March 15, 2016

Ms. Karel Detterman
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Transmittal, Work Plan, Additional Site Investigation
3635 13th Avenue, Oakland, California 94610
Toxics Case No. RO0000159

Dear Ms. Detterman:

Enclosed is the *Work Plan, Additional Site Investigation* prepared at your request for activities at the subject site.

I declare under penalty of perjury, that the information and/or recommendations contained in the attached report for the above-referenced site are true and correct to the best of my knowledge.

If you have any questions or need additional information, please do not hesitate to contact Mr. Trent Weise of AEI Consultants at (925) 746-6000.

Sincerely,

Kia' Sumner

Mr. Kia Sumner

Enclosures

March 15, 2016

Work Plan, Additional Site Investigation

Property Identification:
3635 13th Avenue
Oakland, California 94610

AEI Project No. 338841
ACHCSA Case No. RO0000159

Prepared for:
Mr. Kia Sumner
1069 Oak Hill Road
Lafayette, California 94549

Prepared by:
AEI Consultants
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This document was prepared by, or under the direction, of the undersigned:

Wayne Hung, E.I.T.
Staff Engineer

Trent A. Weise, P.E.
Principal Engineer

1. INTRODUCTION

On behalf of Mr. Kia Sumner, AEI Consultants (AEI) has prepared this work plan describing the proposed soil, soil vapor, and groundwater investigation to be performed at 3635 13th Avenue in Oakland, California ("the Site"). The purpose of the investigation is to address the data gap requested by Alameda County Environmental Health (ACEH) in compliance with State Water Resources Control Board's Low Threat Closure Policy. A meeting was held between Mr. Kia Sumner, ACEH, and AEI to discuss the draft *Feasibility Study / Corrective Action Plan* (FS/CAP) presenting potential options to address chemicals of potential concern (COPCs) identified for the site to allow for closure of the Site under the State Water Resources Control Board's Low Threat Closure Policy. The FS/CAP identified some data gaps that would need to be addressed as part of remedial activities. From the meeting we understand that the ACEH would prefer to close these data gaps prior to finalizing the FS/CAP. In a letter dated March 8, 2016, the ACEH requested a work plan to address the identified data gaps, including additional soil and soil vapor data in order to finalize the draft FS/CAP. AEI's proposed scope of work for the investigation is presented below.

2. SCOPE OF WORK

In addition to routine groundwater sampling scheduled in November, 2015, AEI proposes to perform the following additional soil and soil vapor investigation, including:

- Collecting additional soil samples to further characterize the lateral extent of COPCs
- Collecting additional soil vapor samples to further characterize the lateral extent of petroleum hydrocarbons in soil vapor.

3. Preliminary Field Activities

Pre-field activities for soil borings and soil vapor probe installation will include:

- Notifying the ACEH of the proposed work and schedule.
- Updating the site-specific health and safety plan for these activities, as needed.
- Notifying Underground Service Alert (USA) of the proposed subsurface activities a minimum of 48-hours prior performing the activities.

The activities and sampling details is described below.

3.1 Soil Vapor Investigation

AEI proposes to install six soil vapor probes to collect soil vapor samples, labeled SG-4 through SG-9 at the locations shown on Figure 3. At each location, soil vapor probes will be installed at a depth of five-feet bgs.

AEI will contract a State of California-licensed drilling contractor (C-57) to construct each soil vapor probe. Each temporary monitoring point will be constructed by advancing a 1.5-inch diameter drill rod to the required depth.

For each monitoring point, a soil vapor screen attached to ¼-inch tubing will be placed at depth and covered with approximately one-foot of sand. The monitoring points will then be sealed by backfilling the remaining section of borehole with bentonite to surface, hydrated in six-inch lifts. A vapor-tight cap will be installed at the end of the sample tubing and closed to seal the tubing. Each soil vapor probe will be completed at the surface with a well box or stove pipe to protect the probe from damage.

AEI will collect each soil vapor samples from each monitoring points in general accordance with the *Advisory – Active Soil Gas Investigation, July 2015*, issued by the DTSC, and San Francisco California Regional Water Quality Control Boards ("the Advisory"). After waiting the Advisory-recommended equilibration time of a minimum of two-hours, soil vapor samples will be collected from each of the newly constructed soil vapor probes in general accordance with the Advisory. Prior to collecting the samples, a shut-in test will be performed by placing a vacuum on the above-grade sampling train and vacuum canisters. The vacuum will be observed for approximately one minute and verified to not change, which would be indicative of a potential leak in the sampling apparatus.

Prior to sampling, vapor in the sampling lines and approximately three volumes of the sand pack and dried bentonite will be purged. Soil vapor samples will be collected through a laboratory-supplied, certified clean, regulator at approximately 150 milliliters per minute. After approximately five minutes (depending on the down-hole vacuum), or -5 in Hg vacuum in the canister, each canister will be closed and removed from the sampling line and the final canister vacuum will be recorded. The vacuum canister sample will be sealed with a vapor tight cap, appropriately labeled, and entered onto a chain of custody manifest for delivery to McCampbell Analytical in Pittsburg, California.

A total of nine (three existing plus six newly installed) soil vapor samples will be collected. Collected soil vapor samples will be transported to a State-of-California certified laboratory for chemical analysis under chain-of-custody protocol. Each collected soil vapor sample will be analyzed for:

- TPHg using US EPA Testing Method TO-15 and TPHd using US EPA Testing Method TO-17
- Benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-tert butyl ether (MTBE) using US EPA Testing Method TO-15
- Naphthalene using US EPA Testing Method TO-17
- O_2 and CO_2 using ASTM D1946

3.2 Soil Investigation

AEI proposes to perform six soil borings, each will locate adjacent to the proposed soil vapor probe locations shown on Figure 3. At each location, soil boring will be advanced with a direct push drilling rig down to ten-feet bgs, soil samples will be collected every two-feet intervals. A total of thirty soil samples will be collected. Collected soil samples will be sealed, labeled, and transported on ice under proper chain of custody protocol to McCampbell Analytical for the following analyses:

- Total petroleum hydrocarbons as motor oil (TPHmo), diesel (TPHd), and TPH as gasoline (TPHg) using US EPA Testing Method 8015 with silica gel clean-up
- BTEX and MTBE using US EPA Testing Method 8260
- Naphthalene using US EPA Testing Method 8260
- Lead using US EPA Testing Method CAM 17

3.3 Semi-Annual Groundwater Monitoring

AEI is scheduled to perform groundwater monitoring and sampling activities in May 2016. Prior to sampling, the cap will be removed from each well and allow the well pressure to equilibrate with the atmosphere. The depth to water from the top of the well casing will be measured with an electric water level indicator. The wells will be purged for three well volumes with a submersible pump, and groundwater samples will be collected using disposable plastic bailers. The groundwater parameters temperature, pH, specific conductivity and oxidation-reduction potential (ORP) will be measured during the purging of the well. Once the well recharged to 90% of its original volume, a water sample will be collected with clean disposable bailers.

Groundwater samples will be transported on ice under proper chain of custody protocol to McCampbell Analytical. Each sample will be analyzed for:

- Total petroleum hydrocarbons as motor oil (TPHmo) and diesel (TPHd using US EPA Testing Method 8015B, with silica gel clean-up.
- VOCs, fuel oxygenates and total petroleum hydrocarbons as gasoline (TPHg) using US EPA Testing Method 8260B.

4. REFERENCES

The regulatory record for this Site can be found on the State of California GeoTracker Website at http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0608532731.

California Department of Toxic Substances Control (DTSC). 2011. *Vapor Intrusion Mitigation Advisory, Revision 1, Final* (VIMA)

____. 2015. *Advisory – Active Soil Gas Investigation.* July.

California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board). 2009. *Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites*. July 31.

