

August 21, 2015

RECEIVED

By Alameda County Environmental Health 10:11 am, Aug 24, 2015

Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Pkwy
Alameda, CA 94502

**Re: Certification of Report
2868-2898 Hannah Street
ACEH Case No. RO0003160
Oakland, California**

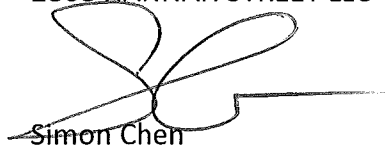
Dear Mr. Wickham:

I have reviewed the attached report dated August 19, 2015.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Roux Associates, upon whose assistance and advice I have relied.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,
2868 HANNAH STREET LLC

A handwritten signature in black ink, appearing to be 'Simon Chen', written over a horizontal line.

Managing Member of the LLC

August 19, 2015

SOIL REMEDIAL ACTION WORK PLAN

**2868 Hannah Street
Oakland, California**

Prepared for

2868 HANNAH STREET LLC

ROUX ASSOCIATES, INC.

Environmental Consulting & Management



555 12th Street, Suite 1725, Oakland, California 94607 ♦ 415-967-6000

SOIL REMEDIAL ACTION WORK PLAN
2868 Hannah Street
Oakland, California

The material and data in this report were prepared under the supervision and direction of the undersigned.

ROUX ASSOCIATES, INC.



David Grunat, P.G.
Project Geologist



Angela Liang Cutting, Ph.D., P.E.
Principal Engineer

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EXECUTIVE SUMMARY

Site Location and Current Usage

The Site is located on the northwest corner of 32nd Street and Hannah Street in Oakland, California, approximately 3/4 mile east from San Francisco Bay (Figure 1). This area is mixed residential and commercial/industrial land use, with residences on the north and east side of the Site, commercial and industrial facilities on the west of the Site, and vacant land on the south side of the Site.

The Site is currently vacant; however, a one-story “L” shaped brick building was recently demolished on the corner of 32nd Street and Hannah Street. This building was last occupied by Precision Cast Products, Inc., which heat treated large engines.

Summary of Proposed Redevelopment Plan

The planned redevelopment of the Site entails the construction of a mixed-use development that includes a three story structure with ground floor parking. The building will include approximately 11,913 SF of commercial space and 36 residential units. The southern and eastern portions of the Site will consist of surface parking.

Summary of the Remedy

Based on the CSM, soil excavation and aeration is proposed to address the chlorinated hydrocarbon impacted soil in the southern portion of the Site. The primary constituent of concern is PCE. Therefore the soil cleanup goal for the Site is achieving the residential ESL for PCE in shallow soil, 550 micrograms per kilogram (ESL Table A-1). The proposed remedial action is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants and uses standard methods that are well established in the industry.

The proposed remedial action will consist of:

1. Mobilization: Equipment mobilization, marking and staking the proposed excavation and aeration areas; and underground utility survey.
2. Excavation: Approximately 1,625 CY of soil will be excavated. The approximate excavation area is shown on Figure 8.
3. Excavation Screening: Excavated soil will be inspected for indications of contamination by visual means, odor, and monitoring with a PID.

4. Soil Management: Excavated soils will be segregated to avoid co-mingling of contaminated material and non-contaminated materials.
5. Confirmation Sampling: Collection and analysis of a minimum of five confirmation samples to determine the performance of the remedy with respect to applicable ESLs.
6. Onsite Aeration: The contaminated soil will be spread onsite (up to 12 inches in each stockpile) and tilled monthly. Soil samples will be collected to determine completion of remediation with respect to applicable ESLs.
7. Backfill: Reuse of remediated and non-contaminated materials for excavation backfill in compliance with this plan and in accordance with applicable laws and regulations.
8. Storm Water Pollution Prevention Measures: Best Management Practices for storm water pollution prevention measures will be implemented in compliance with applicable laws and regulations.
9. Soil Remediation Completion Report: A Remediation Completion Report will be prepared to document the remedial activities and confirm the remedial requirements have been achieved.

LIST OF ACRONYMS

Acronym	Definition
bgs	Below ground surface
BTEX	Total xylenes (benzene, toluene, and ethylbenzene)
CL	Silty clays
CSM	Conceptual Site Model
CY	Cubic yards
DCE	Dichloroethene
ESL	Establish Soil Cleanup Objective
HASP	Health and Safety Plan
ML	Sandy silts
MSL	Mean sea level
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
PCE	Tetrachloroethene
PID	Photoionization detector
RAWP	Remedial Action Work Plan
RCR	Remedial Completion Report
SB	Soil boring
SF	Square foot
TCE	Trichloroethene
TEPH / TPH	Total extractable petroleum hydrocarbons
TPH-d	Total petroleum hydrocarbons as diesel
TPH-g	Total petroleum hydrocarbons as gasoline

LIST OF ACRONYMS

Acronym	Definition
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TPH-ho	Total petroleum hydrocarbons as hydraulic oil
TPH-mo	Total petroleum hydrocarbons as motor oil
TRPH	Total recoverable petroleum hydrocarbons
USA	Underground Service Alert
UST	Underground Storage Tank
VOC	Volatile organic compound

1.0 INTRODUCTION

On behalf of 2868 Hannah Street LLC, Roux Associates, Inc. (Roux Associates) has prepared this Soil Remedial Action Work Plan (Soil RAWP) for the property located at 2868 Hannah Street in Oakland, California (Site). The purpose of the proposed soil remedial action is to immediately address identified source area at the Site. The proposed remedial approach focuses on two elements: excavation of residual contaminant mass in the soil and removal of residual contaminant mass through aeration of the excavated soil on site. The procedures to implement the proposed soil remedial action are also presented in this Soil RAWP.

The Site is approximately 34,112 square feet (SF) and is located on the northwest corner of 32nd Street and Hannah Street in Oakland, California, approximately 3/4 mile east from San Francisco Bay (Figure 1). The planned development at the Site includes a three-story mixed use building with ground floor parking, containing approximately 11,913 SF of commercial space and 36 residential units. The southern and eastern portions of the Site will consist of surface parking.

Presented below is a description of the site background, conceptual site model, and the proposed soil remedial action.

2.0 SITE BACKGROUND

2.1 Site Description

The Site is located on the northwest corner of 32nd Street and Hannah Street in Oakland, California, approximately 3/4 mile east from San Francisco Bay (Figure 1). This area is mixed residential and commercial/industrial land use, with residences on the north and east side of the Site, commercial and industrial facilities on the west of the Site, and vacant land on the south side of the Site.

The Site is currently vacant; however, a one-story “L” shaped brick building was recently demolished on the corner of 32nd Street and Hannah Street. This building was last occupied by Precision Cast Products, Inc., which heat treated large engines. Due to previous onsite remediation, the building most recently had earthen floor, which appeared to have been imported from an offsite location. The rest of the former building was individually protected by steel joints, wood columns, beams, trusses and arches. The shell of the building was corrugated sheet metal nailed to a wood framed structure and contained large glass windows.

2.2 Geologic Setting

2.2.1 Regional Geology

The Site is located along the southwestern margin of the Berkeley Alluvial Plain, which is a subarea of the East Bay Plain area (SFBRWQCB, 1999). Alluvial deposits that generally consist of silts and clays containing thin sandy and gravelly lenses underlie the area. Estuarine mud, known as "Bay Mud," extends east of the San Francisco Bay where it interfingers with the surficial fluvial deposits.

Important regional sands, such as the Merritt Sand, appear to exist intermittently beneath the Site. The depth to bedrock in the Berkeley Alluvial Plain varies from near zero on the north to 500 feet on the south end of the Plain. The Hayward Fault defines the eastern boundary of the Berkeley Alluvial Plain and forms a geologic discontinuity. Bedrock in the East Bay Area is mostly Franciscan Complex melange, which includes marine sandstone and shale, chert, metavolcanics, serpentized ultramafic rocks, and limestone.

2.2.2 Site Lithology

According to ERAS, soils at the Site consisted primarily of silt (ML) to 15 to 19 feet bgs. At 15 to 19 feet, sand and gravel stringers were encountered in a number of soil borings. According to Enrest, soils at the Site primarily consisted of medium plasticity silty clays (CL) and low plasticity sandy silts (ML) to 16 feet bgs. Logged soil borings advanced at the Site did not depict any significantly thick zones of higher permeability to a minimum depth of approximately 16.5 feet bgs.

During remedial soil excavation activities, native soils encountered beneath the vaults consisted of brown silty clays to approximately 10 feet bgs. Sand lenses were noted from 9 to 11 feet bgs and groundwater was generally encountered at 10 to 15 feet bgs. Some soils exhibited a characteristic blue-green color and mild to strong petroleum hydrocarbon odor. These field indications of TPH impact were used to help determine the limits of remedial soil excavation.

2.2.3 Site Hydrogeology

Groundwater has generally been observed at approximately 10 to 15 feet bgs and at 20 to 25 feet bgs. The estimated groundwater flow direction east of the Site is west and the previously calculated groundwater flow direction beneath the Site is west-northwest. Groundwater gradient was estimated at 0.001 to 0.008 foot per foot (ft/ft).

The State Water Resources Control Board Geotracker GAMA website includes approximate locations of water supply wells in California. No water supply wells are shown within the immediate Oakland, Emeryville, or Berkeley areas. However, Roux Associates is currently conducting a water supply well search to identify the locations of the nearest supply wells, if any. The closest surface water body is San Francisco Bay, located approximately 0.75 miles northwest from the Site.

2.3 Previous Investigations

Historic soil, groundwater, and soil vapor data are included in Tables 1, 2, and 3 respectively.

In 1988, Property Contamination Control, Inc. (PCC) conducted a soil investigation consisting of four exploratory soil borings. PCC reported relatively minor concentrations of ethanol,

methanol, 1,1-dichloroethene (1,1-DCE), and metals in soil. Soil sample locations and depths are unknown (ERS, 2009).

In 2002, two environmental consulting firms were retained to perform investigations at the Site: ERAS Environmental, Inc. (ERAS) and Environmental Restoration Services (Enrest).

In March 2002, ERAS advanced four soil borings with a hand auger and reported “elevated” concentrations of total recoverable petroleum hydrocarbons (TRPH) and relatively minor concentrations of benzene, toluene, ethylbenzene and total xylenes (BTEX) in soil at approximately 3 feet below ground surface (bgs) in three of the four soil borings. In November 2002, ERAS analyzed a sample of oil from an excavation pit located near the southeast corner of the building and reported the oil resembled mineral oil, foundry quenching oil, or similar material (ERS, 2009).

In April 2002, Enrest advanced seven Geoprobe soil borings and free-floating oil in one soil boring (SB-6) was reported. In addition, Enrest determined that a pipe identified by ERAS was potentially a waste percolation well. The suspected percolation well was 7 feet deep, the casing was perforated from 5.5 to 7 feet, and drain rock surrounded the well from approximately 5 to 10 feet bgs. On April 26, 2002, Enrest demolished the concrete lining of Pit B and excavated soil to 12 feet bgs. Enrest also excavated casting sand backfill from Pit A and Pit C, and identified another suspect percolation well near the southeast corner of the building (ERS, 2009).

In May 2002, Enrest excavated soil in the vicinity of soil boring SB-6 and in the vicinity of the southeast corner suspect percolation well. Enrest also advanced three soil borings to collect grab groundwater samples north, west, and south of soil boring SB-6, designated as borings SP-1, SP-2, and SP-3. Grab groundwater sample analytical results reported elevated concentrations of motor oil range petroleum hydrocarbons, relatively minor concentrations of BTEX, 1,2-dichlorobenzene, and naphthalene (ERS, 2009).

In May 2003, ERAS advanced eleven continuously-cored, Geoprobe soil borings to depths of approximately 16 to 20 feet bgs, collected soil and grab groundwater samples, and converted three of the soil borings to temporary piezometers. Soil samples were analyzed for volatile

organic compounds (VOCs), total petroleum hydrocarbons as gasoline (TPH-g), total extractable petroleum hydrocarbons (TEPH or TPH), and chromium, copper, and nickel metals. Grab groundwater samples were analyzed for VOCs, TPH-g, TPH, and chromium, copper, and nickel metals. The piezometers were surveyed and the calculated groundwater flow direction and gradient were west to northwest at 0.03 ft/ft. Soil sample analysis generally reported minor to elevated TPH concentrations, varying minor VOC concentrations, and concentrations of chromium, copper, and nickel at typical of background naturally-occurring concentrations. Grab groundwater sample analysis reported relatively low TPH concentrations in soil borings E-6, E-9, and E-10, no VOCs above laboratory reporting limits, and minor to low concentrations of dissolved metals (ERS, 2009).

Concurrently, ERAS sampled the contents of six subsurface concrete vaults. Vault contents were described as poorly-graded sand. These soil samples were analyzed for VOCs, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and TPH. Laboratory analysis reported that the sandy contents of the concrete vaults contained TPH concentrations only (ERS, 2009).

In April 2005, Enrest advanced 15 exploratory soil borings primarily around the perimeter of the building. The purpose was to collect representative verification soil and groundwater samples at the perimeter of the property to evaluate the effectiveness of remedial soil excavation performed in September 2003 to January 2004. Soil samples were generally collected at 4 and 9 feet bgs and grab groundwater samples were collected in each soil boring at approximately 15 and 25 feet bgs. In addition, Enrest collected representative soil samples from imported material to be used to backfill the remedial soil excavations and analyzed the samples for constituents of concern. Imported soil samples are designated with "IMP" in the sample identification (ERS, 2009).

Enrest also collected two soil vapor samples and analyzed for VOCs by EPA Method TO-15. Sample B-1SV was collected at the north end of the Site adjacent to the "north" excavation and sample B-5SV was collected at the south end of the Site adjacent to the "south" excavation. Soil vapor sample analytical results indicated minor VOC constituent concentrations just above their respective laboratory reporting limits, as shown in Table 3. The VOC concentrations reported in

the two soil vapor samples did not indicate a significant source of residual VOCs or BTEX exist in the subsurface (ERS, 2005).

In September 2008, ERS advanced nine exploratory soil borings EB1 through EB9 at selected locations across the Site and at one neighboring residential property located at 2859 Helen Street to further characterize the vertical and lateral extent of constituents of concern (COCs) in soil and groundwater. Soil borings EB1 and EB2 were advanced within two restored excavations and sampled to confirm the general soil quality of backfill. The analytical results were consistent with the soil profiling results at the time it was generated in Berkeley by Affordable Housing Associates. Soil borings EB5 and EB9 were advanced at an approximate angle of 20 degrees from vertical to further assess soil and groundwater at adjacent neighboring properties 2851 Helen Street and 2863 Helen Street. With the exception of soil borings EB3 and EB4, the continuously cored borings were advanced using a four-foot long, hydraulically driven, truck-mounted Geoprobe® sampling tool equipped with 2-inch inside-diameter clear acetate liners. Soil borings EB3 and EB4 were continuously cored using limited access Geoprobe® equipment. Sample locations are shown on Figure 3. Grab groundwater samples were collected in soil borings EB3 through EB9 (ERS, 2009).

Select soil samples were analyzed for TPH as diesel (TPH-d) and TPH as motor oil (TPH-mo) and halogenated VOCs. TPH soil sample analytical results are summarized in Table 1. Figure 2 shows an aerial view of the Site and the surrounding residential properties (ERS, 2009).

2.4 Previous Remediation Activities

In April 2002, Enrest demolished the concrete lining of Pit B and excavated soil to 12 feet bgs. An oil sheen was noted on groundwater that entered the excavation pit. Enrest also excavated sand backfill from Pit A and Pit C. The volume of removed soil is unknown. In or before May 2002, Enrest excavated soil in the vicinity of soil boring SB-6 and around the second 4-inch diameter pipe identified as a waste percolation well (ERS, 2009).

In September 2003 to January 2004, ERAS oversaw remedial soil excavation designed to remove soil containing TPH as hydraulic oil (TPH-ho) above 500 milligrams per kilogram (mg/kg). The limits of soil excavation are shown on Figure 3. Soil was removed in three locations: 1) inside

the northeast corner of the building (designated “north”); 2) inside the southeast portion of the building to the building perimeter (designated “middle”); and 3) outside the building on the south side (designated “south”).

Approximately 845, 1,950, and 407 cubic yards (CY) of soil were removed from the “north”, “middle”, and “south” excavations, respectively, for a total of approximately 3,202 cubic yards (4,800 tons). Following remedial soil excavation, confirmation sidewall and bottom soil samples were collected and analyzed for TPH-ho and select confirmation soil samples were analyzed for VOCs.

Soil remediation was performed to the satisfaction of Barney Chan, caseworker with the Alameda County Environmental Health (ACEH), and verification soil and grab groundwater testing was requested following remedial soil removal (ERS, 2009). Excavated soil was properly profiled and disposed of at Forward Landfill, Manteca, California. Verification sampling was performed as described above by Enrest in April 2005.

3.0 NATURAL AND EXTENT OF CONTAMINATION

3.1 Product Releases and Potential Source Areas

3.1.1 North Area – Former Metal Heat-Treating Facility

The source of the heavy petroleum hydrocarbons in shallow soils beneath the former metal heat-treating facility building appears to have been related to historical industrial activities at the Site, including two potential percolation wells. Previous inspections of the Site revealed the presence of various vaults and pipes in the ground inside the Former Metal Heat-Treating building. The release scenario is unknown but according to the 2008 Investigation Work Plan (ACC, 2008) two 4-inch-diameter pipes were located in the middle excavation part of the property, near Pit B and Pit D (Figure 3). The pipes extended approximately 7 to 10 feet bgs and groundwater in that area was observed at approximately 11 feet bgs. The pipes appear to have been used to dispose of used quenching oil. The two areas appear to be the primary source of petroleum hydrocarbon impact to subsurface soil and groundwater, in the area that was remediated in 2003 and 2004. The quenching oil would have been able to migrate 1 to 3 feet vertically downward and then spread laterally on groundwater in higher permeability soils adjacent to the first-encountered water bearing zone. Fluctuating groundwater levels further “smeared” residual quenching oil in the subsurface and impacted a greater volume of soil.

A 700-gallon gasoline UST under the Hannah Street sidewalk was removed in February 2002, and soil sample results indicated no significant petroleum hydrocarbon releases from this former UST. Soil sample results are included in Table 1.

3.1.2 South Area – Putty and Paint Factory

The exact nature and extent of hazardous waste related activities associated with former paint and putty factory is unknown. However, PCE impacts in soil and groundwater at borings B-18 and EB6 may have originated from activities related to the former paint and putty factory which operated from the 1930s to the 1980s. Due to the lack of degradation breakdown products such as trichloroethylene (TCE) and cis- or trans-dichloroethylene (DCE) in groundwater and solvents were not used at the former facility, a more recent release following the closure of the facility is likely responsible for the PCE reported in groundwater. In addition, the lack of elevated photoionization detector (PID) readings in soil borings EB6 and EB7, the lack of any significant PCE in groundwater samples EB7-W and EB8-W, and the general lack of VOCs in soil vapor

sample B-5SV (collected approximately 45 feet north of EB6) suggest that historical Site practices are not the source of the PCE reported in groundwater in soil boring EB6.

