



**CONESTOGA-ROVERS
& ASSOCIATES**

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April 17, 2008

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Remedial Action Plan**
Former Shell Service Station
461 8th Street
Oakland, California
SAP Code 129453
Incident No. 97093399
ACHCSA Case No. 0343

RECEIVED

1:34 pm, Apr 21, 2008

Alameda County
Environmental Health

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) prepared this document on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). Previously, CRA submitted a February 25, 2008 *Site Investigation and Pilot Test Report, and Corrective Action Plan (CAP)* for the referenced site. In a March 14, 2008 letter to Shell, the Alameda County Health Care Services Agency (ACHCSA) made several technical comments to the report and requested a revised report. Subsequently, ACHCSA, Shell, and the property owner (A.F. Evans Development, Inc.) met to discuss the recommendations of the CAP. Based on these discussions, Shell has elected to proceed with excavation of impacted soils. This *Remedial Action Plan (RAP)* responds to ACHCSA's March 14th technical comments in addition to proposing limited soil excavation. Presented below is the site background, our response to ACHCSA comments, and the RAP for excavation.

SITE BACKGROUND

The site is currently a paved parking lot located at the southwest corner of the intersection of 8th Street and Broadway in Oakland, California (Figures 1 and 2). The property was leased by American Oil Company from at least 1965 until 1972 when the lease was assigned to Shell Oil Products Company (Shell). A Shell service station operated on the property from 1972 to 1980. The underground storage tanks (USTs) associated with the former Shell service station were removed after Shell terminated operations at the site in May 1980. A summary of previous site details and environmental activities performed are presented in Attachment A. The subject site is currently used as a paid public parking lot. The current property owners have submitted development plans and to the best of our knowledge, received approval from the City of Oakland Building Department to develop a mixed-use site consisting of multi-storied commercial and residential units with a subsurface parking area (Attachment B).

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Mr. Jerry Wickham
April 17, 2008

AGENCY RESPONSE

Below are the itemized ACHCSA's March 14th technical comments to CRA's February 25, 2008 CAP followed by our response.

1. Off-site Soil Vapor Sampling: *We request that you complete the off-site soil vapor sampling and present the results in the Revised Site Investigation/Pilot Test Report, and Draft Corrective Action Plan requested below.* Shell and CRA are currently negotiating access with the property owner of the adjacent building (458 7th Street) for the installation of offsite soil vapor probes. We will keep ACHCSA updated on the status of access in future quarterly monitoring reports we submit. As requested in the October 19, 2007 ACHCSA letter, we will adjust the location of soil vapor probe SVP-3.

It should be noted, however, that the May 25, 2007 *Remedial Alternatives Evaluation, Site Investigation, and DPE Pilot Test Work Plan* (May 2007 Work Plan) recommended soil vapor sampling be conducted along the adjacent building's northeastern wall if access was not granted. As reported in the February 2008 SIR/CAP, soil vapor samples were collected from vapor probes VP-2, VP-3, and VP-4, located along the adjacent building's northeastern wall. Gasoline constituent concentrations in soil vapor from vapor probes VP-2, VP-3, and VP-4 were below applicable ESLs. While these results do not directly address the risk to offsite receptors, they do give insight to conditions downgradient of the source areas at the site. We are still planning on moving forward with offsite vapor probe installation, however, pending access.

The May 25, 2007 Work Plan also recommended the installation of one well (S-11) within 7th Street southwest of the site, and the destruction of well S-5, located within the storm drain inlet. An encroachment permit is required for this work, and the City of Oakland requires authorization from the owner of the property adjacent to work conducted in the City right-of-way. Since this work is also being conducted near the adjacent building at 458 7th Street, Shell and CRA will also discuss the encroachment permit during our access agreement negotiations.

2. Vertical Delineation: *Please evaluate the adequacy of vertical delineation particularly in the southern corner of the site.* Soil analytical data collected since 2003 is included on Table 1.

Borings B-10 through B-23 were drilled during December 2006, and soil samples were collected at 5-foot intervals from each boring to depths of approximately 25 feet below grade (fbg). Gasoline constituent concentrations were near or below reporting limits in soil samples collected from borings B-15, B-16, B-17, B-18, and B-19, located near the northwestern-most former dispenser islands, providing horizontal and vertical delineation of gasoline constituents in soil in the northwestern portion of the property.



Gasoline constituent concentrations were near or below reporting limits in soil samples collected from 5, 10, and 15 fbg from each of the remaining borings except boring B-12, located adjacent to the southeastern-most former dispenser island. Elevated gasoline constituent concentrations were also reported in the soil samples collected from 20 and/or 25 fbg in borings B-10, B-11, B-13, and B-25, all located in the vicinity of the former dispensers islands, and in boring B-22, located southwest of the former dispenser islands. The depth of 20 to 25 fbg corresponds to the historical range of depths to groundwater in onsite wells S-8, S-9, and S-10 of approximately 19 to 26 feet below the tops of casings. This is consistent with the light non-aqueous phase liquid (LNAPL) properties of gasoline constituents floating on the top of the groundwater table.

During December 2007, soil samples were collected at 5-foot intervals to depths of approximately 35 fbg from well borings S-13, S-14, S-15, S-16, and AS-1, and from soil boring B-24. The highest gasoline constituent concentrations in each of the borings were detected at depths ranging from approximately 10 to 30 fbg, again corresponding to the approximate depths to groundwater historically measured onsite. Gasoline constituent concentrations were near or below reporting limits in the soil samples collected from 30 and 35 fbg in well borings S-12, S-13, S-14, S-15, and AS-1. While elevated gasoline constituent concentrations were detected in the soil sample collected from 30 fbg in boring B-24, concentrations were an order of magnitude lower in the soil sample collected from 32 fbg. Based on this, the vertical extent of gasoline constituents in groundwater is defined in the vicinity of the southeastern-most former dispenser islands.

Due to drilling refusal encountered in boring B-25, no soil samples could be collected from deeper than 10 fbg, and gasoline constituents in soil are not defined vertically in the southern corner of the site. However, vertical delineation has been provided elsewhere at the site, and findings have been consistent with typical LNAPL releases. Based on this, gasoline constituents can be expected to attenuate vertically with depth in the southern corner of the site, as shown in the other portions of the property.

3. Recommendation for SVE versus DPE: An alternative consisting of DPE and air sparging should also be considered. A DPE system's effectiveness is dependent on adequate dewatering of impacted saturated soils to allow SVE exposure. Our test data indicated that the groundwater yield was high and full dewatering of saturated hydrocarbon impacts was not achieved. In order to achieve full dewatering, groundwater pumps in deeper and more closely-spaced extraction wells would be required, resulting in a significant amount of groundwater production and excessive costs for treatment and disposal of groundwater.



Secondly, an air sparge system requires a minimum (preferably) 10 feet of hydrostatic head above its well screen to provide effective radial diffusion of air. This criterion for air sparging is in direct conflict with the dewatering requirement of DPE. The two systems would short-circuit to each other if operated concurrently. If targeting the same area, effective operation of an air sparge system could only occur following DPE, not concurrent with DPE, and require SVE. If DPE were truly an effective and the preferred technology, then subsequent air sparging with SVE wouldn't be necessary. The combination of DPE and air sparging was not considered for this reason.