____. 2013. *User's Guide: Derivation and Application of Environmental Screening Levels – Interim Final*. December.

____. 2014. *Draft Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region.* October 16.

AEI Consultants
Environmental & Engineering Services

TABLES

Table 1
3635 13th Avenue, Oakland, CA
Soil Sample Analytical Data

Sample ID	Date	Depth	TPH-g	TPH-d	TPH-mo	Benzene	Toluene	EB	Xylenes	MTBE	TBA	Other Fuel Additives
		(bgs feet)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			EPA Method 8015			*EPA Method 8020/8021 or 8260B*						
EB19	9/13/1993	19	<MDL	--	<MDL	<MDL	<MDL	<MDL	<MDL	--	--	-
SWE	9/13/1993	NM	400	--	2,100	1,000	1,500	1,600	5,100	--	--	-
SWN	9/13/1993	NM	<MDL	--	<MDL	<MDL	<MDL	<MDL	<MDL	--	--	-
SWS	9/13/1993	NM	9.4	--	<MDL	24	36	38	120	--	--	-
SWW	9/13/1993	NM	<MDL	--	<MDL	<MDL	<MDL	<MDL	<MDL	--	--	-
HLN	9/13/1993	NM	--	--	--	--	--	--	--	--	--	-
HLS	9/13/1993	NM	--	--	--	--	--	--	--	--	--	-
EW12	9/13/1993	12	<MDL	--	26	<MDL	<MDL	<MDL	<MDL	--	--	-
SB1-10'	8/97-1/98	10	8.2	15	--	0.17	0.031	0.097	0.069	<2.0	-	-
SB2-10'	8/97-1/98	10	1.3	<1.0	--	0.061	0.016	0.03	0.014	<0.05	-	-
SB3-5'	8/97-1/98	5	1.6	-	--	0.048	0.044	0.016	0.046	<0.05	-	-
SB3-10'	8/97-1/98	10	590	160	--	8.6	15	10	48	<6.0	-	-
SB3-15'	8/97-1/98	15	1,000	-	--	8.3	8.8	15	52	<10	-	-
SB3-20'	8/97-1/98	20	<1.0	-	--	0.006	0.009	<0.005	0.017	<0.05	-	-
SB3-25'	8/97-1/98	25	<1.0	-	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB4-10'	8/97-1/98	10	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB5-15'	8/97-1/98	15	2.0	4.9	--	0.08	<0.005	0.045	0.012	<0.05	-	-
SB6-15'	8/97-1/98	15	2.2	<1.0	--	0.058	0.008	0.007	0.073	<0.05	-	-
SB7-15'	8/97-1/98	15	7.9	2.3	--	<0.005	0.016	<0.005	0.073	<0.05	-	-
SB8-10'	8/97-1/98	10	33	11	--	0.25	0.089	0.30	0.29	<0.23	-	-
SB9-10'	8/97-1/98	10	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB-10 12'	8/21/2003	12	100	38	--	0.39	<0.10	0.88	1.4	<1.0	-	-
SB-10 19'	8/21/2003	19	66	6.3	--	<0.005	0.075	0.047	0.13	<0.05	-	-
SB-11 8'	8/21/2003	8	1.8	1.1	--	0.10	0.012	<0.005	<0.005	<0.05	-	-
SB-11 12'	8/21/2003	12	1.3	2.1	--	0.05	<0.005	<0.005	<0.005	<0.05	-	-
SB-11 19'	8/21/2003	19	150	27	--	0.13	0.11	0.25	0.18	<0.50	-	-
SB-12 12'	10/9/2003	12	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB-12 18'	10/9/2003	18	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB-13 20'	10/10/2003	20	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB-14 16'	10/10/2003	16	74	98	--	<0.050	<0.005	<0.050	0.12	<0.50	-	-
SB-14 23'	10/10/2003	23	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB-15 15'	10/10/2003	15	660	100	--	<0.20	5.6	1.3	1.9	<2.0	-	-
SB-15 19'	10/10/2003	19	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	-	-
SB-16-10'	4/23/2007	10	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-16-16'	4/23/2007	16	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-16-20'	4/23/2007	20	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-16-24'	4/23/2007	24	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL

Table 1
3635 13th Avenue, Oakland, CA
Soil Sample Analytical Data

Sample ID	Date	Depth (bgs feet)	TPH-g mg/kg	TPH-d mg/kg	TPH-mo mg/kg	Benzene mg/kg	Toluene mg/kg	EB mg/kg	Xylenes mg/kg	MTBE mg/kg	TBA mg/kg	Other Fuel Additives mg/kg
			EPA Method 8015			*EPA Method 8020/8021 or 8260B*						
SB-17-10'	4/23/2007	10	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-17-15'	4/23/2007	15	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-17-20'	4/23/2007	20	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.0052	<0.05	<MDL
SB-18-10'	4/23/2007	10	27	17	--	0.068	<0.005	0.018	<0.005	<0.005	<0.05	<MDL
SB-18-15'	4/23/2007	15	2.7	<1.0	--	0.078	<0.005	0.014	<0.005	<0.005	<0.05	<MDL
SB-18-19'	4/23/2007	19	<1.0	<1.0	--	0.013	<0.005	<0.005	<0.005	0.022	0.052	<MDL
SB-18-25'	4/23/2007	25	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.011	<0.05	<MDL
SB-19-9'	4/20/2007	9	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-19-15'	4/20/2007	15	12	9.8	--	0.085	<0.010	0.26	0.020	<0.010	<0.10	<MDL
SB-19-20'	4/20/2007	20	160	40	--	0.12	<0.010	0.28	0.082	0.061	<0.10	<MDL
SB-20-14'	4/20/2007	14	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.0085	<0.05	<MDL
SB-20-18'	4/20/2007	18	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.0095	<0.05	<MDL
SB-20-25'	4/20/2007	25	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-20-30'	4/20/2007	30	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-21-6'	4/20/2007	6	<1.0	4.7	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-21-10'	4/20/2007	10	1,300	300	--	<0.20	<0.20	5.2	1.0	<0.20	<2.0	<MDL
SB-21-15'	4/20/2007	15	3.8	<1.0	--	0.56	<0.025	0.086	0.056	<0.025	<0.025	<MDL
SB-21-26'	4/20/2007	26	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-21-35'	4/20/2007	35	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<MDL
SB-22-11'	4/20/2007	11	4,900	1,400	--	78	280	150	830	<10	<100	<MDL
SB-22-16'	4/20/2007	16	200	1.20	--	1.4	0.28	0.27	1.2	<0.10	<1.0	<MDL
SB-22-20'	4/20/2007	20	4.4	<1.0	--	1.5	<0.10	<0.10	<0.10	<0.10	<1.0	<MDL
SB-23-7'	4/20/2007	7	<1.0	210	--	<0.20	<0.20	4.8	11	<0.20	<2.0	<MDL
SB-23-11'	4/20/2007	11	1,800	350	--	3.4	1.2	11	56	<0.50	<5.0	<MDL
SB-23-15'	4/20/2007	15	520	210	--	7.3	6.5	10	53	<0.50	<5.0	<MDL
SB-23-21'	4/20/2007	21	6.9	31	--	1.2	<0.10	0.12	<0.10	<0.10	<1.0	<MDL
SG-1-10'	11/3/2008	10	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SG-2-10'	11/3/2008	10	<1.0	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SG-3-10'	11/3/2008	10	1,700	1,200	<100	3.1	<1.0	17	44	<10	--	--

mg/kg - milligrams per kilogram
bgs - below ground surface
NM - Not measured
MDL - method detection limit with no sample dilution
-- = sample not analyzed by this method
TPH-g - Total Petroleum Hydrocarbons as gasoline
TPH-d - Total Petroleum Hydrocarbons as diesel
MTBE - methyl tertiary butyl ether
EB ethylbenzene
TBA = t-butyl alcohol
< - less than
*Method 8260 performed for BTEX and Fuel Additives for samples collected on and after 4/20/07

