

RECEIVED

2:20 pm, Feb 23, 2009

Alameda County
Environmental Health

The logo for ConocoPhillips, featuring the word "ConocoPhillips" in a bold, sans-serif font. Above the "o" in "Phillips" is a stylized bird or wing icon.

76 Broadway
Sacramento, California 95818

February 19, 2009

Barbara Jakub
Alameda County Health Agency
1131 Harbor Bay parkway, Suite250
Alameda, California 94502-577

Re: ***Work Plan—Site Investigation and Injection Well Installation Prior to Property Development
Former 76 Service Station # 0843 RO # 0450
1629 Webster Street
Alameda, CA***

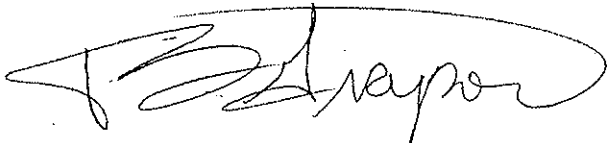
Dear Ms. Jakub:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

Per our review of the site and the pending development plans your expedited review and approval of this plan if possible prior to March 2nd, would be greatly appreciated.

If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Grayson". The signature is fluid and cursive, with a large loop at the end.

Terry L. Grayson
Site Manager
Risk Management & Remediation

February 18, 2009

Ms. Barbara Jakub
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

**RE: Work Plan – Site Investigation and
Monitoring Well Installation
76 Station No. 0843
1629 Webster Street
Alameda, California
Fuel Leak Case No. RO0000450**



Dear Ms. Jakub:

Our meeting with you, Ms. Drogos, and Mr. Sam Koka has put a real sense of urgency upon this remediation project so that Koka family can begin development of their property. Conoco Phillips (COP) and Delta Consultants (Delta) would appreciate your quick review and/or approval of our Work Plan by March 1, 2009, so that we may initiate our work plan in early to mid-March and have results and analyses to you by the end of April, 2009.

On behalf of COP, Delta has prepared this work plan proposing the abandonment of two monitoring wells (MW-1 and MW-2A), installation of two replacement monitoring wells (MW-1AR and MW-1BR), installing two (2) new monitoring wells (MW-7 and MW-8), advance one cone penetration test (CPT) boring to confirm the methyl tertiary butyl ether (MTBE) impact to the groundwater near the original CPT boring (CPT-01), and the installation of a temporary ozone sparge well (TSP-1) for feasibility testing, if warranted by the CPT boring. Four additional ozone injection wells (OS-1 through OS-4) will be installed pending the results of the additional CPT boring and the feasibility test in order to remediate the petroleum hydrocarbon impact to the groundwater on-site and down-gradient of the site located at 1629 Webster Street in Alameda, California (Figure 1).

The vertical extent of the petroleum hydrocarbon impact to the soil and the groundwater has been defined. Additionally, it appears that the hydrocarbon plume at this site has commingled with the hydrocarbon plume originating from the up-gradient Shell station and has migrated off-site, down-gradient of this

site. Therefore, Delta is proposing the installation of four ozone injection wells for the purpose of remediation of the petroleum

hydrocarbon impact to the groundwater beneath the site and down-gradient of the site. The proposed locations of the replacement monitoring wells MW-1AR and MW-1BR, two new (2) monitoring wells (MW-7 and MW-8), the ozone sparge test well, and the four ozone injection wells are shown on Figure 2.

SITE DESCRIPTION

The site is located at the southwest corner of the intersection of Webster Street and Pacific Avenue in Alameda California. The site is currently an inactive service station with the fuel dispenser, one underground waste-oil tank, and two underground gasoline storage tanks (UST's) having been previously removed.

PREVIOUS ASSESSMENT

June 1998 - Tosco Marketing Company (Tosco, now ConocoPhillips) removed two 10,000-gallon gasoline underground storage tanks (USTs), one 550-gallon used oil UST, product lines, and dispensers. Two holes approximately ¾-inch in diameter were observed in the used oil tank during removal. Approximately 338 tons of hydrocarbon impacted soil and backfill were removed from beneath the former USTs, dispensers, and product lines during the UST removal activities.

March 1999 - Four soil borings (B1 through B4) were advanced at the site and converted to monitor wells MW-1 through MW-4. Groundwater was encountered from 8 to 15 feet below ground surface (bgs). Static water was observed between 4 and 6 feet bgs subsequent to well installation.

December 1999 - Two offsite soil borings (B5 and B6) were advanced and subsequently converted to monitor wells MW-5 and MW-6. Groundwater was initially present at approximately 10 feet below bgs. Static water was observed at 7 feet bgs subsequent to well installation.

March 2001 - An underground utility survey was conducted to identify and locate underground utilities beneath and in the vicinity of the site that could provide potential preferential pathways for groundwater flow.

May 2001 - Five direct-push soil borings (GP-1 through GP-5) were installed to evaluate whether underground utilities in the vicinity of the site are providing preferential pathways for groundwater flow and the migration of dissolved hydrocarbons. The results of the investigation indicated insufficient evidence that underground utility lines were providing preferential pathways for the off-site migration of dissolved petroleum hydrocarbons.

December 2001 - Twelve direct-push soil borings (GP-6 through GP-17) were completed to further assess the extent of residual hydrocarbons in the vadose zone beneath the site. The results of the investigation indicated that the extent of the residual hydrocarbon impact detected in the previous investigations was limited.

December 2002 - One on-site monitoring well (MW-2) was destroyed during remedial excavation of hydrocarbon-impacted soil. This well was completed in the vicinity of the former eastern dispenser island and was replaced with on-site backfill monitoring well

MW-2A. Approximately 292 tons of hydrocarbon-impacted soil was removed from beneath the former eastern dispenser island.

September 2003 - A *Request and Work Plan for Closure* prepared by ERI was submitted to the Alameda County Health Care Services Agency, dated September 10, 2003. The report summarized why no further action is needed for the site; the report also included plans to destroy the existing wells upon regulatory acceptance for no further action. Closure was not granted.

June 2004 – A work plan was submitted for two monitor wells down-gradient of MW-5.

May 2005 – A work plan titled *Work Plan Addendum – Site Assessment Activity* dated May 17, 2005 was prepared by ATC Associates Inc. for the installation of two offsite monitor wells.

September 2005 – A work plan was prepared by ATC Associates Inc., titled *Work Plan Subsurface Investigation*, for the installation of one onsite monitor well.

September 2005 – Site environmental consulting responsibilities were transferred to Delta.

November 2006 – A Sensitive Receptor Survey was performed by Delta to identify wells within the survey area.

January 24, 2007 – A work plan was submitted to the ACHCSA recommending the advancement of one soil boring and the installation of three ozone injection wells at the site.

August 14, 2008 – Gregg Drilling, under supervision of Delta, advanced one cone penetration test (CPT) boring to a depth of 55 feet.

October 29, 2008 – A Site Investigation Report was submitted to ACHCSA detailing the results of the August 14, 2008, CPT borings.

SENSITIVE RECEPTORS

June/July 2002 - A groundwater receptor survey was conducted. Three irrigation wells are located within a one-half mile radius of the site. The wells are located approximately 1,980 feet west and 2,245 feet southwest of the site, cross-gradient and up-gradient of the site.

November 2006 – A survey entailing a visit to the DWR office in Sacramento was conducted to examine well log records and to identify domestic wells within the survey area. The DWR survey provided 15 potential receptors within one mile of the site; one domestic well located 0.5 mile southwest of the site; one domestic/irrigation well located 0.7 mile southeast of the site; 11 irrigation wells with three located 0.1 mile northwest, west, and southeast of the site; and two industrial wells located 0.3 miles southwest and 0.9 mile northeast of the site.

PROPOSED ACTIVITIES

Permitting, Utility Notification and Borehole Clearance

Before commencing field operations Delta will prepare a Health and Safety Plan specific to the site and work being performed in accordance with Title 8, Section 5192 of the California Code of Regulations. The will contain a list of emergency contacts, as well as a hospital route map to the nearest emergency facility, and was reviewed daily by field personnel.

In addition, drilling and encroachment permits will be obtained for the borings from the Alameda County Public Works Agency (ACPWA) and the City of Alameda. Prior to drilling, Underground Service Alert (USA) will be notified as required and a private utility locator will be contracted to clear the proposed drilling locations for underground utilities.

