Ms. Barbara Jakub, P.G.
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Grimit Auto Repair and Service, 1970 Seminary Boulevard, Oakland, California (Fuel Leak Case No. RO0000413)

Dear Ms. Jakub:

Stratus Environmental, Inc. (Stratus) has recently prepared a report entitled *Well Installation Report*, on my behalf. The report was prepared in regards to Alameda County Fuel Leak Case No. RO0000413, for the former Grimit Auto Repair and Service, 1970 Seminary Boulevard, Oakland, California.

I have reviewed a copy of this report, sent to me by representatives of Stratus, and "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report are true and correct to the best of my knowledge".

If you have any questions, please contact me via electronic mail at peggy.h.garcia@sbcglobal.net, or my daughter Angel LaMarca at angelcpt@gmail.com.

Sincerely,

Ms. Peggy Garcia, Trustee, Grimit Family Trust

cc: Angel LaMarca

STRATUS
ENVIRONMENTAL, INC.

3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

February 10, 2014
Project No. 2090-1970-01

Mr. Keith Nowell
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(via GeoTracker & Alameda County FTP site)

Re: Well Installation Report
Former Grimit Auto Repair and Service
1970 Seminary Avenue
Oakland, California
(Fuel Leak Case No. RO0000413)

Dear Mr. Nowell:

Stratus Environmental, Inc. (Stratus) has prepared this *Well Installation Report*, on behalf of the Grimit Family Trust, for the Former Grimit Auto Repair and Service facility (the Site), located at 1970 Seminary Avenue, Oakland, California (see Figures 1 and 2). Alameda County Environmental Health Department (ACEHD) currently oversees an environmental case at the subject property relating to the former use of underground storage tanks (USTs) on the subject property. In September 2013, ACEHD personnel approved a plan to implement site remedial work in phases, beginning with use of dual phase extraction (DPE) technology intended to target contaminant mass removal and free product abatement. In order to allow for implementation of DPE, Stratus recently directed the installation of six wells that will be used to extract contaminants from the subsurface; this report documents completion of that work. Other aspects of the work scopes approved by ACEHD will be provided at later dates, in separate reports, as project tasks progress.

SCOPE OF WORK

Prior to implementation of drilling activities, a well installation permit was obtained from Alameda County Public Works Agency (ACPWA). Drilling locations were marked 48 hours prior to fieldwork. Underground Service Alert, ACPWA, ACEHD, the property owner, and the property tenant were notified 48 hours prior to beginning work activities. All work was conducted under the direct supervision of a State of California Professional Geologist. A copy of the drilling permit is provided in Appendix A.

Field Activities

Soil Borings

A Stratus geologist was onsite to oversee Cascade Drilling, Inc. (C-57 #938110) complete the drilling activities between January 29 and 31, 2014. The well borings were advanced to approximately 34 feet below ground surface (bgs) using a limited access drilling rig equipped with 10-inch diameter hollow stem augers. Each boring was completed as an extraction well, as described below. The approximate location of these wells (EX-1 through EX-6) are included on Figure 2. Due to the significant amount of site assessment work already performed on the subject property, no soil samples were collected during this drilling work for geologic evaluation or chemical testing.

Extraction Well Installation

Wells EX-1 through EX-6 were constructed through 10-inch diameter hollow stem augers using 4-inch diameter schedule 40 well casing and 20 feet of 0.020-inch diameter well screen, situated from approximately 13 to 33 feet bgs. A filter pack of #3 sand was placed in the annular space around the well screen from the bottom of the borehole to approximately two feet above the top of the well screen. Approximately three feet of bentonite was placed on top of the filter pack and hydrated with clean water to provide a transition seal for the well. The remaining annular space in the borehole was backfilled with neat cement. A traffic rated vault box was placed over the well, and a watertight locking cap was placed on the top of the well casing. Well construction details for EX-1 through EX-6 are provided in Appendix B. Department of Water Resources (DWR) well completion reports have been submitted to ACPWA; copies of the DWR forms will be provided to ACEHD upon request.

Waste Management

Drill cuttings and rinseate wastewater generated during the drilling activities were contained in DOT-approved 55-gallon steel drums. A sample of the drill cuttings was submitted for analytical testing in order to properly profile this waste stream. The drums were appropriately labeled and stored at the site pending proper disposal. Stratus has retained Integrated Wastestream Management of San Jose to transport the drummed waste to licensed facilities for proper disposal.