Table 2
Groundwater Monitoring Data

Well ID	Date	Screen Interval (feet/bgs)	Well Elevation	Depth to Water	Water Table Elevation	TPH-g (ug/L) EPA 8015M	TPH-d (ug/L) EPA 8015M	TOG (ug/L) EPA 5520	MTBE (ug/L) EPA 8020 / 8021	Benzene (ug/L) EPA 8020 / 8021	Toluene (ug/L) EPA 8020 / 8021	E-benzene (ug/L) EPA 8020 / 8021	Xylenes (ug/L) EPA 8020 / 8021
MW - 1	11/22/94	12-25	194.75	10.92	183.83	210	<50	<0.5	-	<0.5	<0.5	<0.5	2.3
	02/23/95		194.75	10.58	184.17	140	<50	1.2	-	<0.5	<0.5	0.6	1.5
	05/24/95		194.75	10.94	183.81	<50	<50	<0.5	-	<0.5	<0.5	<0.5	<0.5
	08/18/95		194.75	14.52	180.23	2800	<50	<0.5	-	25	6.2	22	30
	02/07/96		194.75	4.43	190.32	<50	<50	<0.5	-	<0.5	<0.5	<0.5	<0.5
	09/06/96		194.75	13.60	181.15	<50	<50	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
	06/19/97		194.75	13.07	181.68	630	400	<5.0	15	25	9.7	100	14
	01/24/02		194.75	9.53	185.22	60	<50	-	<5.0	3.3	2.8	2.0	6.0
	07/15/03		194.75	12.85	181.90	87	<50	-	<5.0	15	4.9	3.3	9.2
	10/10/03		194.75	14.58	180.17	81	110	-	<5.0	<0.5	0.62	0.57	0.5
	04/06/04		194.75	10.92	183.83	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	07/09/04		194.75	14.34	180.41	130	80	-	<35	<0.5	<0.5	2.8	0.78
	10/08/04		194.75	15.30	179.45	260	120	-	24	3.0	2.9	8.3	10
	04/02/07		194.75	12.19	182.56	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	07/02/07		194.75	13.28	181.47	150	79	-	<25	<0.5	1.0	<0.5	<0.5
	10/03/07		194.75	17.05	177.70	<50	<50		5.8	<0.5	<0.5	<0.5	<0.5
	01/09/08		197.28	6.74	190.54	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/08		197.28	13.16	184.12	130	-	-	<10	<0.5	1.2	22	0.93
	07/07/08		197.28	15.84	181.44	<50	<50	-	11	<0.5	<0.5	<0.5	<0.5
	10/16/08		197.28	17.54	179.74	70	<50	-	6.3	<0.5	<0.5	<0.5	<0.5
	1/29/2013 [1]		197.28	11.36	185.92	<50	<50	-	<5.0	3.6	<0.5	<0.5	<0.5
	12/16/13		197.28	19.04	178.24	110	NA	-	46	<0.5	1.2	0.7	<0.5
	04/17/14		197.28	10.11	187.17	<50	NA	-	<0.5	<0.5	<0.5	<0.5	<0.5
	11/04/14		197.28	19.27	178.01	97	NA	-	1.1	21	<0.5	3.2	2.3
	05/29/15		197.28	16.07	181.21	<50	NA	-	<0.5	<0.5	<0.5	1.1	<0.5
MW - 2	11/22/94	15-36	196.44	12.54	183.90	11,000	<50	<0.5	-	35	21	7	50
	02/23/95		196.44	12.35	184.09	4,000	<50	2	-	<0.5	<0.5	3	6
	05/24/95		196.44	12.11	184.33	8,600	<50	<0.5	-	95	37	37	70
	08/18/95		196.44	16.25	180.19	7,200	<50	<0.5	-	43	21	21	71
	02/07/96		196.44	9.34	187.10	11,000	<50	1	-	17	9	9	25
	09/06/96		196.44	15.22	181.22	15,000	1,900	<5.0	ND	4,300	920	460	1,600
	06/19/97		196.44	13.33	183.11	26,000	2,900	<5.0	<200	5,300	1,500	910	3,200
	01/24/02		196.44	9.72	186.72	34,000	5,300	-	<200	3,100	1,100	1,100	2,900
	07/15/03		196.44	12.42	184.02	18,000	6,600	-	<1000	2,300	310	690	1,600
	10/10/03		196.44	13.79	182.65	19,000	1,800	-	<500	2,700	460	850	1,800
	04/06/04		196.44	10.55	185.89	6,900	1,300	-	<200	1,100	100	380	780
	07/09/04		196.44	13.78	182.66	17,000	4,400	-	<450	2,800	240	710	1,300
	10/08/04		196.44	14.78	181.66	6,900	890	-	<150	1,500	240	340	670
	04/02/07		196.44	11.32	185.12	21,000	4,300	-	<450	2,000	300	1,000	1,700
	07/02/07		196.44	13.18	183.26	5,100	750	-	<180	260	21	320	370
	10/03/07		196.44	16.71	179.73	8,600	1,500	-	<300	1,700	140	520	790
	01/09/08		198.93	8.48	190.45	38,000	48,000	-	<400	3,000	380	1,200	1,900
	04/04/08		198.93	12.60	186.33	5,100	-	-	<130	1,000	72	120	330