Monitoring Well Abandonment

Prior to the abandonment of the two (2) monitoring wells, MW-1 and MW-2A, the total depth of each monitoring well will be measured to determine if any obstruction or sediment is present. Water samples will be for taken from each well at this time for analysis. Subsequent to measuring the depths of the monitoring wells the well boxes and the surrounding concrete will be removed using a jackhammer. The space around the monitoring wells will be cleared using an air-knife to a depth of five feet bgs unless utilities are encountered or known to be present. The monitoring wells will be abandoned by over-drilling to a depth of one foot below their constructed depths using a truck mounted drill-rig equipped with 10-inch outside diameter hollow-stem augers. Subsequent to over-drilling, the borehole will be backfilled with neat cement. If utilities are encountered or known to be present, above or below ground, in the vicinity of the monitoring wells that make it unsafe for over-drilling, the monitoring wells will be abandoned by pressure grouting using neat cement. Pressure grouting will consist of attaching a hose from the cement mixer directly to the top of the monitoring well and pumping neat cement into the well, under pressure (a minimum of 25 pounds per square inch (psi)) for five minutes or pumping refusal. In addition, the top of the monitoring well casing will be removed to a depth of five feet bgs if it can be done safely without potentially damaging utilities in the vicinity of the monitoring wells. The space created by removing the well box will be backfilled with concrete or asphalt to match the surrounding conditions.

Monitoring Well Installation

Delta proposes to advance two (2) replacement monitoring wells using a truck mounted drill-rig equipped with 8-inch hollow stem augers adjacent to the former monitoring well MW-1 in the southwest corner of the property. In addition, two new monitoring wells are proposed to be installed, northeast, off-site (in sidewalk) of the property (Figure 2). The borings for the replacement monitoring wells, MW-1AR and MW-1BR, will be advanced to depths of approximately 30 feet bgs (screened 25 feet to 30 feet) and 35 feet bgs (screened 30 feet to 35 feet) respectfully. The borings for the new monitoring wells, MW-7 and MW-8, will be advanced to depths of approximately 25 feet bgs and 30 feet bgs, respectfully.

Soil samples will be logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened for the presence of volatile organic compounds by headspace analysis using a pre-calibrated photo-ionization detector (PID). Soil samples will be continuously cored and collected for lithologic interpretation

and field screening. The soil sample exhibiting the highest PID reading from each of the borings will be submitted for analysis. If PID readings do not indicate the presence of volatile organic compounds, the soil sample collected from above first water and from the bottom of the boring will be submitted for analysis. A chain-of-custody will accompany the samples during transportation to the laboratory. The selected soil sample will be submitted to a California-certified laboratory for analyses of total purgeable petroleum hydrocarbons (TPPH), benzene, toluene, ethyl-benzene, and xylenes (BTEX), MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), ethanol, and ethylene di-bromide (EDB) - (8 oxygenates) by Environmental Protection Agency (EPA) Method 8260B. Additional analyses will include sulfate (EPA Method 300.0), Ferrous Iron (EPA Method 3500FE+D), total and dissolved Manganese (EPA Method 200.8), and Total Carbon (EPA Method 415.1).

Groundwater samples will be collected at depths of 25 to 30 feet bgs in MW-1AR, at 30 to 35 feet bgs in MW-1BR, at 20 feet to 25 feet in MW-7, and at 25 feet to 30 feet in MW-8. Non-disposable sampling equipment will be decontaminated between samples in a non-phosphate detergent and double rinsed with potable water.

The borings will be converted to a groundwater monitoring wells by installing a 2-inch diameter schedule 40 polyvinyl chloride (PVC) well casing with a screened interval based on the lithology encountered during well installation. The screen intervals will be no longer than 5 feet in length. The perforation size in the screen interval will be 0.020-inch. A sand pack of RMC Lonestar Sand #2/12 or equivalent will be installed into the annular space and extend approximately two (2) feet above the top of the screen interval.

A two (2) foot thick bentonite seal will be placed on top of the sand pack. The monitoring wells will be surged prior to the placement of the bentonite seal to promote settling of the sand pack. The remainder of the annular space will be filled with neat cement and the wells will be fitted with a locking cap and encased in a traffic-rated protective vault placed at existing ground level. Well construction details are presented on Figure 3, 3A, 3B, and 3C.

Well Development, Monitoring, and Sampling

The monitoring wells will be developed a minimum of 72 hours after they have been constructed. A minimum of 10 casing volumes of groundwater will be removed from the monitoring wells during the development process.

Subsequent to the installation and development of the newly installed monitoring wells, will be incorporated into a quarterly sampling schedule and will be monitored and sampled minimum of 48 hours after well development.

Groundwater samples collected for analysis from the monitoring wells will be analyzed for TPPH, BTEX, MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, Ethanol, and EDB - (8 oxygenates) by EPA method 8260.

Wellhead Survey

Following the completion of the new monitoring wells, a California licensed surveyor will survey the northing and easting of the monitoring well using the same datum as the was used to survey the monitoring wells at the neighboring service stations, Datum NGVD29 or NAD 88. The monitoring well elevations will be surveyed relative to mean sea level, with an accuracy of +/- 0.01 foot. A global positioning system (GPS) will also be used to survey in the latitude and longitude of the wells to be uploaded into California's Geo Tracker database system. The survey of the well locations will be to sub-meter accuracy.

CPT Boring

A CPT boring (CPT-02) is proposed to be advanced near CPT-01 to confirm the presence of the MTBE in the groundwater found during the August 14, 2008, CPT boring. Total depth of this boring will be 50 feet bgs.

Soil samples will be logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened for the presence of volatile organic compounds by headspace analysis using a pre-calibrated photo-ionization detector (PID). Soil samples will be continuously cored and collected for lithologic interpretation and field screening. The soil sample exhibiting the highest PID reading from the boring will be submitted for analysis. If PID readings do not indicate the presence of volatile organic compounds, the soil sample collected from above first water and from the bottom of the boring will be submitted for analysis. A chain-of-custody will accompany the samples during transportation to the laboratory. The selected soil sample will be submitted to a California-certified laboratory for analyses of TPPH, BTEX, MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, ethanol, and EDB by EPA Method 8260B. Additional analyses will include sulfate (EPA Method 300.0), Ferrous Iron (EPA Method 3500FE+D), total and dissolved Manganese (EPA Method 200.8), and Total Carbon (EPA Method 415.1).

Groundwater samples will be collected from the CPT boring based on the lithology and the UVOST data obtained from the initial CPT borehole.

Groundwater samples collected for analysis will be decanted into properly labeled sample bottles and placed on ice as noted above pending transportation to a California-certified laboratory. A chain-of-custody will accompany the samples during transportation to the laboratory. The collected groundwater samples will be analyzed for TPPH, BTEX, MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, ethanol, and EDB by EPA Method 8260B. Additional analyses will include sulfate (EPA Method 300.0), Ferrous

Iron (EPA Method 3500FE+D), total and dissolved Manganese (EPA Method 200.8), and Total Carbon (EPA Method 415.1).

Ozone Well Installation for Feasibility Testing

Pending the results of the CPT-02 boring, Delta proposes the installation of one ozone sparge well for feasibility testing. **The testing period will be Monday through Friday for one (1) month.** The proposed location and depth (estimated to be between 25 feet bgs and 30 feet bgs) of the test sparge well will be installed between monitoring well MW-1 and CPT-01. Results from the CPT-02 boring, monitoring well data, and, if installed, the test sparge well, Delta would then proceed to install four (4) ozone injection wells at the site. Potential off-site (sidewalk) well locations include in the vicinity of on-site monitoring well MW-4 and off-site boring GP-4 along the northern boundary of the property (Pacific Avenue), in the off-site area east of monitoring well MW-2A, and off-site, up-gradient east of GP-15 (Webster Street). The sparge wells will be installed at the proposed locations parallel and perpendicular to the axis of the TPPH and MTBE plumes present beneath the site. Potential proposed injection well locations are shown on Figure 2.

The injection wells will be constructed with FTB-275 ceramic ozone diffuser attached to ¾-inch poly-vinyl chloride (PVC) casing to just below surface grade. Sand filter packing will extend from total depth to one foot above the top of the diffuser interval, sealed with 5 feet of bentonite saturated in place, and then capped to the ground surface with neat cement and completed with traffic rated vault boxes. The screened interval depth will be based on the data obtained during the advancement of the previously discussed CPT soil boring and may be modified based on the subsurface lithology encountered during the advancement of the boring. A diagram detailing the injection well construction is included as Figure 4 through 4D.

Delta anticipates that each of the proposed injection wells will be installed to total depths of approximately 24 to 27 feet bgs, 29 to 32 bgs, 32 to 35 bgs, and 36 to 39 feet bgs, with the ceramic diffuser placed at 24, 29, 32, and 36 feet bgs, respectively. Soil samples for lithologic logging and chemical analysis will be collected continuously from each of the proposed borings. Selected soil samples will be field screened with a PID for the presence of volatile organic compounds. Delta will collect one soil sample from each boring at the depths that exhibit the highest PID readings. If PID readings do not indicate the presence of volatile organic compounds, the soil sample collected from above first water and from the bottom of the boring will be submitted for analysis. Selected soil samples will be analyzed for TPPH, BTEX, MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, Ethanol, and EDB - (8 oxygenates) by EPA method 8260B. Additional analyses will include sulfate (EPA Method 300.0), Ferrous Iron (EPA Method 3500FE+D), total and dissolved Manganese (EPA Method 200.8), and Total Carbon (EPA Method 415.1).