DISCUSSION

Stratus is currently working to obtain the utility services needed to operate a DPE remediation system at the site. Once utility services have been obtained, the well heads of EX-1 through EX-6 will be modified to allow for installation of lateral conveyance piping. Our intention is to complete this work during the spring of 2014, and perform

DPE during the summer and fall of 2014, as budgets from California's UST Cleanup Fund allow. Our intention is to complete DPE as soon as practical because we anticipate relatively low groundwater levels will be present during 2014, as a result of a dry climatic cycle. Low groundwater levels should result in higher contaminant mass extraction rates in the vapor phase, and thus more rapid and effective remediation by DPE.

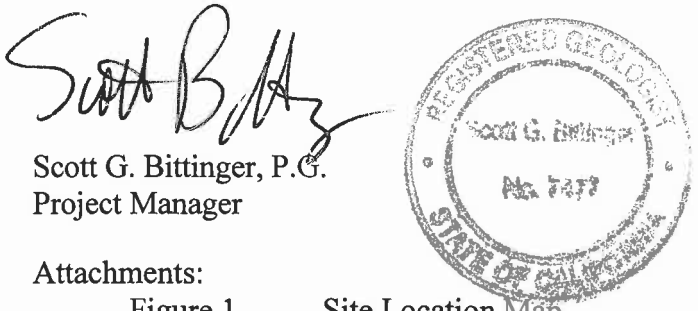
LIMITATIONS

This report was prepared in general accordance with accepted standards of care that existed at the time this work was performed. No other warranty, expressed or implied, is made. Conclusions and recommendations are based on field observations and data obtained from this work and previous investigations. It should be recognized that definition and evaluation of geologic conditions is a difficult and somewhat inexact science. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface conditions present. More extensive studies may be performed to reduce uncertainties. This report is solely for the use and information of our client unless otherwise noted.

If you have any questions or comments concerning this report, please contact Scott Bittinger at (530) 676-2062.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

