November 30, 2006
Project 9795

Mr. Don Hwang
Environmental Health Services
131 Harbor Parkway, Suite 250
Alameda, CA 94502

Subject Fuel Leak Case No. RO0000027; Grove St. Wash Rack
3884 Martin Luther King Junior Way
Oakland, California 94609

Dear Mr. Hwang;

Enclosed is a CORRECTIVE ACTION PLAN--WORK PLAN FOR SUBSURFACE INVESTIGATION for the subject site prepared by John Carver Consulting and dated November 12, 2006

As required the following is provided.

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

Sincerely,

Cotter & Coyle
2193 Trafalgar Street
Oakland, CA 94611
Telephone 415 215 5805

JOHN CARVER CONSULTING
Environmental Consulting ● Civil Engineering

CORRECTIVE ACTION PLAN
WORK PLAN
FOR
SUBSURFACE INVESTIGATION

3884 Martin Luther King Way
Oakland, California
RO#0000027_Workplan_2006-11-08

Project No. 9795
November 12, 2006

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EXECUTIVE DISCUSSION 1
INTRODUCTION 2
Site History 3
Scope 4
Site Location and Description 5
Soil Conditions 5
Groundwater Conditions 5
PLANNED WORK 6
CAP 6
A. Excavation Details. 6
B. Minimum Excavation for Construction. 6
C. Expanded Excavation outside of Construction parameters. 6
D. Soil Handling and Disposal. 7
E. Groundwater Issues. 7
F. Soil Confirmation Sampling. 8
G. Groundwater Sampling. 9
H. In-Situ Remediation. 9
CONTINUED SOIL AND GROUNDWATER INVESTIGATION 10
Sequence 10
Pre-field Activities 11
Soil Borings 11
Soil Sampling During Drilling 11
Groundwater Monitoring Well Installation 12
Well Development 12
Surveying 13
Groundwater Sample Collection 13
Soil and groundwater Sample Analyses 14
Data Interpretation and Soil and Groundwater 14
Report Distribution 14
ATTACHMENTS 16

EXECUTIVE DISCUSSION

3884 Martin Luther King Jr. Way (MLK) is the site of an active LUST case under the jurisdiction of the Alameda County Environmental Health. As such it is subject to continued clean-up and investigations .

There have been two soil and groundwater investigations that have identified soil and groundwater contamination associated with a previous gasoline station at 3884 MLK

3884 MLK and 3860 MLK are to be developed with a full coverage residential apartment building with one floor of underground parking. The development is "lot line to lot line" and the excavation will extend to 12 feet below ground surface (bgs).

As part of the construction excavation, all of the contaminated soil down to 12 feet will be removed. As part of Corrective Actions, a specific and expanded area of contaminated soil has been identified that will be removed during the development.

This will involve repositioning some of the shoring to along the pavement edge and deepening the portions of the excavation to 14 feet or more.

During and after the excavation, a series of confirmation soil tests will be conducted to identify soil contamination at the perimeter of the excavation and to confirm that all contaminated soil within the shoring has been removed and/or defined.

Groundwater at the site has been determined in one investigation to stabilize at 10 to 14 feet bgs. There may be dewatering required as part of the proposed excavation and construction. Any water removed from the excavation will be subject to various regulations and sampling. All water will be characterized and disposed of in accordance with the various discharge/disposal regulations.

Any soil removed from the site will be subject to profiling and characterizations and any found to be contaminated will be disposed of at appropriate certified landfills.

If there is groundwater accumulation in the excavation or if there is remaining soil contamination within the project, an application of Oxygen Releasing Compounds (ORCs) will be carried out as a long term remediation/mitigation measure.

Because the soil and groundwater contamination have not been totally defined, continued off site investigation is required. A program for the installation of three off-site groundwater monitoring wells is contained in the work plan. These wells will be installed independently of the on-site corrective activities.

To summarize, the following activities are addressed in this CAP/INVESTIGATION WORK PLAN:

Removal of all soil within the site down to 12 feet bgs.

Removal of contained soil in a expanded area in the northeast corner to at least 14 feet bgs.

Removal of any groundwater which enters the excavation at or above 12 feet bgs.

Supplemental water removal of any groundwater which enters the deepened excavation.

A program of soil testing at the bottom of the excavation to determine if any contaminated soil remains within the excavated area.

A program of groundwater removal, and analyses for characterization and disposal.

If there is soil and/or groundwater contamination remaining within the excavation, an application of ORCs will be carried out as a long term remediation..