Groundwater samples will be collected at depths of 25 feet bgs, 30 feet bgs, 33 feet bgs, and 37 feet bgs. Non-disposable sampling equipment will be decontaminated between samples in a non-phosphate detergent and double rinsed with potable water.

Groundwater samples obtained from the sparge well borings will be decanted into properly labeled sample bottles and placed on ice as noted above pending

transportation to a California-certified laboratory. A chain-of-custody will accompany the samples during transportation to the laboratory. The collected groundwater samples will be analyzed for TPPH, BTEX, MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, ethanol, and EDB by EPA Method 8260B. Additional analyses will include sulfate (EPA Method 300.0), Ferrous Iron (EPA Method 3500FE+D), total and dissolved Manganese (EPA Method 200.8), and Total Carbon (EPA Method 415.1).

Disposal of Drill Cuttings and Wastewater

Drill cuttings and decontamination water generated during the soil boring advancement and well installation activities will be placed into properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and stored on the property. Samples of the drill cuttings and wastewater will be collected, properly labeled and placed on ice for submittal to a California-certified laboratory and analyzed for TPPH, BTEX, and MTBE by EPA Method 8260B and total lead by EPA Method 6010B. A chain-of-custody will accompany the samples during transportation to the laboratory. Subsequent to receiving the laboratory analytical results, the drummed drill cuttings and wastewater will be profiled, transported, and disposed of at a COP approved facility.

Reporting

Following completion of the field work and receipt of analytical results, a site investigation report will be prepared and submitted within 60 days. The report will present the details of the boring activities, including copies of boring permits, and details of disposal activities and copies of disposal documents. Required electronic submittals will be uploaded to the State Geotracker database.

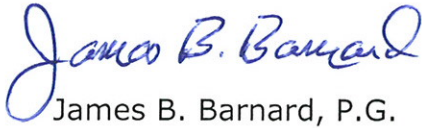
REMARKS/SIGNATURES

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report will be performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have any questions regarding this project, please contact me at (916) 503-1279 or Mr. Terry Grayson of COP at (916) 558-7666.

Sincerely,

DELTA CONSULTANTS


James B. Barnard, P.G.



Senior Project Manger
California Registered Professional Geologist No. 7478

Figures:

- Figure 1 - Site Location Map
- Figure 2 - Site Plan
- Figure 3 - Replacement Well MW-1AR Construction Diagram
- Figure 3A - Replacement Well MW-1BR Construction Diagram
- Figure 3B - New Well MW-7 Construction Diagram
- Figure 3C - New Well MW-8 Construction Diagram
- Figure 4 - OS-1 Test Sparge Well Construction Diagram
- Figure 4A - OS-2 Sparge Well Construction Diagram
- Figure 4B - OS-3 Sparge Well Construction Diagram

- Figure 4C - OS-4 Sparge Well Construction Diagram
- Figure 4D - OS-5 Sparge Well Construction Diagram

cc: Mr. Terry Grayson, ConocoPhillips (electronic copy only)

Ms. Barbara Jakubs, Alameda County Health Care Service Agency

FIGURES

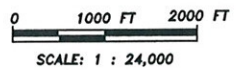
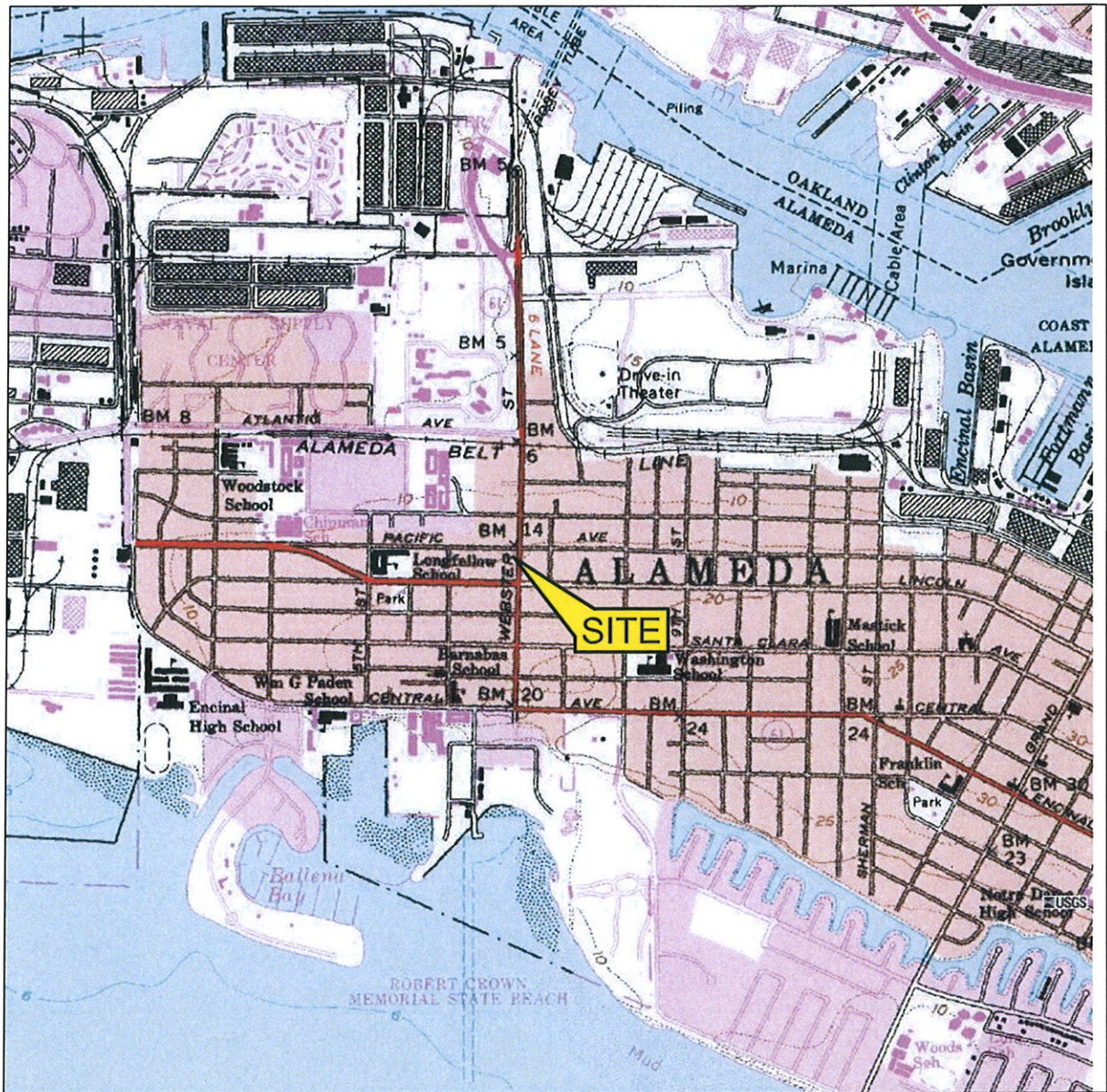