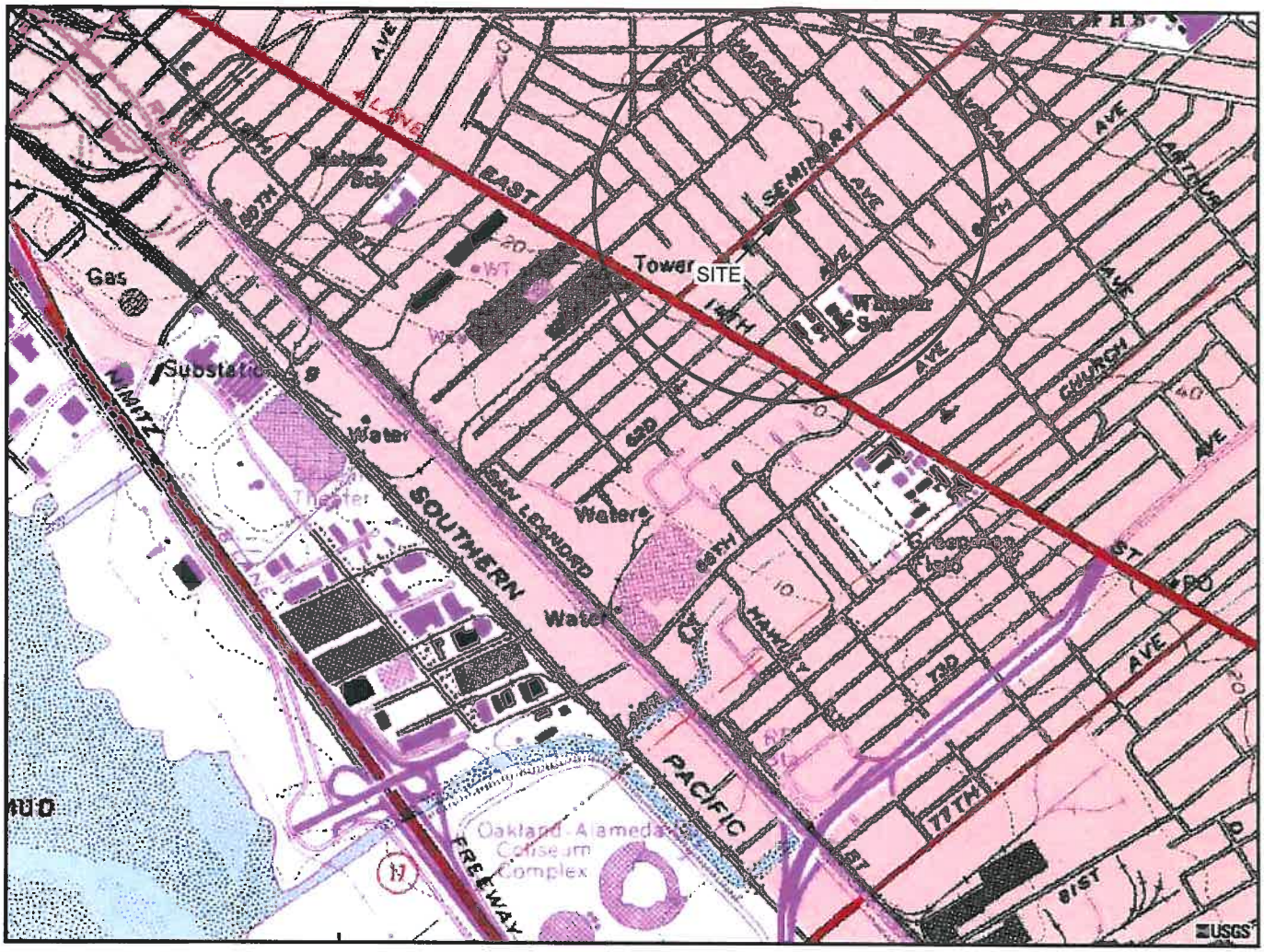


Scott G. Bittinger, P.G.
Project Manager

Attachments:

Figure 1	Site Location Map
Figure 2	Site Plan
Appendix A	Drilling Permit
Appendix B	Well Detail Diagrams

cc: Ms. Angel LaMarca and Ms. Peggy Garcia, Trustee, Grimit Family Trust



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
OAKLAND, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1996