The installation of three off-site groundwater monitoring wells for the continuing definition of the soil and groundwater contamination.

INTRODUCTION

This Work Plan was prepared in response to the Alameda County Environmental Health Department (ACEHD) letter of August 29, 2006 request for a Work Plan. The required Work Plan is part of the continuing environmental activities required by the State Water Resources Control Board's Leaking Underground Fuel Tank (LUFT) manual and The TRI-Regional Board Staff Recommendation for Preliminary Evaluation and Investigation of Underground Tank Sites when evidence of an unauthorized fuel release has been found.

The 3884 Martin Luther King Way (MLK) site is to be developed along with a larger piece of land located immediately adjacent to the south of the site which is known 3860 MLK. The whole development will involve excavations over the total extent of both the 3884 Way MLK and 3860 MLK to about 12 feet below ground surface. The excavation will be necessary for the construction of below ground parking. The general vicinity of the area is shown on Figure 1. The 3884 and 3860 MLK sites are shown on the attached Figure 2

A portion of this Work Plan presents a Corrective Action Plan (CAP) which will provided for activities associated with soil and groundwater remediation activities on the site. These Corrective Actions will take place on site during the development of the site as a multiple residential unit building. The current plans call for 100 percent coverage of the site and the

adjacent property with a building and below grade parking. The construction of such a structure will remove all soil down to a level of about 12 feet below ground surface. Such an excavation will likely encounter groundwater and will provide unique opportunities in assessing actual groundwater conditions and remediation options.

Actual remediation work will be carried out during the development of the site. Various investigative work has been carried out and will continue to be carried out prior to, during and after the remedial work at the site.

The remaining portion of this Work Plan is for a Soil and Groundwater Investigation which will further address the vertical and horizontal limits of the contamination originating from the 3884 MLK site. Previous investigations have identified contamination within the 3884 MLK site. There have been no off-site investigations carried out to date. This Work Plan presents various investigative measures that will be used separately and in conjunction with the property development to further define off-site contamination.

Additionally, in conjunction with this Work Plan a "Preferential Pathway" study was required. The study is being conducted during the preparation of this Work Plan and will be published under separate cover.

Site History

The following Chronology shows the significant work carried out at the 3884 MLK site.

01/05/95	Tanks 1, 2 and 3 removed from site, soil samples taken under ACEHD observation.
01/17/95	Tank Removal Report published by Scott Environmental for Pacific Excavators.
05/10/95	ACEHD publishes a letter requiring additional work be carried out at the 3884 MLK to define the extent of contamination.
07/17/96	Letter by H20GEO presents laboratory results of a stockpile sample.
--/--/--	Various letters from ACEHD and the Regional Board requiring additional work.
09/10/02	State Water Resources Control Board publishes letter of Notice of Removal from the UST Clean Up Fund.

No subsequent data in ACEHD files.

--/--/04	The DTSC commissioned an extensive soil and groundwater investigation of the site and the adjacent site at 3860 MLK Way. The report was obtained in electronic form and was over 1000 pages long.
10/--/05	JCC contacts the ACEHD, reviews files and prepares a Work Plan.
02/02/06	ACEHD approved JCC Work Plan with Technical Comments
02/10/06	Environmental Investigation by URS for DTSC obtained and reviewed.
02/21/06	JCC advances 8 geoprobes, samples and analyses soil and groundwater.
03/10/06	JCC publishes Report of Soil and Groundwater Investigation.
03/28/06	City of Oakland publishes comments regarding JCC Report

08/29/06 ACEHD publishes comment regarding JCC Report and requests Work Plan "Environmental Investigation"
10/23/06 JCC requests time extension for Work Plan Submittal

Pertinent soil and groundwater results from the 2004 URS investigation and the 2006 JCC investigation are summarized on the attached Table. The locations of the various borings and samples along with sample results are shown on the Figure 3-5.

The current owner of the property is:

Cotter & Coyle
2193 Trafalgar Street
Oakland, CA 94611
Telephone 415 215 5805

Scope

The scope of this Work Plan includes descriptions of:

Previous Work carried out at the site.

Corrective Action Plan (CAP)

Estimates of the horizontal and vertical limits of contaminated soil to be excavated
Methods of excavation
Confirmation (clearance) soil sampling
Groundwater sampling
Treatment of groundwater as exposed in the excavation
Methods of excavated soil storage on-site
Profiling and Characterizations of excavated soil
Disposal of Excavated soil
Methods of groundwater storage, characterizations and disposal.
Possible in-situ remediation efforts of residual soil and groundwater contamination.