The DPE pilot test demonstrated the limitations of DPE at this site and the added costs were detailed. The air sparge test demonstrated its effectiveness for remediating the dissolved-phase hydrocarbon plume. Vapor-phase mass recovery increased over an effective area as a result of dissolved-phase hydrocarbon volatilization via air sparging.

4. Table 5 Dual Phase Extraction Tables: Please review the data entries for depth to water and drawdown on Table 5. The data and calculations shown on Table 5 are correct. CRA used the January 7th static depth-to-water measurements as the baseline for evaluating drawdown. It is preferable to wait for at least 80% groundwater recovery prior to starting extraction at a new well. This would allow re-establishment of a baseline water level just prior to extraction from the next well. However, the Bay Area Air Quality Management District restricts pilot testing to five days. Given that our scope of work for this test included individual testing of five wells followed by air sparge testing, the time to allow recharge was not available. Since the induced drawdown from the previous test was still evident at the start of the subsequent test, a true static water level could not be obtained. Therefore, it was a better to use the January 7th baseline data to estimate of total drawdown. Furthermore, had we waited for full groundwater recovery prior to each test, we most likely would not have seen a significant difference between the static water level then and January 7th. Additionally, we reviewed the transducer data trends during extraction to confirm that extraction from a specific well was inducing drawdown in the observation wells and not an after-effect from the previous test.

Since the depth-to-water in well S-16 (25.15 fbg) was still affected by the previous extraction from well S-9, CRA did not collect a pre-extraction depth-to-water from well S-16 (knowing that we had the January 7th baseline data). Instead, the stinger was immediately installed into well S-16, which was then dewatered to approximately 33 fbg.

Similarly, the stinger was immediately installed into well S-13 following extraction from S-16 and then S-13 was dewatered to approximately 31.60 fbg. In conducting DPE, condensation, misting, and stinger slugging can occur within the extraction well. This can create difficulty in measuring depth-to-water in the extraction well with a downwell conductivity probe. The 0.05 foot difference between the field-



measured water levels for S-13 is reasonable error in consideration of the dynamic action occurring within the extraction well. We can say with reason that the well was dewatered to approximately 31.5 fbg.

5. Table 6 DPE Pilot Test – Radius of Influence: Please review your calculations for radius of influence and entries for distances from extraction well to observation well. A couple of data entry errors were identified in reviewing Table 6. However, none of the errors were associated with the data that met the criteria for estimating the vacuum radius of influence (shown in **bold** on Table 6). To clarify, the steady-state radial distribution equation used for estimating vacuum radius of influence (ROI) is considered valid for induced vacuum measurements that are greater than 1% of the applied vacuum. The estimated vacuum radius of influence will increase beyond the radial distance to the observation well as this percentage increases. This was achieved at one observation well for each extraction well, except while extraction from well S-9. As concluded in our report, the theoretical ROI is estimated to be as much as 60 feet (by data observed at S-14 while extracting from S-13), but more consistently around 45 feet (by data observed at S-15 while extracting from S-8). CRA will re-upload the report to include data entry corrections to Table 6.

6. Graphs: Please include the graphs in the revised report requested below. The graphs were mistakenly omitted in final production of the report. Again, CRA will re-upload the report to include these graphs.

REMEDIAL ACTION PLAN

Investigation data suggests that residual soil impacts remain beneath the former dispensers and along the capillary fringe/smear zone at the southeast side of the site. Most of the impacted smear-zone is covered by up to 15-feet of clean over-burden. Based on analytical data from recent and historical borings and established Environmental Screening Levels (ESL's), CRA proposes excavation of 20-foot by 60-foot area on the southeast side of the property. Refer to Figure 3 for the proposed limits of excavation. This excavation will require three stages of shoring and excavation to excavate hydrocarbon impacted soil to approximately 20 feet below grade (fbg). The use of shoring will not allow for sidewall samples to be collected in this area.



Depending on the extent of impacts observed in the field, additional excavation may occur to remove impacted hydrocarbons in soil. Field observations and confirmatory sampling will dictate the actual extent of the excavation limits. The areas proposed for excavation are limited to the site and no offsite excavation is proposed due to the neighboring property structures and underground utilities. For on-site soil excavation, the cost to excavate include engineering, permitting, monitoring well destruction and replacement, sidewall shoring, excavating, stockpiling, profiling the soil for disposal, confirmatory sampling and analyses, loading, off-hauling, disposal, backfilling and compaction, site restoration, and project management and reporting.

The work tasks described below includes tasks related to the installation of the proper shoring; excavation; soil profiling; soil segregation; groundwater extraction (if required); soil sampling; proposed reuse of backfill material; backfill and compaction; soil disposal; well replacement (if required); and reporting.

Work Tasks

Contractor Retention: Shell will sole-source well destruction/replacement to one of its direct-bill contractors. Shell will also sole-source the excavation work to one of its direct-bill contractors.

Permits: CRA will obtain well destruction permits from the ACHCSA and provide all required notifications for the well destructions activities. The excavation contractor will acquire all the required permits and provide all the required notifications for the excavation activities.

Utility Location: For the well destruction activities, CRA will notify Underground Services Alert (USA) to identify and clear utilities in the vicinity. CRA will also contract a private utility locating company to identify unmarked private underground utilities remaining onsite. The excavation contractor will also be required to clear utilities via USA and a private utility line locator prior to excavating.

Site Health and Safety Plan: For well destructions and excavation oversight, CRA will prepare a comprehensive site safety plan to protect CRA site workers, inspectors, and the public. The plan will be reviewed and signed daily by each site worker and kept onsite during field activities. The excavation contractor will be required to have their own safety plan to protect their site workers, inspectors, and the public.

Well Destruction: To complete excavation activities, four wells (S-14, S-15, S-16, and AS-1) and one vapor probe (VP-1) will have to be destroyed according to local regulatory requirements. All well destruction activities will be performed under the supervision of a state of California Professional



Geologist. Since well B-24/VP-1 is located within the proposed excavation footprint and is completed to approximately 12 fbg, this well will be destroyed during the excavation. The remaining wells identified above will be destroyed by drilling out the entire well casing and annulus to total depth. The voids will be tremmie-grouted from the bottom up to grade with grout.

Excavation: CRA proposes to excavate and dispose of hydrocarbon-impacted soil as shown on Figure 3. No soil will be excavated from beyond the property boundaries due to surrounding buildings, underground utilities and sidewalk constraints. The impacted area proposed for excavation will require shoring to safely complete soil removal to approximately 20 fbg. Additional exploratory excavation may occur beyond the proposed limits based on field indicators. The purpose of all exploratory excavation is to verify the absence of or remove hydrocarbon impacted soil, if present. If additional impacts above established ESL's are observed beyond the proposed excavation limits, the impacts to soil above groundwater will be removed until site constraints, including cost-effectiveness or safety concerns, make it infeasible.