N

QUADRANGLE LOCATION

0 1800 FT

APPROXIMATE SCALE

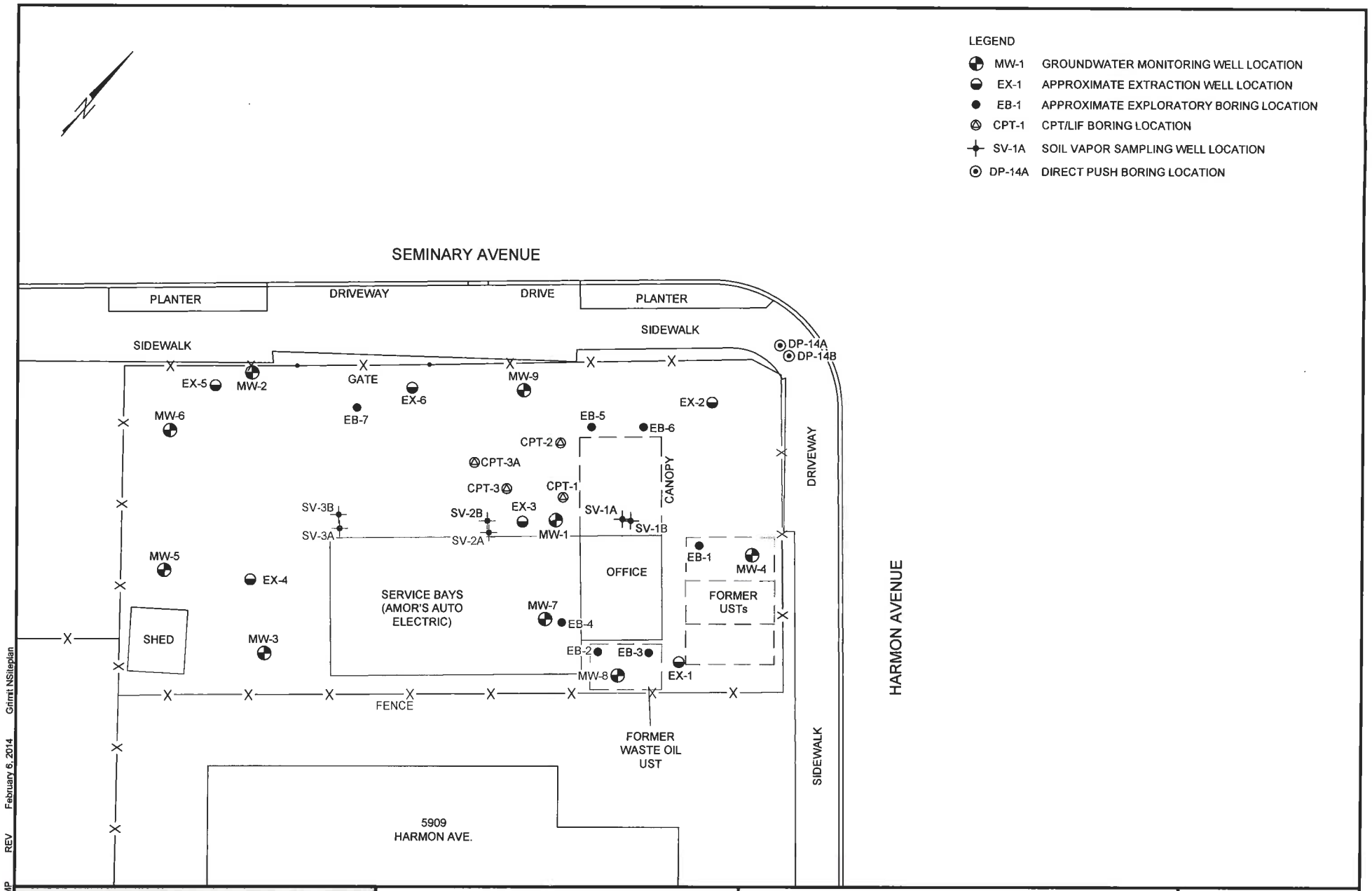
STRATUS ENVIRONMENTAL, INC.

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE
1

PROJECT NO.
2090-1970-01



JMP REV February 6, 2014 Grimit NSiteplan

Grimit Auto

STRATUS ENVIRONMENTAL, INC.

0 20 FT

SCALE

FORMER GRIMIT AUTO
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

SITE PLAN

FIGURE

2

PROJECT NO.
2090-1970-1

APPENDIX A

DRILLING PERMIT

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 01/14/2014 By jamesy

Permit Numbers: W2014-0020
Permits Valid from 01/29/2014 to 01/31/2014

Application Id: 1389397880276
City of Project Site: Oakland
Site Location: 1970 Seminary Avenue
Project Start Date: 01/29/2014
Completion Date: 01/31/2014
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: Stratus - Scott Bittinger
3330 Cameron Park Dr, #550, Cameron Park, CA 95682
Phone: 530-676-2062

Property Owner: Grimit Family Trust
14618 Dublin Avenue, Gardena, CA 90249
Phone: 310-941-0914

Client: ** same as Property Owner **

	Total Due:	$265.00
Receipt Number: WR2014-0007	**Total Amount Paid:**	$265.00
Payer Name : Stratus	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Remediation Well Construction-Extraction - 6 Wells
Driller: Cascade - Lic #: 938110 - Method: hstem

Work Total: $265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2014-0020	01/14/2014	04/29/2014	EX1	10.00 in.	4.00 in.	8.00 ft	35.00 ft
W2014-0020	01/14/2014	04/29/2014	EX2	10.00 in.	4.00 in.	8.00 ft	35.00 ft
W2014-0020	01/14/2014	04/29/2014	EX3	10.00 in.	4.00 in.	8.00 ft	35.00 ft
W2014-0020	01/14/2014	04/29/2014	EX4	10.00 in.	4.00 in.	8.00 ft	35.00 ft
W2014-0020	01/14/2014	04/29/2014	EX5	10.00 in.	4.00 in.	8.00 ft	35.00 ft
W2014-0020	01/14/2014	04/29/2014	EX6	10.00 in.	4.00 in.	8.00 ft	35.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and

mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit number and site map.

