the site and preventing unacceptable exposure to contaminants during construction activities, site redevelopment and in the future.

2.5.1 Deed Notice and Land Use Covenant

A deed notice was provided to the ACEH on February 1, 1995 as a requirement by the ACEH and the RWQCB as part of closure of the UST case (Pettit & Martin, 1995). The deed notice imposed conditions and/or restrictions on the use of the property related to groundwater use, soil excavation and potential future construction activities. The deed notice is discussed further in Section 2.7.12.

Anton plans to work with ACEH to develop a land use covenant (LUC) to replace the existing deed notice. The LUC document will identify the contamination at the site, restrictions on development and use of the site, restrictions on use of underlying groundwater, and requirements for maintenance of the site cover and notification to ACEH.

2.5.2 Soil Management and Contingency Plan (SMP)

Based on known and/or suspected soil and groundwater contamination at and beneath the site, and information from ACEH, submittal and ACEH approval of a Soil Management and Contingency Plan (SMP) will be required to allow redevelopment of the site for residential purposes and support ACEH's closure of the SLIC case. The purpose of the SMP is to summarize existing soil and groundwater data for the site, identify safety and training requirements for construction workers, and establish procedures for assessing and managing contaminated soil and groundwater that could be encountered during construction activities (e.g., demolition, grading, and excavation) and potential subsurface work in the future. The SMP will contain the following information:

- A detailed description of the site and summary of previous investigation and remedial activities, including information on the areas and contaminants subject to soil management requirements;
- Provisions for site redevelopment activities (e.g., building demolition and foundation slab removal, asphalt parking lot removal/installation, site grading/excavation activities, building and parking structure foundation construction, and roadway and utility trench construction);
- A Health and Safety Plan (HASP) for use by contractors performing demolition and construction activities (exclusive of asbestos-containing materials or other hazardous materials in existing building materials);
- Field screening protocols;
- Soil matrix sampling/characterization protocols;
- Soil and groundwater management practices (e.g., segregation/storage/transportation of soils, dust control, and decontamination procedures);
- A soil and groundwater management and contingency plan;
- A Post-Construction Operations & Management Plan;
- An Intrusive Earthwork Guidance Plan with procedures for protecting workers conducting subsurface work at the site; and
- A schedule of future activities.

The institutional and engineering controls provided by the SMP ensure that future occupants and subsurface construction workers are protected during intrusive sub-grade work from potential exposure to residual contamination. The SMP will be submitted to ACEH for review and approval.

2.6 Summary of Nearby Release and LUST Site Cases

A description of a nearby LUST case pertinent to the subject site is presented below. As further indicated below, affected groundwater from these nearby cases does not appear to have commingled with affected groundwater for the subject property. Details regarding the Mussallem/Sybase and Richardson/Sybase Property, which is located south and immediately adjacent to the site, are discussed below based on its proximity to the site and environmental investigations conducted at this property.

The Mussallem/Sybase and Richardson/Sybase Property, which is the current location of Ex'pression College, is located at 6601 and 6603 Shellmound Street (referenced herein as Sybase). The 6601/6603 Shellmound Street site (ACEH case numbers RO0000042 / RO0000043; Geotracker Global ID's T0600100825 / T0600100470) is located south and immediately adjacent to the subject property (see Plate 2). The Sybase property lies downgradient of the subject property based on south/southwest groundwater flow directions obtained at this property (EKI, 2012), the subject property, and other properties in the vicinity.

Three USTs were removed from the Sybase property in August and October 1989. The USTs were located approximately 150 feet south of the subject property, adjacent to the southern property boundary of the 6601/6603 Shellmound Street. The USTs contained diesel, leaded gasoline, and unleaded gasoline (EKI, 2012). Separate-phase hydrocarbon was observed in the excavation during the removal of the USTs in August 1989. Subsequently, 4,950 gallons of petroleum and groundwater were removed from the excavation between August 23 and September 12, 1989.

Various environmental investigations have been conducted at the Sybase property dating back to 1989. The most recent investigations conducted in 2011 and 2012, involved collected samples from three monitoring wells, and installing subslab vapor probes. The results from the 2011 and 2012 investigations and current site conditions are presented in EKI's 2012 report titled *Report of Additional Site Investigation and 2012 Request for Site Closure* (EKI, 2012). Impacts to soil and groundwater have been characterized as oil and grease, TPHd, TPHg, and BTEX. Based on existing data, the 2012 report indicated that benzene may be present in subslab vapor, but the concentrations are relatively low and are expected to decrease over time. The report requested that ACEH issue a case-closure letter for the property under the 2012 California State Water Resources Control Board (SWRCB) Low-Threat UST Case Closure Policy[3].

This property is not expected to present a significant environmental concern to the subject property based on its downgradient location with respect to the subject property, and the nature and extent of soil, groundwater, and soil vapor detected in environmental investigations conducted at the property.

[3] California State Water Resources Control Board, 2012. Resolution 2012-0016: "*Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closure.*" May 1.

Other nearby sites listed on the hazardous materials release databases are not expected to present a significant environmental concern to the subject property based on one or more of the following: (1) the listed property has received case closure by the appropriate regulatory agency; (2) the listed property is either crossgradient or downgradient of the subject property with respect to the inferred regional groundwater flow direction; (3) the listed property is a soils-only case; and (4) the listed property is located at too great a distance to represent a significant environmental condition with respect to the subject property.

2.7 Summary of Previous Environmental Activities

Based on a review of historical site documents, several environmental site assessments, sampling investigations, groundwater monitoring events, and remedial actions have been conducted at the site since 1989. The following sections summarize past investigations and other environmental actions taken at the subject property. Pertinent reference documents are included in Section 4.0, and a list of prior environmental documents is presented in Table 1. Pertinent data tables and plates from previous reports prepared by PES and others are presented in Appendix B. The information includes historical soil, groundwater, and soil gas analytical results, and depth-to-water and groundwater elevation data. Previous investigation sampling locations are included on Plate 4.

2.7.1 1989 Site Inspection, Waste Characterization and Disposal, and Sampling Activities

The ACEH inspected the MRCP facility in January 1989, and subsequently issued MRCP a Notice of Violation under four sections of the California Code of Regulations (CCR), Title 22. The violations included citations for lack of an EPA identification number, no copies of hazardous waste manifests on-site, on-site storage of hazardous waste for more than 90 days, and hazardous waste storage areas that lacked secondary containment (ACDEH, 1989).

LW Environmental Services, Inc. (LW Environmental) conducted the following sampling activities in March and April 1989:

- Sampled 90 drums of hazardous waste stored at the west end of the printing facility (i.e., area labeled on Plate 3 as former drum storage area) on March 14 and 15, 1989. The drums contained waste associated with site operations conducted by MRCP; and

- Drilled two borings (IS-1 and IS-2) in the general vicinity of the stored drums on April 26, 1989.

Based on the analytical results the drums were profiled and properly disposed off-site at Gibson Oil & Refining in Bakersfield, California, in June 1989 (LW Environmental, 1989a). The analytical results for the sample collected from borings IS-1 and IS-2 are discussed below.

2.7.2 1989 Environmental Site Assessment and Subsurface Evaluations

The discussion below summarizes the observations, analytical results, and findings presented in the following 1989 reports prepared by LW Environmental:

- *Environmental Site Assessment and Subsurface Evaluation – Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California*. July 10 (LW Environmental, 1989b);

- *Supplemental Environmental Site Assessment and Subsurface Evaluation – Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California*. August 25 (LW Environmental, 1989c); and

- *Environmental Site Assessment – Phase II Subsurface Evaluation - Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California 94609.* September 26 (LW Environmental, 1989d).

LW Environmental inspected the site to assess the potential for contamination on March 13 and August 17, 1989. Areas of concern found during the site inspections included:

- The presence of two shallow compressor sumps used to collect discharged condensate from air lines. The sumps were connected to the municipal sewer system;

- Three USTs were discovered on the eastern side of the property. The removal of these USTs is discussed below;

- Four drains found in the mezzanine area of the warehouse channeled discarded chemical wastes into a sump located outside and along the western side of the warehouse. The sump was connected to the municipal sewer system. The sump area was excavated on August 21, 1989. The location of the former sump and sump excavation is shown on Plate 3. The confirmation sample from the sump excavation did not contain purgeable organics at or above the laboratory reporting limits; and

- A ditch area along the western side of the property line (Plate 3) was also excavated to approximately 3 feet below grade on August 21, 1989. This was an area where runoff from the asphalt was channeled and collected. Confirmation samples collected at 1 and 3 bgs were analyzed for purgeable organics. Ethylbenzene, total xylenes, and/or toluene were detected in these samples at maximum concentrations of 20 milligrams per kilogram (mg/kg), 360 mg/kg, and 80 mg/kg, respectively.

Between April 26 and August 31, 1989, LW Environmental drilled eight borings (IS-1, IS-2, and B-1 through B-6) and installed four groundwater monitoring wells (MW-1 in boring B-1, MW-3 in boring B-3, MW-5 in boring B-5, and MW-6 in boring B-6). Monitoring well MW-1 was sampled on July 8 and September 7, 1989, and the remaining wells were sampled on September 7, 1989.

Based on the results of the investigation, LW Environmental recommended:

- Delineate and excavate the extent of shallow hydrocarbon contamination in the soil at the rear of the site; and

- Continue sampling of groundwater from existing wells to monitor contaminant concentrations (refer to Section 2.7.5).

2.7.3 1989 Underground Storage Tank Removal

On October 2, 1989, LW Environmental oversaw the removal of the contents of the three USTs located on the eastern side of the subject site (LW Environmental, 1989e). The approximate extent of the former UST excavation is shown on Plate 3. According to the Underground Tank Closure/Modification Plans form submitted to ACEH, the USTs historically contained solvents and had capacities of 1,650, 2,000, and 3,200 gallons. Approximately 1,075 gallons of liquid, which was profiled as MEK and water, was pumped from the USTs and transported off-site for disposal.

On October 5, 1989, the USTs were removed and transported off-site for disposal. Soil excavated during the UST removals was stockpiled on-site in a secure, fenced area. After the USTs were removed, soil confirmation samples were collected (under the direction of an ACEH inspector) along the excavation walls at both ends of the USTs (sample IDs SS-1 through SS-6). The samples were analyzed for total petroleum hydrocarbons quantified as diesel (TPHd) and TPH quantified as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and halogenated VOCs. The confirmation samples analytical results indicated the presence of TPHg, TPHd, BTEX, 1,2-dichlorobenzene (1,2-DCB), 1,3-dichlorobenzene (1,3-DCB), 1,4-dichlorobenzene (1,4-DCB).

Based on a December 19, 1989 letter from SCS Engineers to Mr. John Nady, the soil that was excavated during the removal of the USTs was placed back into the excavation upon agreement with LW Environmental (SCS Engineers, 1989) because it contained "relatively high concentrations of methyl-isobutyl-ketone." SCS Engineers indicated in the letter that a soil vapor extraction system would be installed subsequently to remediate this soil.

2.7.4 1989 Phase I Review of Documents and Verification of Groundwater Flow

In November 1989, McLaren prepared a review of the environmental work performed to date at the site and verified groundwater flow direction (McLaren, 1989). The scope of work included a site visit (including a building walk through) and neighborhood drive-by, a review of published lists for known hazardous waste sites, surveying of four existing site groundwater wells, and measurement of the water levels in the wells to verify the groundwater flow direction.

Results of McLaren's work verified that the apparent groundwater flow direction is to the northwest in the vicinity of the USTs. Based on their findings, McLaren recommended:

- Further review of neighboring sites and historical chemical use to determine if off-site contamination is migrating onto the site;

- Further excavation in the UST area and additional soil and groundwater sampling in this area;

- Conduct a second round of sampling on the four on-site wells to establish baseline conditions; and

- Install wells and soil borings upgradient of Well MW-5 to determine whether contaminated groundwater is migrating onto the subject site from the adjacent 6601/6603 Shellmound Street property to the south.

2.7.5 1990 Environmental Assessment

SCS Engineers Environmental Assessment of the site consisted of: (1) performing an off-site records search and assessment, and a reconnaissance of the site and surrounding areas; and (2) conducting a subsurface investigation in January 1989. The results of their assessment are presented in the January 30, 1990 report titled *Environmental Assessment, 6707 Bay Street, Emeryville, California* (SCS Engineers, 1990). The subsurface investigation involved drilling five borings (i.e., B-9 through B-13) and installing two groundwater monitoring wells (i.e., MW-7 and MW-8). As recommended by LW Environmental in 1989, these monitoring wells and the four existing wells (i.e., MW-1, MW-3, MW-5, and MW-6) were sampled as part of their investigation activities.

SCS Engineers concluded that their off-site records search and assessment indicated that there is a possibility that the site was being impacted by contamination from off-site sources and that the site may possibly be located over an abandoned landfill. Construction debris was found in the borings advanced during the investigation.

In summary, the subsurface investigation encountered contamination in vadose zone soil and groundwater beneath the site. Oil and grease (up to 45,000 mg/kg) was detected in all of the soil samples, and diesel (up to 5,050 mg/kg) and polychlorinated biphenyls (PCBs, up to 4.2 mg/kg) were detected in some of the soil samples. Metals were detected in most of the soil samples with lead concentrations as high as 3,000 mg/kg in boring B-12. Low levels of volatile (including MIBK at 8 mg/kg in well MW-8) and SVOCs were also detected in soil. The groundwater monitoring well samples detected little or no contamination in most of the wells except:

- Benzene in wells MW-5 (at 12 micrograms per liter [μg/L]) and MW-8 (up to 2,100 μg/L);

- Oil and grease at concentrations ranging from 500 μg/L (in well MW-1) to 103,000 μg/L (in well MW-8); and

- MIBK (160,000 μg/L) in well MW-8.

Based on the results of their investigation, SCS Engineers recommended the installation of soil vapor extraction system and groundwater extraction and treatment system in the vicinity of the former USTs to remove and treat MIBK in soil and groundwater, and installation of a system in the southwest portion of the site using either MW-5 or MW-7 to extract and treat groundwater.

2.7.6 1990 Preliminary Assessment

ICF Technology Incorporated (ICF) conducted a Preliminary Assessment (PA) of the subject property in 1990 on behalf of the U.S. Environmental Protection Agency (EPA) (ICF, 1990). The U.S. EPA requested the PA because the subject property was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) on February 13, 1989. The site was entered into the CERCLIS files in February 1989 due to a telephone complaint concerning the storage of drums behind the warehouse.

ICF's report discussed the site's facility process and waste management, apparent problems, regulatory involvement with the site, operation history, investigation efforts and results to date, and hazard ranking system factors, which assesses the relative threat associated with actual or potential releases of hazardous substances at the site.

Based on the report's findings, EPA recommended the site for low priority SSI (site status information).

2.7.7 1991 Interim Report for Construction and Operation of the Remediation Systems

SCS Engineers prepared this document to provide updated information regarding subsurface conditions beneath the site, and to discuss construction and operation of the remediation systems installed at the site (SCS Engineers, 1991). The report indicated that SCS Engineering had conducted the following work since January 1990:

- Pumping tests at MW-7 and MW-8 were conducted in July 1990;
- Construction of the remediation systems took place from June through September 1990;
- The vapor extraction and treatment system began operating in July 1990 and the groundwater extraction and treatment system began operating in October 1990; and
- The groundwater remediation effluent and influent were sampled in November and December of 1990 and the rate of flow from the system was measured to determine the amount of water being discharged to the landscaped area.

The report indicated a vapor extraction system was installed in the area of the former USTs, and groundwater extraction and treatment systems were installed in the vicinity of the UST excavation using well MW-8 as an extraction well and in the southwest portion of the site using MW-7 as an extraction well.

The vapor extraction system ran from late July to late September 1990 and the influent vapor stream readings dropped to 2 parts per million (ppm) before the system was shutdown to allow contaminants to buildup in the vicinity of the extraction wells. The report indicated that after the shutdown the system had not exceeded 10 ppm since October 22, 1990. Based on these results they concluded that the system appears to have been successful.

The report also discussed pre-remediation groundwater results for wells MW-7 and MW-8 versus results for samples collected 2-months into remediation. Lower TPH concentrations were detected in both wells, and lower concentrations of benzene and MIBK were detected in well MW-8

2.7.8 1991 Investigation of Site Conditions Near Former USTs

PES prepared a report in 1991, summarizing results of the investigation of site conditions in the vicinity of the former USTs (PES, 1991). The investigation consisted of:

- Drilling two soil borings (i.e., PB-1 and PB-2) in the area of the former USTs and collecting soil samples for chemical analysis; and
- Sampling three existing monitoring wells in the area of the former USTs to evaluate groundwater conditions.

No contaminants were detected in the soil in the vicinity of the former USTs. Based on these results PES concluded that the soil vapor extraction system appeared to have been effective in reducing MIBK concentrations in unsaturated soils in the vicinity of the former USTs. In the report, PES recommended that the ACDEH approve no further action with respect to soil contamination in the former UST area and allow the system to be abandoned.

The groundwater results indicated that detectable amounts of MIBK were present in the area of the former USTs. However, PES indicated that MIBK had not been detected in any well other than MW-8. Groundwater monitoring for three additional quarters was recommended.

2.7.9 1992 Site Inspection

Bechtel conducted an inspection of the subject property in 1992 on behalf of the EPA, Region IX (Bechtel, 1992). As discussed above, a PA of the subject property was conducted for the EPA by ICF in 1990.

The Bechtel report indicated that the site had the following environmental conditions:

- MIBK, lead, copper, zinc, benzene, and toluene were detected in groundwater; and
- Subsurface soil sampling indicates the presence of zinc, lead, copper, BTEX, and MIBK.

Bechtel's report discussed the site's operational history, investigation efforts and results to date, and hazard ranking system factors, which assesses the relative threat associated with actual or potential releases of hazardous substances at the site.

Based on the report's findings, EPA recommended no further action was required under the authority of CERCLA.

2.7.10 1993 Treatment System Decommissioning

As discussed in a *Quarterly Groundwater Monitoring and Treatment System Decommissioning* prepared by Subsurface Consultants, Inc., the treatment systems were decommissioned in May 1993 (Subsurface Consultants, Inc., 1993a).

2.7.11 1994 Supplemental MIBK Contamination Assessment

Subsurface Consultants, Inc. conducted a supplemental investigation to further investigation the extent of MIBK in the vicinity of the former USTs (Subsurface Consultants, Inc., 1994c). The investigation involved:

- Drilling nine borings (i.e., T1 through T7 and the two well boreholes indicated below) to depths of approximately 15 feet bgs;
- Installing monitoring wells in two of the boring (i.e., MW-9 and MW-10);
- Sampling wells MW-8, MW-9, and MW-10 in April 1994, well MW-8 in May 1994, and wells MW-1, MW-3, MW-8, MW-9, and MW-10 in August 1994; and
- Performing slug tests in monitoring wells MW-3, MW-8, MW-9, and MW-10 to estimate the hydraulic conductivity in the former UST area.

In soil, MIBK was detected in 5 of 16 samples at concentrations ranging from 6 micrograms per kilogram (μg/kg) to 7,800 μg/kg (in the 14 feet bgs sample collected from boring T7). In groundwater, MIBK was detected at concentrations ranging from 23 μg/L in well MW-10 (April event) to 140,000 μg/L in well MW-8 (May event).

Based on the results of the investigation Subsurface Consultants, Inc. concluded that significant soil and groundwater remediation has occurred in the area of the former USTs, but elevated levels of MIBK still remain, predominantly within clayey soil and in groundwater downgradient of the former USTs.

2.7.12 Deed Notice

As discussed previously, a deed notice was provided to the ACEH on February 1, 1995 as a requirement by the ACEH and the RWQCB for closure of the UST case (Pettit & Martin, 1995). The deed notice imposed the following conditions and/or restrictions on the use of the property:

1. If soil is excavated, it may be considered hazardous waste under state and federal law;

2. Groundwater from the site is not usable for domestic, irrigation or industrial purposes;

3. If future construction includes structures extending below the ground level (that being approximately 7 to 10 feet), groundwater generated during dewatering operations will require treatment prior to discharge;

4. An approved Health and Safety Plan will be required by the Alameda County Health Care Services Agency (ACHCSA) prior to any work requiring significant subsurface excavations; and

5. An environmental risk assessment may be required by the ACHCSA if any significant change in land use is proposed.

Subsequently in December 1996, following the completion of groundwater monitoring activities at the site, the ACEH issued a conditional site closure letter stating that further remediation and/or monitoring related to the former USTs removed from the site is not required, but the recorded deed notice must be modified to include the following risk management measures (ACEH, 1996):

1. The shallow groundwater beneath the site shall not be used. This statement should replace condition #2 as recorded in the previous deed notice.

2. Appropriate Health and Safety plans shall be prepared prior to and followed during any activities involving exposure to pollution in soil or groundwater. This statement should replace condition #4.

3. A health risk assessment shall be required if a change in land use, structural configuration or site activities are proposed such that more conservative scenarios should be evaluated. This statement should replace condition #5.

4. Potential vertical conduits between the shallow and deep aquifers shall not be created. This statement should replace condition #6.

No information was obtained by PES that indicated the deed notice had been modified to be consistent with the December 1996 letter.

2.7.13 Groundwater Monitoring Activities

Groundwater monitoring reports prepared for the site include:

- Subsurface Consultants, Inc., 1993a. *Quarterly Groundwater Monitoring and Treatment System Decommissioning*. June 14.
- Subsurface Consultants, Inc., 1993b. *Quarterly Groundwater Monitoring, August 1993*. September 15.
- Subsurface Consultants, Inc., 1994a. *Quarterly Groundwater Monitoring, November 1993*. January 8.
- Subsurface Consultants, Inc., 1994b. *Quarterly Groundwater Monitoring, February 1994*. April 5.
- Subsurface Consultants, Inc., 1995b. *Groundwater Monitoring, February 1995 Event*. March 1.
- Subsurface Consultants, Inc., 1995c. *Groundwater Monitoring, November 1995 Event*. December 15.
- Subsurface Consultants, Inc., 1996. *Groundwater Monitoring - May 1996 Event, Request for "No Further Action*." June 21.

During the final monitoring event, which was conducted on May 9, 1996, water samples were collected from wells MW-1, MW-8, MW-9, and MW-10. Constituents detected during this event included:

- MIBK at a concentration of 15,000 μg/L in well MW-8;
- Benzene and chlorobenzene in well MW-10 at concentrations of 7.5 μg/L and 3.5 μg/L, respectively;
- Total extractable hydrocarbons (TEH) at concentrations ranging from 1.0 to 5.7 milligrams per liter (mg/L); and
- Total volatile hydrocarbons (TVH) at concentrations ranging from 0.05 to 3.6 mg/L.

Subsurface Consultants, Inc. indicated that all measured required in the *Addendum No. 1, Work Plan and Revised Request for "No Further Action"* were completed and requested confirmation that "no further action" was required for the site and that the site may be closed (Subsurface Consultants, Inc., 1995a).

2.7.14 April 2013 Phase I Site Assessment and Phase II Investigation

ENVIRON International Corporation (ENVIRON) conducted a Phase I ESA and Phase II investigation of the site in April 2013. The findings of their Phase I ESA and Phase II investigation are presented in the July 3, 2013 draft report titled Phase I Environmental Site Assessment (ENVIRON, 2013b). The results of the Phase II investigation are also presented in ENVIRON's document titled Summary of Environmental Findings (ENVIRON, 2013a).

During the Phase II investigation, ENVIRON collected soil, soil gas, and/or grab groundwater samples from locations SG-1 through SG-5. The analytical results for the investigation are summarized below:

- Soil: Impacted with TPHd and TPH quantified as motor oil (TPHmo). Polychlorinated biphenyls (PCBs) were detected at concentrations above regulatory screening levels at locations SG-3 (at 14 mg/kg) and SG-4 (at 8 mg/kg). The pesticide DDT was detected at 4 of the 5 locations, but at concentrations below regulatory screening levels. Elevated concentrations of metals (primarily arsenic and lead) where detected in most of the soil samples;

- Grab Groundwater: Impacted with TPHd and TPHmo at concentrations above regulatory screening levels. Groundwater on the western portion of the site (SG-5) is also impacted with VOCs including benzene, ethylbenzene, naphthalene, and xylenes. Elevated concentrations of total metals (antimony, arsenic, barium, cadmium, cobalt, copper, lead, mercury, molybdenum, nickel, silver, vanadium and zinc) were detected. Subsequent groundwater sampling and analysis for dissolved metals indicated these findings were anomalous[4]; and

- Soil Gas: VOCs were detected in soil gas samples collected from locations SG-1 through SG-5. Benzene was detected at locations SG-3 and SG-4 at concentrations that are above the California Human Health Screening Levels[5] (CHHSLs) for shallow soil gas at residential sites. The presence of tracer gas and elevated levels of oxygen and argon in the soil gas sample from SG-3, suggest that the sample may have been affected by ambient air and therefore may not be representative of subsurface conditions.

Based on findings of these Phase I ESA and Phase II investigation, ENVIRON identified the following recognized environmental conditions (RECs) in connection with the property:

- Soil, soil gas, and groundwater contamination detected during environmental investigations conducted at the site;

[4] As discussed in Section 2.7.15, subsequent sampling and analysis indicates that the reported values of metals in groundwater are not reflective of actual site conditions.

[5] DTSC, 2005. Use of *California Human Health Screening Levels in Evaluation of Contaminated Properties*. January.

- Residual contamination from prior environmental remediation activities; and

- Open Spills, Leaks, Investigation and Cleanup (SLIC) Case. The site is listed on the SLIC database as being the focus of an open remediation case at the ACEH Local Oversight Program (LOP).

A discussion of each of these RECs is presented in ENVIRON's report.

2.7.15 November 2013 Supplemental Subsurface Investigation

In November 2013, PES conducted a supplemental subsurface investigation at the subject property (PES, 2014a). The investigation consisted of drilling, logging and sampling 18 soil borings at exterior (SB1 through SB13) and interior (SB14 through SB18) locations. Large diameter continuous soil cores were retrieved from the soil borings and logged to evaluate subsurface lithologic and fill material conditions. In addition, groundwater samples were collected through temporary well casings from six borings (GGW-1 through GGW-6) advanced in the exterior portions of the site.

In summary, the results of the supplemental investigation indicated:

- Fill material ranging from 14 to 19 feet thick underlies the entire, and is generally thinner in the central portion of the site and toward the west, and thickest toward the northern and southern portions of the site. Fill material debris, including brick, metal, concrete, asphalt, glass, wood, fabric, and rubber, has been encountered throughout the site, but is generally most abundant on the western half of the site and at depths below approximately 8 to 10 feet bgs. Fine-grained Bay Mud deposits were encountered directly below the fill material;

- The soil results for samples collected from the fill material suggest the presence of elevated concentrations (i.e., equal to or above regulatory screening levels[6]) of SVOCs, PCBs, and metals (i.e., antimony, arsenic, cadmium, cobalt, copper, lead, nickel, vanadium, and zinc). The concentrations of lead in five of the samples and vanadium in one sample also exceeded their respective Total Threshold Limit Concentration (TTLC) values;

- Waste Extraction Test (WET) was performed on seven selected samples; five of the seven results were at concentrations above the Soluble Threshold Limit Concentration (STLC) lead limit of 5.0 mg/L. The Toxicity Characteristic Leaching Procedure (TCLP) was performed on eight soil samples with elevated total lead concentrations. Only one sample contained a concentration that was above the TCLP lead limit of 5.0 mg/L; and

[6] U.S. Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.

- Groundwater is impacted with dissolved metals (i.e., arsenic and lead) that exceed State of California Maximum Contaminant Levels (MCLs[7]).

The maximum concentration of dissolved lead detected in groundwater during PES investigation was 190 μg/L in boring GGW-2. This boring was advanced on the western portion of the site. PES indicated that based on a comparison of dissolved lead and other metals results to those obtained during the April 2013 investigation; it appears that the April 2013 metal results were anomalously high and, therefore, not representative of groundwater conditions beneath the site.

2.7.16 November 2013 Phase I Site Environmental Site Assessment

PES conducted a Phase I ESA of the site in November 2013. The findings are presented in the Phase I ESA report dated January 17, 2014 (PES 2014b) and summarized below.

The subject property consists of land reclaimed by filling from San Francisco Bay and has been the subject of industrial uses since the early 1960s. Numerous environmental investigations have been undertaken to evaluate the site, as well as several remedial actions to mitigate documented environmental conditions. The LUST case has been closed under conditions associated with a deed notice. The SLIC case for the site is still open.

Based on findings of the Phase I ESA, PES identified the following RECs in connection with the property.

- The site is underlain by heterogeneous fill placed to create buildable land, like much of the filled bay-shore area of Emeryville. As such, sporadic and various chemicals can be detected when samples of soil, soil gas, and/or groundwater are tested. In addition, releases associated with the former USTs and the site's historical use may have contributed to chemical constituents detected in soil, groundwater, and soil gas samples collected during environmental investigations conducted at the site; and

- Environmental investigations at the site have identified the presence of primarily non-chlorinated VOCs in soil, soil vapor, and groundwater. If these VOCs in the subsurface are unmitigated, there is a potential for vapor intrusion on the subject property.

The following Controlled REC[8] has been identified at the subject property:

---

[7] California Department of Public Health Maximum Contaminant Levels (MCLs).

[8] A Controlled REC is defined in the American Society for Testing and Materials guidelines for Phase I Environmental Site Assessments (ASTM E 1527-13) as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

- Three USTs were removed from the subject property in 1989. The LUST case for the former USTs has been closed under conditions associated with a deed notice.

In addition, PES noted the following observations during the performance of the Phase I ESA:

- The presence of four unlabelled 55-gallon drums, which are located adjacent to the southwest corner of the warehouse building. Three of the four drums were covered. The uncovered drum appears to contain soil. The content of the remaining drums is not known. The drums are aged and discolored, but appeared to have maintained their integrity and no evidence of staining was observed. Characterization and proper off-site disposal of the drums should be conducted; and

- Numerous groundwater monitoring wells associated with the closed LUST case and vapor wells installed during prior investigations are currently located on the subject property. These wells should be properly destroyed under permit.

A discussion of each of these RECs and observations is presented in PES' report.

2.8 Distribution of Contaminants of Concern in the Subsurface

The distribution of the contaminants of concern (COCs) found in the subsurface at the site is summarized below. COCs are related to the historical fill materials originally used to create the subject property and residual contamination related to historical site operations including a release from the former USTs.

COCs include TPH, VOCs, semivolatile organic compounds (SVOCs), PCBs, and metals (primarily lead). Summary tables with the analytical results and plates with sample locations are included in Appendix B. Analytical results include a summary of historical results from 1989 to 1994, results from ENVIRON's 2013 Phase II investigation (ENVIRON, 2013b) and results from PES' 2013 supplemental subsurface investigation (PES 2014a). Subsurface Consultants, Inc. tables and plates for groundwater monitoring from 1993 to 1996 are also included.

The detected concentrations of COCs at the site are compared residential risk-based screening levels including U. S. EPA Region 9, January 2015 Regional Screening Levels (RSLs) and RWQCB December 2013 Tier 1 Environmental Screening Level (ESLs) for residential soil (shallow soil and non-drinking water). ESLs have been developed for specific exposure scenarios and receptors including direct exposure and vapor intrusion for volatile chemicals. Soil and groundwater concentrations are also compared to direct exposure ESLs and vapor intrusion ESLs for volatile COCs that may be potentially applicable to the site. Vapor intrusion ESLs for residential receptors and ESLs for direct exposure for construction and trench workers were used for comparisons.

2.8.1 Distribution of Petroleum Hydrocarbons in Soil

Results are from analyses for oil & grease, TPHd, TPHmo, TEH (aka total extractable petroleum hydrocarbons [TEPH]), and TVH (including total VOCs for 1989 to 1994 results).

- Historical (1989 to 1994) results for oil & grease range from 20 to 45,000 mg/kg in soil samples collected at depths of 3 to 25.5 feet bgs at locations across the north and west portions of the site. Detected TEPH concentrations range from 11 to 7,300 mg/kg and the reported concentrations of total VOCs (TVH) vary from 2 to 460 mg/kg; and

- Soil samples collected at depths of 3 to 5 feet bgs in borings SG-1 through SG-5 by ENVIRON in April 2013 had reported concentrations of 33 to 290 mg/kg TPHd, and 250 to 1,400 mg/kg TPHmo.

The RWQCB ESL (residential shallow soils where groundwater is not a current or potential of drinking water) for TPH in soil, including TPHg, TPHd and TPHmo, is 100 mg/kg.

The U.S. EPA RSLs for TPH in soil range from 96 to 230,000 mg/kg depending on the carbon range and amounts of aliphatic and aromatic hydrocarbons.

The RWQCB direct exposure ESLs for TPHg, TPHd, and TPHmo in soil for construction and trench workers are 2,700, 900, and 28,000 mg/kg, respectively.

The highest concentrations of TPH generally were found at depths of approximately 8 to 12 feet bgs which coincide with the depth interval of groundwater fluctuations beneath the site. Concentrations generally increase with depth to 8 to 12 feet bgs, then decrease with additional depth.

2.8.2 Distribution of Metals in Soil

The following summarizes detections for metals that exceed risk-based screening levels (residential, shallow soil, non-drinking water ESLs and residential RSLs). Concentrations are also compared to the direct exposure ESLs. Hazardous waste criteria are also included as applicable.

Arsenic - ESL is 0.39 mg/kg and RSL is 0.67 mg/kg. Total threshold limit concentration (TTLC) which determines if a soil is classified as California–regulated or non-RCRA hazardous waste is 50 mg/kg.

- Historical (1989 to 1994) results – 4.2 to 38 mg/kg;

- 2013 ENVIRON results - 6.9 to 12 mg/kg; and

- 2013 PES results – 2.3 to 49 mg/kg.

Concentrations are above ESL and RSL. Four samples with concentrations of 19 to 49 mg/kg were collected at depths of 9 and 10 feet. Other sample concentrations range from 2.3 to 12 mg/kg which is considered within the range of naturally occurring background levels for arsenic.

The ESL for direct exposure to arsenic in soil for construction and trench workers is 10 mg/kg and lower than concentrations detected in soil.

Cadmium - ESL is 12 mg/kg and RSL is 70 mg/kg. TTLC is 100 mg/kg.

- Historical (1989 to 1994) results – 44 mg/kg; and
- 2013 PES results – 13 mg/kg.

Concentrations are above ESL and below RSL. Sample with 44 mg/kg was collected at 9 feet bgs and sample with 13 mg/kg was collected at 7.5 feet bgs.

The ESL for direct exposure to cadmium in soil for construction and trench workers is 110 mg/kg and higher than concentrations detected in soil.

Cobalt - ESL and RSL are both 23 mg/kg. TTLC is 8,000 mg/kg.

- Historical (1989 to 1994) results – 28 mg/kg; and
- 2013 PES results – 26 mg/kg.

Concentrations are slightly above ESL and RSL. Sample with 28 mg/kg was collected at 9 feet bgs and sample with 26 mg/kg was collected at 5 feet bgs.

The ESL for direct exposure to cobalt in soil for construction and trench workers is 49 mg/kg and higher than concentrations detected in soil.

Copper - ESL is 230 mg/kg and RSL is 3,100 mg/kg. TTLC is 2,500 mg/kg.

- Historical (1989 to 1994) results – 330 to 2,300 mg/kg;
- 2013 ENVIRON results - 480 mg/kg; and
- 2013 PES results – 260 to 450 mg/kg.

Concentrations are above ESL and below RSL. Samples with concentrations above the ESL (230 mg/kg) were collected at depths of 5.5 to 10 feet bgs.

The ESL for direct exposure to copper in soil for construction and trench workers is 12,000 mg/kg and higher than concentrations detected in soil.

Lead - ESL is 80 mg/kg and RSL is 400 mg/kg. TTLC is 1,000 mg/kg.

- Historical (1989 to 1994) results – 90 to 4,300 mg/kg, concentrations in 5 samples (1,270 to 4,300 mg/kg) exceed TTLC;
- 2013 ENVIRON results – 120 to 990 mg/kg; and
- 2013 PES results – 81 to 10,000 mg/kg, concentrations in 5 samples (1,100 to 10,000 mg/kg) exceed TTLC.

Concentrations are above ESL and RSL. Samples with concentrations above the TTLC (1,000 mg/kg) were collected at depths of 5.5 to 15.5 feet bgs.

The ESL for direct exposure to lead in soil for construction and trench workers is 320 mg/kg and lower than concentrations detected in soil.

Nickel - ESL is 150 mg/kg and RSL is 820 mg/kg. TTLC is 2,000 mg/kg.

- Historical (1989 to 1994) results – 151 to 350 mg/kg;
- 2013 ENVIRON results - 220 mg/kg; and
- 2013 PES results – 170 to 190 mg/kg.

Concentrations are above ESL and below RSL. Sample with the highest concentration of 350 mg/kg was collected at 9 feet bgs.

The ESL for direct exposure to nickel in soil for construction and trench workers is 6,100 mg/kg and higher than concentrations detected in soil.

Vanadium - ESL is 200 mg/kg and RSL is 390 mg/kg. TTLC is 2,400 mg/kg.

- 2013 PES results – 11,000 mg/kg, concentration exceeds ESL, RSL and TTLC.

Concentrations are below ESL and RSL for all other samples. Sample with concentration above the ESL, RSL and TTLC threshold limit was collected at a depth of 10 feet bgs.

The ESL for direct exposure to vanadium in soil for construction and trench workers is 1,500 mg/kg and lower than concentrations detected in soil.

Zinc - ESL is 600 mg/kg and RSL is 23,000 mg/kg. TTLC is 5,000 mg/kg.

- Historical (1989 to 1994) results – 940 to 6,200 mg/kg, concentrations in 3 samples (5,400 to 6,200 mg/kg) exceed TTLC; and

- 2013 PES results – 920 to 2,500 mg/kg.

Concentrations are above ESL and below RSL. One sample collected at 4 feet bgs had a concentration of 940 mg/kg, and the remaining 9 samples with concentrations above the ESL (600 mg/kg) were collected at depths of 7.5 to 16 feet bgs. Samples with concentrations above the TTLC threshold limit (5,000 mg/kg) were collected at depths of 9 to 16 feet bgs.

The ESL for direct exposure to zinc in soil for construction and trench workers is 93,000 mg/kg and higher than the concentrations detected in soil.

Concentrations of arsenic, lead and vanadium detected in soil at the site exceed the ESLs for direct exposure for construction and trench workers, which is a potential exposure scenario during construction and site redevelopment.

The highest concentrations of metals generally occur at depths of approximately 8 to 12 feet bgs which is the interval of groundwater fluctuations beneath the site. Concentrations generally increase with depths greater than 8 to 12 feet bgs.

The concentrations of lead detected in soil samples from PES' 2013 investigations are included on the cross sections presented in Plates 5 through 8.

2.8.3 Distribution of Semivolatile Organic Compounds in Soil

The following summarizes detections for SVOCs that exceed risk-based screening levels (residential, shallow soil, non-drinking water ESLs and residential RSLs).

Benzo (a) anthracene - ESL is 380 μg/kg and RSL is 150 μg/kg.

- Historical (1989 to 1994) results – 580 μg/kg detected in one sample collected at 9 feet bgs; and

- 2013 PES results – 340 to 2,400 μg/kg detected in 4 samples at depths of 4 to 10 feet bgs.

The ESL for direct exposure to benzo (a) anthracene in soil for construction and trench workers is 8,300 μg/kg and higher than concentrations detected in soil.

Benzo (a) pyrene - ESL is 38 μg/kg and RSL is 15 μg/kg.

- Historical (1989 to 1994) results – 470 μg/kg detected in one sample collected at 4 feet bgs; and

- 2013 PES results – 900 to 3,000 μg/kg detected in 3 samples at depths of 4 to 7.5 feet bgs.

The ESL for direct exposure to benzo (a) pyrene in soil for construction and trench workers is 830 µg/kg and lower than concentrations detected in soil.

Benzo (b) fluoranthene - ESL is 380 µg/kg and RSL is 150 µg/kg.

- 2013 PES results – 970 to 3,700 µg/kg detected in 4 samples at depths of 4 to 10 feet bgs.

The ESL for direct exposure to benzo (a) fluoranthene in soil for construction and trench workers is 8,300 µg/kg and higher than concentrations detected in soil.

Benzo (k) fluoranthene - ESL is 380 µg/kg and RSL is 1,500 µg/kg.

- 2013 PES results – 1,500 µg/kg detected in one sample collected at 4 bgs.

The ESL for direct exposure to benzo (k) fluoranthene in soil for construction and trench workers is 8,300 µg/kg and higher than concentrations detected in soil.

Indeno (1,2,3-cd) pyrene - ESL is 380 µg/kg and RSL is 150 µg/kg.

- 2013 PES results – 340 and 1,300 µg/kg detected in 2 samples at depths of 4 and 7.5 feet bgs.

The ESL for direct exposure to ideno (1,2,3-cd) pyrene in soil for construction and trench workers is 8,300 µg/kg and higher than concentrations detected in soil.

2-Methyl-naphthalene - ESL is 250 µg/kg and RSL is 230,000 µg/kg.

- Historical (1989 to 1994) results – 1,000 to 1,500 µg/kg detected in 3 samples collected at depths of 9 to 12 feet bgs; and

- 2013 PES results – 2,000 to 9,200 µg/kg detected in 2 samples at depths of 8 and 10 feet bgs.

The ESL for direct exposure to 2-methyl-naphthalene in soil for construction and trench workers is 570,000 µg/kg and higher than concentrations detected in soil.

Naphthalene - ESL is 3,100 µg/kg and RSL is 3,800 µg/kg.

- Historical (1989 to 1994) results – 8,900 µg/kg detected in one sample collected at 9 feet bgs; and

- 2013 PES results – 28,000 µg/kg detected in one sample collected at 8 feet bgs.

The ESL for direct exposure to naphthalene in soil for construction and trench workers is 370,000 µg/kg and higher than concentrations detected in soil

The concentrations of benzo (a) pyrene detected in soil at the site exceed the ESLs for direct exposure for construction and trench workers, which is a potential exposure scenario during construction and site redevelopment.

2.8.4 Distribution of Polychlorinated Biphenyls in Soil

The following summarizes detections for PCBs that exceed risk-based screening levels (residential, shallow soil, non-drinking water ESLs and residential RSLs). Hazardous waste criteria are also included as applicable.

Aroclor-1260 - ESL is 220 µg/kg and RSL is 240 µg/kg. TTLC is 50 mg/kg.

- Historical (1989 to 1994) results – 2,200 to 4,200 µg/kg detected in 4 samples collected at depths of 4 to 9 feet bgs;
- 2013 ENVIRON results – 8,000 and 14,000 µg/kg detected in 2 samples collected at 4 feet bgs; and
- 2013 PES results – 270 and 10,000 µg/kg detected in 8 samples collected at depths of 2 to 10 feet bgs.

The ESL for direct exposure to PCBs in soil for construction and trench workers is 2,700 µg/kg and lower than concentrations detected in soil.

The concentrations of PCBs detected in soil at the site exceed the ESLs for direct exposure for construction and trench workers, which is a potential exposure scenario during construction and site redevelopment.

2.8.5 Distribution of Volatile Organic Compounds in Soil

The following summarizes detections for VOCs that exceed risk-based screening levels (residential, shallow soil, non-drinking water ESLs and residential RSLs).

MIBK (4-methyl-2-pentanone) - ESL is 3,900 µg/kg and RSL is 5,300,000 µg/kg.

- 1989 UST removal confirmation samples – 180,000 to 5,000,000 µg/kg detected in 4 samples collected at 12 feet bgs (2 feet beneath USTs);
- 1990 sample from boring B-8/MW-8 – 8,300 µg/kg detected in one sample collected at 9 feet bgs; and

- 1991 sampling did not encounter MIBK in soil samples collected from borings PB-1 and PB-2.

MEK (2-butanone) - ESL is 13,000 µg/kg and RSL is 27,000,000 µg/kg

- 1989 UST removal confirmation samples – Not detected (ND); however, the detection limits for 4 samples collected and analyzed at 12 feet bgs (2 feet beneath USTs) were 40,000 to 2,000,000 µg/kg; and

- 1990 and 1991 (borings PB-1 and PB-2) sampling did not encounter MEK in soil samples.

Benzene - ESL is 740 µg/kg and RSL is 1,200 µg/kg.

- 1989 UST removal confirmation samples – 1,300 to 4,600 µg/kg detected in 3 samples collected at 12 feet bgs (2 feet beneath USTs); and

- 1991 sampling did not encounter benzene in soil samples collected from borings PB-1 and PB-2.

1,4-DCB (1,4–Dichlorobenzene) - ESL is 1,800 µg/kg and RSL is 2,600 µg/kg.

- 1989 UST removal confirmation samples – 2,400 µg/kg detected in one sample collected at 12 feet bgs (2 feet beneath USTs); and

- 1991 sampling did not encounter 1,4-DCB in soil samples collected from borings PB-1 and PB-2.

The 1989 UST removal confirmation samples were collected before remediation activities including groundwater extraction and operation of a vapor extraction system in 1990. No VOCs were detected in soil at concentrations above the ESLs and RSLs after 1990, including soil samples collected from 2 borings (PB-1 and PB-2) drilled in the area of the former USTs in 1991 and from 8 borings (MW-9, MW-10 and T-2 through T-7) drilled in the UST excavation area in 1994. Based on these results it was concluded that the soil vapor extraction system appeared to have been effective in reducing MIBK and other VOC concentrations in unsaturated soils in the area of the former USTs. Based on available data, there are no indications that VOCs currently exist in soil at the site at concentrations exceeding current risk-based levels (ESLs and/or RSLs).

2.8.6 Distribution of Petroleum Hydrocarbons in Groundwater

Historical groundwater sampling results are included in Appendix B. Results are from analyses for oil & grease, TPHd, TPHmo, TEH (aka TEPH), and TVH.

- Historical (1989 to 1994) sampling did not indicate the presence of oil & grease in groundwater samples collected from monitoring wells MW-1, MW-3, MW8, MW-9 and MW-10 at or above the laboratory reporting limits (5 and 10 milligrams per liter [mg/L]) except for one detection of 14 mg/L (14,000 µg/L) in well MW-8 in November 1993. Detected TEH concentrations range from 430 µg/L for well MW-3 to 4,400 µg/L for well MW-10. The reported concentrations of TVH range from 60 µg/L (MW-3) to 7,200 µg/L (MW-8); and

- Groundwater samples collected from sampling locations SG-1, SG4, and SG-5 by ENVIRON in April 2013 had reported concentrations of 920 to 58,000 µg/L TPHd, and 5,600 to 12,000 µg/L TPHmo.

The RWQCB ESL (residential shallow soil where groundwater is not a current or potential of drinking water) for TPHd and TPHmo in groundwater is 640 µg/L (based on aquatic habitat goal).

The U.S. EPA RSLs for TPH in tapwater range from 5.5 to 60,000 µg/L depending on the carbon range and amounts of aliphatic and aromatic hydrocarbons.

2.8.7 Distribution of Metals in Groundwater

The following summarizes detections for metals in groundwater that exceed risk-based screening levels (residential, shallow soil, non-drinking water ESLs and RSLs for tapwater). As discussed previously, PES believes that based on a comparison of dissolved lead and other metals results obtained during PES' November 2013 investigation to those obtained during ENVIRON's April 2013 investigation, it appears that the April 2013 metal results were anomalously high and not representative of groundwater conditions beneath the site. Therefore the following summary of metals detections in groundwater is based on results from PES' November 2013 investigation.

Arsenic - ESL is 36 µg/L and RSL is 0.052 µg/L.

- 2013 PES results – 6.4 to 32 µg/L.

Copper - ESL is 3.1 µg/L and RSL is 800 µg/L.

- 2013 PES results – 9.1 µg/L.

Lead - ESL is 2.5 µg/L and RSL is 150 µg/L.

- 2013 PES results – 3.1 to 190 µg/L.

Mercury - ESL is 0.025 µg/L and RSL is 0.63 µg/L.

- 2013 PES results – 0.21 to 0.41 µg/L.

Nickel - ESL is 8.2 µg/L and RSL is 200 µg/L.

- 2013 PES results – 8.5 µg/L.

Selenium - ESL is 5.0 µg/L and RSL is 100 µg/L.

- 2013 PES results – 26 to 27 µg/L.

Vanadium - ESL is 19 µg/L and RSL is 86 µg/L.

- 2013 PES results – 22 to 71 µg/L.

Zinc - ESL is 81 µg/L and RSL is 6,000 µg/L.

- 2013 PES results – 210 to 360 µg/L.

2.8.8 Distribution of Volatile Organic Compounds in Groundwater

The following summarizes detections for VOCs in groundwater that exceed risk-based screening levels (residential, shallow soil, non-drinking water ESLs and RSLs for tapwater). Data for VOCs in groundwater includes results for groundwater samples collected from various monitoring wells from 1989 to 1996. Detected VOCs include MIBK, MEK, benzene, toluene, xylenes, acetone, and chlorobenzene. The detected concentrations of toluene, xylenes, and chlorobenzene are below the respective ESLs and RSLs. The ESLs for MIBK, MEK, and acetone are based on aquatic habitat goals and the ESL for benzene is based on vapor intrusion.

For volatile chemicals, ESLs have been developed for vapor intrusion from groundwater. The vapor intrusion ESLs are intended for screening use at sites where groundwater is present at depths of 10 feet or greater, and there are values for two soil types (fine – coarse mix and all sand). The fine – coarse mix is most applicable to the subject site based on the subsurface lithology.

MIBK (4-methyl-2-pentanone) - ESL is 170 µg/L and RSL is 1,200 µg/L.

- MW-8 - 840 to 160,000 µg/L detected in 13 samples from 1990 to 1996;
- MW-9 – 120 µg/L detected in one sample in 1994; and
- MW-10 – 23 µg/L detected in one sample in 1994.

The groundwater screening level for evaluation of potential vapor intrusion for residential land use is 11,000,000 µg/L (fine-coarse mix) and 2,300,000 µg/L (all sand).

MEK (2-butanone) - ESL is 140 μg/L and RSL is 5,600 μg/L.

- MW-8 – 10,000 and 78 μg/L detected in 2 samples from 1990 and 1995, respectively.