3.1.3 Potential Offsite Source

Historical records indicate that a former dry cleaner was located at 1546 32nd Street, 40 feet northwest of the Site. This facility was present for several decades, beginning in approximately 1925. PCE from this adjacent site may have impacted groundwater beneath the Site.

3.2 Petroleum Hydrocarbon Distribution

Elevated heavy petroleum hydrocarbons (TPH-D, TPH-HO, TPH-MO) were detected primarily in the vicinity of the former metals heat treating/metals foundry building. No significant VOCs including BTEX or Naphthalene constituents were encountered in soil or groundwater samples.

3.2.1 Soil

North Area – Former Metal Heat-Treating Facility

As a former metal heat-treating facility, quenching oil was the primary constituent of concern. Minor concentrations of metals and volatile organic compound (most likely contained within proprietary quenching oil mixtures) were identified in given soil and groundwater samples but mineral oil-range petroleum hydrocarbons (TEPH) were the primary contaminant. Due to relatively fine grain soils at the Site, vertical and lateral TPH migration was limited. Excavation and offsite disposal of approximately 3,247 cubic yards of hydrocarbon-impacted soil was conducted between October 2003 and January 2004.

Soil samples from post-excavation borings, EB3 and EB4, located in adjacent east residential back yards, indicate very limited migration of heavy petroleum hydrocarbons; with values ranging from 2.3 to 12 mg/kg. Significant vertical attenuation of petroleum hydrocarbons was noted in fine grain silty clay soils observed in soil borings EB5 from approximately 7 to 16 feet bgs (TPH-d decreased from 5,500 mg/kg at 7.4 feet bgs to 11 mg/kg at 16 feet bgs), and similar decreases were noted in silty clay soils in boring EB9 (TPH-d decreased from 1,700 mg/kg at 7.4 feet to 290 mg/kg at 15.5 feet bgs). TEPH attenuation in the vertical direction is reinforced by the generally low concentrations of TEPH reported in grab groundwater samples collected in soil borings EB5 and EB9. The vertical and horizontal TEPH attenuation in the subsurface is fairly typical and the information obtained in soil borings EB3 and EB4 (advanced at

2859 Helen Street that previously provided physical access) should be applicable on the neighboring properties on both side of 2859 Hellen Street (i.e., 2851 and 2863 Helen Street).

South Area – Putty and Paint Factory

Total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPH-g, TPH-d, and TPH-mo) were observed in all borings. However, these results were flagged by the laboratory due to the high concentration of PCE causing false detections. This is supported by the relatively low concentrations of TPH-d and TPH-mo, and the lack of TPH-g in borings RB-2 and RB-4.

3.2.2 Groundwater

North Area – Former Metal Heat-Treating Facility

TPH impacts in groundwater are generally low to below laboratory reporting limits. Groundwater analytical results do not indicate any significant source of TPH for groundwater and the identified TPH impacts in groundwater are generally from motor oil-range or mineral oil-based petroleum hydrocarbons.

The post 2003 to 2004 remediation excavation grab groundwater sample collected in soil boring EB5 reported 150 micrograms per liter ($\mu\text{g/L}$) TPH-d, and the grab groundwater sample from soil boring EB9 reported 51 $\mu\text{g/L}$ TPH-d. In the horizontal direction, significant petroleum hydrocarbon attenuation was reported in the grab groundwater samples collected in soil borings EB3 and EB4. Grab groundwater sample EB3-W reported 730 $\mu\text{g/L}$ TPH-d and 610 $\mu\text{g/L}$ TPH-mo and grab groundwater sample EB4-W reported 69 $\mu\text{g/L}$ TPH-d.

South Area – Putty and Paint Factory

Total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPH-g, TPH-d, and TPH-mo) were observed in all borings. However, these results were flagged by the laboratory due to the high concentration of PCE causing false detections. This is supported by the relatively low concentrations of TPH-d and TPH-mo, and the lack of TPH-g in borings RB 2 and RB 4.

3.3 Chlorinated Hydrocarbon Distribution

The primary constituent of concern is PCE. Only low concentrations of PCE degradation products have been detected onsite.

3.3.1 Soil

North Area – Former Metal Heat Treating Facility

PCE impacts in soil at the North Area of the Site are minimal and generally insignificant.

South Area – Putty and Paint Factory

Soil concentrations found to be exceeding residential ESLs for shallow soil are limited to PCE in RB-1 and RB-3 and a low estimated concentration of cis-1,2-dichloroethylene (cis-1,2-DCE). In borings RB-2 and RB-4, no PCE or daughter products were detected above the laboratory reporting limits. PCE concentrations in RB-1 and RB-3 are generally ubiquitous throughout the soil column. Concentrations slightly increase with depth as they approach the groundwater table. Samples were erroneously analyzed from within the saturated zone at 20 ft bgs and are likely representative of dissolved phase concentrations.

3.3.2 Groundwater

North Area – Former Metal Heat Treating Facility

Grab groundwater samples from pre-excavation borings outside the excavation areas and from post-excavation borings inside the excavation areas showed PCE impacts in groundwater are generally low to below laboratory reporting limits. Chlorinated solvents were not used at the facility.

South Area – Putty and Paint Factory

Grab groundwater samples from borings B-18 and EB6 showed elevated concentrations of PCE. Grab groundwater samples from north and northeast borings B-8, B-5, and EB7 showed no significant detections of PCE, indicating that the PCE source is not within the Site building.

Based on the March 2015 remedial investigation sample results, the highest PCE concentration was detected in RB-3 (11,500 µg/L) located approximately 40 feet east of boring RB-1. The lowest PCE concentration was observed in boring RB-5 (499 µg/L) located across Hannah Street from the site. Currently PCE concentrations are bounded to the north and south, however; are not fully delineated to the east. Concentrations to the west likely continue to decrease similar to the observed groundwater concentrations.

3.4 Soil Vapor

Historic soil and groundwater investigations indicate that residual heavy petroleum hydrocarbons do not present a vapor intrusion.

Following the completion of soil excavation, all VOCs associated with petroleum in soil and grab groundwater samples have been low and generally one to three orders of magnitude below applicable Environmental Screening Levels (ESLs). According to RWQCB Table E-1a, *Groundwater Screening Levels For Evaluation of Potential Vapor Intrusion Concerns*, residual petroleum concentrations in groundwater are generally three to five orders of magnitude below their applicable ESL. Shallow soils beneath the site are clay-dominated, and two previous soil vapor samples, B-1SV and B-5SV, showed no significant VOC impacts, as shown in Table 3.

Following the completion of soil and groundwater remediation, vapor intrusion concerns associated with observed PCE in soil and groundwater will be evaluated.

3.5 Evaluation of Preferential Pathways

Roux Associates has obtained and reviewed available utility drawings for the Site to determine if any subsurface conduits (e.g., sewer laterals) may have acted as preferential pathways. A file review was conducted at the City of Oakland on August 13, 2015 but no documents were available. Available maps are presented in Appendix A. Based on available drawings, it does not appear that any utilities remain on site.

Based on available maps, the City of Oakland sanitary sewer line is located in the center of Hannah Street at approximately 2.07 feet above mean sea level (MSL). Comparing this elevation to site elevations (generally 6 feet MSL), the sanitary sewer is approximately 4 feet bgs. As groundwater is encountered generally between 10 and 15 ft bgs, it is unlikely that the sanitary sewer system is acting as a preferential pathway for groundwater impacts at the Site.

If the historic utilities are encountered during the proposed soil remediation, the utility location will be noted and this conduit study will be revised.

3.6 Conceptual Site Model

This section details the current and future land use at the Site and the potential exposure pathways.

The Site is located in an area with mixed residential and commercial/industrial land use, with residences on the north and east side of the Site, commercial and industrial facilities on the west of the Site, and a large uncapped vacant land on the south side of the Site. The Site is currently vacant and the proposed development is a three-story mixed use building with ground floor parking.

Figure 4 presents the Conceptual Site Model (CSM) for the Site under current conditions based on the available data. The CSM will be updated following the completion of the remedial action.

3.7 Evaluation of Low Threat Closure Criteria

To evaluate the status of this site, Roux Associates has reviewed the Low Threat Closure Assessment Tool (RWQCB, 2014). Based on this guidance, three main factors are necessary to achieve low threat closure: development of a complete CSM, control sources and mitigate risks and threats, and demonstrate that residual pollution in all media will not adversely affect present and anticipated land and water uses. Each of these topics is described in detail below.

3.7.1 Conceptual Site Model

According to the Low Threat Closure Assessment Tool, three steps are necessary to evaluate if the CSM is complete. The first is the identification of potential sources. As described above, the source of hydrocarbons in the northern portion of the site are suspected percolation wells removed during previous remedial efforts. On the southern portion of the property, a source has not been identified for PCE; however, shallow soil impacts in RB-1 and RB-3 indicate the source was located surrounding this area. Therefore, the current source for PCE is residual PCE concentrations in shallow soil.

The second criteria to be evaluated, is adequately characterizing the Site. To date nearly 60 borings have been advanced at the site with approximately 30 borings being conducted following the completion of soil remediation on the northern portion of the site. Currently the extent of

petroleum hydrocarbons is well characterized. However, PCE concentrations have yet to be fully delineated to the east. Roux Associates' August 10, 2015 *Phase II Environmental Site Assessment Results* included a work plan to collect additional samples to further investigate the extent of PCE in soil. Additionally in ACEH's August 13, 2015 conditional approval of the proposed investigation, it was requested that a deeper soil boring be advanced to determine if PCE is present above screening levels in deeper groundwater. Following the completion of this investigation, the Site will be adequately characterized.

Finally, an evaluation of exposure pathways will be necessary to complete the CSM. Following the completion of proposed soil and groundwater remediation, Roux Associates will evaluate the potential receptors and associated risk with any residual concentrations, if any, that remain following remediation.

3.7.2 Control Sources and Mitigate Risks and Threats

Remedial activities performed at the northern portion of the Site include the removal of the petroleum hydrocarbon source. Remedial activities for the PCE impacts in soil are presented in Section 4 and a work plan describing the proposed groundwater remediation will be submitted under separate cover.

3.7.3 Media Will Not Adversely Affect Land and Water Uses

Currently the Site is vacant; therefore, the only potential receptor is onsite construction workers. Roux Associates is currently proposing soil and groundwater remediation. Following the completion of the remediation, the concentration trends will be evaluated against screening standards to ensure that further regulatory oversight for the Site is no longer necessary.

4.0 PROPOSED SOIL REMEDIAL ACTION

Based on the CSM, soil excavation and aeration is proposed to address the chlorinated hydrocarbon impacted soil in the southern portion of the Site. The proposed remedial action is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants and uses standard methods that are well established in the industry.

4.1 Soil Remedial Action Goal

As described in the CSM, the primary constituent of concern is PCE. Therefore the soil cleanup goal for the Site is achieving the residential ESL for PCE in shallow soil, 550 micrograms per kilogram (ESL Table A-1).

4.2 Description of Proposed Soil Remedial Action

The proposed remedial action will consist of:

1. Mobilization: Equipment mobilization, marking and staking the proposed excavation and aeration areas; and underground utility survey.
2. Excavation: Approximately 1,625 CY of soil will be excavated. The approximate excavation area is shown on Figure 8.
3. Excavation Screening: Excavated soil will be inspected for indications of contamination by visual means, odor, and monitoring with a PID.
4. Soil Management: Excavated soils will be segregated to avoid co-mingling of contaminated material and non-contaminated materials.
5. Confirmation Sampling: Collection and analysis of a minimum of five confirmation samples to determine the performance of the remedy with respect to applicable ESLs.
6. Onsite Aeration: The contaminated soil will be spread onsite (up to 12 inches in each stockpile) and tilled monthly. Soil samples will be collected to determine completion of remediation with respect to applicable ESLs.
7. Backfill: Reuse of remediated and non-contaminated materials for excavation backfill in compliance with this plan and in accordance with applicable laws and regulations.
8. Storm Water Pollution Prevention Measures: Best Management Practices for storm water pollution prevention measures will be implemented in compliance with applicable laws and regulations.
9. Soil Remediation Completion Report: A Remediation Completion Report will be prepared to document the remedial activities and confirm the remedial requirements have been achieved.

4.3 Soil Management and Sampling during Remediation

Soil and materials management onsite, including excavation, handling, and aeration, will be conducted in accordance with this Soil RAWP. Excavation is planned in the southern portion of the Site as shown on Figure 8.

Estimated Soil Removal Quantities

The total quantity of soil expected to be excavated is approximately 1,625 CY, of which approximately 875 CY and 750 CY are anticipated to be impacted and non-impacted, respectively. Non-impacted material will be stockpiled separately. Impacted material will be placed onsite for aeration (Figure 10).

Confirmation Sampling

Removal actions will be performed in conjunction with remedial confirmation sampling. Confirmation sampling will consist of the following:

1. One sample from each sidewall and one sample from the excavation bottom.
2. Post excavation soil samples for laboratory analysis will be taken immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples will be collected.

Post-excavation sample locations and depth will be biased towards the areas and depths of highest contamination identified during previous investigations unless field indicators such as field instrument measurements or visual impacted soils identified during the remedial action indicate that other locations and depths may be more heavily impacted.

Confirmation samples will be analyzed by a California certified laboratory for the following parameters:

- TPH-d and TPH-mo by U.S. EPA Method 8015M
- TPH-g and VOCs by U.S. EPA Method 8260B

Aeration Monitoring Samples

Aeration monitoring sampling will consist of the following:

1. Samples will be collected in accordance with the California Department of Toxic Substances Control's Information Advisory Clean Imported Fill Material, four discrete samples for the first 1000 cubic yards of soil and 1 discrete sample for each additional 500 cubic yards of soil.

Aeration monitoring samples will be analyzed by a California certified laboratory for the following parameters:

- TPH-d and TPH-mo by U.S. EPA Method 8015M
- TPH-g and VOCs by U.S. EPA Method 8260B

5.0 REMEDIAL CONSTRUCTION MANAGEMENT

5.1 Construction Health and Safety Plan

Roux Associates will prepare a site-specific Health and Safety Plan. Remedial work performed under the Soil RAWP will be in full compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the HASP and applicable laws and regulations.

All field personnel involved in remedial activities will participate in training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining workers training records.

Personnel entering any exclusion zone will be trained in the provisions of the HASP and be required to sign an HASP acknowledgment. Site-specific training will be provided to field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a log book or specific form.

An emergency contact sheet with names and phone numbers is included in the HASP. That document will define the specific project contacts for use in case of emergency.

5.2 Permitting

All permits or approvals required for remediation have been or will be obtained prior to the start of remediation.

5.3 Site Preparation

Pre-Construction Meeting

A pre-construction meeting will be held at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

Mobilization

Mobilization includes field personnel orientation, equipment mobilization, marking/staking excavation limits and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

Utility Marker Layouts, Easement Layouts

Roux Associates will contact Underground Service Alert (USA) a minimum of two days prior to subsurface activities to notify utility operators of the planned work and to request marking of nearby utilities. Additionally, Roux Associates will retain a private utility locator to clear proposed excavation area prior to excavation.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAP.

Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations. The location of proposed equipment and material staging areas and stockpile areas is shown in Figure 10.

5.4 Soil Aeration

Contaminated soil will be placed onsite for aeration as shown in Figure 10. This soil will be tilled every two weeks for the duration of the aeration process to encourage volatilization of contaminants. Aeration will continue until aeration monitoring sampling indicates attainment of ESLs.

5.5 Backfill

Upon completion of soil aeration, all excavated materials will be used to backfill the excavation area. Aerated soils will be used to backfill the lower portion of the excavation area, while clean stockpiled material will be used to backfill the upper portion of the excavation.

5.6 Demobilization

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, storage areas, and access area);
- Removal of sediment from erosion control measures and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination; and
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities.

5.7 Reporting and Record Keeping

Daily Reports

Daily reports providing a general summary of activities for each day of *active remedial work* will be completed by the Roux field manager. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material handled at the Site;
- Status of soil stockpiles; and
- Photograph of notable Site conditions and activities.

Daily reports will be included as an Appendix in the RCR.

Record Keeping and Photo-Documentation

Job-site record keeping for all remedial work will be performed. These records will be maintained on-Site during the project. Representative photographs will be taken of the Site prior

to any remedial activities and during major remedial activities to illustrate remedial program elements. Photographs will be submitted at the completion of the project in the RCR in digital format (i.e., jpeg files).

6.0 SCHEDULE

The remedial excavation activities will occur immediately following the receipt of approval from ACEH and the receipt of a grading permit from the City of Oakland. A Preliminary schedule is included in Figure 11.

7.0 REFERENCES

- ACC Environmental Consultants, Inc. (ACC), 2008. *Revised Work Plan – Subsurface Investigation, 1549 32nd Street, Oakland, California*. April 4.
- Applied Remedial Services, Inc. (ARS Inc.), 2015a. *Phase I Environmental Site Assessment, 1549 32nd Street and 2868 Hannah Street, Oakland, California, 94607*. February 3.
- ARS Inc., 2015b. *Site Conceptual Model, 1549 32nd Street, Oakland, California*. February 16.
- Environmental Risk Specialties Corporation (ERS), 2005. *Investigative Report, 1549 32nd Street, California*. December 14.
- ERS, 2009. *Work Plan for Additional Subsurface Investigation, 1549 32nd Street, California*. March 13.
- San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), 1999. *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report*. June.