Table 2
Groundwater Monitoring Data

Well ID	Date	Screen Interval (feet/bgs)	Well Elevation	Depth to Water	Water Table Elevation	TPH-g (ug/L) EPA 8015M	TPH-d (ug/L) EPA 8015M	TOG (ug/L) EPA 5520	MTBE (ug/L)	Benzene (ug/L)	Toluene (ug/L) EPA 8020 / 8021	E-benzene (ug/L) EPA 8020 / 8021	Xylenes (ug/L) EPA 8020 / 8021
MW - 2	07/07/08	15-36	198.93	15.49	183.44	5,600	920	-	<130	930	52	250	320
	10/16/08		198.93	17.22	181.71	12,000	770	-	<250	1,400	110	400	470
	1/29/2013 [1]		198.93	12.89	186.04	6,600	1,100	-	<250	540	110	430	460
	12/16/13		198.93	18.72	180.21	3,600	NA	-	20	160	20	120	129
	04/17/14		198.93	10.30	188.63	4,800	NA	-	26	500	16	270	97
	11/04/14		198.93	18.65	180.28	2,100	NA	-	25	150	27	120	84
	05/29/15		198.93	15.57	183.36	38,000	NA	-	24	1,300	150	530	316
MW - 3	11/22/94	15.5-36	198.93	11.53	187.40	200	<50	3	-	<0.5	<0.5	<0.5	2
	02/23/95		198.93	11.89	187.04	1500	<50	0.9	-	6.6	6.4	4.2	13
	05/24/95		198.93	12.71	186.22	710	<50	<0.5	-	2.5	3.2	3.1	16
	08/18/95		198.93	16.14	182.79	310	<50	<0.5	-	3.1	2.1	2.2	11
	02/07/96		198.93	6.22	192.71	400	<50	2.2	-	1.4	2.5	2.2	7
	09/06/96		198.93	13.51	185.42	<50	<50	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
	06/19/97		198.93	12.46	186.47	<50	<50	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
	01/24/02		198.93	10.08	188.85	58	<50	-	<5.0	4	2.7	2.3	6.7
	07/15/03		198.93	12.45	186.48	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	10/10/03		198.93	14.00	184.93	350	75	-	<5.0	14	16	23	60
	04/06/04		198.93	10.78	188.15	<50	<50	-	<5.0	<0.5	1.7	<0.5	1.7
	07/09/04		198.93	14.14	184.79	260	<50	-	<5.0	12	13	14	36
	10/08/04		198.93	14.99	183.94	450	76	-	<5.0	21	22	30	86
	04/02/07		198.93	11.87	187.06	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	07/02/07		198.93	14.45	184.48	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	10/03/07		198.93	17.10	181.83	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	01/09/08		201.46	9.42	192.04	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/08		201.46	15.16	186.30	<50	-	-	<5.0	<0.5	<0.5	<0.5	<0.5
	07/07/08		201.46	15.63	185.83	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	10/16/08		201.46	17.53	183.93	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	1/29/2013 [1]		201.46	12.15	189.31	63	<50	-	<5.0	7.8	<0.5	3.1	2.1
	12/16/13		201.46	19.20	182.26	<50	NA	-	<5.0	<0.5	<0.5	<0.5	<0.5
	04/17/14		201.46	12.56	188.90	<50	NA	-	<5.0	<0.5	<0.5	<0.5	<0.5
	11/04/14		201.46	19.17	182.29	<50	NA	-	<5.0	<0.5	<0.5	<0.5	<0.5
	05/29/15		201.46	16.33	185.13	<50	NA	-	<5.0	<0.5	<0.5	<0.5	<0.5
MW - 4	10/03/07	17-22	200.23	17.21	183.02	11,000	2,000	-	<1,500	1,100	87	<17	1,300
	01/09/08		200.23	9.20	191.03	17,000	2,600	-	<900	1,300	120	580	790
	04/04/08		200.23	13.63	186.60	17,000	-	-	<1,500	1,600	200	500	1,300
	07/07/08		200.23	16.18	184.05	18,000	3,100	-	<1,200	1,400	190	930	1,200
	10/16/08		200.23	17.81	182.42	25,000	2,000	-	<1,500	1,200	110	490	890
	1/29/2013 [1]		200.23	11.66	188.57	18,000	3,200	-	<700	1,500	170	1,100	1,100
	12/16/13		200.23	20.44	179.79	4,200	NA	-	43	370	26	130	100
	04/17/14		200.23	10.97	189.26	7,300	NA	-	45	550	55	540	305
	11/04/14		200.23	20.78	179.45	4,800	NA	-	33	220	21	190	66
	05/29/15		200.23	16.53	183.70	12,000	NA	-	49	600	78	740	337
MW - 5	10/03/07	17-22	198.52	17.44	181.08	8,800	680	-	<250	2,800	74	100	190
	01/09/08		198.52	10.01	188.51	7,400	580	-	<350	2,000	5.6	93	29
	04/04/08		198.52	11.78	186.74	43,000	-	-	<500	12,000	2,800	670	2,500
	07/07/08		198.52	15.53	182.99	20,000	1,000	-	<500	6,800	190	280	380
	10/16/08		198.52	17.89	180.63	13,000	490	-	<250	3,500	10	93	30
	1/29/2013 [1]		198.52	13.21	185.31	5,300	470	-	<130	1,300	11	170	14
	12/16/13		198.52	18.65	179.87	1,300	NA	-	86	240	<2.5	5.7	<2.5
	04/17/14		198.52	16.32	182.20	2,100	NA	-	91	400	<2.5	30	<2.5
	11/04/14		198.52	19.53	178.99	470	NA	-	59	1.1	<0.5	0.9	<0.5
	05/29/15		198.52	16.37	182.15	2,200	NA	-	39	480	<3.1	48	<3.1

Table 2
Groundwater Monitoring Data

Well ID	Date	Screen Interval (feet/bgs)	Well Elevation	Depth to Water	Water Table Elevation	TPH-g (ug/L) EPA 8015M	TPH-d (ug/L) EPA 8015M	TOG (ug/L) EPA 5520	MTBE (ug/L) EPA 8020 / 8021	Benzene (ug/L) EPA 8020 / 8021	Toluene (ug/L) EPA 8020 / 8021	E-benzene (ug/L) EPA 8020 / 8021	Xylenes (ug/L) EPA 8020 / 8021
MW - 6	10/03/07	17-22	200.20	18.46	181.74	11,000	1,400	-	<1,200	1,400	64	74	320
	01/09/08		200.20	11.93	188.27	8,400	1,300	-	<400	790	17	210	51
	04/04/08		200.20	15.69	184.51	6,100	-	-	<500	630	52	430	130
	07/07/08		200.20	14.84	185.36	6,200	1,200	-	<300	500	11	250	53
	10/16/08		200.20	18.95	181.25	3,700	600	-	180	220	4.4	93	15
	1/29/2013 [1]		200.20	17.62	182.58	2,300	440	-	<130	180	18	79	40
	12/16/13		200.20	19.60	180.60	1,400	NA	-	170	100	1.9	9.0	5.0
	04/17/14		200.20	17.38	182.82	740	NA	-	97	49	1.1	22	0.9
	11/04/14		200.20	18.73	181.47	1,300	NA	-	140	52	1.0	3.2	1.4
	05/29/15		200.20	15.26	184.94	2,600	NA	-	140	310	13	25	42.7
MW - 7	1/29/2013 [1]	17-22	NM	19.07	NM	42,000	2,300	-	<900	14,000	140	1,100	800
	12/16/13		NM	19.49	NM	21,000	NA	-	<50	7,200	<50	280	164
	04/17/14		NM	10.54	NM	11,000	NA	-	23	3,900	22	290	157
	11/04/14		NM	20.32	NM	8,400	NA	-	<25	4,100	<25	260	<25
	05/29/15		NM	15.71	NM	6,800	NA	-	<20	2,700	<20	240	24

Well Elevation in feet above mean sea level (msl)
Depth to water in feet below the tops of the well casings
TPH-g - Total petroleum hydrocarbons (TPH) as gasoline
ND = non detect (detection limit not known)
NA = Not Analyzed
NM = Not Measured
*Monitoring Well elevation for MW-1 through MW-3 was resurveyed on 11/7/08
[1] = well additionally analyzed for TPH as motor oil and hexachrome; all below laboratory detection limits.

TOG - Total oil and grease
MTBE - Methyl tertiary butyl ether
E-benzene: Ethyl-benzene
TPH-d - TPH as diesel

mg/L - milligrams per liter
ug/L - micrograms per liter
- = sample not analyzed by this method