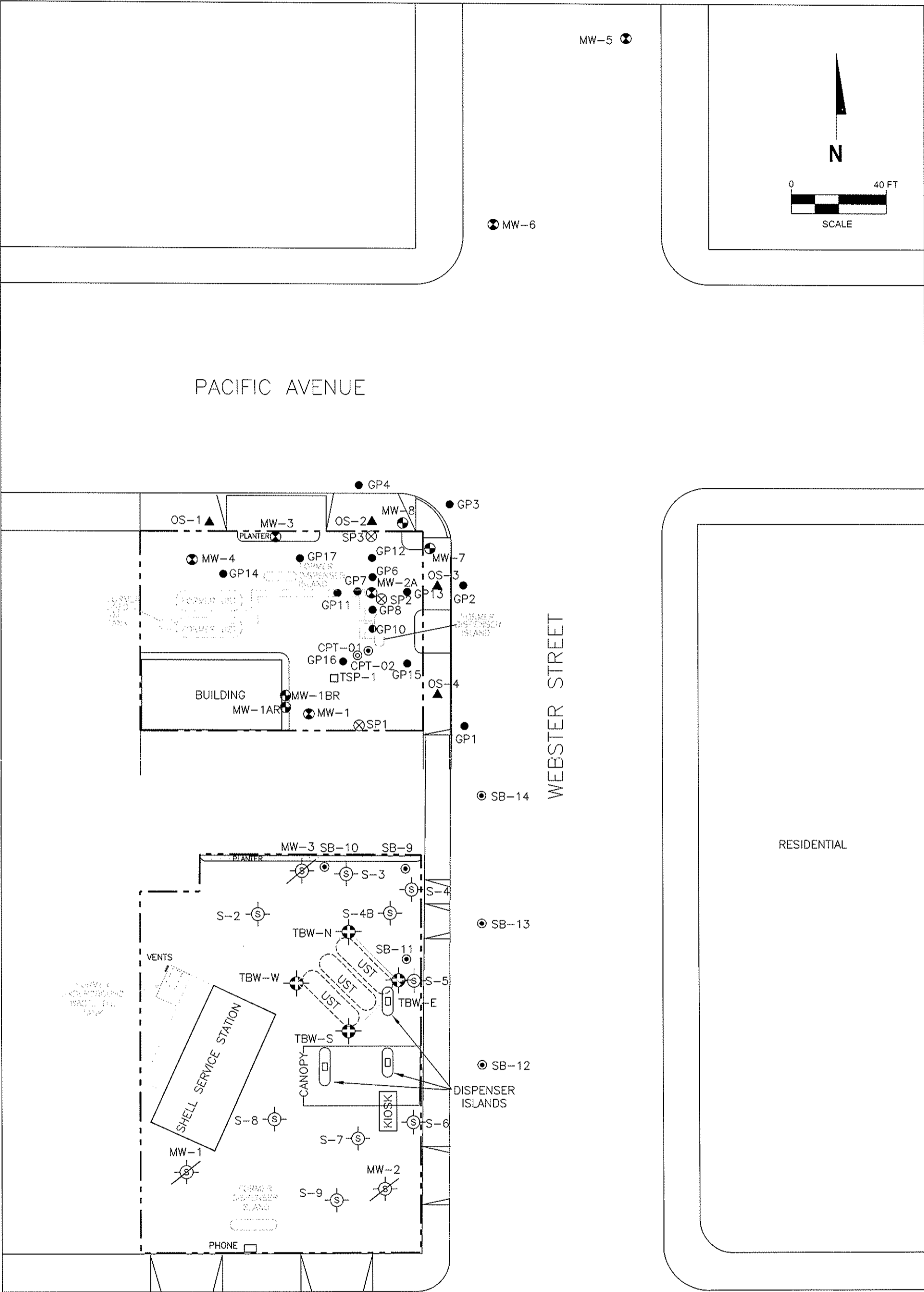
FIGURE 1
SITE LOCATION MAP

76 STATION NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

PROJECT NO. C100-843	DRAWN BY JH 01/24/07
FILE NO. Site Locator 0843	PREPARED BY JH
REVISION NO. 1	REVIEWED BY



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND WEST QUADRANGLE, 1996



LEGEND:

- PROPERTY BOUNDARY
 - - - FORMER PRODUCT LINE
 - ⊗ FORMER 76 MONITORING WELL
 - ⊕ SHELL MONITORING WELL
 - ⊖ DESTROYED SHELL MONITORING WELL
 - ⊕ TANK BACKFILL WELL
 - DIRECT-PUSH SOIL BORING
 - ⊙ CPT SOIL BORING
 - ⊙ PROPOSED CPT SOIL BORING
 - PROPOSED TEST SPARGE POINT
 - ▲ PROPOSED OZONE SPARGE WELL
 - ⊕ PROPOSED MONITORING WELL
 - ⊗ PREVIOUSLY PROPOSED OZONE INJECTION WELL
- NOTE: MW-1 AND MW-2A TO BE ABANDONED.

PLAN ADAPTED FROM A DRAWING DATED 9/18/08 TITLED "SITE PLAN" PREPARED BY TRC.

<p>FIGURE 2 SITE PLAN</p> <p>FORMER 76 STATION NO. 0843 1629 WEBSTER ROAD ALAMEDA, CALIFORNIA</p>			
PROJECT NO. C100843	PREPARED BY JBB	DRAWN BY JH	
DATE 02/13/09	REVIEWED BY	FILE NAME 76-0843	

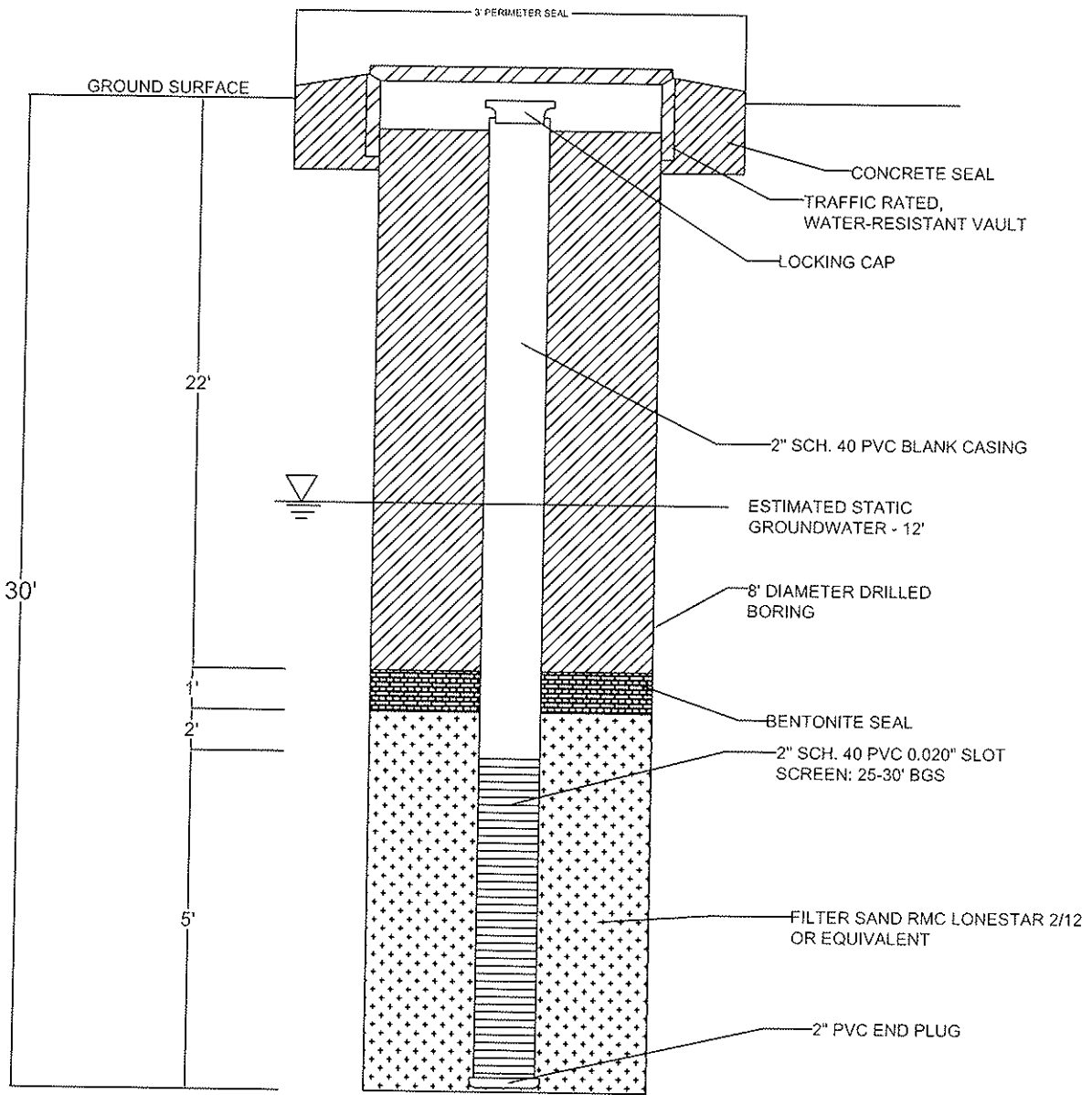


FIGURE 3
 REPLACEMENT GROUNDWATER
 MONITORING WELL 1AR CONSTRUCTION DETAIL
 FORMER 76 STATION NO. 0843
 1629 WEBSTER ROAD
 ALAMEDA, CALIFORNIA