The groundwater screening level for evaluation of potential vapor intrusion for residential land use is 23,000,000 μg/L (fine-coarse mix) and 7,800,000 μg/L (all sand).

Acetone - ESL is 1,500 μg/L and RSL is 14,000 μg/L.

- 3,200 and 40 μg/L detected in 2 samples from 1990 and 1995, respectively.

The groundwater screening level for evaluation of potential vapor intrusion for residential land use is 130,000,000 μg/L (fine-coarse mix) and 47,000,000 μg/L (all sand).

Benzene - ESL is 27 μg/L (vapor intrusion) and RSL is 0.45 μg/L.

- MW-8 - 63 to 2,100 μg/L detected in 5 samples from 1990 to 1995;
- MW-10 – 6.6 to 31 μg/L detected in 6 samples from 1994 to 1996; and
- MW-1 – 7 μg/L detected in one sample in 1990.

The groundwater screening level for evaluation of potential vapor intrusion for residential land use is 27 μg/L (fine-coarse mix) and 1.2 μg/L (all sand).

Subsurface Consultants, Inc. conducted groundwater monitoring at wells MW-1, MW-3, MW-8, MW-9 and MW-10 from May 1993 to May 1996. During the final monitoring event in May 1996, groundwater samples from wells MW-1, MW-8, MW-9 and MW-10 were analyzed for VOCs. MIBK was detected at a concentration of 15,000 μg/L in well MW-8, and benzene and chlorobenzene were detected in well MW-10 at concentrations of 7.5 μg/L and 3.5 μg/L, respectively.

In 2013, ENVIRON conducted grab groundwater sampling and analysis for VOCs at three locations (SG-1, SG-4 and SG-5). Benzene, ethylbenzene, naphthalene, and xylenes were detected at maximum concentrations of 8.1, 45, 84 and 59 μg/L. These maximum concentrations were all lower than the respective vapor intrusion ESLs. Twelve (12) other VOCs were detected in groundwater but the detected VOCs either do not have corresponding vapor intrusion ESLs or the levels were at least five orders of magnitude lower than the corresponding vapor intrusion ESL (e.g., toluene detected at a maximum concentration of 0.54 μg/L and the vapor intrusion ESL equals 95,000 μg/L).

Based on the results from May 1996 and April 2013, there are no VOCs in groundwater that exceed applicable ESLs. The 15,000 μg/L concentration of MIBK exceeds the aquatic habitat ESL however is well below the vapor intrusion ESL which is the most applicable for potential

risks at the site. The 8.1 μg/L concentration of benzene is below the vapor intrusion ESL (42 μg/L) for fine – coarse soil mixes which is most applicable to the site.

2.8.9 Distribution of Volatile Organic Compounds in Vapor

As part of the April 2013 investigations, ENVIRON collected soil gas samples at locations SG-1 through SG-5 for analysis of VOCs. VOCs were detected in soil gas samples collected from locations SG-1 through SG-5. Benzene was detected at locations SG-1, SG-3, SG-4 and SG-5 at concentrations of 8.6 to 73 micrograms per cubic meter ($\mu g/m^3$). The concentration of 73 $\mu g/m^3$ detected at SG-3 is above the RWQCB ESL for shallow soil gas at residential sites which is 42 $\mu g/m^3$. The presence of tracer gas and elevated levels of oxygen and argon in the soil gas sample from SG-3, suggest that the sample may have been affected by ambient air and therefore may not be representative of subsurface conditions.

2.8.10 Residual COC Transport Mechanisms and Attenuation

Residual COCs in subsurface fill materials (primarily TPH and metals) will continue to leach to groundwater. Long-term natural attenuation for these COCs is assumed. Based on available data, remediation and attenuation of VOCs in soil and groundwater at the site have reduced residual concentrations to below risk-based levels, and future continued attenuation is expected.

2.9 Evaluation of Potential Preferential Migration Pathways

Evaluation of preferential pathways include: (1) locations and depths of the site utility corridors; and (2) wells within 0.25 miles of the site. No significant lateral or vertical conduits were identified at the site, and available information indicates that vicinity wells are used only for monitoring or remediation purposes.

Based on information from previous investigations, no preferential pathway are associated with the locations and depths of site utilities. PES also reviewed water well completion reports obtained from the California Department of Water Resources (DWR) within a 0.25-mile radius of the site. DWR well logs indicated that only relatively shallow monitoring wells were present. No lateral or vertical conduits were identified for the site, and available water well information for the vicinity indicates that wells were used only for monitoring or remediation purposes.

2.10 Site Redevelopment Plans and Evaluation of Potential Receptors

Future redevelopment plans are for new multi-story, multi-family residential development on the subject property. Existing buildings and related improvements will be demolished and removed followed by grading and excavation for new construction. Planned development includes a seven-story building comprising the majority of the subject property with parking garage, lobby, and amenities spaces occupying the first (on-grade) and second floors of the building. Limited residential use is planned for the first and second floors (four units on the north side and six units on the west side of the building). After redevelopment, the entire site

will be covered by building structures, and paved parking and driving areas with the exception of landscaped areas. The conceptual site development plans are presented in Appendix C.

The CSM and evaluation of potential receptors and exposure scenarios is based on site conditions and characteristics that will be present after redevelopment, for construction activities associated with redevelopment, and for future maintenance activities. A receptor represents hypothetical groups of people that are associated with various assumed exposure scenarios. The primary future receptors are residents. Commercial indoor workers are currently present, and some are expected to be present in the future at the site (office and retail space). In addition to future occupants of the site, receptors include workers that will be involved with redevelopment construction. Workers may be involved with future work including periodic maintenance activities requiring temporary subsurface excavation or trenching conducted by construction workers (such work would be controlled by the Intrusive Earthwork Guidance Plan, as discussed below and to be included in the SMP). Aside from new on-site structures the remainder of the site will be is comprised of paved parking, driving and pedestrian areas, and landscaped areas along the north, east, and west portions of the property.

Categories of potential site users include: (1) future residents; (2) current and future indoor commercial workers; and (3) future outdoor construction and maintenance workers. These categories are based on the current and anticipated future use of the site and potential access and/or exposure to impacted media (i.e., soil, soil vapor, and groundwater).

2.11 Evaluation of Exposure Pathways

An exposure pathway is a mechanism by which receptors are assumed to contact chemicals in site media (U.S. EPA, 1989). Potential exposure pathways are discussed in the following sections and shown schematically on Plate 9.

2.11.1 Direct Exposure

Direct exposure can occur via soil incidental ingestion, soil dermal contact, groundwater incidental ingestion, and groundwater dermal contact, as discussed below.

Groundwater Incidental Ingestion: Shallow groundwater is not used as a drinking water source for the site or surrounding area, so ingestion of groundwater by site users is highly improbable. The potential for exposure to groundwater is further limited by the City of Emeryville Ordinance No. 07-006 prohibiting extraction of groundwater for drinking, industrial, or irrigation purposes. Direct contact with groundwater via incidental ingestion is not considered a significant or complete exposure pathway.

Groundwater Dermal Contact: The site will be mostly paved and covered by structures and no direct contact exposure pathway for groundwater exposure exists for occupants of the site. Shallow groundwater at the site is present at depths ranging from 8 to 12 feet bgs. Construction work including installation of site utilities will be above the depth to shallow

groundwater and it is therefore unlikely future construction workers will come into direct contact via dermal exposure with groundwater. The exposure pathway for groundwater dermal contact is not considered complete. Potential exposure to construction workers will be addressed through implementation of contingency measures described in the SMP and Intrusive Earthwork Guidance Plans.

Soil Incidental Ingestion/Soil Dermal Contact: The site will be mostly covered with structures and pavement and no direct contact exposure pathways will exist for future users of the site; therefore, direct contact with soil is not considered to be a significant or complete exposure pathway for future site occupants. Future landscaped and open areas will be constructed with a minimum of 2 feet of clean fill material to mitigate potential for direct exposure in these areas.

Direct exposure via incidental ingestion or dermal contact with soil and/or groundwater during temporary subsurface excavation or trenching conducted by construction workers will be regulated by the Intrusive Earthwork Guidance Plan that will stipulate procedures for conducting subsurface work (including, for example, wearing protective clothing and monitoring ambient air for organic vapors) that are protective of the public and workers involved in subgrade construction, maintenance, repair, inspection or other activities involving subgrade work at the site. Therefore, direct contact for construction workers via soil incidental ingestion or dermal contact is largely mitigated through implementation of the Intrusive Earthwork Guidance Plan and is considered a complete but insignificant pathway.

2.11.2 Indirect Exposure

Indirect exposure can occur to receptors via indoor air inhalation, ambient air inhalation, and fugitive dust inhalation.

Indoor Air Inhalation: Vapor inhalation may occur from volatile chemicals originating in the groundwater or soil in the subsurface. As indicated in the schematic CSM (Plate 9), indoor air inhalation exposure risk is comprised of the cumulative effects of vapor migration to indoor air from organic vapors in soil and/or groundwater. Although enclosed structures will be present at the site, the majority of property will be open air on the surface. Data indicates that potential exposure to vapor from soil or groundwater is low. Additionally, continued attenuation processes will further reduce the potential for vapor exposure. As such, the vapor intrusion pathway is not considered a significant exposure pathway for current or future site users.

Ambient Air Inhalation: The site will be capped by low-permeability asphalt/concrete paved parking and/or walkways, or covered by the building structure concrete slabs. No significant ambient air exposure pathway exists for the site.

Fugitive Dust Inhalation: The will be capped by asphalt/concrete paved parking and/or walkways, or covered by the building structure concrete slab; therefore, the fugitive dust

inhalation pathway is not considered complete future site users. Potential fugitive dust exposure during construction activities will be addressed in the SMP.

2.11.3 Potential Ecological Receptors

The site is located in a developed urban environmental and is devoid of ecological habitat. There are no surface water bodies at the site. As such, ecological receptors are absent and will not likely be present at the site in the future. Due to the distance between the site and San Francisco Bay (where site groundwater is presumed to discharge to surface water [approximately 1,000 feet away]), potential exposure pathways for ecological receptors are incomplete.

2.11.4 Summary of Potential Exposure Pathways

Potential and current future human receptors at the site include future residents, current and future indoor commercial workers and future construction and maintenance workers. The future land use at the site is anticipated to be residential with some commercial use.

Based on existing and planned engineering and institutional controls, potentially complete (but likely insignificant) exposure pathways are limited to future construction and maintenance workers, and include:

- Incidental ingestion of or dermal contact with subsurface soil.

2.12 Assessment of Potential Public Health Concerns from Residual Constituents

This section provides an assessment of potential human health concerns from residual COCs at the site and evaluation of applicable screening criteria.

RWQCB's East Bay Plain Groundwater Basin Beneficial Use Evaluation Report (RWQCB, 1999; "East Bay Plan") states that groundwater in the site vicinity is "unlikely to be used as a drinking water resource" for which "passive remediation to restore municipal beneficial uses as a long-term goal is recommended." RWQCB further identifies groundwater beneath the site as "Other Groundwater (uses other than drinking water)." Background water quality likely precludes use for human consumption based on: (1) the presence of the site within a former fill area of Emeryville; (2) the City of Emeryville Ordinance 07-006 prohibiting extraction of groundwater for site use; and (3) generally high TDS values in background groundwater samples. Comparison to ESLs[9] where groundwater is "not a current or potential use of drinking water" is most appropriate.

[9] Comparisons made using the latest interim final version released by the RWQCB in December 2013 (RWQCB, 2013).

2.12.1 Assessment of Potential Human Health Concerns - Groundwater Volatilization

The indoor air inhalation pathway and outdoor air ambient volatilization are not considered significant based on existing information. The concentration of benzene detected in soil gas at one sampling location in 2013 exceeded the ESL; however, benzene concentrations at four other sampling locations were below the ESL. Benzene concentrations in soil and groundwater are below applicable ESLs and continued attenuation is expected. Concentrations for other COCs were below the applicable ESL concentrations for soil vapor and vapor intrusion concerns.

2.12.2 Assessment of Potential Human Health Concerns - Direct Contact with Soil

As described previously, the site will be paved or covered by buildings and no direct contact or soil incidental ingestion/dermal contact pathways exist for users of the site. Direct exposure for construction workers via contact with soil during temporary subsurface excavation or trenching will be regulated at the site by the Intrusive Earthwork Guidance Plan that will stipulate procedures for conducting subsurface work that are protective of the public and workers involved in subsurface work at the site.

For construction and trench worker direct contact criteria, concentrations exceed the direct exposure ESLs for TPH, arsenic, lead, vanadium, benzo (a) pyrene, and PCBs. The potential for direct exposures to soil for construction and trench workers will be addressed by implementing procedures and controls that will be included in the SMP.

3.0 SUMMARY OF CURRENT SITE CONDITIONS AND CONCLUSIONS

This CSM has been developed to assess the existing data and evaluate potential exposure scenarios for COCs identified at the site. Conditions at the site are summarized below:

- No significant unacceptable exposure scenarios for future site residents and workers were identified;
- The potential for construction worker exposure to COC residuals in the subsurface will be mitigated by the requirements of the SMP and Intrusive Earthwork Guidance Plan that will be implemented for redevelopment construction and future maintenance at the site, and which will specify health and safety precautions for any significant subsurface work;
- There are no identified preferential pathways of significance;
- VOC residuals in the vicinity of the former USTs have been remediated and attenuated to concentrations below risk-based concentrations; and
- Natural attenuation of COCs will continue to reduce residual levels.

In summary, investigation, remediation and monitoring activities conducted at the site since 1989 have defined the extent of contamination and associated risks from COCs at the site. The information supports the planned redevelopment, and in conjunction with prescribed institutional and engineering controls, it is recommended that the site be evaluated for closure under ACEH and SLIC criteria.

4.0 REFERENCES

Alameda County Department of Environmental Health (ACEH), 1989. Shahid, Rafat A., Alameda County, Department of Environmental Health, Notice of Violation Letter to James McClay, Mike Roberts Color Productions. March 2.

ACEH, 1996. Letter to MRCP Realty and Nady Systems, Inc. Regarding Deed Notice, Nady's Systems, Inc. (Former MRCP) – 6707 Bay Street, Emeryville, CA 94608. December 16.

Bechtel, 1992. *Site Inspection, Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California, 94608*. October 22.

California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), 2010. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*. December 31.

California RWQCB, 2013. *San Francisco Bay Region, 2013 Update to Environmental Screening Levels*. December.

Erler & Kalinowski, Inc. [EKI], 2012. *Report of Additional Site Investigation and 2012 Request for Site Closure, 6601/6603 Shellmound Street, Emeryville, California*. July 3.

ENVIRON International Corporation (ENVIRON), 2013a. *Summary of Environmental Findings, Nady Systems, Inc., 6701 Shellmound Street or 6707 Bay Street, Emeryville, California*. May 29.

ENVIRON, 2013b. *Draft Phase I Environmental Site Assessment, Nady Systems, 6701-6707 Bay Street, Emeryville, California*. July 3.

ICF Technology Incorporated (ICF), 1990. Preliminary Assessment. *Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California, 94608*. September 13.

LW Environmental Services, Inc. (LW Environmental), 1989a. *Status Report of Activities Related to the Removal and Disposal of Hazardous Waste from M.R.C.P. Property and Analytical Results of Soil & Water Samples Collected in the Northwest Area of the*

Property, Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California 94609. June 27.

LW Environmental, 1989b. *Environmental Site Assessment and Subsurface Evaluation – Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California*. July 10.

LW Environmental, 1989c. *Supplemental Environmental Site Assessment and Subsurface Evaluation – Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California*. August 25.

LW Environmental, 1989d. *Environmental Site Assessment – Phase II Subsurface Evaluation - Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California 94609*. September 26.

LW Environmental, 1989e. *Final Report/Tank Removal, Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California*. November 3.

McLaren, 1989. *Phase I Review of Documents and Verification of Groundwater Flow Direction at 6070 Bay Street in Emeryville, California*. November 21.

Nichols, D.R. and Wright, N.A., 1971. *Preliminary map of historic margins of marshland, San Francisco Bay, California,* U.S. Geological Survey Open-File Report.

PES Environmental, Inc. (PES), 1991. *Letter Report, Nady Systems, Inc. Site, 6707 Bay Street, Emeryville, California.* December 9.

PES, 2013. *Groundwater Monitoring Report, Fourth Quarter 2012 Sampling Event, 1650 65th Street, Emeryville, California*. January 22.

PES, 2014a. *Supplemental Subsurface Investigation Report, 6701, 6705, and 6707 Shellmound Street, Emeryville, California*. January 13.

PES, 2014b. *Phase I Environmental Site Assessment, 6701, 6705, and 6707 Shellmound Street, Emeryville, California*. January 17.

Pettit & Martin, Attorneys at Law, 1995. Recorded Deed Notice Pursuant to Work Plan and Revised Request for "No Further Action", Alternative Compliance Points Monitoring Program, 6707 Bay Street, Emeryville, California. February 1.

SCS Engineers, 1989. *Environmental Review and Assessment of the Michael Roberts Color Production Property located at 6707 Bay Street, Emeryville, California*. December 19.

SCS Engineers, 1990. *Environmental Assessment, 6707 Bay Street, Emeryville, California*. January 30.

SCS Engineers, 1991. *Interim Report One, 6707 Bay Street, Emeryville, California*. February 25.

Subsurface Consultants, Inc., 1993a. *Quarterly Groundwater Monitoring and Treatment System Decommissioning, 6701 Bay Street, Emeryville, California*. June 14.

Subsurface Consultants, Inc., 1993b. *Quarterly Groundwater Monitoring, August 1993, 6701 Bay Street, Emeryville, California*. September 15.

Subsurface Consultants, Inc., 1994a. *Quarterly Groundwater Monitoring, November 1993, 6701 Bay Street, Emeryville, California*. January 8.

Subsurface Consultants, Inc., 1994b. *Quarterly Groundwater Monitoring, February 1994, 6701 Bay Street, Emeryville, California*. April 5.

Subsurface Consultants, Inc., 1994c. Supplemental MIBK Contamination Assessment, 6707 Bay Street, Emeryville, California. September 21.

Subsurface Consultants, Inc., 1995a. Addendum No. 1, Work Plan and Revised Request for "No Further Action", Alternate Compliance Points Monitoring Program, 6707 Bay Street, MIBK Tank Area, Emeryville, California. January 17.

Subsurface Consultants, Inc., 1995b. *Groundwater Monitoring, February 1995 Event, 6707 Bay Street, Emeryville, California*. March 1.

Subsurface Consultants, Inc., 1995c. *Groundwater Monitoring, November 1995 Event, 6707 Bay Street, Emeryville, California*. December 15.

Subsurface Consultants, Inc., 1996. *Groundwater Monitoring, May 1996 Event, Request For "No Further Action", 6707 Bay Street, Emeryville, California*. June 21.

United States Environmental Protection Agency (U.S. EPA), 1989. *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A), Interim Final.* Office of Emergency and Remedial Response, Washington D.C., EPA/540/1-89/002. July.

U.S. EPA, Region 9, 2015. Regional Screening Levels (RSL) for Chemical Contaminants. January.

URS, 2005. Final Report, Geotechnical Characterization, 6701 Shellmound/Bay Street, Emeryville, California. October 7.

TABLES

Table 1
Prior Environmental Documents
6701, 6705, and 6707 Shellmound Street
Emeryville, California

Prepared by	Title/Subject	Date
Alameda County Department of Environmental Health	Notice of Violation Letter to James McClay, Mike Roberts Color Productions	2-Mar-89
Alameda County Department of Environmental Health	Letter to MRCP Realty and Nady Systems, Inc. Regarding Deed Notice, Nady's Systems, Inc. (Former MRCP) – 6707 Bay Street, Emeryville, CA 94608	16-Dec-96
Bechtel	Site Inspection, Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California	22-Oct-92
ENVIRON International Corporation	Summary of Environmental Findings, Nady Systems, Inc., 6701 Shellmound Street or 6707 Bay Street, Emeryville, California	29-May-13
ENVIRON International Corporation	Draft Phase I Environmental Site Assessment, Nady Systems, 6701-6707 Bay Street, Emeryville, California	3-Jul-13
ICF Technology Incorporated	Preliminary Assessment, Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California	13-Sep-90
LW Environmental Services, Inc.	Status Report of Activities Related to the Removal and Disposal of Hazardous Waste from M.R.C.P. Property and Analytical Results of Soil & Water Samples Collected in the Northwest Area of the Property, Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California	27-Jun-89
LW Environmental Services, Inc.	Environmental Site Assessment and Subsurface Evaluation – Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California	10-Jul-89
LW Environmental Services, Inc.	Supplemental Environmental Site Assessment and Subsurface Evaluation – Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California	25-Aug-89
LW Environmental Services, Inc.	Environmental Site Assessment – Phase II Subsurface Evaluation - Mike Roberts Color Productions Property, 6707 Bay Street, Emeryville, California	26-Sep-89
LW Environmental Services, Inc.	Final Report/Tank Removal, Mike Roberts Color Productions, 6707 Bay Street, Emeryville, California	3-Nov-89
McLaren	Phase I Review of Documents and Verification of Groundwater Flow Direction at 6070 Bay Street in Emeryville, California	21-Nov-89
PES Environmental, Inc.	Letter Report Summarizing Results of an Investigation of Site Conditions in the Vicinity of the Former USTs, Nady Systems, Inc. Site, 6707 Bay Street, Emeryville, California	9-Dec-91
PES Environmental, Inc.	Supplemental Subsurface Investigation Report, 6701, 6705, and 6707 Shellmound Street, Emeryville, California	13-Jan-14

Table 1
Prior Environmental Documents
6701, 6705, and 6707 Shellmound Street
Emeryville, California

Prepared by	Title/Subject	Date
PES Environmental, Inc.	Phase I Environmental Assessment, 6701, 6705, and 6707 Shellmound Street, Emeryville, California	17-Jan-14
Pettit & Martin, Attorneys at Law	Recorded Deed Notice Pursuant to Work Plan and Revised Request for “No Further Action”, Alternative Compliance Points Monitoring Program, 6707 Bay Street, Emeryville, California	1-Feb-95
SCS Engineers	Environmental Review and Assessment of the Michael Roberts Color Production Property located at 6707 Bay Street, Emeryville, California	19-Dec-89
SCS Engineers	Environmental Assessment, 6707 Bay Street, Emeryville, California	30-Jan-90
SCS Engineers	Interim Report One for Construction and Operation of the Remediation Systems, 6707 Bay Street, Emeryville, California	25-Feb-91
Subsurface Consultants, Inc.	Quarterly Groundwater Monitoring and Treatment System Decommissioning, 6707 Bay Street, Emeryville, California	14-Jun-93
Subsurface Consultants, Inc.	Quarterly Groundwater Monitoring, August 1993, 6707 Bay Street, Emeryville, California	15-Sep-93
Subsurface Consultants, Inc.	Quarterly Groundwater Monitoring, November 1993, 6707 Bay Street, Emeryville, California	8-Jan-94
Subsurface Consultants, Inc.	Quarterly Groundwater Monitoring, February 1994, 6707 Bay Street, Emeryville, California	5-Apr-94
Subsurface Consultants, Inc.	Supplemental MIBK Contamination Assessment, 6707 Bay Street, Emeryville, California	21-Sep-94
Subsurface Consultants, Inc.	Addendum No. 1, Work Plan and Revised Request for “No Further Action”, Alternate Compliance Points Monitoring Program, 6707 Bay Street, MIBK Tank Area, Emeryville, California	17-Jan-95
Subsurface Consultants, Inc.	Groundwater Monitoring, February 1995 Event, 6707 Bay Street, Emeryville, California	1-Mar-95
Subsurface Consultants, Inc.	Groundwater Monitoring, November 1995 Event, 6707 Bay Street, Emeryville, California	15-Dec-95
Subsurface Consultants, Inc.	Groundwater Monitoring, May 1996 Event, Request For “No Further Action”, 6707 Bay Street, Emeryville, California	21-Jun-96

ILLUSTRATIONS



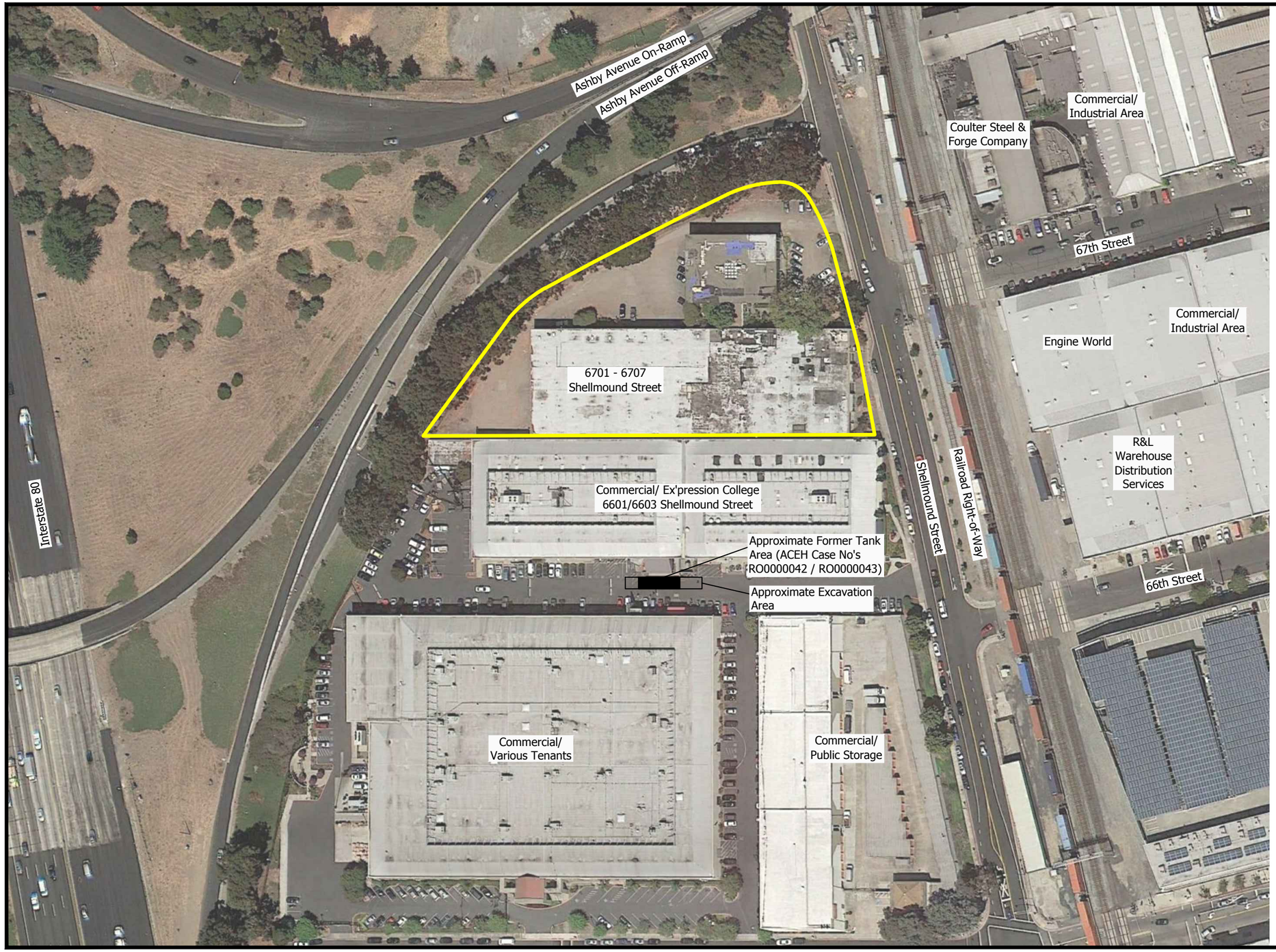
U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle.1997

PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
Conceptual Site Model
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE
1

1448.001.01.003	1448-00101003_CSM_1-3	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

Approximate Property Boundary

N

0 80

SCALE IN FEET

Aerial Photo: Google Earth, August 28, 2012

PES Environmental, Inc.
Engineering & Environmental Services

Site Vicinity
Conceptual Site Model
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE
2

1448.001.01.003	1448-00101003_CSM_1-3	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

Explanation

Approximate Property Boundary

INTERSTATE 80, ASHBY AVENUE/BAY STREET EXIT RAMP

BAY STREET

2-STORY OFFICE BUILDING

Concrete Patio Area

1-Story Lobby/ Receptionist Area

Approximate Location of Wall-Mounted Exterior Pipes

Approximate Extent of Former UST Excavation

Former Sump Excavation

Approximate Area of Building where Machine Shops are Located

Product Storage

Product Storage

Approximate Location of Wall-Mounted Filter Housing

WAREHOUSE BUILDING

Former Ditch Excavation

Former Drum Storage Area

Shipping and Receiving Area

Product Storage

Minor Equipment Repair / Packaging Area

Product Storage

Location of 55-gallon drums, trash dumpsters, and debris

N

0 50

SCALE IN FEET

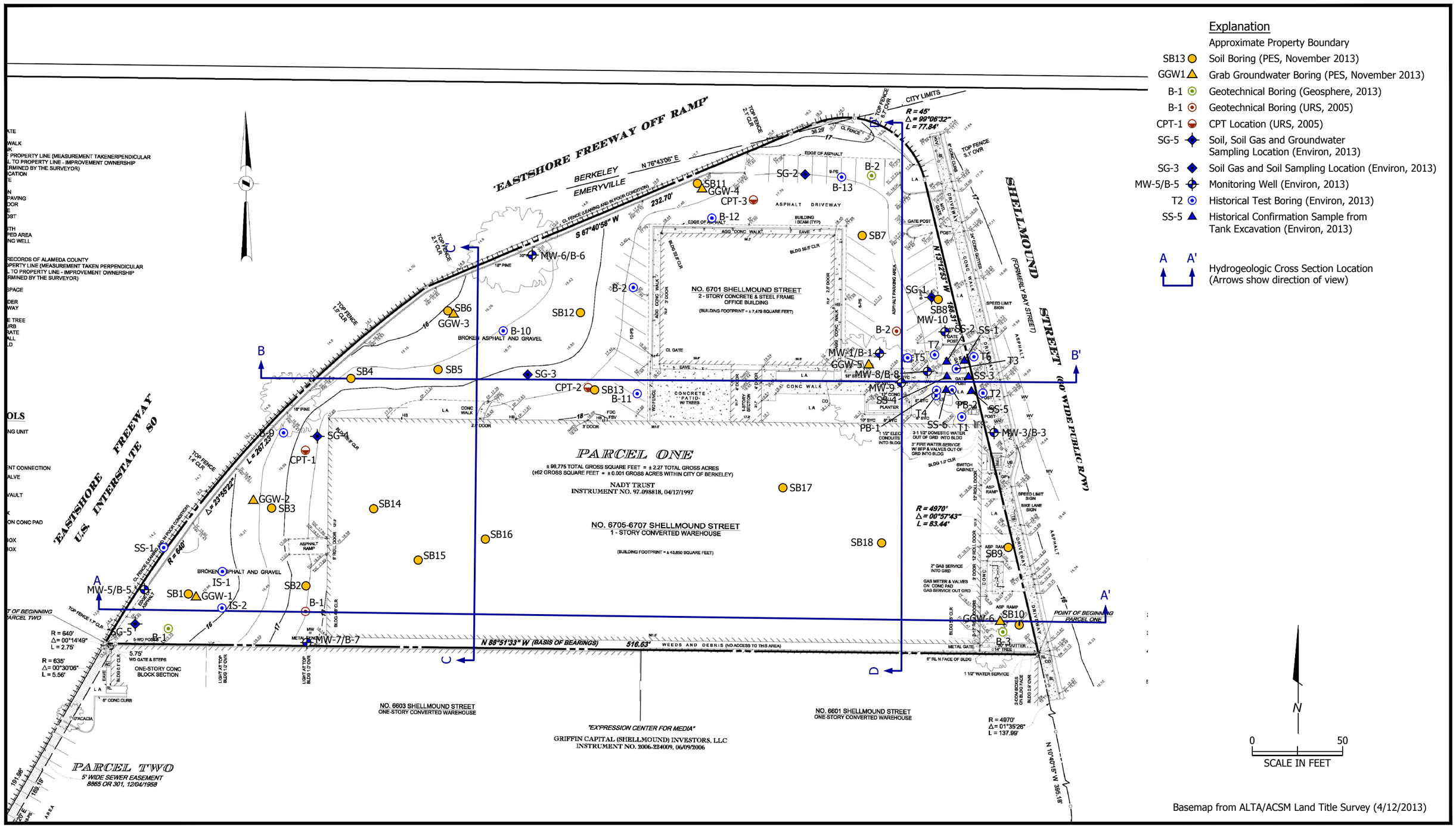
Basemap from ENVIRON 4/29/13

PES Environmental, Inc.
Engineering & Environmental Services

Site Plan
Conceptual Site Model
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE 3

1448.001.01.003	1448-00101003_CSM_1-3	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Property Boundary
- SB13 — Soil Boring (PES, November 2013)
- GGW1 — Grab Groundwater Boring (PES, November 2013)
- B-1 — Geotechnical Boring (Geosphere, 2013)
- B-1 — Geotechnical Boring (URS, 2005)
- CPT-1 — CPT Location (URS, 2005)
- SG-5 — Soil, Soil Gas and Groundwater Sampling Location (Environ, 2013)
- SG-3 — Soil Gas and Soil Sampling Location (Environ, 2013)
- MW-5/B-5 — Monitoring Well (Environ, 2013)
- T2 — Historical Test Boring (Environ, 2013)
- SS-5 — Historical Confirmation Sample from Tank Excavation (Environ, 2013)
- A A' — Hydrogeologic Cross Section Location (Arrows show direction of view)

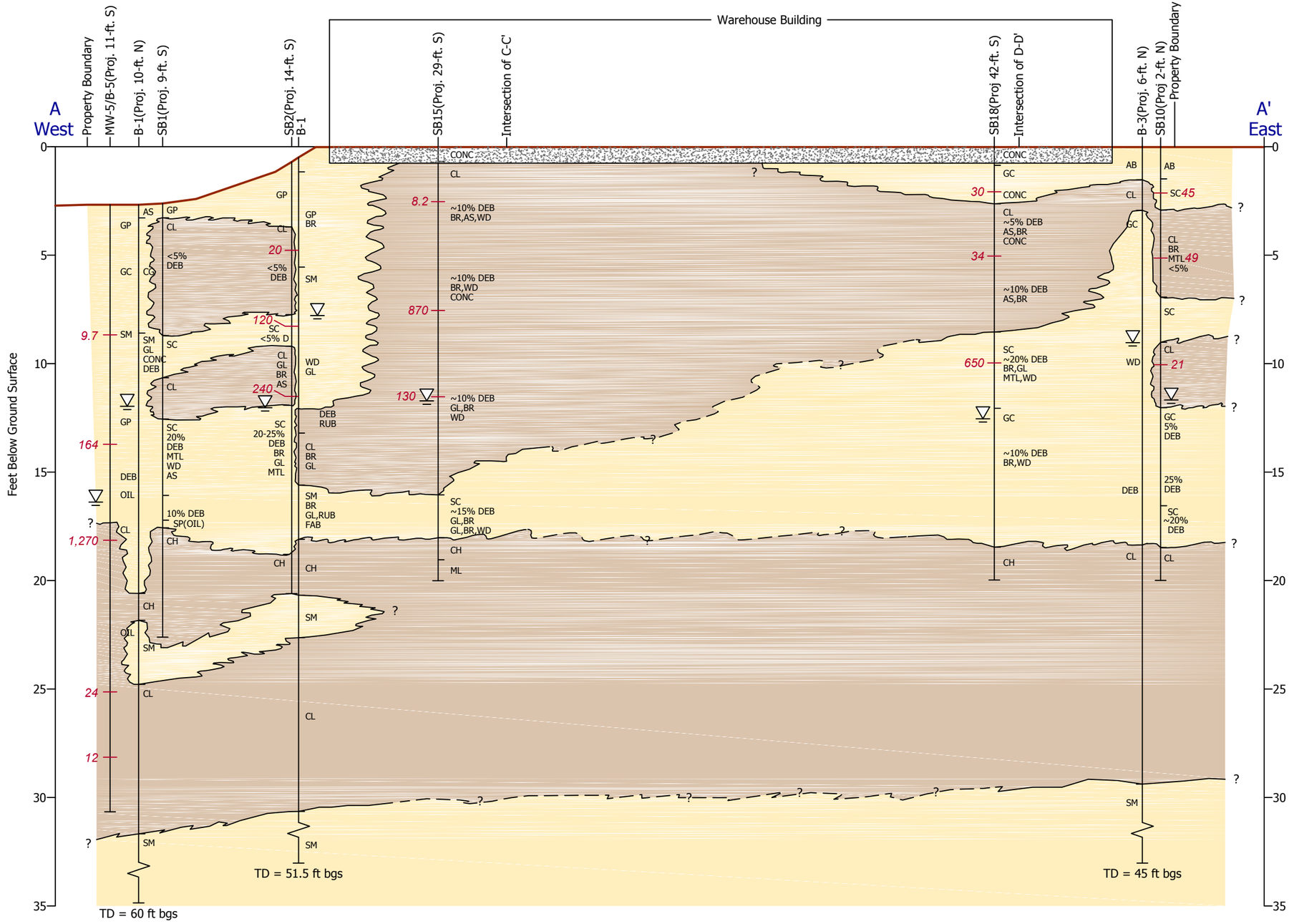
Basemap from ALTA/ACSM Land Title Survey (4/12/2013)

PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Boring, Well, and Cross Section Location Map
Conceptual Site Model
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE 4

1448.001.01.003	1448-00101003_CSM_4-8	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 11-ft. S) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
- GP = Poorly Graded Gravel
- CG = Clayey Gravel
- SP = Poorly Graded Sand
- SM = Silty Sand
- SC = Clayey Sand

Predominantly fine-grained deposits:
- CL/CH = Clay with and without sand and gravel
- ML/MH = Silt with and without sand and gravel

- Concrete (CONC)

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

650 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).

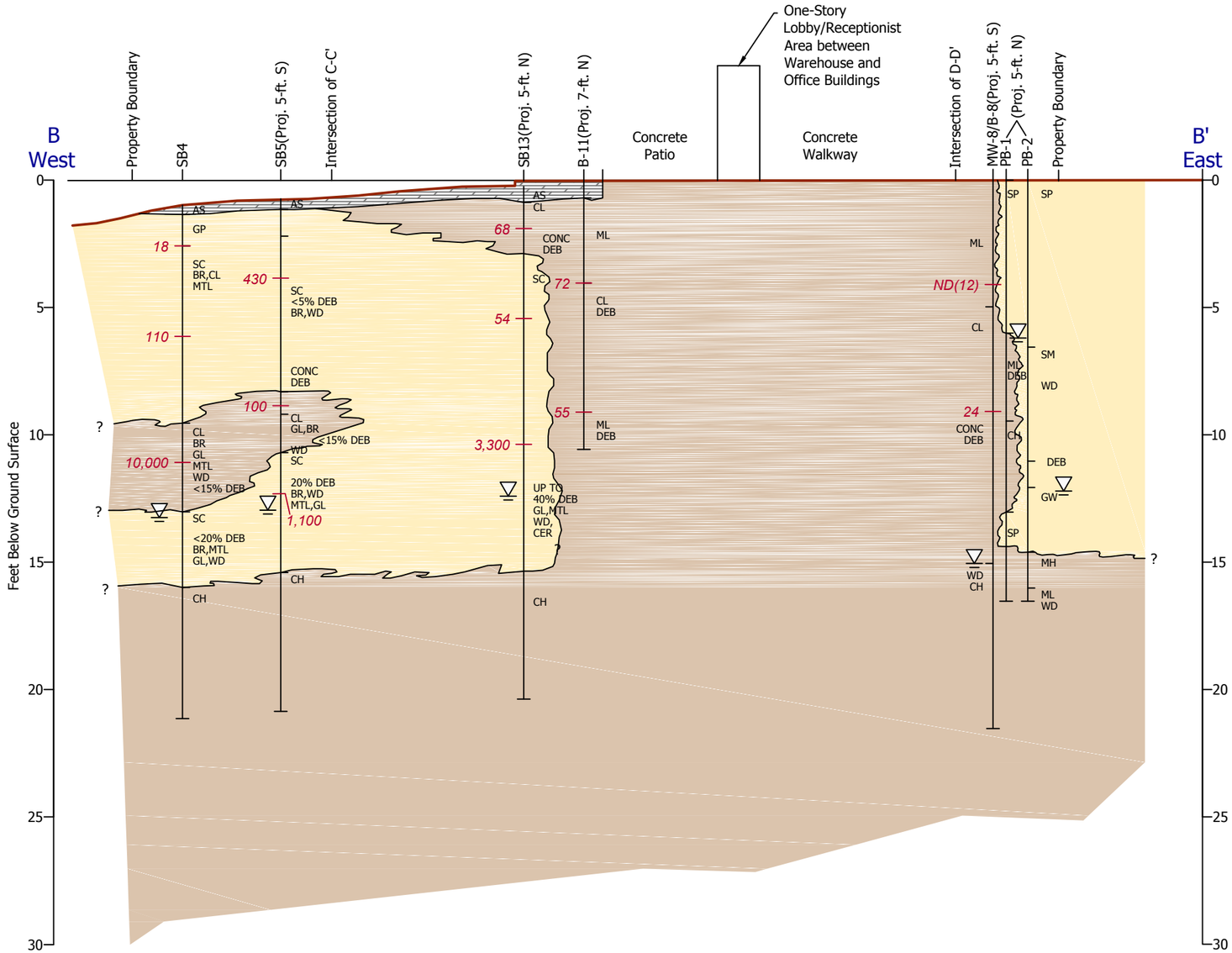
5 Vertical Scale in Feet
0 — 50 Horizontal Scale in Feet
Vertical Exaggeration 10:1

PES Environmental, Inc.
Engineering & Environmental Services

Cross Section A-A'
Conceptual Site Model
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE 5

1448.001.01.003	1448-00101003_CSM_4-8	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 5-ft. S) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
- GP = Poorly Graded Gravel
- CG = Clayey Gravel
- SP = Poorly Graded Sand
- SM = Silty Sand
- SC = Clayey Sand

Predominantly fine-grained deposits:
- CL/CH = Clay with and without sand and gravel
- ML/MH = Silt with and without sand and gravel

- Asphalt (AS)

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

3,300 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).

ND(12) — Not detected at or above the indicated laboratory reporting limit.

5 — Vertical Scale in Feet
0

0 — 50 — Horizontal Scale in Feet

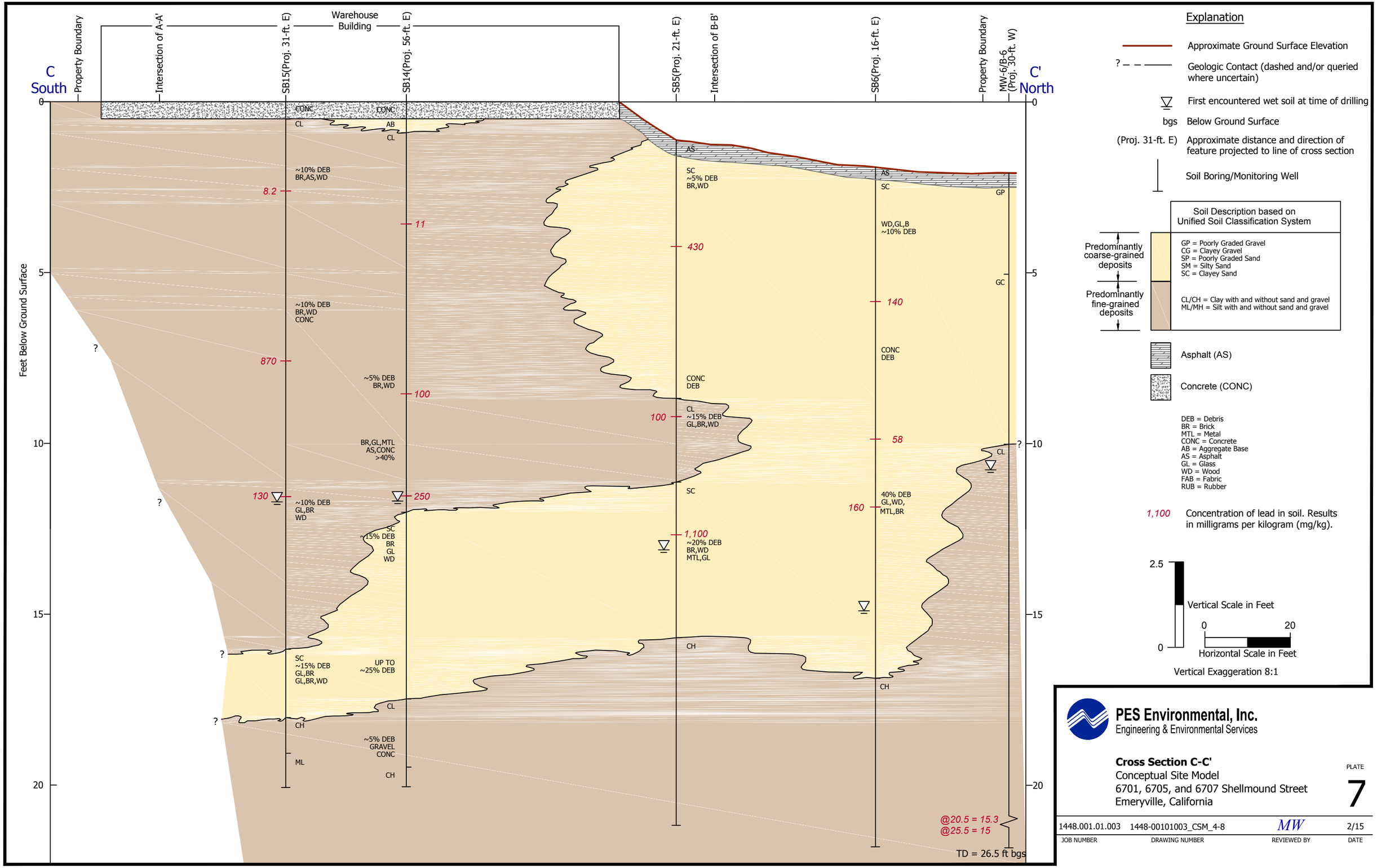
Vertical Exaggeration 10:1

PES Environmental, Inc.
Engineering & Environmental Services

Cross Section B-B'
Conceptual Site Model
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE
6

1448.001.01.003	1448-00101003_CSM_4-8	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 31-ft. E) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
- GP = Poorly Graded Gravel
- CG = Clayey Gravel
- SP = Poorly Graded Sand
- SM = Silty Sand
- SC = Clayey Sand

Predominantly fine-grained deposits:
- CL/CH = Clay with and without sand and gravel
- ML/MH = Silt with and without sand and gravel

- Asphalt (AS)
- Concrete (CONC)

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

1,100 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).

2.5
Vertical Scale in Feet
0
0 20
Horizontal Scale in Feet

Vertical Exaggeration 8:1

PES Environmental, Inc.
Engineering & Environmental Services

Cross Section C-C'
Conceptual Site Model
6701, 6705, and 6707 Shellmound Street
Emeryville, California

PLATE 7

1448.001.01.003	1448-00101003_CSM_4-8	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

D South

D' North

Property Boundary | Intersection of A-A' | Warehouse Building | SB18(Proj. 11-ft. E) | SB17(Proj. 66-ft. E) | PB-1(Proj. 19-ft. W) | Intersection of B-B' | MW-8/B-8 (Proj. 7-ft. W) | MW-1/B-1 (Proj. 12-ft. E) | B-2(Proj. 3-ft. E) | SB8(Proj. 20-ft. W) | SB7(Proj. 22-ft. E) | B-2(Proj.17-ft. E) | Property Boundary

Feet Below Ground Surface

0 | 5 | 10 | 15 | 20 | 25 | 30 | 35

CONC | GC | CONC | CL | ~5% DEB AS,BR CONC | ~10% DEB AS,BR | SC ~20% DEB BR,GL MTL,WD | GC | ~10% DEB BR,WD | CH | ~10% DEB BR,GL,MTL WD | ~20% DEB BR,GL,WD | BR | ~15% DEB AS,WD,BR | SC ~10% DEB GL,WD,BR | CL | SP | ML | DEB | CH WD | CH | SM | CL/SM WD | WD | CL | GW CONC DEB | CL | GP | CL | SM | SP | CONC DEB | CL WD | CH | SM | GC <5% DEB | SP | CL <5% DEB WD | CL | AS | AB | AS | SC <5% DEB BR GL | SP | GC | MTL | SM GL CONC RUB | CH | CH/CL | CL | CL

30 | 54 | 34 | 27 | 650 | 150 | ND(12) | 24 | 61 | 3 | 160 | 77 | 8 | 4.5 | 200 | 3.1 | 3.0 | 120 | 250 | 2.1

TD = 51.5 ft bgs

TD = 40 ft bgs

Explanation

- Approximate Ground Surface Elevation
- Geologic Contact (dashed and/or queried where uncertain)
- First encountered wet soil at time of drilling
- bgs — Below Ground Surface
- (Proj. 11-ft. E) — Approximate distance and direction of feature projected to line of cross section
- Soil Boring/Monitoring Well
- Asphalt (AS)
- Concrete (CONC)
- 650 — Concentration of lead in soil. Results in milligrams per kilogram (mg/kg).
- ND(12) — Not detected at or above the indicated laboratory reporting limit.