Continuing Soil and Groundwater Investigation

Establishment of the locations of permanent groundwater monitoring wells
Required pre-field work activities and permitting.
Drilling equipment and methods.
Soil sampling equipment and techniques.
Soil sample handling and transportation.
Groundwater sampling equipment and techniques.
Groundwater and soil sample handling and transportation.
Sample analyses.
Data interpretation and reporting procedures.

Site Location and Description

The subject commercial property is located at the northeast corner of 39th Street and Martin Luther King Way in Oakland, California. The site has been previously identified as the "Grove Street Wash Rack" site. The property is a historic gasoline service station and the gasoline station building, a canopy and out buildings remain on the site. There is currently an automotive repair facility on the property but there are no fuel distribution systems. Figure 1 attached, shows the general site vicinity. The actual location of the tanks as well as nearby streets are shown on Figures 3-5.

Soil Conditions

The soil conditions encountered in all the geoprobes and in the URS investigation were all similar. The site is underlain by terrace deposits which are composed of alternating layers of fine grained soil (sandy and clayey silts) and coarser soil deposits, silty sands and clayey sands with varying amounts of fine angular gravels. Because of the proximity of the source materials, (the hills to the east) the deposits vary with depth and lateral position.

The two different subsurface investigations have defined the contamination to be in the areas nearest the intersection of MLK and 39th Street. The levels of gasoline related contamination at 1.5-4 feet; 8-10 feet; and 12-14 feet are shown on Figures 3-5.

Groundwater Conditions

During the March 2006 JCC investigation, there were no specific indications of free groundwater during the advancement of the geoprobes. By 16 feet, the soil appeared saturated with small amounts of water on the sampler. Based on the URS reports of groundwater at 14 feet, PVC casings were installed. Groundwater collected in the casings and was periodically measured to determine stabilized depths. During the time available, groundwater elevations rose several feet. Because of the time restriction to complete the grouting of the wells per the Alameda County Public Works Authority, final stabilized elevations were not determined. Final un-stabilized depths to water from adjacent pavement are:

Locations	depth to water
GP1	12.41 feet
GP2	12.97 feet
GP3	15.44 feet
GP4	10.83 feet

Based on review of procedures, data in the URS report, nearby data information in URS report and the presence of rainwater or perched water reported in the Tank Removal Report, The depth to stabilized groundwater at the site is in the range of about 10 feet below grade. The discontinuous soil conditions with permeabilities varying vertically and horizontally, the strong possible that the groundwater is confined and under pressure from aquifers much higher in elevation to the east of the site, presents a very complex hydrological condition.

The distribution of gasoline groundwater contamination in the groundwater as determined by URS and JCC is presented on Figure 6.

The lack of stabilized groundwater elevations, and the discontinuous nature of the aquifer on the site precluded calculation of a gradient.

PLANNED WORK

The two major activities discussed in this document are the Corrective Action Plan (CAP) and the Continuing Soil and Groundwater Investigation. These two activities will overlap and data generated from each will be used in the other.

CAP

The CAP addresses the actual contamination found on the site which results from activities of the previous gasoline service station on the 3884 MLK site. Because the gasoline station site is within the footprint of the proposed multiple family construction, remediation work will be carried out in conjunction with the proposed development. The essential corrective actions that will be carried out at the site are:

A. Excavation Details.

The proposed architectural plans call for a 10 foot clear height basement within the building footprint. Actual depth of the excavation for building design will be determined based on accepted plans. With a 10 foot height, there will be at least a 2 foot allowance for floor slab/mat foundations and required sub-slab bedding, resulting in a minimum of 12 feet of excavation. Because stabilized groundwater is anticipated to be between 10 and 14 feet, the removal of additional soil below 12 feet becomes difficult and less than effective. Soils below the groundwater typically are difficult to test for petroleum hydrocarbons because of the tendency for the hydrocarbons to "float" on the groundwater and contaminate any soil brought up through the groundwater.

B. Minimum Excavation for Construction.

There will be excavation of the entire gasoline station site and adjacent areas to the south down to a level of about 12 feet. This excavation will be carried out as part of the construction needed to provide below grade parking for the proposed development. It is anticipated that the construction will remove all of the contaminated soil to 12 feet below grade.

C. Expanded Excavation Outside of Construction Parameters.

Because there has been soil contamination identified below the sidewalk along MLK in front of 3884 MLK, the excavation for the below grade parking area will be extended

beyond the building footprint into the sidewalk area. This will allow additional contaminated soil to be removed during the construction. The precise extent of the additional area will be determined based on actual conditions.