PROJECT NO. C100-843	DRAWN BY JH 02/13/09
FILE NO. 0843-WELLDDETAIL	PREPARED BY JBB
REVISION NO.	REVIEWED BY



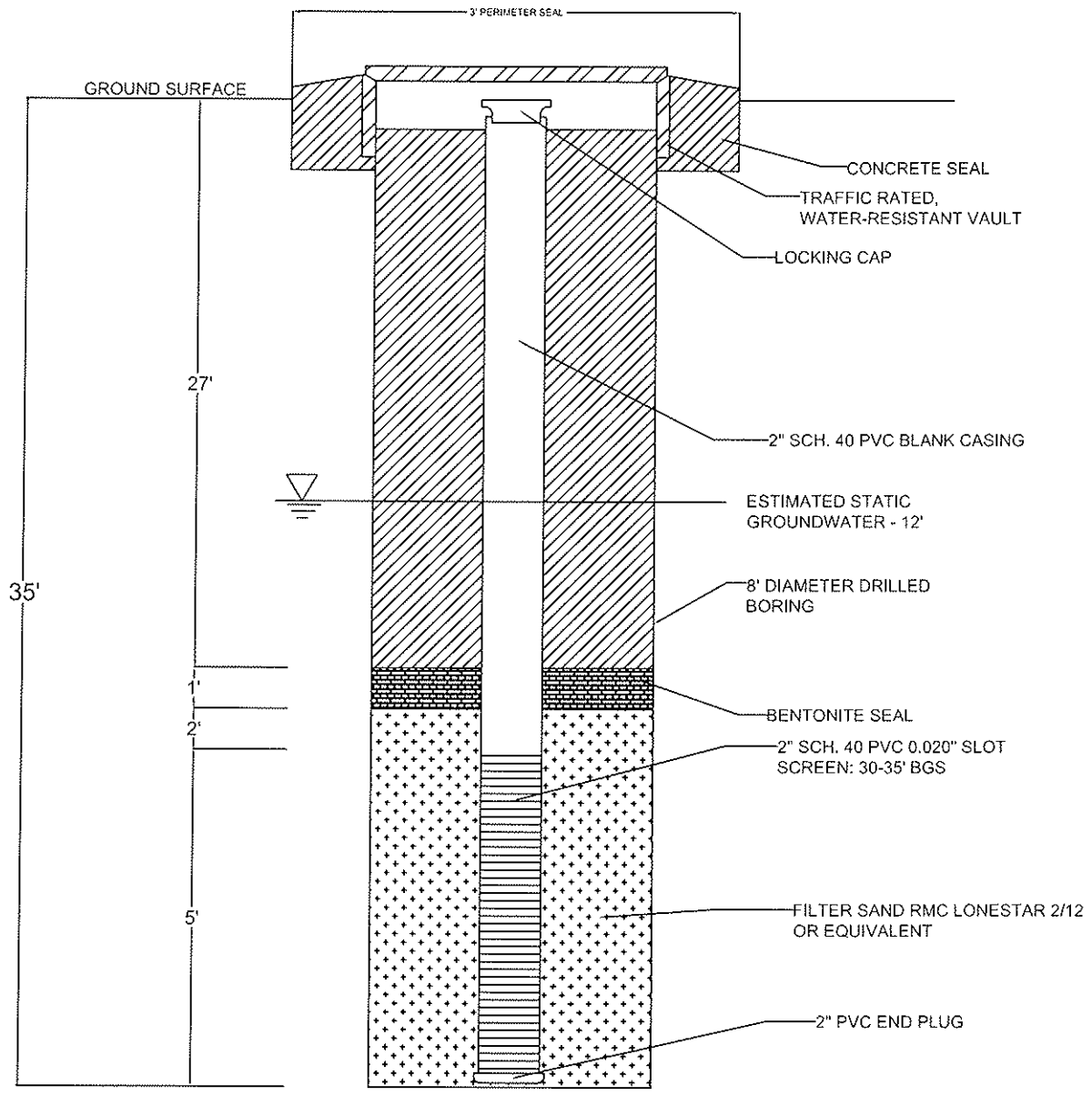


FIGURE 3A
 REPLACEMENT GROUNDWATER
 MONITORING WELL 1BR CONSTRUCTION DETAIL
 FORMER 76 STATION NO. 0843
 1629 WEBSTER ROAD
 ALAMEDA, CALIFORNIA

PROJECT NO. C100-843	DRAWN BY JH 02/13/09
FILE NO. 0843-WELLDDETAIL	PREPARED BY JBB
REVISION NO.	REVIEWED BY



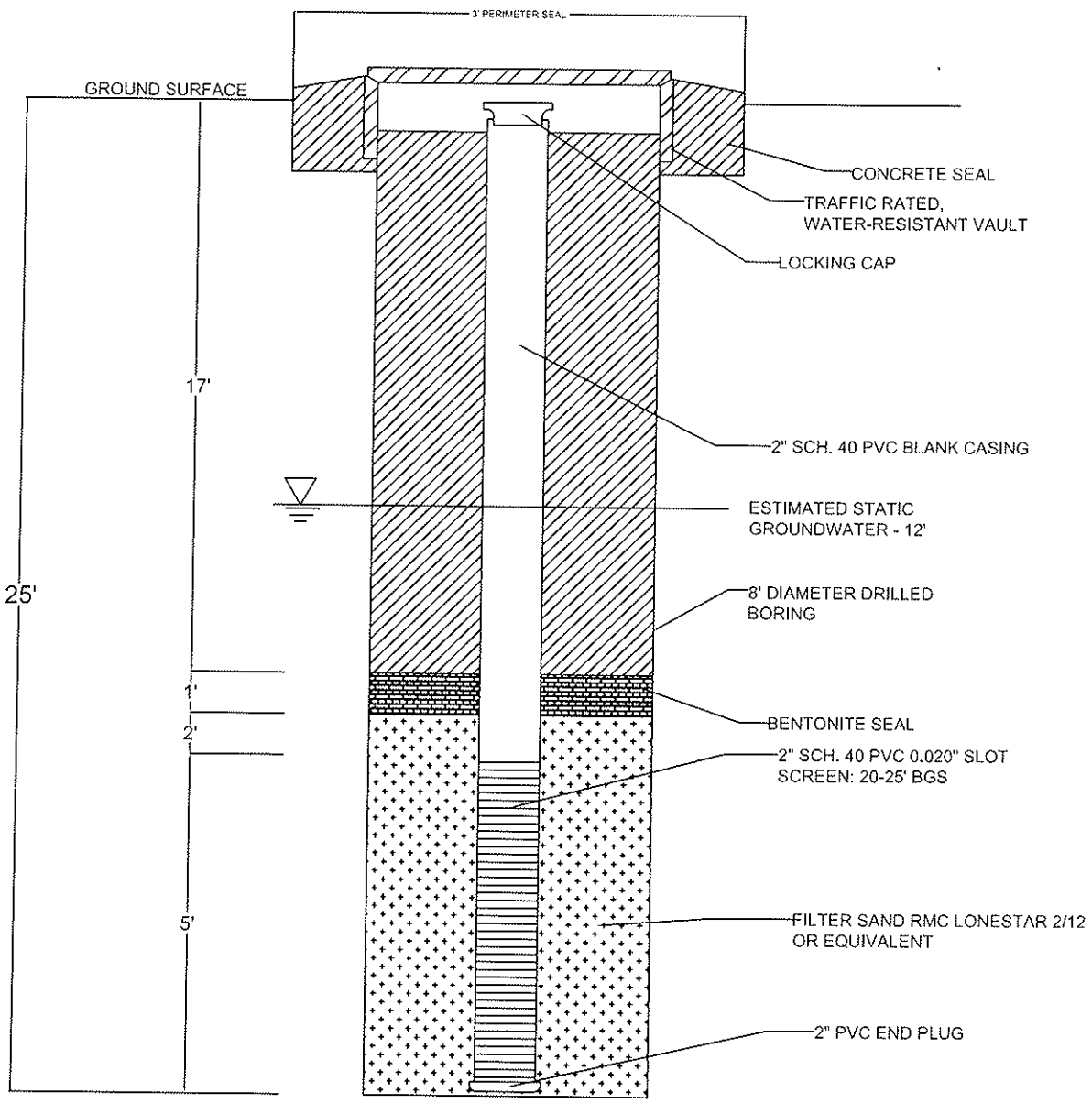


FIGURE 3B
 REPLACEMENT GROUNDWATER
 MONITORING WELL 7 CONSTRUCTION DETAIL
 FORMER 76 STATION NO. 0843
 1629 WEBSTER ROAD
 ALAMEDA, CALIFORNIA