TABLES

1. Historical Analytical Data for Soil
2. Historical Analytical Data for Groundwater
3. Historical Analytical Data for Soil Vapor
4. Grab Groundwater Results for Phase II Investigation
5. Soil Results for Phase II Investigation

**Table 1. Historical Analytical Data for Soil
2868 Hannah Street, Oakland, California**

Sample ID	Consultant	Sample Date	Sample Depth (feet)	Units	TEPH	TPH-MO	TPH-D	TPH-HO	TPH-G	Benzene	Toluene	EB	Xylenes	PCE	TCE	VC	Acetone	cis-1,2-Dichloroethylene (cis-1,2-DCE)	trans-1,2-Dichloroethylene
ESL Table A-1 - Shallow Soils (<3m bgs) GW is a source or potential source of drinking water					mg/kg	--	100	100	100	0.04	2.86	3.28	2.26	0.55	0.46	0.032	0.50	0.19	0.67
SB-1-2.5	ERAS	3/27/2002	2.5	mg/kg	--	8300	--	--	11	0.053	0.065	0.046	0.17	--	--	--	--	--	--
SB-2-2.5	ERAS	3/27/2002	2.5	mg/kg	--	<50	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--
SB-3-3	ERAS	3/27/2002	3	mg/kg	--	<50	--	--	17	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--
SB-4-3	ERAS	3/27/2002	3	mg/kg	--	2100	--	--	5.3	<0.005	0.0071	<0.005	0.020	--	--	--	--	--	--
SS-N	Ernest	4/26/2002	10.0	mg/kg	--	3,300	--	--	--	--	--	--	--	--	--	--	--	--	--
Pit A	Ernest	4/26/2002	--	mg/kg	--	--	--	--	--	<0.020	<0.020	<0.020	<0.060	--	--	--	--	--	--
Oil	Ernest	4/26/2002	--	mg/kg	--	--	--	--	--	5.81	3.62	2.5	10.74	--	--	--	--	--	--
Source Pt@7	Ernest	5/21/2002	7.0	mg/kg	--	20,800	--	--	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
PZ-1	ERAS	4/1/2003	3.0-3.5	mg/kg	--	<13	8.1	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
PZ-1	ERAS	4/1/2003	11.0-12.0	mg/kg	--	<13	12	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
PZ-2	ERAS	4/3/2003	1.0-2.0	mg/kg	--	<13	<1.0	80	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
PZ-2	ERAS	4/3/2003	11.5-12.5	mg/kg	--	<13	<1.0	20	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-5	ERAS	4/2/2003	2.5-3.5	mg/kg	--	<1,300	<100	3,400	0.31	<0.0125	<0.0125	<0.0125	0.023	<0.0125	<0.0125	--	--	--	--
E-5	ERAS	4/2/2003	11.0-12.0	mg/kg	--	<13	3.8	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-6	ERAS	4/1/2003	4.0-5.0	mg/kg	--	<260	<20	640	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-6	ERAS	4/1/2003	8.5-9.0	mg/kg	--	<260	<20	2,000	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-7	ERAS	4/1/2003	4.0-5.0	mg/kg	--	<13	4.8	<13	0.068	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-7	ERAS	4/1/2003	11.0-12.0	mg/kg	--	<13	<1	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-8	ERAS	4/1/2003	4.0-5.0	mg/kg	--	<312.5	<25	<312.5	0.051	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-8	ERAS	4/1/2003	11.0-12.0	mg/kg	--	<13	9.6	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-9	ERAS	4/2/2003	1.0-2.0	mg/kg	--	<650	<50	1,500	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-9	ERAS	4/2/2003	11.0-12.0	mg/kg	--	<13	<1	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-10	ERAS	4/1/2003	3.0-4.0	mg/kg	--	<1,300	<100	3,700	0.28	<0.005	0.015	<0.005	0.013	<0.005	<0.005	--	--	--	--
E-10	ERAS	4/1/2003	11.0-12.0	mg/kg	--	<13	<1	26	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-11	ERAS	4/2/2003	4.0-4.5	mg/kg	--	<130	<10	220	0.12	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-11	ERAS	4/2/2003	10.0-11.0	mg/kg	--	<13	9.0	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-12	ERAS	4/2/2003	2.0-3.0	mg/kg	--	<13	<1	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-12	ERAS	4/2/2003	11.0-12.0	mg/kg	--	<13	<1	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-13	ERAS	4/2/2003	2.0-3.0	mg/kg	--	<13	2.6	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
E-13	ERAS	4/2/2003	11.0-12.0	mg/kg	--	<13	<1	<13	<0.050	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--
NSW3@7	ERAS	1/21/2004	7	mg/kg	--	--	--	160	--	--	--	--	--	--	--	--	--	--	--
SE-2-7	ERAS	12/30/2003	7	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
SS-1-7	ERAS	12/30/2003	7	mg/kg	--	--	--	130	--	--	--	--	--	--	--	--	--	--	--
SW4-7	ERAS	12/30/2003	7	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
SWB-7	ERAS	8/23/2003	7	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
XX@7	ERAS	1/21/2004	7	mg/kg	--	--	--	300	--	--	--	--	--	--	--	--	--	--	--
YY@7	ERAS	1/21/2004	7	mg/kg	--	--	--	32	--	--	--	--	--	--	--	--	--	--	--
SW-D-7A	ERAS	12/8/2003	7	mg/kg	--	--	--	66	--	--	--	--	--	--	--	--	--	--	--
SW-E-7A	ERAS	12/8/2003	7	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
SW-F-7A	ERAS	12/8/2003	7	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
OT2@7	ERAS	1/21/2004	7	mg/kg	--	--	--	830	--	--	--	--	--	--	--	--	--	--	--
OT1@7	ERAS	1/21/2004	7	mg/kg	--	--	--	440	--	--	--	--	--	--	--	--	--	--	--
OT6@7	ERAS	1/21/2004	7	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
OT5@7	ERAS	1/21/2004	7	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
OT4@7	ERAS	1/21/2004	7	mg/kg	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--
OT3@7	ERAS	1/21/2004	7	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
WB2-9	ERAS	1/21/2004	9	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SC-5-8	ERAS	12/30/2003	8	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--
OTB1@10'	ERAS	1/21/2004	10	mg/kg	--	--	--	24	--	--	--	--	--	--	--	--	--	--	--
OTB2@10'	ERAS	1/21/2004	10	mg/kg	--	--	--	26	--	--	--	--	--	--	--	--	--	--	--

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2868 Hannah Street, Oakland, California**

Sample ID	Consultant	Sample Date	Sample Depth (feet)	Units	TEPH	TPH-MO	TPH-D	TPH-HO	TPH-G	Benzene	Toluene	EB	Xylenes	PCE	TCE	VC	Acetone	cis-1,2-Dichloroethylene (cis-1,2-DCE)	trans-1,2-Dichloroethylene	
ESL Table A-1 - Shallow Soils (<3m bgs) GW is a source or potential source of drinking water					mg/kg	--	100	100	100	100	0.04	2.86	3.28	2.26	0.55	0.46	0.032	0.50	0.19	0.67
SWA-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	2,200	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	
OT1@7'	ERAS	1/21/2004	7	mg/kg	--	--	--	440	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	
OT2@7'	ERAS	1/21/2004	7	mg/kg	--	--	--	830	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	
SWB-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	1,100	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	
SWC-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	140	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	
SWD-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	1,000	--	--	--	--	--	--	--	--	--	--	--	
SWE-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	2,800	--	--	--	--	--	--	--	--	--	--	--	
SWF-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	1,400	--	--	--	--	--	--	--	--	--	--	--	
SWG-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--	
SWH-1@4'	ERAS	10/6/2003	4	mg/kg	--	--	--	3,800	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	
BH-1@9'	ERAS	10/6/2003	9	mg/kg	--	--	--	600	--	--	--	--	--	--	--	--	--	--	--	
BH-2@6'	ERAS	10/6/2003	6	mg/kg	--	--	--	4,200	--	--	--	--	--	--	--	--	--	--	--	
BH-3@9'	ERAS	10/6/2003	9	mg/kg	--	--	--	470	--	--	--	--	--	--	--	--	--	--	--	
BH-4@10'	ERAS	10/6/2003	10	mg/kg	--	--	--	160	--	--	--	--	--	--	--	--	--	--	--	
SW-A-7	ERAS	10/23/2003	7	mg/kg	--	--	--	910	--	--	--	--	--	--	--	--	--	--	--	
SW-B-7	ERAS	10/23/2003	7	mg/kg	--	--	--	1,300	--	--	--	--	--	--	--	--	--	--	--	
SW-D-7	ERAS	10/23/2003	7	mg/kg	--	--	--	5,900	--	--	--	--	--	--	--	--	--	--	--	
SW-E-7	ERAS	10/23/2003	7	mg/kg	--	--	--	3,800	--	--	--	--	--	--	--	--	--	--	--	
SW-F-7	ERAS	10/23/2003	7	mg/kg	--	--	--	5,900	--	--	--	--	--	--	--	--	--	--	--	
BH-1-9	ERAS	10/23/2003	7	mg/kg	--	--	--	440	--	--	--	--	--	--	--	--	--	--	--	
BH-2-9	ERAS	10/23/2003	7	mg/kg	--	--	--	61	--	--	--	--	--	--	--	--	--	--	--	
SW1@7'	ERAS	12/15/2003	7	mg/kg	--	--	--	670	--	--	--	--	--	--	--	--	--	--	--	
SWJ@7'	ERAS	12/15/2003	7	mg/kg	--	--	--	3,400	--	--	--	--	--	--	--	--	--	--	--	
B5.9'-9.5'	ERAS	12/15/2003	9.9.5	mg/kg	--	--	--	1,900	--	--	--	--	--	--	--	--	--	--	--	
B6.9.9.5'	ERAS	12/15/2003	9.9.5	mg/kg	--	--	--	98	--	--	--	--	--	--	--	--	--	--	--	
B7.9'-90.5'	ERAS	12/15/2003	9.9.5	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--	
SN3-3	ERAS	12/30/2003	3	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--	
SN3-7	ERAS	12/30/2003	7	mg/kg	--	--	--	1,700	--	--	--	--	--	--	--	--	--	--	--	
SW4-9	ERAS	12/30/2003	9	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--	
NSW2@7'	ERAS	1/12/2004	7	mg/kg	--	--	--	2,400	--	--	--	--	--	--	--	--	--	--	--	
WB2@9'	ERAS	1/12/2004	9	mg/kg	--	--	--	<13	--	--	--	--	--	--	--	--	--	--	--	
B4@4'	Enrest	4/21/2005	4	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B4@9'	Enrest	4/21/2005	9	mg/kg	--	--	--	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	--	--	--	--	
B10@4'	Enrest	4/21/2005	4	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B10@9'	Enrest	4/21/2005	9	mg/kg	60	--	--	--	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	--	
B11@4'	Enrest	4/21/2005	4	mg/kg	--	--	--	????	--	--	--	--	--	--	--	--	--	--	--	
B11@9'	Enrest	4/21/2005	9	mg/kg	--	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B5@4'	Enrest	4/21/2005	4	mg/kg	<50	--	--	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	--	
B5@9'	Enrest	4/21/2005	9	mg/kg	<50	--	--	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	--	
B8@4'	Enrest	4/21/2005	4	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B8@9'	Enrest	4/21/2005	9	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B2@4'	Enrest	4/21/2005	4	mg/kg	--	--	--	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	--	
B2@9'	Enrest	4/21/2005	9	mg/kg	--	--	--	<0.5	????	????	????	????	????	????	????	--	--	--	--	
B1@4'	Enrest	4/21/2005	4	mg/kg	<50	--	--	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	--	
B1@9'	Enrest	4/21/2005	9	mg/kg	120	--	--	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	--	--	--	--	--	
B14@4'	Enrest	4/22/2005	4	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B14@9'	Enrest	4/22/2005	9	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B7@4'	Enrest	4/22/2005	4	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B7@9'	Enrest	4/22/2005	9	mg/kg	70	--	--	3.44	--	--	--	--	--	--	--	--	--	--	--	
B18@4'	Enrest	4/22/2005	4	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	
B18@9'	Enrest	4/22/2005	9	mg/kg	<50	--	--	<0.5	--	--	--	--	--	--	--	--	--	--	--	

Table 1. Historical Analytical Data for Soil
2868 Hannah Street, Oakland, California

Sample ID	Consultant	Sample Date	Sample Depth (feet)	Units	TEPH	TPH-MO	TPH-D	TPH-HO	TPH-G	Benzene	Toluene	EB	Xylenes	PCE	TCE	VC	Acetone	cis-1,2-Dichloroethylene (cis-1,2-DCE)	trans-1,2-Dichloroethylene	
ESL Table A-1 - Shallow Soils (<3m bgs) GW is a source or potential source of drinking water					mg/kg	--	100	100	100	100	0.04	2.86	3.28	2.26	0.55	0.46	0.032	0.50	0.19	0.67
EB1-4.0	ERSC	9/18/2008	4	mg/kg	--	370	52	--	--	--	--	--	--	<4.8	<4.8	--	--	--	--	
EB1-8.0	ERSC	9/18/2008	8	mg/kg	--	230	250	--	--	--	--	--	--	<5.0	<5.0	--	--	--	--	
EB1-12.0	ERSC	9/18/2008	12	mg/kg	--	<5.0	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
EB2-4.0	ERSC	9/18/2008	4	mg/kg	--	130	22	--	--	--	--	--	--	<4.9	<4.9	--	--	--	--	
EB2-8.0	ERSC	9/18/2008	8	mg/kg	--	140	33	--	--	--	--	--	--	<4.7	<4.7	--	--	--	--	
EB2-12.0	ERSC	9/18/2008	12	mg/kg	--	<5.0	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
EB8-7.5	ERSC	9/18/2008	7.5	mg/kg	--	8.8	3.3	--	--	--	--	--	--	<4.8	<4.8	--	--	--	--	
EB8-16.0	ERSC	9/18/2008	16	mg/kg	--	<5.0	1.7	--	--	--	--	--	--	--	--	--	--	--	--	
EB7-7.5	ERSC	9/18/2008	7.5	mg/kg	--	<5.0	2.2	--	--	--	--	--	--	<4.6	<4.6	--	--	--	--	
EB7-15.0	ERSC	9/18/2008	15	mg/kg	--	<5.0	2.4	--	--	--	--	--	--	--	--	--	--	--	--	
EB6-7.5	ERSC	9/18/2008	7.5	mg/kg	--	<5.0	<1.0	--	--	--	--	--	--	48	<4.6	--	--	--	--	
EB6-16.0	ERSC	9/18/2008	16	mg/kg	--	<5.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	
EB5-7.4	ERSC	9/18/2008	7.4	mg/kg	--	2,500	5,500	--	--	--	--	--	--	<4.9	<4.9	--	--	--	--	
EB5-16.0	ERSC	9/18/2008	16	mg/kg	--	<5.0	11	--	--	--	--	--	--	--	--	--	--	--	--	
EB9-7.4	ERSC	9/18/2008	7.4	mg/kg	--	670	1,700	--	--	--	--	--	--	<4.9	<4.9	--	--	--	--	
EB9-15.5	ERSC	9/18/2008	15.5	mg/kg	--	130	290	--	--	--	--	--	--	--	--	--	--	--	--	
EB3-9.0	ERSC	9/18/2008	9	mg/kg	--	7.3	12	--	--	--	--	--	--	<4.9	<4.9	--	--	--	--	
EB3-15.5	ERSC	9/18/2008	15.5	mg/kg	--	<5.0	2.7	--	--	--	--	--	--	--	--	--	--	--	--	
EB4-9.0	ERSC	9/18/2008	9	mg/kg	--	<5.0	2.3	--	--	--	--	--	--	<5.0	<5.0	--	--	--	--	
EB4-16.5	ERSC	9/18/2008	16.5	mg/kg	--	<5.0	4.3	--	--	--	--	--	--	--	--	--	--	--	--	
Vault E	ERAS	4/1/2003	--	mg/kg	--	<6,500	<500	18,000	--	--	--	--	--	--	--	--	--	--	--	
Vault F	ERAS	4/1/2003	--	mg/kg	--	93	<5	<65	--	--	--	--	--	--	--	--	--	--	--	
Vault G	ERAS	4/1/2003	--	mg/kg	--	<13	<1	18	--	--	--	--	--	--	--	--	--	--	--	
Vault H	ERAS	4/1/2003	--	mg/kg	--	<13,000	<1,000	29,000	--	--	--	--	--	--	--	--	--	--	--	
Vault I	ERAS	4/1/2003	--	mg/kg	--	<13,000	<1,100	43,000	--	--	--	--	--	--	--	--	--	--	--	
Vault J	ERAS	4/1/2003	--	mg/kg	--	<65	<5	110	--	--	--	--	--	--	--	--	--	--	--	
RB-1	Roux	27/3/2015	5	µg/kg	--	15,100 J	1,810 J	--	503 ^c	--	--	--	--	559	4.8 J	<1.0	<1.0	<1.2	<0.52	
RB-1	Roux	27/3/2015	10	µg/kg	--	6,910 J	1,170 J	--	2,340 E ^b	--	--	--	--	3,240	46.9	1.3 J	<1.0	46.1	1.7 J	
RB-1	Roux	27/3/2015	15	µg/kg	--	2,650 J	1,158 J	--	2,690 E ^b	--	--	--	--	3,270	42.4	7.2	<1.0	45.1	5.1 J	
RB-1	Roux	27/3/2015	20	µg/kg	--	2,510 J	1,260 J	--	7,040 ^c	--	--	--	--	4,050	<33	<65	<650	<72	<33	
RB-2	Roux	27/3/2015	5	µg/kg	--	<2000	<990	--	<57	--	--	--	--	<0.68	<0.57	<1.1	<1.1	<1.2	<0.57	
RB-2	Roux	27/3/2015	10	µg/kg	--	<2100	<1000	--	<52	--	--	--	--	<0.63	<0.52	<1.0	<1.0	<1.2	<0.52	
RB-2	Roux	27/3/2015	15	µg/kg	--	<2100	1,270 J	--	<60	--	--	--	--	<0.72	<0.60	<1.2	<1.2	<1.3	<0.60	
RB-2	Roux	27/3/2015	20	µg/kg	--	<2100	1,050 J	--	<56	--	--	--	--	<0.67	<0.56	<1.1	<1.1	<1.2	<0.56	
RB-3	Roux	27/3/2015	5	µg/kg	--	<2000	<1000	--	4,150 J ^a	--	--	--	--	1,140	<31	<61	<610	<67	<31	
RB-3	Roux	27/3/2015	10	µg/kg	--	<2000	1,140 J	--	16,900 J ^a	--	--	--	--	9,640	116 J	<220	<2,200	243 J	<110	
RB-3	Roux	27/3/2015	15	µg/kg	--	<2100	1,280 J	--	22,300 J ^a	--	--	--	--	11,800	213 J	<230	<2,300	325 J	<120	
RB-3	Roux	27/3/2015	20	µg/kg	--	<2100	<1100	--	12,800 ^c	--	--	--	--	6,300	69.9 J	<110	<1,100	<130	<57	
RB-4	Roux	27/3/2015	5	µg/kg	--	5,050 J	1,860 J	--	<55	--	--	--	--	<0.67	<0.55	<1.1	<1.1	<1.2	<0.55	
RB-4	Roux	27/3/2015	10	µg/kg	--	<2000	<1000	--	<48	--	--	--	--	<0.58	<0.48	<0.97	<9.7	<1.1	<0.48	
RB-4	Roux	27/3/2015	15	µg/kg	--	<2100	1,210 J	--	<59	--	--	--	--	<0.70	<0.59	<1.2	<1.2	<1.3	<0.59	
RB-4	Roux	27/3/2015	20	µg/kg	--	<2100	<1000	--	52.1 J	--	--	--	--	<0.62	<0.51	<1.0	<1.0	<1.1	<0.51	
RB-5	Roux	27/3/2015	5	µg/kg	--	3900 J	2,640 J	--	59.8 J	--	--	--	--	<0.67	<0.56	3.1 J	15.9 J	<1.2	<0.56	
RB-5	Roux	27/3/2015	10	µg/kg	--	<2100	1,400 J	--	3,690 J ^a	--	--	--	--	1,110	89.2	11.9	<9.5	80.7	3.7 J	
RB-5	Roux	27/3/2015	15	µg/kg	--	<2000	1,530 J	--	316 ^c	--	--	--	--	209 J	13	3.8 J	<9.3	17.9	1.2 J	
RB-5	Roux	27/3/2015	20	µg/kg	--	<2000	1160 J	--	164 ^c	--	--	--	--	114	2.2 J	<0.96	<9.6	2.3 J	<0.48	