4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

7. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

8. Minimum surface seal thickness is two inches of cement grout placed by tremie.

9. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

10. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

APPENDIX B

WELL DETAIL DIAGRAMS

EXTRACTION WELL DETAILS

PROJECT NUMBER: 2090-1970-01

PROJECT NAME: Former Grimit Auto

LOCATION: 1970 Seminary Ave, Oakland , California

WELL PERMIT NO.: W2014-0020

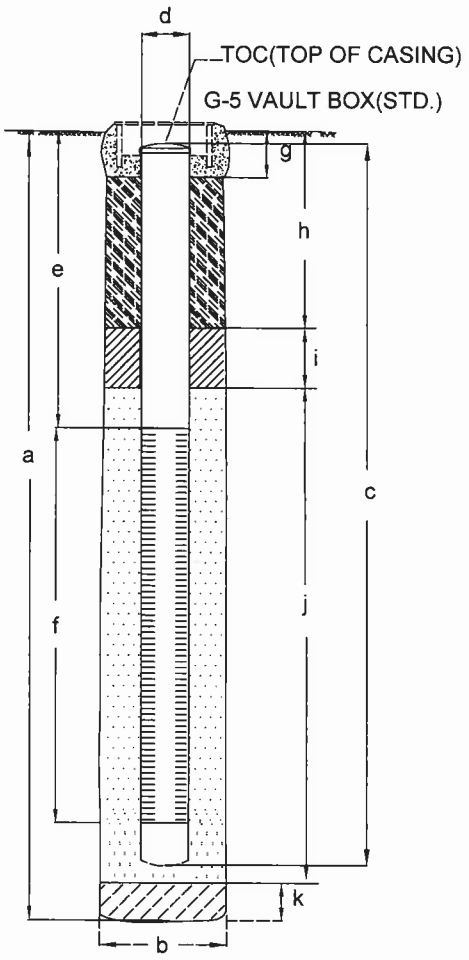
BORING/WELL NO.: EX-1

TOP OF CASING ELEV.:

GROUND SURFACE ELEV.:

DATUM:

INSTALLATION DATE: January 29, 2014



BENTONITE

CEMENT

CONCRETE

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 34 ft.

b. DIAMETER 10 in.

DRILLING METHOD Hollow Stem Auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 34 ft.

MATERIAL Schedule 40 PVC

d. DIAMETER 4 in.

e. DEPTH TO TOP PERFORATIONS 13 ft.

f. PERFORATED

INTERVAL FROM 13 TO 33 ft.

PERFORATION TYPE Milled Slots

PERFORATION SIZE 0.02 in.

g. SURFACE SEAL 0 to 1 ft.

SEAL MATERIAL Concrete

h. BACKFILL 1 to 8 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 8 to 11 ft.

SEAL MATERIAL Bentonite Chips

j. FILTER PACK 11 to 34 ft.