Soil Description based on Unified Soil Classification System

Predominantly coarse-grained deposits:
GP = Poorly Graded Gravel
CG = Clayey Gravel
SP = Poorly Graded Sand
SM = Silty Sand
SC = Clayey Sand

Predominantly fine-grained deposits:
CL/CH = Clay with and without sand and gravel
ML/MH = Silt with and without sand and gravel

DEB = Debris
BR = Brick
MTL = Metal
CONC = Concrete
AB = Aggregate Base
AS = Asphalt
GL = Glass
WD = Wood
FAB = Fabric
RUB = Rubber

5 — Vertical Scale in Feet — 0

0 — 20 Horizontal Scale in Feet

Vertical Exaggeration 10:1

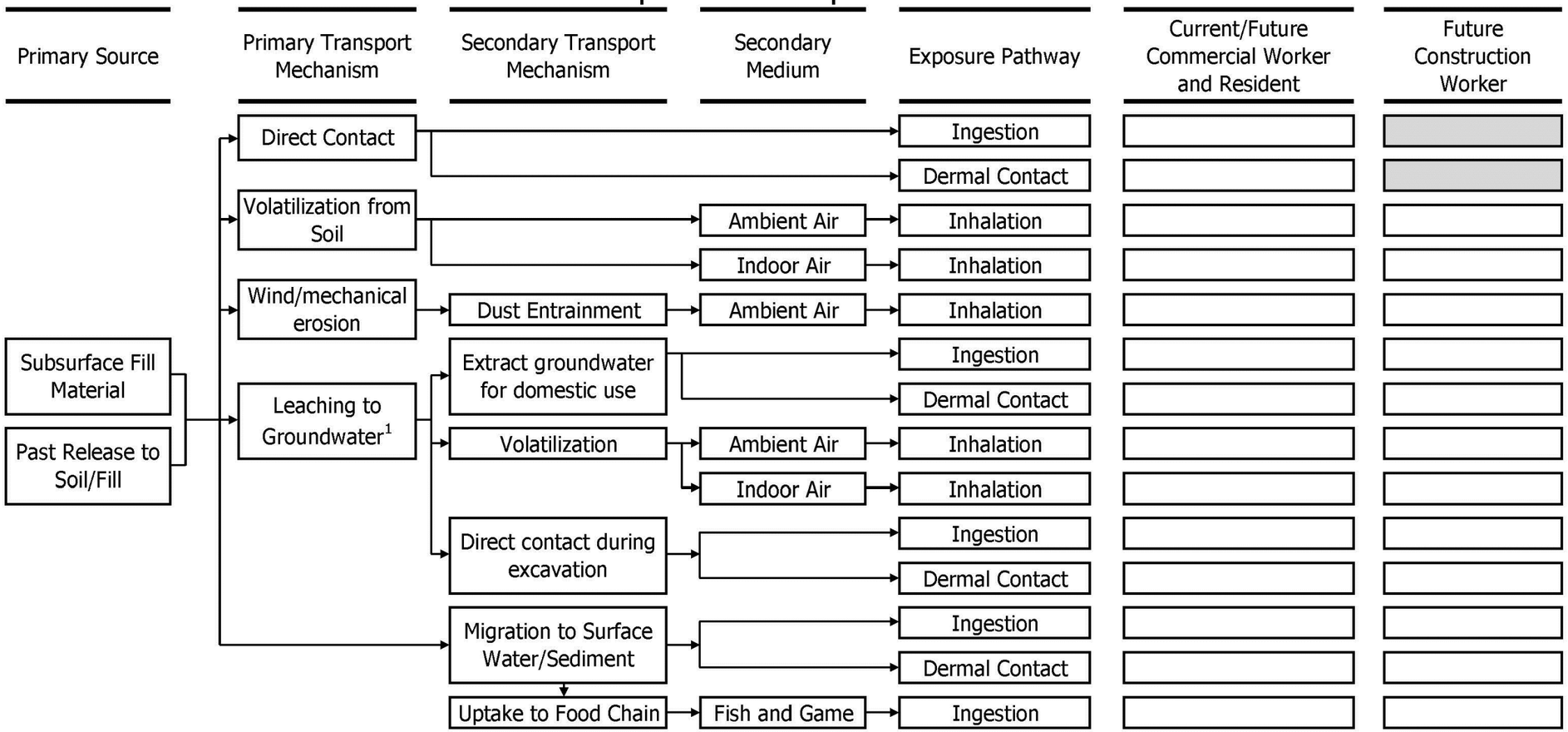
PES Environmental, Inc.
Engineering & Environmental Services

Cross Section D-D'
Conceptual Site Model
6701, 6705, AND 6707 Shellmound Street
Emeryville, California

PLATE 8

1448.001.01.003	1448-00101003_CSM_4-8	MW	2/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

Conceptualized Exposure Model



Receptor likely to be exposed via this route, so exposure pathways are considered potentially complete and significant.

Receptor may be exposed via this route; however, exposure is likely insignificant based on engineering and institutional controls. [2]

Pathway to receptor is not complete and/or significant and not evaluated further.

Footnotes:

[1] Groundwater ranges from approximately 8 to 12 feet below ground surface.

[2] Refer to Section 2.5 of report text.

APPENDIX A

BORING LOGS FROM PRIOR INVESTIGATIONS

BORING LOGS PREPARED BY OTHERS

Blows per 1/2 ft.	SAMPLE NUMBER	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
			0	0.2 ft. Asphalt Brown, damp, loose, gravel and SAND	CEMENT
		GM	1	Gray-brown, damp to moist, medium-dense, gravel (concrete fragments) cobbles and SAND	
			2		BENTONITE SEAL
			3		BLANK CASING
			4		
15 19 25	S-B1-5.5	CL	5	Blue-grey, damp to moist, firm to stiff, gravely CLAY OVA = 340	
			6		
			7		
			8		
		SM	9	Grey and white (salt & pepper), moist to wet, medium dense, very-fine-grained SAND with shell fragments OVA = 370	
5 12 18	S-B1-10.5		10	GROUND WATER	
			11		
			12		
			13		
			14		
			15		
2 3 19	S-B1-16	CL	16	Light-grey and dark blue grey, saturated, stiff, CLAY with wood fibers and greasy, hydrocarbon and transformer odor OVA = 640	
			17		
			18		
			19		
		CL/SM	20	Light gray and blue grey, saturated, firm to stiff CLAY with sand and wood fragments OVA = 520	MD. 3 SAND SLOTTED CASING

REGISTERED GEOLOGIST
JOYLUCAS AFFEROT
RG 4322
Exp[illegible]
STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-1

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 1a

Blows per 1/2 Ft.	Sample Numbers	USCS	Depth in Feet	DESCRIPTION	Well Const.
14 14 17	S-B1-20.5	CL/SM	- 20	Light gray and blue gray, saturated, firm to stiff CLAY with sand and wood fragments OVA = 520	NO. 3 SAND SLOTTED CASING
			- 21		
			- 22	wood fragments common	
			- 23		
			- 24		
10 13 30	S-B1-25.5	CL	- 25	Brown to tan, wet, stiff CLAY (few wood fibers) OVA = 350	BLANK CASING
			- 26		
			- 27		
			- 28		
			- 29		
		CL	- 30	Brown to tan, saturated, stiff CLAY	
5 11 32	S-B1-30.5	SM	- 31	Light-gray, saturated, medium-dense, silty very-fine-grained SAND	
			- 32		
			- 33	Total Depth: 31.5 feet Ground water encountered at 10.7 feet Monitoring well installed 7-5-89 0 - 5.0 ft. blank casing 5.0 - 25.0 ft. slotted casing 25.0 - 30.0 ft. blank casing Well developed on 7-6-89	
			- 34		
			- 35		
			- 36		
			- 37		
			- 38		
			- 39		
			- 40		

REGISTERED GEOLOGIST
JON LACY ARENDT
RG 4322
Exp. 3-31-90
STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-1

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 1b

Blows per 1/2 Ft.	Sample Numbers	USCS	Depth in Feet	DESCRIPTION	Well Cement.
		GW	0	0.2 ft. Asphalt Gray-brown. damp. loose. sandy GRAVEL	
			1		
		CL	2	Blue-gray. moist. soft. silty. sandy. CLAY with some organics	
			3		
			4		
			5	Blue-gray. moist. soft. silty. sandy. CLAY with some organics OVA = 0	
7 8 8	S-B2-6		6		
			7		
			8		
			9		
12 45 31	S-B2-10	SM	10	Blue-gray and light-gray. moist to wet. loose silty. clayey. fine to medium grained SAND slight hydrocarbon odor OVA = 40	
			11	GROUND WATER	
		SM		Light-gray to gray saturated. medium dense. silty. SAND	
			12		
			13		
			14		
			15		
10 14 17	S-B2-16	CL	16	Light-brown. saturated. soft to firm. gravely CLAY. trace hydrocarbon odor OVA = 540	
			17		
			18		
			19		
		CL	20	Blue gray. saturated. very soft CLAY OVA = 320	

REGISTERED GEOLOGIST JON LUCK, ARGUST RG 4322 Exp 6-30-90 STATE OF CALIFORNIA

BACKFILLED WITH PORTLAND CEMENT ON JULY 5, 1989

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-2

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 2a

Blows per 1/2 ft.	SAMPLE NUMBER	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
6 5 8	S-82-20.5	CL	- 20 - 21	Blue gray, saturated, very soft CLAY OVA = 320	
			- 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30 - 31 - 32 - 33 - 34 - 35 - 36 - 37 - 38 - 39 - 40	Total Depth: 21.5 feet Ground water encountered at 11.5 feet No caving Backfilled with portland cement 7-5-89	

REGISTERED GEOLOGIST
JONATHAN PRENDT
RG4322
Exp 6-30-90
STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-2

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 2b

BLOWS PER FOOT	SAMPLE NUMBER	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
			- 0	**Fill**	
			- 1	Chunks of concrete, brick and debris	
			- 2		
		SM	- 3	Dark gray, damp, medium dense, silty SAND with brick and debris	
10 8 7	S-B3- 5.0		- 4	**Native bay mud & fill debris**	
		SC	- 5	Red-brown and gray, dense, silty CLAYEY SAND with brick and debris OVA = 50	
			- 6		
			- 7		
			- 8	GW encountered	
		CL	- 9	Gray-blue gray, wet, soft, silty CLAY with gravel	
2 2 2	NR		-10		
			-11		
	S-B3- 12	CL	-12	Blue-gray, wet, soft, silty, gravely CLAY with gravel OVA = 150	
			-13	**BAY MUD WITH FILL**	
			-14		
Push for 18"	S-B3- 15	CL	-15	Blue, green, gray and black, wet, soft, gravely CLAY 1/3 sample saturated with black, old HC oil OVA = 260	
			-16		
			-17		
			-18		
			-19	**OLDER BAY MUD**	
Push for 18	S-B3- 20	CL	-20	Light brown-tan, wet, stiff, sandy CLAY OVA = 260	

REGISTERED GEOLOGIST
JONATHAN ARENDT
RG 4322
Exp. 6-30-00
STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4385 FAX (415) 822-5290

LOG OF BORING B-3

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 3a

BLOWS PER FOOT	SAMPLE NUMBERS	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
			-20	Light brown-tan. wet. stiff. sandy CLAY OVA = 260	
			-21		
			-22		
			-23		
			-24		
Push for 12" 1 for 6"	S-B3-25	CL	-25	Light brown-tan. wet. stiff. sandy CLAY	
			-26		
			-27		
			-28		
			-29	Total Depth: 26.0 feet Ground water encountered at 9.8 feet Monitoring well installed 8-23-89 0 - 5.0 ft. blank casing 5.0 - 25.0 ft. slotted casing Well developed on 9-7-89	
			-30		
			-31		
			-32		
			-33		
			-34		
			-35		
			-36		
			-37		
			-38		
			-39		
			-40		

REGISTERED JON JACKI ARENDT RG 4322 Exp. [illegible] STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-3

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 3b

BLOWS PER FOOT	SAMPLE NUMBERS	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
		GP	- 0	FILL Light brown, damp, loose to medium dense, silty, gravely SAND/sandy GRAVEL	
			- 1		
			- 2		
			- 3		
12 26 21	S-B4- 4.5	GP	- 4	Light brown, damp, loose to medium dense, gravelly SAND, sandy gravel OVA = 140	
			- 5		
			- 6		
			- 7	(Hard drilling)	
			- 8		
		SP	- 9	Light gray to light brown, damp, dense, gravel and SAND	
5 7 5	S-B4- 10	CL	-10	Blue-gray and brown, moist, wet, dense, gravelly, sandy CLAY OVA = 320 Ground water encountered	
			-11		
			-12		
			-13		
			-14		
6 5 3	S-B4- 14.5	GP	-15	Blue-gray, wet, saturated, dense, sandy, clayey GRAVEL, tr. old, black HC OVA = 480	
			-16	Refusal at 16'	
			-17		
			-18	Lost lead auger in hole - abandoned hole Hole caving at 6' - 9'	
			-19	Total Depth: 16.0 feet	
			-20	Ground water encountered at 10.5 ft.	

REGISTERED GEOLOGIST
JON JACOB ARENDT
RG 4322
Exp 6-30-93
STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-4

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 4a

BLOWS PER FOOT	SAMPLE NUMBER	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
		GP	- 0	FILL Light gray-tan. dry to damp. loose. silty. sandy GRAVEL.	
			- 1		
			- 2		
		GC	- 3	Light gray-gray brown. damp. firm. silty. gravely CLAY	
			- 4		
			- 5		
8 21 13	S-B5- 6.0	SM	- 6	Light gray and medium gray (S & P). damp. moist. mud. dense. silty. finegrained SAND OVM = 190	
			- 7		
			- 8		
		SM	- 9	Gray. moist. medium dense. silty SAND	
8 24 28	S-B5- 4.0	GP	-10	GRAVEL and debris	
			-11	Groundwater encountered OVM = 300	
			-12	(Oil/grease common in sample shoe)	
			-13		
			-14		
1 2 1	S-B5- 15.5	CL	-15	Dark gray. moist-wet. soft. silty CLAY Sampler covered with oil and grease	
			-16		
			-17	OVM = 350	
			-18		
			-19		
			-20	Dark gray. wet. soft to firm silty CLAY	

REGISTERED GEOLOGIST JON HACKLAREMONT RG 4322 Exp 6-30-90 STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-5

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 5a

BLOWS PER FOOT	SAMPLE NUMBER	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
11 12 15	no recovery	CL	-20	Dark gray, wet, soft-firm, silty CLAY	
			-21		
		CL	-22		
	S-B5-22.5			Dark gray as above and light brown-tan, moist-wet, stiff, silty CLAY OVA = 430	
			-23		
			-24		
10 11 10	S-B5-25.5		-25		
		CL	-26	Light brown, tan, wet, stiff, silty CLAY	
				OVA= 430	
			-27		
			-28		
			-29		
			-30	Total Depth: 26.5 feet Ground water encountered at 10.3 ft. Monitoring well installed 8-31-89 0 - 5.0 ft. blank casing 5.0 - 25.0 ft. slotted casing Well developed on 9-7-89	
			-31		
			-32		
			-33		
			-34		
			-35		
			-36		
			-37		
			-38		
			-39		
			-40		

REGISTERED GEOLOGIST
JON UHLER ARENDT
RG 4322
Exp. [illegible]
STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-5

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 5b

BLOWS PER FOOT	SAMPLE NUMBER	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
		GP	- 0	FILL Light gray, damp-moist, loose, medium dense, silty, sandy, GRAVEL	
			- 1		
			- 2		
		GC	- 3	Grey-brown, damp, loose-medium dense, sandy, clayey GRAVEL	
			- 4		
			- 5		
			- 6		
			- 7		
		CL	- 8	Light grey-dark gray, moist, dense, gravely, sandy CLAY	
			- 9		
		CL	-10	Blue-gray, moist-wet, soft-firm, gravely, sandy CLAY	
			-11		
			-12		
			-13		
			-14		
		CL	-15	Blue-gray, wet, soft-firm, sandy CLAY	
		CL	-16	Blue-gray, wet, soft-firm, sandy CLAY	
			-17		
			-18		
		CL	-19	Blue-gray and tan, wet, soft-stiff, sandy CLAY	
			-20		

REGISTERED GEOLOGIST JON LACK ARENDT RG 4322 Exp. [illegible] STATE OF CALIFORNIA

Environmental Services, Inc.
2111 Jennings St. San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-6

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 6a

BLOWS PER FOOT	SAMPLE NUMBER	USCS	DEPTH IN FEET	DESCRIPTION	WELL CONST.
10 21 15	S-B6- 20.5	CL	-20	Light brown-tan, wet, stiff, sandy CLAY OVA = 410	
			-21		
			-22		
			-23		
			-24		
8 10 15	S-B6- 25.0	CL	-25	Light brown-tan, wet, stiff-very stiff, sandy CLAY	
			-26	OVA = 350	
			-27		
			-28		
			-29		
			-30	Total Depth: 26.5 feet Ground water encountered at 10.5 ft. Monitoring well installed on 8-31-89 0 - 5.0 ft. blank casing 5.0 - 25.0 ft. slotted casing Well developed on 9-7-89	
			-31		
			-32		
			-33		
			-34		
			-35		
			-36		
			-37		
			-38		
			-39		
			-40		

REGISTERED GEOLOGIST JON [illegible] ARENDT RG 4322 Exp [illegible] STATE OF CALIFORNIA

LW Environmental Services, Inc.
2111 Jennings St., San Francisco, CA 94124-3224
(415) 822-4555 FAX (415) 822-5290

LOG OF BORING B-6

Mike Roberts Color Productions
6707 Bay Street
Emeryville, California

PROJECT NUMBER: 9077

PLATE 6b

BORING LOG

Project MRCP
Location Emeryville
Job # 0389058.00
Geologist/Engineer Don McClenagan
Drill Agency Bay Area Exploration

Hole/Well # B-9
Diameter of Drill Hole 5 inches
Total Depth of Hole 9 feet
Date Started 1-4-90
Date Completed 1-5-90

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0					
2	CEMENT GROUT			ML	0-3' asphalt Yellow brown gravelly silt, damp, 15% gravel, loose
4		11 19 21	9-1		4-5.5 Medium brown silty gravel, brick, concrete frags, damp, loose, no odor
6				GM	
8					
10		10 11 21	9-2		9-10.5 light brown gravel (brick & concrete frags, glass, nails, aluminum shavings), saturated with oily substance at 10', loose, strong odor

SCS ENGINEERS

BORING LOG

Project MRCP
Location Emeryville
Job # 0389058.00
Geologist/Engineer Don McClenagan
Drill Agency Bay Area Exploration

Hole/Well # B-13
Diameter of Drill Hole 5 inches
Total Depth of Hole 9 feet
Date Started 1-4-90
Date Completed 1-5-90

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0					
2	CEMENT GROUT				0-.3' asphalt .3-2' medium brown silt, 5% gravel, slightly damp, loose, no odor
4		9 14 18	13-1	ML	4-5.5' 30% construction debris and gravel, loose, no odor
6					
8					
10		6 7 12	13-2	SW	at 10' green, well graded sand, coarse, loose, damp, no odor

SCS ENGINEERS

BORING LOG

Project MRCP
Location Emeryville
Job # 0389058.00
Geologist/Engineer Don McClenagan
Drill Agency Bay Area Exploration

Hole/Well # B-10
Diameter of Drill Hole 5 inches
Total Depth of Hole 9 feet
Date Started 1-4-90
Date Completed 1-5-90

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0					
2	CEMENT GROUT			GM	0-3 asphalt medium brown, silty gravel, damp, loose, slight odor
4		4 7 8	10-1		4-5.5 brown silt, wood fragments, brick and concrete frags, strong odor, staurated with oily substance
6				ML	
8					
10		4 4 5	10-2	GM	9-10.5 dark brown, gravel cgl, construction debris, saturated with oily substance

SCS ENGINEERS

BORING LOG

Project MRCP
Location Emeryville
Job # 0389058.00
Geologist/Engineer Don McClenagan
Drill Agency Bay Area Exploration

Hole/Well # B-11
Diameter of Drill Hole 5 inches
Total Depth of Hole 9 feet
Date Started 1-4-90
Date Completed 1-5-90

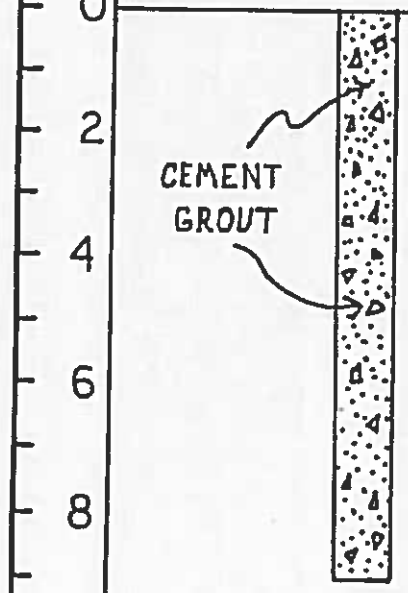
DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0					
2	CEMENT GROUT			ML	0-.3' asphalt .3-1 yellow brown silt, 20% gravel, slightly damp, loose
4					4-6.5 medium brown gravelly caly, 15% gravel, damp, medium stiff, construction debris
6		2 6 8	11-1	CL	
8					
10		6 4 8	11-2	ML	9-10.5' brown gravelly silt, 50% gravel, constuction debris, loose, chemical odor, saturated with oily substance

SCS ENGINEERS

BORING LOG

Project: MRCP
Location: Emeryville
Job #: 0389058.00
Geologist/Engineer: Don McClenagan
Drill Agency: Bay Area Exploration

Hole/Well #: B-12
Diameter of Drill Hole: 5 inches
Total Depth of Hole: 9 feet
Date Started: 1-4-90
Date Completed: 1-5-90



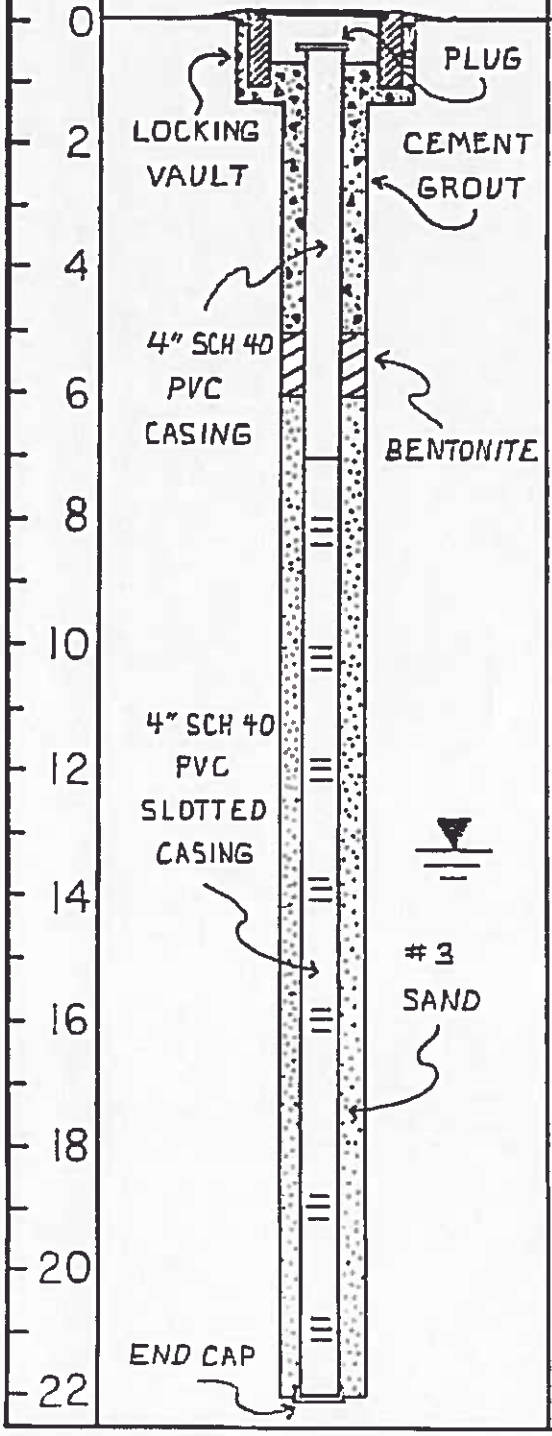
DEPTH IN FEET	N-VALUE	SOURCE	GRAPHIC SYMBOL	DESCRIPTION
0				
0–.3'				asphalt
.3–2'				medium brown clayey silt, 5% gravel, loose, slightly damp, no odor
4	5 9 10	12-1	ML	
4–5.5'				dark brown clayey silt, 20% construction debris & gravel, loose, damp
6				
8				
10	5 7 13	12-2	SW	
10–10.5				Green well graded sand, coarse, damp, loose

SCS ENGINEERS

BORING LOG

Project MRCP
Location Emeryville
Job # 0389058.00
Geologist/Engineer Don McClenagan
Drill Agency Bay Area Exploration

Hole/Well # MW-7
Diameter of Drill Hole 10.5 inches
Total Depth of Hole 22 feet
Date Started 1-3-90
Date Completed 1-4-90



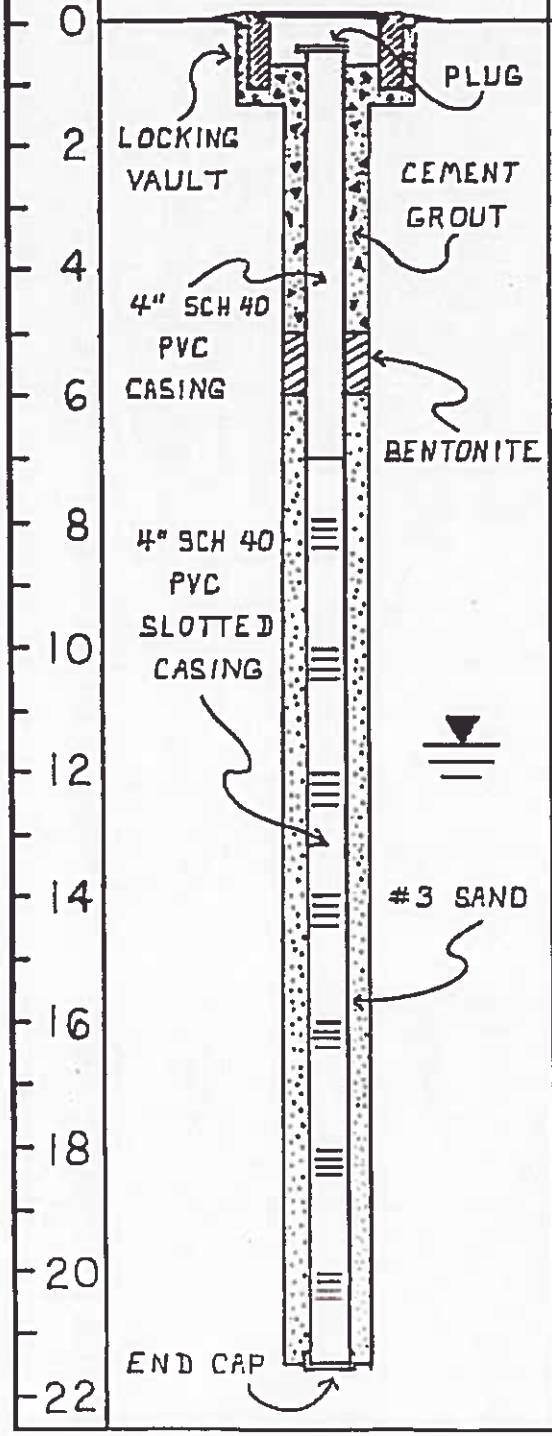
DEPTH IN FEET	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0				
			GM	0-.3' asphalt .3-1' medium brown sandy gravel, damp, loose 4.5-5' yellow silty gravel, damp, some chemical odor, loose
	6 8 7	8-1	CL	5-6' black silty clay, 5% gravel, stiff, damp, some odor
				9.5-11' yellow silt, 15% gravel, damp, brick and glass fragments, loose, saturated with oily substance at 10'
	3 13 21	8-2	ML	14.5-16 20% gravel
	3 4 6	8-3	SW	at 20.5' - dark brown silty clay, saturated, shell fragments no chemical odor
				groundwater first encountered: 14.5'
				Static level: 13.25'
	11 8 6	8-4	CL	

SCS ENGINEERS

BORING LOG

Project MRCP
Location Emeryville
Job # 0389058.00
Geologist/Engineer Don McClenagan
Drill Agency Bay Area Exploration

Hole/Well # MW-8
Diameter of Drill Hole 10.5 inches
Total Depth of Hole 21.5 feet
Date Started 1-3-90
Date Completed 1-4-90



0-1' dark brown gravelly silt, 20% gravel, damp, loose

5-6.5' dark brown sandy clay, 1% gravel, 10% organic mat., damp, stiff, no chem. odor

10-11.5' gray, hard concrete or mortar, slightly damp, strong chemical odor

15-16.5' dark grey clay, saturated, wood and plant fiber, strong chemical odor

20-21.5' dark grey-green to yellow, silty clay, saturated, strong odor

groundwater first encountered at 15 feet

SCS ENGINEERS

LOG OF TEST BORING T 1

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/13/94
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
			0	0			DARK BROWN SILTY SANDY CLAY (CL) medium stiff, moist, with gravel (fill)
			0	5		17	YELLOW BROWN SANDY GRAVEL (GP) medium dense, moist (fill)
			0			7	MOTTLED BROWN CLAYEY SANDY GRAVEL (GC) medium dense, moist, with asphalt and concrete fragments (fill)
			0			11	DARK GRAY BROWN SILTY CLAY (CL/CH) stiff, moist, with glass fragments (fill)
			0	▼		4	GROUNDWATER LEVEL DURING DRILLING
			10	10		4	GRAY CLAYEY SILTY SAND (SM) loose to medium dense, moist, with gravel (fill)
				15		3	Boring backfilled with cement grout

LOG OF TEST BORING T 2

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/13/94
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
				0			BROWN SILTY SAND (SM) loose to medium dense (fill)
						36	GRAY BROWN SANDY GRAVEL (GM) medium dense, moist (fill)
			0	5			
			10			18	BROWN CLAYEY SAND (SC) medium dense, moist (fill)
			0			7	OLIVE GRAY SANDY SILTY CLAY (CL) soft, moist (fill)
				▼		4	GROUNDWATER LEVEL DURING DRILLING
				10			
			0			2	
							BROWN AND BLACK SILTY SAND (SM) loose, wet
				15		2	Boring backfilled with cement grout

Subsurface Consultants

6707 BAY STREET - EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	4/27/94	LLC

PLATE 3

LOG OF TEST BORING T 3

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/13/94
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
				0			BROWN SILTY SAND (SM) loose, moist (fill)
						7	BROWN CLAYEY SAND (SC) medium dense, moist, with gravel and concrete fragments and plastic (fill) asphalt at 5 feet
				5		8	
							BLACK CLAYEY SAND (SC) loose, wet (fill)
						2	GROUNDWATER LEVEL DURING DRILLING
						4	
			25	10			
			3			5	MOTTLED GRAY SANDY SILTY CLAY (CL) soft to medium stiff, moist, with organic material
			0				
			0			3	
				15			Boring backfilled with cement grout

LOG OF TEST BORING T 4

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/14/94
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
				0			BROWN CLAYEY SAND (SC) medium dense, moist, with concrete fragments and gravel (fill)
			0			35	
				5		14	
							GRAY SILTY CLAY (CL) medium stiff, moist, with sand (fill)
						8	
						15	GROUNDWATER LEVEL DURING DRILLING
			6	10			GRAY AND BROWN CLAYEY SILTY SAND (SM)
						23	medium dense, moist, with gravel, glass and wood fragments (fill)
						5	BLACK CLAYEY SAND (SC) loose, wet (fill)
			4	15			Boring backfilled with cement grout

Subsurface Consultants

6707 BAY STREET - EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	4/27/94	

PLATE 4

LOG OF TEST BORING T 5

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/14/94
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
				0			ASPHALTIC CONCRETE - 3" thick BROWN SILTY SANDY GRAVEL (GM) medium dense, moist (fill)
			0			35	
				5		17	BROWN CLAYEYGRAVELLY SAND (SC) medium dense, moist (fill)
			0			37	GRAY SAND (SP) medium dense, moist
			0	▼		19	GROUNDWATER LEVEL DURING DRILLING
				10		15	
			3				
				15		6	GRAY SANDY SILTY CLAY (CH) medium stiff, moist

Boring backfilled with cement grout

LOG OF TEST BORING T 6

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/14/94
ELEVATION - -

LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
				0			ASPHALTIC CONCRETE - 1" thick BROWN SILTY SANDY GRAVEL (GM) medium dense (fill)
			0			12	
				5		10	GRAY SANDY SILTY CLAY (CL) medium stiff, moist, with asphalt (fill)
			0			15	
			0	▼		14	GROUNDWATER LEVEL DURING DRILLING concrete at 9 feet
			0	10		16	
				15		6	GRAY CLAYEY SILT (MH) medium stiff, moist

Boring backfilled with cement grout

Subsurface Consultants

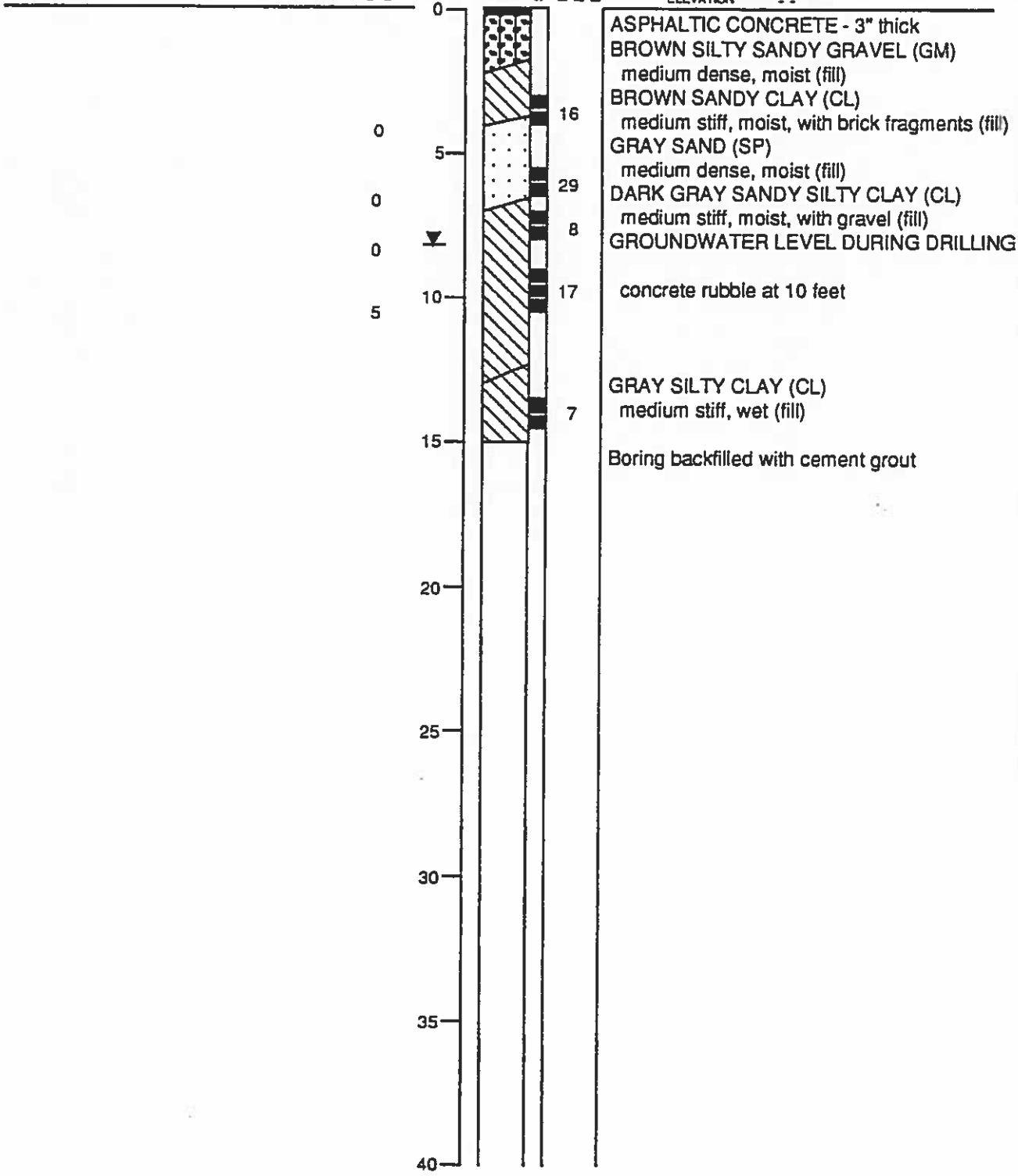
6707 BAY STREET - EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	4/27/94	

PLATE 5

LOG OF TEST BORING T 7

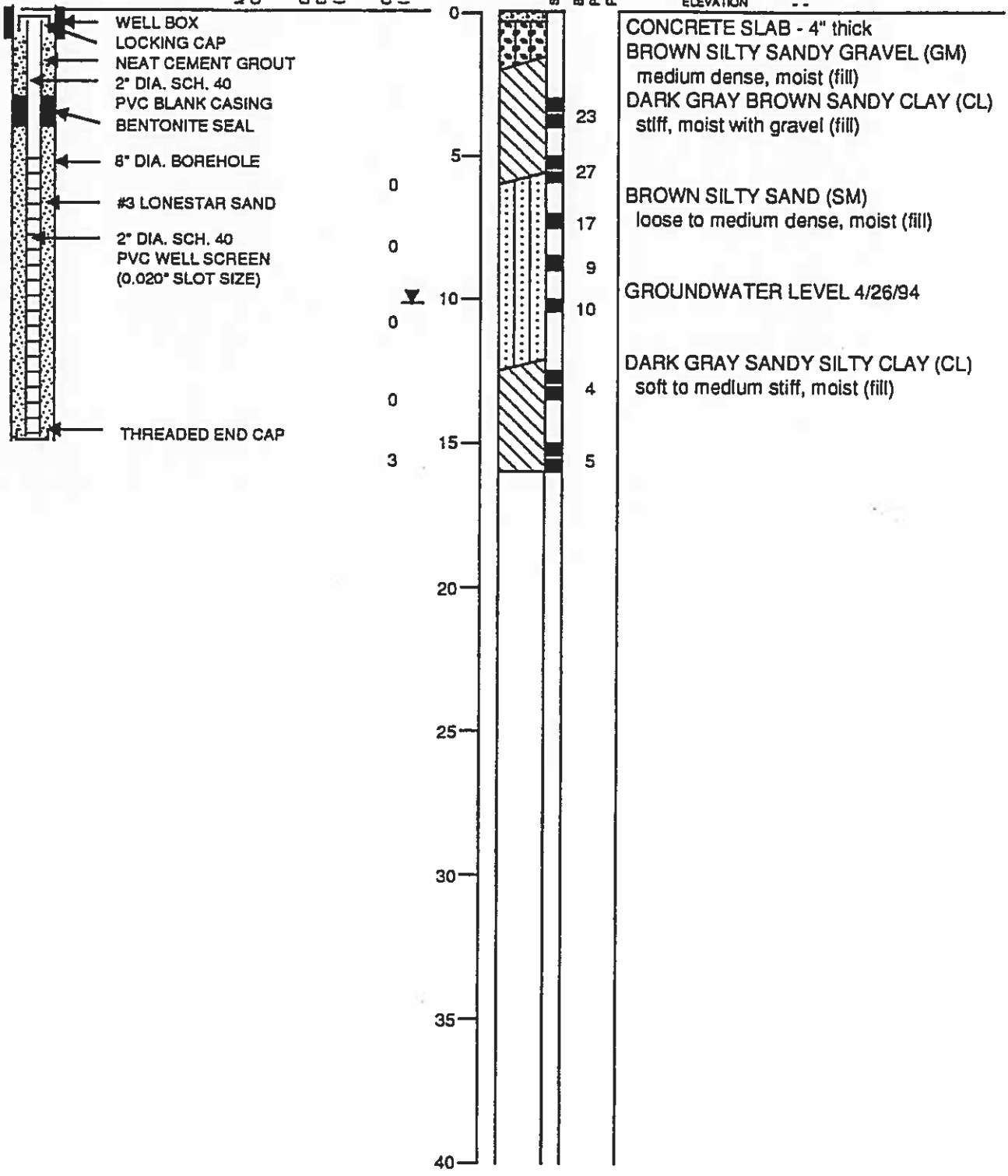
EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/14/94
ELEVATION - -



Subsurface Consultants	6707 BAY STREET - EMERYVILLE, CA			PLATE
	JOB NUMBER	DATE	APPROVED	6
	820.001	4/27/94		

LOG OF TEST BORING MW-9

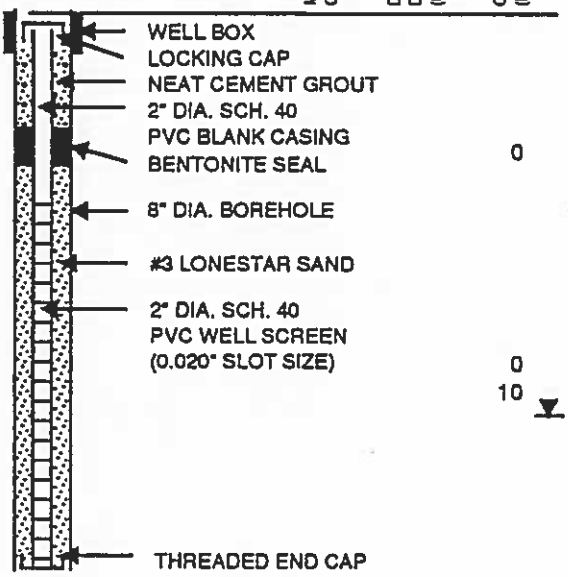
EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/13/94
ELEVATION - -



Subsurface Consultants	6707 BAY STREET - EMERYVILLE, CA			PLATE
	JOB NUMBER	DATE	APPROVED	7
	820.001	4/27/94	plc	

LOG OF TEST BORING MW-10

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 4/14/94
ELEVATION - -



MOISTURE CONTENT (%)	DRY DENSITY (PCF)	OVM (PPM)	DEPTH (FEET)	SAMPLE	BLOWS PER FOOT	
			0			BROWN CLAYEY SAND (SC) loose, moist (fill)
		0			19	DARK BROWN SANDY CLAY (CL) medium stiff, moist (fill)
			5		23	DARK GRAY BROWN SANDY CLAY (CL) stiff, moist (fill)
						BROWN SAND (SP) loose to medium dense, moist (fill)
					21	
		0			9	CONCRETE RUBBLE at 9 feet
		10	10		3	GROUNDWATER LEVEL 4/26/94
						BLACK BROWN CLAYEY SANDY SILT (ML) soft, wet (fill)
					2	oily odor
						organic debris and wood fragments at 14 feet
		5	15		3	black oil sludge at 16 feet
			20			
			25			
			30			
			35			
			40			

Subsurface Consultants

6707 BAY STREET - EMERYVILLE, CA

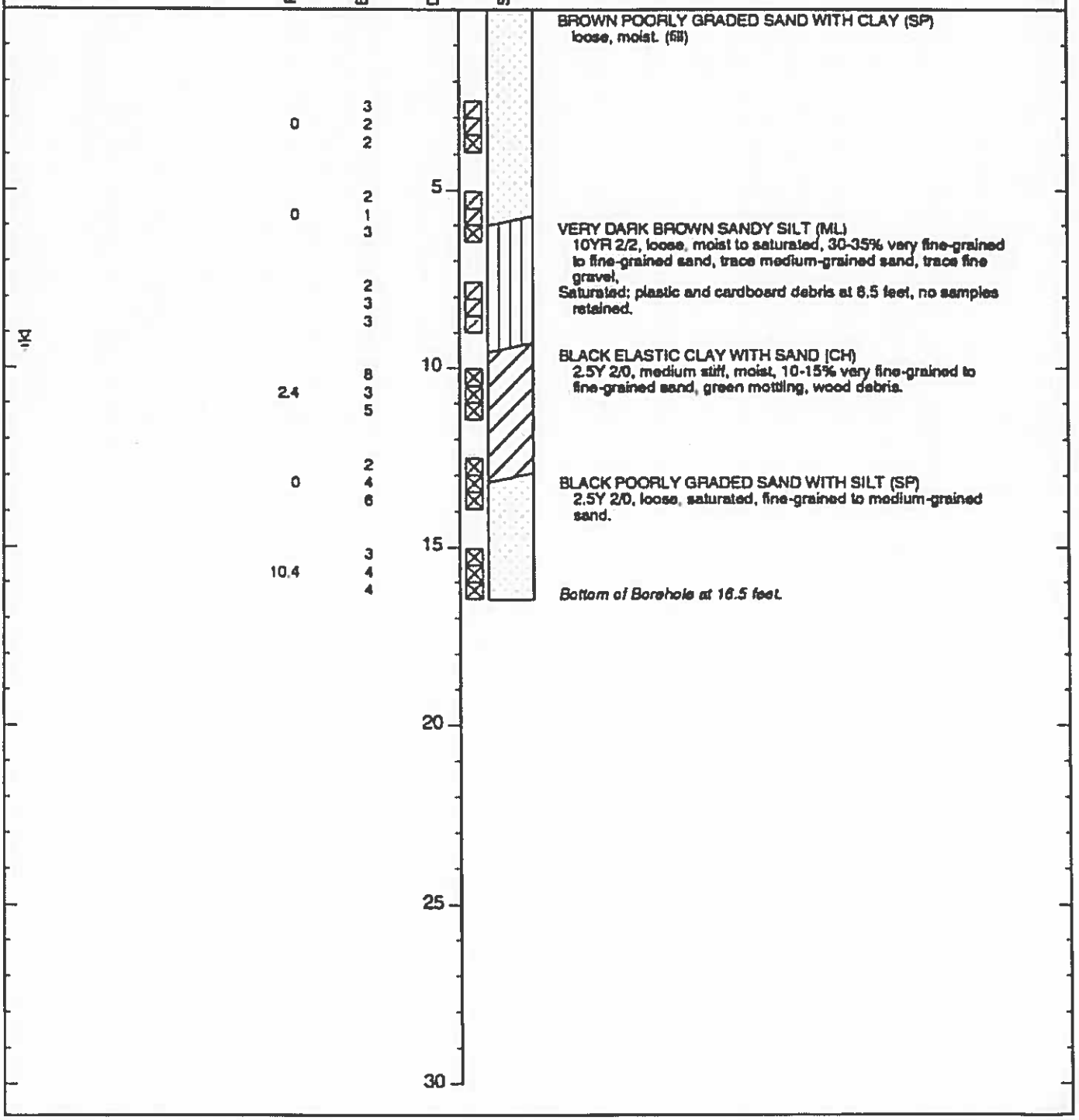
JOB NUMBER	DATE	APPROVED
820.001	4/27/94	

PLATE 8

BORING LOGS PREPARED BY PES ENVIRONMENTAL

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING PB-1



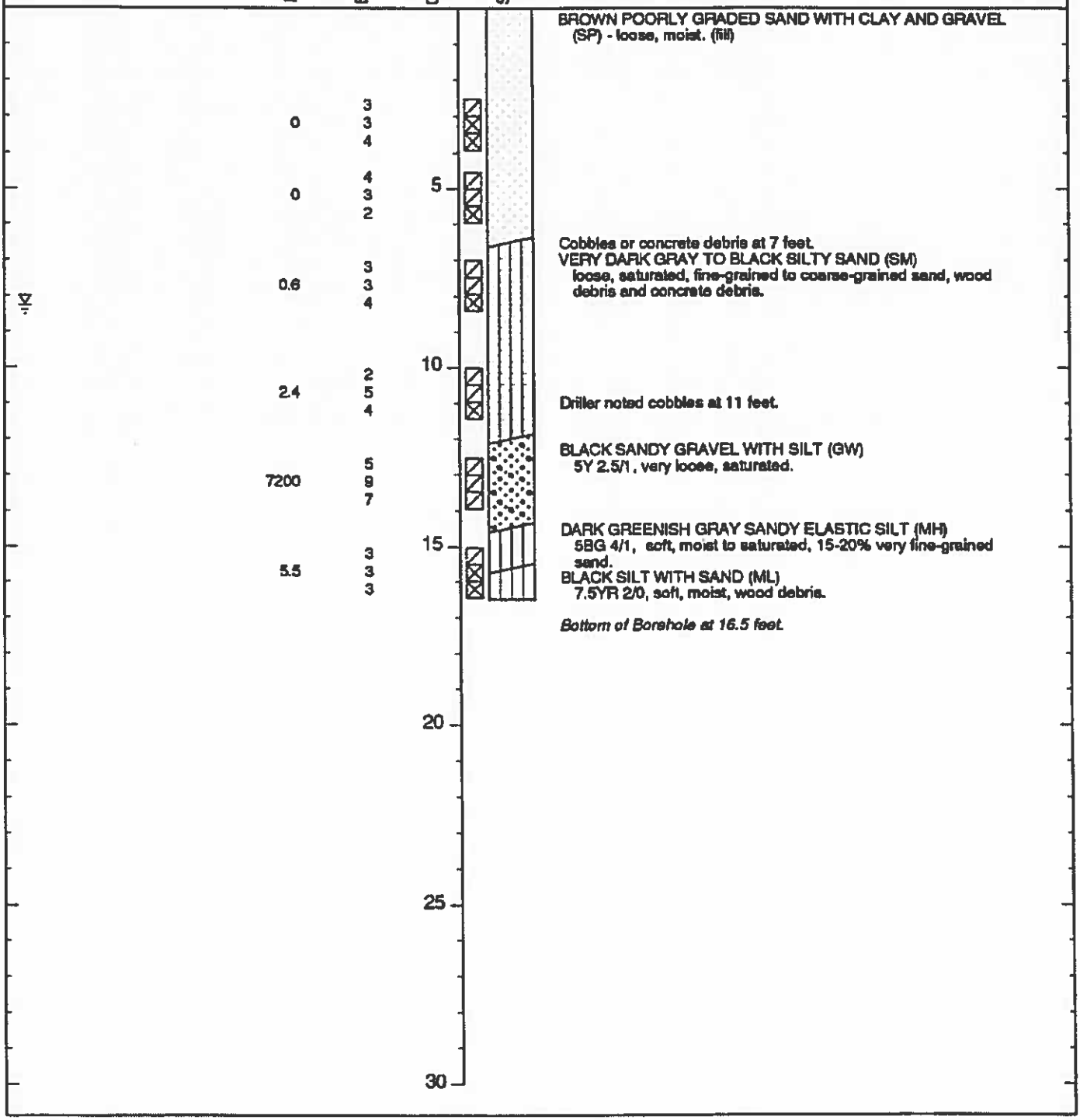
CLIENT	Nady Systems Site	DIAMETER OF HOLE	8 inches
LOCATION	6707 Bay Street, Emeryville, CA	TOTAL DEPTH OF HOLE	16.5 feet
JOB NUMBER	MP001B	TOP OF CASING ELEVATION	
GEOLOGIST/ENGINEER	J. Gill	DATE STARTED	9/5/91
DRILL RIG	Truck Mounted C-57	DATE COMPLETED	9/5/91