Notes:
(-): Results were not analyzed or unavailable
(??): Laboratory analytical results could not be interpreted
j = Estimated value
E = value exceeds calibration range
a = Result reported as an estimated value from low-level run (exceeded calibration range). Compound was < RL in methanol extract run due to dilution for a single peak (Tetrachloroethene).
b = Result reported as an estimated value from low-level run (exceeded calibration range). Compound was < RL in methanol due to dilution for a single peak (Tetrachloroethene).
c = Atypical pattern; value primarily due to a single peak(s).
<x.xx = Concentration not detected above x.xx reporting limit
TPH-HO: Total Petroleum Hydrocarbons as Hydraulic Oil, PCE: Tetrachloroethylene, TCE: Trichloroethylene, VC: Vinyl Chloride
Concentration exceeds environmental screening level (ESL)
Volatile Organic Compounds (VOCs) and TPHg by EPA Method 8260
TPHd and TPHno by EPA Method 8015

**Table 2. Historical Analytical Data for Groundwater
2868 Hannah Street, Oakland, California**

Sample ID	Consultant	Sample Date	Sample Depth (feet)	Units	TEPH	TPH-MO	TPH-D	TPH-HO	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	PCE	TCE	VC	Acetone	cis-1,2-Dichloroethylene (cis-1,2-DCE)
ESL Table E-1 - GW Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only)				µg/L	--	--	--	--	--	27	95,000	310	37,000	63	130	1.8	--	--
SB-1	Enrest	4/26/2002	(-11)	µg/L	--	<500	--	--	--	--	--	--	--	--	--	--	--	--
SB-2	Enrest	4/26/2002	(-11)	µg/L	--	<500	--	--	--	--	--	--	--	--	--	--	--	--
SB-3	Enrest	4/26/2002	(-11)	µg/L	--	<500	--	--	--	--	--	--	--	--	--	--	--	--
SB-4	Enrest	4/26/2002	(-11)	µg/L	--	<500	--	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	--	--	--
SB-5	Enrest	4/26/2002	(-11)	µg/L	--	<500	--	--	--	<1.0	21	<1.0	2	<1.0	<2.0	--	--	--
SB-6	Enrest	4/26/2002	(-11)	µg/L	--	<500	--	--	--	--	--	--	--	--	--	--	--	--
SP1	Enrest	5/21/2002	(-11)	µg/L	--	77,000	--	--	--	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	--	--	--
SP2	Enrest	5/21/2002	(-11)	µg/L	--	74,000	--	--	--	<1.0	<1.0	<1.0	3.0	<1.0	<2.0	--	--	--
SP3	Enrest	5/21/2002	(-11)	µg/L	--	5,780,000	--	--	--	87	94	<1.0	82	<1.0	2.0	--	--	--
Source Pt	Enrest	5/21/2002	(-11)	µg/L	--	--	--	--	--	<1.0	<1.0	<1.0	<2.0	<5.0	<10	--	--	--
PZ-1	ERAS	4/1/2003	(8.8)	µg/L	--	<250	<50	<250	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
PZ-2	ERAS	4/3/2003	--	µg/L	--	<556	<50	<556	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-5	ERAS	4/2/2003	(-10)	µg/L	--	<10	<570	5,300	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-6	ERAS	4/1/2003	(-10)	µg/L	--	<338	130	<338	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-7	ERAS	4/1/2003	(14.5)	µg/L	--	<250	<50	<250	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-8	ERAS	4/1/2003	(6.7)	µg/L	--	<385	<77	<385	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-9	ERAS	4/2/2003	(-10)	µg/L	--	<291	<50	890	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-10	ERAS	4/1/2003	(-10)	µg/L	--	<313	<63	670	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-11	ERAS	4/2/2003	(-10)	µg/L	--	<588	<118	890	<0.050	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-12	ERAS	4/2/2003	(12.0)	µg/L	--	<250	<50	<250	<0.050	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
E-13	ERAS	4/2/2003	(14.0)	µg/L	--	<333	<67	<333	<0.050	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--
B4-GW	Enrest	4/21/2005	(-10)	µg/L	<10,000	--	--	--	<50	????	????	????	????	????	????	--	--	--
B9-GW	Enrest	4/21/2005	(-10)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B12-GW	Enrest	4/21/2005	(-10)	µg/L	--	--	--	--	<50	--	--	--	--	--	--	--	--	--
B10-GW	Enrest	4/21/2005	(-10)	µg/L	<10,000	--	--	--	<50	????	????	????	????	????	????	--	--	--
B13-GW	Enrest	4/21/2005	(-10)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B11-GW	Enrest	4/21/2005	(-10)	µg/L	--	--	--	--	<50	--	--	--	--	--	--	--	--	--
B5-GW	Enrest	4/21/2005	(-10)	µg/L	<10,000	--	--	--	<50	????	????	????	????	????	????	--	--	--
B8-GW	Enrest	4/21/2005	(-10)	µg/L	--	--	--	--	<50	--	--	--	--	--	--	--	--	--
B6-GW	Enrest	4/21/2005	(-10)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B2-GW	Enrest	4/21/2005	(-10)	µg/L	--	--	--	--	<50	--	--	--	--	--	--	--	--	--
B1-GW	Enrest	4/21/2005	(-10)	µg/L	--	--	--	--	<50	--	--	--	--	--	--	--	--	--
B8-GW	Enrest	4/22/2005	(-10)	µg/L	???	--	--	--	--	--	--	--	--	--	--	--	--	--
B12-GW	Enrest	4/22/2005	(-10)	µg/L	???	--	--	--	--	--	--	--	--	--	--	--	--	--
B2-GW	Enrest	4/22/2005	(-10)	µg/L	<10,000	--	--	--	--	--	--	--	--	--	--	--	--	--

**Table 2. Historical Analytical Data for Groundwater
2868 Hannah Street, Oakland, California**

Sample ID	Consultant	Sample Date	Sample Depth (feet)	Units	TEPH	TPH-MO	TPH-D	TPH-HO	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	PCE	TCE	VC	Acetone	cis-1,2-Dichloroethylene (cis-1,2-DCE)
ESL Table E-1 - GW Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only)					µg/L	--	--	--	--	27	95,000	310	37,000	63	130	1.8	--	--
B11-GW	Enrest	4/22/2005	(-10)	µg/L	<10,000	--	--	--	--	--	--	--	--	--	--	--	--	--
B8-GW@25'	Enrest	4/22/2005	(25)	µg/L	<17,000	--	--	--	62	--	--	--	--	--	--	--	--	--
B5-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B10-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B11-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B9-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B13-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B6-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B4-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	853	--	--	--	--	--	--	--	--	--
B18-GW	Enrest	4/22/2005	(-10)	µg/L	<10,000	--	--	--	1,640	--	--	--	--	--	--	--	--	--
B7-GW	Enrest	4/22/2005	(-10)	µg/L	<20,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B18-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	285	--	--	--	--	--	--	--	--	--
B7-GW@25'	Enrest	4/22/2005	(25)	µg/L	<19,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B3-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B1-GW	Enrest	4/22/2005	(-10)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B1-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B14-GW	Enrest	4/22/2005	(-10)	µg/L	???	--	--	--	<50	--	--	--	--	--	--	--	--	--
B14-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
B2-GW@25'	Enrest	4/22/2005	(25)	µg/L	<10,000	--	--	--	<50	--	--	--	--	--	--	--	--	--
EB3-W-18.5	ERSC	9/18/2008	(18.5)	µg/L	--	610	730	--	--	--	--	--	--	<0.5	<0.5	--	--	--
EB4-W-21.0	ERSC	9/18/2008	(21.0)	µg/L	--	<300	69	--	--	--	--	--	--	<0.5	<0.5	--	--	--
EB5-W-21.0	ERSC	9/18/2008	(21.0)	µg/L	--	<300	150	--	--	--	--	--	--	1.6	<0.5	--	--	--
EB6-W-21.0	ERSC	9/18/2008	(21.0)	µg/L	--	<300	73	--	15000*	<83	<83	<83	<83	11000.0	<83	--	--	--
EB7-W-15.5	ERSC	9/18/2008	(15.5)	µg/L	--	1,600	1,400	--	<50	<0.5	<0.5	<0.5	<0.5	7.1	4.3	--	--	--
EB8-W-8.5	ERSC	9/18/2008	(8.5)	µg/L	--	650	3,100	--	460	<0.5	<0.5	5.0	1.3	<0.5	<0.5	--	--	--
EB9-W-15.5	ERSC	9/18/2008	(15.5)	µg/L	--	<300	51	--	--	--	--	--	--	2.1	<0.5	--	--	--
RB-1	Roux	3/27/2015	--	µg/L	--	273	294	--	7200 ^d	--	--	--	<46	4220.0	121	<20	<400	163
RB-2	Roux	3/27/2015	--	µg/L	--	234	264	--	<25	--	--	--	<0.46	<0.30	<0.20	<0.20	<4.0	<0.20
RB-3	Roux	3/27/2015	--	µg/L	--	187 J	320	--	19500 ^d	--	--	--	<120	11500.0	252	56.4 J	<1000	396
RB-4	Roux	3/27/2015	--	µg/L	--	80.8 J	79.8 J	--	<25	--	--	--	0.86 J	<0.30	<0.20	<0.20	6.0 J	<0.20
RB-5	Roux	3/27/2015	--	µg/L	--	110 J	164	--	924 ^d	--	--	--	<4.6	499.0	35.1	4.6 J	<40	48.6

Notes:
 (-): Results were not analyzed or unavailable
 ??? : Laboratory analytical results could not be interpreted
 * Result flagged by the laboratory as primarily due to single spike and not resembling TPHg
 TPH-HO: Total Petroleum Hydrocarbons as Hydraulic Oil, PCE: Tetrachloroethylene, TCE: Trichloroethylene, VC: Vinyl Chloride
 j = Estimated value
 d = Atypical pattern; value primarily due to a single peak(s).
 <x.xx = Concentration not detected above x.xx reporting limit
 Concentration exceeds environmental screening level (ESL)
 Volatile Organic Compounds (VOCs) and TPHg by EPA Method 8260
 TPHd and TPHmo by EPA Method 8015

**Table 3. Historical Analytical Data for Soil Vapor
2868 Hannah Street, Oakland, California**

Sample ID	Consultant	Sample Date	Sample Depth (feet)	Units	TEPH	TPH-MO	TPH-D	TPH-HO	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	PCE	TCE	VC
ESL Table E-2 - Soil Vapor Screening Levels for Evaluation of Potential Vapor Intrusion Concerns - Residential				µg/m ³	--	--	--	--	--	42	160,000	490	52,000	210	300	16
B-5SV	Enrest	5/25/2005	3.5	µg/m ³	--	--	--	--	--	5	33	9.1	52	<7.3	<5.8	<4.4
B-1SV	Enrest	5/25/2005	3.5	µg/m ³	--	--	--	--	--	<3.6	30	6.9	36	<7.8	<6.2	6.2

Notes:

(--): Results were not analyzed or unavailable

**Table 4. Grab Groundwater Results for Phase II Investigation
2868 Hannah Street, Oakland, California**

Boring ID	Date	Acetone	cis-1,2-Dichloroethylene (cis-1,2-DCE)	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	Vinyl chloride	Xylene (total)	Other VOCs	Total Petroleum Hydrocarbons as Gasoline (TPHg)	Total Petroleum Hydrocarbons as Diesel (TPHd)	Total Petroleum Hydrocarbons as Motor Oil (TPHmo)
		<i>micrograms per liter (µg/L)</i>									
RB-1	3/27/2015	<400	163	4,220	121	<20	<46	ND	7200 ^d	294	273
RB-2	3/27/2015	<4.0	<0.20	<0.30	<0.20	<0.20	<0.46	ND	<25	264	234
RB-3	3/27/2015	<1000	396	11,500	252	56.4 J	<120	ND	19500 ^d	320	187 J
RB-4	3/27/2015	6.0 J	<0.20	<0.30	<0.20	<0.20	0.86 J	ND	<25	79.8 J	80.8 J
RB-5	3/27/2015	<40	48.6	499	35.1	4.6 J	<4.6	ND	924 ^d	164	110 J
ESLs											
Table E-1	Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion (Residential)	130,000,000	3,100	63	130	2	37,000	NA	No Value	No Value	No Value
Table E-1	Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion (Commercial)	Sample Soil Gas	26,000	640	1,300	18	Sample Soil Gas	NA	No Value	No Value	No Value

Notes:

j = Estimated value

d = Atypical pattern; value primarily due to a single peak(s).

<x.xx = Concentration not detected above x.xx reporting limit

Concentration exceeds environmental screening level (ESL)

Volatile Organic Compounds (VOCs) and TPHg by EPA Method 8260

TPHd and TPHmo by EPA Method 8015

**Table 5. Soil Results for Phase II Investigation
2868 Hannah Street, Oakland, California**

Client Sample ID:	Depth	Date Sampled:	Acetone	cis-1,2-Dichloroethylene (cis-1,2-DCE)	trans-1,2-Dichloroethylene	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	Vinyl chloride	Other VOCs	Total Petroleum Hydrocarbons as Gasoline (TPHg)	Total Petroleum Hydrocarbons as Diesel (TPHD)	Total Petroleum Hydrocarbons as Motor Oil (TPHmo)	Moisture, Percent
			micrograms per kilogram (µg/kg)										%
RB-1	5	3/27/2015	<10	<1.2	<0.52	559	4.8 J	<1.0	ND	503 ^c	1,810 J	15,100 J	18.2
RB-1	10	3/27/2015	<10	46.1	1.7 J	2,640	46.9	1.3 J	ND	2,340 E ^a	1,170 J	6,910 J	20.3
RB-1	15	3/27/2015	<10	45.1	5.1 J	3,270	42.4	7.2	ND	2,690 E ^b	1,158 J	2,650 J	19.8
RB-1	20	3/27/2015	<650	<72	<33	4,050	<33	<65	ND	7,040 ^c	1,260 J	2,510 J	21.7
RB-2	5	3/27/2015	<11	<1.2	<0.57	<0.68	<0.57	<1.1	ND	<57	<990	<2000	15.7
RB-2	10	3/27/2015	<10	<1.2	<0.52	<0.63	<0.52	<1.0	ND	<52	<1000	<2100	20.1
RB-2	15	3/27/2015	<12	<1.3	<0.60	<0.72	<0.60	<1.2	ND	<60	1,270 J	<2100	20.2
RB-2	20	3/27/2015	<11	<1.2	<0.56	<0.67	<0.56	<1.1	ND	<56	1,050 J	<2100	19.4
RB-3	5	3/27/2015	<610	<67	<31	1,140	<31	<61	ND	4,150 J ^c	<1000	<2000	18.4
RB-3	10	3/27/2015	<2,200	243 J	<110	9,640	116 J	<220	ND	16,900 J ^c	1,140 J	<2000	14.7
RB-3	15	3/27/2015	<2,300	325 J	<120	11,800	213 J	<230	ND	22,300 J ^c	1,280 J	<2100	20.2
RB-3	20	3/27/2015	<1,100	<130	<57	6,300	69.9 J	<110	ND	12,800 ^c	<1100	<2100	21.9
RB-4	5	3/27/2015	<11	<1.2	<0.55	<0.67	<0.55	<1.1	ND	<55	1,860 J	5,050 J	19.1
RB-4	10	3/27/2015	<9.7	<1.1	<0.48	<0.58	<0.48	<0.97	ND	<48	<1000	<2000	17.6
RB-4	15	3/27/2015	<12	<1.3	<0.59	<0.70	<0.59	<1.2	ND	<59	1,210 J	<2100	19.7
RB-4	20	3/27/2015	<10	<1.1	<0.51	<0.62	<0.51	<1.0	ND	52.1 J	<1000	<2100	19.9
RB-5	5	3/27/2015	15.9 J	<1.2	<0.56	<0.67	<0.56	3.1 J	ND	59.8 J	2640 J	3900 J	20.7
RB-5	10	3/27/2015	<9.5	80.7	3.7 J	1,110	89.2	11.9	ND	3,690 J ^c	1400 J	<2100	21.6
RB-5	15	3/27/2015	<9.3	17.9	1.2 J	209 J	13	3.8 J	ND	316 ^c	1530 J	<2000	19.5
RB-5	20	3/27/2015	<9.6	2.3 J	<0.48	114	2.2 J	<0.96	ND	164 ^c	1160 J	<2000	19.6
ESLs													
Table A-1	Shallow Soil Screening Levels- Residential Land Use (Groundwater is a current or potential drinking water resource)		0.5	190	670	550	460	32	NA	100,000	100,000	100,000	NA
Table A-2	Shallow Soil Screening Levels- Commercial Land Use (Groundwater is a current or potential drinking water resource)		0.5	190	760	700	460	85	NA	500,000	110,000	500,000	NA

Notes:

j = Estimated value

E = value exceeds calibration range

a = Result reported as an estimated value from low-level run (exceeded calibration range). Compound was < RL in methanol extract run due to dilution for a single peak (Tetrachloroethene).

b = Result reported as an estimated value from low-level run (exceeded calibration range). Compound was < RL in methanol due to dilution for a single peak (Tetrachloroethene).

c = Atypical pattern; value primarily due to a single peak(s).