Table 3
3635 13th Avenue, Oakland, CA
Soil Vapor Sample Analytical Data

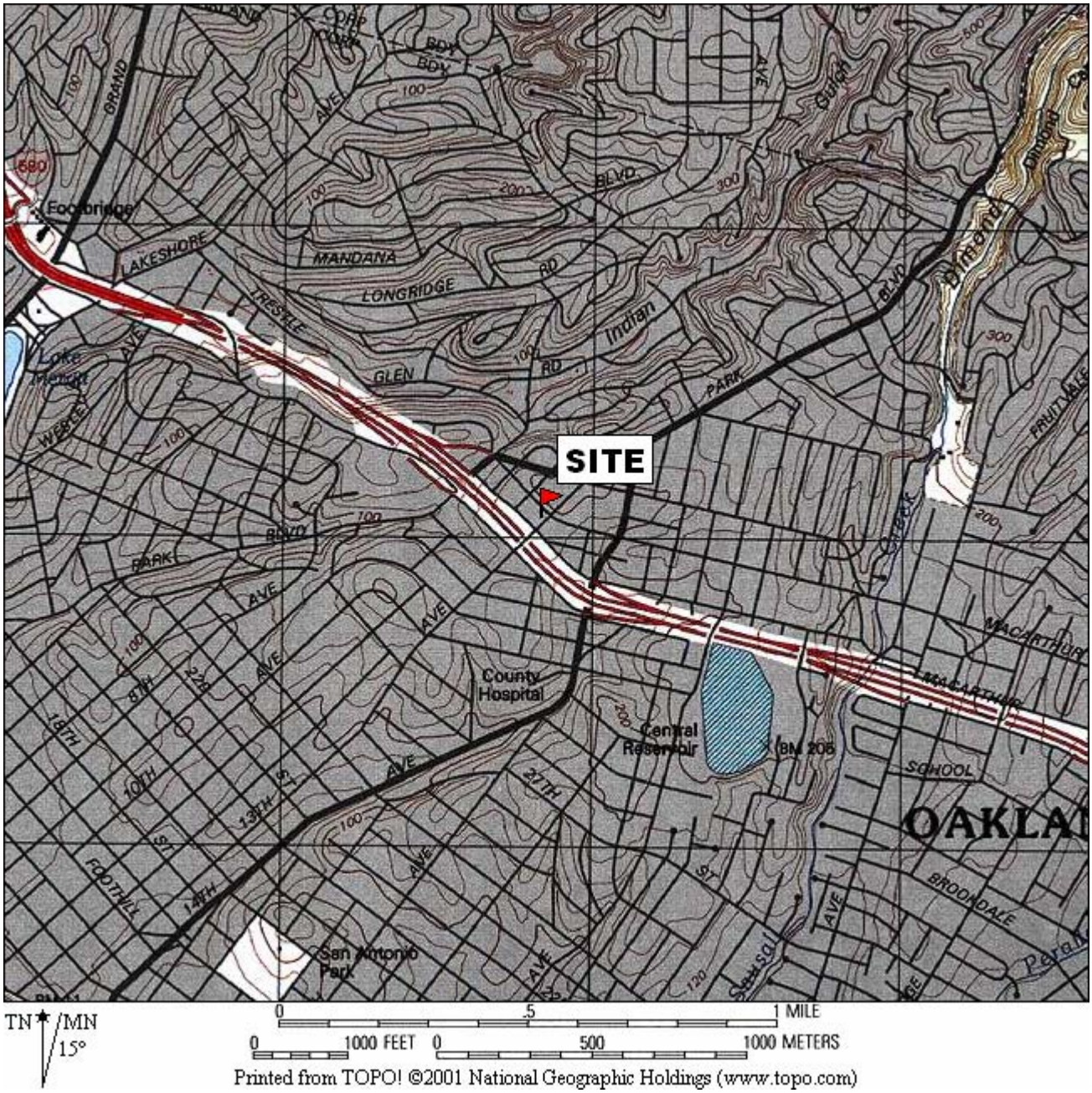
Sample ID	Date	TPH-g µg/m^3	Benzene µg/m^3	Toluene µg/m^3	EB µg/m^3	Xylenes µg/m^3	MTBE µg/m^3	IPA µg/m^3
SG-1-5'	2/15/2013	<1,800	<6.5	<7.7	<8.8	<27	<7.3	<50
SG-1-10'	2/15/2013	4,600	<6.5	<7.7	<8.8	<27	13	<50
SG-2-5'	2/15/2013	<1,800	<6.5	<7.7	<8.8	<27	<7.3	<50
SG-2-10'	2/15/2013	<1,800	<6.5	<7.7	<8.8	<27	<7.3	<50
SG-3-5'	2/15/2013	6,400,000	6,400	<2,000	<2,000	<2,000	<2,000	<20,000

.

µg/m^3 - micrograms per cubic meter
ND = Non detect
MDL - method detection limit with no sample dilution
- = sample not analyzed by this method
TPH-g - Total Petroleum Hydrocarbons as gasoline
TPH-d - Total Petroleum Hydrocarbons as diesel
MTBE - methyl tertiary butyl ether
EB ethylbenzene
IPA - Isopropyl Alcohol used as leak check compound
< - less than

AEI Consultants
Environmental & Engineering Services

FIGURES



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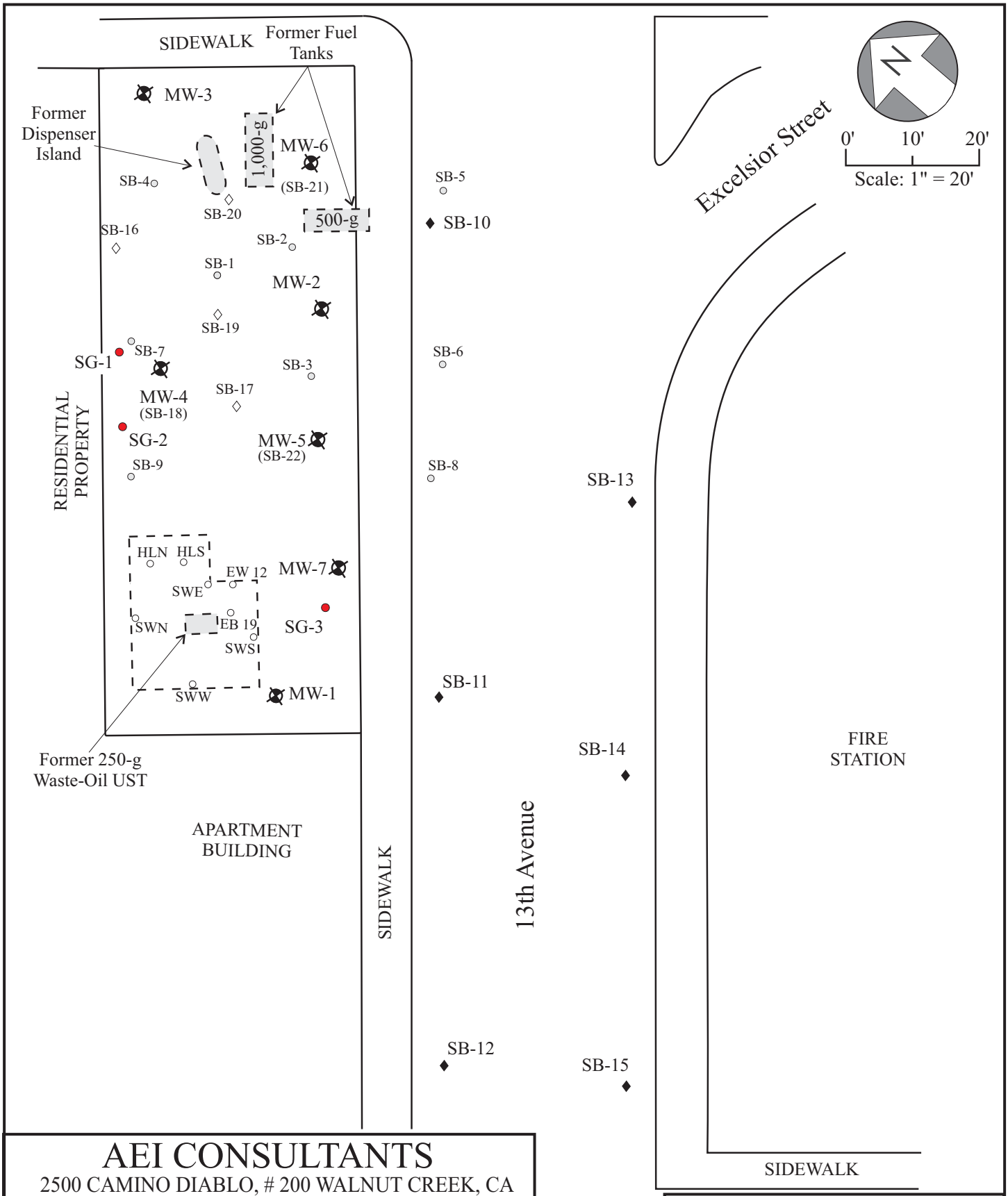
AEI CONSULTANTS	
SITE LOCATION MAP	
3635 13th AVENUE OAKLAND, CALIFORNIA	**FIGURE 1** PROJECT NO. 8499