PLATE

A-2

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING PB-2



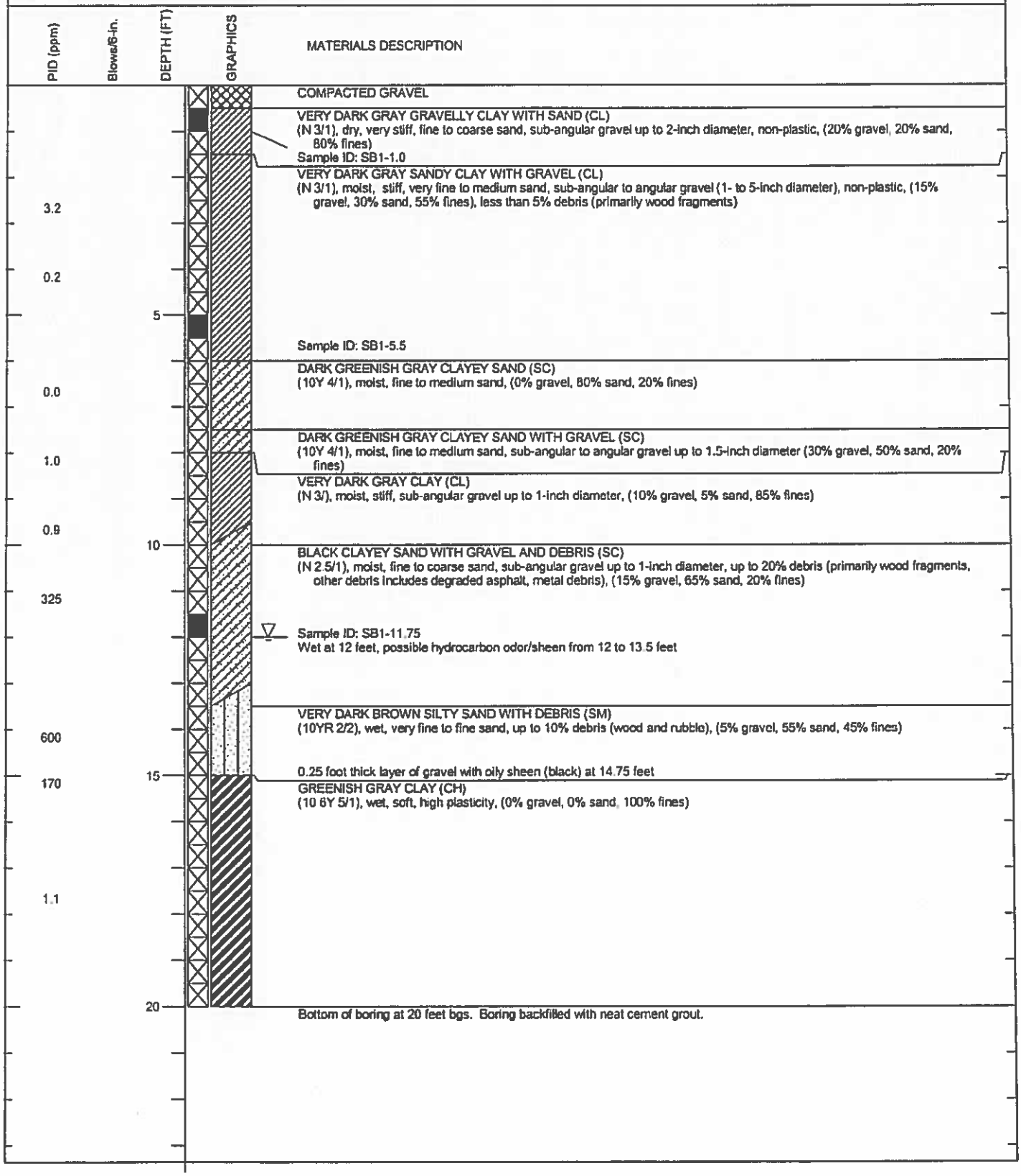
CLIENT	Nady Systems Site	DIAMETER OF HOLE	8 inches
LOCATION	6707 Bay Street, Emeryville, CA	TOTAL DEPTH OF HOLE	16.5 feet
JOB NUMBER	MP001B	TOP OF CASING ELEVATION	
GEOLOGIST/ENGINEER	J. Gill	DATE STARTED	9/5/91
DRILL RIG	Truck Mounted C-57	DATE COMPLETED	9/5/91

PLATE

A-3

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB1



PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-1

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB2

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				OLIVE BROWN SILTY GRAVEL WITH SAND (GM) (2.5Y 4/4), moist, sub-angular to angular gravel up to 1.5-inch diameter, very fine to coarse sand, (60% gravel, 20% sand, 20% fines) Compacted gravel, sub-angular to angular gravel up to 1 in diameter. Very little recovery 0 to 2 feet
2.3				
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (60% gravel, 20% sand, 20% fines)
1.2				
				Sample ID: SB2-4.0
				3-inch thick layer of concrete-like material at 4.5 feet
		5		
1.2				
				VERY DARK GRAY CLAYEY SAND WITH GRAVEL (SC) (N 3/), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick fragments), (15% gravel, 45% sand, 40% fines)
1.0				Sample ID: SB2-7.5
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 10% debris (brick, glass, and asphalt fragments), (20% gravel, 25% sand, 55% fines)
1.1				
		10		
				▽ Sample ID: SB2-10.75
				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), wet, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 25% debris (brick, glass, metal, and wood fragments), (15% gravel, 55% sand, 30% fines) Possible hydrocarbon sheen and odor
115				
96				
		15		
120				VERY DARK GREENISH GRAY CLAY WITH GRAVEL, SAND, AND DEBRIS (CH) (10GY 3/1), wet, medium stiff, gravel, sand, and debris (up to 20%) in Bay mud matrix, debris (wood, glass, and concrete fragments), (15% gravel, 10% sand, 75% fines) Possible hydrocarbon staining/odor
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-2

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB3

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				OLIVE BROWN SILTY SAND WITH GRAVEL (SM) (2.5Y 4/4), dry, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (40% gravel, 45% sand, 15% fines) Sample ID: SB3-1.5
2.4				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 5% debris (brick, glass, and wood fragments), (60% gravel, 20% sand, 20% fines) Large (greater than 3-inch diameter) concrete fragments at 2 feet
		5		
3.5				Increase in sand content to (20% gravel, 30% sand, 50% fines) at 6 feet Increase in debris content up to 10% (wood, glass, and brick fragments) Sample ID: SB3-7.5
1.5		10		Decrease in sand and gravel content to (15% gravel, 15% sand, 70% fines) at 9.0 feet Sample ID: SB3-11.0
35.1				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), wet, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 20% debris (brick, glass, metal, ceramic, and wood fragments), (15% gravel, 55% sand, 30% fines)
4.5		15		
1.1				GREENISH GRAY CLAY (CH) (10GY 5/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-3

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB4

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				OLIVE BROWN GRAVEL WITH SAND AND SILT (GP) (2.5Y 4/4), dry, very fine to coarse sand, angular gravel up to 1.5-inch diameter, (50% gravel, 40% sand, 10% fines) Sample ID: SB4-1.5
0.6				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick, glass, and metal fragments), (20% gravel, 45% sand, 35% fines)
1.0				
		5		Sample ID: SB4-5.0
1.2				
1.0				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (brick, glass, wood and metal fragments), (15% gravel, 30% sand, 55% fines)
		10		Sample ID: SB4-10.0
12.1				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), wet, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 20% debris (brick, glass, metal, and wood fragments), (15% gravel, 60% sand, 25% fines)
1.3		15		BLACK CLAY (CH) (N 2.5/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
4.1				GREENISH GRAY CLAY (CH) (10GY 5/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-4

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB5

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				No recovery
1.0				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick and wood fragments), (25% gravel, 35% sand, 40% fines)
				Sample ID: SB5-3.0
1.3				
		5		
				Concrete debris from 6.5 to 7.5 feet
0.9				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (brick, glass, and wood fragments), (15% gravel, 25% sand, 60% fines) Sample ID: SB5-6.0
		10		Abundant brick debris at 10 feet
0.9				
				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), moist, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 20% debris (brick, glass, metal, and wood fragments), (15% gravel, 55% sand, 30% fines) Sample ID: SB5-11.5 Wet at 12 feet
1.4				
		15		DARK GREENISH GRAY CLAY (CH) (10GY 4/1), wet, soft, very fine to fine sand, high plasticity, (0% gravel, 10% sand, 90% fines)
2.2				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-5

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB6

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 10% debris (brick, glass and wood fragments), (15% gravel, 55% sand, 30% fines)
1.6				
				Change in color to VERY DARK GRAY (2.5Y 3/1), increase in clay content to (15% gravel, 45% sand, 40% fines) at 3.5 feet
				Sample ID. SB6-4.0
		5		
				Concrete debris at 5.5 feet
2.4				
				DARK GREENISH GRAY CLAYEY SAND (SC) (10Y 4/1), moist, stiff, fine sand, (0% gravel, 80% sand, 20% fines)
				Sample ID: SB6-8.0
				BLACK CLAYEY SAND WITH GRAVEL AND DEBRIS (SC) (N 2.5/1), moist, fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 40% debris (brick, glass, metal, and wood fragments), (15% gravel, 55% sand, 30% fines)
4.1				
		10		Sample ID: SB6-10.0
				▽ Wet at 13 feet
1.7				
		15		GREENISH GRAY CLAY WITH SAND (CH) (10GY 5/1), wet, soft, very fine to fine sand, high plasticity, (0% gravel, 20% sand, 80% fines)
3.2				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/7/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/7/13

PLATE
C-6

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB7

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 2.0-inch diameter, less than 5% debris (brick and glass fragments), (15% gravel, 55% sand, 30% fines)
0.9				
				Sample ID: SB7-2.5
				Change in color to VERY DARK GRAY (2.5Y 3/1), increase in clay content to (15% gravel, 45% sand, 40% fines) at 3.0 feet
1.2				
		5		Abundant brick fragments at 5 feet
1.6				
				Sample ID: SB7-8.0
				DARK GREENISH GRAY SAND WITH CLAY (SP) (10Y 4/1), moist, fine to medium sand, (0% gravel, 90% sand, 10% fines)
		10		
1.8				
				Sample ID: SB7-12.5
				Wet at 13.0 feet
		15		DARK GREENISH GRAY CLAYEY GRAVEL WITH SAND (GC) (10Y 4/1), wet, fine to coarse sand, sub-angular to angular gravel up to 3-inch diameter, (60% gravel, 15% sand, 25% fines)
2.5				
1.9				GREENISH GRAY SANDY CLAY (CL) (10GY 5/1), wet, soft, very fine to fine sand, low plasticity, (0% gravel, 30% sand, 70% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-7

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB8

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				LIGHT YELLOWISH BROWN SILTY SAND WITH GRAVEL (SM) (10YR 6/4), dry, very fine to fine sand, sub-angular to angular gravel up to 1-inch diameter, (15% gravel, 70% sand, 15% fines)
0.3				
				DARK YELLOWISH BROWN CLAYEY GRAVEL WITH SAND (GC) (10YR 3/4), moist, very fine to fine sand, minor coarse sand, sub-angular to angular gravel up to 3-inch diameter, less than 5% debris (brick fragments), (50% gravel, 20% sand, 30% fines) Sample ID: SB8-3.5
		5		
0.1				YELLOWISH BROWN SAND (SP) (10Y 5/4), moist, fine to medium sand, (0% gravel, 100% sand, 0% fines)
0.2				Sample ID: SB8-8.0
		10		
0.4				
				Sample ID: SB8-12.0 Wet at 12.5 feet Change in color to DARK GREENISH GRAY (5GY 4/1) at 13 feet
		15		VERY DARK GRAY CLAY WITH SILT AND SAND (CL) (N 3/), wet, medium stiff, very fine to fine sand, less than 5% debris (wood), (0% gravel, 20% sand, 80% fines)
1.6				
2.0				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-8

PES Environmental, Inc.

Engineering & Environmental Services

LOG OF BORING SB9

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				GRAY GRAVEL WITH SAND (GP) (5Y 5/1), dry, very fine to coarse sand, angular gravel up to 1.5-inch diameter, (60% gravel, 40% sand, 15% fines)
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 55% sand, 30% fines)
1.1				Change in color to VERY DARK GRAY (2.5Y 3/1) at 4 feet, increase in clay to (15% gravel, 45% sand, 40% fines)
				Sample ID: SB9-4.5
		5		
				VERY DARK GREENISH GRAY CLAYEY SAND WITH GRAVEL (SC) (10Y 3/1), moist, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, up to 5% debris (brick fragments), (15% gravel, 45% sand, 40% fines)
0.8				
		10		Sample ID: SB9-10.0
				VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick and wood fragments), (50% gravel, 20% sand, 30% fines)
1.7		15		
0.9				GREENISH GRAY SILT WITH SAND (ML) (5GY 5/1), moist, stiff, very fine to fine sand, non-plastic, (0% gravel, 20% sand, 80% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1388.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE

C-9

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB10

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to medium sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (20% gravel, 50% sand, 30% fines)
1.3				Sample ID: SB10-2.0
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, less than 5% debris (brick, metal and concrete fragments), (20% gravel, 25% sand, 55% fines)
		5		Sample ID: SB10-5.0
2.1				OLIVE BROWN CLAYEY SAND (SC) (2.5Y 4/3), moist, very fine to medium sand, trace fine gravel, (5% gravel, 65% sand, 30% fines)
1.6				DARK GREENISH GRAY CLAY WITH SAND (CL) (5GY 4/1), moist, soft, very fine to medium sand, (0% gravel, 20% sand, 80% fines)
		10		Sample ID: SB10-10.0
				▽
3.2				VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (50% gravel, 20% sand, 30% fines), up to 5% debris at 12 to 15 feet
		15		Increase in debris to up to 25% from 15 to 16 feet (primarily wood and glass fragments)
2.7				BLACK CLAYEY SAND WITH GRAVEL (SC) (N2 5/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 2.5-inch diameter, up to 20% debris (brick, concrete, glass, and wood), (15% gravel, 70% sand, 15% fines)
3.1				GREENISH GRAY CLAY WITH SILT (CL) (5GY 5/1), moist, stiff, very fine to fine sand, low plasticity, (0% gravel, 10% sand, 90% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-10

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB11

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT
				LIGHT YELLOWISH BROWN GRAVEL WITH SAND (GP) (2.5Y 6/3), dry, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, (60% gravel, 40% sand, 0% fines)
0.3				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (2.5Y 3/1), moist, very stiff, very fine to coarse sand, minor coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 30% sand, 55% fines) Sample ID: SB11-2.0
		5		DARK OLIVE BROWN CLAYEY SAND WITH GRAVEL (SC) (2.5Y 3/3), moist, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 10% debris (brick, wood and metal fragments), (0% gravel, 100% sand, 0% fines) Concrete debris at 4 feet Sample ID: SB11-5.5 Concrete debris at 6 feet
1.1				
0.9		10		OLIVE BROWN SAND WITH CLAY (SP) (2.5Y 4/6), moist, fine to medium sand, (0% gravel, 90% sand, 10% fines) Sample ID: SB11-11.5 Wet at 12 feet Change in color to DARK GREENISH GRAY (10GY 4/1) at 12.75 feet
2.1				
		15		
1.4				
1.0		20		DARK GREENISH GRAY CLAY WITH SAND (CL) (10GY 4/1), wet, soft, very fine to fine sand, (0% gravel, 20% sand, 80% fines) Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1366.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-11

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB12

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick and wood fragments), (15% gravel, 30% sand, 55% fines)
2.1				Sample ID: SB12-2.0
				VERY DARK GRAY CLAYEY SAND WITH GRAVEL (SC) (N 3/), moist, stiff, very fine to medium sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 55% sand, 30% fines) Concrete debris at 3 feet
1.3		5		Sample ID: SB12-5.0
0.7		10		Increase in debris up to 20% (brick and glass fragments) at 9.75 feet Sample ID: SB12-10.0
9.1				Wet at 12 feet, Increase in debris up to 30% (brick, wood and glass fragments) at 12 feet
15		15		Up to 85% debris (wood) from 15 to 16 feet
1.4				DARK GREENISH GRAY SAND (SP) (10GY 4/1), wet, very fine to medium sand, (0% gravel, 95% sand, 5% fines)
				DARK GREENISH GRAY SANDY CLAY (CL) (10Y 4/1), wet, stiff, very fine to fine sand, low plasticity, (0% gravel, 30% sand, 70% fines)
				Shell fragments present from 19 to 20 feet
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-12

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB13

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
1.3				VERY DARK GRAY SANDY CLAY WITH GRAVEL (CL) (N 3/), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick fragments), (15% gravel, 30% sand, 55% fines) Sample ID: SB13-1.5 Concrete debris at 2 to 2.5 feet
1.2		5		VERY DARK GRAY CLAYEY SAND WITH GRAVEL (SC) (N 3/), moist, stiff, very fine to medium sand, sub-angular to angular gravel up to 1.5-inch diameter, less than 5% debris (brick and wood fragments), (15% gravel, 55% sand, 30% fines) Sample ID: SB13-5.0
2.0		10		Increase in debris up to 20% (brick, wood, metal, ceramic, and glass fragments) at 8.5 feet Sample ID: SB13-10.0
2.1		15		▽ Wet at 12 feet; increase in debris up to 40% (ceramic, wood, metal, and glass fragments) at 12 feet VERY DARK GRAY CLAY (CH) (N 3/), wet, soft, very fine sand, (0% gravel, 10% sand, 90% fines)
4.0		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/8/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/8/13

PLATE
C-13

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB14

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				ASPHALT AND BASE ROCK
0.9				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (15% gravel, 30% sand, 55% fines)
				Sample ID: SB14-3.5
1.1		5		
				Change in color to VERY DARK GRAY (N 3/) at 8 feet, increase in debris to up to 5% (brick and wood fragments)
				Sample ID: SB14-8.5
1.2		10		
				Increase in debris to up to 40% (brick, glass, metal, asphalt and concrete fragments)
				Sample ID: SB14-11.5
				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 5-inch diameter, up to 15% debris (brick, wood and glass fragments), (15% gravel, 60% sand, 25% fines)
4.7				
				Increase in clay content to (15% gravel, 30% sand, 35% fines) at 13.5 feet
		15		
				Decrease in clay content to (15% gravel, 60% sand, 25% fines) at 16 feet Up to 25% debris (brick, metal, concrete, glass, and wood debris)
20.6				
				BLACK SANDY CLAY WITH GRAVEL (CL) (N 2.5/1), wet, medium stiff, very fine to fine sand, sub-angular to angular gravel up to 1-inch diameter, up to 5% debris (wood, metal, and glass fragments), (15% gravel, 25% sand, 60% fines)
				VERY DARK GRAY CLAY WITH SAND (CH) (N 3/1), wet, soft, very fine sand, (0% gravel, 10% sand, 90% fines) Gravel and concrete debris at 19 to 19.5 feet
6.4		20		
		25		Bottom of boring at 25 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	25 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE
C-14

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB15

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (15% gravel, 30% sand, 55% fines), up to 10% debris (brick, asphalt, and wood fragments)
0.3				Sample ID: SB15-2.5
				Change in color to VERY DARK GRAY (N 3/) at 3.5 feet
		5		
1.2				Increase in debris to up to 10% (brick, wood, and concrete fragments)
				Sample ID: SB15-7.5
0.7				
		10		
				Sample ID: SB15-11.5 Wet at 11.75 feet Change in color to BLACK (N 2.5/1), up to 10% debris (glass, brick, and wood fragments)
1.0				
		15		
1.5				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), wet, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (brick, wood and glass fragments), (15% gravel, 55% sand, 30% fines)
				VERY DARK GRAY CLAY (CH) (N 3/), wet, soft, high plasticity, (0% gravel, 5% sand, 95% fines)
2.8				
				DARK GREENISH GRAY SANDY SILT (ML) (5GY 4/1), wet, soft, very fine to fine sand, (0% gravel, 30% sand, 70% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1388.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE
C-15

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB16

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, (15% gravel, 30% sand, 55% fines)
1.0				Sample ID: SB16-2.5
		5		Change in color to VERY DARK GRAY (N 3/) at 4.5 feet
				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), moist, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 15% debris (wood, metal, concrete, and glass fragments), (15% gravel, 60% sand, 25% fines)
0.6				Sample ID: SB16-7.5
		10		Sample ID: SB16-10.5
			▽	Wet at 11 feet
1.3				
				Increase in clay content to (15% gravel, 45% sand, 40% fines) at 13 feet Increase in debris to up to 25% (wood, brick, metal, and glass fragments)
		15		
2.5				VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/), wet, soft, sub-angular to angular gravel up to 3-inch diameter, up to 20% debris (clay pipe and wood fragments), (70% gravel, 15% sand, 15% fines)
				VERY DARK GREENISH GRAY CLAY (CH) (5GY 3/1), wet, soft, high plasticity, (0% gravel, 0% sand, 100% fines)
0.9				
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1388.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE
C-16

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB17

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
				OLIVE BROWN SANDY CLAY WITH GRAVEL (CL) (2.5Y 4/4), moist, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2-inch diameter, up to 10% debris (brick, wood, and glass fragments), (15% gravel, 30% sand, 55% fines) Sample ID: SB17-2.0
1.0				
		5		Sample ID: SB17-5.0
				Increase in debris to up to 20% (large brick fragments, glass and wood debris)
0.3				
				Sample ID: SB17-9.5
		10		Abundant brick fragments at 10 feet
				▽
0.5				DARK OLIVE GRAY SANDY CLAY (CL) (5Y 3/6), wet, medium stiff, very fine to coarse sand, sub-angular to angular gravel, up to 1.5-inch diameter, up to 15% debris (asphalt, wood and brick fragments), (15% gravel, 20% sand, 65% fines)
				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), wet, very fine to coarse sand, sub-angular to angular gravel, up to 1.5-inch diameter, up to 10% debris (glass, wood and brick fragments), (15% gravel, 60% sand, 25% fines)
1.2		15		
				DARK OLIVE GRAY CLAY WITH SAND (CL) (5Y 3/8), wet, soft, very fine to fine sand, sub-angular to angular gravel, up to 1.5-inch diameter, black marbling present, (0% gravel, 15% sand, 85% fines)
1.9				
				DARK GREENISH GRAY SANDY CLAY (CL) (5GY 4/1), wet, very fine to fine sand, (0% gravel, 30% sand, 70% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE
C-17

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING SB18

PID (ppm)	Blows/6-in.	DEPTH (FT)	GRAPHICS	MATERIALS DESCRIPTION
				CONCRETE AND BASE ROCK
0.4				OLIVE BROWN CLAYEY GRAVEL WITH SAND (GC) (2.5Y 4/1), dry, stiff, very fine to coarse sand, sub-angular to angular gravel up to 2.5-inch diameter, up to 10% debris (brick, wood, concrete, and glass fragments), (50% gravel, 25% sand, 25% fines) Sample ID: SB18-2.0 Abundant concrete debris at 2 feet
0.5				DARK GREENISH GRAY SANDY CLAY WITH GRAVEL (CL) (5GY 4/1), MOIST, stiff, very fine to coarse sand, sub-angular to angular gravel up to 1.5-inch diameter, up to 5% debris (brick, asphalt, and concrete fragments), (15% gravel, 30% sand, 55% fines) Abundant asphalt debris from 3 to 4 feet
		5		Sample ID: SB18-5.0
0.7				Change in color to VERY DARK GRAY (N 3/) Increase in debris to up to 10% (wood and brick fragments)
0.8				BLACK CLAYEY SAND WITH GRAVEL (SC) (N 2.5/1), moist, very fine to coarse sand, sub-angular to angular gravel, up to 1.5-inch diameter, up to 20% debris (brick, glass, wood and metal fragments), (15% gravel, 45% sand, 40% fines)
		10		Sample ID: SB18-10.0
1.0				▽ VERY DARK GRAY CLAYEY GRAVEL WITH SAND (GC) (N 3/), wet, very fine to coarse sand, sub-angular to angular gravel, up to 3-inch diameter, up to 10% debris (brick and wood fragments), (50% gravel, 25% sand, 25% fines)
		15		
1.3				VERY DARK GREENISH GRAY CLAY (CH) (5GY 3/1), wet, soft, very fine sand, high plasticity, (0% gravel, 10% sand, 90% fines)
		20		Bottom of boring at 20 feet bgs. Boring backfilled with neat cement grout.

PROJECT	6701 Shellmound Street	REVIEWED BY	GDT
LOCATION	Emeryville, CA	DIAMETER OF HOLE	3.5
JOB NUMBER	1386.001.01.005	TOTAL DEPTH OF HOLE	20 feet
LOGGED BY	Mitch Buttress	DATE STARTED	11/9/13
DRILL RIG	Geoprobe 8040 DT	DATE COMPLETED	11/9/13

PLATE
C-18

APPENDIX B

PERTINENT DATA FROM PREVIOUS ENVIRONMENTAL REPORTS PREPARED BY PES AND OTHERS

PERTINENT TABLES AND PLATES EXCERPTED FROM REPORTS PREPARED BY PES ENVIRONMENTAL

Table 1
Summary of Laboratory Analytical Results for Soil - VOCs
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Acetone (µg/kg)	Other VOCs (µg/kg)
SB2	SB2-4.0	4	11/7/2013	ND(20)	ND
SB2	SB2-7.5	7.5	11/7/2013	**35**	ND
			Residential Soil RSLs [1]	**6,100,000**	N/A

Notes:
Detections are shown in bold.
bgs = Below ground surface.
VOCs = Volatile organic compounds.
µg/kg = Micrograms per kilogram.
ND(20) = Not detected at or above the indicated laboratory reporting limit.
ND = Not detected.
NE = Not Established.
N/A = Not applicable.
1. United States Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.
- Results equal to or exceeding RSLs are shaded.

Table 2
Summary of laboratory Analytical Results for Soil - SVOCs
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Acenaphthene (µg/kg)	Acenaphthylene (µg/kg)	Anthracene (µg/kg)	Benzo (a) Anthracene (µg/kg)	Benzo (a) Pyrene (µg/kg)	Benzo (b) Fluoranthene (µg/kg)	Benzo (k) Fluoranthene (µg/kg)	Benzo (g,h,i) Perylene (µg/kg)	Chrysene (µg/kg)	Fluoranthene (µg/kg)	Fluorene (µg/kg)	Indeno (1,2,3-cd) Pyrene (µg/kg)	2-Methyl-naphthalene (µg/kg)	4-Methylphenol (µg/kg)	Naphthalene (µg/kg)	N-Nitrosodi-phenylamine (µg/kg)	Phenanthrene (µg/kg)	Pyrene (µg/kg)
SB2	SB2-4.0	4	11/7/2013	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(330)	ND(67)	ND(330)	ND(67)	ND(67)
SB2	SB2-7.5	7.5	11/7/2013	ND(130)	270	630	1,200	970	970	360	330	1,400	2,100	210	340	ND(130)	ND(660)	ND(130)	ND(660)	2,400	2,300
SB6	SB6-4.0	4	11/7/2013	ND(660)	ND(660)	1,200	2,400	3,000	3,700	1,500	1,400	2,900	4,400	810	1,300	ND(660)	ND(3,300)	2,900	ND(3,300)	5,500	4,500
SB6	SB6-10.0	10	11/7/2013	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(67)	ND(330)	ND(67)	ND(330)	ND(67)	ND(67)
SB7	SB7-2.5	2.5	11/8/2013	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	10,000	1,500	ND(1,700)	450	ND(330)
SB7	SB7-8.0	8	11/8/2013	500	ND(330)	340	340	ND(330)	ND(330)	ND(330)	ND(330)	470	1,100	680	ND(330)	9,200	ND(1,600)	28,000	1,700	2,400	1,100
SB11	SB11-2.0	2	11/8/2013	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(1,300)	ND(6,600)	ND(1,300)	ND(6,600)	ND(1,300)	1,300
SB11	SB11-5.5	5.5	11/8/2013	ND(670)	ND(670)	ND(670)	ND(670)	980	980	ND(670)	ND(670)	820	1,800	ND(670)	ND(670)	ND(670)	ND(3,300)	ND(670)	ND(3,300)	750	2,300
SB13	SB13-1.5	1.5	11/8/2013	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	ND(66)	92	ND(330)	260	ND(330)	ND(66)	79
SB13	SB13-10.0	10	11/8/2013	ND(1,700)	ND(1,700)	ND(1,700)	2,000	ND(1,700)	1,800	ND(1,700)	ND(1,700)	2,100	4,200	ND(1,700)	ND(1,700)	2,000	ND(8,300)	2,100	ND(8,300)	7,500	4,000
Residential Soil RSLs [1]				340,000	NE	1,700,000	150	15	150	1,500	NE	15,000	230,000	230,000	150	23,000	NE	3,800	NE	NE	170,000

Notes:
Detections are shown in bold.
bgs = Below ground surface
µg/kg = Micrograms per kilogram.
ND(67) = Not detected at or above the indicated laboratory reporting limit.
NE = Not established
1 United States Environmental Protection Agency (U.S. EPA). Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.
- Results equal to or exceeding RSLs are shaded

Table 3
Summary of laboratory Analytical Results for Soil - PCBs
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Depth (feet bgs)	Date Collected	Aroclor-1016 (µg/kg)	Aroclor-1221 (µg/kg)	Aroclor-1232 (µg/kg)	Aroclor-1242 (µg/kg)	Aroclor-1248 (µg/kg)	Aroclor-1254 (µg/kg)	Aroclor-1260 (µg/kg)	Aroclor-1262 (µg/kg)	Aroclor-1268 (µg/kg)	Total PCBs (µg/kg)
SB5	SB5-3.0	3	11/7/2013	ND(170)	ND(330)	ND(170)	ND(170)	ND(170)	ND(170)	**10,000**	ND(170)	ND(170)	**10,000**
SB5	SB5-8.0	8	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**180**	ND(12)	**180**
SB5	SB5-11.5	11.5	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**140**	ND(12)	**140**
SB6	SB6-4.0	4	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**570**	ND(12)	ND(12)	**570**
SB6	SB6-8.0	8	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**160**	ND(12)	**160**
SB6	SB6-10.0	10	11/7/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	**48**	ND(12)	**48**
SB7	SB7-2.5	2.5	11/8/2013	ND(82)	ND(160)	ND(82)	ND(82)	ND(82)	ND(82)	**1,900**	ND(82)	ND(82)	**1,900**
SB7	SB7-8.0	8	11/8/2013	ND(42)	ND(84)	ND(42)	ND(42)	ND(42)	ND(42)	ND(42)	**1,500**	ND(42)	**1,500**
SB11	SB11-2.0	2	11/8/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**380**	ND(12)	ND(12)	**380**
SB11	SB11-5.5	5.5	11/8/2013	ND(42)	ND(83)	ND(42)	ND(42)	ND(42)	ND(42)	**1,200**	ND(42)	**1,400**	**2,600**
SB12	SB12-2.0	2	11/8/2013	ND(42)	ND(85)	ND(42)	ND(42)	ND(42)	ND(42)	**2,000**	ND(42)	ND(42)	**2,000**
SB12	SB12-5.0	5	11/8/2013	ND(41)	ND(82)	ND(41)	ND(41)	ND(41)	ND(41)	ND(41)	**1,200**	ND(41)	**1,200**
SB12	SB12-10.0	10	11/8/2013	ND(83)	ND(170)	ND(83)	ND(83)	ND(83)	ND(83)	ND(83)	**6,500**	ND(83)	**6,500**
SB13	SB13-1.5	1.5	11/8/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**270**	ND(12)	ND(12)	**270**
SB13	SB13-5.0	5	11/8/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**18**	ND(12)	ND(12)	**18**
SB13	SB13-10.0	10	11/8/2013	ND(84)	ND(170)	ND(84)	ND(84)	ND(84)	ND(84)	**3,300**	ND(84)	**1,900**	**5,200**
SB14	SB14-3.5	3.5	11/9/2013	ND(12)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	**13**	ND(12)	ND(12)	**13**
Residential Soil RSLs [1]				**390**	**140**	**140**	**220**	**220**	**110**	**220**	**NE**	**NE**	**NE**

Notes:
Detections are shown in bold.
bgs = below ground surface.
µg/kg = Micrograms per kilogram.
PCBs= Polychlorinated biphenyls.
ND(24) = Compound not detected at or above the indicated laboratory reporting limit.
NE = Not established.
1. United States Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.
- Results equal to or exceeding RSLs are shaded.

Table 4
Summary of laboratory Analytical Results for Soil - California Title 22 Metals, STLC, and TCLP
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	STLC Lead (mg/L)	TCLP Lead (mg/L)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
SB1	SB1-1.0	1	11/7/2013	ND(0.51)	5.9	160	0.39	0.94	86	13	52	81	--	--	0.22	ND(0.25)	100	ND(0.51)	ND(0.25)	ND(0.51)	51	190
SB1	SB1-5.5	5.5	11/7/2013	--	--	--	--	--	--	--	--	1,300	--	8.1	--	--	--	--	--	--	--	--
SB1	SB1-11.75	11.75	11/7/2013	--	--	--	--	--	--	--	--	2,400	--	0.75	--	--	--	--	--	--	--	--
SB2	SB2-4.0	4	11/7/2013	--	--	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--	--
SB2	SB2-7.5	7.5	11/7/2013	--	--	--	--	--	--	--	--	120	2.7	--	--	--	--	--	--	--	--	--
SB2	SB2-10.75	10.75	11/7/2013	--	--	--	--	--	--	--	--	240	--	--	--	--	--	--	--	--	--	--
SB3	SB3-1.5	1.5	11/7/2013	ND(0.46)	3.4	150	0.59	0.44	16	6.9	16	14	--	--	0.39	ND(0.23)	23	ND(0.46)	ND(0.23)	ND(0.46)	26	46
SB3	SB3-7.5	7.5	11/7/2013	--	--	--	--	--	--	--	--	340	1.8	1.1	--	--	--	--	--	--	--	--
SB3	SB3-11.0	11	11/7/2013	3.3	7.5	810	0.39	4.3	46	10	170	460	--	--	0.17	4.6	38	ND(0.50)	ND(0.25)	ND(0.50)	42	920
SB4	SB4-1.5	1.5	11/7/2013	--	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--
SB4	SB4-5.0	5	11/7/2013	--	--	--	--	--	--	--	--	110	7.5	--	--	--	--	--	--	--	--	--
SB4	SB4-10.0	10	11/7/2013	--	--	--	--	--	--	--	--	10,000	--	2.4	--	--	--	--	--	--	--	--
SB5	SB5-3.0	3	11/7/2013	--	--	--	--	--	--	--	--	430	7.7	0.27	--	--	--	--	--	--	--	--
SB5	SB5-8.0	8	11/7/2013	3.1	6.7	100	0.21	0.77	39	6.3	100	100	--	--	0.19	0.34	38	ND(0.50)	ND(0.25)	ND(0.50)	29	170
SB5	SB5-11.5	11.5	11/7/2013	--	--	--	--	--	--	--	--	1,100	--	1.0	--	--	--	--	--	--	--	--
SB6	SB6-4.0	4	11/7/2013	--	--	--	--	--	--	--	--	140	--	--	--	--	--	--	--	--	--	--
SB6	SB6-8.0	8	11/7/2013	--	--	--	--	--	--	--	--	58	--	--	--	--	--	--	--	--	--	--
SB6	SB6-10.0	10	11/7/2013	7.5	5.6	140	0.27	1.9	140	16	380	160	--	--	0.13	4.9	190	6.0	ND(0.26)	ND(0.52)	41	270
SB7	SB7-2.5	2.5	11/8/2013	0.75	5.9	160	0.25	1.2	34	9.0	74	120	--	--	0.19	0.69	49	0.66	ND(0.23)	ND(0.47)	35	220
SB7	SB7-8.0	8	11/8/2013	--	--	--	--	--	--	--	--	250	39	--	--	--	--	--	--	--	--	--
SB7	SB7-12.5	12.5	11/8/2013	--	--	--	--	--	--	--	--	2.1	--	--	--	--	--	--	--	--	--	--
SB8	SB8-3.5	3.5	11/8/2013	--	--	--	--	--	--	--	--	200	--	--	--	--	--	--	--	--	--	--
SB8	SB8-8.0	8	11/8/2013	ND(0.51)	2.3	32	ND(0.10)	ND(0.25)	33	4.4	4.7	3.1	--	--	ND(0.016)	ND(0.25)	24	ND(0.51)	ND(0.25)	ND(0.51)	26	19
SB8	SB8-12.0	12	11/8/2013	--	--	--	--	--	--	--	--	3.0	--	--	--	--	--	--	--	--	--	--
SB9	SB9-4.5	4.5	11/8/2013	ND(0.49)	5.4	120	0.32	0.81	45	10	46	41	--	--	0.12	1.5	38	ND(0.49)	ND(0.24)	ND(0.49)	36	110
SB9	SB9-10.0	10	11/8/2013	--	--	--	--	--	--	--	--	50	--	--	--	--	--	--	--	--	--	--
SB10	SB10-2.0	2	11/8/2013	ND(0.47)	6.9	550	0.33	0.58	38	6.9	27	45	--	--	0.15	0.61	36	ND(0.47)	ND(0.23)	ND(0.47)	34	90
SB10	SB10-5.0	5	11/8/2013	--	--	--	--	--	--	--	--	49	--	--	--	--	--	--	--	--	--	--
SB10	SB10-10.0	10	11/8/2013	--	--	--	--	--	--	--	--	21	--	--	--	--	--	--	--	--	--	--
SB11	SB11-2.0	2	11/8/2013	--	--	--	--	--	--	--	--	28	--	--	--	--	--	--	--	--	--	--
SB11	SB11-5.5	5.5	11/8/2013	0.62	9.2	140	0.26	1.2	160	10	260	170	--	--	0.17	21	170	ND(0.54)	ND(0.27)	ND(0.54)	36	300
SB11	SB11-11.5	11.5	11/8/2013	--	--	--	--	--	--	--	--	1.7	--	--	--	--	--	--	--	--	--	--
SB12	SB12-2.0	2	11/8/2013	--	--	--	--	--	--	--	--	130	12	1.1	--	--	--	--	--	--	--	--
SB12	SB12-5.0	5	11/8/2013	--	--	--	--	--	--	--	--	320	--	--	--	--	--	--	--	--	--	--
SB12	SB12-10.0	10	11/8/2013	ND(0.49)	5.9	210	0.27	1.3	31	6.6	44	290	--	--	0.18	0.28	29	ND(0.49)	ND(0.25)	ND(0.49)	30	1,900
SB13	SB13-1.5	1.5	11/8/2013	--	--	--	--	--	--	--	--	68	--	--	--	--	--	--	--	--	--	--
SB13	SB13-5.0	5	11/8/2013	ND(0.47)	8.4	270	0.42	0.70	23	26	30	54	--	--	0.070	0.37	27	1.8	ND(0.23)	ND(0.47)	45	100
SB13	SB13-10.0	10	11/8/2013	--	--	--	--	--	--	--	--	3,300	--	--	--	--	--	--	--	--	--	--
SB14	SB14-3.5	3.5	11/9/2013	ND(0.46)	7.7	170	0.54	0.67	140	19	33	11	--	--	0.060	ND(0.23)	190	4.5	ND(0.23)	ND(0.46)	53	63
SB14	SB14-8.5	8.5	11/9/2013	--	--	--	--	--	--	--	--	100	--	--	--	--	--	--	--	--	--	--
SB14	SB14-11.5	11.5	11/9/2013	--	--	--	--	--	--	--	--	250	--	--	--	--	--	--	--	--	--	--

Table 4
Summary of laboratory Analytical Results for Soil - California Title 22 Metals, STLC, and TCLP
6701 Shellmound Street
Emeryville, California

Boring Location	Sample Number	Sample Depth (Feet bgs)	Date Collected	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	STLC Lead (mg/L)	TCLP Lead (mg/L)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
SB15	SB15-2.5	2.5	11/9/2013	--	--	--	--	--	--	--	--	8.2	--	--	--	--	--	--	--	--	--	--
SB15	SB15-7.5	7.5	11/9/2013	3.8	4.8	250	0.27	13	43	6.6	450	870	--	--	0.14	0.43	48	ND(0.50)	ND(0.25)	ND(0.50)	40	1,700
SB15	SB15-11.5	11.5	11/9/2013	--	--	--	--	--	--	--	--	130	--	--	--	--	--	--	--	--	--	--
SB16	SB16-2.5	2.5	11/9/2013	--	--	--	--	--	--	--	--	19	--	--	--	--	--	--	--	--	--	--
SB16	SB16-7.5	7.5	11/9/2013	--	--	--	--	--	--	--	--	280	14	1.8	--	--	--	--	--	--	--	--
SB16	SB16-10.5	10.5	11/9/2013	1.4	11	180	0.34	0.89	53	8.7	51	210	--	--	0.24	ND(0.26)	34	3.4	ND(0.26)	ND(0.52)	41	510
SB17	SB17-2.0	2	11/9/2013	ND(0.47)	7.8	150	0.46	0.61	41	12	32	54	--	--	0.12	ND(0.24)	43	ND(0.47)	ND(0.24)	ND(0.47)	53	87
SB17	SB17-5.0	5	11/9/2013	--	--	--	--	--	--	--	--	27	--	--	--	--	--	--	--	--	--	--
SB17	SB17-9.5	9.5	11/9/2013	--	--	--	--	--	--	--	--	150	--	--	--	--	--	--	--	--	--	--
SB18	SB18-2.0	2	11/9/2013	--	--	--	--	--	--	--	--	30	--	--	--	--	--	--	--	--	--	--
SB18	SB18-5.0	5	11/9/2013	--	--	--	--	--	--	--	--	34	--	--	--	--	--	--	--	--	--	--
SB18	SB18-10.0	10	11/9/2013	ND(0.48)	49	640	0.47	5.5	43	13	450	650	--	--	0.41	5.1	190	2.8	ND(0.24)	ND(0.48)	11,000	2,500
Residential Soil RSLs [2]				3.1	0.61	1,500	16	7.0	12,000 [1]	2.3	310	400	N/A	N/A	1.0	39	150	39	39	0.078	39	2,300
TTLC [3]				500	500	10,000	75	100	2,500	8,000	2,500	1,000	N/A	N/A	20	3,500	2,000	100	500	700	2,400	5,000
STLC and TCLP Regulatory Thresholds				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0	5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

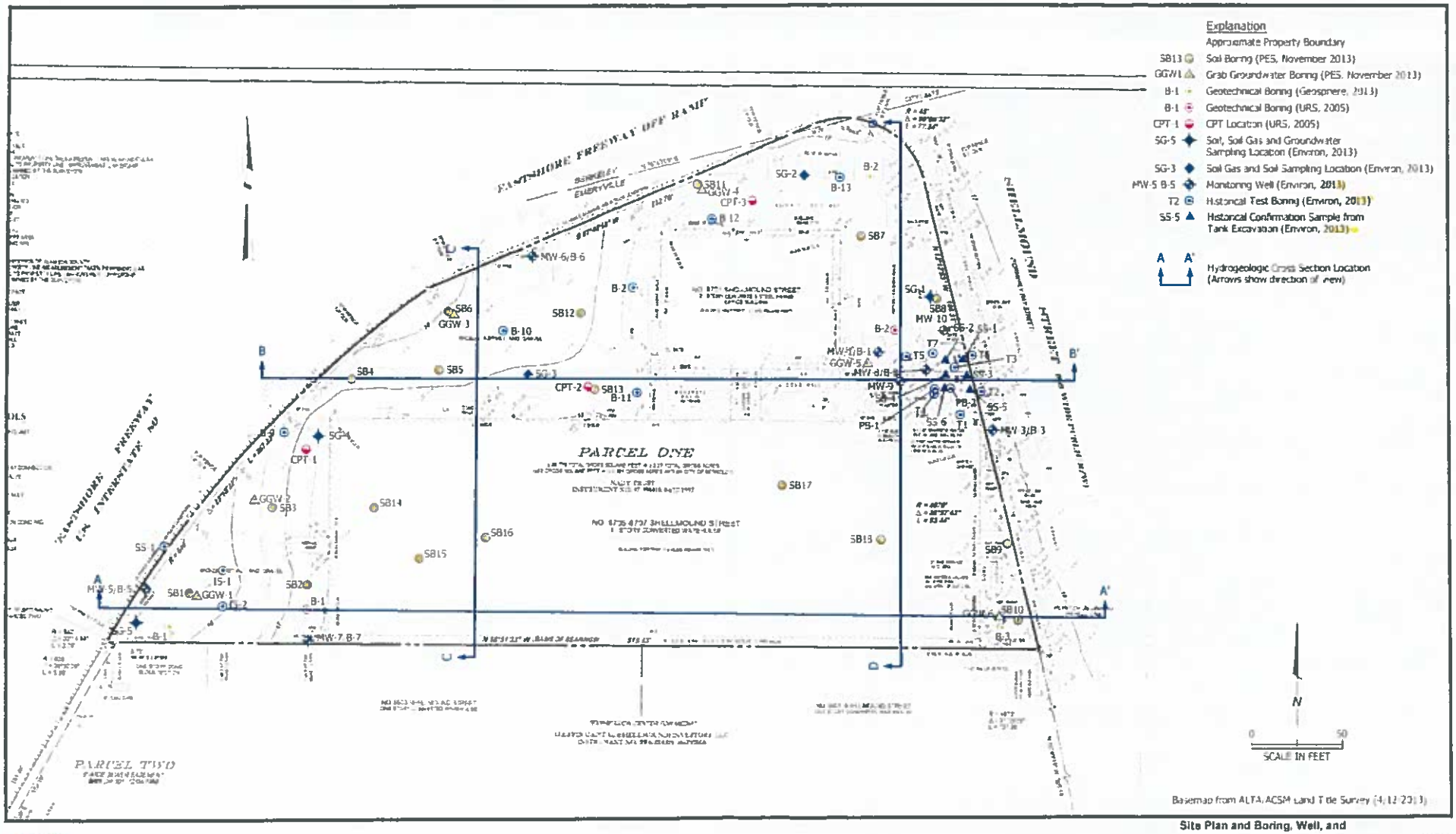
Notes:
Detections are shown in bold.
bgs = Below ground surface.
mg/kg = Milligrams per kilogram.
mg/L = Milligrams per liter.
ND(0.24) = Not detected at or above the indicated laboratory reporting limit.
-- = Not analyzed.
N/A = Not applicable.
STLC = Soluble Threshold Limit Concentration.
TCLP = Toxicity Characteristic Leaching Procedure.
1. Value is for chromium III.
2. United States Environmental Protection Agency (U.S. EPA), Region 9, November 2013 Regional Screening Levels (RSLs) for residential soil.
3. TTLC = Total Threshold Limit Concentration.
- Results equal to or exceeding RSLs, STLC or TCLP values are shaded.

Table 5
Summary of Laboratory Analytical Results for Groundwater - Dissolved California Title 22 Metals
6701 Shellmound Street
Emeryville, California

Boring Location	Pre-Pack Well Screen Depth (feet bgs)	Date Collected	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Molybdenum (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
GGW-1	10 to 20	11/11/2013	ND(10)	ND(5.0)	250	ND(2.0)	ND(5.0)	8.9	ND(5.0)	ND(5.0)	59	0.28	10	5.4	27	ND(5.0)	ND(10)	71	210
GGW-2	10 to 20	11/11/2013	ND(10)	6.4	280	ND(2.0)	ND(5.0)	8.0	ND(5.0)	9.1	190	0.41	ND(5.0)	8.5	26	ND(5.0)	ND(10)	22	360
GGW-3	10 to 20	11/11/2013	ND(10)	32	340	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	17	ND(0.20)	8.7	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(5.0)	29
GGW-4	10 to 20	11/11/2013	ND(10)	ND(5.0)	200	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	1.3 J	ND(0.20)	10	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(5.0)	ND(20)
GGW-5	10 to 20	11/11/2013	ND(10)	ND(5.0)	350	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	9.9	0.21	6.6	6.4	ND(10)	ND(5.0)	ND(10)	ND(5.0)	23
GGW-6	10 to 20	11/11/2013	ND(10)	ND(5.0)	94	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	3.1 J	ND(0.20)	5.9	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(5.0)	ND(20)
	California MCLs [1]		6.0	10	1,000	4.0	5.0	50 [2]	NE	1,300	15	2.0	NE	100	50	NE	2.0	NE	NE

Notes:
Detections are shown in bold.
Analytical results presented in micrograms per liter (µg/L).
bgs = below ground surface.
ND(5.0) = Compound not detected at or above the indicated laboratory reporting limit.
J = Estimated value.
1. California Department of Public Health Maximum Contaminant Levels (MCLs).
2. ESL value is for chromium (total).

- Results equal to or exceeding MCLs are shaded.