PROJECT NO. C100-843	DRAWN BY JH 02/13/09
FILE NO. 0843-WELLDDETAIL	PREPARED BY JBB
REVISION NO.	REVIEWED BY



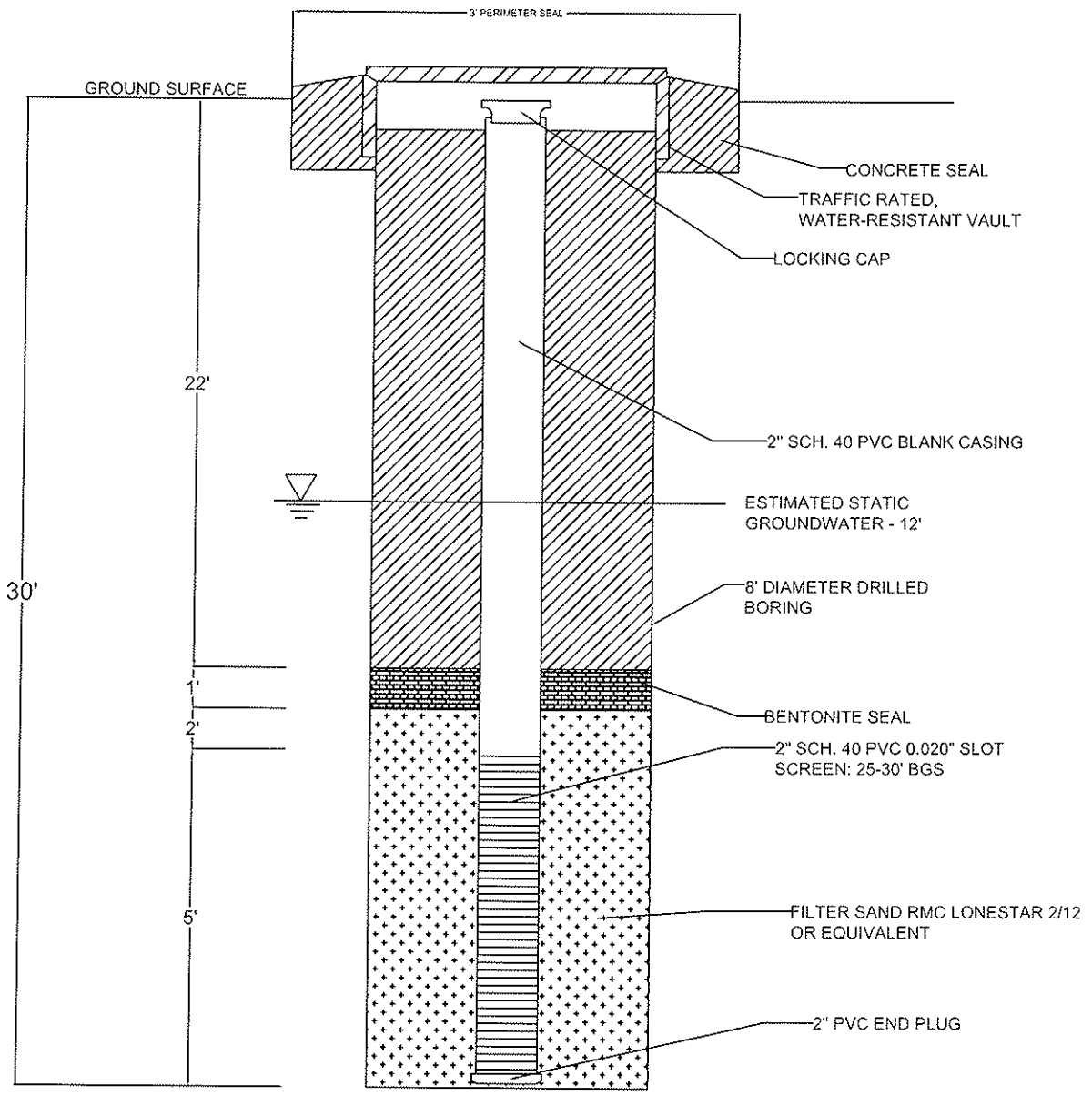
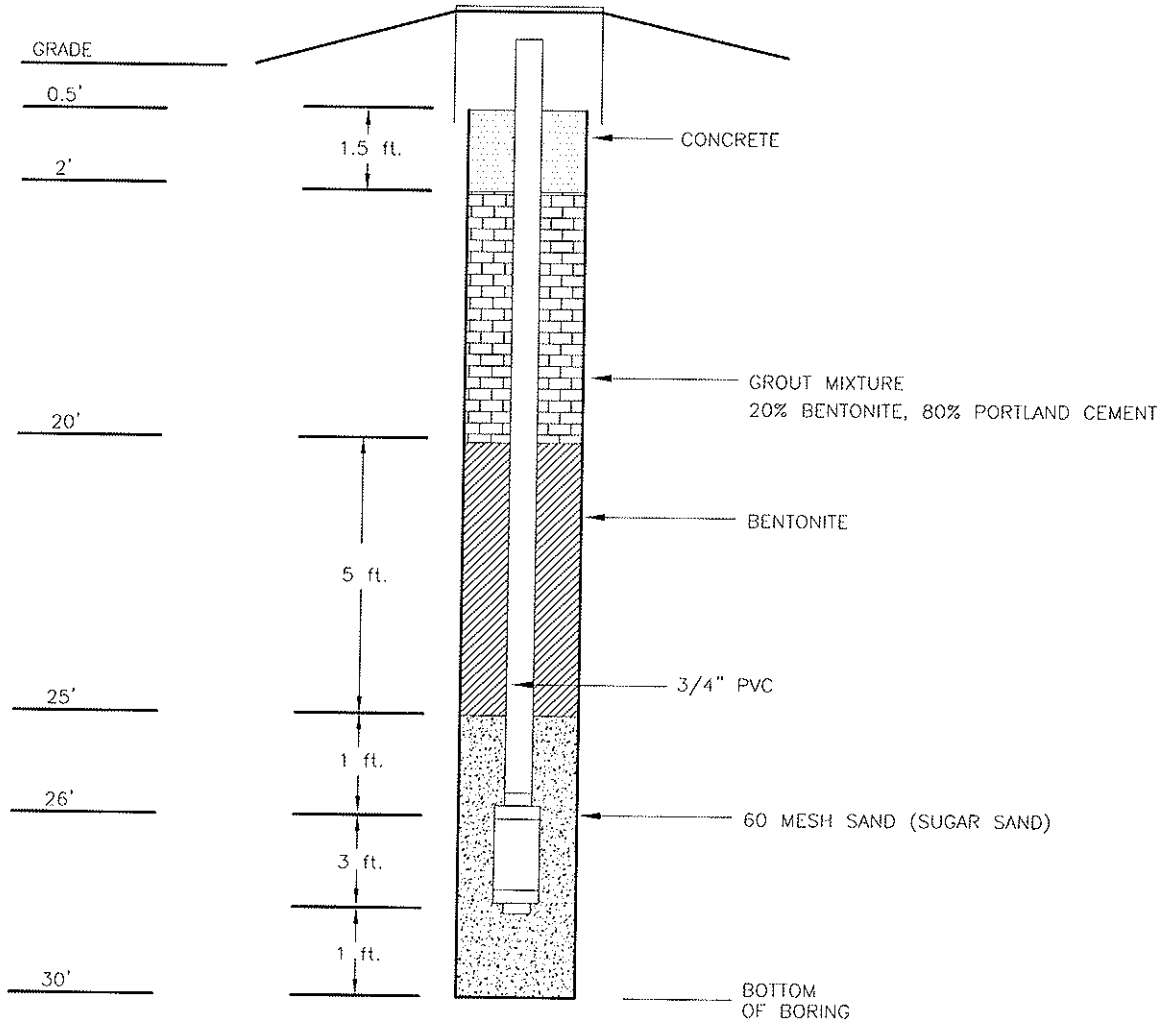


FIGURE 3C
REPLACEMENT GROUNDWATER
MONITORING WELL 8 CONSTRUCTION DETAIL
FORMER 76 STATION NO. 0843
1629 WEBSTER ROAD
ALAMEDA, CALIFORNIA