There is also identified soil contamination extending to at least 14 feet bgs in the area of 3884 MLK. The nominal 12 foot deep excavation will be deepened in the area of 3884 MLK to remove this contamination. The actual depth of removal will be depend on the groundwater conditions encountered during construction

As working and construction drawings are produced, the project construction and civil engineers will be directed to design soil retention structures as close to the MLK pavement edge as possible. The soil retention structures in the area of 3884 MLK will also be designed and constructed to allow for excavations down to 14 feet bgs. The approximate area of excavation along MLK is shown on Figure 7.

D. Soil Handling and Disposal.

Because all excavated soil for the project will require disposal, the contaminated soil below the gasoline station will be disposed of at an appropriate landfill permitted to accept contaminated soil. Landfill permits require profiling and categorization of all waste soils. There are various procedures required by the landfill as to number, types and age of analyses for disposal. These issues will be addressed prior to excavation but only after approval of the project and issuance of an excavation permit.

One of the following two methods will be used for handling, storage and disposal of waste soils.

1. The soil to be disposed of will be categorized and profiled in situ using existing or additional soil samples. The soil will then be excavated and loaded directly into trucks for transport to the disposal landfill.

2. The soil will be excavated and stockpiled on site. A program of segregation and subsequent profiling and categorization will then be carried out for the selected landfill. Upon acceptance of the waste, the soil will be transferred from the stockpiles to trucks for appropriate disposal.

When the project is fully permitted with all appropriate approvals, and excavation contracts are in place, a Site Hazard Mitigation Plan will be published establishing rules profiling, soil handling, disposal fates, dust control, "house keeping" and other safety measures to address the pathways, nuisance conditions, tracking and site specific health plans.

E. Groundwater Issues.

Groundwater has been determined to be between 10 and 14 feet below ground surface during the several investigations at the site. Groundwater has been shown to be

contaminated with various gasoline related constituents. It is possible that the 12 foot deep excavation will encounter groundwater. As part of the construction procedures, if there is groundwater within the excavation, it will require removal. Such removal will allow construction of the concrete slab and foundations. As any groundwater is removed, it will serve as a corrective action. In accordance with discharge requirements, the groundwater will either be stored and treated, stored and discharged in accordance with regulations, or stored and disposed of depending on contamination characteristics.

The precise method of dealing with the groundwater will be determined as part of the actual construction procedures and will consider contamination and all discharge/disposal regulations. The issues of the groundwater handling will be addressed by the excavation contractor and the environmental consultant.

F. Soil Confirmation Sampling.

A program of soil sampling will be carried out during the excavation of the property. The sampling within all soil retention structures will be to serve two purposes.

1. Profiling the soil for disposal at the appropriate landfills
2. Obtaining soil contamination data as part of an on-going soil and groundwater investigation.

Profile soil samples will be obtained from the excavated soil and will be analyzed for the requirements that are set by landfills. At a minimum, all soil samples will be analyzed for:

TPH-G
BTEX
MTBE

Soil that is not to be excavated, i.e. at the bottom of the excavation which are not below the groundwater, and soils outside the soil retention plan will be sampled and analyzed. Such a program will comply with the requirements to determine lateral and vertical extent of contamination resulting from the leaking tanks at the service station area. The following parameters will be used in obtaining soil samples at the perimeter of the excavation:

Soil Samples from 4 feet, 8 feet and 12 feet deep in the vertical soil behind the temporary soil retention systems. A set of three soil samples will betaken every 15 linear feet along the 39th Street and MLK rights-of-way.

Soil samples from the bottom of the excavation will be taken on a 10 foot by 10 foot grid within the area of 3884 MLK property.

The approximate locations of the soil samples are shown on Figure 8. All soil samples will be analyzed for:

TPH-G
BTEX
MTBE

G. Groundwater Sampling.

There may be several opportunities during the excavation process where sampling of groundwater is appropriate and required. If there is to be any dewatering of the excavation, the groundwater will require profiling to determine its ultimate disposition. The sampling may be directly from the excavation or from on-site storage/settlement tanks.

If groundwater coincides with the bottom of the excavation, and dewatering as a construction method is not required, groundwater samples will be obtained as an assessment of groundwater contamination within the excavated area. Observations and sampling and subsequent analyses will be used in further defining aquifer condition and groundwater quality.