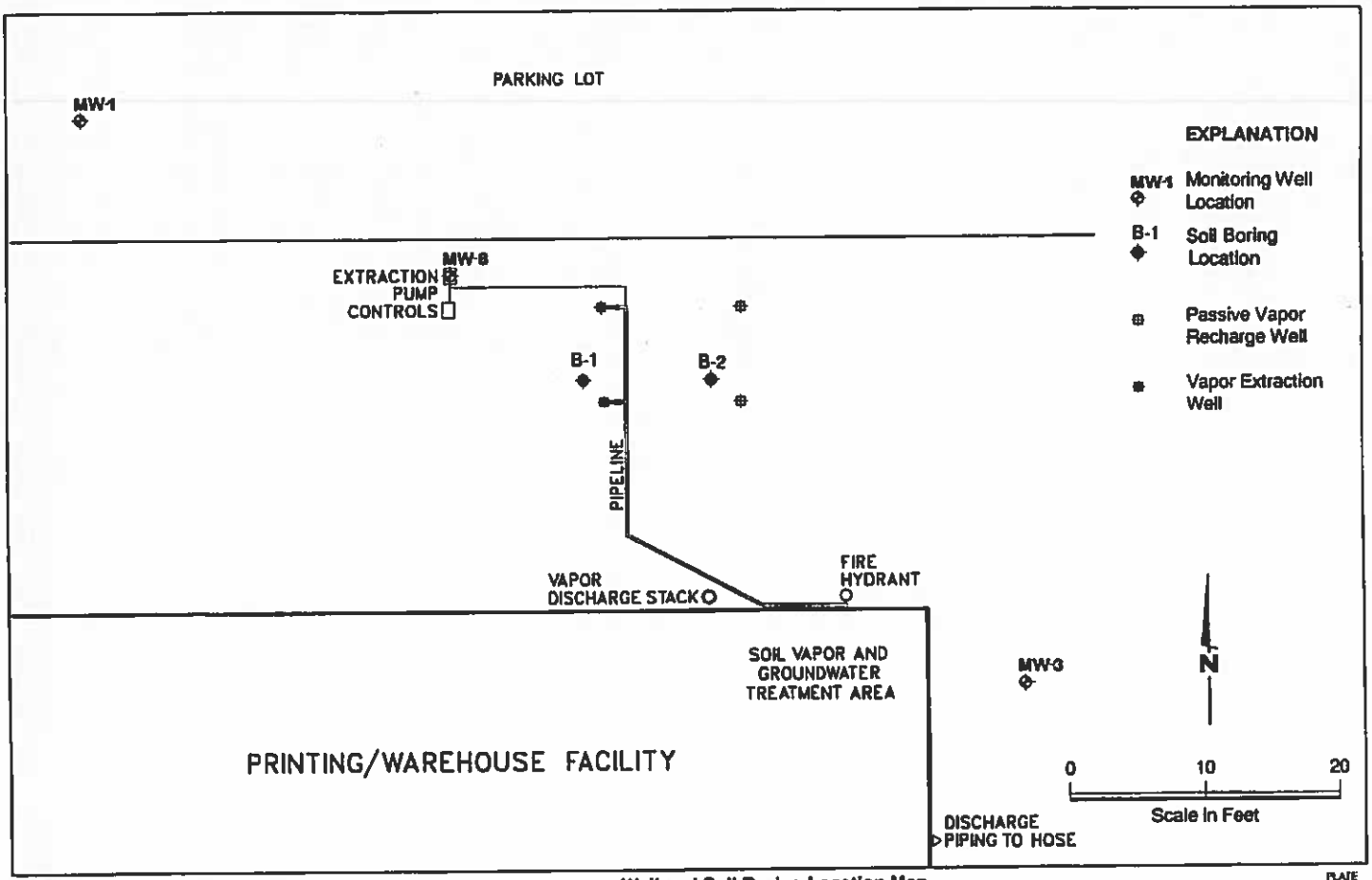


PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Boring, Well, and Cross Section Location Map
Supplemental Subsurface Investigation Report
6701 Shellmound Street
Emeryville, California

PLATE 2

1386.001.01.005 | 1386001001305_rset_1.6 | GDT | 1:13

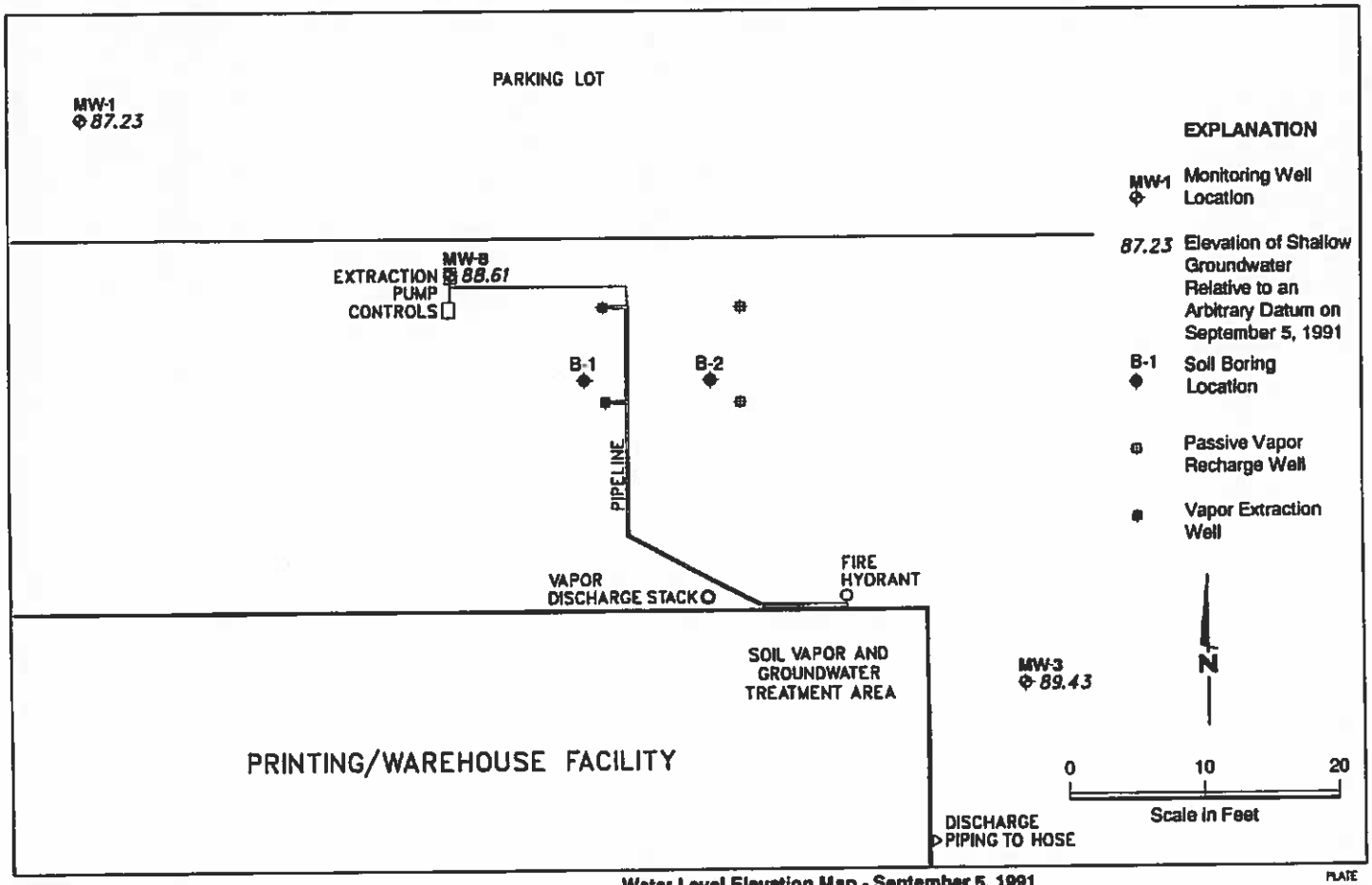


PES Environmental, Inc.
Engineering & Environmental Services

Well and Soil Boring Location Map
Nady Systems Site
6707 Bay Street
Emeryville, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
MP001B		11/91		

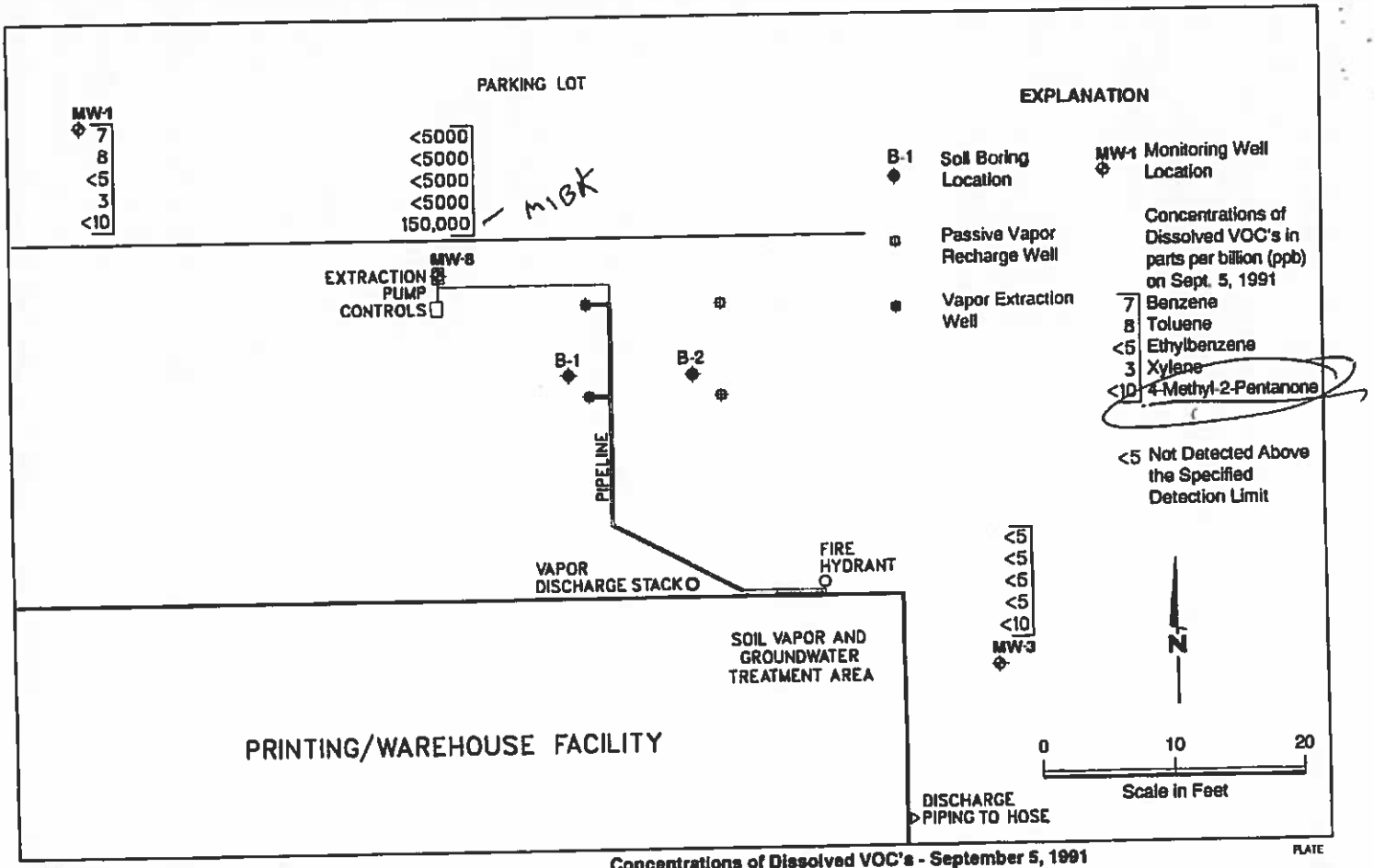


PES Environmental, Inc.
Engineering & Environmental Services

Water Level Elevation Map - September 5, 1991
Nady Systems Site
6707 Bay Street
Emeryville, California

PLATE **2**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
MP001B		11/91		

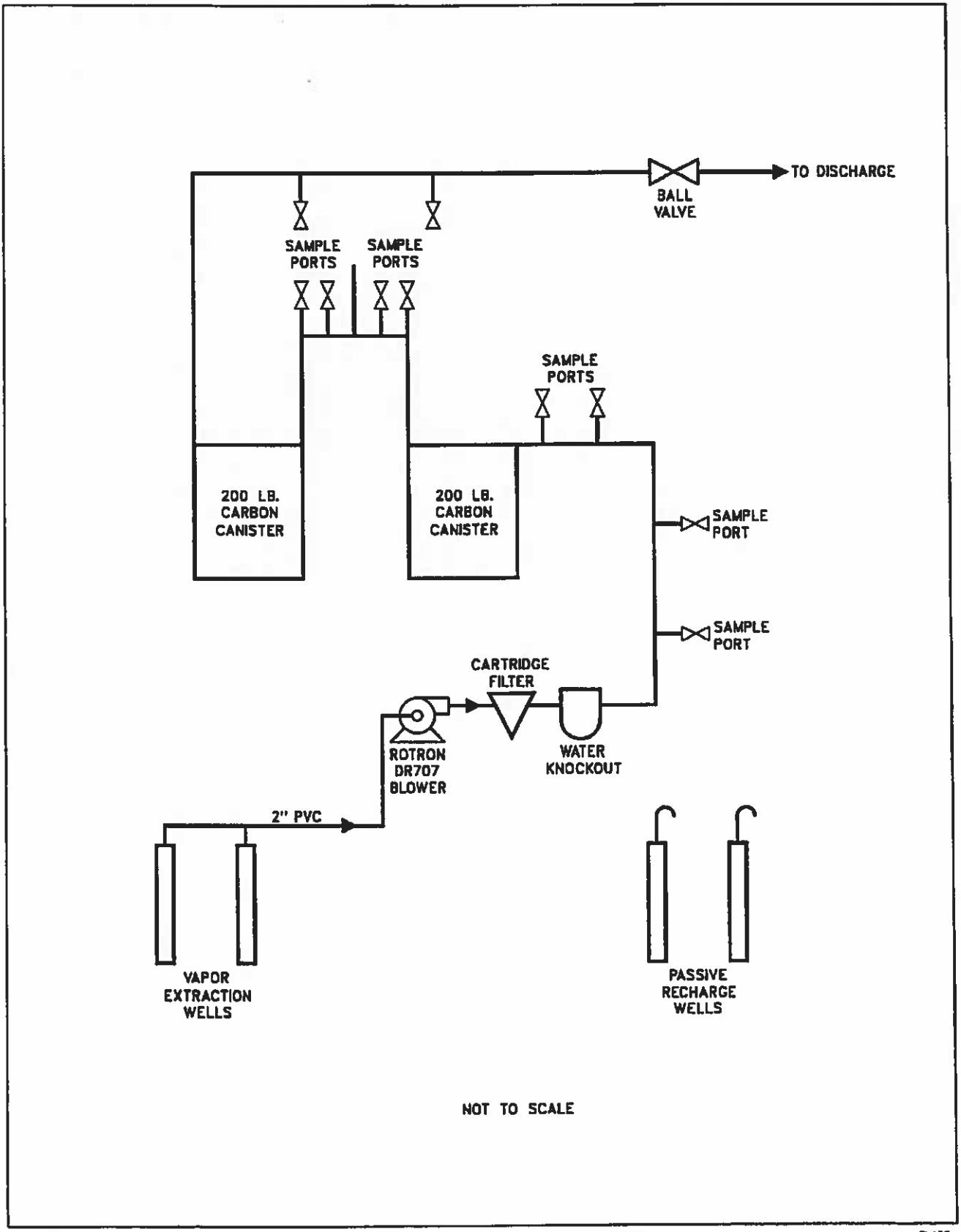


PES Environmental, Inc.
Engineering & Environmental Services

Concentrations of Dissolved VOC's - September 5, 1991
Nady Systems Site
6707 Bay Street
Emeryville, California

PLATE **3**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
MP001B		11/91		

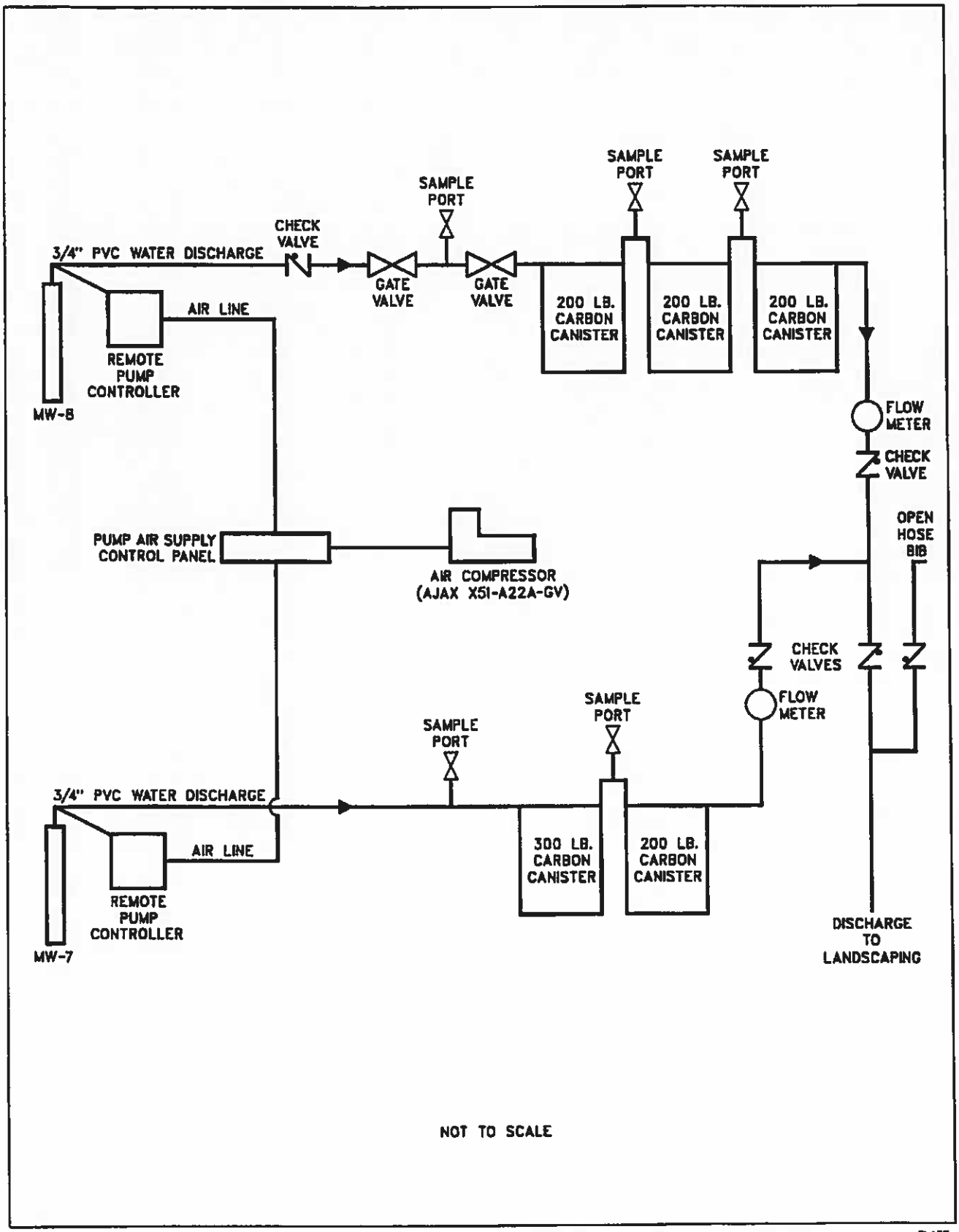


PES Environmental, Inc.
Engineering & Environmental Services

Schematic Diagram of Soil Vapor Extraction and Treatment System
Nady Systems Site
Emeryville, California

PLATE
4

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
MP001B		12/91		



PES Environmental, Inc.
Engineering & Environmental Services

Schematic Diagram of Groundwater Extraction and Treatment System
Nady Systems Site
Emeryville, California

PLATE **5**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
MP001B		12/91		

PERTINENT TABLES AND PLATES EXCERPTS FROM REPORTS PREPARED BY ENVIRON INTERNATIONAL

Table 1 - Organics in Soil
2013 Subsurface Investigation by ENVIRON
Nady Systems

Borehole ID	Sample Depth	TPH [mg/kg]		Pesticides and PCBs [mg/kg]		
		TPH-Diesel	TPH-Motor Oil	DDT	Arochlor 1260	Total PCBs
SG-1	3.5-4.0	43	250	0.03	ND < 0.5	ND < 0.5
SG-2	3.0-3.5	43	340	0.068	ND < 1.0	ND < 1.0
SG-3	3.5-4.0	290	1,400	0.25	14	14
SG-4	3.5-4.0	200	400	0.42	8	8
SG-5	4.5-5.0	33	290	ND < 0.020	ND < 1.0	ND < 1.0
CHHSL - Residential [1]		*na*	*na*	*1.6*	*0.089*	*0.089*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource [2]		*100*	*500*	*1.7*	*0.22*	*0.22*

Notes:
exceeds regulatory criteria
Only detected compounds are shown.
Detections are in **bold**.
CHHSL: California Human Health Screening Level
DDT: dichlorodiphenyltrichloroethane
ESL: Environmental Screening Level
mg/kg: milligrams per kilogram
na: not available
ND < ##: Not detected at or above laboratory reporting limit shown
NDW: Non-Drinking Water Resource Area
PCBs: Polychlorinated Biphenyls
TPH: Total Petroleum Hydrocarbons

1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*. January.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)*. February.

Table 2 - Metals in Soil
2013 Subsurface Investigation by ENVIRON
Nady Systems

Borehole ID	Sample Depths	Metals (mg/kg, except where noted)																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead - STLC (mg/L)	Lead - TCLP (mg/L)	Mercury	Molybdenum	Nickel	Silver	Vanadium	Zinc
SG-1	3.5-4.0	5.2	11	280	ND < 0.5	1	100	22	480	990	12	ND<0.2	0.2	4.2	220	0.6	60	490
SG-2	3.0-3.5	1.9	12	160	0.51	0.84	50	11	88	120	4	ND<0.2	0.36	1.3	63	ND < 0.5	50	220
SG-3	3.5-4.0	8.9	7.3	230	ND < 0.5	0.94	54	9.3	160	830	--	--	0.2	1.3	51	ND < 0.5	49	240
SG-4	3.5-4.0	2.6	6.9	170	ND < 0.5	0.82	68	14	78	130	--	--	0.32	2.9	83	ND < 0.5	45	440
SG-5	4.5-5.0	1	9.9	120	ND < 0.5	0.44	44	7.3	44	75	--	--	0.12	0.5	34	ND < 0.5	41	97
CHHSL - Residential[1]		*30*	*0.07*	*5,200*	*150*	*1.7*	*10,000*	*660*	*3,000*	*150*	*N/A*	*N/A*	*18*	*380*	*1,600*	*380*	*530*	*23,000*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource[2]		*20*	*0.39*	*750*	*4*	*12*	*750*	*0.33*	*230*	*80*	*N/A*	*N/A*	*6.7*	*40*	*150*	*20*	*200*	*600*

Notes:
exceeds regulatory criteria
exceeds California hazardous waste criteria
Only detected compounds are shown.
Detections are in bold.
mg/kg: milligrams per kilogram
mg/L: milligrams per liter
N/A: Not Applicable
--: not analyzed
ND < ##: Not detected at or above laboratory reporting limit shown
CHHSL: California Human Health Screening Level
ESL: Environmental Screening Level
NDW: Non-Drinking Water Resource Area
STLC: Soluble Threshold Limit Concentration
TCLP: Toxicity Characteristic Leaching Procedure
1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*. January.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)*. February.

Table 3 - Organics in Groundwater
2013 Subsurface Investigation by ENVIRON
Nady Systems

Location ID	Depth to Water (ft bgs)	Observations	TPH (ug/L)		VOCs (ug/L)															
			TPH-Diesel	TPH-Motor Oil	Benzene	TBA	n-Butyl Benzene	sec-Butyl Benzene	Carbon disulfide	Chloro-benzene	Ethyl-benzene	cis-1,2-DCE	Isopropyl-benzene	4-isopropyl toluene	Naph-thalene	n-Propyl benzene	Toluene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Total Xylenes
SG-1	10.75	Gray color, no odor	920	5,600	ND < 0.5	ND < 2.0	ND < 0.5	ND < 0.5	1.1	4.4	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
SG-4	11.75	Black color, strong H2S odor	4,700	12,000	2	2.3	ND < 0.5	1.3	3.9	ND < 0.5	ND < 0.5	0.69	1.1	ND < 0.5	ND < 0.5	ND < 0.5	0.54	ND < 0.5	ND < 0.5	ND < 0.5
SG-5	10.29	Black color, sheen, H2S odor	58,000	9,500	8.1	ND < 20	32	38	ND < 5.0	ND < 5.0	45	ND < 5.0	67	13	84	87	ND < 5.0	350	24	59
California MCL - Drinking Water[1]			*na*	*na*	*1*	*na*	*na*	*na*	*na*	*100**	*300*	*6*	*na*	*na*	*na*	*na*	*150*	*na*	*na*	*1,750*
ESL - Groundwater[2]			*100*	*100*	*1*	*12*	*na*	*na*	*na*	*25*	*30*	*6*	*na*	*na*	*6.2*	*na*	*40*	*na*	*na*	*20*
ESL - Evaluation of Potential Vapor Intrusion Concerns, Residential[2]			*na*	*na*	*27*	*na*	*na*	*na*	*no*	*na*	*310*	*na*	*na*	*na*	*160*	*na*	*95,000*	*na*	*na*	*37,000*

Notes:
exceeds regulatory criteria
Only detected compounds are shown.
Detections are in bold.
bgs: below ground surface
DCE: dichloroethene
ESL: Environmental Screening Level
H2S: hydrogen sulfide
ug/L: micrograms per liter
na: not available
ND < ##: Not detected at or above laboratory reporting limit shown
NDW: Non-Drinking Water Resource Area
TBA: t-Butyl alcohol
TPH: Total Petroleum Hydrocarbons
VOCs: Volatile Organic Compounds
1. California Department of Public Health, 2013. *California Maximum Contaminant Levels (MCLs)*. March.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)*. February.
* Indicates USEPA MCL, shown for compounds that have a federal MCL but do not have a California MCL.

Table 4 - Metals in Groundwater
2013 Subsurface Investigation by ENVIRON
Nady Systems

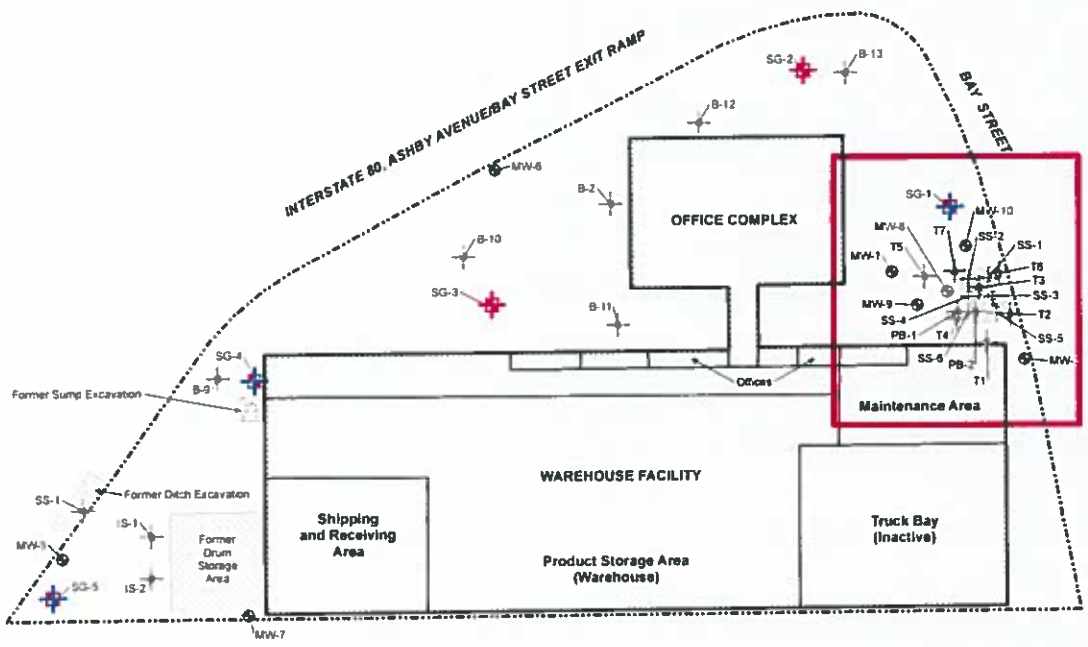
Location ID	Depth to Water (ft bgs)	Observations	Total Metals (ug/L)												
			Antimony	Arsenic	Barium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Silver	Vanadium	Zinc
SG-1	10.75	Gray color, no odor	ND < 50	210	12,000	ND < 25	4,100	820	4,200	2,700	2.7	77	4,600	ND < 19	2,100	5,900
SG-4	11.75	Black color, strong H2S odor	150	650	23,000	210	1,400	210	8,300	26,000	130	270	1,600	19	480	78,000
SG-5	10.29	Black color, sheen, H2S odor	94	1,600	25,000	320	1,800	490	34,000	60,000	52	180	2,700	53	1,900	160,000
California MCL - Drinking Water[1]			*6*	*10*	*1,000*	*5*	*50*	*na*	*1,300*	*15*	*2*	*na*	*100*	*na*	*na*	*na*
ESL - Groundwater[2]			*6*	*36*	*1,000*	*0.25*	*50*	*3*	*3.1*	*2.5*	*0.025*	*180*	*8.2*	*0.19*	*15*	*81.0*
STLC - California Hazardous Waste Criteria			*15,000*	*5,000*	*100,000*	*1,000*	*5,000*	*80,000*	*25,000*	*5,000*	*200*	*350,000*	*20,000*	*5,000*	*24,000*	*250,000*

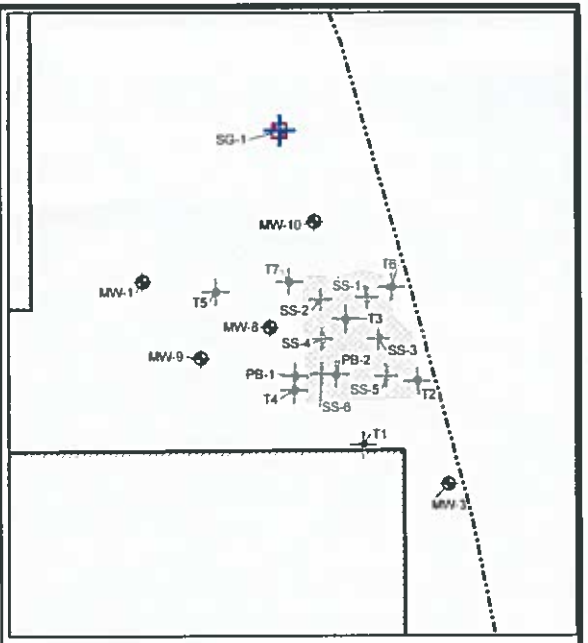
Notes:
exceeds regulatory criteria
exceeds hazardous waste and regulatory criteria
Only detected compounds are shown.
Detections are in bold.
bgs: below ground surface
ug/L: micrograms per liter
H2S: hydrogen sulfide
na: not available
ND < ##: Not detected at or above laboratory reporting limit shown
STLC: Soluble Threshold Limit Concentration
1. California Department of Public Health, 2013. *California Maximum Contaminant Levels (MCLs)*. March.
2. San Francisco Bay Regional Water Quality Control Board, 2013. *2013 Tier 1 ESL Lookup Tables*. February.

Table 5 - VOCs and Fixed Gases in Soil Gas
2013 Subsurface Investigation by ENVIRON
Nady Systems

		VOCs (ug/m³)															Fixed Gases (% by volume)			
Location ID	Depth to Water (ft bgs)	Acetone	Benzene	Chloro-methane	Ethyl-benzene	4-Ethyl-toluene	2-Butanone (MEK)	PCE	TCE	Toluene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	cis-1,2-DCE	o-Xylene	p/m-Xylene	1,1-DFA (Leak Check)	Methane	Carbon Dioxide	Oxygen and Argon	Nitrogen
SG-1	10.75	ND < 7.2	8.8	ND < 1.6	ND < 3.3	ND < 3.7	ND < 6.7	ND < 5.2	ND < 4.1	3.4	ND < 11	ND < 3.7	ND < 3.8	ND < 3.3	ND < 13	ND < 8.2	ND < 0.5	8.49	8.9	82.6
SG-2	--	ND < 13	ND < 4.5	ND < 2.9	ND < 6.1	13	ND < 12	ND < 9.6	ND < 7.6	ND < 5.3	37	16	ND < 5.6	ND < 6.1	ND < 24	ND < 15	ND < 0.5	10.7	12	77.2
SG-3	--	ND < 38	73	ND < 8.3	ND < 17	ND < 20	ND < 35	30	ND < 21	38	ND < 59	ND < 20	24	ND < 17	ND < 69	140	0.864	ND < 0.5	19.9	79.3
SG-4	11.75	19	37	2.4	4.6	ND < 3.6	7.7	ND < 4.9	9.8	16	ND < 11	ND < 5.0	ND < 2.9	5.6	16	ND < 7.8	ND < 0.5	9.52	11.4	79.1
SG-5	10.29	19	9.9	ND < 1.7	6.2	ND < 4.0	ND < 7.3	ND < 5.6	9.1	6.1	ND < 12	ND < 4.0	ND < 3.3	17	28	ND < 8.9	ND < 0.5	8.5	13.6	77.9
SG-2 Shroud	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	130,000	--	--	--	--
Shallow Soil Gas CHHSL - Residential [1]		*na*	*36.2*	*na*	*na*	*na*	*na*	*180*	*530*	*110,000*	*na*	*na*	*15,900*	*315,000*	*317,000*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Notes:
[redacted] exceeds regulatory criteria
Only detected compounds are shown.
Detections are in bold.
na: not available
N/A: not applicable
ND < ##: Not detected at or above laboratory reporting limit shown
-- not analyzed
bgs: below ground surface
CHHSL: California Human Health Screening Level
DCE: dichloroethene
DFA: difluoroethane
PCE: tetrachloroethene
TCE: trichloroethene
ug/m³: micrograms per cubic meter
1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*. January.





Legend

- Soil, Soil Gas and Groundwater Sampling Location
- Soil Gas and Soil Sampling Location
- Monitoring Well
- Historical Test Boring
- Historical Confirmation Sample from Tank Excavation
- Wall
- Building
- Property Line
- Approximate Extent of Previous Tank Excavation

Note: Interior building dimensions are approximate

N

0 50 100

SCALE IN FEET

ENVIRON

Soil, Soil Gas, and Groundwater Sampling Locations
6707 Bay Street
Emeryville, California

Date	Contract Number		Figure
4/29/13	03-32356A		3
Drafter: RS	Approved	Revised	

Path: O:\DM\AN\35\03232356A\GIS\32356A Project\mxd\Soil\Location.mxd

Table D4-1 - Historical Total Petroleum Hydrocarbons (TPH) Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths	TPH (mg/kg)		
				Oil & Grease	TEPH	Total VOCs
IS-1	4/26/1989	Drum Area	3.5	1,915	46	ND<10
			7	3,390	200	ND<10
			10	36,535	ND<10	ND<10
IS-2	4/26/1989	Drum Area	3	1,305	50	ND<10
			8.5	2,185	ND<10	300
B-1/MW-1	7/5/1989	West of Tanks	5.5	845	12	ND<10
			10.5	ND<50	ND<10	ND<10
			16	1,600	63	ND<10
			20.5	80	ND<10	ND<10
			25.5	95	ND<10	ND<10
			30.5	ND<50	ND<10	ND<10
B-2	7/5/1989	West of office	0.5	ND<50	ND<10	ND<10
			6	1,160	19	ND<10
			10	14,900	172	20
			16	ND<50	ND<10	ND<10
B-3/MW-3	8/28/1989	SE of Tanks	5	1,845	30	ND<10
			12	95	20	ND<10
			15	625	260	120
			20	ND<20	ND<10	ND<10
			25	20	ND<10	ND<10
B-4	8/28/1989	Location unknown	4.5	6,685	ND<10	ND<10
			10	25,470	170	ND<10
			14.5	ND<20	ND<10	ND<10
B-5/MW-5	8/31/1989	At trench and drum area	6	330	ND<10	ND<10
			11	3,580	15	25
			15.5	1,200	15	20
			22.5	110	20	ND<10
			25.5	115	ND<10	ND<10
B-6/MW-6	8/31/1989	NW site boundary	20.5	100	ND<10	ND<10
			25.5	190	ND<10	ND<10
SS-1-E	10/5/1989	UST Confirmation	2' Beneath UST	--	12	12
SS-2-W	10/5/1989	UST Confirmation	2' Beneath UST	--	11	ND<10
SS-3-E	10/5/1989	UST Confirmation	2' Beneath UST	--	ND<10	ND<10
SS-4-W	10/5/1989	UST Confirmation	2' Beneath UST	--	60	240
SS-5-E	10/5/1989	UST Confirmation	2' Beneath UST	--	35	115
SS-6-W	10/5/1989	UST Confirmation	2' Beneath UST	--	700	460
B-7/MW-7	1/3/1990	Drum Area	4	9,000	ND<10	ND<10
			9	8,800	788	ND<10
B-8/MW-8	1/3/1990	Downgradient of USTs	4	2,000	ND<10	ND<10
			9	20,000	ND<10	ND<10
B-9	1/4/1990	At sump	4	23,000	ND<10	ND<10
			9	15,000	5,050	ND<10
B-10	1/4/1990	NW part of site	4	9,500	380	ND<10
			9	6,300	ND<10	ND<10
B-11	1/4/1990	Between office and warehouse	4	45,000	ND<10	ND<10
			9	30,400	ND<10	ND<10
B-12	1/4/1990	N of office	4	12,000	ND<10	ND<10
			9	38,800	ND<10	ND<10
B-13	1/4/1990	N part of site	4	9,400	ND<10	ND<10
			9	3,000	ND<10	ND<10
Sump	1/5/1990	Sump Excavation	Confirmation	10,500	ND<10	ND<10
MW-9	4/13/1994	W of Tank Excavation	8.5	--	ND<1	--
			15.5	470	--	--
MW-10	4/14/1994	N of Tank Excavation	9.5	--		
			15.5	9,400	7,300	2
T-1	4/13/1994	S of tank excavation	8	--	--	--
			14	--	96	ND<1
T-2	4/13/1994	SE tank excavation	6	160	40	--
			8.5	--	--	ND<1
T-3	4/13/1994	Bottom tank excavation	8	--	--	ND<1
			14.5	--	--	--
T-4	4/14/1994	SW tank excavation	9	--	--	ND<1
			14.5	--	--	--
T-5	4/14/1994	W of tank excavation	5	710	ND<10	ND<1
			9	ND<50	ND<1	ND<1
			14.5	--	--	--
T-7	4/14/1994	NW tank excavation	7.5	68	ND<10	ND<1
			14	--	ND<20	160
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [1]				*500*	*100*	*na*

Notes:
exceeds regulatory criteria
Only locations with detected TPH and/or Total VOC data are shown.
mg/kg: milligrams per kilogram
na: not available
ND<##: Not detected at or above laboratory reporting limit shown.
TEPH: Total Extractable Petroleum Hydrocarbons
TPH: Total Petroleum Hydrocarbons
VOCs: Volatile Organic Compounds
UST: Underground storage tank
1. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)*. February

Table D4-2 : Historical Volatile OrganicCompound (VOC) Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths (ft bgs)	VOCs (ug/kg)										
				Acetone	Benzene	Ethylbenzene	Toluene	Total Xylenes	MIBK	1,1-DCE	1,2-DCE	MEK	Carbon Disulfide	Methylene Chloride
SB-1-E	10/1/1989	UST Confirmation	2' Beneath UST	ND<200,000	1,900	40	NR	300	600,000	ND<30	120	280	ND<200,000	ND<80,000	ND<30
SB-2-W	10/1/1989	UST Confirmation	2' Beneath UST	ND<20	230	30	60	30	20	ND<30	ND<30	ND<30	ND<20	ND<3	ND<30
SB-3-E	10/1/1989	UST Confirmation	2' Beneath UST	60	ND<30	ND<30	50	35	ND<20	ND<30	ND<30	ND<30	ND<20	ND<5	ND<30
SB-4-W	10/1/1989	UST Confirmation	2' Beneath UST	ND<2,000,000	1,400	110	NR	1,300	1,900,000	70	2,000	2,400	ND<2,000,000	ND<800,000	ND<30
SB-5-E	10/1/1989	UST Confirmation	2' Beneath UST	ND<400,000	ND<300	ND<300	NR	1,300	180,000	ND<30	ND<30	ND<30	ND<40,000	ND<70,000	ND<30
SB-6-W	10/1/1989	UST Confirmation	2' Beneath UST	ND<2,000,000	4,600	ND<1,500	NR	7,500	5,900,000	ND<30	ND<30	ND<30	ND<2,000,000	ND<800,000	ND<30
B-7/MW 7	1/3/1990	Drum Area	4	ND<50	ND<10	ND<10	ND<10	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	ND<10	250	61	1,020	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
B-8/MW 8	1/3/1990	Downgradient of USTs	4	ND<50	ND<10	ND<10	ND<10	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	ND<100	ND<100	ND<100	ND<100	8,300	ND<100	ND<100	ND<100	ND<500	ND<100	ND<50
B-9	1/4/1990	At sump	4	ND<50	ND<10	ND<10	12	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	14	140	28	180	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
B-11	1/4/1990	Between office and warehouse	4	ND<50	ND<10	ND<10	15	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
			9	ND<50	ND<10	ND<10	ND<10	ND<10	ND<30	ND<10	ND<10	ND<10	ND<50	ND<10	ND<50
SB-1	9/5/1991	Soil Boring in tank area	6	ND<20	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	2	ND<5	ND<20	ND<5	ND<5
			8.5	ND<20	ND<5	ND<5	ND<5	ND<5	ND<10	3	4	ND<5	ND<20	ND<5	ND<5
SB-2	9/5/1991	Soil Boring in tank area	5.5	ND<20	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<5	ND<5	ND<20	ND<5	ND<5
			8	ND<20	5	ND<5	ND<5	ND<5	ND<10	4	4	ND<5	ND<20	ND<5	ND<5
MW-9	4/13/1994	W of Tank Excavation	8.5	70	ND<5	ND<5	ND<5	ND<5	6	NR	NR	NR	10	ND<5	ND<10
			15.5	160	6	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	20	ND<5	ND<10
MW 10	4/14/1994	N of Tank Excavation	9.5	30	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	ND<10	ND<5	ND<10
			15.5	120	ND<10	ND<10	ND<10	ND<10	11	NR	NR	NR	120	20	60
T-2	4/13/1994	SE tank excavation	6	--	--	--	--	--	--	--	--	--	--	--	--
			8.5	110	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	20	ND<5	ND<10
T-3	4/13/1994	Bottom tank excavation	6	70	6	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	10	ND<5	ND<10
			14.5	180	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	20	ND<5	ND<10
T-4	4/14/1994	SW tank excavation	9	50	ND<5	ND<5	ND<5	ND<5	10	NR	NR	NR	6	6	ND<10
			14.5	160	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	40	ND<5	ND<10
T-5	4/14/1994	W of tank excavation	5	--	--	--	--	--	--	--	--	--	--	--	--
			9	20	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	ND<10	ND<5	ND<10
			14.5	ND<70	12	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	10	ND<5	ND<10
T-6	4/14/1994	NE tank excavation	7.5	100	ND<5	ND<5	ND<5	ND<5	6	NR	NR	NR	10	ND<5	ND<10
			14	ND<100	ND<30	ND<30	ND<30	ND<30	ND<50	NR	NR	NR	ND<50	ND<30	ND<50
T-7	4/14/1994	NW tank excavation	7.5	30	ND<5	ND<5	ND<5	ND<5	ND<10	NR	NR	NR	9	ND<5	ND<10
			14	ND<1,000	ND<1,000	600	ND<300	ND<300	300	NR	NR	NR	ND<500	ND<300	ND<500
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [1]				*500*	*44*	*2,900*	*2,900*	*2,300*	*2,800*	*1,100*	*7,400*	*590*	*6,500*	*na*	*77*

Notes:
exceeds regulatory criteria
Only locations with detected VOCs are shown.
Only detected compounds are shown.
ug/kg: micrograms per kilogram
bgs: below ground surface
DCE: dichloroebenzene
MEK: Methyl ethyl ketone
MIBK: Methyl isobutyl ketone
na: not available
ND<##: Not detected at or above laboratory reporting limit shown
TCA: trichloroethane
TCE: trichloroethene
UST: Underground storage tank
1. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)* . February.

Table D4-3 - Historical Semi-Volatile Organic Compound (SVOC) Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths	SVOCs (ug/kg)														
				Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Chrysene	Fluor-anthene	Isophor-one	2-Methyl naphthal-ene	Naphthal-ene	Nitro-benzene	Phen-anthrene	Pyrene	Bis (2-ethylhexyl) phthalate	4-Methyl phenol	1,2,4-TCB
SS-3-E	10/5/1989	UST Confirmation	2' Beneath UST	ND<30	ND<30	ND<30	ND<70	ND<30	ND<30	ND<30	ND<30	ND<30	ND<30	ND<30	ND<300	200	200
SS-5-E	10/5/1989	UST Confirmation	2' Beneath UST	ND<200	ND<200	ND<200	ND<400	ND<200	ND<200	1,000	300	ND<200	ND<200	ND<200	ND<2,000	ND<200	ND<200
B-7/MW-7	1/3/1990	Drum Area	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	390	320	ND<300	1,500	750	ND<300	530	380	ND<2,000	ND<300	ND<300
B-8/MW-8	1/3/1990	Downgradient of USTs	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	410	ND<2,000	ND<300	ND<300
B-9	1/4/1990	At sump	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	690	340	ND<300	1,100	8,900	ND<300	590	550	ND<2,000	ND<300	ND<300
B-11	1/4/1990	Between office and warehouse	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	320	ND<2,000	ND<300	ND<300
			9	580	ND<300	ND<300	820	1,100	ND<300	ND<300	ND<300	ND<300	560	1,800	ND<2,000	ND<300	ND<300
B-12	1/4/1990	N of office	4	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	370	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
B-13	1/4/1990	N part of site	4	ND<300	470	ND<300	390	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	920	ND<2,000	ND<300	ND<300
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<2,000	ND<300	ND<300
MW-9	4/13/1994	W of Tank Excavation	8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			15.5	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	400	ND<300	ND<300
T-2	4/13/1994	SE tank excavation	6	ND<300	ND<300	200	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300
			8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-5	4/14/1994	W of tank excavation	5	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000	ND<3,000
			9	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	ND<300	400	ND<300	ND<300
			14.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHHSL - Residential[1]				*na*	*38*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area[2]				*380*	*38*	*380*	*3,800*	*40,000*	*na*	*250*	*1,700*	*na*	*11,000*	*85,000*	*160,000*	*na*	*7,600*

Notes:
exceeds regulatory criteria
Only locations with detected SVOCs are shown.
Only detected compounds are shown.
na: not available
ND<##: Not detected at or above laboratory reporting limit shown
SVOCs: Semivolatile Organic Compounds
TCB: trichlorobenzene
ug/kg: micrograms per kilogram
UST: Underground storage tank
1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (Revised 2009)*. January.
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs)*. February.