Shoring: Based on the current information available, CRA believes that it is appropriate to excavate the areas using shoring. The proposed excavation area is well defined by previous boring sampling data and the property boundary. To remove the soil to approximately 20 fbg and protect the adjacent sidewalk and any subsurface utilities, this area (approximately 20 feet along sidewalk) will require shoring. To cost-effectively excavate the target area, three stages of shoring and excavation will occur. Inter-locking sheet pile shoring will be installed to circumference a 20-foot by 20-foot target area. Once the target area has been excavated and backfilled, shoring will be relocated to excavate the next stage.

Confirmation Sampling: Groundwater accumulation in the excavated pit is not anticipated. However, if the base of the shored excavation has standing groundwater, no soil samples will be collected from the saturated zone due to the potential for groundwater concentrations to adversely effect actual soil conditions. Sidewall sampling is not possible due to the presence of shoring. Historical boring data clearly defines the extent of impact in the proposed shoring area. If no standing groundwater is present at the base of the excavation (20 fbg) a grab soil sample will be collected from the base, including a minimum of one sample from near each sidewall.

Groundwater Extraction: The main purpose of the proposed excavation is to remove relatively high TPHg and benzene concentrations remaining in soil. An added benefit of excavation is the potential to readily remove non-aqueous phase and dissolved phase hydrocarbons from groundwater by groundwater extraction from the open excavation(s). Depending on site conditions, a holding tank may be mobilized for groundwater storage as the project progresses. CRA will either oversee the off haul and disposal of hydrocarbon impacted groundwater, or a dewatering system may be mobilized and set-up to extract, treat



and dispose under permit, treated groundwater to the local sanitary agency. Currently it is unknown how much or if any groundwater will need to be treated or disposed. If present, grab groundwater samples will be collected at the completion of excavation and prior to backfilling, if feasible. Additional samples may need to be collected for groundwater profiling and disposal/discharge requirements. These will be dictated by the disposal process, either by off haul or sanitary discharge. If required, a groundwater discharge report will be forwarded to the appropriate agencies and a copy included in the final report.

Backfill and Compaction: Upon completion of the excavation and groundwater extraction, the excavation(s) will be backfilled and compacted. Self-compacting or compactable type materials will be placed as necessary to return the site conditions to preconstruction grade. If a compaction report is required, it will be provided and reported accordingly. If required, the site will be restored to the preconstruction condition, including asphalt and striping.

Chemical Analyses: Soil and groundwater samples (if observed) collected from this site will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) and BTEX by EPA Method 8260B. For proper soil and groundwater disposal, additional analysis will be required, as directed by the disposal facility or agency.

Soil Disposal: Excavated soil will be profiled, manifested, transported, and disposed of according to all federal and state regulations. Documentation support of disposal will be provided with the final report.

Well Replacement: The ACHCSA may require installation of replacement wells. Depending on the proposed redevelopment schedule, it may be infeasible to replace the wells removed for excavation purposes. If replacement wells can be or are requested to be installed prior to redevelopment, they will be installed within the excavation backfill and designed similarly to the wells that are proposed for removal. It may be required to replace the onsite vapor wells to assess and confirm the absence of hydrocarbon impacts in these areas.

Report Preparation: CRA will prepare a report of findings for the proper destruction of monitoring wells and excavation field events for submittal to the ACHCSA. This report will include a discussion of excavation activities, dewatering (if required), backfill, compaction (if required), well replacement (if performed) and spoils disposal. The document will also include the post-excavation monitoring program for the site.



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Mr. Jerry Wickham
April 17, 2008

CLOSING

A timeframe to complete this work has been predicated by the property owner's development plans. Shell is directing this work to move forward as soon as possible. If you have any questions regarding this document, please contact Jacquelyn England at (707) 933-2370.

Sincerely,

Conestoga-Rovers & Associates

Jacquelyn England

Daniel N. Lescure, P.E.



- Figures: 1 – Vicinity Map
 2 – Site Plan
 3 – Proposed Limits of Excavation
- Tables: 1 – Historical Soil Analytical Data
- Attachments: A – Summary of Historical Site Activities
 B – Site Development Plan
- cc: Denis Brown, Shell Oil Products US
 A.F. Evans Company (Property Owners), c/o Anye Spivey
 R. Casteel & Co.
 Leroy Griffin, City of Oakland Fire Prevention Bureau

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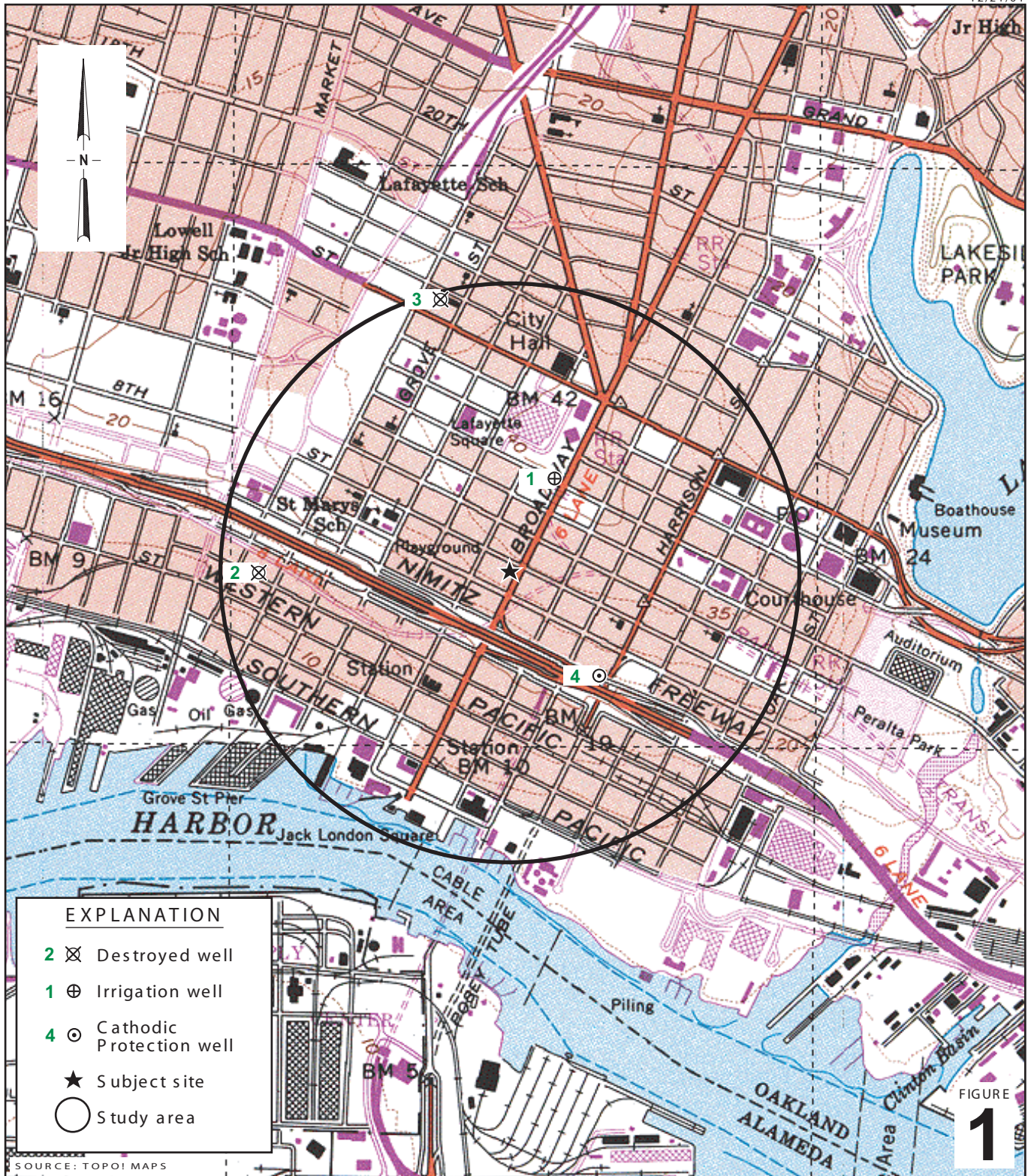