All groundwater samples will be analyzed for:

TPH-G
BTEX
MTBE

H. In-Situ Remediation.

Because the removal of soil down to or below the groundwater table is required for development, a unique opportunity is present for in-situ remediation of soil and/or groundwater. When the bottom of the excavation is exposed, there will be an area which has been exposed to soil and groundwater contamination.

Provisions will be made for application of ORCs (Oxygen Releasing Compounds) as recommended in the URS report. Such treatment will serve as a continuing soil and groundwater remediation action. The final decision will be based on the results of the confirmation soil and groundwater sampling. Should any significant contamination be detected, the ORC program will be carried out.. ORC was chosen as an additive for enhanced bioremediation based on experience at other petroleum contaminated sites. Based on an ORC addition of 0.1 to 1 percent by weight of contaminated soil to be treated, it is estimated that approximately 1,000 pounds of ORC would be tilled into the exposed soil at the bottom of the excavation in the area of the gasoline station. The approximate area to be treated with ORC is shown on Figure 7.

I. Reporting.

Upon completion of excavation, sampling and in-situ soil/groundwater remediation, a Summary Report will be prepared and published. The report will provide scaled drawings of the excavated area, soil and groundwater sample locations, and-situ ORC remediation treatment locations as well as tabulated analytical results.

The report will present conclusion regarding the efficacy of the excavation as a remediation effort and provide recommendations for further investigation and remediation outside of the proposed building footprint.

CONTINUED SOIL AND GROUNDWATER INVESTIGATION

Because the contained groundwater plume has not been completely defined, a continuing program of investigation is required. Certain aspects of the investigation will be carried out during the excavation at the project as explained in the CAP portion of this document. Those investigative methods will include soil sampling at the perimeter of the excavation to determine actual soil conditions. Groundwater will be sampled if it enters the excavation.

In order to adequately define the groupware contamination plume, a program of monitoring well in stallion will be conducted. The purpose of the monitoring wells will be to provide on-going data regarding the condition of the groundwater and to make judgments regarding the efficacy of on site in-situ remediation and to provide a basis for further investigation and/or off site remediation.

Sequence

The following is the planned sequence of activities at the site:

- Obtain required permits, coordinate all events with the property owners, tenants, Underground Service Alert and the ACEHD
- Drill three exploratory borings at the approved off-site locations using Geo-probe/hollow stem auger techniques.
- Sample the soil encountered above and at the interface of the groundwater level.
- Extend each boring to beyond the first encountered groundwater.
- Install permanent groundwater monitoring wells in each of the three exploratory borings.
- Develop the newly installed groundwater monitoring wells.
- Allow a stabilization period for groundwater levels to become established.
- After stabilization, measure each of the new groundwater monitoring wells.
- Purge all three monitoring wells.
- Sample the groundwater from each of the wells.
- Survey the top of casing elevations for groundwater gradient calculation.
- Analyze all soil and groundwater samples.
- Prepare a summary report of the work accomplished along with a calculation of the groundwater gradient and recommendations for further work.

Pre-field Activities

JCC will obtain all permits which are required by the ACEHD, and the City of Oakland.. The property owners, tenants and regulatory agencies will be notified of all field work dates and the precise locations so access is available. Underground Service Alert will be notified at least 72 hours before any excavation so that any utilities are located. JCC will arrange and schedule all drilling, surveying and laboratory subcontractor services.

Soil Borings

The three well borings will be advanced at the approximate locations shown on Figure 9, attached. The well boring locations were selected in order to provide additional information regarding lateral extent of soil contamination, to establish the depth to groundwater, the condition of the groundwater and to provide three points for groundwater gradient calculations.

The three borings will be drilled out with 8 inch diameter hollow stem augers to allow for the construction of 2 inch diameter monitoring wells.

The locations were also selected to be accessible to equipment and away from known utilities. Actual locations may depend on particular access conditions and the exact drill rig configuration as well as on any discovered underground obstructions. All down-hole equipment will be cleaned before arriving on site and before leaving to prevent off-site contamination.

Drilling will be by a California Licensed Water Well Drilling Contractor (C57), using Geoprobe sampling equipment and 8 inch hollow stem augers. The borings will be logged under the supervision of a registered Civil Engineer. Soil encountered will be classified in accordance with the Unified Soil Classification System by observing the samples and cuttings. All soil cuttings will be stored on site in drums and will be disposed of pending laboratory analyses.