<x.xx = Concentration not detected above x.xx reporting limit

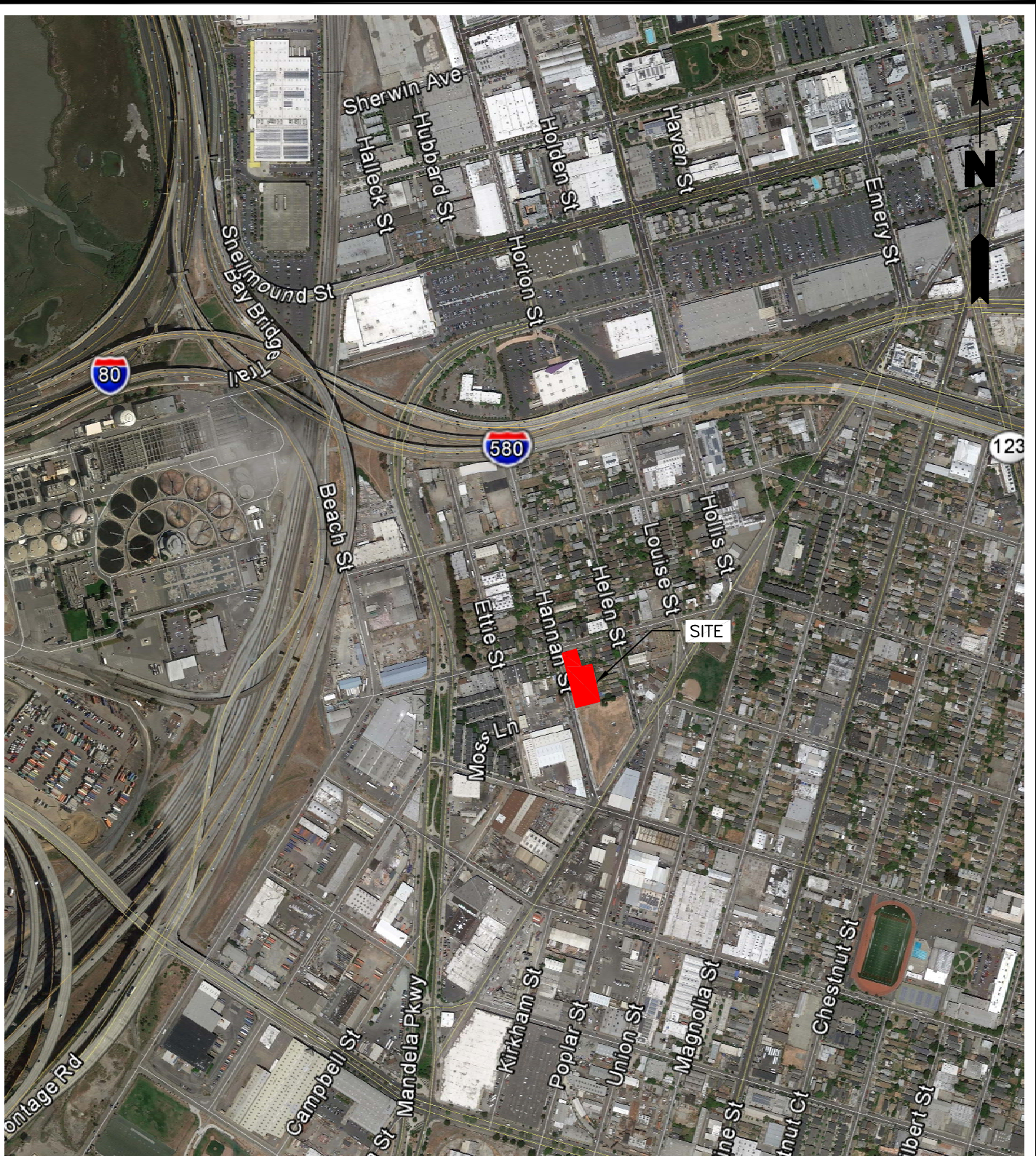
Concentration exceeds environmental screening level (ESL)

Volatile Organic Compounds (VOCs) and TPHg by EPA Method 8260

TPHD and TPHmo by EPA Method 8015

FIGURES

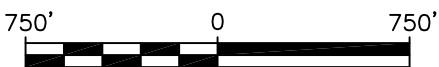
1. Site Location Map
2. Site Map
3. Previous Remedial Activities
4. Conceptual Site Model
5. Phase II Investigation Distribution of PCE and TCE in Groundwater
6. Phase II Investigation Distribution of PCE and TCE in Soil
7. Groundwater Monitoring Wells and Supplemental Soil Borings
8. Soil Excavation Site Plan
9. Soil Excavation Details
10. Soil Aeration and Erosion Control Plan
11. Preliminary Schedule



LEGEND



SITE LOCATION



Title:				SITE LOCATION MAP	
				2868 HANNAH STREET OAKLAND, CALIFORNIA	
Prepared For:				2868 HANNAH STREET, LLC	
ROUX		Compiled by: NR	Date: 31JUL15	FIGURE 1	
ROUX ASSOCIATES, INC. <i>Environmental Consulting & Management</i>		Prepared by: NR	Scale: AS SHOWN		
		Project Mgr: DG	Project: 2463.0003S000		
		File: 2463.0003S103.01.DWG			

32ND STREET I

MULTI-TENANT RESIDENTIAL

1505
32ND ST

1505
32ND ST

RESIDENTIAL
2877 HELEN ST

RESIDENTIAL
2871 HELEN ST

RESIDENTIAL
2867 HELEN ST

RESIDENTIAL
2863 HELEN ST

RESIDENTIAL
2859 HELEN ST

RESIDENTIAL
2849-51 HELEN ST

RESIDENTIAL
2845 HELEN ST

RESIDENTIAL
2841 HELEN ST

RESIDENTIAL
2835 HELEN ST

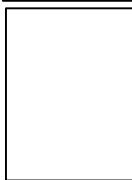
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2831 HELEN ST

VACANT LAND

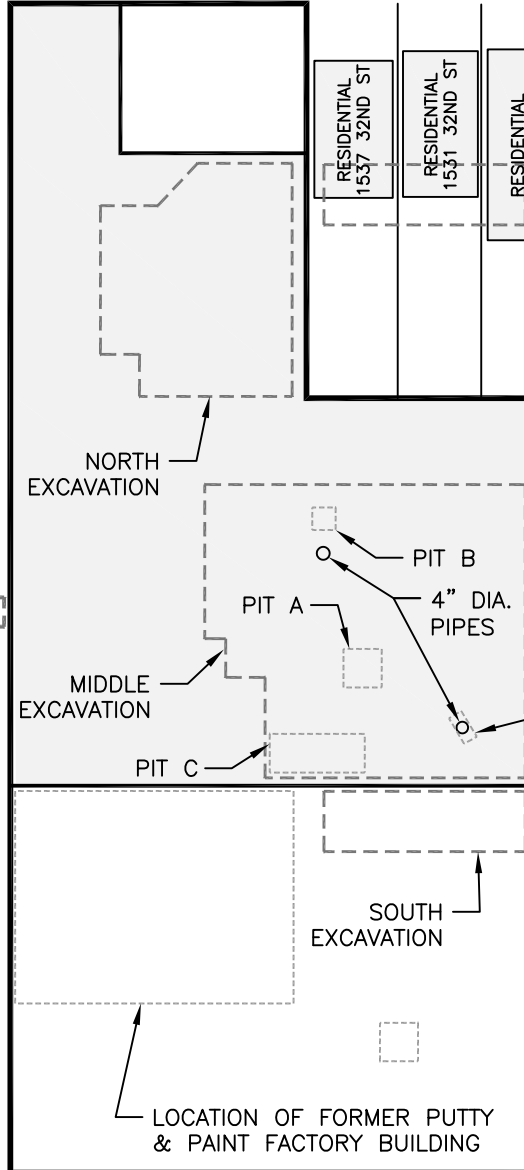
MULTI-TENANT
RESIDENTIAL
1555 32ND ST

HANNAH STREET

FORMER 700-GAL
GASOLINE UST
(REM. 02/2002)



CLEAR CHANNEL
OUTDOOR



NORTH
EXCAVATION

MIDDLE
EXCAVATION

SOUTH
EXCAVATION

PIT A

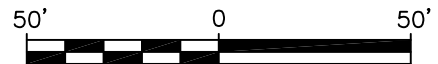
PIT B

PIT D

4" DIA.
PIPES

PIT C

LOCATION OF FORMER PUTTY
& PAINT FACTORY BUILDING



Title:

SITE MAP

2868 HANNAH STREET
OAKLAND CALIFORNIA

Prepared For:

2868 HANNAH STREET, LLC

ROUX ROUX ASSOCIATES, INC. Environmental Consulting & Management	Compiled by: D.F.	Date: 14AUG15	FIGURE 2
	Prepared by: N.R.	Scale: AS SHOWN	
	Project Mgr: A.C.	Project: 2463.0003S000	
	File: 2463.0003S103.02.DWG		

32ND STREET I

MULTI-TENANT RESIDENTIAL

1505 32ND ST

1505 32ND ST

RESIDENTIAL 2877 HELEN ST

RESIDENTIAL 2871 HELEN ST

RESIDENTIAL 2867 HELEN ST

RESIDENTIAL 2863 HELEN ST

RESIDENTIAL 2859 HELEN ST

RESIDENTIAL 2849-51 HELEN ST

RESIDENTIAL 2845 HELEN ST

RESIDENTIAL 2841 HELEN ST

RESIDENTIAL 2835 HELEN ST

RESIDENTIAL 2831 HELEN ST

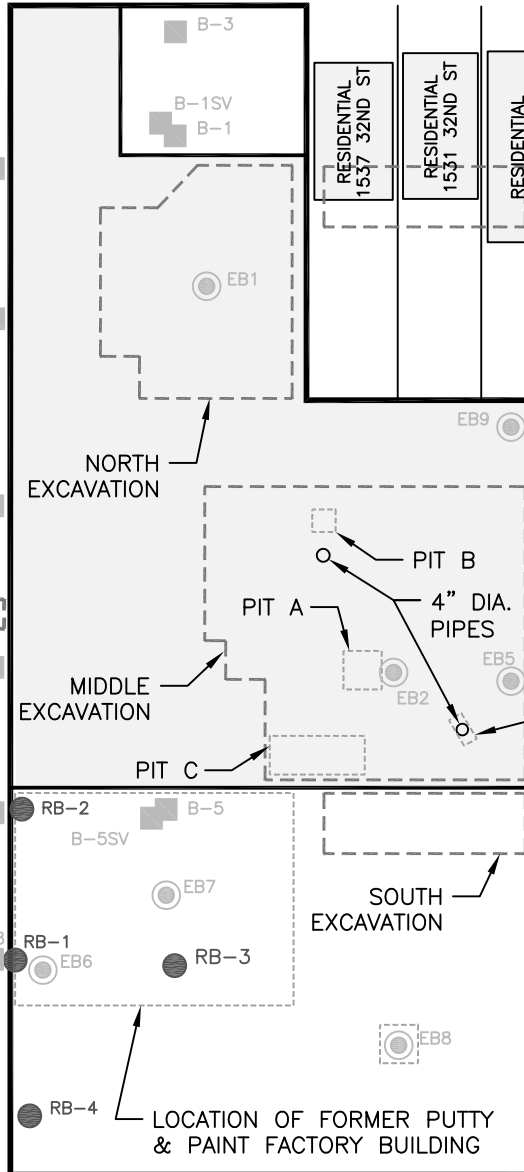
VACANT LAND

MULTI-TENANT RESIDENTIAL 1555 32ND ST

HANNAH STREET

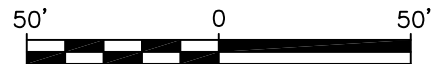
FORMER 700-GAL GASOLINE UST (REM. 02/2002)

CLEAR CHANNEL OUTDOOR



LEGEND

- ENVIRONMENTAL RISK SPECIALTIES SOIL BORING LOCATION
- ENVIRONMENTAL RESTORATION SERVICES BORING LOCATION
- ROUX PHASE 2 SOIL BORING LOCATION



Title:

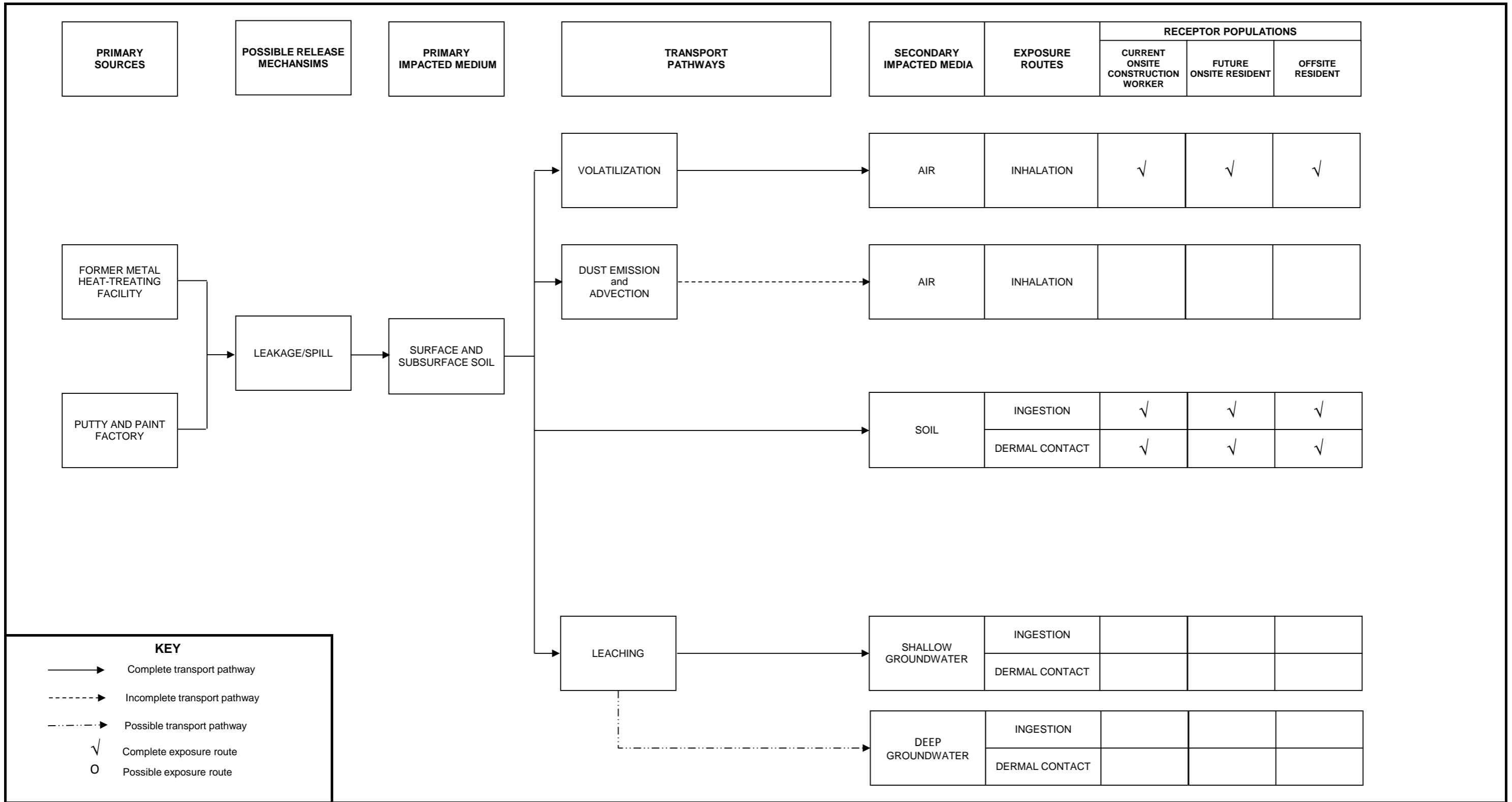
PREVIOUS REMEDIAL ACTIVITIES

2868 HANNAH STREET
OAKLAND CALIFORNIA

Prepared For:

2868 HANNAH STREET, LLC

 ROUX ASSOCIATES, INC. <i>Environmental Consulting & Management</i>	Compiled by: D.F.	Date: 14AUG15	FIGURE 3
	Prepared by: N.R.	Scale: AS SHOWN	
	Project Mgr: A.C.	Project: 2463.0003S000	
	File: 2463.0003S103.02.DWG		



KEY

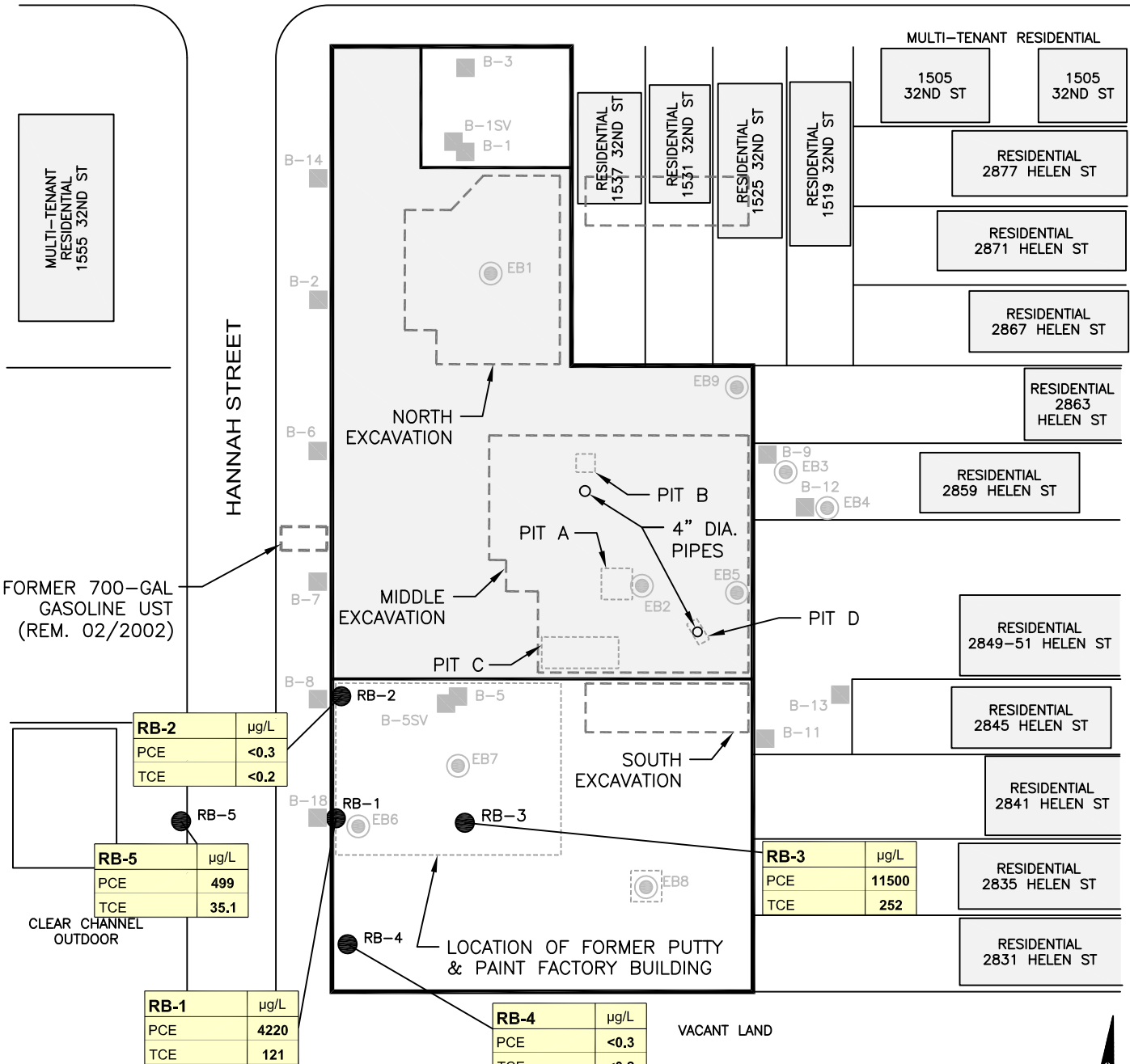
- Complete transport pathway
- - - - - Incomplete transport pathway
- · - · - Possible transport pathway
- √ Complete exposure route
- Possible exposure route

ROUX ASSOCIATES, INC.
Environmental Consulting & Management
 555 12th Street, Suite 1725
 Oakland, California 94607

Conceptual Site Model
 2868 Hannah Street
 Oakland, California

Figure 4

32ND STREET I



RB-2	µg/L
PCE	<0.3
TCE	<0.2

RB-5	µg/L
PCE	499
TCE	35.1

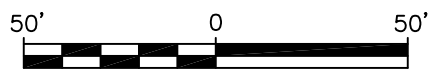
RB-1	µg/L
PCE	4220
TCE	121

RB-4	µg/L
PCE	<0.3
TCE	<0.2

RB-3	µg/L
PCE	11500
TCE	252

LEGEND

- ENVIRONMENTAL RISK SPECIALTIES SOIL BORING LOCATION
- ENVIRONMENTAL RESTORATION SERVICES BORING LOCATION
- ROUX PHASE II SOIL BORING LOCATION