AEI CONSULTANTS

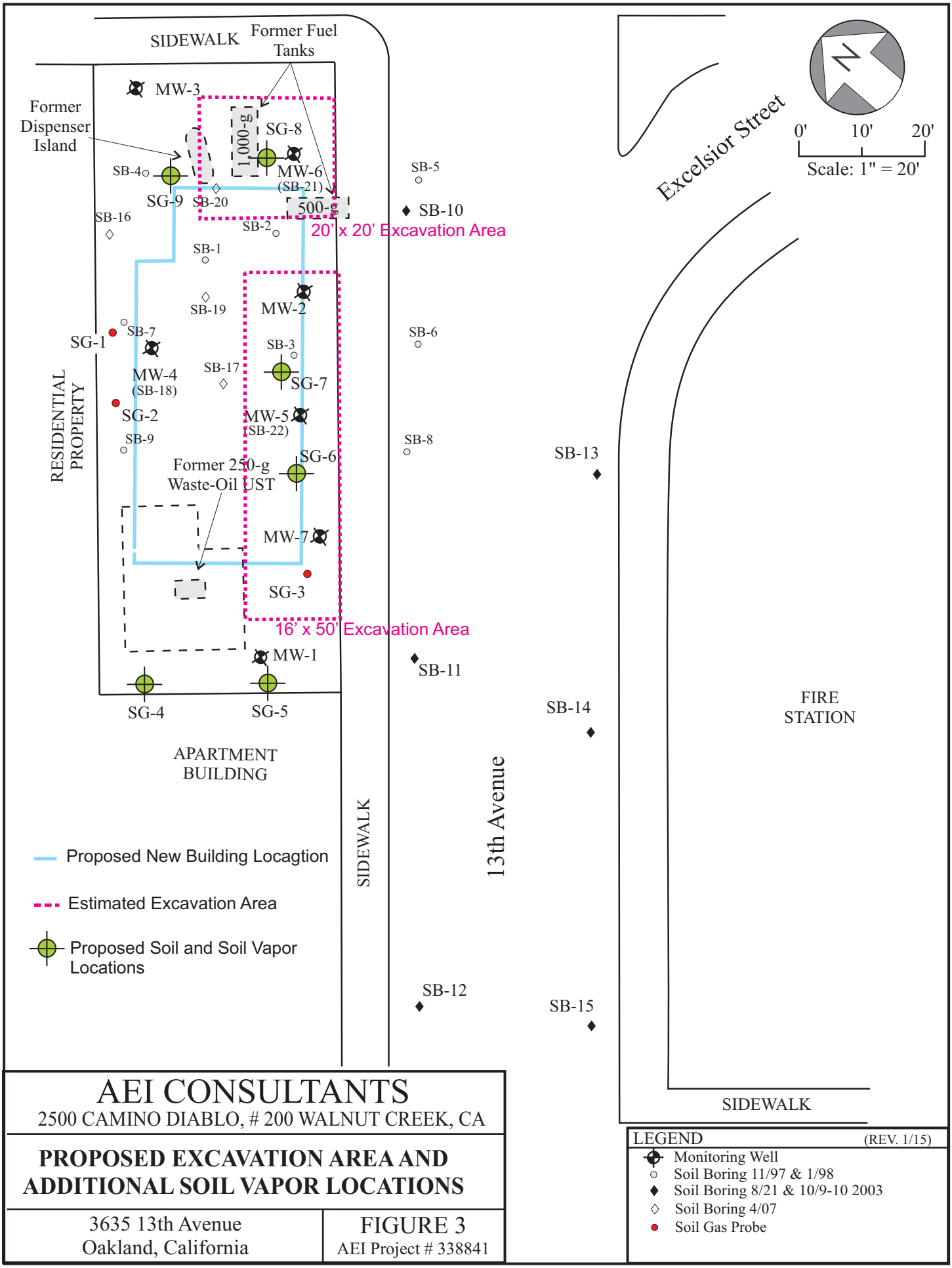
2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

SITE PLAN

3635 13th Avenue Oakland, California	FIGURE 2 AEI Project # 270852

LEGEND (REV. 1/15)

- Monitoring Well
- Soil Boring 11/97 & 1/98
- Soil Boring 8/21 & 10/9-10 2003
- Soil Boring 4/07
- Soil Gas Probe
- Former Soil Excavation Area
- Soil Sample Collected From Soil Excavation



AEI CONSULTANTS

2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

PROPOSED EXCAVATION AREA AND ADDITIONAL SOIL VAPOR LOCATIONS

3635 13th Avenue Oakland, California	FIGURE 3 AEI Project # 338841

LEGEND (REV. 1/15)

- Monitoring Well
- Soil Boring 11/97 & 1/98
- Soil Boring 8/21 & 10/9-10 2003
- Soil Boring 4/07
- Soil Gas Probe

AEI Consultants
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APPENDIX A

Zoning Change Document from City of Oakland

CITY OF OAKLAND PARCEL INFORMATION

The information provided in this map is for reference purposes only. It is not intended for any other use and should not be relied on for any other purpose. To obtain the latest information, please contact the Zoning information Hotline Counter at (510)238-3911.
Report on 11/17/2015

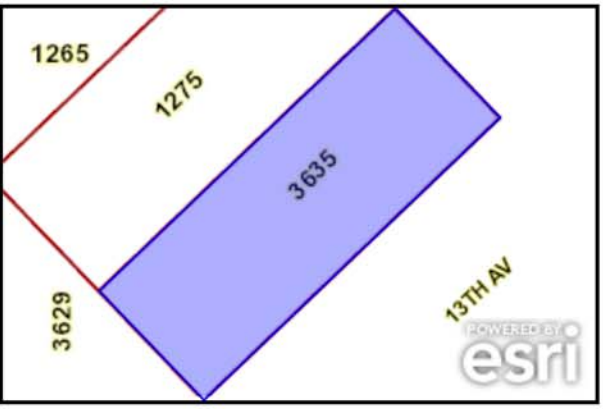
Basic Parcel Information		
Parcel Number	023 048000500	More Info
Area	Approx. Area = 3700.01 sq.ft.	
Address within the parcel	3635 13TH AVE	

Zoning and General Plan Information		
Zoning	RM-3 (additional zoning districts may apply if illustrated in map below)	
Height - Central Business District	N/A	More Info
Height - Commercial Corridor	N/A	More Info
General Plan/Estuary Policy Plan	Mixed Housing Type Residential	More Info
Condominium Conversion Impact Area	No	Municipal Code 16.36

Administrative Information		
City Council District	CCD5	More Info
SDS Service District	3	
Port of Oakland Jurisdiction	No	

Historic Resources Information		
Local Historic Property Category	Local Register	More Info
Local Historic District		More Info
OCHS Rating	X	More Info
Construction Date		
Local Landmark	No	More Info
National Historic Landmark	No	More Info
Heritage Property	No	More Info
Designated Historic District	No	More Info
Mills Act	No	More Info

Environmental Information	
WhipSnake Critical Habitat	No
Flood Zone	No
Hayward Fault Zone	No
Liquefaction Hazard Zone	Yes, Liquefaction Severity 2
Wild Fire Assessment District	No



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Environmental & Engineering Services