The borings will be drilled to about 5-10 feet beyond first encountered groundwater. The anticipated total depth of the borings is about 15 to 20 feet. Final decisions as to the actual well depths will be made based on actual soil and groundwater conditions encountered. The soil borings will be converted to groundwater monitoring wells immediately after drilling.

Soil Sampling During Drilling

Each boring will be sampled starting at about 4 feet below ground surface and will continue at approximate 4 foot intervals until groundwater is encountered. Since the groundwater is anticipated to be about 10 to 14 feet bgs, attempts will be made to obtain a soil sample just about the groundwater interface. Soil sampling during the drilling will provide additional information regarding the possible lateral and vertical extent of soil contamination.

A geoprobe will be used to sample the soil. After sampling, the geoprobe rig would then advance hollow stem augers to the depths required.

The geoprobe is a percussion drilling method which advances a plastic liner into the soil and a continuous soil core is obtained. The core is observed and relatively undisturbed soil samples will obtained from the geoprobes by removing a section of the plastic liner.

As samples are obtained, they will be covered with teflon sheets, capped and sealed with tape. The samples will then be labeled, and stored in a cooled ice chest for transportation to the analytical laboratory.

A Chain-of-Custody form will be initiated by L&W personnel at the time of sampling and will accompany the samples to a state certified laboratory using California Department of Health Services approved methods.

Groundwater Monitoring Well Installation

The monitoring wells will be installed by the Licensed C57 driller used to drill the borings. The wells will be constructed within the 8 inch diameter hollow stem augers. In any case, the wells will not extend more than 10 feet beyond the first encountered groundwater in order to preclude drilling into any other underlying aquifers.

The monitoring wells will be constructed of 2 inch diameter, flush threaded, Schedule 40 Polyvinyl Chloride (PVC) factory slotted well screen and blank casing. A friction cap which will act as a sediment trap will be installed at the bottom of the wells and a locking slip cap will be installed at the top. The top of the wells will be secured and protected by a well cover installed flush with the adjacent surface. No glue or solvent will be used in constructing the wells.

The PVC well screen, slot size 0.020 inch, and blank casing will be installed within the hollow stem augers. A filter pack consisting of No. 2 or 3 Monterey sand will be placed within the annular space between the casing and borehole as the auger sections are withdrawn. The filter pack will be continually measured with a steel tape to insure that no bridging occurs. The sand will be placed to about 1 foot above the screened interval of the wells. A minimum thickness of 1 foot of bentonite pellets will be placed directly on top of the sand pack and hydrated. The remainder of the annular space will be filled with neat Portland cement grout in the presence of a county inspector. The well cover will then be concreted in place to finish the installation. Figure 10 attached is a typical detail of the monitoring well installation.

Well Development

The groundwater monitoring wells will be developed to clean the wells and stabilize the filter pack around the screened interval in order to provide a hydraulic connection between the wells and the aquifer. The well development will be performed by alternately surging and bailing. Depending on actual groundwater and aquifer conditions, devolvement may be carried out using a peristaltic pump. Well development will continue until the well water is as free of turbidity and particulate matter as is reasonably possible (generally only until slightly cloudy). Development water will be stored on site in 55 gallon DOT 17E drums

labeled as "GROUNDWATER" until analysis of the water is obtained and the proper method of transport and disposal can be determined. Aquifer testing will not be performed unless groundwater contamination is verified by analysis and the aquifer parameters are needed for additional site characterization and remedial action studies.

Surveying

Upon the completion of well development, the elevations of the top of the newly installed groundwater monitoring well casings will be surveyed in reference to each other to allow for immediate groundwater gradient calculations. The surveying will be conducted with laser equipment and will be done by a licensed civil engineer.

There will be additional horizontal and vertical surveying carried out by a Licensed Land Surveyor to provide the data required for Electronic Data Delivery (EDD) to the State Geo-Tracker system. The surveying will be arranged after the groundwater wells are established, sampled and reported.

Groundwater Sample Collection

Following development, the groundwater monitoring wells will be allowed to stabilize for at least 24 hours before sampling. Initially the depth to water from the tops of the wells will be measured to an accuracy of 0.01 feet. The water will then be checked for floating product or iridescent sheen by taking a preliminary water sample with a bailer. If floating product is observed, the thickness and nature of the product will be noted.

Next, the wells will be purged of at least four casing volumes or until the pH, temperature and conductivity measurements of the purge water are essentially stable. Purging will be carried out by successive use of a bailer. Depending on actual groundwater and aquifer conditions, purging may be carried out using a peristaltic pump All purged water will be stored in a DOT 17E drum and labeled as "GROUNDWATER" until analysis of the water is obtained and the proper method of transport and disposal can be determined.