Table D6-6 - Historical Metals Data
Study Systems

Borehole ID	Date	Subsample	Sample Depths (ft bgs)	Metals (mg/kg)													
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Silver	Vanadium	Zinc
VS-1	4/16/1988	Drum Area	3.5	0.5	ND< 2.7	110	0.66	4.1	26.1	5.4	70	600	ND< 5	1.2	33.1	11.3	15.4	200
			7	1.4	ND< 2.7	130	ND< 0.025	4.2	21.5	6.6	104	130	ND< 5	ND< 1	31.5	ND< 0.1	17.3	49.9
			10	1.6	ND< 2.2	230	ND< 0.025	10.1	63.5	11.4	1,045	1,000	ND< 5	5.7	42.6	ND< 0.1	17.3	1,000
VS-2	4/16/1988	Drum Area	3	ND< 1	ND< 2.2	98	ND< 0.025	3.1	18.5	5	36.7	60	ND< 5	1.2	30.9	ND< 0.1	13.6	270
			8.5	ND< 1	ND< 2.2	38.7	ND< 0.025	1.5	6.6	2.6	13.6	9.3	ND< 5	ND< 1	13.5	ND< 0.1	6.7	22.9
B-1/MW-1	7/5/1989	West of Tanks	5.5	ND< 1	ND< 2.2	85	ND< 0.025	1.4	43	8.7	25	24	ND< 5	ND< 1	56	ND< 0.1	13	94
			10.5	ND< 1	ND< 2.2	71	ND< 0.025	0.6	12.5	2.6	6	9	ND< 5	ND< 1	12.7	ND< 0.1	7	5.4
			16	4	ND< 2.2	78	ND< 0.025	12	42	13.4	13.3	180	ND< 5	2.4	30	ND< 0.1	32	2,000
			20.5	ND< 1	ND< 2.2	84	ND< 0.025	1.4	15	4.3	23	77	ND< 5	ND< 1	19	ND< 0.1	10	108
			25.5	ND< 1	ND< 2.2	32	ND< 0.025	2	10	3	13	8	ND< 5	ND< 1	14	ND< 0.1	12	27
			30.5	ND< 1	ND< 2.2	23	ND< 0.025	1.3	9.9	2.6	7.4	6.5	ND< 5	ND< 1	42	ND< 0.1	6.7	15
B-2	7/5/1989	West of office	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			5	1.2	ND< 2.2	100	ND< 0.025	1.6	11.3	5	92	367	ND< 5	ND< 1	18.5	ND< 0.1	9.7	67
			10	ND< 1	ND< 2.2	46	ND< 0.025	ND< 0.3	12.7	2.7	22.3	7.8	ND< 5	ND< 1	12.5	ND< 0.1	10	5.92
			16	1.2	ND< 2.2	96	ND< 0.025	1.4	43	12	10	11	ND< 5	ND< 1	78	ND< 0.1	32	25
			20.5	ND< 1	ND< 2.2	86	ND< 0.025	1.4	7.6	1.9	9	8.7	ND< 5	ND< 1	30.6	ND< 0.1	17	11
B-3/MW-5	8/31/1989	At trench and drum area	5	ND< 1	ND< 2.2	29.2	ND< 0.025	0.8	13.5	5.8	13.2	9.3	ND< 5	ND< 1	14	ND< 0.1	12	53
			11	1.08	ND< 2.2	157.3	ND< 0.025	1.19	15.2	6.7	92	184	ND< 5	ND< 1	22	ND< 0.1	23.4	200
			15.5	8.89	ND< 2.2	681	ND< 0.025	4.3	23.4	9.1	281	1,300	ND< 5	ND< 1	28.8	ND< 0.1	39	1,410
			22.5	ND< 1	ND< 2.2	1,130	ND< 0.025	5.8	19	46	44.2	24	ND< 5	ND< 1	151	ND< 0.1	58.3	84.6
			25.5	ND< 1	ND< 2.2	156	ND< 0.025	1.1	23	12.9	23.5	12	ND< 5	ND< 1	14	ND< 0.1	31	47
B-4/MW-6	8/31/1989	NW site boundary	20.5	ND< 1	ND< 2.2	290	ND< 0.025	1.1	21	10	22.5	15.2	ND< 5	ND< 1	48	ND< 0.1	58	47
			25.5	ND< 1	ND< 2.2	58.5	ND< 0.025	0.3	23	11	22	13	ND< 5	ND< 1	58	ND< 0.1	39	43.8
B-7/MW-7	1/1/1990	Drum Area	4	ND< 10	ND< 16	140	0.49	ND< 0.7	32	8.8	27	ND< 12	ND< 0.09	ND< 1	68	ND< 0.4	36	79
B-8/MW-8	1/1/1990	Downgradient of USTs	9	ND< 10	ND< 16	34	0.15	ND< 0.7	23	ND< 2	1.5	ND< 12	0.088	ND< 1	58	ND< 0.4	1.2	310
			4	ND< 10	ND< 16	42	0.16	ND< 0.7	27	2.8	5.5	ND< 12	ND< 0.09	ND< 1	15	ND< 0.4	15	75
B-9	1/4/1990	At sump	9	ND< 10	ND< 16	86	0.15	ND< 0.7	9.8	ND< 2	41	56	0.36	ND< 1	5.8	ND< 0.4	6.3	120
			4	ND< 10	ND< 16	140	0.31	ND< 0.7	23	7.8	55	40	0.45	ND< 1	42	ND< 0.4	31	1,20
B-10	1/4/1990	NW part of site	9	ND< 10	ND< 16	610	0.31	64	180	15	2,800	900	0.88	27	800	ND< 0.4	36	1,300
			9	ND< 10	ND< 16	32	0.08	ND< 0.7	23	ND< 2	10	42	0.1	ND< 1	58	ND< 0.4	3	97
B-11	1/4/1990	Area of the former office and warehouse	9	ND< 10	31	340	0.19	1.3	30	6.9	140	1,100	0.62	ND< 1	34	ND< 0.4	28	310
			4	ND< 10	ND< 16	360	0.26	1	23	6.4	64	75	0.092	ND< 1	42	ND< 0.4	23	940
			9	ND< 10	ND< 16	160	0.21	0.7	21	5.9	ND< 4 500	50	0.051	ND< 1	34	ND< 0.4	17	180
B-12	1/4/1990	N of office	4	ND< 10	ND< 16	80	0.23	ND< 0.7	38	8.4	170	120	ND< 0.09	ND< 1	56	ND< 0.4	23	150
			9	ND< 20	36	340	0.36	7.7	190	28	2,300	1,100	ND< 0.09	20	150	ND< 0.4	25	2,600
B-13	1/4/1990	N part of site	9	ND< 10	ND< 16	160	0.46	ND< 0.7	82	8.8	120	9.25	ND< 0.09	ND< 1	42	ND< 0.4	27	800
			9	ND< 10	ND< 16	87	0.15	ND< 0.7	29	5.8	6.9	12	ND< 0.09	ND< 1	14	ND< 0.4	15	210
Sump	1/5/1990	Sump Excavation	Confirmation	ND< 10	ND< 16	150	0.46	ND< 0.7	38	15	68	62	0.052	ND< 1	130	ND< 0.4	38	130
MW-9	4/11/1994	W of Tank Excavation	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			15.5	ND< 1	4.2	100	0.43	ND< 0.25	28	13	30	11	ND< 0.083	ND< 1	48	ND< 0.1	27	15
MW-10	4/14/1994	N of Tank Excavation	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			15.5	6.4	19	1,400	0.23	3.3	90	19	220	250	0.77	3.1	97	1.1	24	530
T-2	4/11/1994	SE tank excavation	4	9.1	9.8	1,70	0.23	1	25	6.7	2,500	600	ND< 0.087	1.5	56	0.5	26	140
			8.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-6	4/14/1994	W of tank excavation	5	ND< 2.9	8	1,30	0.31	5.77	25	9.2	60	61	0.23	ND< 0.99	37	ND< 0.49	38	68
			9	ND< 5	ND< 2.5	83	ND< 0.10	ND< 0.25	25	4.2	10	1.5	ND< 0.087	ND< 1	20	ND< 0.1	13	16
			14.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-7	4/14/1994	NW tank excavation	7.5	ND< 3	4.2	150	0.44	0.28	27	10	40	6.1	ND< 0.087	ND< 0.99	27	ND< 0.5	27	62
			14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHHSL - Residential [1]				30	0.07	5,300	16	1.7	100,000	660	3,000	80	18	380	1,600	380	530	23,000
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [2]				20	0.39	750	4	1.7	750	0.33	230	80	6.7	40	150	30	200	600

Notes:
- exceeds regulatory and California hazardous waste criteria
- exceeds regulatory criteria

Only detected constituents are shown.
bgs: below ground surface
mg/kg: milligrams per kilogram
ND< RL: not detected at or above laboratory reporting limit shown

1. California EPA, 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* (Revised 2005). January
2. San Francisco Bay Regional Water Quality Control Board (SF RWQCB), 2013. *2013 Tier 1 Environmental Screening Levels (ESLs).* February

Table D4-5- Historical PCBs Data
Nady Systems

Borehole ID	Date	Rationale	Sample Depths	PCBs (mg/kg)	
				Arochlor 1260	Other PCBs
B-7/MW-7	1/3/1990	Drum Area	4	ND<1	ND
			9	ND<1	ND
B-8/MW-8	1/3/1990	Downgradient of USTs	4	ND<1	ND
			9	2.3	ND
B-9	1/4/1990	At sump	4	ND<1	ND
			9	ND<1	ND
B-10	1/4/1990	NW part of site	4	ND<1	ND
			9	ND<1	ND
B-11	1/4/1990	Between office and warehouse	4	2.2	ND
			9	ND<1	ND
B-12	1/4/1990	N of office	4	ND<1	ND
			9	ND<1	ND
B-13	1/4/1990	N part of site	4	3.1	ND
			9	ND<1	ND
Sump	1/5/1990	Sump Excavation	Confirmation	4.2	ND
CHHSL - Residential [1]				*0.089*	*0.089*
ESL - Shallow Soil, Residential, Non-Drinking Water Resource Area [2]				*0.22*	*0.22*

Notes:
exceeds regulatory criteria
Only locations with detections are shown.
Only detected compounds are shown.
mg/kg: milligrams per kilogram
ND<##: Not detected at or above laboratory reporting limit shown
PCBs: Polychlorinated biphenyls
UST: Underground storage tank

PERTINENT TABLES AND PLATES EXCERPTS FROM REPORTS PREPARED BY SUBSURFACE CONSULTANTS

Table 1
Groundwater Elevation Data

Well	Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
SCI MW-7	5/9/95		Dry	--
SCI MW-8	5/20/93	20.72	9.55	11.17
	6/4/93		10.81	9.91
	8/25/93		10.93	9.79
	11/18/93		11.72	9.00
	2/25/94		9.05	11.87
	4/20/94		10.18	10.54
	4/22/94		10.48	10.24
	4/26/94		10.13	10.59
	8/8/94		10.99	9.73
	2/9/95		7.85	12.87
	5/9/95		9.05	11.67
	11/13/95		11.00	9.72
	5/9/96		9.71	11.01
SCI MW-9	4/20/94	20.69	10.26	10.43
	4/22/94		10.31	10.38
	4/26/94		10.26	10.43
	8/8/94		11.24	9.45
	2/9/95		7.55	13.14
	5/9/95		8.88	11.81
	11/13/95		10.46	10.23
	5/9/96		9.60	11.09
SCI MW-10	4/20/94	20.42	10.72	9.70
	4/22/94		10.73	9.69
	4/26/94		10.72	9.70
	8/8/94		11.60	8.82
	2/9/95		7.10	13.32
	5/9/95		8.70	11.72
	11/13/95		11.70	8.72
	5/9/96		9.54	10.88
PES MW-2	2/9/95	15.79	10.64	5.15
	5/9/95		10.60	5.19
	11/13/95		11.18	4.61
	5/9/96		10.78	5.01
PES MW-3	2/9/95	12.43	6.86	5.57
	5/9/95		7.16	5.27
	11/13/95		8.44	3.99
	5/9/96		7.72	4.71
PES MW-4	2/9/95	12.24	8.11	4.13
	5/9/95		7.76	4.48
	11/13/95		7.95	4.29
	5/9/96		7.64	4.60

Table 1
Groundwater Elevation Data

Well	Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
PES MW-5	2/9/95	12.82	5.68	7.14
	5/9/95		5.38	7.46
	11/13/95		6.89	5.93
	5/9/96		6.00	6.82
PES MW-6	2/9/95	12.03	7.66	4.37
	5/9/95		8.57	3.46
	11/13/95		8.15	3.88
	5/9/96		7.64	4.39
PES MW-7	2/9/95	12.90	7.57	5.33
	5/9/95		5.15	7.75
	11/13/95		5.98	6.92
	5/9/96		6.11	6.79
PES MW-8	2/9/95	15.01	10.23	4.78
	5/9/95		10.48	4.53
	11/13/95		11.02	3.99
	5/9/96		10.50	4.51

Reference Elevation: MSL

Table 2
Volatile Organic Chemical Concentrations in Groundwater

Well	Date	4-Methyl-2 Pentanone (µg/l)[1]	Vinyl Chloride (µg/l)	Acetone (µg/l)	2-Butanone (µg/l)	4-Methyl-2 Pentanol (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl benzene (µg/l)	Xylene (µg/l)	Trans-1,2 Dichloro-ethene (µg/l)	Other EPA 8240 Compounds (µg/l)
Sump-Well	8/21/89	<20	<4	<20	<20	NR[2]	<2	<2	<3	<3	<3	ND[3]
MW1	7/6/89	<20	<4	<20	<20	NR	<2	<2	<3	<3	<3	ND
	9/7/89	<20	<4	<20	<20	NR	<2	<2	<3	<3	<3	ND
	1/10/90	NR	<30	NR	NR	NR	<5	<5	<5	<5	<5	ND
	9/5/91	<10	<10	<20	<20	NR	7	8	<5	3	<5	ND
	5/20/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	8/25/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	11/18/93	<10	<10	<40	<10	NR	<5	<5	<5	<5	<5	ND
	2/25/94	<10	<10	<10	<10	NR	<5	<5	<5	<5	<5	ND
	8/8/94	<10	<10	<10	<10	NR	<5	<5	<5	<5	<5	ND
	2/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	5/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	11/13/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	5/9/96	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
MW3	9/7/89	<20	<4	<20	<20	NR	<2	<2	<3	<3	<3	ND
	1/10/90	NR	<30	NR	NR	NR	<5	<5	<5	<5	<5	ND
	9/5/91	<10	<10	<20	<20	NR	<5	<5	<5	<5	<5	ND
	5/20/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	8/25/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	11/18/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	2/25/94	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	8/8/94	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
MW8	1/10/90	160,000[4]	<6,000	NR	NR	NR	2,100	<1,000	<1,000	<1,000	<1,000	ND
	12/10/90	47,000[4]	<150	3,200[4]	10,000[4]	130,000[4]	160	<25	<25	<25	<25	ND
	9/5/91	150,000	<10,000	<5,000	<20,000	NR	<10,000	<10,000	<5,000	<5,000	<5,000	ND
	5/20/93	100,000	<5,000	<10,000	<5,000	NR	<3,000	<3,000	<3,000	<3,000	<3,000	ND
	8/25/93	48,000	<3,000	<5,000	<3,000	NR	<1,000	<1000	<1000	<1000	<1000	ND
	11/18/93	840	<50	<100	<50	NR	<25	<25	<25	<25	<25	ND
	2/25/94	14,000	<1,000	<2,000	<1,000	NR	<500	<500	<500	<500	<500	ND
	4/21/94	19,000	<1,000	<2,000	<1,000	NR	<500	<500	<500	<500	<500	ND
	5/11/94	140,000	<5,000	<10,000	<3,000	NR	<3,000	<3,000	<3,000	<3,000	<3,000	ND
	8/8/94	61,000	<1,000	<2,000	<1,000	NR	<500	<500	<500	<500	<500	ND
	2/9/95	62,000	<10	40	78	NR	64	<5	<5	<5	<5	7.9[5],10[6]
	5/9/95	<10	<10	<20	<10	NR	69	<5	<5	<5	<5	11[6]
	11/13/95	85,000	<100	<200	<100	NR	63	<50	<50	<50	<50	ND
	5/9/96	15,000	<500	<1000	<500	NR	<250	<250	<250	<250	<250	ND

Table 2
Volatile Organic Chemical Concentrations in Groundwater

Well	Date	4-Methyl-2 Pentanone (MIBK Hexanone) (µg/l)[1]	Vinyl Chloride (µg/l)	Acetone (µg/l)	2-Butanone (MEK) (µg/l)	4-Methyl-2 Pentanol (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl benzene (µg/l)	Xylene (µg/l)	Trans-1,2 Dichloro-ethene (µg/l)	Other EPA 8240 Compounds (µg/l)
MW9	4/21/94	120	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	8/8/94	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	2/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	5/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	11/13/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	5/8/96	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
MW10	4/21/94	23	<10	<20	<10	NR	22	<5	<5	<5	<5	ND
	8/8/94	<10	<10	<20	<10	NR	14	<5	<5	<5	<5	ND
	2/9/95	<10	<10	<20	<10	NR	6.6	<5	<5	<5	<5	3.2[4]
	5/9/95	<10	<10	<20	<10	NR	12	<5	<5	<5	<5	3.0[6], 3.0[7]
	11/13/95	<10	<10	<20	<10	NR	31	<5	<5	<5	<5	ND
	5/8/96	<10	<10	<10	<10	NR	7.6	<5	<5	<5	5	3.5[4]

1 micrograms per liter
2 Not reported
3 Not detected at concentrations above the reporting limits
4 Tentatively identified compound concentrations
5 2-Hexanone (reporting limit = 10 ug/l)
6 Chlorobenzene (Reporting Limit = 5.0 µg/l)
7 Carbon Disulfide (Reporting Limit = 5.0 ug/l)

Table 3
Petroleum Hydrocarbon Concentrations in Groundwater

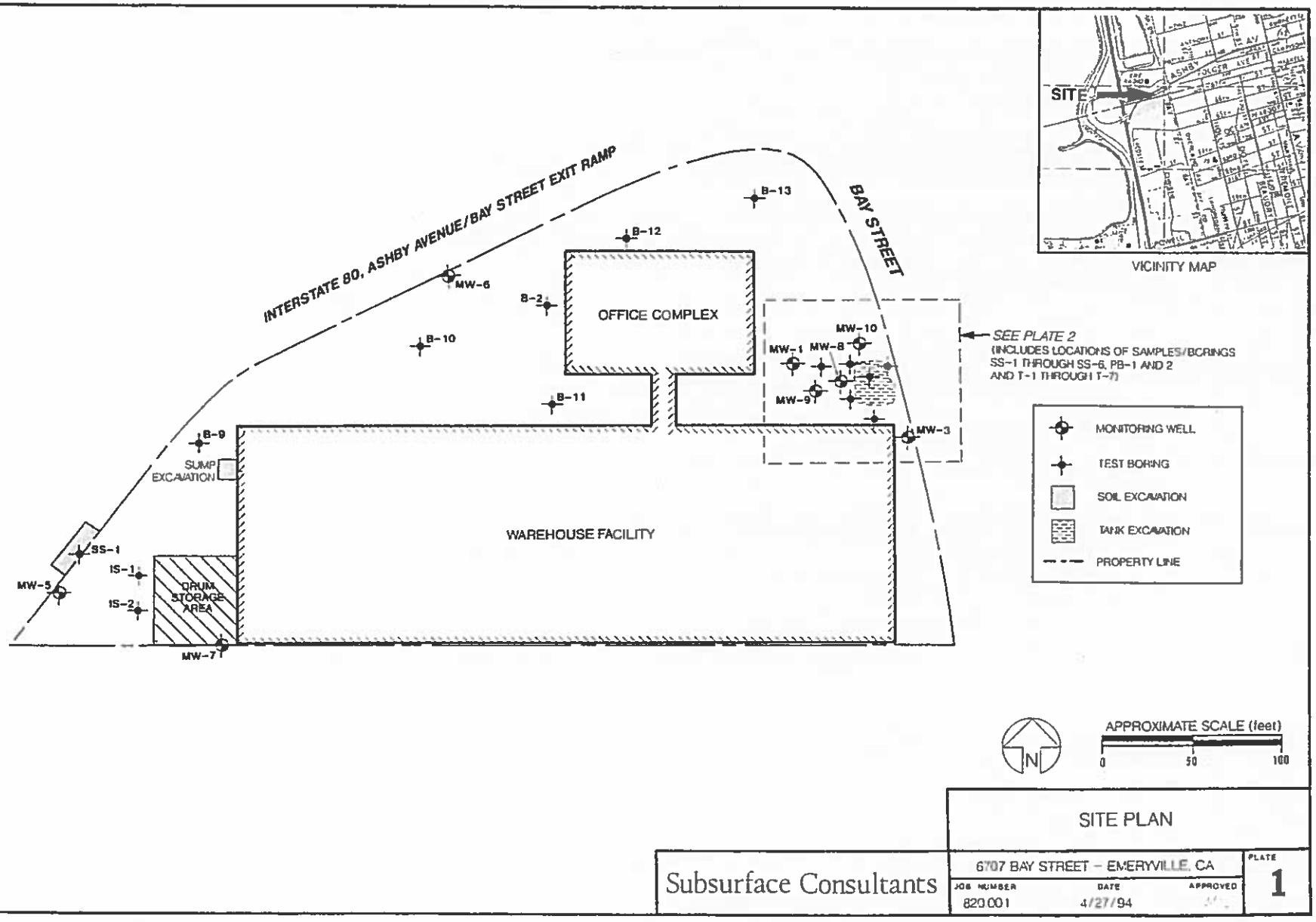
Date	Well	Total Recoverable Hydrocarbons (mg/l)	Oil and Grease (mg/l)	TEH (mg/l)	TVH (mg/l)
7/6/89	MW-1	--	--	<0.5	<0.5
9/7/89		--	<10	<0.5	<0.5
1/10/90		0.5	--	<10	<10
5/20/93		--	<5	--	--
8/25/93		--	<5	--	--
11/18/93		--	<5	--	--
2/25/94		--	<5	--	--
8/8/94		--	--	<0.05	<0.05
2/9/95		--	--	1.0[b]	<0.05
5/9/95		--	--	1.2[b]	0.95[a]
11/13/95		--	--	<0.05	<0.05
5/9/96		--	--	1[b]	0.05[a]
9/7/89	MW-3	--	<10	<0.5	<0.5
1/10/90		0.6	--	<10	<10
5/20/93		--	<5	--	--
8/25/93		--	<5	--	--
11/18/93		--	<5	--	--
2/25/94		--	<5	--	--
4/21/94		--	<5	0.43	0.08
8/8/94		--	<5	1.2	<0.05
1/10/90	MW-8	103	--	<10	<10
12/10/90		10.5	--	--	--
5/20/94		--	<5	--	--
8/25/93		--	<5	--	--
11/18/93		--	14	--	--
2/25/94		--	<5	--	--
4/21/94		--	<5	2.8	5.9
8/8/94		--	<5	3.8	7.2
2/9/95		--	--	2.8[b]	9.1[a]
5/9/95		--	--	4.9[b]	0.95[a]
11/13/95		--	--	1.9[b]	18[a]
5/9/96		--	--	4.9[b]	3.6[a]
4/21/94	MW-9	--	<5	0.88	0.92
8/8/94		--	<5	1.2	0.86
2/9/95		--	--	0.730[b]	0.400[c]
5/9/95			--	0.900[b]	0.440[c]
11/13/95		--	--	0.340[b]	0.430[c]
5/9/96		--	--	5.7[b]	0.2[c]
4/21/94	MW-10	--	<5	2.1	0.68
8/8/94		--	<5	4.4	0.61
2/9/95		--	--	1.3[b]	0.150[c]
5/9/95		--	--	2.8[b]	0.280[c]
11/13/95		--	--	2.2[b]	0.660[c]
5/9/96		--	--	2.2[b]	0.2[c]

-- = Test not requested

[a] = Sample chromatogram does not resemble gas standard

[b] = Sample chromatogram does not resemble diesel standard

[c] = Sample exhibits unknown single peak or peaks



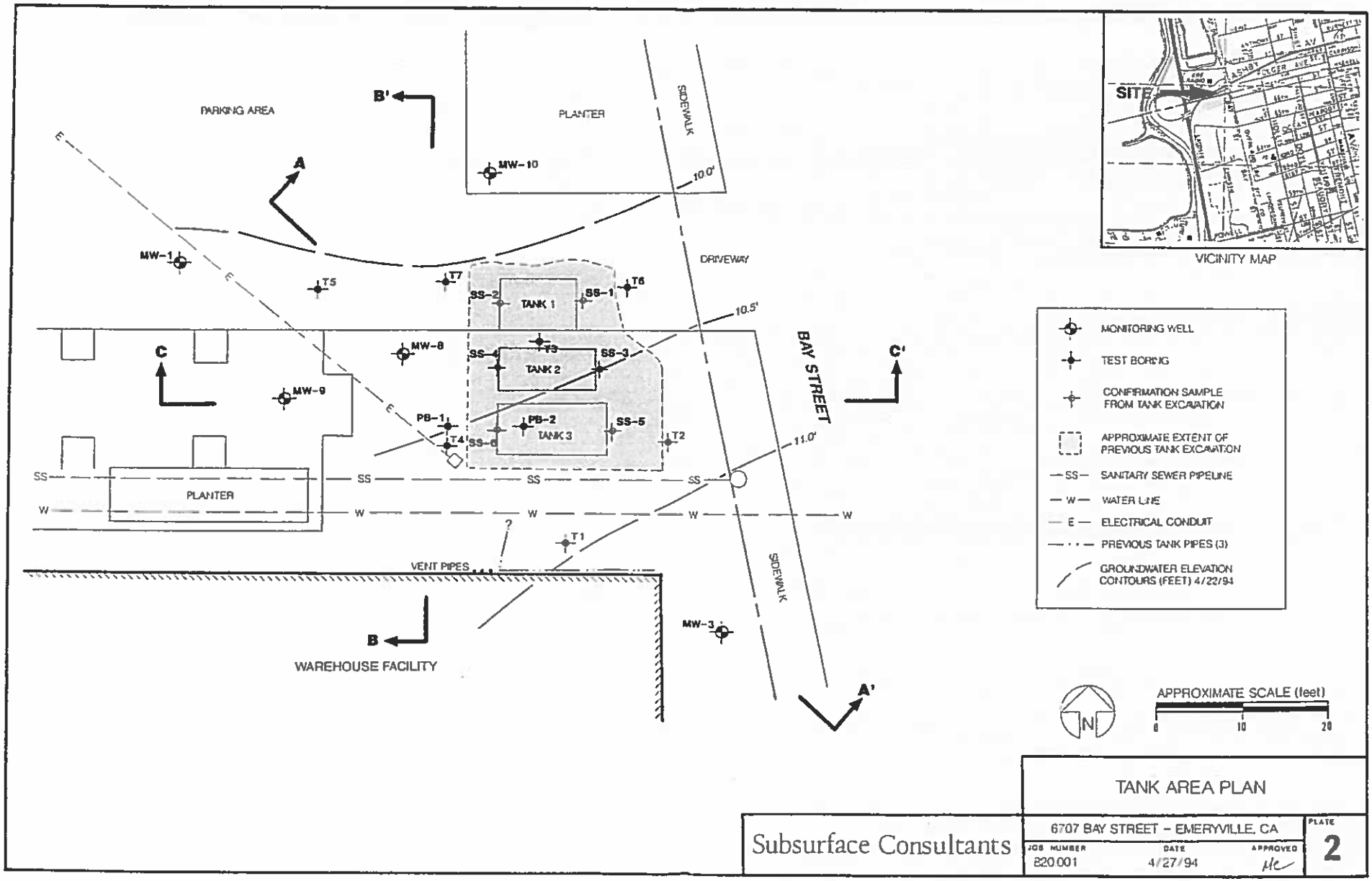
SITE PLAN

Subsurface Consultants

6707 BAY STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820001	4/27/94	

PLATE 1



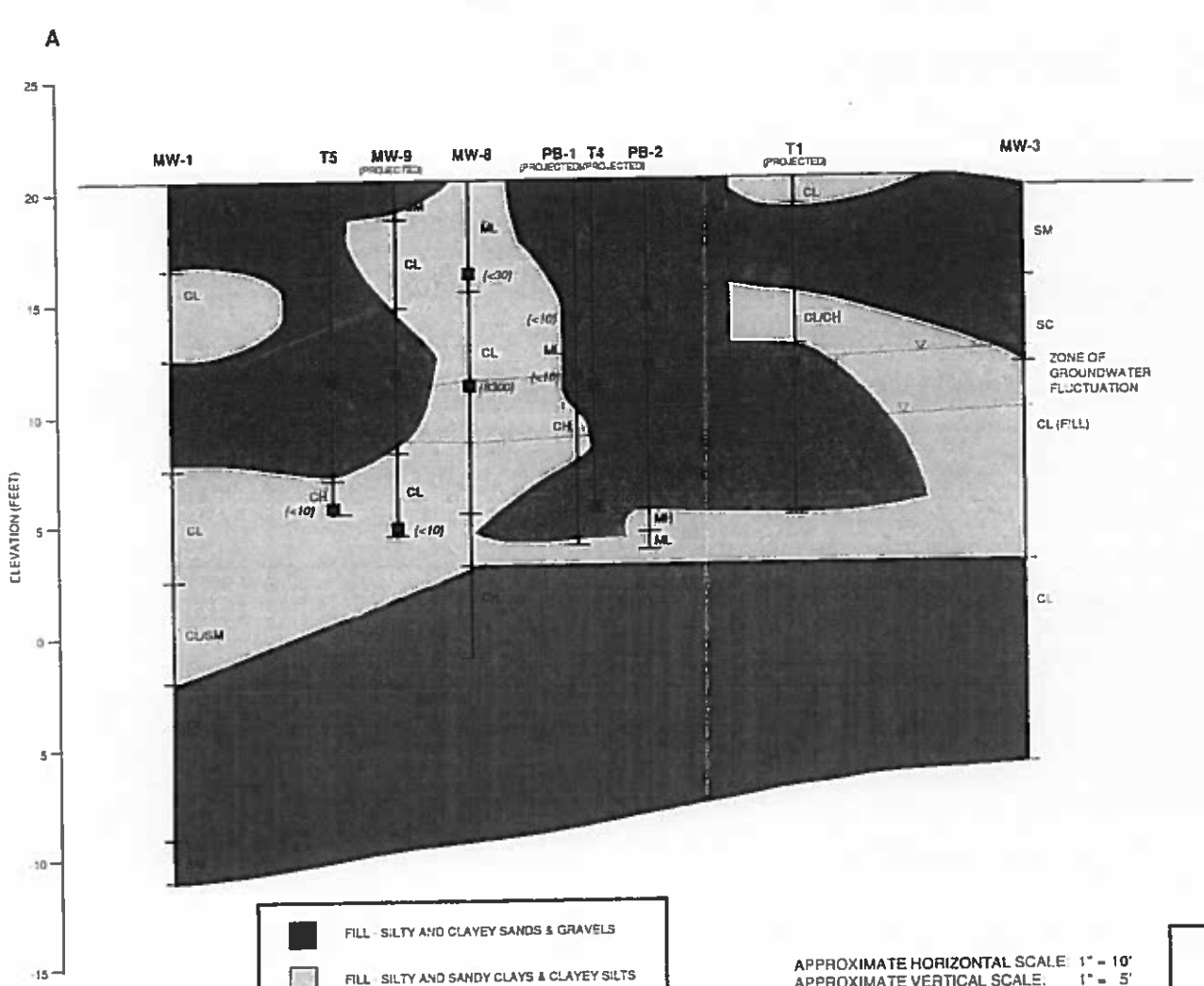
TANK AREA PLAN

Subsurface Consultants

6707 BAY STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	4/27/94	HC

PLATE 2



FILL - SILTY AND CLAYEY SANDS & GRAVELS

FILL - SILTY AND SANDY CLAYS & CLAYEY SILTS

BAY AND MARSH DEPOSITS

(15) MIBK CONCENTRATION IN SOIL (µg/kg)

ELEVATION REFERENCE: MSL

APPROXIMATE HORIZONTAL SCALE: 1" = 10'
APPROXIMATE VERTICAL SCALE: 1" = 5'

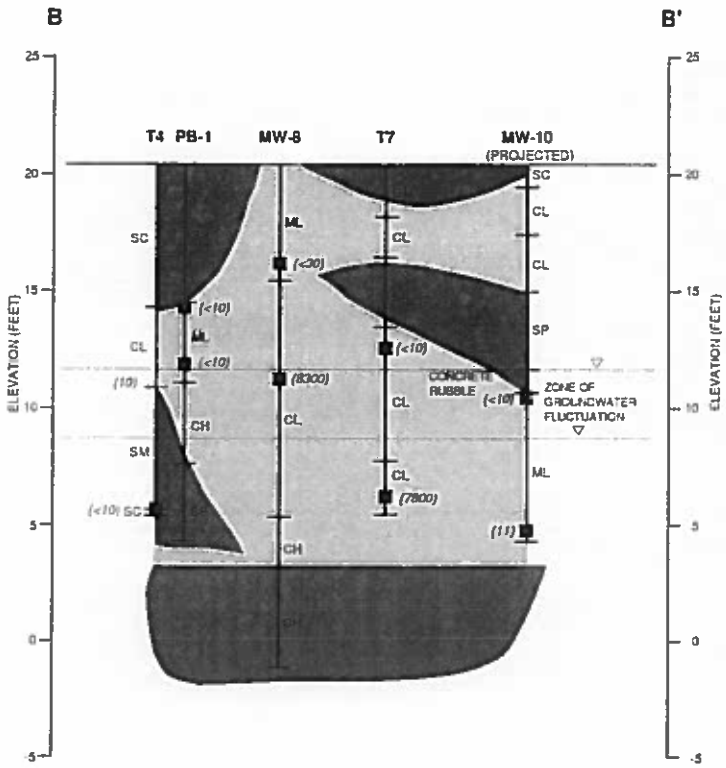
CROSS SECTION A - A'

Subsurface Consultants

6707 BAY STREET - EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820 001	5/6/94	

PLATE 14



FILL - SILTY AND CLAYEY SANDS & GRAVELS

FILL - SILTY AND SANDY CLAYS & CLAYEY SILTS

BAY AND MARSH DEPOSITS

(20) MIBK CONCENTRATION IN SOIL (µg/kg)

ELEVATION REFERENCE: MSL

APPROXIMATE HORIZONTAL SCALE: 1" = 10'
APPROXIMATE VERTICAL SCALE: 1" = 5'

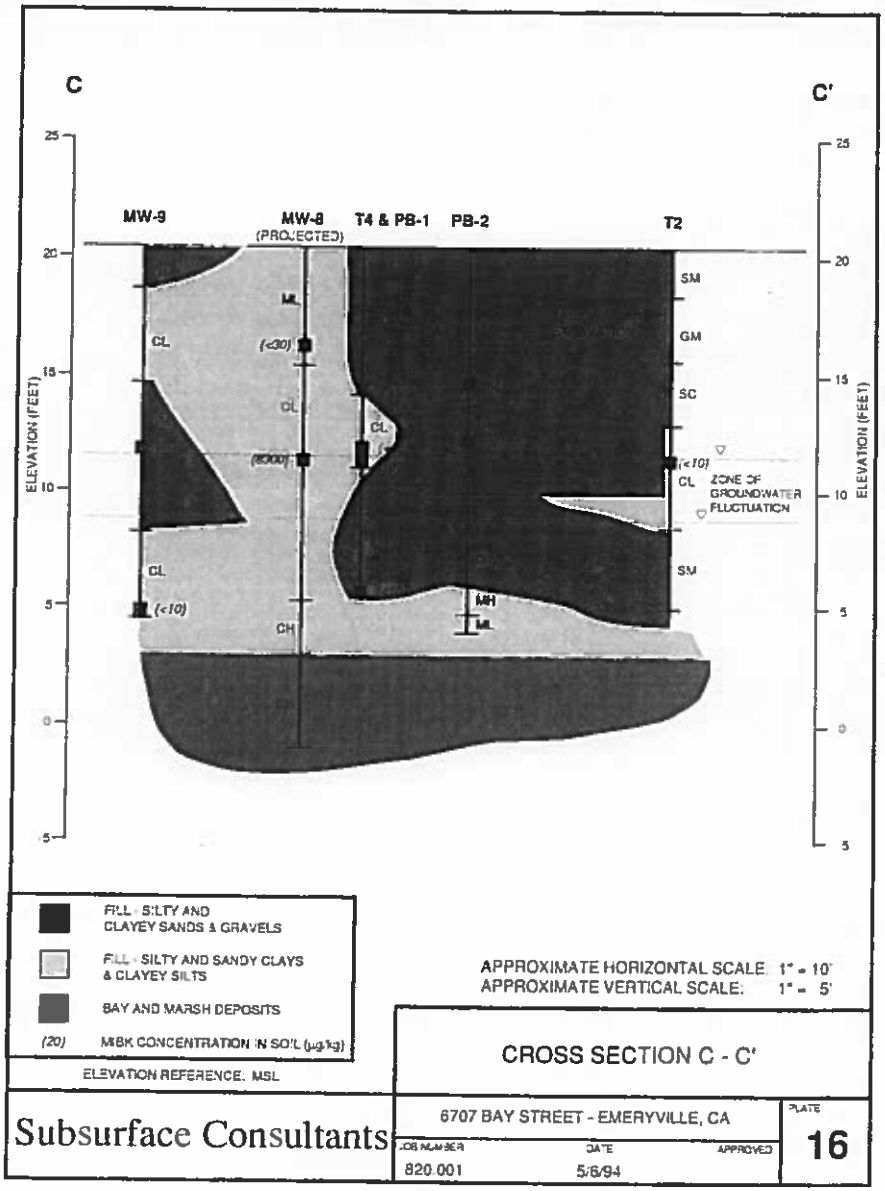
CROSS SECTION B-B'

Subsurface Consultants

6707 BAY STREET - EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	5/6/94	

PLATE 15

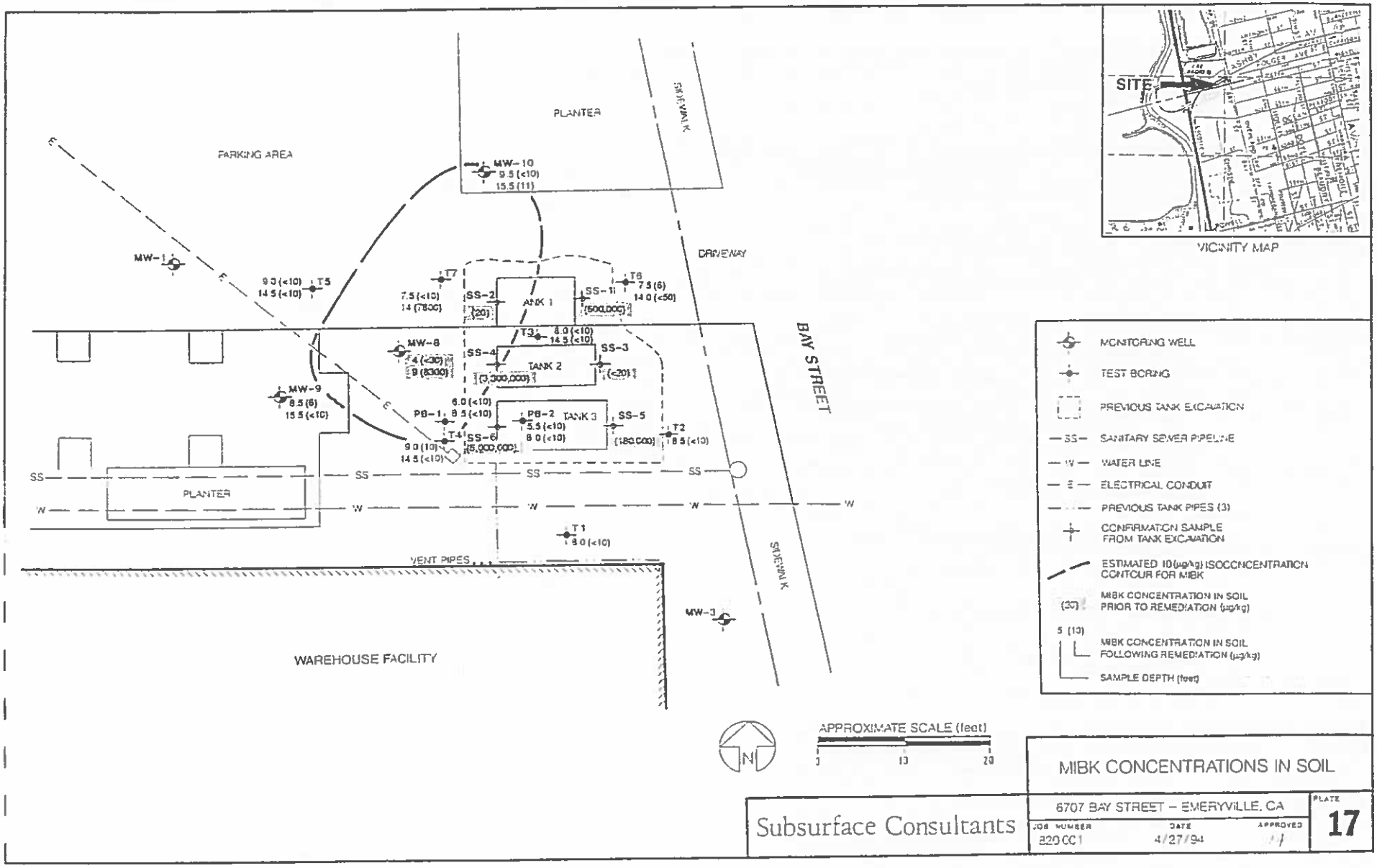


CROSS SECTION C - C'

Subsurface Consultants

6707 BAY STREET - EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED	PLATE
820.001	5/6/94		16



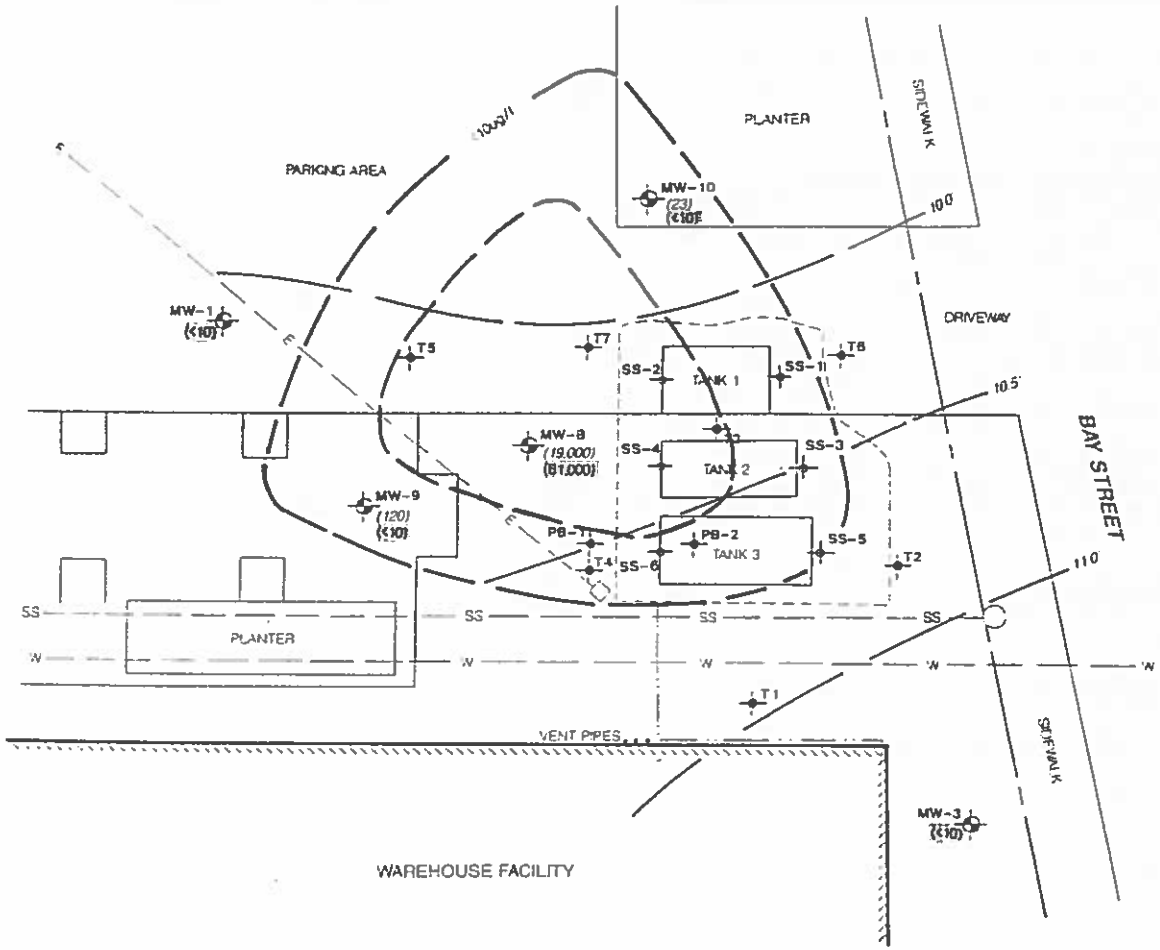
MIBK CONCENTRATIONS IN SOIL

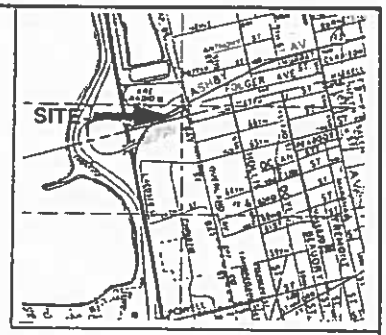
Subsurface Consultants

6707 BAY STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
220CC1	4/27/94	

PLATE 17





VICINITY MAP

- MONITORING WELL
- TEST BORING
- PREVIOUS TANK EXCAVATION
- — SS — SANITARY SEWER PIPELINE
- — W — WATER LINE
- — E — ELECTRICAL CONDUIT
- PREVIOUS TANK PIPES (3)
- CONFIRMATION SAMPLE FROM TANK EXCAVATION
- GROUNDWATER ELEVATION CONTOURS (FEET) 4/22/94
- ESTIMATED <10µg/l ISOCONCENTRATION CONTOUR FOR MIBK (4/21/94)
- ESTIMATED <10µg/l ISOCONCENTRATION CONTOUR FOR MIBK (8/8/94)
- (100) MIBK CONCENTRATION (µg/l) IN GROUNDWATER 4/21/94
- (<10) MIBK CONCENTRATION (µg/l) IN GROUNDWATER 8/8/94

N

APPROXIMATE SCALE (feet)
0 10 20

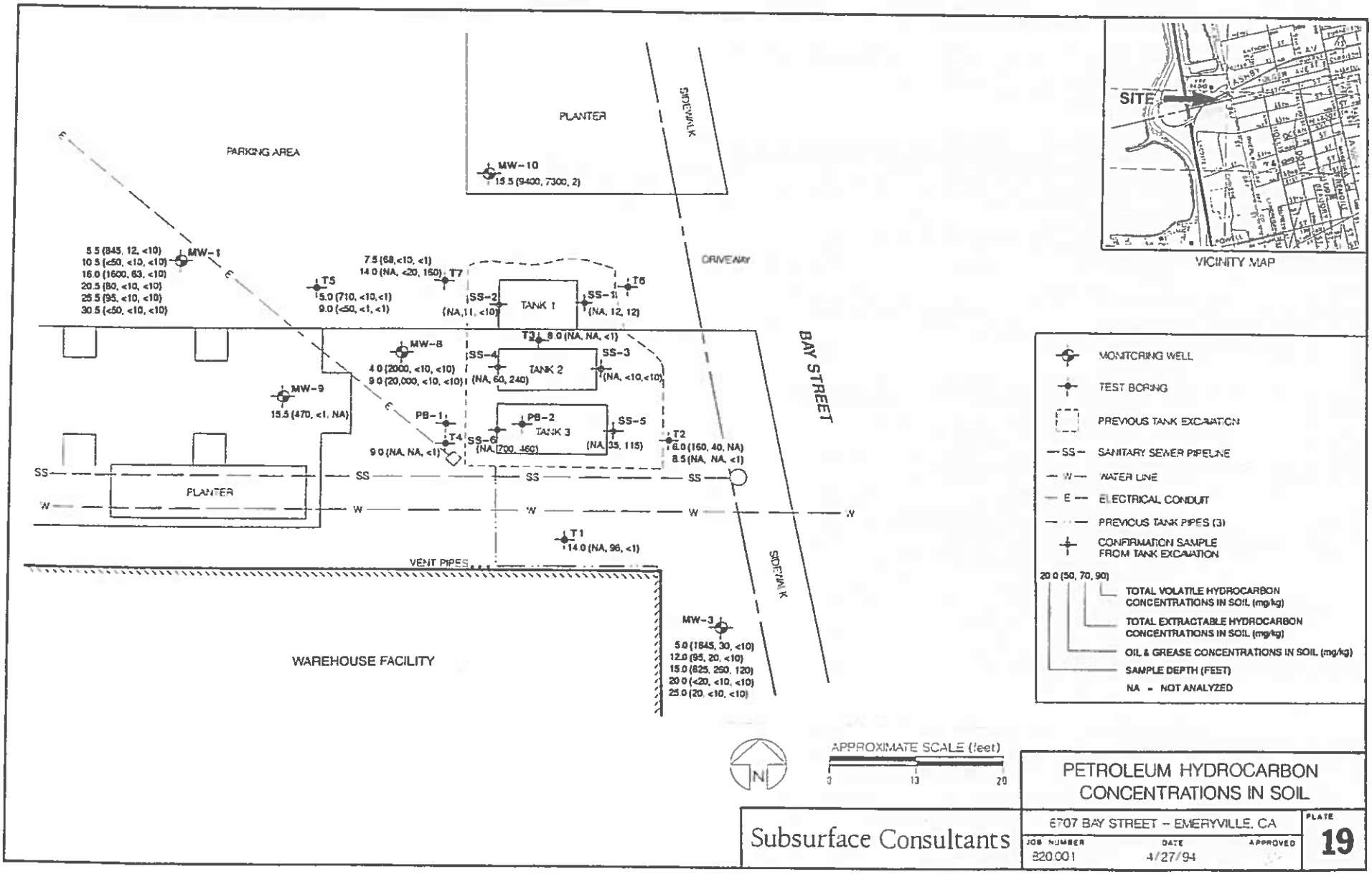
MIBK CONCENTRATIONS IN GROUNDWATER

Subsurface Consultants

6707 BAY STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820001	4/27/94	

PLATE 18



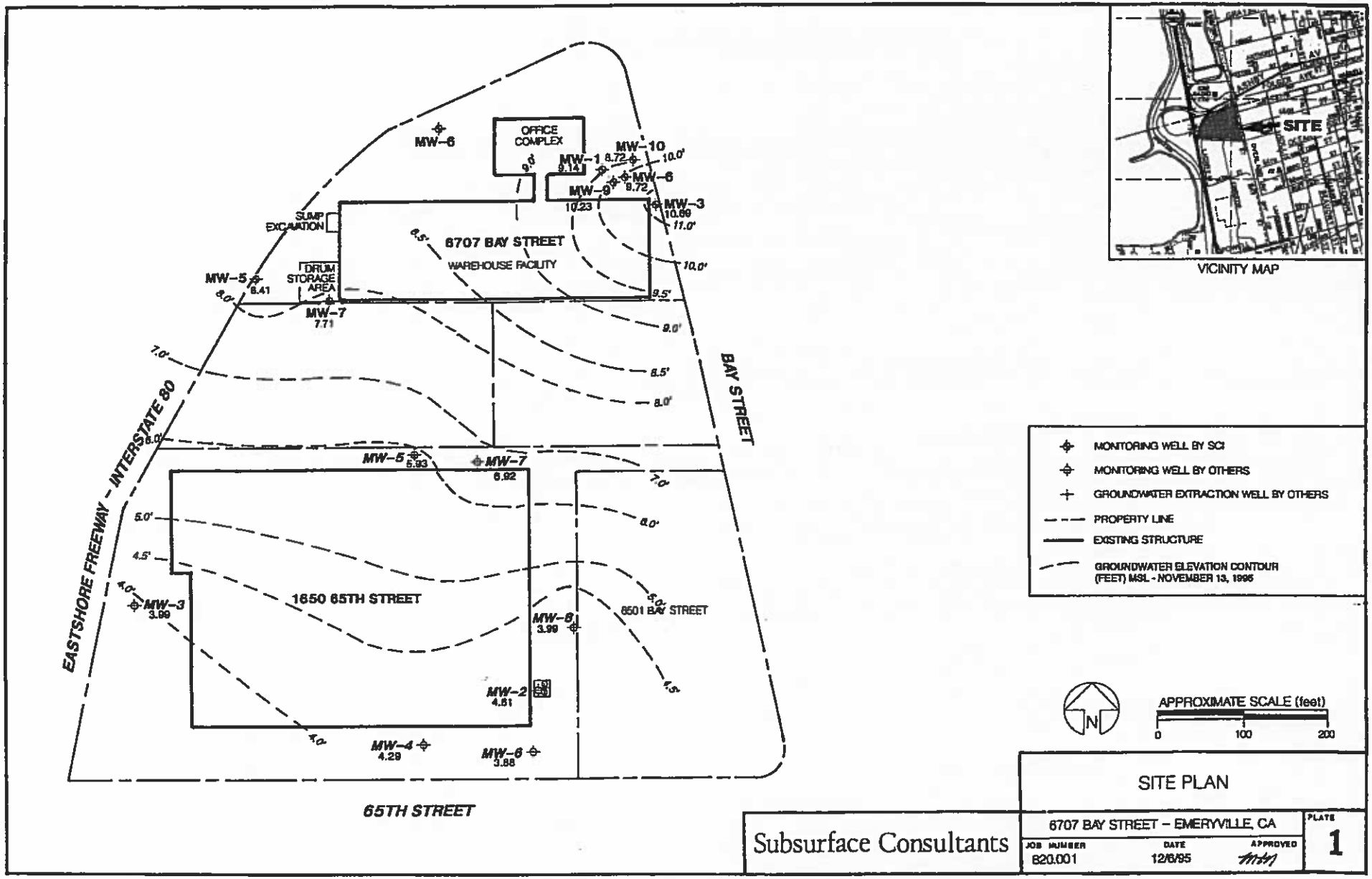
PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL

Subsurface Consultants

6707 BAY STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	4/27/94	

PLATE 19



SITE PLAN

Subsurface Consultants

6707 BAY STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	12/6/95	

PLATE 1

APPENDIX C

SITE REDEVELOPMENT PLANS

PROJECT SUMMARY

Unit Information (Approx Ave)	SF per Unit	Building 1	Total SF	Unit Ratio
Studio	630	11	6,955	5%
1 Bedroom Flat	785	98	77,130	47%
1 Bedroom Town House	1,070	3	3,210	1%
2 Bedroom Flat	1,210	79	95,705	37%
2 Bedroom Town House	1,510	7	10,580	3%
2 Bedroom Mezzanine	1,550	2	3,095	2%
3 Bedroom Flat	1,395	10	13,960	5%
3 Bedroom Mezzanine	1,685	1	1,685	0%
TOTAL		**211**	**212,320**	100%
Units Per Typical Floor		40		
Average Unit Size			1,005	

Parking Information		Total
Total Parking Proposed	(201 Stalls + 63 Stackers)	264
Commercial: Retail (Dog/Bike) Required Parking		0
City: Required Parking		313
City: Deficient Parking		49
Client: Surplus Parking		5
Gross Total Parking Area (Approx)		92,880
Parking Ratio (Parking Stalls to Units with Mechanical Parking)		1.25
Total Bicycle Parking Provided (Short-Term)		14
Required Bicycle Parking (Short-Term)		14
Total Bicycle Parking Provided (Long-Term)	(146 First Floor + 65 Second Floor)	211
Required Bicycle Parking (Long-Term)		211

Gross Area Per Floor (Sq.Ft.)	Building 1	Garage Total	Total Area
First Floor	16,135	46,880	63,015
Second Floor	16,580	46,000	62,580
Third Floor	46,445	0	46,445
Fourth Floor	47,210	0	47,210
Fifth Floor	47,210	0	47,210
Sixth Floor	47,210	0	47,210
Seventh Floor (w/Mezzanine)	52,935	0	52,935
Total	273,725	92,880	366,605

Gross Area Information	Building 1	Area Ratio
Amenity (Bike)	590	0%
Amenity (Dog)	425	0%
Amenity (Fitness Area)	1,200	0%
Amenity (Club Room - Seventh Floor)	749	0%
Amenity (Roof Deck - Seventh Floor)	860	N/A
Storage	740	0%
Trash	900	0%
MEP	1,120	0%
Maintenance	955	0%
Leasing Office / Mail Room	2,030	1%
Circulation	52,696	20%
Unit Total	212,320	78%
Building Total (Without Garage)	273,725	100%

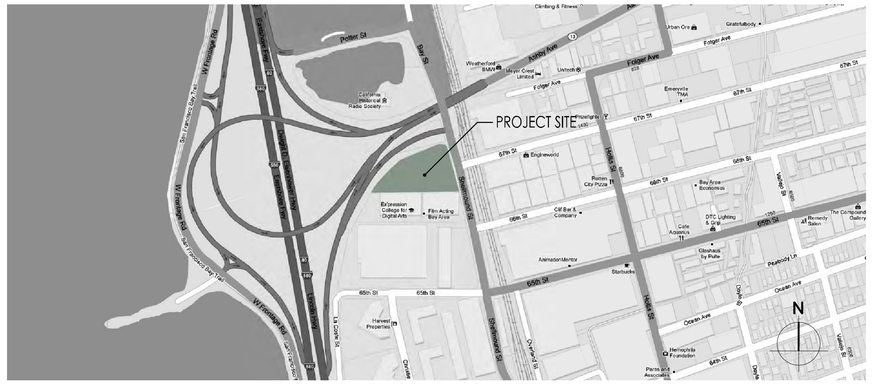
Floor Area Ratio	2.77 (Net Garage)	3.71

Site Information	Total Sq.Ft.	Area (Acre)
Site Area	98,775	2.27

Density	Units	Units per Acre
Maximum Density Allowed	227	100
Density Proposed	211	93

Open Space	Required		Proposed
Private Open Space	8,440		13,380
Common Open Space	5,660		38,260
Total	14,100	37,540 (Surplus)	51,640

VICINITY MAP



PROJECT TEAM

DEVELOPER: ANTON DEVELOPMENT
1415 L STREET
SACRAMENTO, CA 95814
TREY TELLER
CTELLER@ANTON.CO
(916) 400–2072

ARCHITECT: MBH ARCHITECTS
2470 MARINER SQUARE LOOP
ALAMEDA, CA 94501
DAVID DELASANTOS
DAVIDD@MBHARCH.COM
(510) 865–8663

CIVIL: LUK AND ASSOCIATES
738 ALFRED NOBEL DRIVE
HERCULES, CA 94547
JACKIE LUK
JACKIE@LUKASSOCIATES.COM
(510) 724–3388

LANDSCAPE: IMA
20341 BIRCH STREET, SUITE 100
NEWPORT BEACH, CA 92660
ANN CUTNER
ACUTNER@IMADESIGN.COM
(949) 954–7500

SHEET INDEX

A0.0 – TITLE SHEET
A0.1 – HISTORICAL CONTEXT
A0.2 – HISTORICAL CONTEXT
A0.3 – INSPIRATIONAL IMAGERY
A0.4 – INSPIRATIONAL IMAGERY
A0.5 – ARCHITECTURAL VIGNETTES
A0.6 – NEIGHBORHOOD CONTEXT
A0.7 – NEIGHBORHOOD CONTEXT
A1.0 – COMPOSITE SEVENTH, PODIUM AND FIRST FLOOR PLAN
A1.1 – AERIAL VIEWS
A1.2 – VIEW SOUTHWEST ON SHELLMOUND
A1.3 – VIEW NORTHWEST ON SHELLMOUND
A1.4 – VIEW NORTHEAST ON FREEWAY OFF–RAMP
A1.5 – VIEW SOUTHEAST ON FREEWAY OFF–RAMP
A1.6 – COURTYARD VIEW
A1.7 – COLOR AND MATERIALS
A1.8 – AMENITIES
A2.1 – FIRST FLOOR PLAN
A2.2 – SECOND FLOOR PLAN
A2.3 – THIRD FLOOR PLAN
A2.4 – FOURTH (TYPICAL FIFTH THROUGH SIXTH) FLOOR PLAN
A2.5 – SEVENTH FLOOR PLAN
A2.6 – ROOF PLAN
A3.1 – BUILDING SECTIONS
A3.2 – BUILDING ELEVATIONS
A3.3 – BUILDING ELEVATIONS
A4.1 – TYPICAL UNIT PLANS
A4.2 – TYPICAL UNIT PLANS
A5.0 – SITE AND ACCESS PLAN
A5.1 – TRASH SERVICE DIAGRAM GROUND FLOOR
A5.2 – TRASH SERVICE DIAGRAM SECOND FLOOR
A5.3 – TRASH SERVICE DIAGRAM THIRD FLOOR (FOURTH – SEVENTH SIMILAR)
A5.4 – PODIUM EXITING DIAGRAM
A5.5 – OPEN SPACE DIAGRAM
A5.6 – BICYCLE STORAGE ACCESS DIAGRAM – GROUND FLOOR
A5.7 – BICYCLE STORAGE ACCESS DIAGRAM – SECOND FLOOR
A6.1 – SHADOW STUDY
A6.2 – SHADOW STUDY
A6.3 – SHADOW STUDY
A6.4 – SHADOW STUDY
A6.5 – SHADOW STUDY

L1.0 – COMPOSITE LANDSCAPE PLAN
L1.1 – GROUND FLOOR LANDSCAPE PLAN
L2.0 – SHELLMOUND ENLARGED PLAN
L2.1 – SHELLMOUND PERSPECTIVE VIEW
L2.2 – TOWN HOUSE NEIGHBORHOOD #1 ENLARGED PLAN
L2.3 – TOWN HOUSE NEIGHBORHOOD PERSPECTIVE
L2.4 – TOWN HOUSE NEIGHBORHOOD #2 AND GARDEN ENLARGED PLAN
L2.5 – TOWN HOUSE NEIGHBORHOOD #2 AND GARDEN PERSPECTIVE
L3.0 – THIRD FLOOR COURTYARD ENLARGED PLAN
L4.0 – SEVENTH FLOOR COURTYARD ENLARGED PLAN
L5.0 – PLANT PALETTE
L6.0 – WELO DOCUMENTS
L7.0 – FEATURE DETAIL CONCEPTS

C1 – EXISTING PLAN
C2 – SITE PLAN
C3 – PRELIMINARY GRADING PLAN
C4 – PRELIMINARY STORMWATER CONTROL PLAN

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS–2014

QA/C

No.	Date	Issue
		07 NOV 14 PLANNING SUBMITTAL

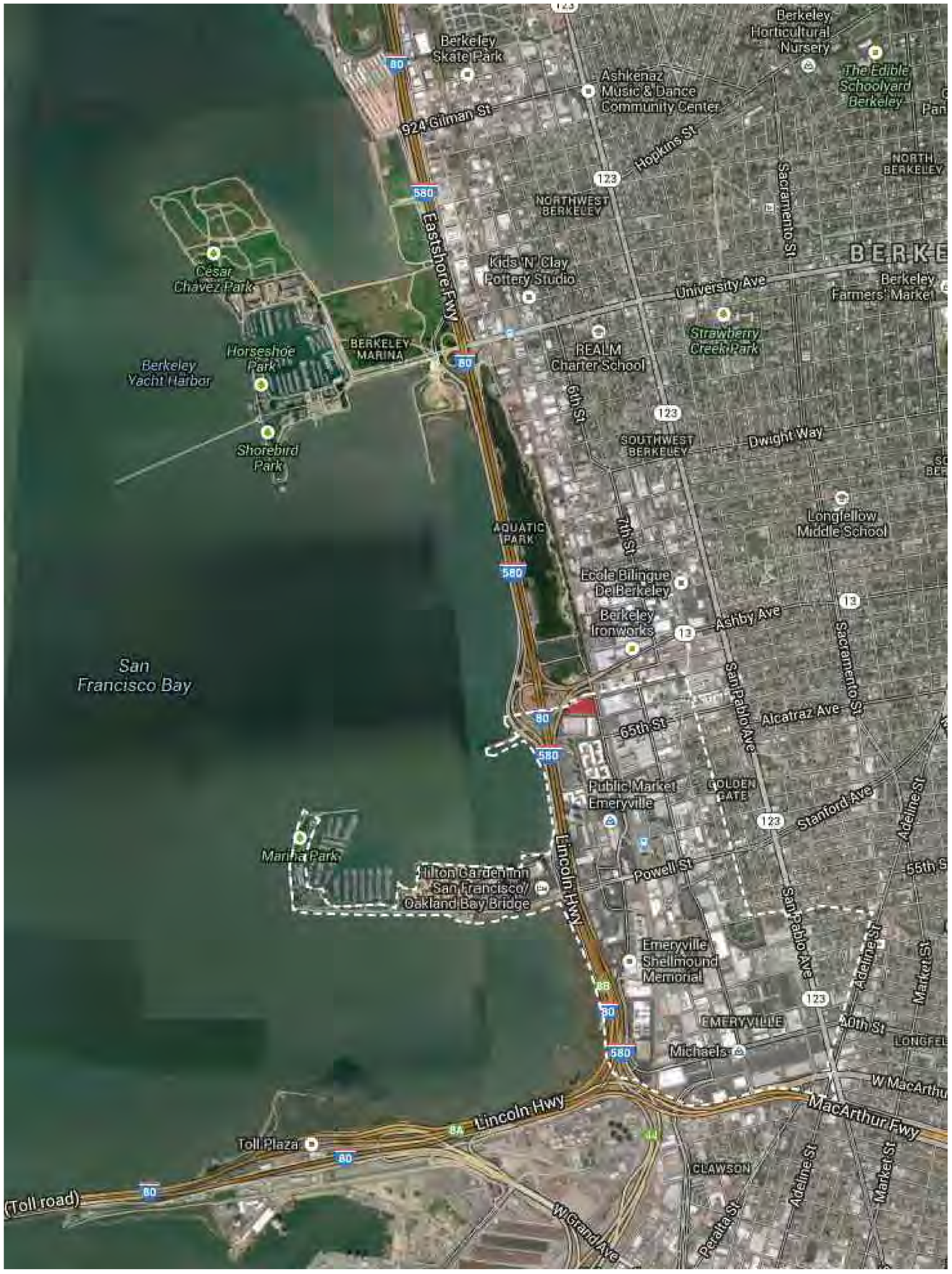
Project No. 48429
Scale NO SCALE
Drawing Title TITLE SHEET

M:\49988–Anton Development–6701 Shellmound\ACAD\Sheets\A0.0.dwg

Drawing No.

A0.0

Plotted: Friday, November 07, 2014 9:43am by: chriss







Oakland Estuary Westward, 1918. Moore-Scott shipyard in foreground, SPRR docks and mole beyond. United States Army Air Corps, Ariel Photo Section. Courtesy Oakland Public Library, Oakland History Room and Maps Division.



Standard Oil Plant, 1910. Richmond Local History Photograph Collection. Courtesy Richmond Public Library.

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS–2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale NO SCALE
Drawing Title HISTORICAL CONTEXT

M:\49988–Anton Development–6701 Shellmound\ACAD\Sheets\A0.1.dwg

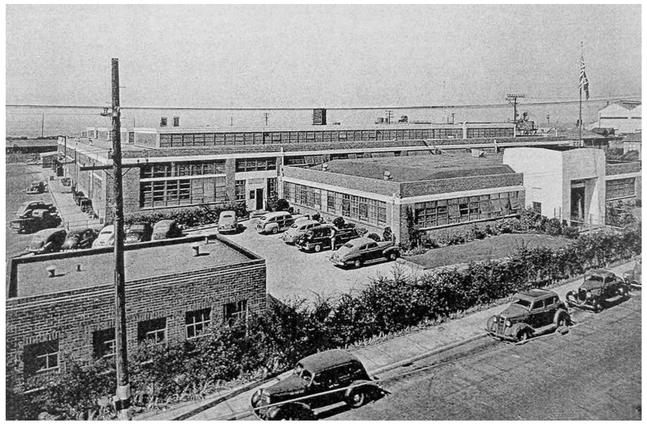
Drawing No.

A0.1

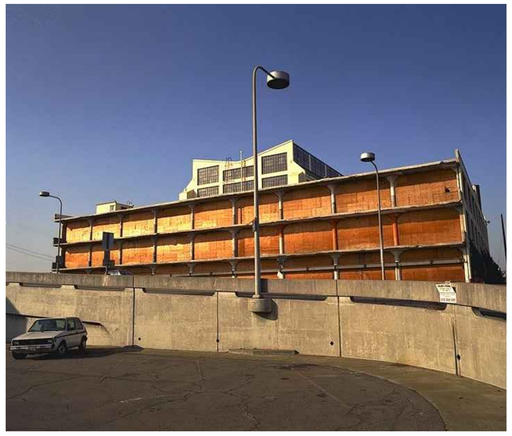
Plotted: Thursday, November 06, 2014 11:11am by chriss



Before Image





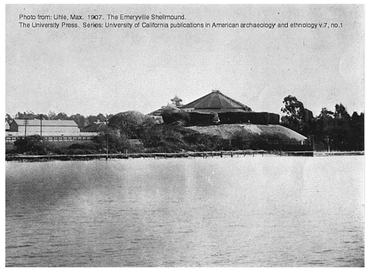


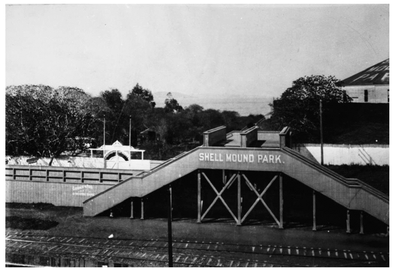


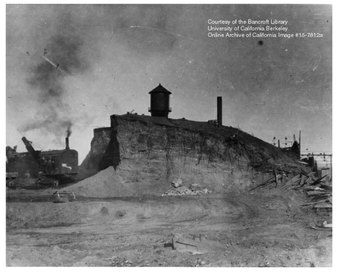




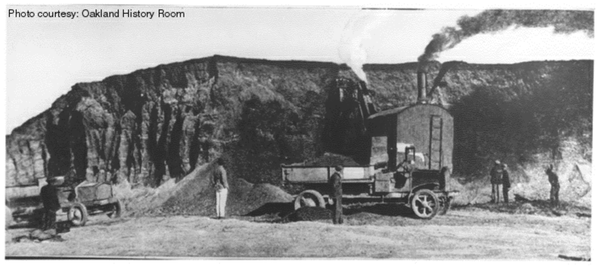












MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale NO SCALE
Drawing Title HISTORICAL CONTEXT

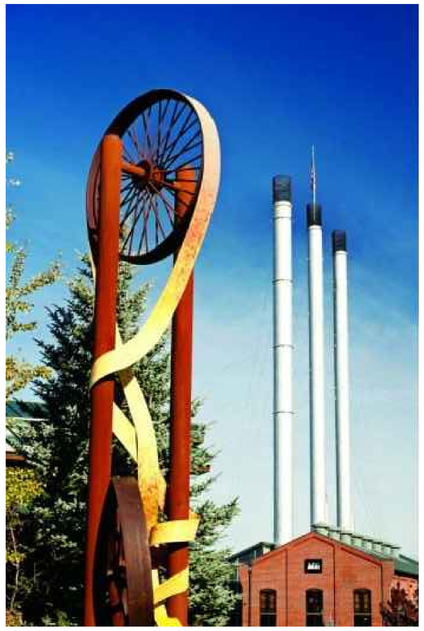
M:\49068-Anton Development-6701 Shellmound\ACAD\Sheets\A0.2.dwg

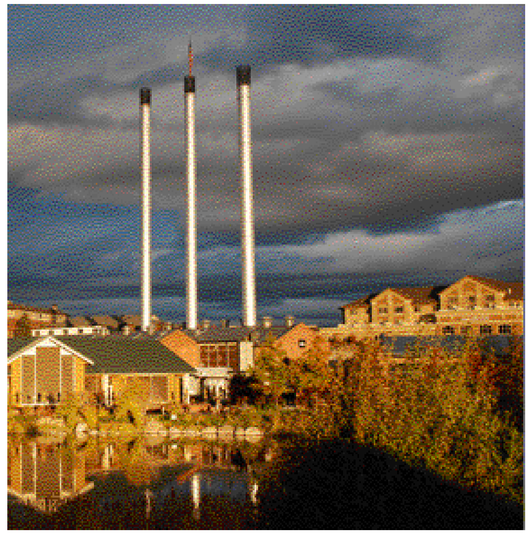
Drawing No.

A0.2

Plotted Thursday November 06, 2014 11:15am by chrisa













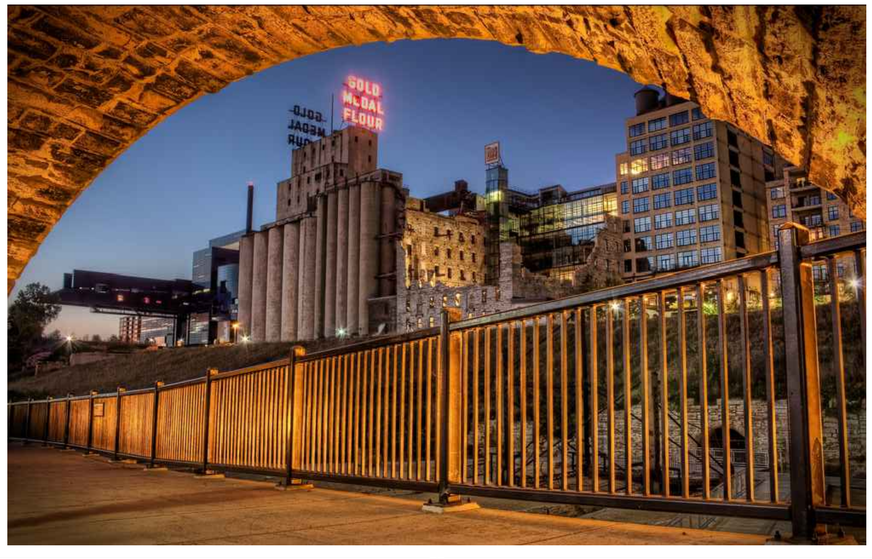












MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QA/QC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

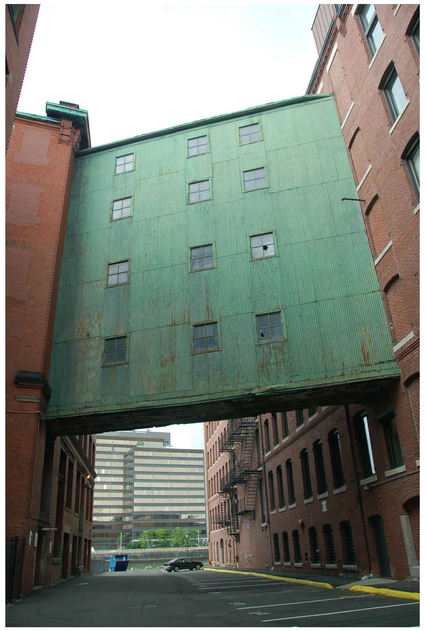
Project No. 48429
Scale NO SCALE
Drawing Title INSPIRATIONAL IMAGERY

M:\48988-Anton Development-6701 Shellmound\ACAD\Sheets\A0.3.dwg

Drawing No.

A0.3

Plotted Thursday, November 06, 2014, 11:11:pm by: chriss











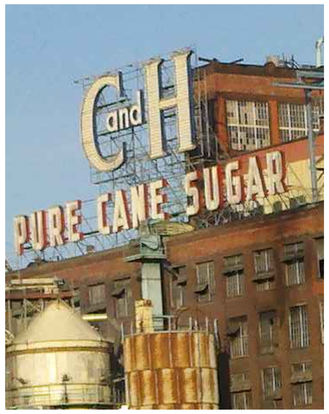






















MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale NO SCALE

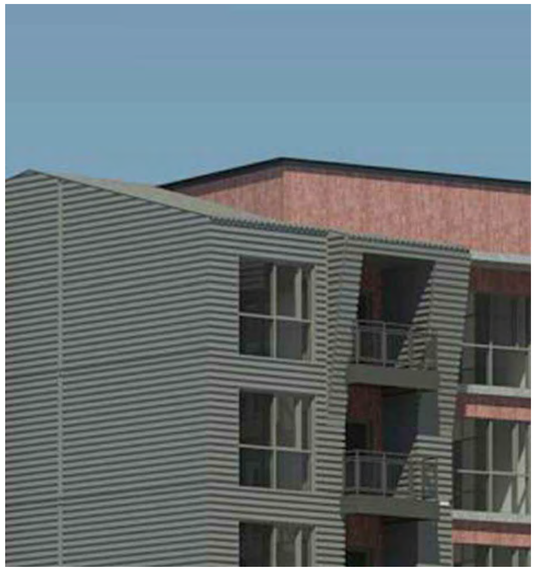
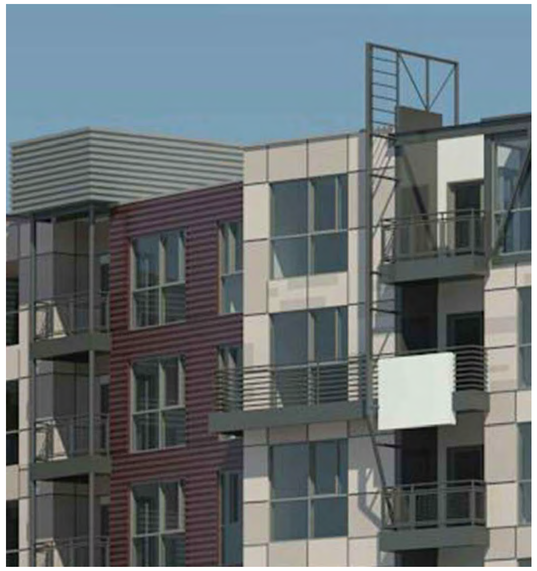
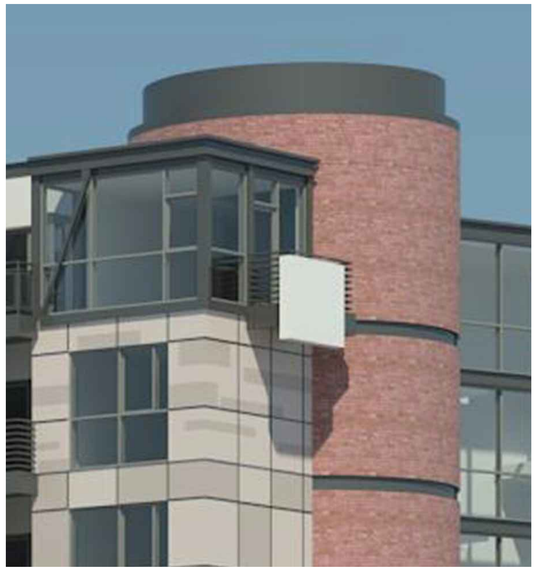
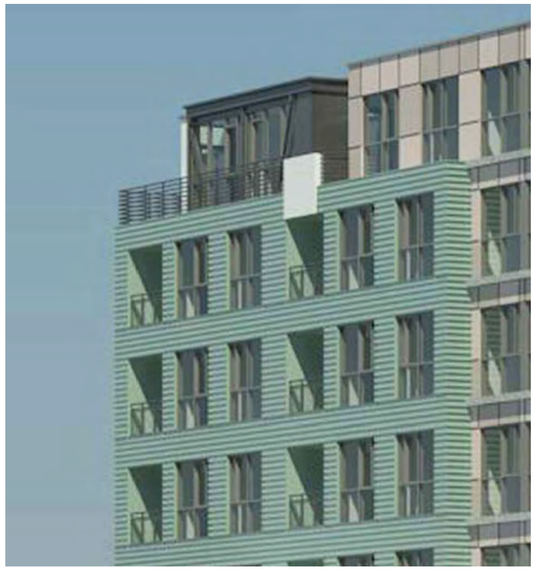
Drawing Title INSPIRATIONAL IMAGERY

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A0.4.dwg

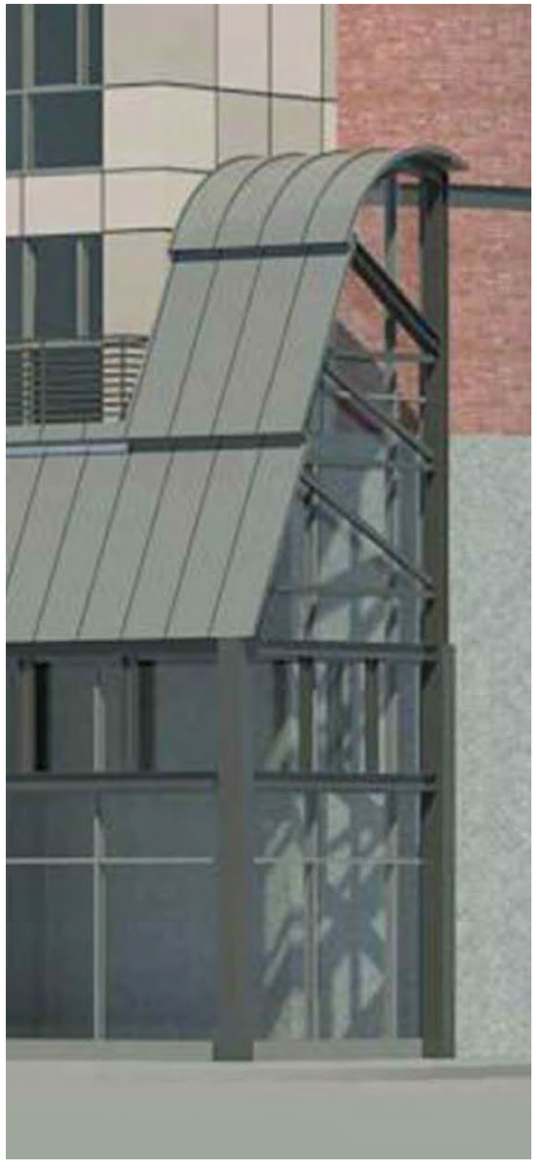
Drawing No.

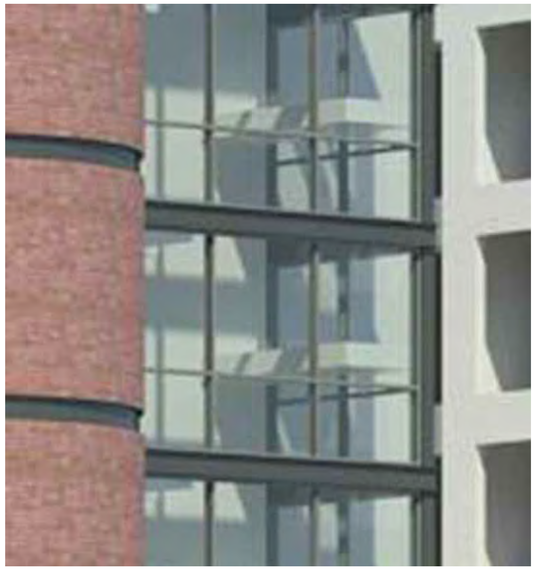
A0.4

Plotted: Thursday, November 06, 2014 11:11am by chrisa








MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale NO SCALE
Drawing Title ARCHITECTURAL VIGNETTES

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A0.5.dwg

Drawing No.

A0.5

Plotted Thursday November 06, 2014 11:15am by shinko

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

PROJECT SITE



VIEW SOUTH ON SHELLMOUND | 1



Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
		07 NOV 14 PLANNING SUBMITTAL

Project No. 48429
Scale NO SCALE
Drawing Title NEIGHBORHOOD CONTEXT

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A0.6.dwg
Drawing No.

A0.6

Plotted: Thursday, November 06, 2014 11:11am by: chriss

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

PROJECT SITE





VIEW NORTH ON SHELLMOUND | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale NO SCALE

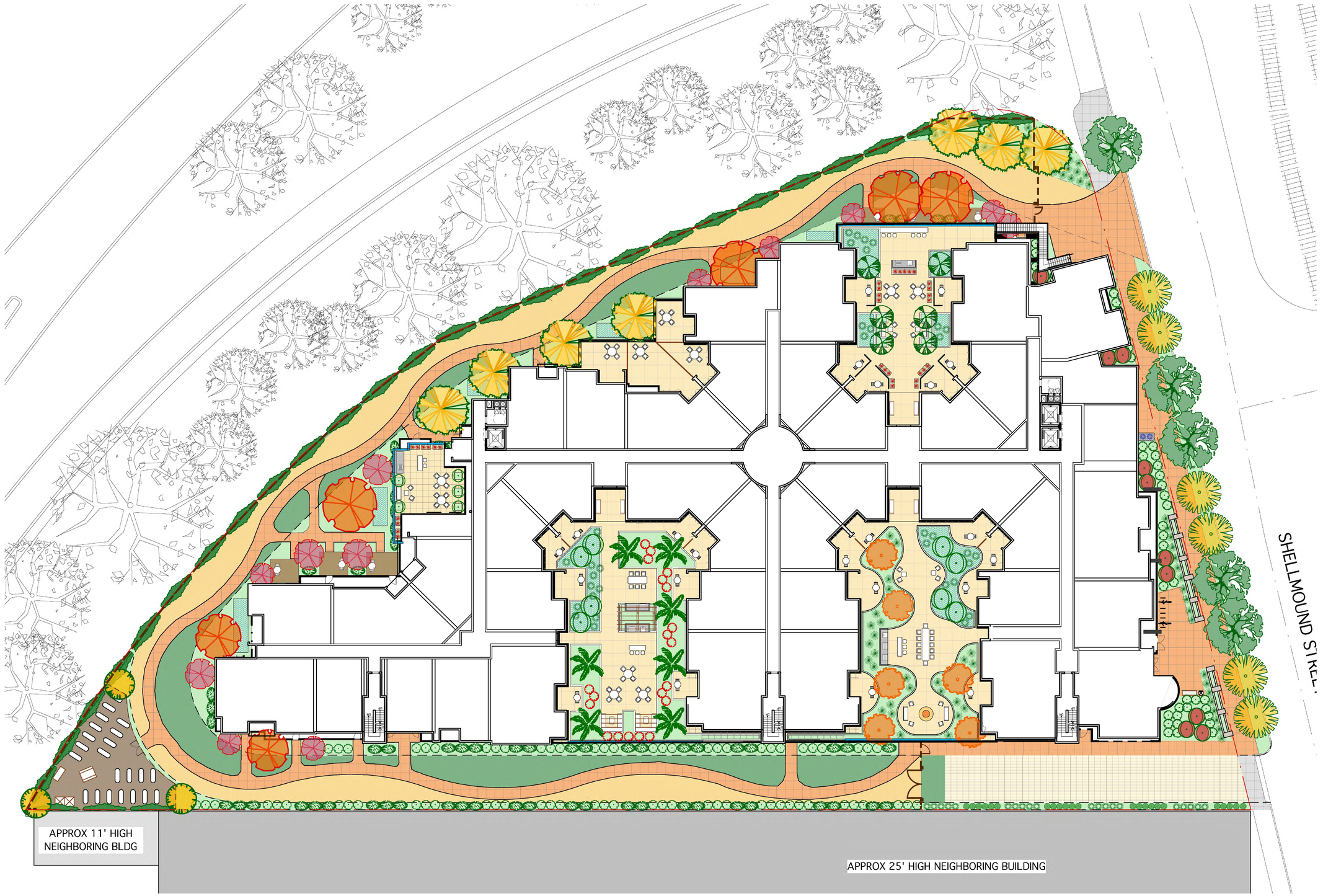
Drawing Title NEIGHBORHOOD CONTEXT

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A0.7.dwg

Drawing No.

A0.7

Plotted: Thursday, November 06, 2014 11:11am by: chriss



COMPOSITE SEVENTH, PODIUM & FIRST FLOOR PLAN | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

N

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QA/QC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title COMPOSITE PODIUM & FIRST FLOOR PLAN

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A1.0.dwg

Drawing No.

A1.0

Plotted: Thursday, November 06, 2014, 11:15am by: chrisa

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



VIEW LOOKING NORTHEAST | 2



VIEW LOOKING SOUTHWEST | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title AERIAL VIEWS

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A1.1.dwg

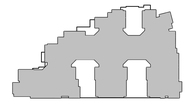
Drawing No.

A1.1

Plotted: Thursday, November 06, 2014 11:11am by chriss

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com





N

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title VIEW SOUTHWEST ON SHELLMOUND

M:\49588-Anton Development-6701 Shellmound\ACAD\Sheets\A1.2.dwg

Drawing No.

A1.2

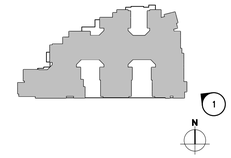
VIEW SOUTHWEST ON SHELLMOUND | 1

Plotted: Thursday, November 06, 2014 11:11am by chriso



VIEW NORTHWEST ON SHELLMOUND | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title VIEW NORTHWEST ON SHELLMOUND

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A1.3.dwg

Drawing No.

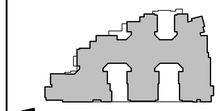
A1.3

Plotted: Thursday, November 06, 2014 11:12am By: chriss



VIEW NORTHEAST ON FREEWAY OFF-RAMP | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title VIEW NORTHEAST ON SHELLMOUND

M:\49088-Anton Development-6701 Shellmound\ACAD\Sheets\A1.4.dwg

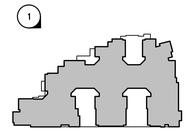
Drawing No.

A1.4

Plotted Thursday November 06, 2014 11:12am by chrisa

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com





Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title VIEW SOUTHEAST ON FREEWAY OFF-RAMP

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A1.5.dwg

Drawing No.

A1.5

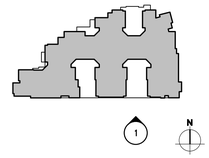
VIEW SOUTHEAST ON FREEWAY OFF-RAMP | 1

Plotted: Thursday, November 06, 2014 - 11:12am - by: chriss



COURTYARD VIEW | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QA/QC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

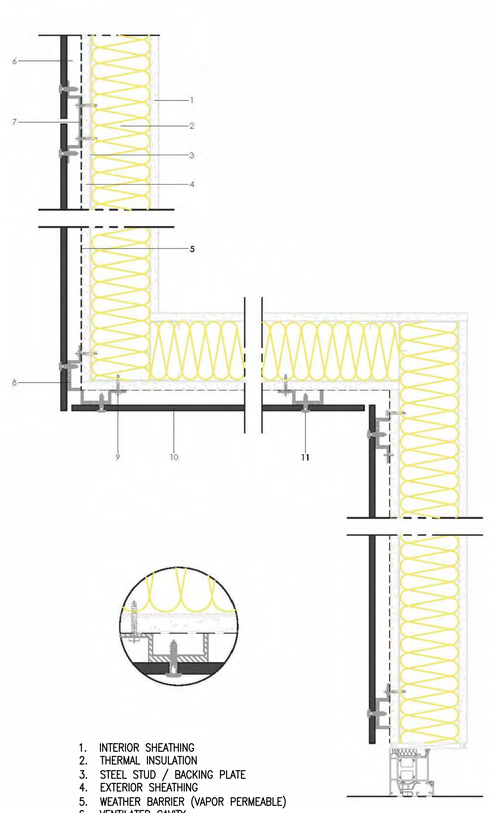
Drawing Title COURTYARD VIEW

M:\49985-Anton Development-6701 Shellmound\ACAD\Sheets\A1.6.dwg

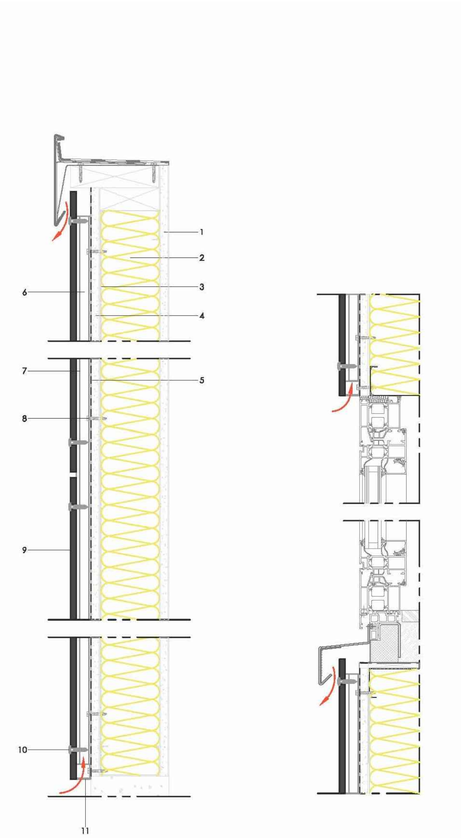
Drawing No.

A1.6

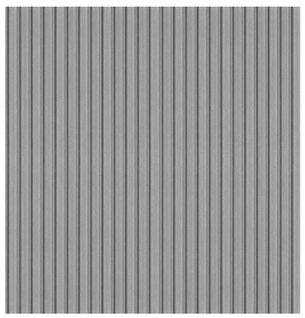
Plotted: Thursday, November 06, 2014 11:12am By: chriss



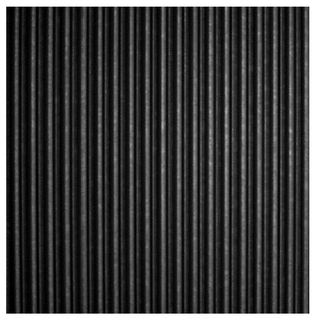
1. INTERIOR SHEATHING
2. THERMAL INSULATION
3. STEEL STUD / BACKING PLATE
4. EXTERIOR SHEATHING
5. WEATHER BARRIER (VAPOR PERMEABLE)
6. VENTILATED CAVITY
7. J-CHANNEL OR HAT CHANNEL
8. CHANNEL ANCHOR
9. CEMENTITIOUS PANEL
10. PANEL FASTENER
11. VENT SCREEN



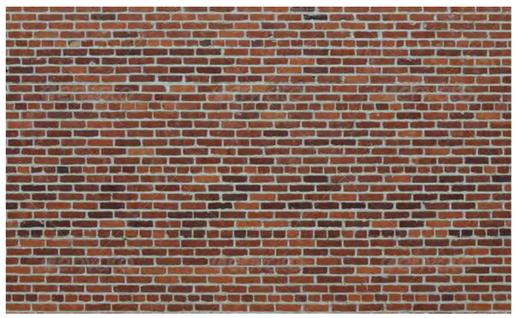
CEMENTITIOUS RAINSCREEN PANELING DETAILS



LIGHT CORRUGATED METAL



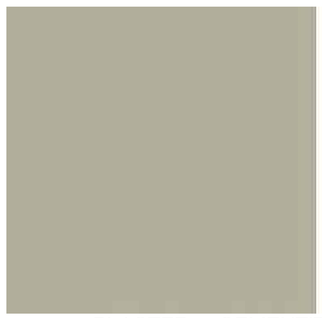
DARK CORRUGATED METAL



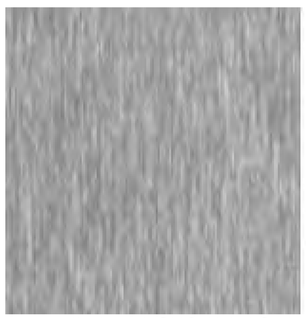
PANELIZED THIN BRICK



CEMENTITIOUS RAINSCREEN PANELING



PLASTER + CEMENTITIOUS SIDING COLOR PALETTE



ALUMINUM STOREFRONT



STANDING SEAM SHEET METAL SIDING PANEL



BOARD-FORM CONCRETE



STOCK METAL PIPE RAILS W/ FITTINGS



ACCENT COLOR PALETTE

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title COLOR AND MATERIALS

M:\49588-Anton Development-6701 Shellmound\ACAD\Sheets\A1.7.dwg
Drawing No.

A1.7

Plotted: Thursday, November 06, 2014 11:12am by: Alvina



BIKE SPA | 2



DOG SPA | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title AMENITIES

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A1.8.dwg

Drawing No.

A1.8

Plotted: Thursday, November 06, 2014 11:12am by: chriss

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

406'-10"

1 A3.1

2 BED 2-STORY TOWN HOUSE
2 BED 2-STORY TOWN HOUSE
2 BED 2-STORY TOWN HOUSE
1 BED 2-STORY TOWN HOUSE

11 TOTAL SPACES

LOBBY / LEASING
MAIL

SHELLMOUND STREET

219'-0"

BICYCLE STORAGE
TRASH
TRASH

23 TOTAL SPACES
23 TOTAL SPACES

GARAGE
94 PARKING STALLS
+ 63 PUZZLE LIFT SPACES = 157 SPACES
(INCLUDING 18 GUEST SPACES)
146 BICYCLE PARKING SPACES

23 TOTAL SPACES
23 TOTAL SPACES

DOG SPA
FITNESS
BICYCLE STORAGE
BIKE SPA

2 A3.1

BICYCLE STORAGE
MAINTENANCE ROOM
UP

2 BED 2-STORY TOWN HOUSE
2 BED 2-STORY TOWN HOUSE
1 BED 2-STORY TOWN HOUSE
2 BED 2-STORY TOWN HOUSE
2 BED 2-STORY TOWN HOUSE
1 BED 2-STORY TOWN HOUSE
MEP

19 TOTAL SPACES
11 TOTAL SPACES
MEP
LOADING

(E) BUILDING

64 PUZZLE LIFT SPACES

UNIT LEGEND

STUDIO	2-BEDROOM
1-BEDROOM	3-BEDROOM

0 8' 16' 24' 48'

N

FIRST FLOOR PLAN | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QAQC

No.	Date	Issue
		07 NOV 14 PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title FIRST FLOOR PLAN

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A2.1.dwg

Drawing No.

A2.1

Plotted Thursday November 06, 2014 11:12am by chriss

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

406'–10"



UNIT LEGEND

- STUDIO
- 1-BEDROOM
- 2-BEDROOM
- 3-BEDROOM

0 8' 16' 24' 48'

N

SECOND FLOOR PLAN | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title SECOND FLOOR PLAN

M:\49068-Anton Development-6701 Shellmound\ACAD\Sheets\A2.2.dwg
Drawing No.

A2.2

Plotted Thursday November 06, 2014 11:53am by chrisa

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



UNIT LEGEND

STUDIO	2-BEDROOM
1-BEDROOM	3-BEDROOM

0 8' 16' 24' 48'

N

THIRD FLOOR PLAN | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title THIRD FLOOR PLAN

M:\49588-Anton Development-6701 Shellmound\ACAD\Sheets\A2.3.dwg
Drawing No.

A2.3

Plotted Thursday November 06, 2014 11:53am by Johna

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

406'-3"

210'-6"



UNIT LEGEND

STUDIO	2-BEDROOM
1-BEDROOM	3-BEDROOM

0 8' 16' 24' 48'

N

FOURTH FLOOR PLAN (TYPICAL FIFTH AND SIXTH) | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title TYPICAL (FOURTH THRU SIXTH) FLOOR PLAN

M:\49588-Anton Development-6701 Shellmound\ACAD\Sheets\A2.4.dwg

Drawing No.

A2.4

Plotted Thursday November 06, 2014 11:14am by Johna

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

406'-3"

210'-6"



UNIT LEGEND

STUDIO	2-BEDROOM
1-BEDROOM	3-BEDROOM

32' 8' 16' 24' 48'

N

SEVENTH FLOOR PLAN | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title SEVENTH FLOOR PLAN

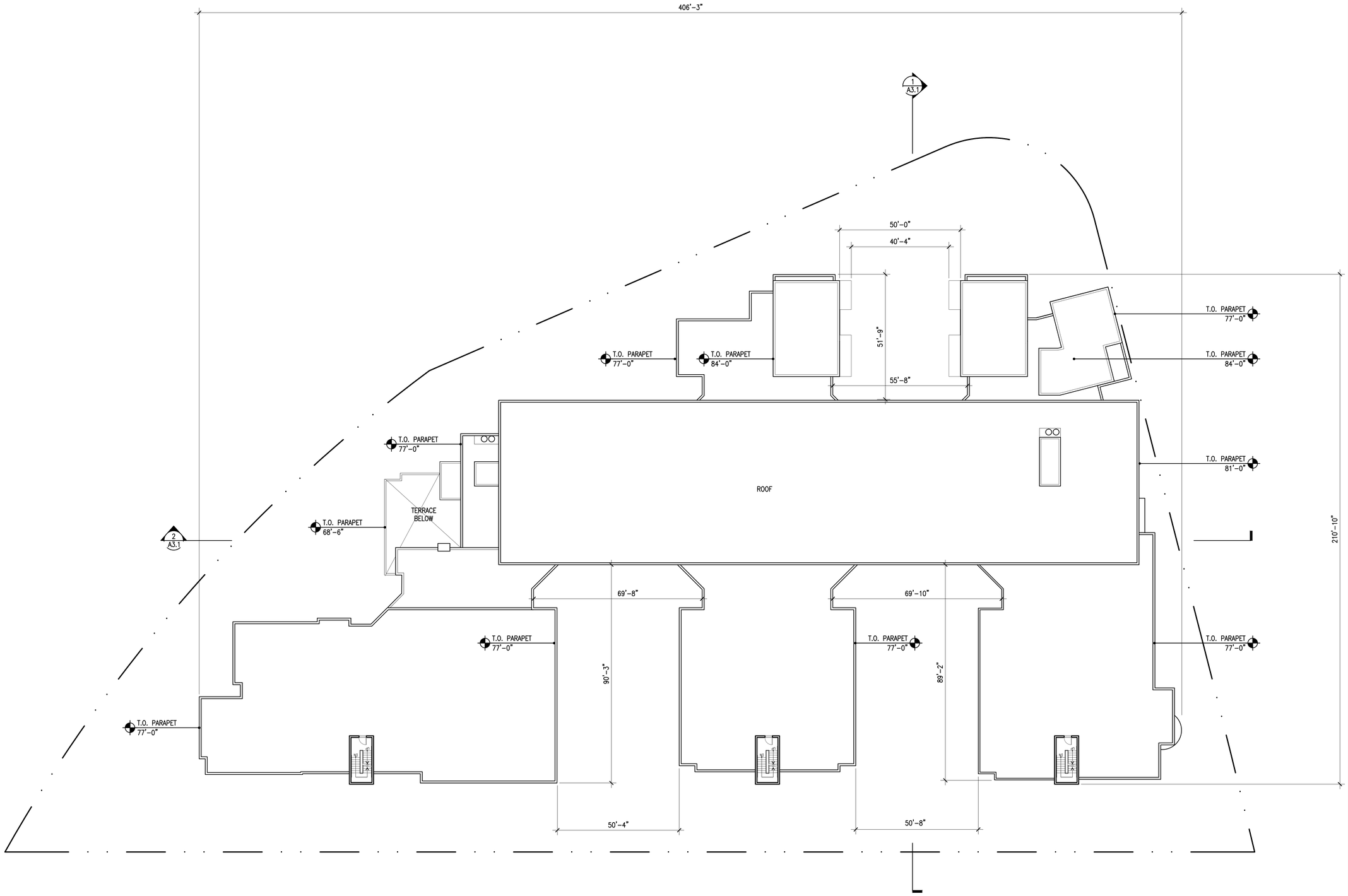
M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A2.5.dwg

Drawing No.