FIGURE 1

Former Shell Service Station
 461 8th Street
 Oakland, California

Vicinity Map

1/2 Mile Radius

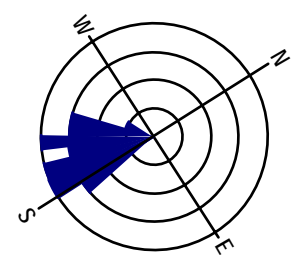


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EXPLANATION

- Attempted soil boring location
- Groundwater monitoring well
- Air sparging well
- Soil vapor probe
- Abandoned monitoring well
- Destroyed recovery well
- Soil boring
- Soil vapor boring
- Manhole
- Flow line depth below ground surface
- Flow direction indicator
- Underground BART line (B)
- Storm Drain line (SD)
- Water line (W)
- Sanitary Sewer line (SS)
- Pacific Bell line (T)
- Gas line (G)
- Electrical line (E)

Note: Because well S-5 is located in confined space, it is no longer gauged or sampled



Groundwater Flow Direction (1Q00 to 3Q05)

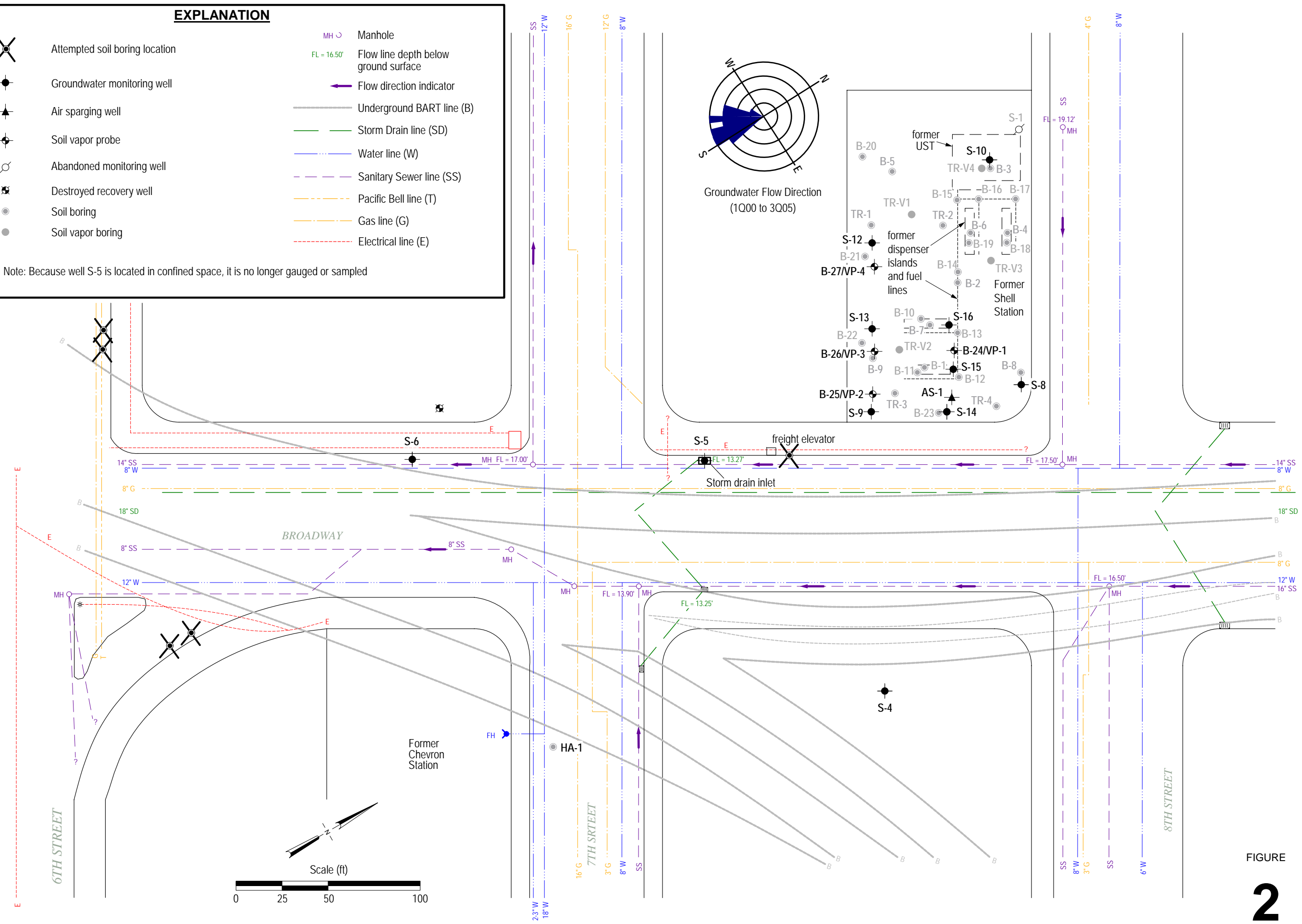
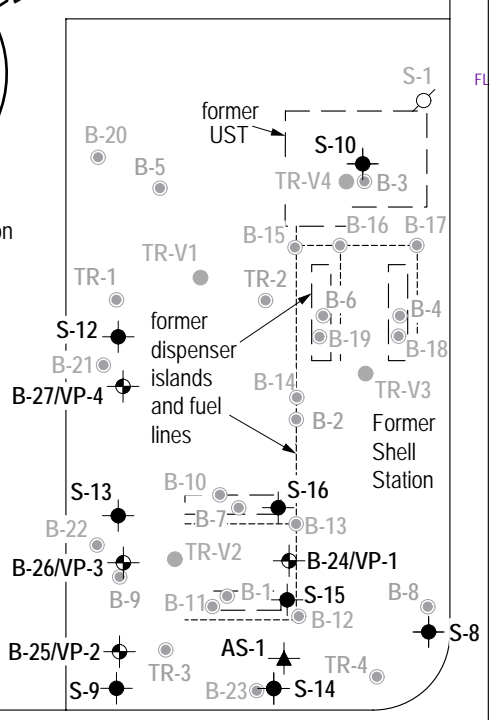


FIGURE
2



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Former Shell Service Station