The water sample will be collected in a new disposable bailer and poured directly into laboratory cleaned 40 milliliter volatile organic analysis (VOA) vials to prevent loss of any volatile constituents. The vials will be filled slowly and in such a manner that the meniscus extends above the top of the VOA vial. After the vials are filled and capped, they will be inverted to insure there are no headspaces or entrapped air bubbles. After sealing with a laboratory provided teflon cap, the VOA vials will then be labeled and stored in a cooled ice chest for transportation to the analytical laboratory. Similar techniques will be used for one liter bottle should they be required.

A Chain-of-Custody form will be initiated by L&W personnel at the time of sampling and will accompany the water samples to a state certified laboratory using Department of Health Services approved methods.

Soil and groundwater Sample Analyses

All soil and groundwater samples obtained during the work described in this Work Plan will be analyzed for the following:

Total Petroleum Hydrocarbons as Gasoline (TPH-G).
Volatile aromatic hydrocarbons Benzene, Toluene. Ethylbenzene and total Xylenes (BTEX).
Methyl Tertiary Butyl Ether (MTBE).

Groundwater Samples will also be analyzed for:
Total Dissolved Solids (TDS)

All analyses will be conducted by a laboratory certified by the State of California and will use current extraction and analytic methods approved by the Department of Health Services.

Data Interpretation and Soil and Groundwater

Following the completion of the field work, JCC will review the data obtained and prepare a Soil and Groundwater Investigation Report. The report will describe the details of the field work, summarize the analytical results, discuss the finding of the initial wells monitoring, present a calculated groundwater gradient and provide conclusions and recommendations.

Report Distribution

All reports that are prepared during the continuing work on this project will be sent to:

Mr. Neil Carter
2847 Arguello Drive
Burlingame, CA 94010
Telephone 415 215 5805

Mr. Don Hwang
Alameda County Environmental Health Department
1131 Harbor Bay Parkway Suite 250
Alameda, CA 94502
(and electronically uploaded as required by the ACEHD)

California Regional Water Quality Control Board San Francisco Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Kathy Kleinbaum
City of Oakland
CEDA, Redevelopment Division
250 Frank Ogawa Plaza, Suite 5313

Oakland, CA 94612

ATTACHMENTS

3884 Martin Luther King Way
Oakland, California
RO#0000027_Workplan_2006-11-08

Project No. 9795
November 12, 2006

JOHN CARVER CONSULTING
ENVIRONMENTAL -- CIVIL -- GEOTECHNICAL
Soil Analytical Results 3884 Martin Luther King Junior Way
JCC INVESTIGATION OF FEBRUARY 2006

Analyte	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Other Oxygenates			TTLC	STLC	PRG resid	RBSL
9795-GP1-5.0	ND	ND	ND	ND	ND	ND	ND			--	--	NE	100
9795-GP1-10.0	ND	ND	ND	ND	ND	ND	ND			--	--	NE	100
9795-GP1-15.0	ND	ND	ND	ND	ND	ND	ND			--	--	NE	500
										--	--	NE	NE
9795-GP2-5.0	ND	ND	ND	ND	ND	ND	ND			--	--	varies	varies
9795-GP2-10.0	23.6 ppm	ND	ND	0.315 ppm	0.243 ppm	ND	ND			--	--	6.2	0.028
9795-GP2-14.0	ND	ND	ND	ND	ND	ND	ND						
										500	15.0	310	6.3
9795-GP3-5.0	ND	ND	ND	ND	ND	ND	ND			500	5.	220	0.39
9795-GP3-10.0	ND	ND	ND	ND	ND	ND	ND			10,000	100	5,400	750
9795-GP3-14.0	ND	ND	ND	ND	ND	ND	ND			75	0.75	150	4.0
										100	1.0	37	1.7
9795-GP4-5.0	ND	ND	ND	ND	ND	ND	ND			2500	560	210	750
9795-GP4-10.0	30.7 ppm	ND	ND	1.38 ppm	4.60 ppm	ND	ND			8,000	80	900	40
9795-GP4-14.0	1.31 ppm	ND	ND	0.083 ppm	0.057 ppm	ND	ND			2,500	25	3,100	225
										1,000	5.0	150	200
9795-GP5-2.0	ND	ND	ND	ND	ND	ND	ND			20	0.2	23	4.7
9795-GP5-8.0	176	ND	ND	3.19 ppm	15.5 ppm	ND	ND			3,500	350	390	40
9795-GP5-12.0	1.80	0.86 ppm	0.14 ppm	0.11 ppm	0.26 ppm	ND	ND			2,000	20	1,600	150
										100	1.0	390	10
9795-GP6-1.5	ND	ND	ND	ND	ND	ND	ND			500	5.0	390	20
9795-GP6-6.0	ND	ND	ND	ND	ND	ND	ND			700	7.0	5.2	1.0
9795-GP6-10.0	18.3 ppm	ND	ND	0.48 ppm	0.57 ppm	ND	ND						
9795-GP6-14.0	1.36 ppm	0.60 ppm	0.079 ppm	0.10 ppm	0.07 ppm	ND	ND						