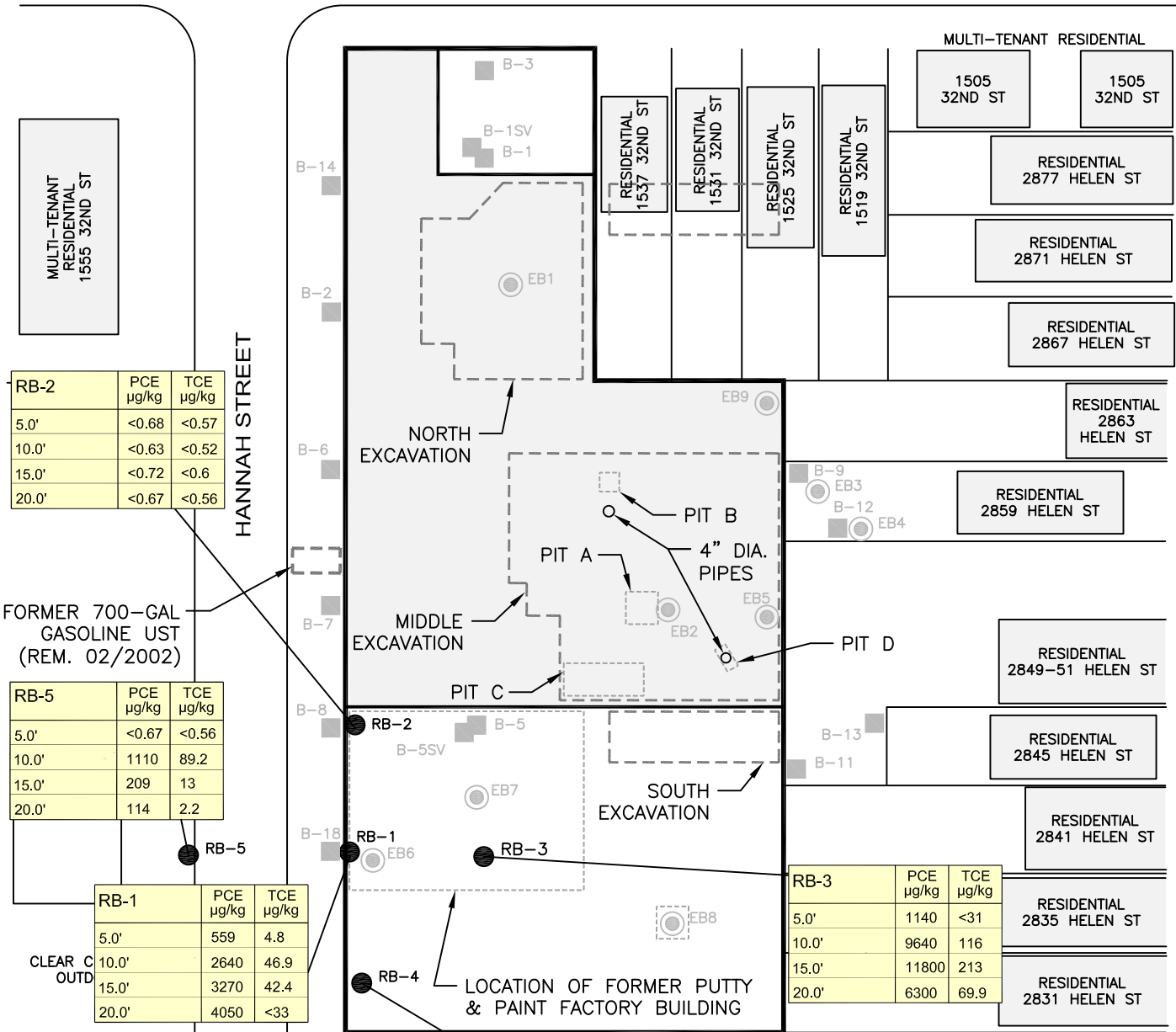
Title: **PHASE II INVESTIGATION
DISTRIBUTION OF PCE AND TCE
IN GROUNDWATER**
2868 HANNAH STREET
OAKLAND CALIFORNIA

Prepared For:
2868 HANNAH STREET, LLC

 ROUX ASSOCIATES, INC. <i>Environmental Consulting & Management</i>	Compiled by: D.F.	Date: 07AUG15	FIGURE 5
	Prepared by: N.R.	Scale: AS SHOWN	
	Project Mgr: A.C.	Project: 2463.0003S000	
	File: 2463.0003S103.05.DWG		

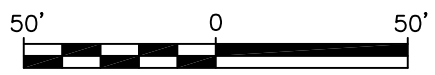
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32ND STREET I



LEGEND

- ENVIRONMENTAL RISK SPECIALTIES SOIL BORING LOCATION
- ENVIRONMENTAL RESTORATION SERVICES BORING LOCATION
- ROUX PHASE II SOIL BORING LOCATION



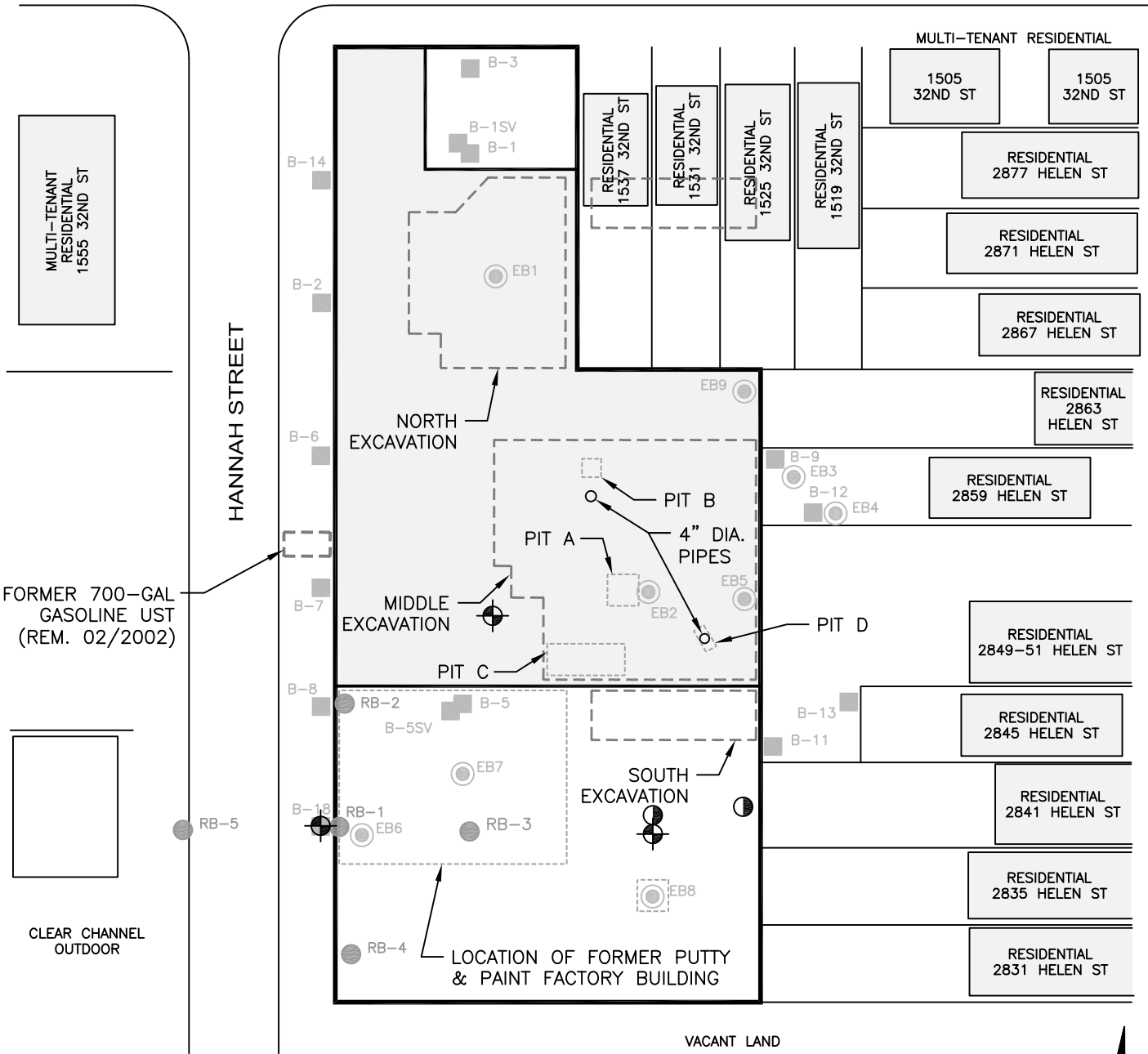
Title: **PHASE II INVESTIGATION DISTRIBUTION OF PCE AND TCE IN SOIL**
 2868 HANNAH STREET OAKLAND CALIFORNIA

Prepared For: **2868 HANNAH STREET, LLC**

 ROUX ASSOCIATES, INC. Environmental Consulting & Management	Compiled by: D.F.	Date: 07AUG15	FIGURE 6
	Prepared by: N.R.	Scale: AS SHOWN	
	Project Mgr: A.C.	Project: 2463.0003S000	
	File: 2463.0003S103.05.DWG		

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32ND STREET I



FORMER 700-GAL GASOLINE UST (REM. 02/2002)

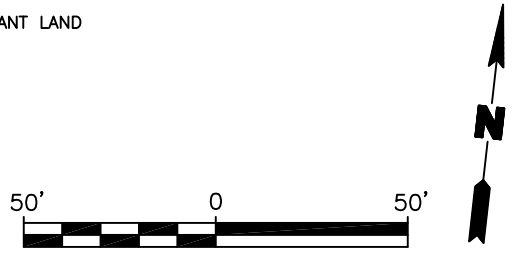
CLEAR CHANNEL OUTDOOR

LOCATION OF FORMER PUTTY & PAINT FACTORY BUILDING

VACANT LAND

LEGEND

- ENVIRONMENTAL RISK SPECIALTIES SOIL BORING LOCATION
- ENVIRONMENTAL RESTORATION SERVICES BORING LOCATION
- ROUX PHASE 2 SOIL BORING LOCATION
- ⊕ GROUNDWATER MONITORING WELL
- ◐ SUPPLEMENTAL SOIL BORING LOCATION



<p>Title: GROUNDWATER MONITORING WELLS AND SUPPLEMENTAL SOIL BORINGS</p> <p>2868 HANNAH STREET OAKLAND CALIFORNIA</p>			
<p>Prepared For: 2868 HANNAH STREET, LLC</p>			
<p>ROUX ROUX ASSOCIATES, INC. Environmental Consulting & Management</p>	<p>Compiled by: D.F.</p>	<p>Date: 14AUG15</p>	<p>FIGURE 7</p>
	<p>Prepared by: N.R.</p>	<p>Scale: AS SHOWN</p>	
	<p>Project Mgr: A.C.</p>	<p>Project: 2463.0003S000</p>	
<p>File: 2463.0003S103.02.DWG</p>			

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32ND STREET I

MULTI-TENANT RESIDENTIAL

1505
32ND ST

1505
32ND ST

RESIDENTIAL
2877 HELEN ST

RESIDENTIAL
2871 HELEN ST

RESIDENTIAL
2867 HELEN ST

RESIDENTIAL
2863 HELEN ST

RESIDENTIAL
2859 HELEN ST

RESIDENTIAL
2849-51 HELEN ST

RESIDENTIAL
2845 HELEN ST

RESIDENTIAL
2841 HELEN ST

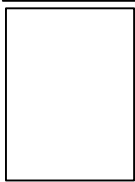
RESIDENTIAL
2835 HELEN ST

RESIDENTIAL
2831 HELEN ST

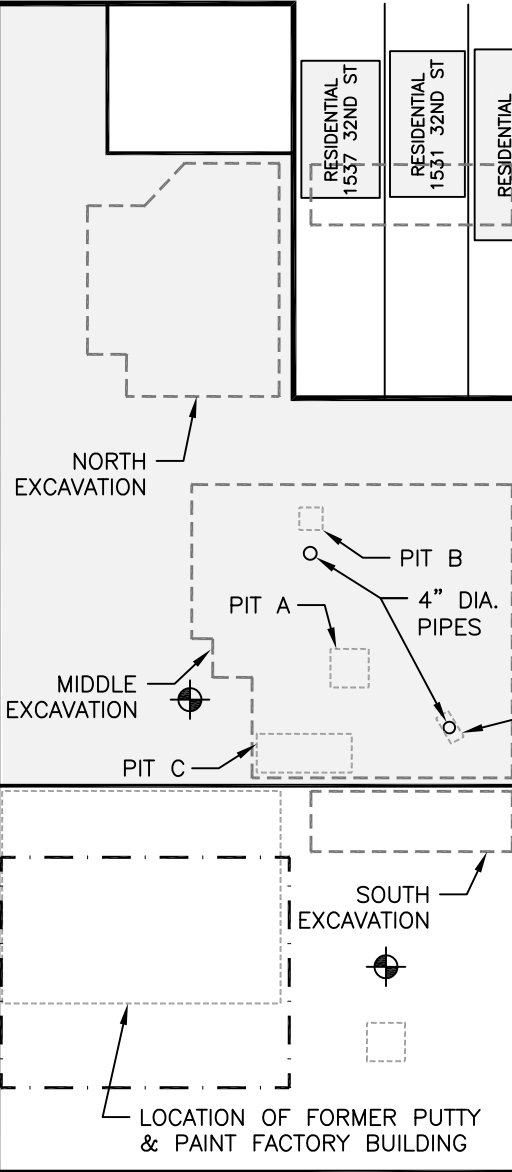
MULTI-TENANT
RESIDENTIAL
1555 32ND ST

HANNAH STREET

FORMER 700-GAL
GASOLINE UST
(REM. 02/2002)