461 8th Street
Oakland, California

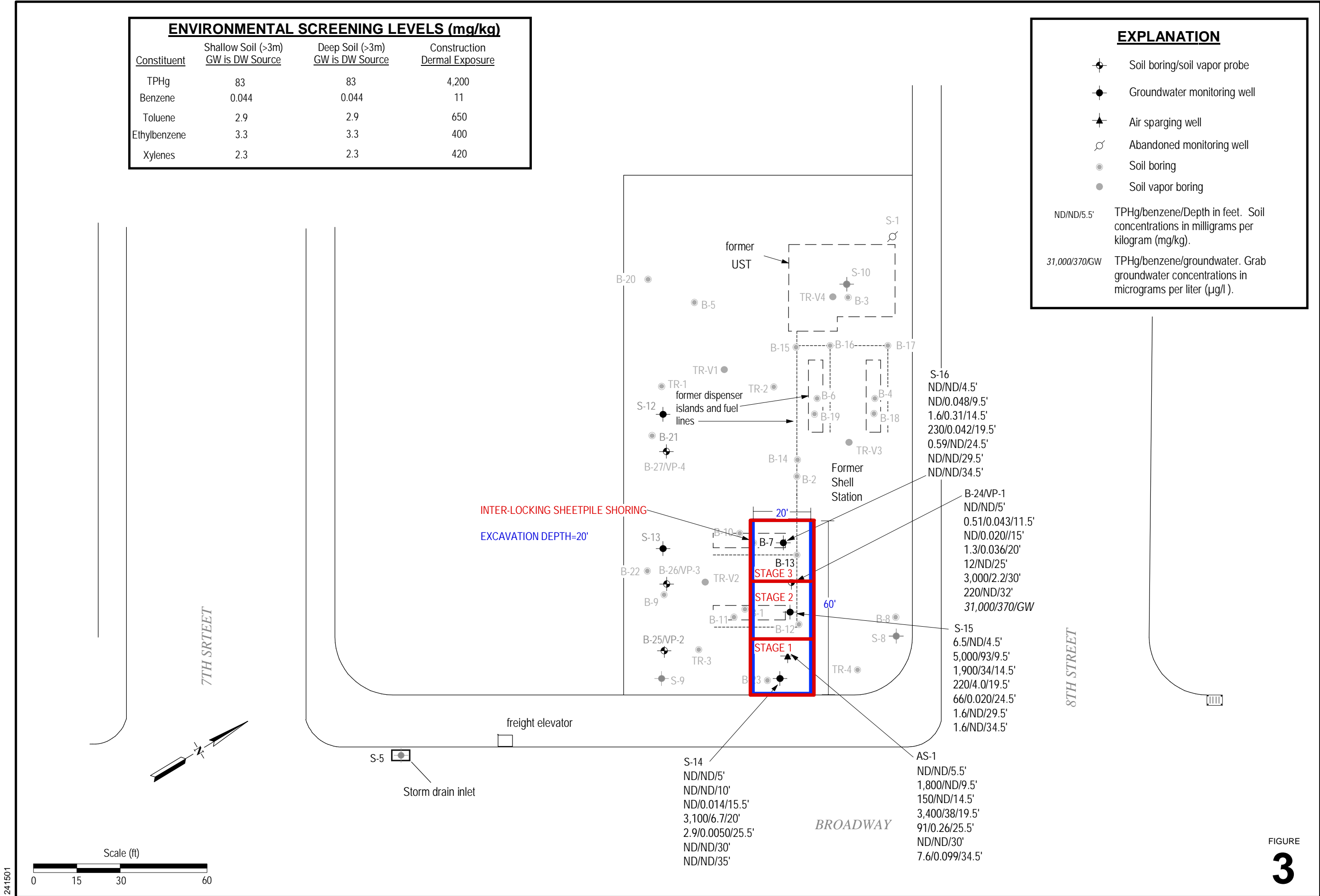
ENVIRONMENTAL SCREENING LEVELS (mg/kg)			
Constituent	Shallow Soil (>3m) GW is DW Source	Deep Soil (>3m) GW is DW Source	Construction Dermal Exposure
TPHg	83	83	4,200
Benzene	0.044	0.044	11
Toluene	2.9	2.9	650
Ethylbenzene	3.3	3.3	400
Xylenes	2.3	2.3	420

EXPLANATION

- ⊕ Soil boring/soil vapor probe
- Groundwater monitoring well
- ⬆ Air sparging well
- ⊘ Abandoned monitoring well
- Soil boring
- Soil vapor boring

ND/ND/5.5' TPHg/benzene/Depth in feet. Soil concentrations in milligrams per kilogram (mg/kg).

31,000/370/GW TPHg/benzene/groundwater. Grab groundwater concentrations in micrograms per liter (µg/l).



241501

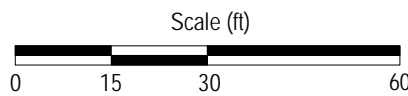


FIGURE
3

Proposed Limits of Excavation
April 11, 2007



Former Shell Service Station
461 8th Street
Oakland, California

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 461 8th Street, Oakland, California

Sample ID	Depth (fbg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
Sample date: October 14, 2003													
HA-1-10.0	10.0	< 1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA
HA-1-16.5	16.5	< 1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA
Sample date: December 11 to 13, 2006													
B-10-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-10-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-10-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-10-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-10-25	25	7,800	49	290	160	800	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50
B-11-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-11-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-11-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-11-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-11-25	25	3,500	30	200	97	510	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50
B-12-5	5	<1.0	0.028	0.018	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-12-10	10	2,300	0.54	7.5	<0.50	180	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50
B-12-15	15	1,700	2.9	35	22	190	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50
B-12-20	20	5,900	30	250	100	570	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50
B-12-25	25	750	0.70	8.3	13	73	<0.12	<0.50	<0.50	<0.50	<1.2	<0.12	<0.12
B-13-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-13-10	10	<1.0	0.022	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-13-15	15	<1.0	0.028	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	0.053	<0.0050	<0.0050
B-13-20	20	4.5	0.12	0.18	0.070	0.54	<0.0050	<0.010	<0.0050	<0.0050	0.083	<0.0050	<0.0050
B-13-25	25	1,400	1.2	19	17	97	<0.12	<0.50	<0.50	<0.50	<1.2	<0.12	<0.12

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 461 8th Street, Oakland, California

Sample ID	Depth (fbg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
B-14-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-14-10	10	<2.0	<0.010	<0.010	<0.010	<0.020	<0.010	<0.020	<0.010	<0.010	<0.10	<0.010	<0.010
B-14-15	15	<1.0	0.039	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	0.050	<0.0050	<0.0050
B-14-20	20	<2.0	0.019	<0.010	<0.010	<0.020	<0.010	<0.020	<0.010	<0.010	<0.10	<0.010	<0.010
B-14-25	25	<2.0	0.017	<0.010	0.016	0.023	<0.010	<0.020	<0.010	<0.010	<0.10	<0.010	<0.010
B-15-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-15-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-15-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-15-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-15-25	25	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-16-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-16-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-16-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-16-20	20	1.6	0.054	0.11	0.043	0.26	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-16-25	25	2.5	0.19	0.17	0.12	0.54	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-17-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-17-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-17-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-17-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-17-25	25	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-18-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-18-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-18-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-18-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-18-25	25	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 461 8th Street, Oakland, California