PROJECT NO. C100-843	DRAWN BY JH 02/13/09
FILE NO. 0843-WELLDDETAIL	PREPARED BY JBB
REVISION NO.	REVIEWED BY



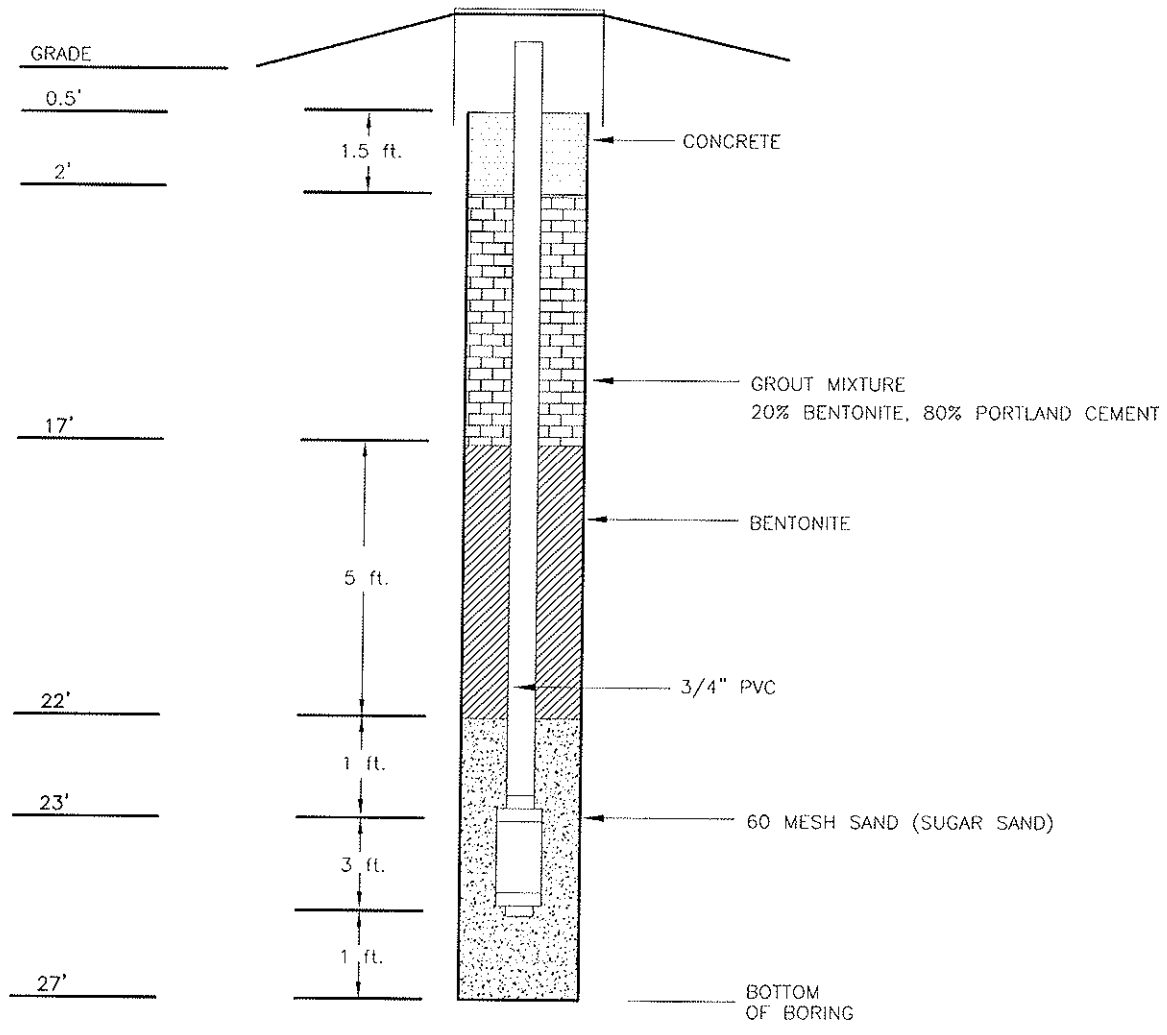


NOTES:

1. NOT DRAWN TO SCALE
2. DEPTH MEASUREMENTS AND INTERVALS ARE APPROXIMATE. ACTUAL WELL DESIGN WILL BE BASED ON EXPLORATORY BORING AND SITE CONDITIONS

FIGURE 4
TEST SPARGE POINT CONSTRUCTION DETAILS
FORMER 76 STATION 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

PROJECT NO. C100843	PREPARED BY JBB	DRAWN BY JH	
DATE 02/13/09	REVIEWED BY	FILE NAME 0843-ProSP	



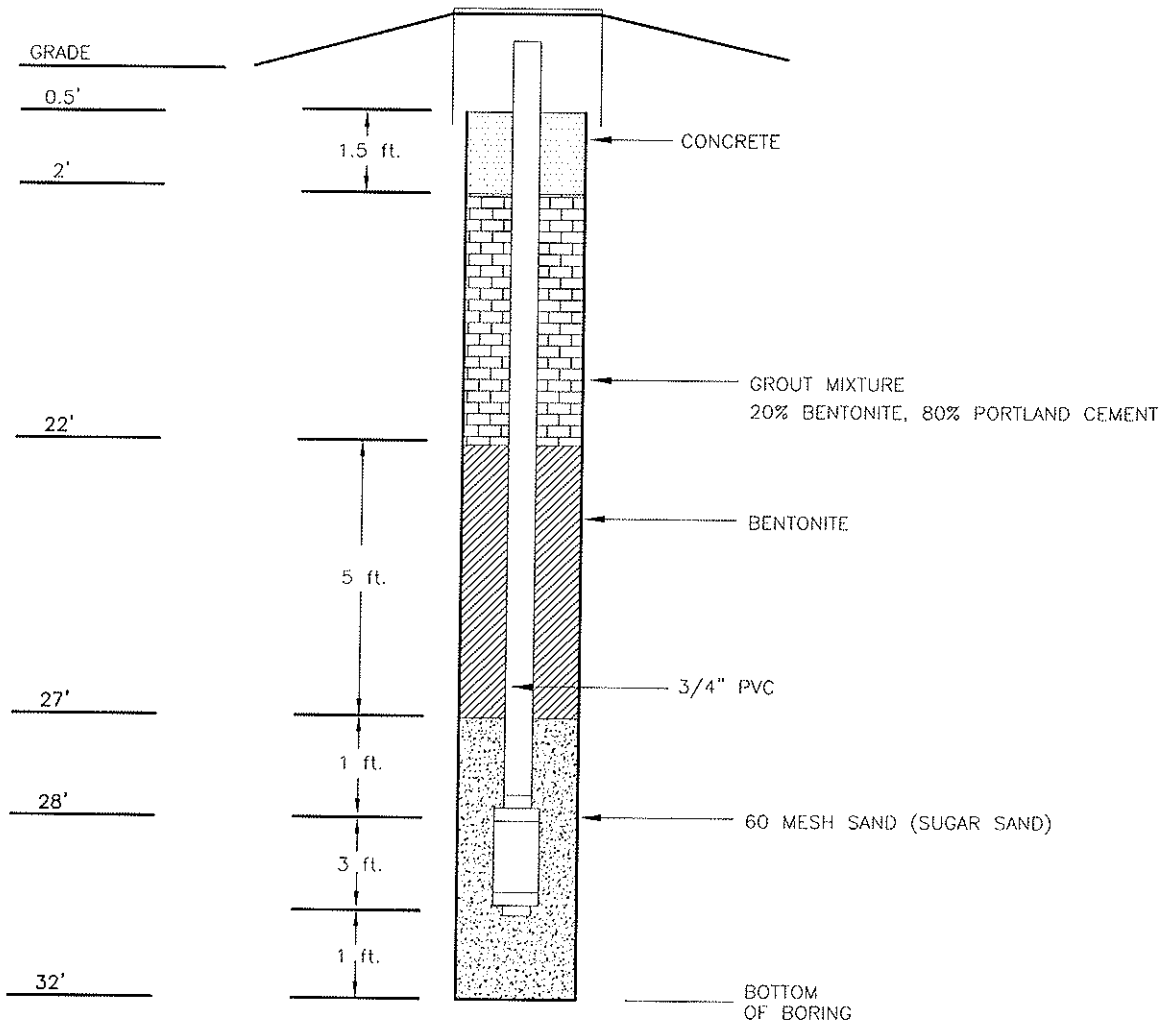
NOTES:

1. NOT DRAWN TO SCALE
2. DEPTH MEASUREMENTS AND INTERVALS ARE APPROXIMATE. ACTUAL WELL DESIGN WILL BE BASED ON EXPLORATORY BORING AND SITE CONDITIONS