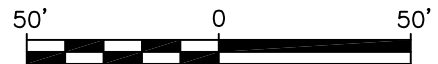
CLEAR CHANNEL
OUTDOOR



VACANT LAND

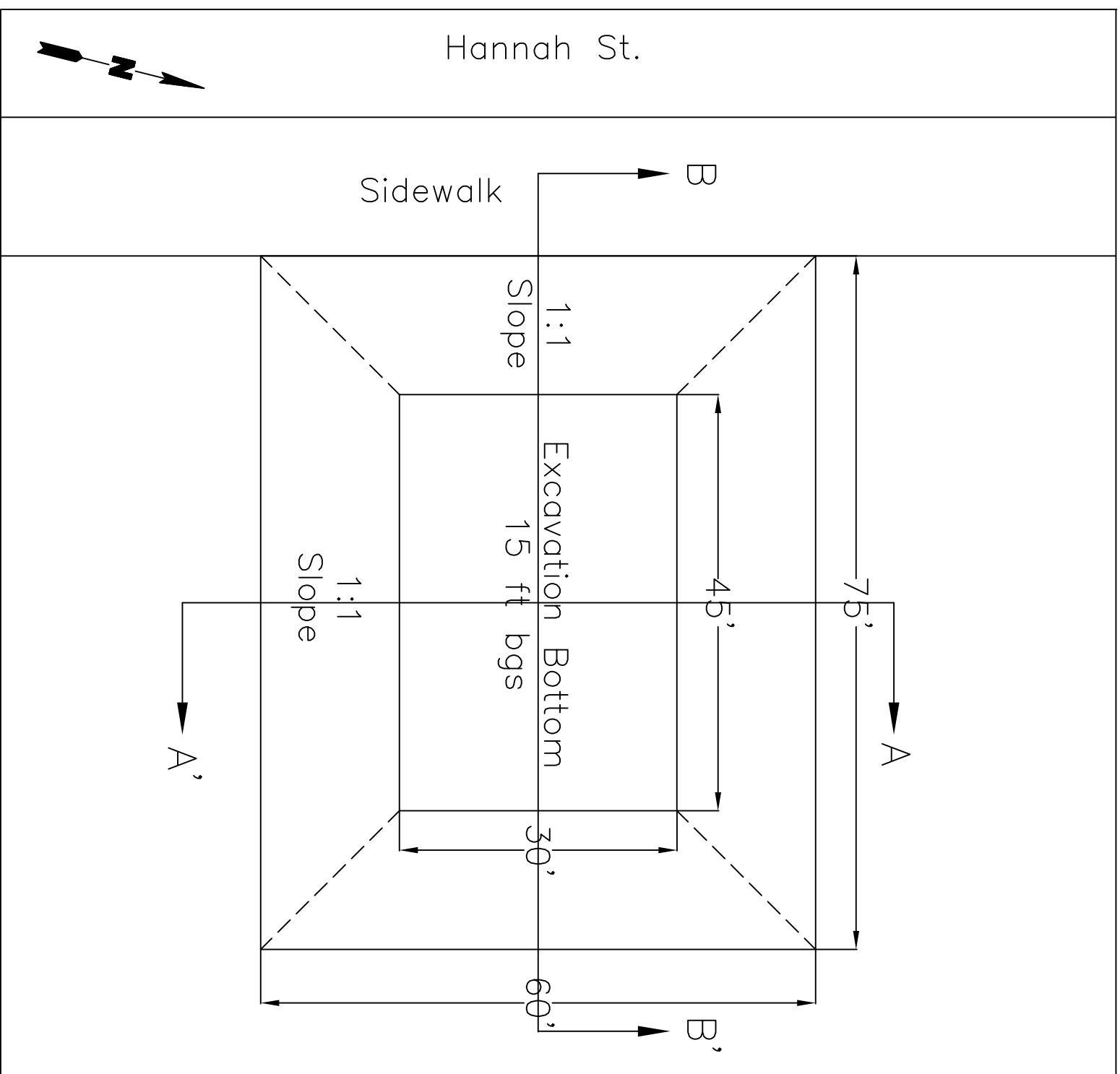
LEGEND

- PROPOSED LIMITS OF SOIL AND GROUNDWATER REMEDIATION
- ⊕ GROUNDWATER MONITORING WELL

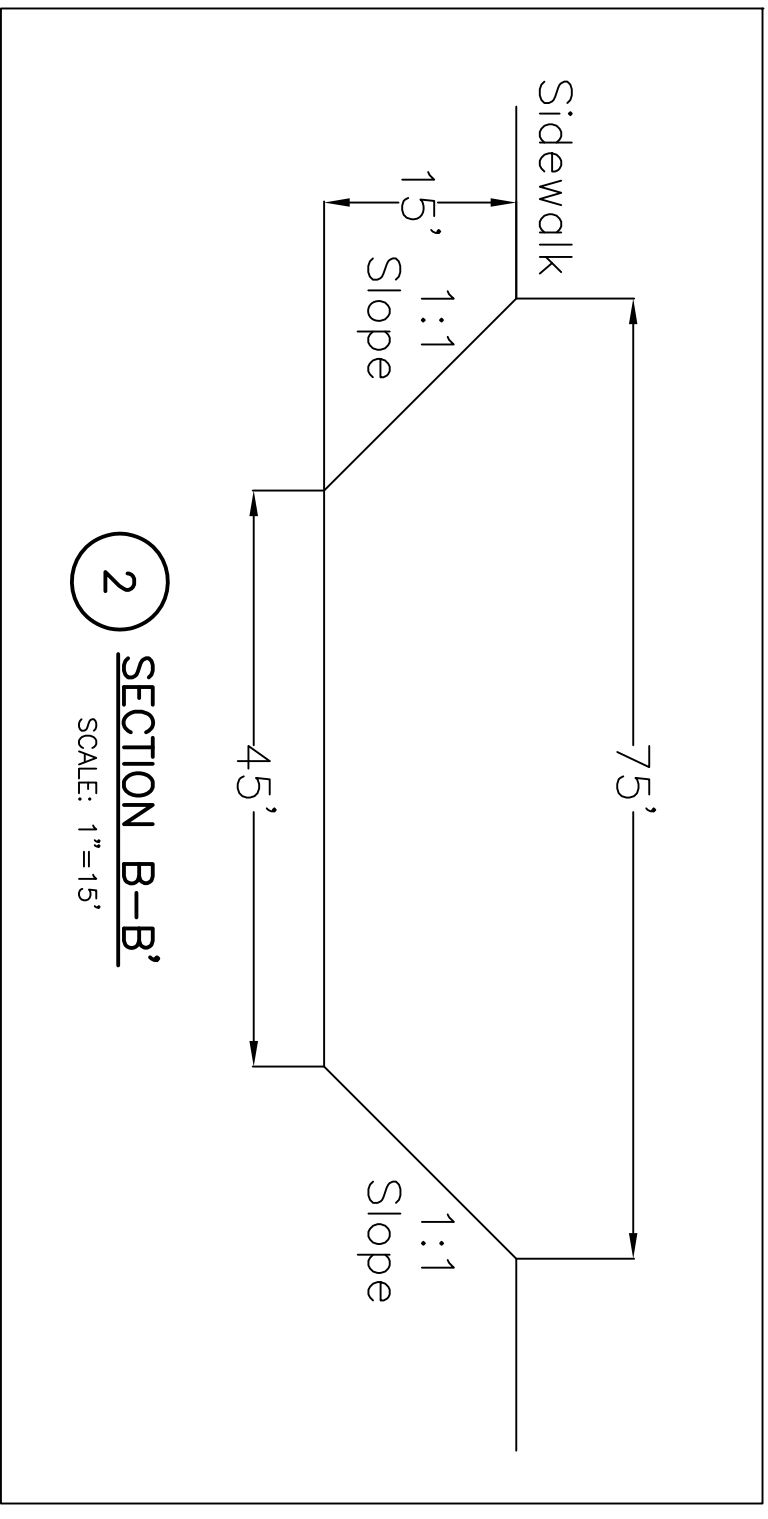
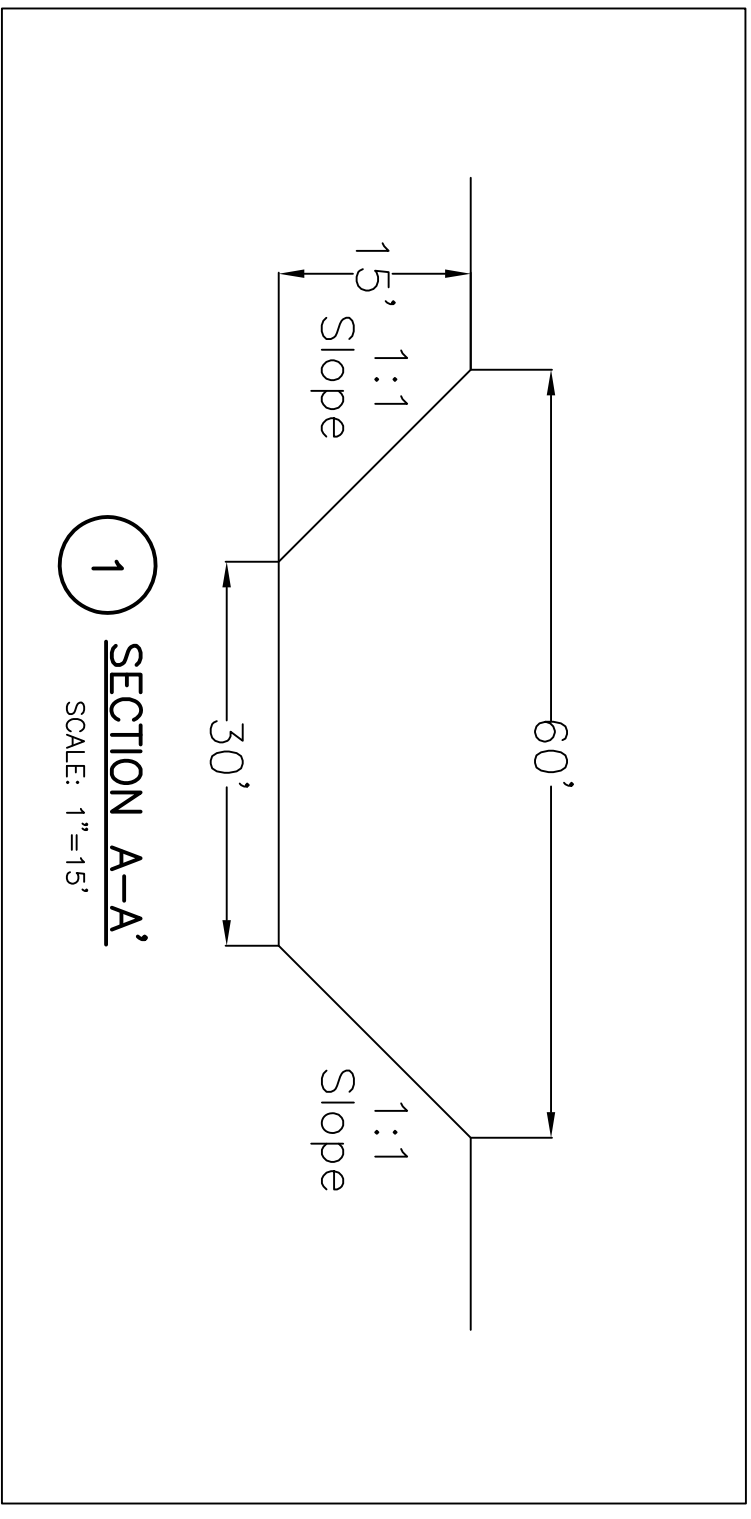


Title:			
SOIL EXCAVATION SITE PLAN			
2868 HANNAH STREET OAKLAND CALIFORNIA			
Prepared For:			
2868 HANNAH STREET, LLC			
ROUX ROUX ASSOCIATES, INC. <i>Environmental Consulting & Management</i>	Compiled by: D.F.	Date: 14AUG15	FIGURE 8
	Prepared by: N.R.	Scale: AS SHOWN	
	Project Mgr: A.C.	Project: 2463.0003S000	
	File: 2463.0003S103.02.DWG		

O:\CLIENTS\MADISON PARK FINANCIAL\2868 HANNAH STREET, OAKLAND\FIGURES\SOIL REMEDIATION WORK PLAN\2463.0003S103.02.DWG



IMPACTED VOLUME: 875 C.Y.
 UNIMPACTED VOLUME: 750 C.Y.



North, South, and East boundaries may extend based on confirmation sampling results

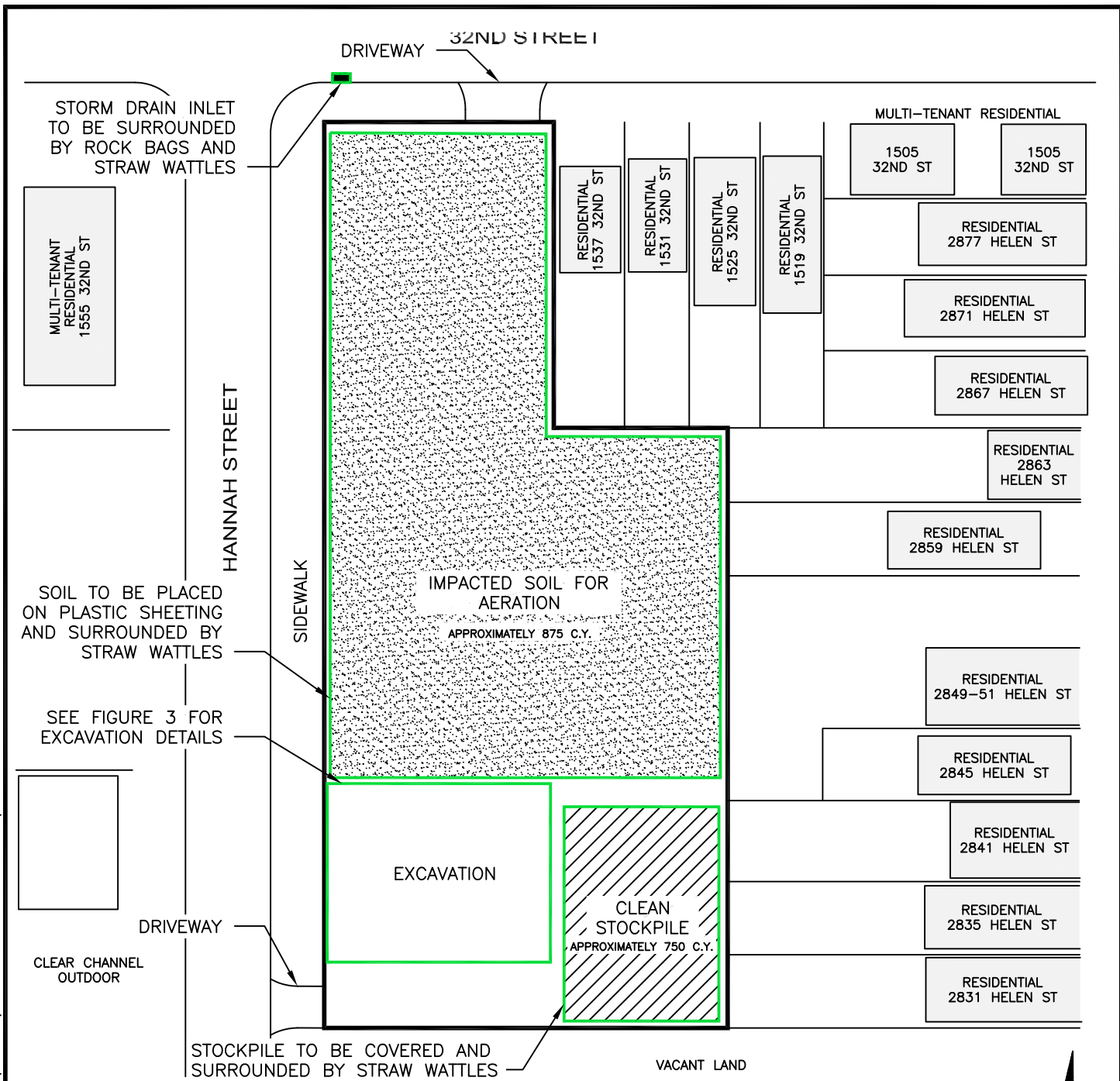
SOIL EXCAVATION DETAILS

2868 HANNAH STREET
 OAKLAND, CALIFORNIA

Prepared For: 2868 HANNAH STREET, LLC

ROUX Environmental Consulting & Management	Prepared by: DRF	Date: 14AUG15
	Prepared by: NR	Scale: AS SHOWN
	Project Mgr: DG	Project: 2463.0003S002
	File: 2463.0003S103.03.DWG	

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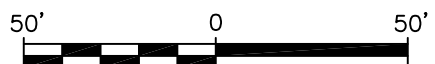


LEGEND

- PROPERTY BOUNDARY
- STRAW WATTLE

NOTES

1. EXCAVATION WILL REMAIN COVERED AND SURROUNDED BY STRAW WATTLES DURING AERATION.
2. STORM DRAIN INLET TO BE PROTECTED IN ACCORDANCE WITH CALTRANS CONSTRUCTION BMP MANUAL DETAIL SC-10.
3. EXCAVATION AND STOCKPILES WILL BE PROTECTED IN ACCORDANCE WITH CALTRANS CONSTRUCTION BMP MANUAL DETAILS SS-07 AND WM-03, RESPECTIVELY.
4. HOURS OF OPERATION: 7:00 AM - 5:30 PM.



Title:			
SOIL AERATION AND EROSION CONTROL PLAN			
2868 HANNAH STREET OAKLAND, CALIFORNIA			
Prepared For:			
2868 HANNAH ST., LLC			
 ROUX ASSOCIATES, INC. <i>Environmental Consulting & Management</i>	Compiled by: N.R.	Date: 14AUG15	FIGURE 10
	Prepared by: N.R.	Scale: AS SHOWN	
	Project Mgr: A.C.	Project: 2463.0003S000	
	File: 2463.0003S103.04.DWG		

Draft Remediation Schedule (Augst 10, 2015)

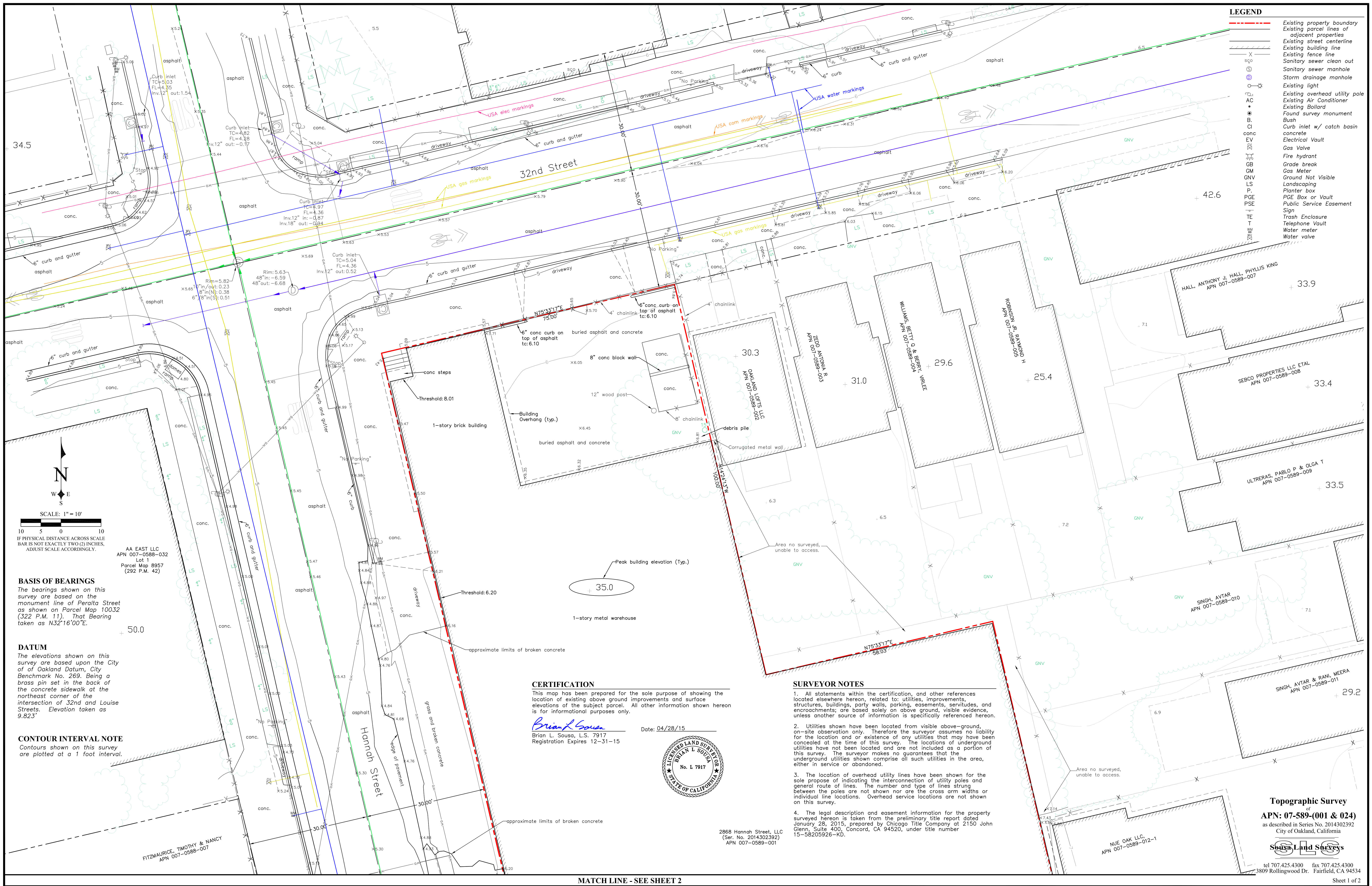
ID	%	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Half 2, 2015							Half 1, 2016					Half 2,	
									M	J	J	A	S	O	N	D	J	F	M	A	M	J
1	0%		2868 Hannah Street Remediation Soil Remediation	264 days	Tue 7/28/15	Fri 7/29/16			[Gantt bar spanning from Tue 7/28/15 to Fri 7/29/16]													
2	0%		Prepare Application for City of Oakland Grading Permit	10 days	Tue 7/28/15	Mon 8/10/15			[Gantt bar from Tue 7/28/15 to Mon 8/10/15]													
3	0%		Submit Grading Permit Application	1 day	Wed 8/12/15	Wed 8/12/15	2FS+1 day		[Gantt bar from Wed 8/12/15 to Wed 8/12/15]													
4	0%		Prepare Excavation Work Plan	7 days	Tue 7/28/15	Wed 8/5/15			[Gantt bar from Tue 7/28/15 to Wed 8/5/15]													
5	0%		Submit Excavation Work Plan	1 day	Thu 8/6/15	Thu 8/6/15	4		[Gantt bar from Thu 8/6/15 to Thu 8/6/15]													
6	0%		ACEH Review and Approval of Excavation Work Plan	15 days	Fri 8/7/15	Thu 8/27/15	5		[Gantt bar from Fri 8/7/15 to Thu 8/27/15]													
7	0%		Receive Grading Permit	1 day	Fri 9/18/15	Fri 9/18/15	6FS+15 days		[Gantt bar from Fri 9/18/15 to Fri 9/18/15]													
8	0%		Prepare BAAQMD Permit Application for Aeration	10 days	Thu 8/6/15	Wed 8/19/15	4		[Gantt bar from Thu 8/6/15 to Wed 8/19/15]													
9	0%		Soil Excavation	3 wks	Mon 10/19/15	Fri 11/6/15	7FS+20 days		[Gantt bar from Mon 10/19/15 to Fri 11/6/15]													
10	0%		Soil Aeration	9 mons	Mon 11/9/15	Fri 7/15/16	9		[Gantt bar from Mon 11/9/15 to Fri 7/15/16]													
11	0%		Excavation Backfilling and Compaction	10 days	Mon 7/18/16	Fri 7/29/16	10		[Gantt bar from Mon 7/18/16 to Fri 7/29/16]													

Project: 2868 Hannah Street Remediation Schedule Date: 5/1/15	Task Project Summary Split External Tasks Milestone External Milestone Summary Inactive Task	Inactive Milestone Inactive Summary Manual Task Duration-only	Manual Summary Rollup Manual Summary Start-only Finish-only	Deadline Progress
--	---	--	--	--------------------------

Soil Remedial Action Work Plan
2868 Hannah Street
Oakland, California

APPENDIX A

Utility Site Maps



LEGEND

- Existing property boundary
- - - Existing parcel lines of adjacent properties
- - - Existing street centerline
- - - Existing building line
- - - Existing fence line
- ⊗ Sanitary sewer clean out
- ⊕ Sanitary sewer manhole
- ⊙ Storm drainage manhole
- ⊛ Existing light
- ⊙ Existing overhead utility pole
- AC Existing Air Conditioner
- ⊙ Existing Ballast
- ⊙ Found survey monument
- B. Bush
- CI Curb inlet w/ catch basin
- conc concrete
- EV Electrical Vault
- GV Gas Valve
- Fire hydrant
- GB Grade break
- GM Gas Meter
- GNV Ground Not Visible
- LS Landscaping
- P Planter box
- PGE Box or Vault
- PSE Public Service Easement
- Sign
- TE Trash Enclosure
- T Telephone Vault
- Water meter
- Water valve

34.5

42.6

32nd Street

1-story brick building

Peak building elevation (Typ.)
35.0

1-story metal warehouse

CERTIFICATION

This map has been prepared for the sole purpose of showing the location of existing above ground improvements and surface elevations of the subject parcel. All other information shown herein is for informational purposes only.