Sample ID	Depth (fbg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
B-19-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-19-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-19-15	15	<1.0	0.028	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-19-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-19-25	25	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-20-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-20-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-20-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-20-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-20-25	25	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-21-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-21-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-21-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-21-20	20	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-21-24	24	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-21-28	28	<1.0	<0.0050	0.0087	0.011	0.060	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-22-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-22-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-22-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-22-20	20	1,800	0.81	10	26	180	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50
B-22-25	25	3,000	14	140	85	470	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50
B-23-5	5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-23-10	10	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-23-15	15	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-23-20	20	1.7	<0.0050	0.0053	0.010	0.075	<0.0050	<0.010	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
B-23-25	25	4,900	7.0	78	60	450	<0.25	<1.0	<1.0	<1.0	<2.5	<0.25	<0.25

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 461 8th Street, Oakland, California

Sample ID	Depth (fbg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
Sample date: November 30 to December 13, 2007													
B-24-5	5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
B-24-11.5	11.5	0.51	0.043	0.021	0.0094	0.116	---	---	---	---	---	---	---
B-24-15	15	<0.50	0.020	0.0064	<0.0050	0.0140	---	---	---	---	---	---	---
B-24-20	20	1.3	0.036	0.049	0.016	0.102	---	---	---	---	---	---	---
B-24-25	25	12	<0.0050	0.039	0.040	0.308	---	---	---	---	---	---	---
B-24-30	30	3,000	2.2	23	26	140	---	---	---	---	---	---	---
B-24-32	32	220	<0.12	0.73	1.3	6.14	---	---	---	---	---	---	---
B-25-5	5	0.76^a	<0.0050	0.31	0.011	0.070	---	---	---	---	---	---	---
B-25-10	10	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
B-26-5	5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
B-26-10	10	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
B-26-15	15	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
B-27-5	5	<0.50	<0.0050	0.015	<0.0050	<0.0100	---	---	---	---	---	---	---
B-27-10	10	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-12-5.5	5.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-12-9.5	9.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-12-14.5	14.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-12-19.5	19.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-12-24.5	24.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-12-29.5	29.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-12-34.5	34.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-13-5.5	5.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-13-10	10	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-13-15	15	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 461 8th Street, Oakland, California

Sample ID	Depth (fbg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
S-13-20.5	20.5	340	<0.0050	0.48	1.1	8.7	---	---	---	---	---	---	---
S-13-25	25	62	0.017	0.053	0.030	0.146	---	---	---	---	---	---	---
S-13-31	31	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-13-35	35	1.2	<0.0050	0.0069	<0.0050	0.0077	---	---	---	---	---	---	---
S-14-5	5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-14-10	10	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-14-15.5	15.5	<0.50	0.014	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-14-20	20	3,100	6.7	42	66	308	---	---	---	---	---	---	---
S-14-25.5	25.5	2.9	0.0050	0.0074	0.037	0.091	---	---	---	---	---	---	---
S-14-30	30	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-14-35	35	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-15-4.5*	4.5	6.5	<0.0050	0.0058	<0.0050	0.044	---	---	---	---	---	---	---
S-15-9.5	9.5	5,000	93	350	100	660	---	---	---	---	---	---	---
S-15-14.5	14.5	1,900	34	290	72	460	---	---	---	---	---	---	---
S-15-19.5	19.5	220	4.0	19	5.8	33.8	---	---	---	---	---	---	---
S-15-24.5	24.5	66	0.020	0.054	0.027	0.163	---	---	---	---	---	---	---
S-15-29.5	29.5	1.6	<0.0050	0.0062	<0.0050	<0.0100	---	---	---	---	---	---	---
S-15-34.5	34.5	1.6	<0.0050	0.0062	<0.0050	0.0078	---	---	---	---	---	---	---
S-16-4.5*	4.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-16-9.5	9.5	<0.50	0.048	0.013	<0.0050	0.0171	---	---	---	---	---	---	---
S-16-14.5	14.5	1.6	0.31	0.25	0.039	0.233	---	---	---	---	---	---	---
S-16-19.5	19.5	230	0.042	0.21	0.18	1.28	---	---	---	---	---	---	---
S-16-24.5	24.5	0.59	<0.0050	0.017	0.014	0.083	---	---	---	---	---	---	---
S-16-29.5	29.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
S-16-34.5	34.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 461 8th Street, Oakland, California

Sample ID	Depth (fbg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)
AS-1-5.5	5.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
AS-1-9.5	9.5	1,800	<0.0050	0.59	0.88	29	---	---	---	---	---	---	---
AS-1-14.5	14.5	150	<0.12	0.27	0.29	1.93	---	---	---	---	---	---	---
AS-1-19.5	19.5	3,400	38	210	110	610	---	---	---	---	---	---	---
AS-1-25.5	25.5	91	0.26	0.99	1.1	5.1	---	---	---	---	---	---	---
AS-1-30	30	<0.50	<0.0050	<0.0050	<0.0050	<0.0100	---	---	---	---	---	---	---
AS-1-34.5	34.5	7.6	0.099	0.16	0.058	0.220	---	---	---	---	---	---	---

Notes and Abbreviations:

mg/kg = Milligrams per kilogram

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015M or 8260B.

The following constituents analyzed by GCMS/8260B:

BTEX = Benzene, toluene, ethylbenzene, xylenes

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

TBA = Tertiary butyl alcohol

1,2-DCA = 1,2-Dichloroethane

EDB = 1,2-Dibromoethane

NA = Not analyzed

<x = Not detected at or below reporting limits

a = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based on the specified standard.

* = Sample may have contained backfilled soil from air knife clearance activities.

ATTACHMENT A
Summary of Historical Site Activities

ATTACHMENT A

Site Background

Former Shell Service Station
461 8th Street
Oakland, California

During January 1979, separate phase hydrocarbons (SPH) were reported in a Bay Area Rapid Transit (BART) tunnel under the intersection of 7th Street and Broadway. Product line testing at the site indicated a pressure leak, and the product lines were replaced in January 1979. The USTs were also tested for tightness and passed. According to the *Bart Recovery Project Log*, (chronological list of events – 1/10/79 through 12/3/81) and a 1981 Groundwater Technology, Inc. *Considerations on Infiltration of Gasoline into BART KE Line* report, one observation well is reported to have been drilled to a depth of 25 feet concurrent with piping replacement with no reports of contamination. Separate-phase product samples taken from the BART tube in January 1979 and in May 1981 reported the product as Shell Regular. Approximately 2,600 gallons (48 55-gallon drums) of a gasoline-and-water mixture are reported to have been removed from the BART tunnel between October 1979 and April 1980. The Shell station discontinued operation in May 1980, and all existing improvements, tanks, and associated piping were removed at that time. It is unknown whether a UST and piping removal report exists; to date, it has not been located.