FIGURE 4A
OS-1 SPARGE POINT CONSTRUCTION DETAILS
 FORMER 76 STATION 0843
 1629 WEBSTER STREET
 ALAMEDA, CALIFORNIA

PROJECT NO. C100843	PREPARED BY JBB	DRAWN BY JH
DATE 02/13/09	REVIEWED BY	FILE NAME 0843-ProSP





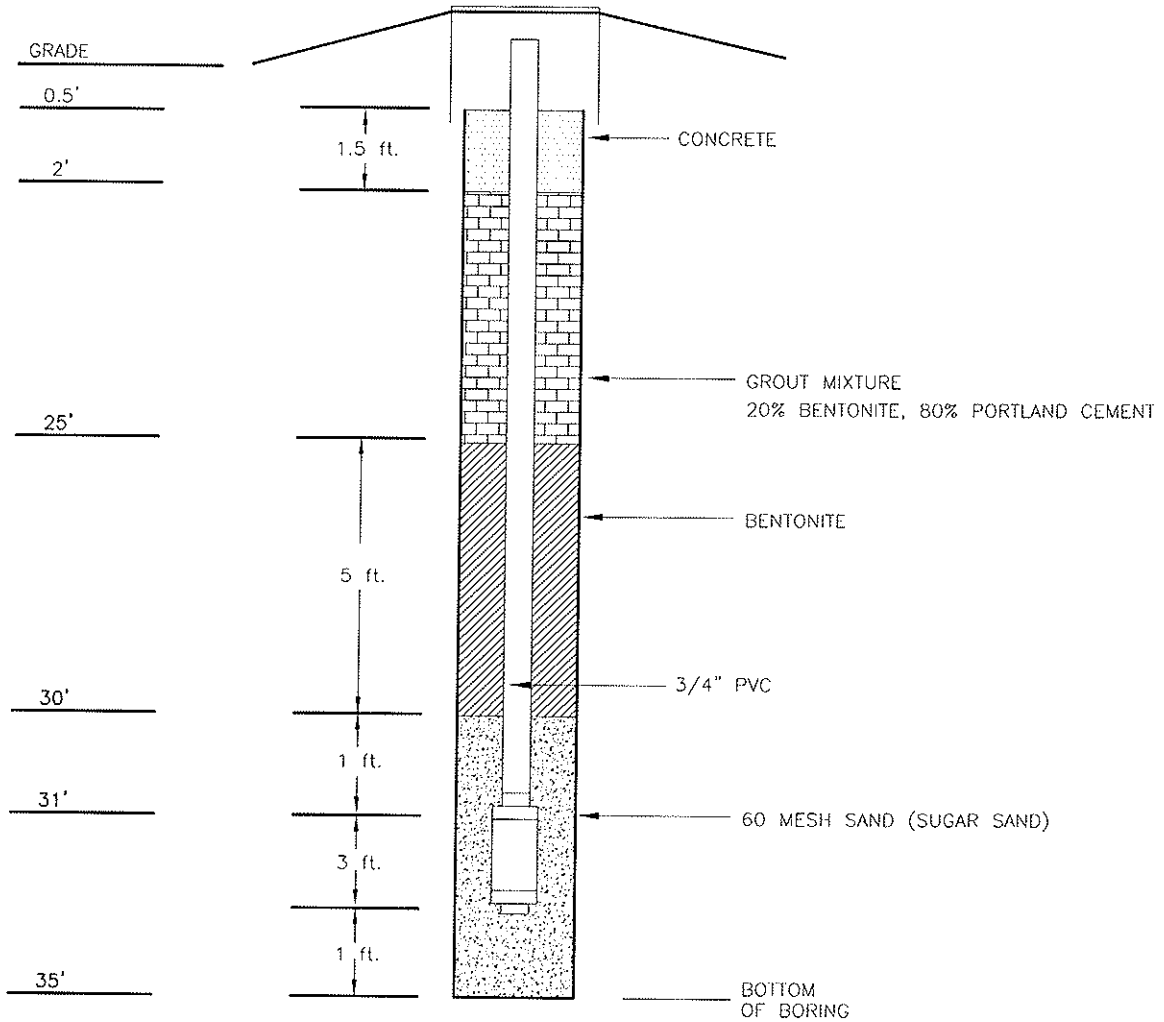
NOTES:

1. NOT DRAWN TO SCALE
2. DEPTH MEASUREMENTS AND INTERVALS ARE APPROXIMATE. ACTUAL WELL DESIGN WILL BE BASED ON EXPLORATORY BORING AND SITE CONDITIONS

FIGURE 4B
OS-2 SPARGE POINT CONSTRUCTION DETAILS
 FORMER 76 STATION 0843
 1629 WEBSTER STREET
 ALAMEDA, CALIFORNIA

PROJECT NO. C100843	PREPARED BY JBB	DRAWN BY JH
DATE 02/13/09	REVIEWED BY	FILE NAME 0843-ProSP





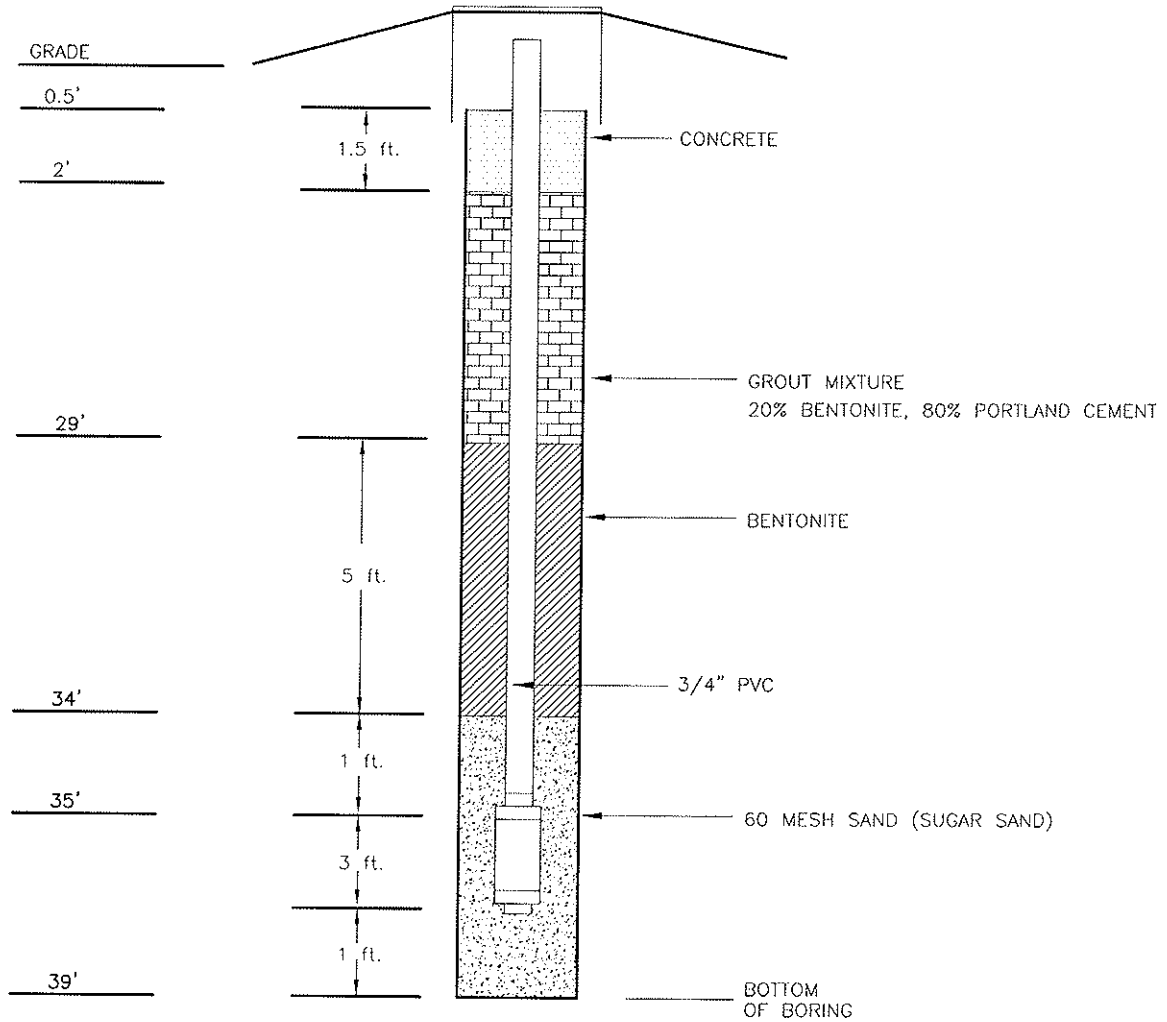
NOTES:

1. NOT DRAWN TO SCALE
2. DEPTH MEASUREMENTS AND INTERVALS ARE APPROXIMATE. ACTUAL WELL DESIGN WILL BE BASED ON EXPLORATORY BORING AND SITE CONDITIONS

FIGURE 4C
OS-3 SPARGE POINT CONSTRUCTION DETAILS
 FORMER 76 STATION 0843
 1629 WEBSTER STREET
 ALAMEDA, CALIFORNIA

PROJECT NO. C100843	PREPARED BY JBB	DRAWN BY JH
DATE 02/13/09	REVIEWED BY	FILE NAME 0843-ProSP





NOTES:

1. NOT DRAWN TO SCALE
2. DEPTH MEASUREMENTS AND INTERVALS ARE APPROXIMATE. ACTUAL WELL DESIGN WILL BE BASED ON EXPLORATORY BORING AND SITE CONDITIONS

FIGURE 4D
OS-4 SPARGE POINT CONSTRUCTION DETAILS
 FORMER 76 STATION 0843
 1629 WEBSTER STREET
 ALAMEDA, CALIFORNIA

PROJECT NO. C100843	PREPARED BY JBB	DRAWN BY JH
DATE 02/13/09	REVIEWED BY	FILE NAME 0843-ProSP