APPENDIX B

Proposed Building Plan

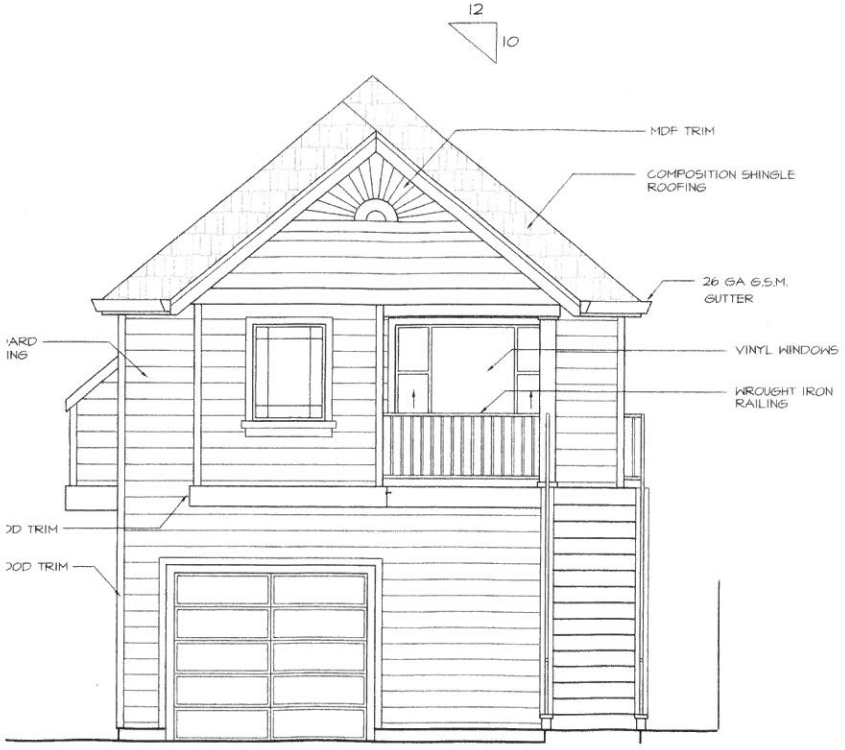
REVISIONS	BY

VAN HULLE ASSOCIATES
ARCHITECTURE & PLANNING
2121 N. CALIFORNIA BLVD., STE. 530
WALNUT CREEK, CA 94596
(925) 944-6446 FAX (925) 944-9431

SUMNER RESIDENCE
3635 13TH AVE.
OAKLAND, CALIFORNIA

FRONT & LEFT SIDE EXTERIOR ELEVATIONS

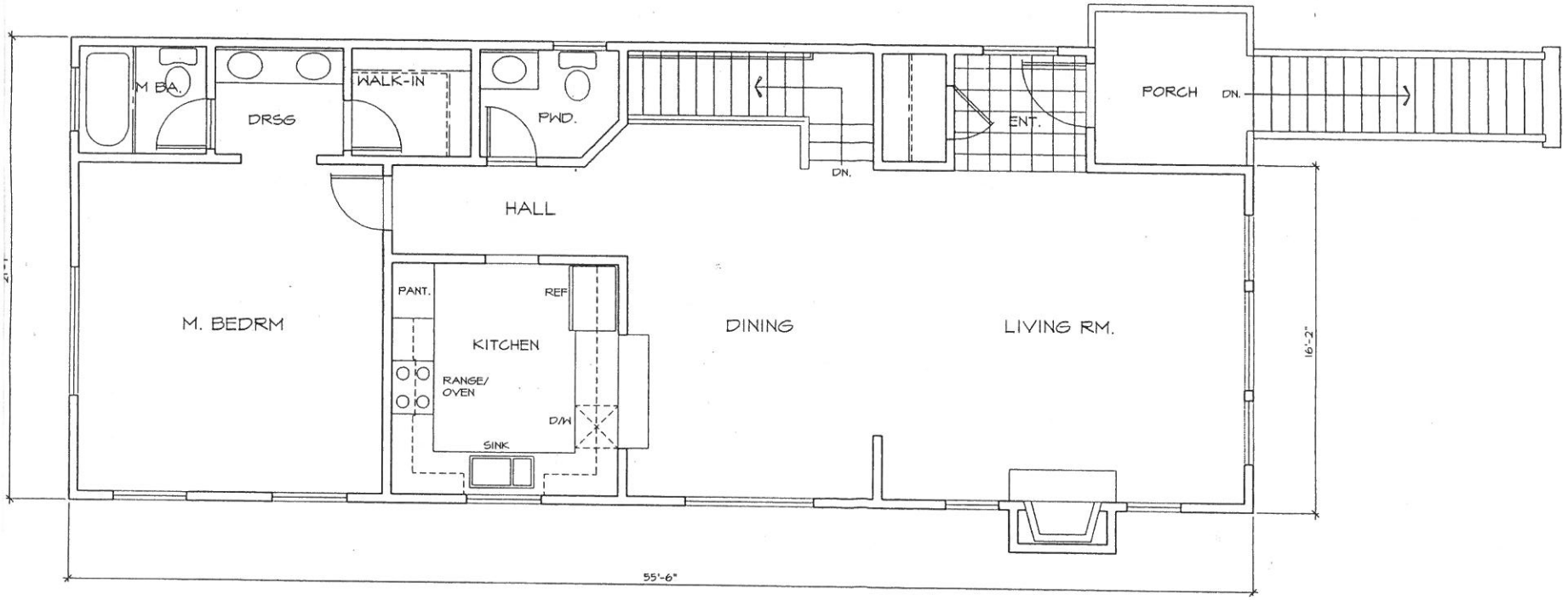
DATE: 6-16-14
JOB NO: 0613
SCALE: 1/4"=1'-0"
DRAWN BY: ST
SHEET
OF SHEETS



NOTE: DOWNSPOUTS NOT SHOWN.
SEE ROOF PLAN FOR LOCATIONS

FRONT ELEVATION WEST

SCALE: 1/4" = 1'-0"



SECOND FLOOR PLAN

REVISIONS | BY

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SUMNER RESIDENCE
3635 13th AVE.
OAKLAND, CALIFORNIA

FRONT & LEFT SIDE EXTERIOR ELEVATIONS

DATE 6-16-14
JOB NO. 0613
SCALE: 1/4"=1'-0"
DRAWN BY: ST
SHEET
OF SHEETS

REVISIONS	BY

VAN HULLE ASSOCIATES
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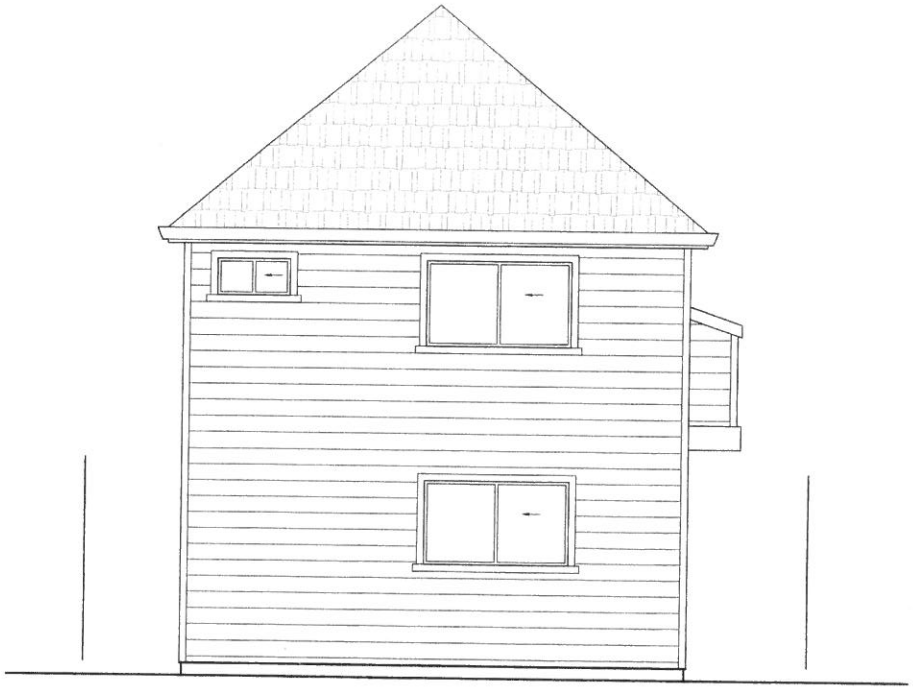