FILTER PACK MATERIAL #3 Sand

k. BOTTOM SEAL

SEAL MATERIAL NONE

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

EXTRACTION WELL DETAILS

PROJECT NUMBER: 2090-1970-01

PROJECT NAME: Former Grimit Auto

LOCATION: 1970 Seminary Ave, Oakland, California

WELL PERMIT NO.: W2014-0020

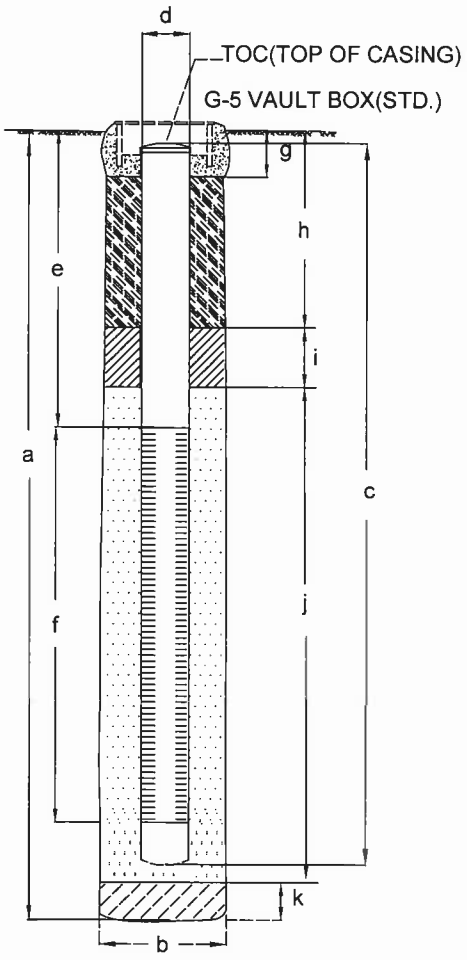
BORING/WELL NO.: EX-2

TOP OF CASING ELEV.: _____

GROUND SURFACE ELEV.: _____

DATUM: _____

INSTALLATION DATE: January 29, 2014



BENTONITE

CEMENT

CONCRETE

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 34 ft.

b. DIAMETER 10 in.

DRILLING METHOD Hollow Stem Auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 34 ft.

MATERIAL Schedule 40 PVC

d. DIAMETER 4 in.

e. DEPTH TO TOP PERFORATIONS 13 ft.

f. PERFORATED

INTERVAL FROM 13 TO 33 ft.

PERFORATION TYPE Milled Slots

PERFORATION SIZE 0.02 in.

g. SURFACE SEAL 0 to 1 ft.

SEAL MATERIAL Concrete

h. BACKFILL 1 to 8 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 8 to 11 ft.

SEAL MATERIAL Bentonite Chips

j. FILTER PACK 11 to 34 ft.

FILTER PACK MATERIAL #3 Sand

k. BOTTOM SEAL _____

SEAL MATERIAL NONE

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

EXTRACTION WELL DETAILS

PROJECT NUMBER: 2090-1970-01

PROJECT NAME: Former Grimit Auto

LOCATION: 1970 Seminary Ave, Oakland, California

WELL PERMIT NO.: W2014-0020

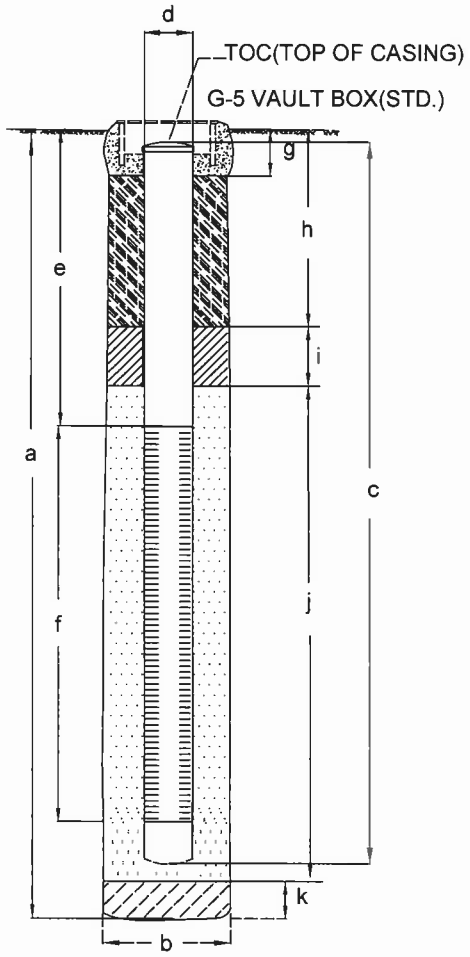
BORING/WELL NO.: EX-3

TOP OF CASING ELEV.: _____

GROUND SURFACE ELEV.: _____

DATUM: _____

INSTALLATION DATE: January 30, 2014



BENTONITE

CEMENT

CONCRETE

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 34 ft.

b. DIAMETER 10 in.

DRILLING METHOD Hollow Stem Auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 34 ft.

MATERIAL Schedule 40 PVC

d. DIAMETER 4 in.

e. DEPTH TO TOP PERFORATIONS 13 ft.

f. PERFORATED

INTERVAL FROM 13 TO 33 ft.

PERFORATION TYPE Milled Slots

PERFORATION SIZE 0.02 in.

g. SURFACE SEAL 0 to 1 ft.

SEAL MATERIAL Concrete

h. BACKFILL 1 to 8 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 8 to 11 ft.

SEAL MATERIAL Bentonite Chips

j. FILTER PACK 11 to 34 ft.