Brian L. Sousa
Brian L. Sousa, L.S. 7917
Registration Expires 12-31-15

Date: 04/28/15



SURVEYOR NOTES

1. All statements within the certification, and other references located elsewhere hereon, related to: utilities, improvements, structures, buildings, party walls, parking, easements, servitudes, and encroachments; are based solely on above ground, visible evidence, unless another source of information is specifically referenced hereon.
2. Utilities shown have been located from visible above-ground, on-site observation only. Therefore the surveyor assumes no liability for the location and or existence of any utilities that may have been concealed at the time of this survey. The locations of underground utilities have not been located and are not included as a portion of this survey. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned.
3. The location of overhead utility lines have been shown for the sole purpose of indicating the interconnection of utility poles and general route of lines. The number and type of lines strung between the poles are not shown nor are the cross arm widths or individual line locations. Overhead service locations are not shown on this survey.
4. The legal description and easement information for the property surveyed hereon is taken from the preliminary title report dated January 28, 2015, prepared by Chicago Title Company at 2150 John Glenn, Suite 400, Concord, CA 94520, under title number 15-58205928-KD.

2868 Hannah Street, LLC
(Ser. No. 2014302392)
APN 007-0589-001

BASIS OF BEARINGS
The bearings shown on this survey are based on the monument line of Paralta Street as shown on Parcel Map 10032 (322 P.M. 11). That Bearing taken as N32°16'00"E.

DATUM
The elevations shown on this survey are based upon the City of Oakland Datum, City Benchmark No. 269. Being a brass pin set in the back of the concrete sidewalk at the northeast corner of the intersection of 32nd and Louise Streets. Elevation taken as 9.823'

CONTOUR INTERVAL NOTE
Contours shown on this survey are plotted at a 1 foot interval.

AA EAST LLC
APN 007-0588-032
Lot
Parcel Map 8957
(292 P.M. 42)

FITZMAURICE, TIMOTHY & NANCY
APN 007-0588-007

Topographic Survey
of
APN: 07-589-(001 & 024)
as described in Series No. 2014302392
City of Oakland, California

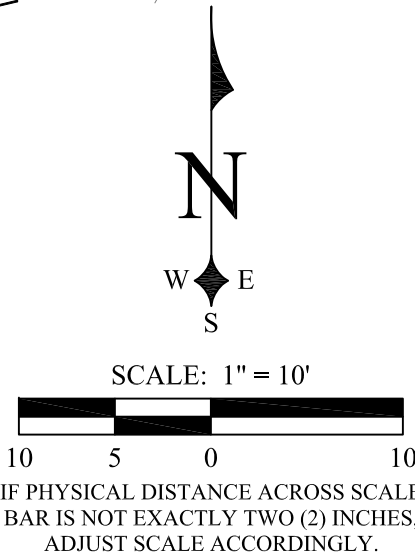
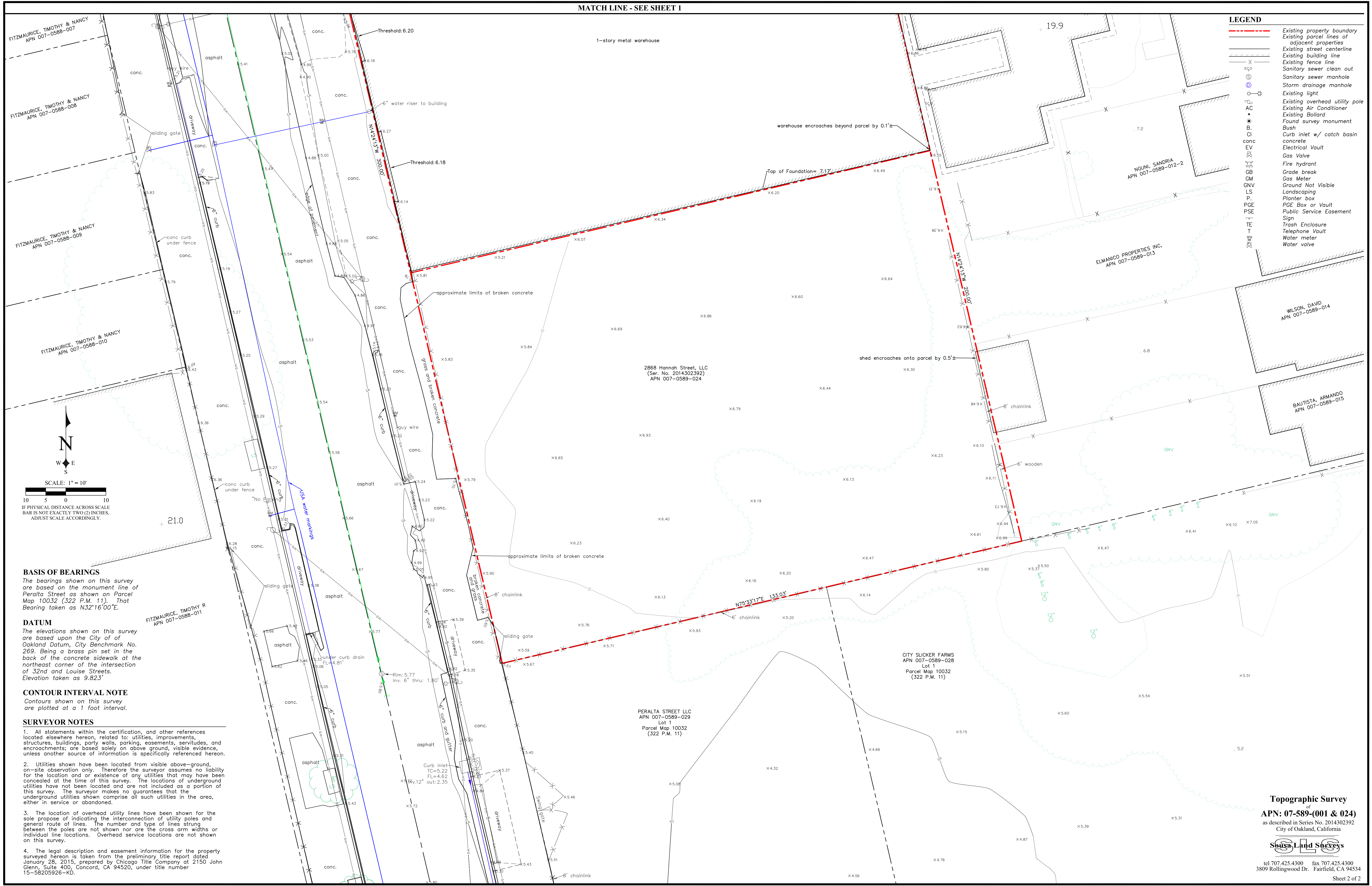
Sousa Land Surveys

tel 707.425.4300 fax 707.425.4300
3809 Rollingwood Dr. Fairfield, CA 94534

MATCH LINE - SEE SHEET 2

Sheet 1 of 2

LEGEND	
	Existing property boundary
	Existing parcel lines of adjacent properties
	Existing street centerline
	Existing building line
	Existing fence line
	Sanitary sewer clean out
	Sanitary sewer manhole
	Storm drainage manhole
	Existing light
	Existing overhead utility pole
	Existing Air Conditioner
	Existing Bollard
	Found survey monument
	Bush
	Curb inlet w/ catch basin
	concrete
	Electrical Vault
	Gas Valve
	Fire hydrant
	Grade break
	Gas Meter
	Ground Not Visible
	Landscaping
	Planter box
	PGE Box or Vault
	Public Service Easement
	Sign
	Trash Enclosure
	Telephone Vault
	Water meter
	Water valve



BASIS OF BEARINGS
 The bearings shown on this survey are based on the monument line of Peralta Street as shown on Parcel Map 100332 (322 P.M. 11). That Bearing taken as N32°16'00"E.

DATUM
 The elevations shown on this survey are based upon the City of Oakland Datum, City Benchmark No. 269. Being a brass pin set in the back of the concrete sidewalk at the northeast corner of the intersection of 32nd and Louise Streets. Elevation taken as 9.823'

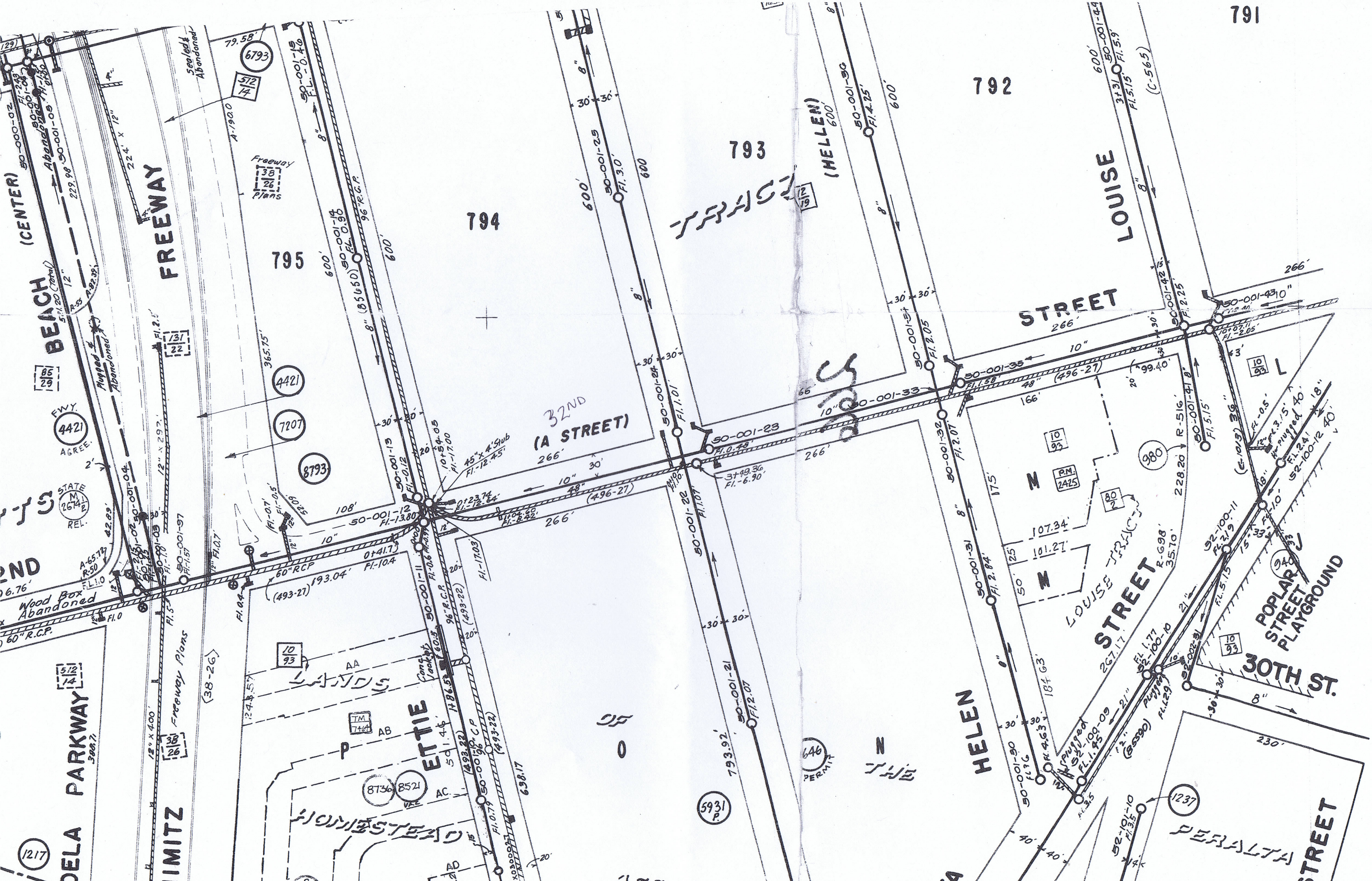
CONTOUR INTERVAL NOTE
 Contours shown on this survey are plotted at a 1 foot interval.

SURVEYOR NOTES

- All statements within the certification, and other references located elsewhere hereon, related to: utilities, improvements, structures, buildings, party walls, parking, easements, servitudes, and encroachments; are based solely on above ground, visible evidence, unless another source of information is specifically referenced hereon.
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- The location of overhead utility lines have been shown for the sole purpose of indicating the interconnection of utility poles and general route of lines. The number and type of lines strung between the poles are not shown nor are the cross arm widths or individual line locations. Overhead service locations are not shown on this survey.
- The legal description and easement information for the property surveyed hereon is taken from the preliminary title report dated January 28, 2015, prepared by Chicago Title Company at 2150 John Glenn, Suite 400, Concord, CA 94520, under title number 15-58205926-KD.

Topographic Survey
 of
APN: 07-589-(001 & 024)
 as described in Series No. 2014302392
 City of Oakland, California

Sousa Land Surveys
 tel 707.425.4300 fax 707.425.4300
 3809 Rollingwood Dr. Fairfield, CA 94534
 Sheet 2 of 2



792

793

794

795

32ND (A STREET)

STREET

LOUISE

BEACH

FREEWAY

HELEN

STREET

POPLAR STREET

30TH ST.

DELA PARKWAY

LIMITZ

ETTIE

STREET

646 PERMIT

5931 P.

1217

6793

572 14

4421

7207

8793

10 93

744

8736

8521

980

80 7

10 93

P.M. 2425

94

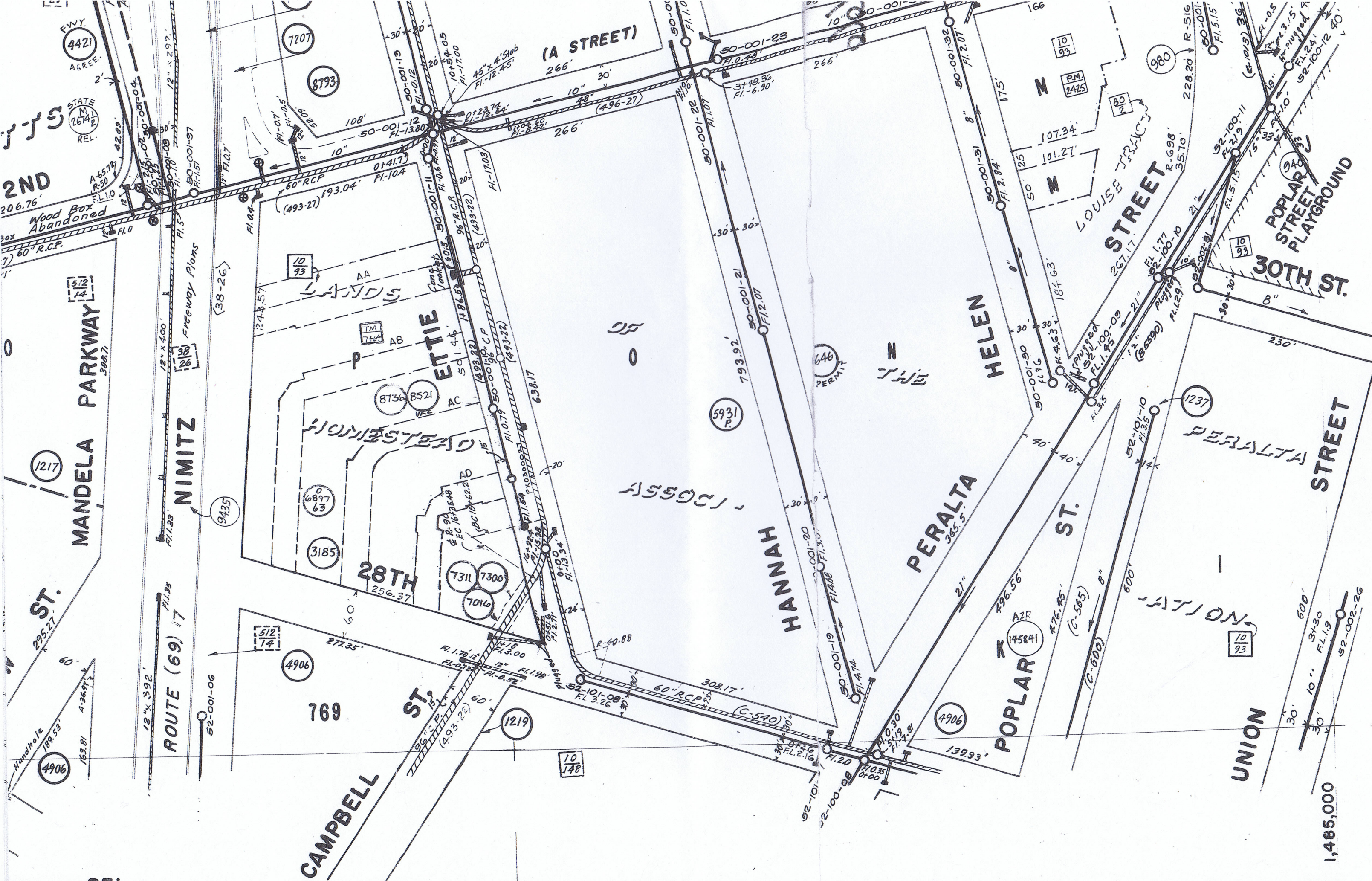
16 93

1237

Handwritten Urdu text: لیٹنگ ڈیٹیل

Handwritten Urdu text: 2305

Handwritten Urdu text: نئے



(A STREET)

LOUISE STREET

HELEN STREET

HANNAH STREET

PERALTA STREET

ST.

PERALTA STREET

UNION STREET

CAMPBELL STREET

28TH

POPLAR STREET PLAYGROUND

MANDELA PARKWAY

NIMITZ

ROUTE (69)

ST.

(1217)

(4906)

(1217)

2ND

(4421)

(7207)

(8793)

(8136)

(8521)

(6897)

(3185)

(7311)

(7300)

(7016)

(4906)

(1219)

(10148)

(5931)

(646)

(145841)

(4906)

(13993)

(980)

(802)

(1237)

(10193)

1,485,000