Seven monitoring wells (L-1 through L-7) were installed during 1981. Based on recommendations following this investigation, a recovery well was installed in the vicinity of well L-6 (now re-named S-6) in 1982. According to a September 14, 1993 GeoStrategies Inc. (GSI) *Work Plan*, groundwater extraction from the recovery well began in February 1982 and continued until August 1982, when the system was shut down because the effluent discharge exceeded permitted discharge levels. Wells L-1 through L-3 were destroyed during construction of the BART tunnels in the mid-1980's and are no longer accessible. Records of the well destructions are not available. Wells L-4, L-5, and L-6 were renamed S-4, S-5, and S-6. Gettler-Ryan Inc. began gauging wells S-4 through S-6 in 1986 and collecting groundwater samples for analysis in 1988. A November 2, 1993 *Work Plan for Soil and Groundwater Sampling* prepared by Enviro, Inc. (Enviros) indicates that groundwater was extracted from wells S-5 and S-6 by bailing or by a vacuum truck beginning in October 1988.

Information collected by GSI and reported in a June 30, 1993 *Phase I Preliminary Site Assessment* identified seven sites with known UST leaks within a ¼-mile radius of the site. One of the seven sites identified is the Oakland Police Department site, which was noted in the *Bart Recovery Project Log* to have replaced leaking USTs in October 1979 and to have accepted product deliveries by a local Shell gasoline distributor. During a review of available regulatory files, GSI noted a permit to repair the product lines and dispensers at the Oakland Police Department parking lot taken out in 1984 by Egan and Paradiso Company, but no additional information was available. It appears that no environmental investigation has been conducted for this site.

During July 1994, nine soil borings (B-1 through B-9) were installed in the vicinity of the former pump islands and the former USTs at the site. Investigation activities are described in an August 16, 1994 *Enviros Site Investigation Report*. The maximum total petroleum hydrocarbons as gasoline (TPHg) and benzene concentrations reported in soil samples were 15 milligrams per kilogram (mg/Kg) and 0.24 mg/Kg, respectively, collected near the former pump islands. No TPHg or benzene was reported in the area of the former piping or the former UST locations.

During December 1994, onsite monitoring wells S-8, S-9, and S-10 were installed in similar locations as the previously destroyed wells L-2, L-3, and L-1, respectively. Investigation activities are described in a February 14, 1995 *Enviros Site Investigation Report and Quarterly Monitoring Report – First Quarter 1995*. Except for 0.014 mg/Kg benzene in a sample from S-8 at 21.5 fbg, no TPHg or benzene was reported in soil samples collected from wells S-8 and S-9. Except for 760 mg/Kg TPHg and 0.0032 mg/Kg benzene reported in the sample from S-10 at 11.5 fbg, no TPHg or benzene was reported in soil samples collected from well S-10.

During October 2003, one soil boring (HA-1) was installed within 7th Street, south of the site. Three additional offsite soil borings (one in Broadway near well S-5, one northwest of Broadway within 6th Street, and one near the eastern corner of Broadway and 6th Street) were attempted. However, subsurface obstructions and utility corridors were encountered, and the borings could not be completed. No TPHg, benzene, or methyl tertiary butyl ether (MTBE) was detected in soil samples collected from boring HA-1. No TPHg or benzene, and 6.3 micrograms per liter (µg/L) MTBE were detected in a grab groundwater sample collected from boring HA-1. Investigation activities are described in the December 16, 2003 *Subsurface Investigation Report* prepared by Cambria Environmental Technology, Inc. (Cambria).

During May 2004, Treadwell & Rollo, Inc. (T&R) of Oakland, California installed four soil borings (TR-1 through TR-4) onsite to collect soil and soil vapor samples. No TPHg or volatile

organic compounds (VOCs) were detected in soil samples, and no benzene, toluene, ethylbenzene, or xylenes (BTEX) were detected in soil vapor samples collected. Investigation results are summarized in T&R's March 27, 2006 *Subsurface Investigation* report.

Access to the subject site for investigation activities had been limited by the previous property owner. Since the new owner anticipates construction a commercial development over the entire parcel, future access to the site for subsurface investigation will not be feasible. Thus, Cambria's June 7, 2006 *Subsurface Investigation Work Plan* provided the following activities and rationale for proposed work:

- The source of the impact in wells S-5 and S-6 has not been identified. The data obtained from the subject site to date does not support that the former Shell station is the source of impact to those wells; however, the lateral and vertical extent of shallow soil impact onsite has not been sufficiently assessed. Thus, Cambria recommends installing ten (10) soil borings (B-10 through B-19) in the vicinity of the former piping and dispenser areas.
- The lateral extent of shallow soil and groundwater impact along the property boundaries has not been sufficiently assessed. Thus, Cambria recommends installing four (4) soil borings (B-20 through B-23) for the collection of soil and grab groundwater samples.

The Alameda County Environmental Health (ACEH) approved the work in correspondence dated August 29, 2006. The access agreement was executed in October 2006 and negotiations with the owner's tenant for access occurred in November 2006. The field work was then scheduled for early December 2006.

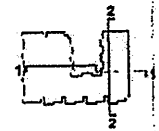
During December 2006, fourteen soil borings (B-10 through B-23) were drilled onsite. Impacted vadose zone soils were identified in B-12 and, to a lesser extent in B-13, B-14, and B-19. The grab groundwater samples from each boring (except B-20) indicated impact to groundwater beneath and downgradient (southwest) of the former dispenser islands. Investigation activities are described in the March 2, 2007 *Subsurface Investigation Report* prepared by Conestoga-Rovers & Associates (CRA).

ATTACHMENT B
Site Development Plan

Architecture and Urban Design
 3220 Wilshire Blvd. Suite 1000
 Los Angeles, CA 90010
 Tel: 310 450-0000
 Fax: 310 450-0001
 www.solomon-et.com

Wilcox Adams & Todd, Inc.
 Civil Engineer

Old Oakland Housing
 15401 Broadway @ 15th Street
 Oakland, CA 94612
 Project Number:
 AF Evans Development, Inc.
 1500 Broadway, Suite 100
 Oakland, CA 94612
 Map No.