FILTER PACK MATERIAL #3 Sand

k. BOTTOM SEAL _____

SEAL MATERIAL NONE

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

EXTRACTION WELL DETAILS

PROJECT NUMBER: 2090-1970-01

PROJECT NAME: Former Grimit Auto

LOCATION: 1970 Seminary Ave, Oakland, California

WELL PERMIT NO.: W2014-0020

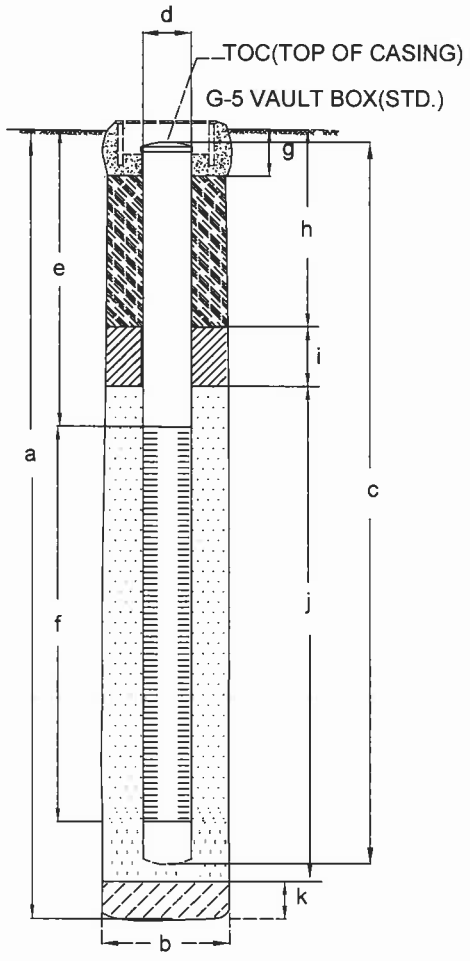
BORING/WELL NO.: EX-4

TOP OF CASING ELEV.: _____

GROUND SURFACE ELEV.: _____

DATUM: _____

INSTALLATION DATE: January 31, 2014



BENTONITE

CEMENT

CONCRETE

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 34 ft.

b. DIAMETER 10 in.

DRILLING METHOD Hollow Stem Auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 34 ft.

MATERIAL Schedule 40 PVC

d. DIAMETER 4 in.

e. DEPTH TO TOP PERFORATIONS 13 ft.

f. PERFORATED

INTERVAL FROM 13 TO 33 ft.

PERFORATION TYPE Milled Slots

PERFORATION SIZE 0.02 in.

g. SURFACE SEAL 0 to 1 ft.

SEAL MATERIAL Concrete

h. BACKFILL 1 to 8 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 8 to 11 ft.

SEAL MATERIAL Bentonite Chips

j. FILTER PACK 11 to 34 ft.

FILTER PACK MATERIAL #3 Sand

k. BOTTOM SEAL _____

SEAL MATERIAL NONE

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

EXTRACTION WELL DETAILS

PROJECT NUMBER: 2090-1970-01

PROJECT NAME: Former Grimit Auto

LOCATION: 1970 Seminary Ave, Oakland , California

WELL PERMIT NO.: W2014-0020

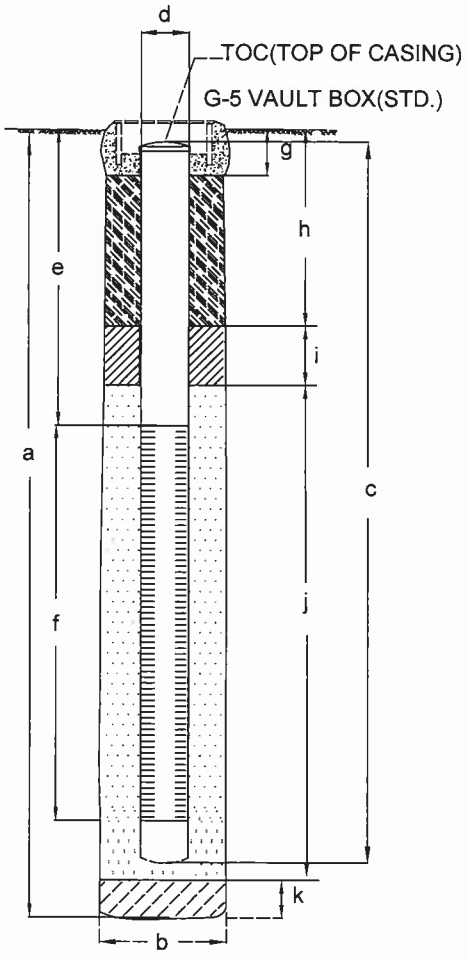
BORING/WELL NO.: EX-5

TOP OF CASING ELEV.:

GROUND SURFACE ELEV.:

DATUM:

INSTALLATION DATE: January 30, 2014



BENTONITE

CEMENT

CONCRETE

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 34 ft.

b. DIAMETER 10 in.

DRILLING METHOD Hollow Stem Auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 34 ft.

MATERIAL Schedule 40 PVC

d. DIAMETER 4 in.

e. DEPTH TO TOP PERFORATIONS 13 ft.

f. PERFORATED

INTERVAL FROM 13 TO 33 ft.

PERFORATION TYPE Milled Slots

PERFORATION SIZE 0.02 in.

g. SURFACE SEAL 0 to 1 ft.

SEAL MATERIAL Concrete

h. BACKFILL 1 to 8 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 8 to 11 ft.

SEAL MATERIAL Bentonite Chips

j. FILTER PACK 11 to 34 ft.

FILTER PACK MATERIAL #3 Sand

k. BOTTOM SEAL

SEAL MATERIAL NONE

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

EXTRACTION WELL DETAILS

PROJECT NUMBER: 2090-1970-01

PROJECT NAME: Former Grimit Auto

LOCATION: 1970 Seminary Ave, Oakland , California

WELL PERMIT NO.: W2014-0020

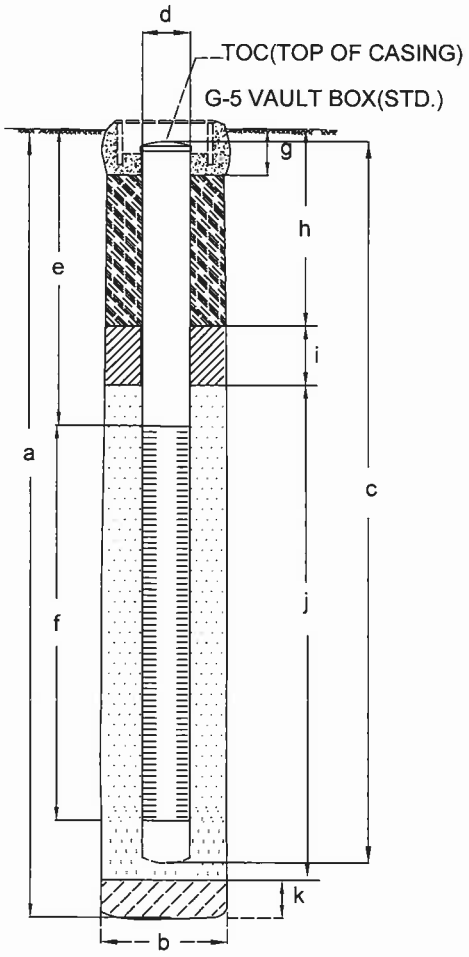
BORING/WELL NO.: EX-6

TOP OF CASING ELEV.: _____

GROUND SURFACE ELEV.: _____

DATUM: _____

INSTALLATION DATE: January 30, 2014



BENTONITE

CEMENT

CONCRETE

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 34 ft.

b. DIAMETER 10 in.

DRILLING METHOD Hollow Stem Auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 34 ft.

MATERIAL Schedule 40 PVC

d. DIAMETER 4 in.

e. DEPTH TO TOP PERFORATIONS 13 ft.

f. PERFORATED

INTERVAL FROM 13 TO 33 ft.

PERFORATION TYPE Milled Slots

PERFORATION SIZE 0.02 in.

g. SURFACE SEAL 0 to 1 ft.

SEAL MATERIAL Concrete

h. BACKFILL 1 to 8 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 8 to 11 ft.

SEAL MATERIAL Bentonite Chips

j. FILTER PACK 11 to 34 ft.

FILTER PACK MATERIAL #3 Sand

k. BOTTOM SEAL _____

SEAL MATERIAL NONE

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____