A2.5

Plotted: Thursday, November 06, 2014 - 11:14am by chriss

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



ROOF PLAN | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

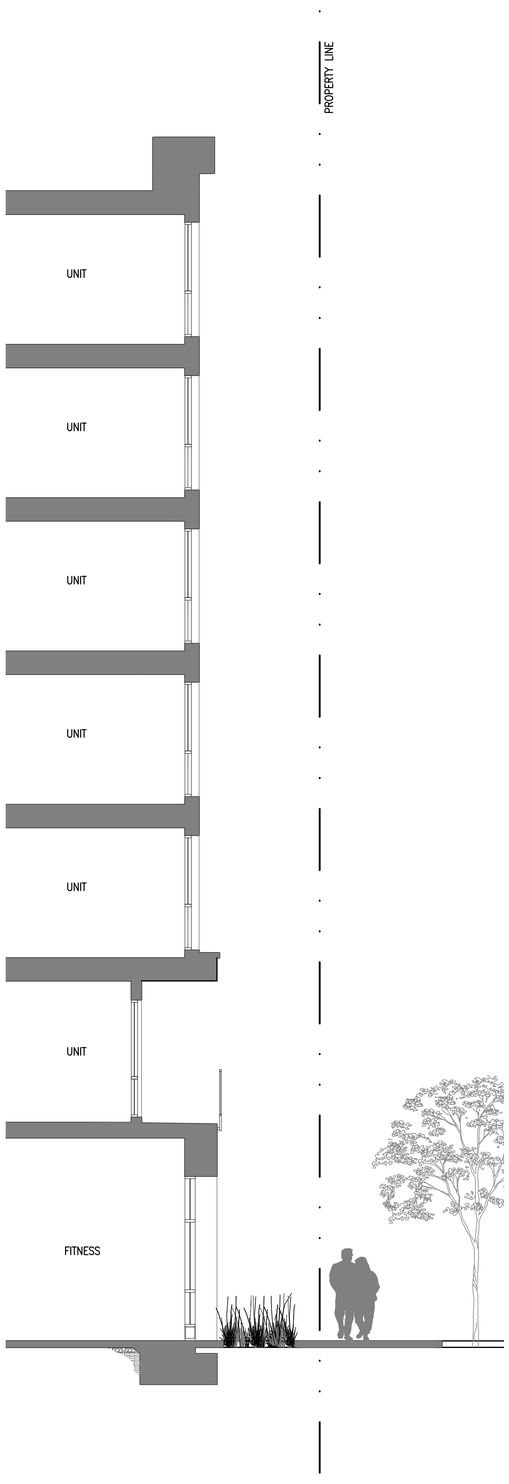
No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title ROOF PLAN

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A2.6.dwg
Drawing No.

A2.6

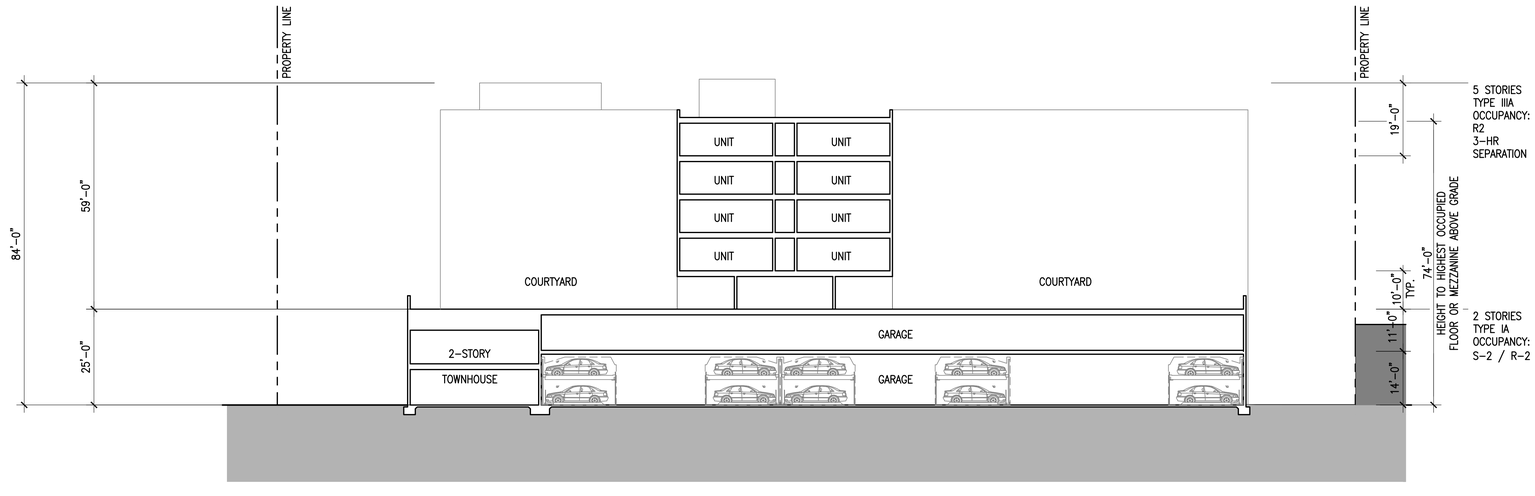
Plotted: Thursday, November 06, 2014 11:14am by chriss



ENLARGED WALL SECTION | 3

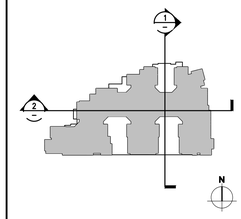


SECTION B-B | 2



SECTION A-A | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title BUILDING SECTIONS

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A3.1.dwg

Drawing No.

A3.1

Plotted: Thursday, November 06, 2014 11:14am by: chriss



0 8' 16' 24' 48'

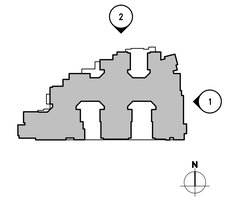
NORTH ELEVATION | 2



0 8' 16' 24' 48'

EAST ELEVATION | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title BUILDING ELEVATIONS

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A3.2.dwg

Drawing No.

A3.2

Plotted: Thursday, November 06, 2014 11:15am by: chriss



0 8' 16' 24' 48'

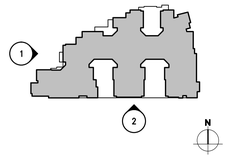
SOUTH ELEVATION | 2



0 8' 16' 24' 48'

WEST ELEVATION | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com



Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

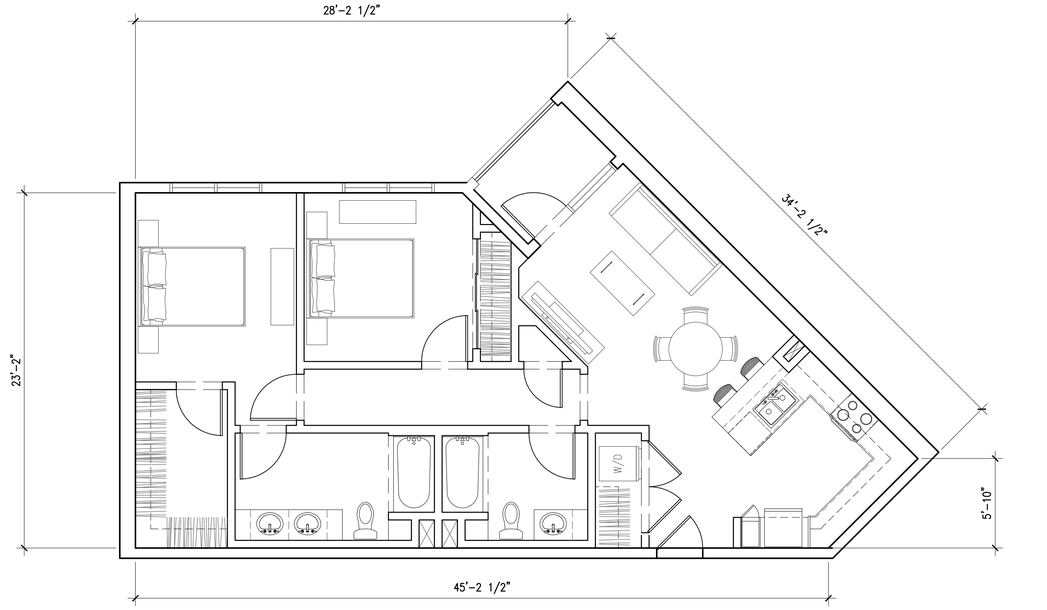
Project No. 48429
Scale
Drawing Title BUILDING ELEVATIONS

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A3.3.dwg

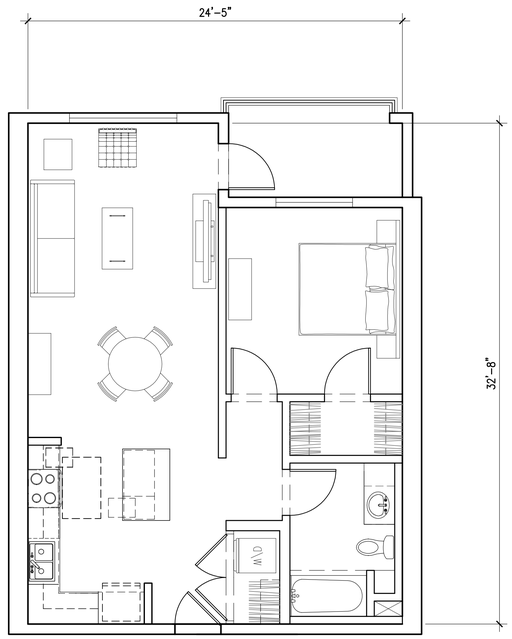
Drawing No.

A3.3

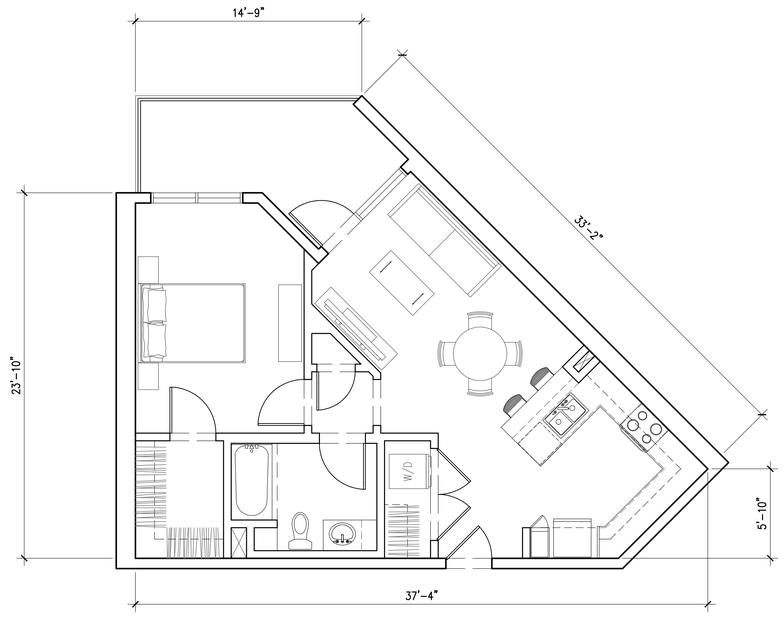
Plotted: Thursday, November 06, 2014 11:15am by: chriss



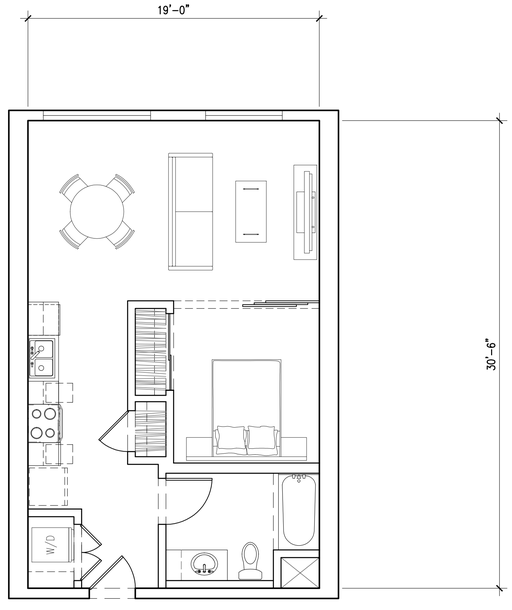
UNIT B2 FLOOR PLAN | 4



UNIT A2 FLOOR PLAN | 2



UNIT A4 FLOOR PLAN | 3



UNIT S1 FLOOR PLAN | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

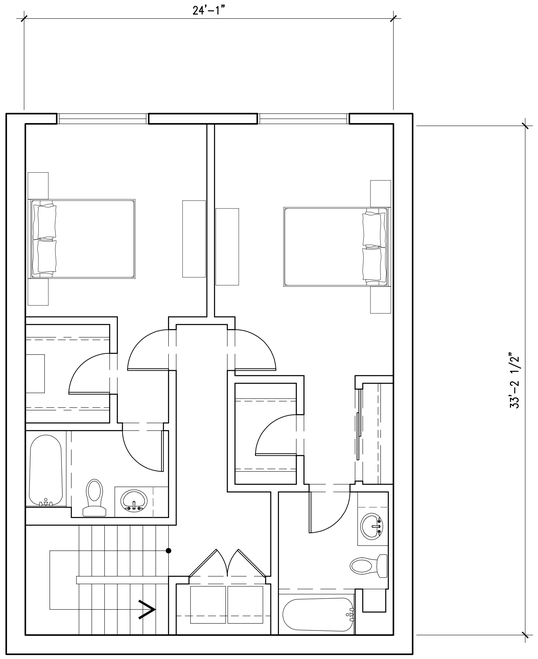
Project No. 48429
Scale
Drawing Title TYPICAL UNIT PLANS

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A4.1-A.dwg

Drawing No.

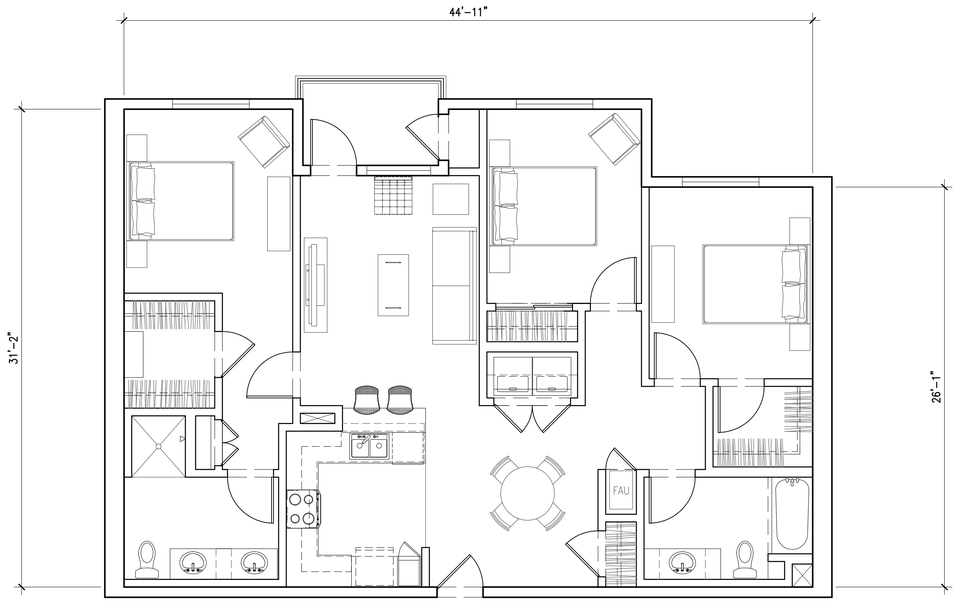
A4.1

Plotted: Thursday, November 06, 2014 11:13am by: chriss



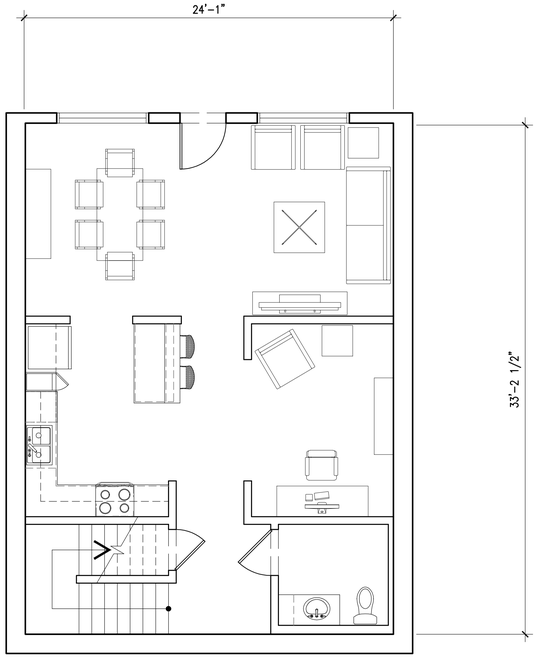
0 1' 2' 4' 8' 12'

UNIT B10 TOWN HOUSE SECOND FLOOR PLAN | 4



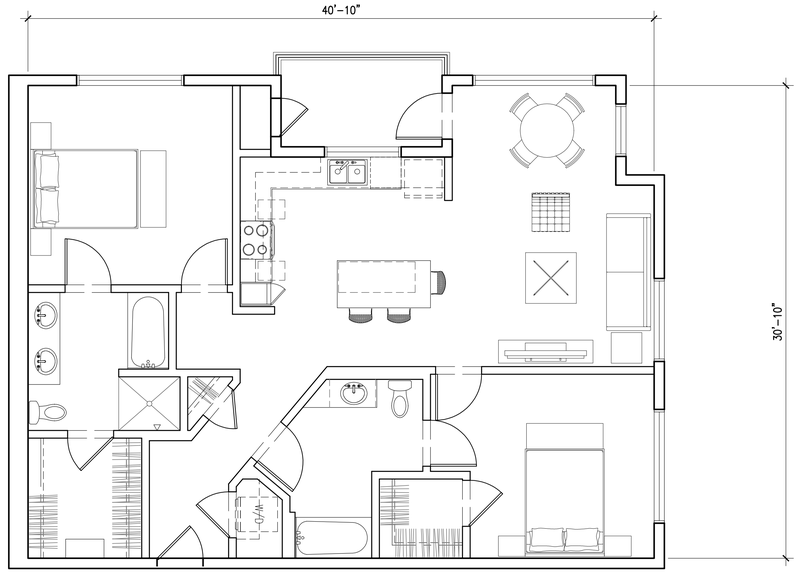
0 1' 2' 4' 8' 12'

UNIT C1 FLOOR PLAN | 2



0 1' 2' 4' 8' 12'

UNIT B10 TOWN HOUSE FIRST FLOOR PLAN | 3



0 1' 2' 4' 8' 12'

UNIT B6 FLOOR PLAN | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

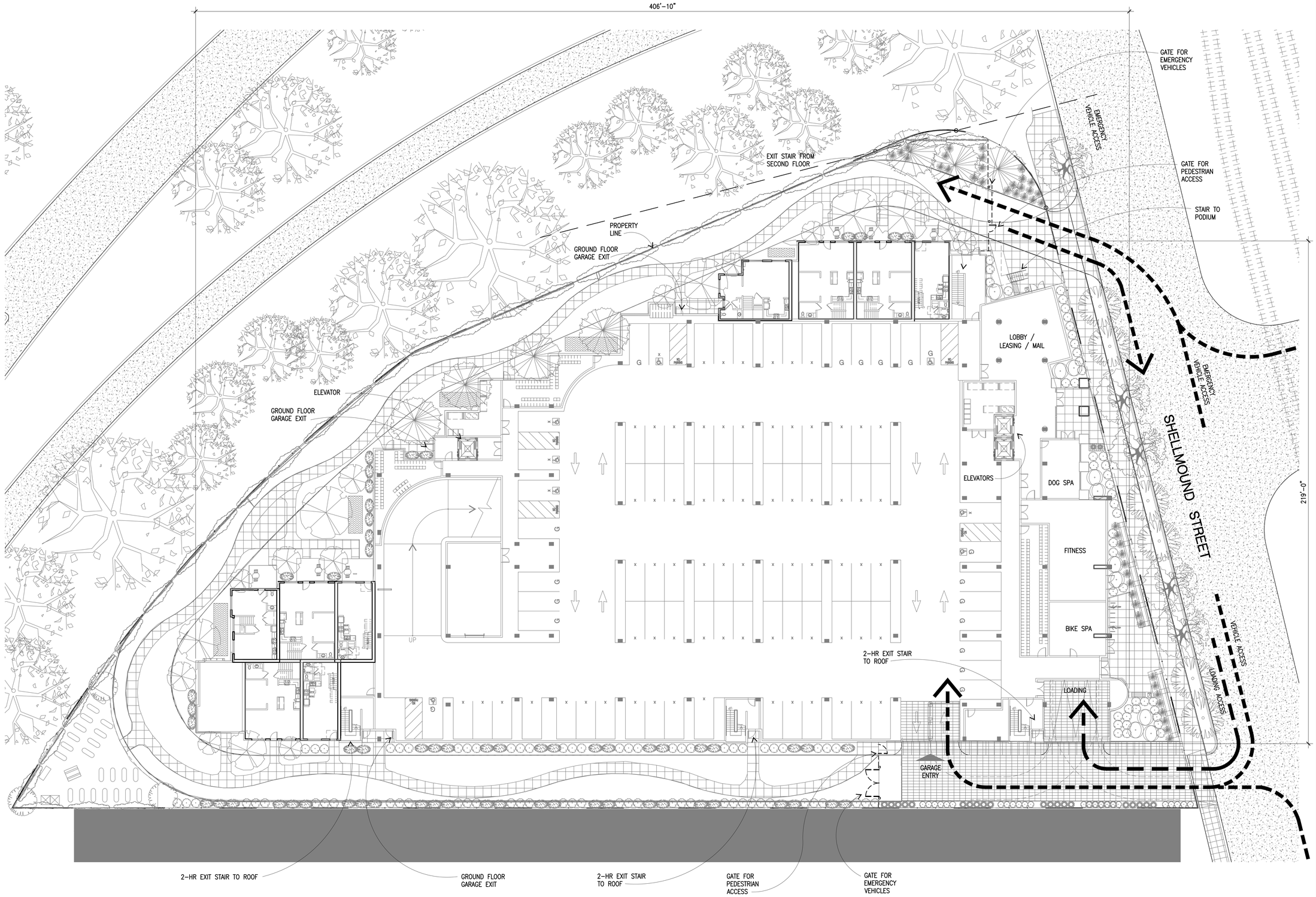
Project No. 48429
Scale
Drawing Title TYPICAL UNIT PLANS

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A4.2-A.dwg

Drawing No.

A4.2

Plotted: Thursday, November 06, 2014 11:16am by: chriss



SITE AND ACCESS PLAN | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
		07 NOV 14 PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title SITE AND ACCESS PLAN

M:\49585-Anton Development-6701 Shellmound\ACAD\Sheets\A5.0.dwg
Drawing No.

A5.0

Plotted: Thursday, November 06, 2014 - 11:16am by: Alvina

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

406'–10"

OUTDOOR COMPOST ENCLOSURE

TRASH & RECYCLING ROOM

THRU WALL CHUTE DOORS FOR TOWNHOUSE TENANTS AND BUILDING COMPOST

TRASH & RECYCLING ROOM

THRU WALL CHUTE DOORS FOR TOWNHOUSE TENANTS

LOBBY / LEASING / MAIL

DOG SPA

FITNESS

BIKE SPA

LOADING & TRASH STAGING AREA

GARAGE ENTRY

SHELLMOUND STREET

219'–0"

UP

LEGEND

- TRUCK ROUTE
- RESIDENTIAL TRASH ROUTE
- AMENITY TRASH ROUTE
- DUMPSTER PICK–UP ROUTE

0 8' 16' 24' 48'

N

TRASH SERVICE DIAGRAM - GROUND FLOOR | 1

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS–2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title TRASH SERVICE DIAGRAM GROUND FLOOR

M:\49985–Anton Development–6701 Shellmound\ACAD\Sheets\A5.1.dwg

Drawing No.

A5.1

Plotted Thursday November 06, 2014 11:16am by rivina

406'–10"

EXHAUST FAN

MEP

BIKE PARKING

STORAGE

BIKE PARKING

TRASH & RECYCLING ROOM

OPEN TO BELOW

STORAGE

TERRACE

3 BED

1 BED

2 BED

MEP

219'–0"

(E) BUILDING

0 8' 16' 24' 48'

N

TRASH SERVICE DIAGRAM - SECOND FLOOR | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

LEGEND

RESIDENTIAL TRASH ROUTE

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

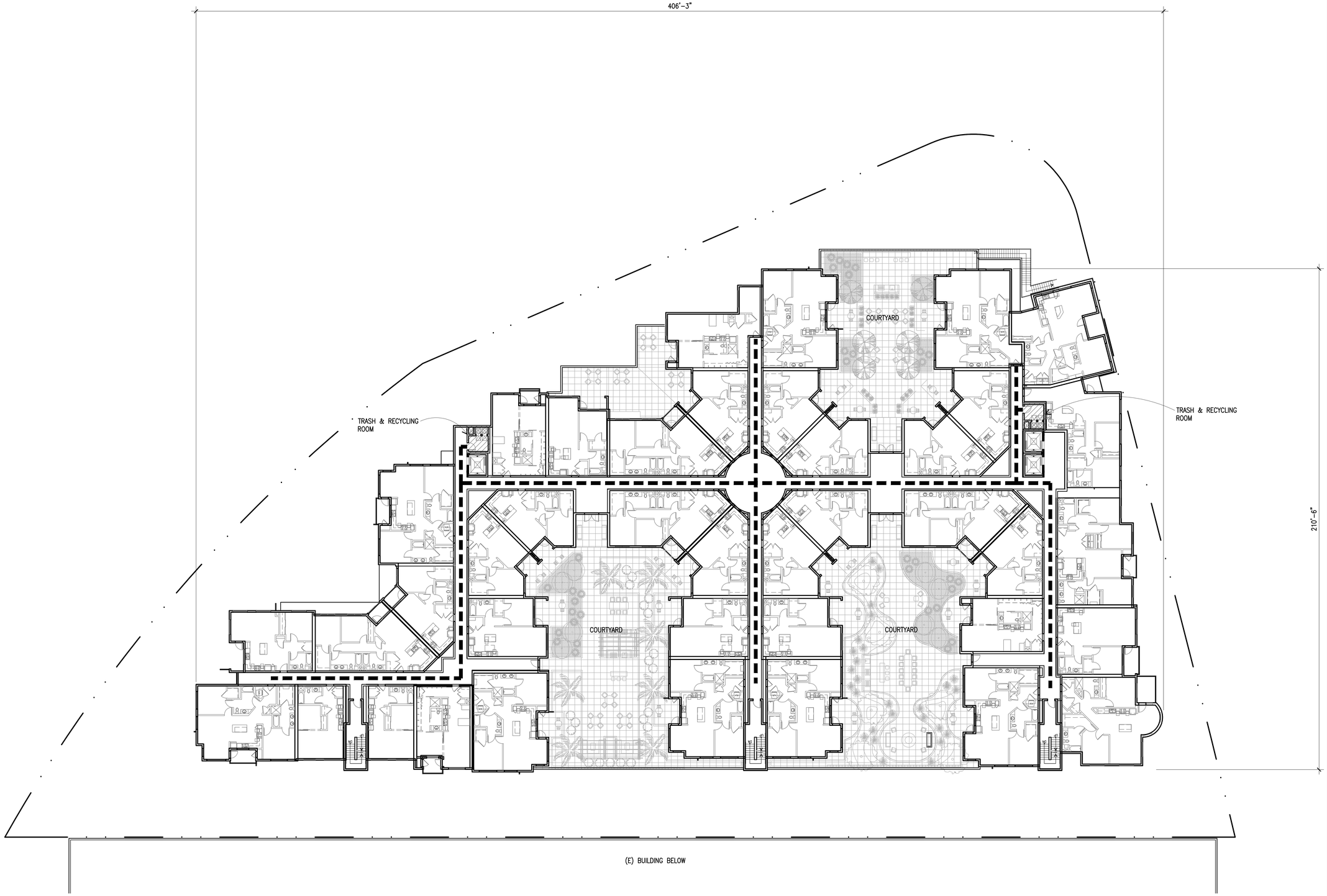
Drawing Title TRASH SERVICE DIAGRAM SECOND FLOOR

M:\49088-Anton Development-6701 Shellmound\ACAD\Sheets\A5.2.dwg

Drawing No.

A5.2

Plotted Thursday November 06, 2014 11:16am by chrisa



0 8' 16' 24' 48'

N

TRASH SERVICE DIAGRAM - THIRD FLOOR (4-7 SIM.) | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

LEGEND

RESIDENTIAL TRASH ROUTE

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QA/QC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

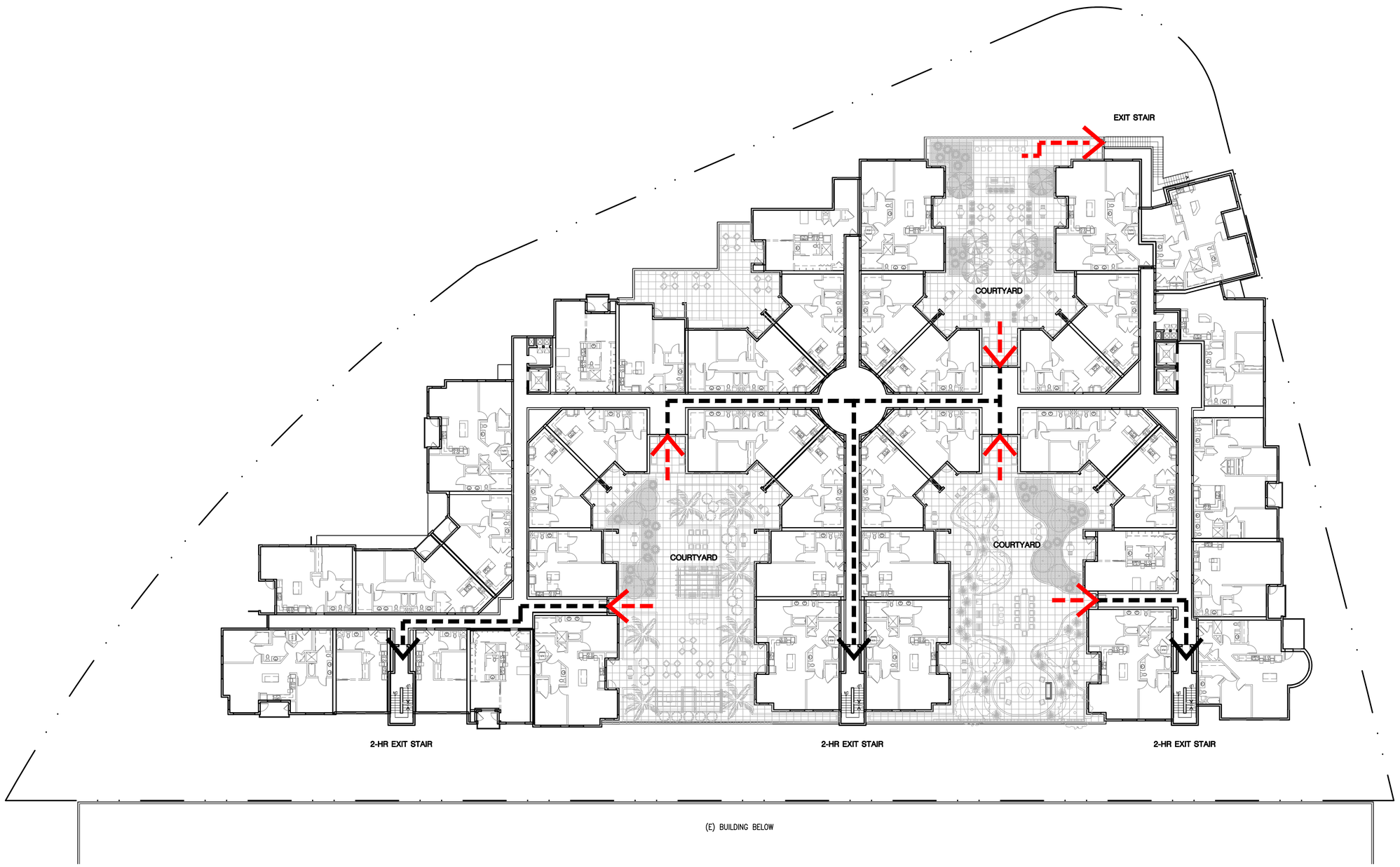
Drawing Title TRASH SERVICE DIAGRAM
THIRD FLOOR (4-7 SIM.)

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A5.3.dwg

Drawing No.

A5.3

Plotted: Thursday, November 06, 2014 - 11:17am by chrisa



0 8' 16' 24' 48'

N

PODIUM EXITING DIAGRAM | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QA/QC

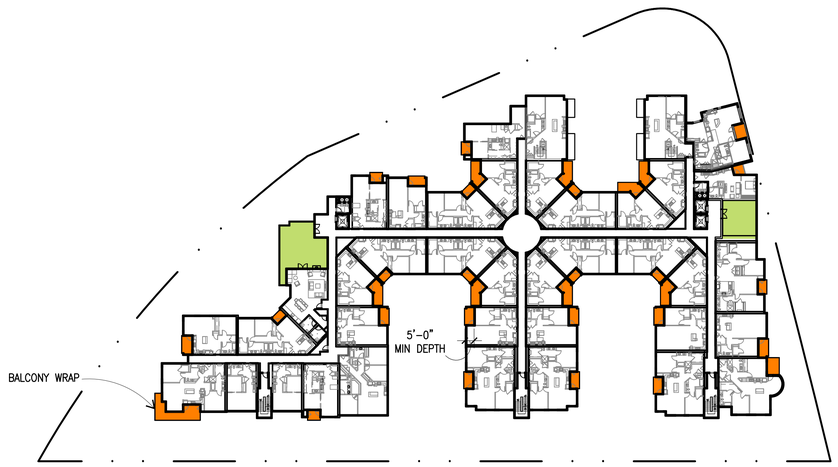
No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title PODIUM EXITING DIAGRAM

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A5.4.dwg
Drawing No.

A5.4

Plotted: Thursday, November 06, 2014, 11:17am by chrisa



0 10' 20' 40' 80' 120'

N

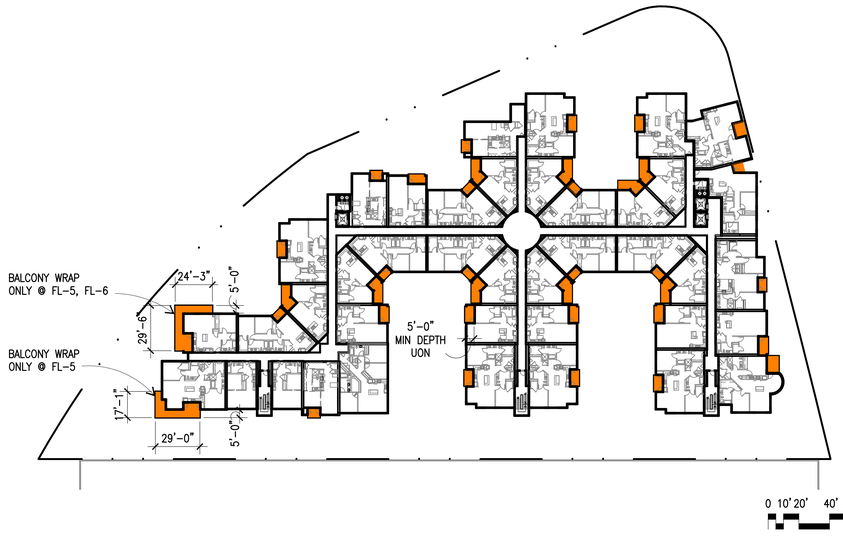
SEVENTH FLOOR PLAN | 5

OPEN SPACE

FLOOR	PRIVATE (5' X 6' MIN)	COMMON (6' X 6' MIN)	TOTAL
FIRST FLOOR	240	35,390	35,630
SECOND FLOOR	120	130	250
THIRD FLOOR	1,480	11,670	13,150
FOURTH FLOOR	1,480	0	1,480
FIFTH FLOOR	1,480	0	1,480
SIXTH FLOOR	1,480	0	1,480
SEVENTH FLOOR	1,320	1,415	2,735
TOTAL PROPOSED	7,600	48,605	56,205
TOTAL REQUIRED	8,440	5,660	14,100

PRIVATE OPEN SPACE

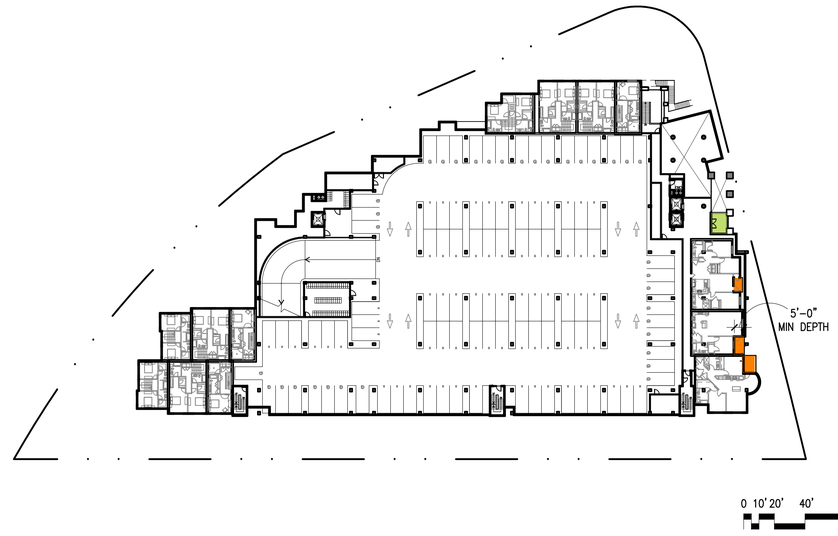
COMMON OPEN SPACE



0 10' 20' 40' 80' 120'

N

FOURTH (TYPICAL FIFTH THROUGH SIXTH) FLOOR PLAN | 4



0 10' 20' 40' 80' 120'

N

SECOND FLOOR PLAN | 2



0 10' 20' 40' 80' 120'

N

THIRD FLOOR PLAN | 3



0 10' 20' 40' 80' 120'

N

FIRST FLOOR PLAN | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

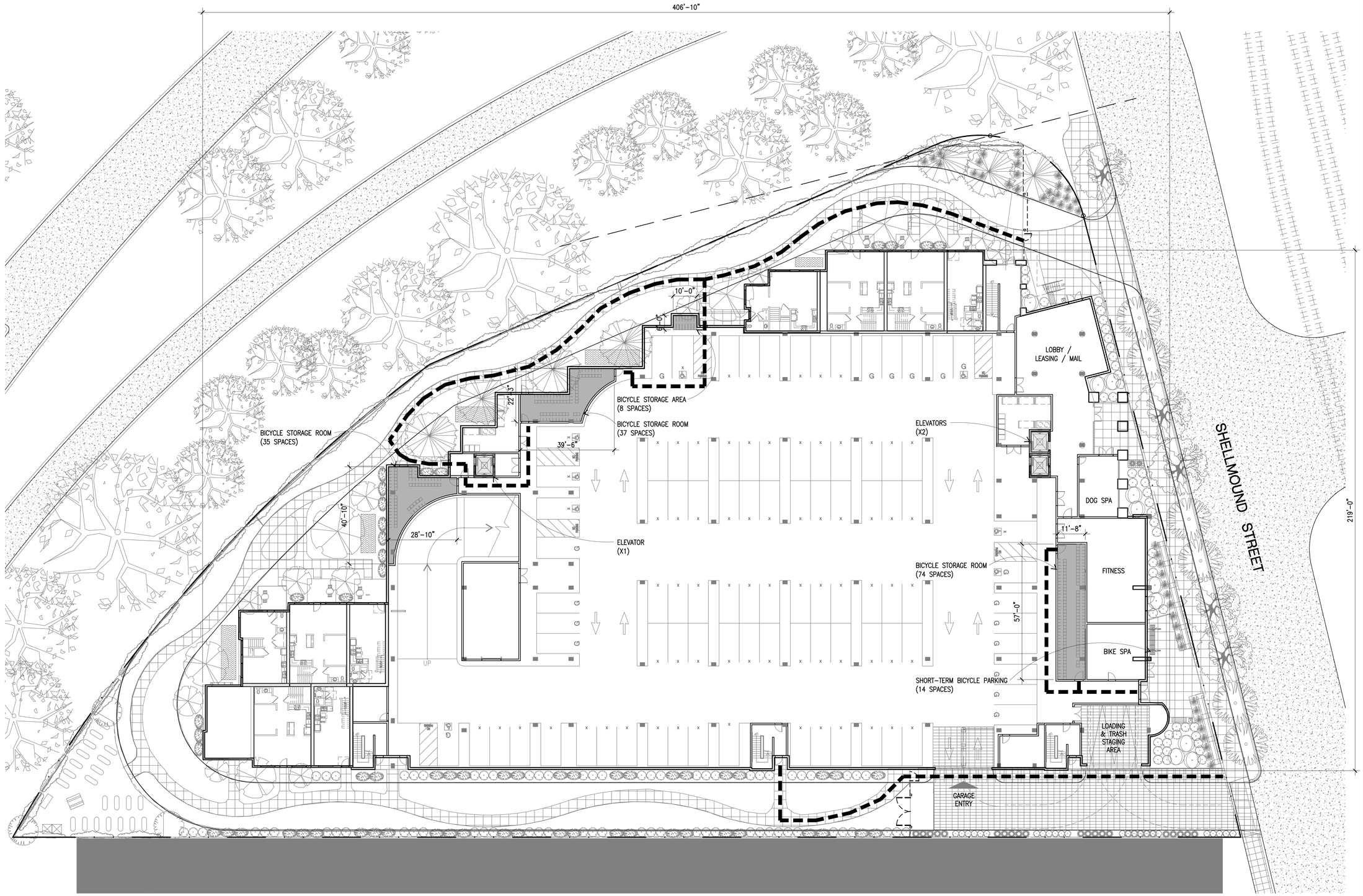
Drawing Title OPEN SPACE DIAGRAM

M:\49588-Anton Development-6701 Shellmound\ACAD\Sheets\A5.5.dwg

Drawing No.

A5.5

Plotted: Thursday, November 06, 2014 11:18am by: chriso



0 8' 16' 24' 48'

N

BICYCLE STORAGE ACCESS DIAGRAM - GROUND FLOOR | 1

LEGEND

- BICYCLE STORAGE ACCESS TO PUBLIC WAY
- BICYCLE STORAGE AREA
- ELEVATOR LOCATION

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
		07 NOV 14 PLANNING SUBMITTAL

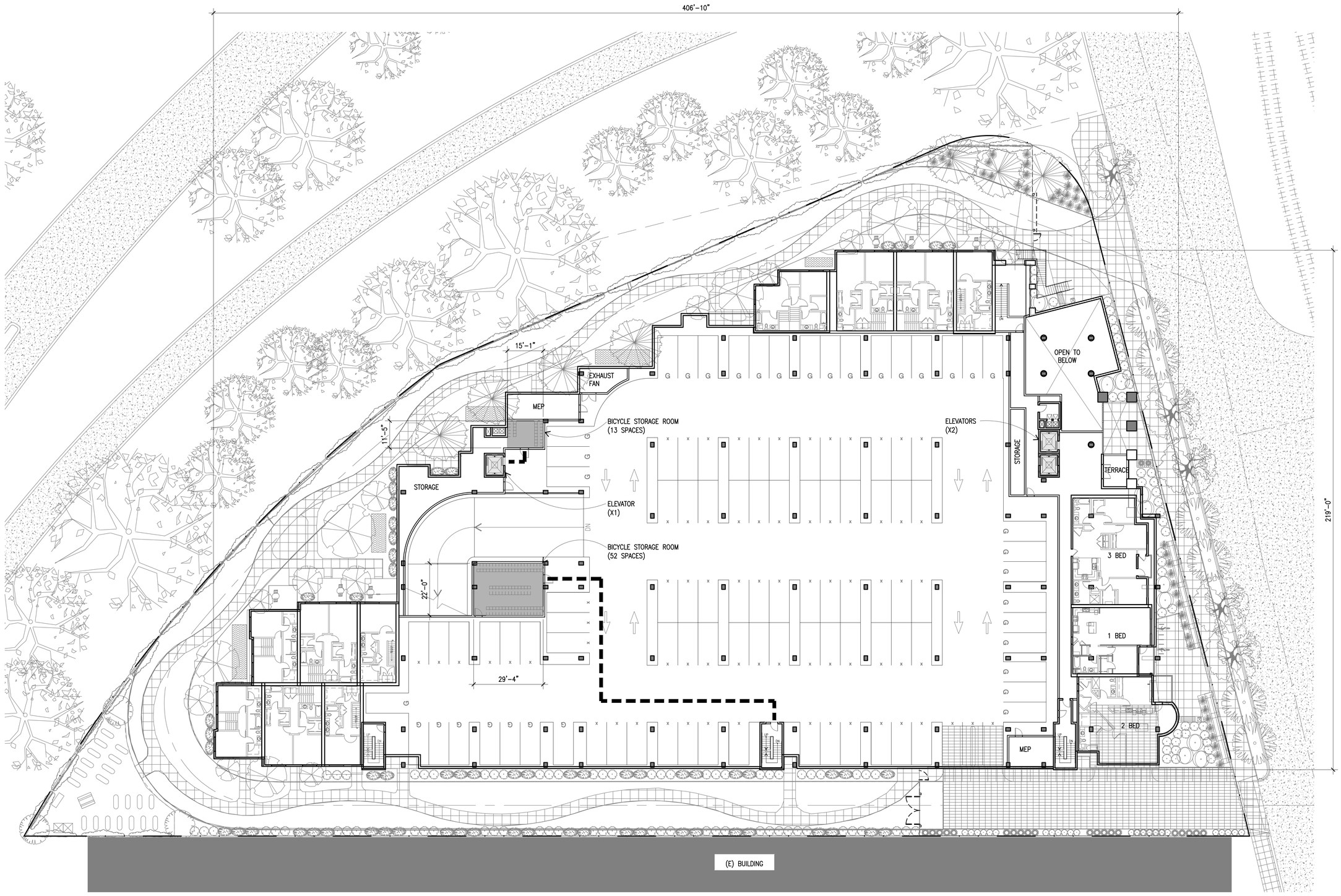
Project No. 48429
Scale
Drawing Title BIKE STORAGE ACCESS DIAGRAM GROUND FLOOR

M:\49988-Anton Development-6701 Shellmound\ACAD\Sheets\A5.6.dwg

Drawing No.

A5.6

Plotted: Thursday, November 06, 2014 11:19am by: chrisa



0 8' 16' 24' 48'

N

BICYCLE STORAGE ACCESS DIAGRAM - SECOND FLOOR | 1

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

LEGEND

- BICYCLE STORAGE ACCESS TO PUBLIC WAY
- BICYCLE STORAGE AREA
- ELEVATOR LOCATION

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title BIKE STORAGE ACCESS DIAGRAM SECOND FLOOR

M:\49588-Anton Development-6701 Shellmound\ACAD\Sheets\A5.7.dwg

Drawing No.

A5.7

Plotted Thursday November 06, 2014 11:19am by chrisa

	Plan	Southwest	Northeast
March 21			
June 21			
September 21			
December 21			

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title SHADOW STUDY

M:\49068-Anton Development-6701 Shellmound\ACAD\Sheets\A6.1.dwg

Drawing No.

A6.1

Plotted Thursday November 06, 2014 11:19am by chrisa

	Plan	Southwest	Northeast
March 21			
June 21			
September 21			
December 21			

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title SHADOW STUDY

M:\49068-Anton Development-6701 Shellmound\ACAD\Sheets\A6.2.dwg

Drawing No.

A6.2

Plotted Thursday November 06, 2014 11:59am by chrisa

	Plan	Southwest	Northeast
March 21			
June 21			
September 21			
December 21			

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS - 2014

QAQC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429
Scale
Drawing Title SHADOW STUDY

M:\49068-Anton Development-6701 Shellmound\ACAD\Sheets\A6.3.dwg

Drawing No.

A6.3

Plotted Thursday November 06, 2014 11:59am by chrisa

Plan | Southwest | Northeast

March 21





June 21





September 21





December 21





MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QA/QC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title SHADOW STUDY

M:\48988-Anton Development-6701 Shellmound\ACAD\Sheets\A6.4.dwg

Drawing No.

A6.4

Plotted: Thursday, November 06, 2014 11:19am by chriss

	Plan	Southwest	Northeast
March 21			
June 21			
September 21			
December 21			

MBH
2470 Mariner Square Loop
Alameda, CA 94501
510 865 8663
mbharch.com

Anton DEVELOPMENT COMPANY

6701 SHELLMOUND
EMERYVILLE, CALIFORNIA

Drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect
©MBH ARCHITECTS-2014

QA/QC

No.	Date	Issue
	07 NOV 14	PLANNING SUBMITTAL

Project No. 48429

Scale

Drawing Title SHADOW STUDY

M:\48988-Anton Development-6701 Shellmound\ACAD\Sheets\A6.5.dwg

Drawing No.

A6.5

Plotted: Thursday, November 06, 2014 11:19am by chriss

DISTRIBUTION

CONCEPTUAL SITE MODEL
6701 – 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA
Fuel Leak Case No. RO0000548
GeoTracker Global ID T0600100894

FEBRUARY 6, 2015

COPY NO. ____

		Copy No.
	Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502 Attention: Mr. Mark Detterman, PG, CEG	PDF only
2 Copies	Anton Development Company 1415 L Street, Suite 450 Sacramento, California 95814 Attention: Ms. Rachel Green	1 - 2
3 Copies	PES Job Files	3 – 5
1 Copy	Unbound Original	6