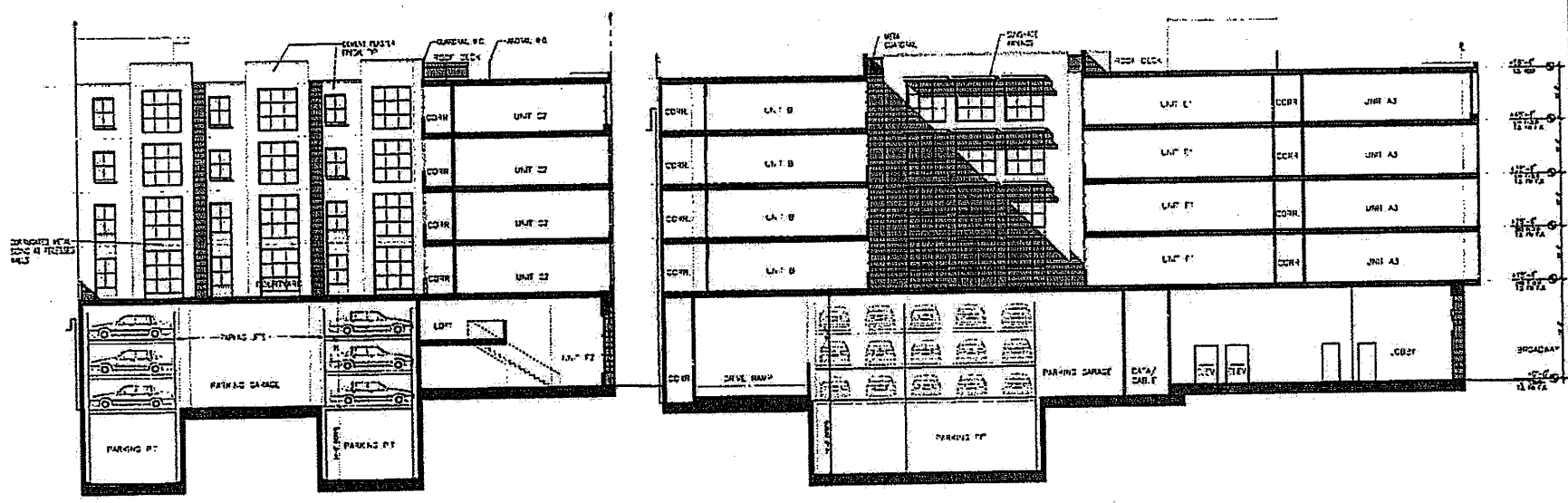
Architect's License No. 1000-0000
 Drawn By
 Checked By
 Date May 12, 2008
 Scale 1/8" = 1'-0"

Discipline / Elevations

A3.2

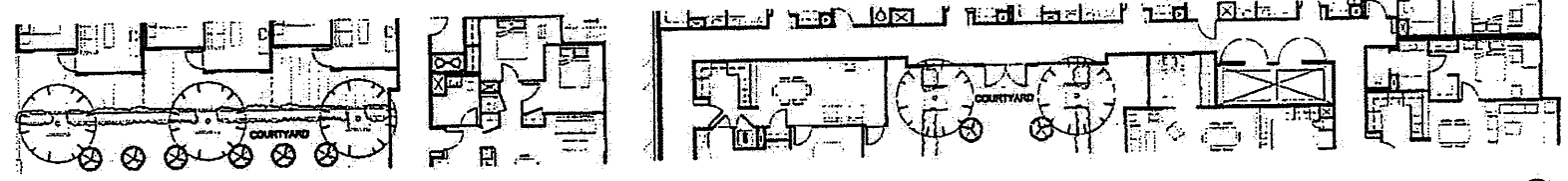
Prepared For the Distribution

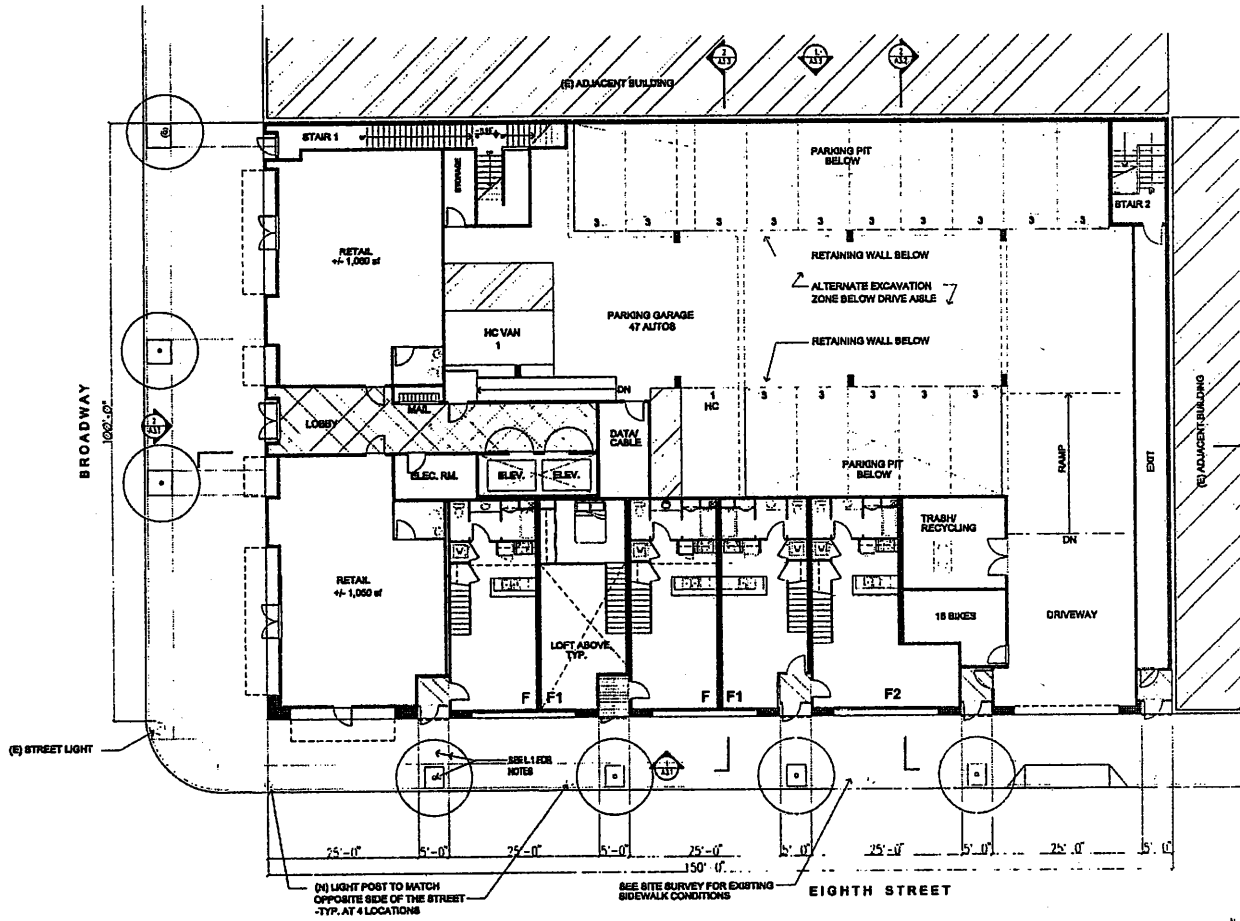
May 11, 2008 - Planning Submission Set



EAST FACING COURTYARD SECTION / ELEVATION & PODIUM LEVEL PLAN
 SCALE: 1/8" = 1'-0" ②

SOUTH COURTYARD SECTION/ELEVATION & PODIUM LEVEL PLAN
 SCALE: 1/8" = 1'-0" ①





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 1328 Mission Street, South Bay
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William Roberts & Todd, Inc.
 Contractor

Old Oakland Housing
 725-241 Broadway @ 8th Street
 Oakland, CA 94612

Project Name:
AF Evans Development, Inc.
 1231 Broadway, Suite 502
 Oakland, CA 94612

Key Plan

Scale

Job Number: 4294-0202
 Drawn By:
 Checked By:
 Date: May 1, 2002
 Scale: 1/8"=1'-0"

Title:
Ground Floor Plan

Sheet:
A1.0