REAR ELEVATION

SCALE: 1/4" = 1'-0"

SEE SHEET A3.0 FOR TYPICAL NOTES

SUMNER RESIDENCE
3635 13TH AVE.
OAKLAND, CALIFORNIA

FRONT & LEFT SIDE EXTERIOR ELEVATIONS

DATE: 6-16-14
JOB NO: 0613
SCALE: 1/4"=1'-0"
DRAWN BY: ST
SHEET

SHEETS

REVISIONS	BY

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2121 N. CALIFORNIA BLVD., STE. 630
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RIGHT SIDE ELEVATION

SCALE: 1/4" = 1'-0"

SUMNER RESIDENCE
3635 13th AVE.
OAKLAND, CALIFORNIA

FRONT & LEFT SIDE EXTERIOR ELEVATIONS

DATE 6-16-14
JOB NO 0613
SCALE 1/4"=1'-0"
DRAWN BY SI
SHEET
OF SHEETS

REVISIONS	BY

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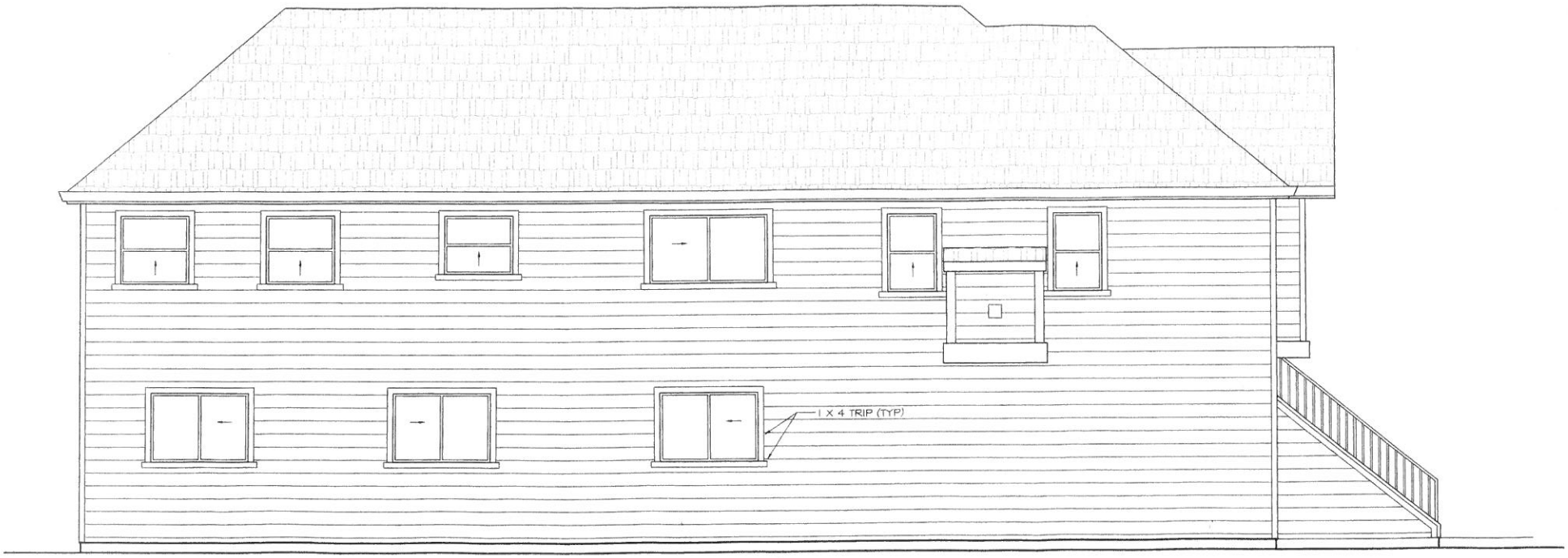

LEFT SIDE ELEVATION

SCALE: 1/4" = 1'-0"

SUMNER RESIDENCE
3635 13TH AVE.
OAKLAND, CALIFORNIA

FRONT & LEFT SIDE EXTERIOR ELEVATIONS

DATE: 6-16-14
JOB NO: 0613
SCALE: 1/4"=1'-0"
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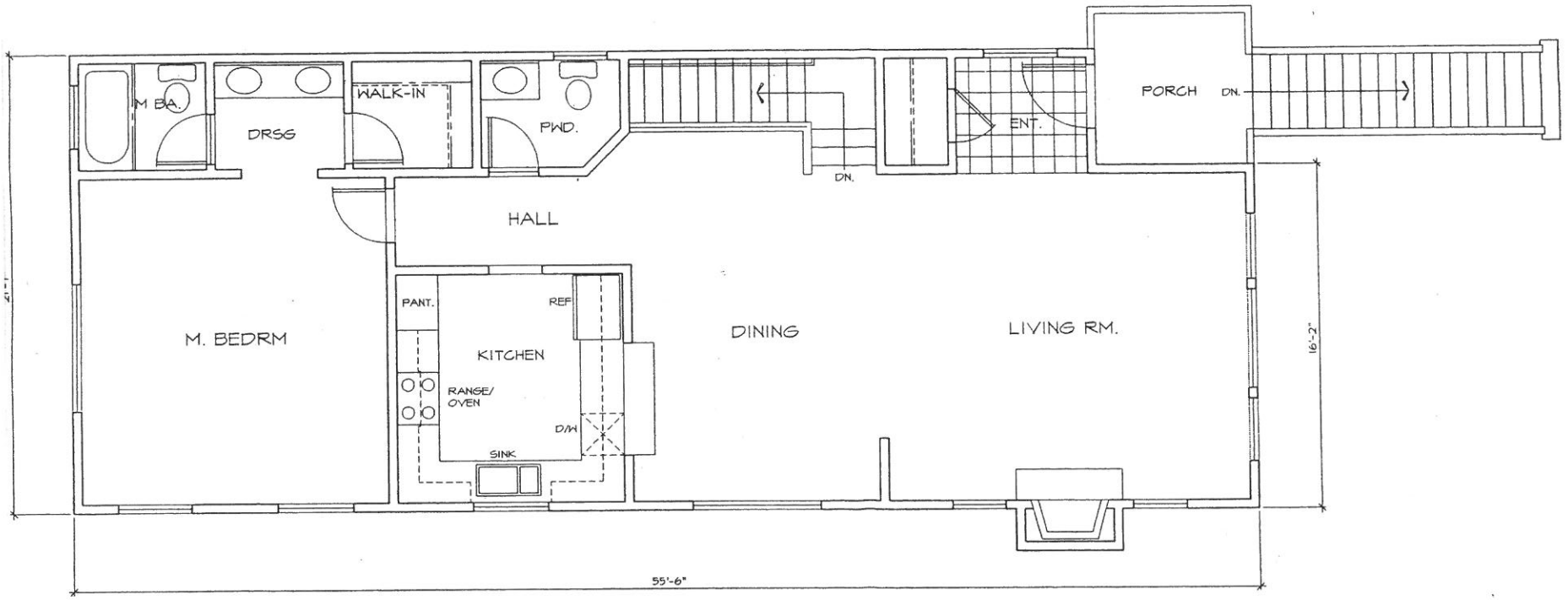

SECOND FLOOR PLAN

REVISIONS | BY

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SUMNER RESIDENCE
3635 13TH AVE.
OAKLAND, CALIFORNIA

FRONT & LEFT SIDE EXTERIOR ELEVATIONS

DATE 6-16-14
JOB NO. 0613
SCALE 1/4"=1'-0"
DRAWN BY ST
SHEET

OF SHEETS