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Soil Analytical Results 3884 Martin Luther King Junior Way
JCC INVESTIGATION OF FEBRUARY 2006

Analyte	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Other Oxygenates
9795-GP7-5.0	ND	0.007 ppm	ND	ND	ND	ND	ND
9795-GP7-10.0	19.1 ppm	ND	ND	0.23 ppm	ND	ND	ND
9795-GP7-14.0	2.85 ppm	ND	ND	0.058 ppm	0.042 ppm	ND	ND
9795-GP8-5.0	ND	ND	ND	ND	ND	ND	ND
9795-GP8-10.0	ND	ND	ND	ND	ND	ND	ND
9795-GP8-12.0	ND	ND	ND	ND	ND	ND	ND

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URS INVESTIGATION OF SEPTEMBER 2004

Analyte	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Other Oxygenates
S1-1.0	ND	ND	ND	ND	ND	ND	
S1-3.5	ND	ND	ND	ND	ND	ND	
S1-14.0	ND	110 ppb	15 ppb	38 ppb	95 ppb	18 ppb	
S2-1.0	ND	ND	ND	ND	ND	ND	
S2-3.5	ND	ND	ND	ND	ND	ND	
S2-14.0	170 ppm	3,200 ppb	14,000 ppb	4,100 ppb	20,000 ppb	ND	
S3-1.0	ND	ND	ND	ND	ND	ND	
S3-3.5	ND	ND	ND	ND	ND	ND	
S3-14.0	ND	22 ppb	ND	ND	ND	ND	
S4-1.0	ND	ND	ND	ND	ND	ND	
S4-3.5	ND	ND	ND	ND	ND	ND	
S4-14.0	6.2 ppm	250 ppb	ND	ND	ND	ND	
S5-1.0	ND	ND	ND	ND	ND	ND	
S5-3.5	ND	ND	ND	ND	ND	ND	
S5-14.0	ND	ND	ND	ND	ND	ND	
S6-1.0	ND	ND	ND	ND	ND	ND	
S6-3.5	ND	ND	ND	ND	ND	ND	
S6-14.0	ND	ND	ND	ND	ND	ND	

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URS INVESTIGATION OF SEPTEMBER 2004

Analyte	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Other Oxygenates
S7-1.0	ND	ND	ND	ND	ND	ND	
S7-3.5	ND	ND	ND	ND	ND	ND	
S7-14.0	ND	ND	ND	ND	ND	ND	
S8-1.0	ND	ND	ND	ND	ND	ND	
S8-3.5	ND	ND	ND	ND	ND	ND	
S8-14.0	ND	ND	ND	ND	ND	ND	
S9-1.0	ND	ND	ND	ND	ND	ND	
S9-3.5	ND	11 ppb	ND	22 ppb	37 ppb		
S9-14.0	20 ppm	1,500 ppb	280 ppb	380 ppb	1,600 ppb	ND	
S10-1.0	ND	ND	ND	ND	ND	ND	
S10-3.5	ND	ND	ND	ND	ND	ND	
S10-14.0	ND	19 ppb	6.2 ppb	79 ppb ppb	96 ppb	ND	
S11-1.0	ND	ND	ND	ND	ND	ND	
S11-3.5	ND	ND	ND	ND	ND	ND	
S11-10.0	220 ppm	940 ppb	670 ppb	8,500 ppb	8,000 ppb	ND	

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Analytical Results 3884 Martin Luther King Junior Way
JCC INVESTIGATION OF FEBRUARY 2006
URS INVESTIGATION OF SEPTEMBER 2004

GROUNDWATER

Analyte	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Other Oxygenates
		JCC INVESTIGATION OF 2006					
9795-GP1-W	ND	ND	ND	ND	ND	ND	ND
9795-GP2-W	554 ppb	10.1 ppb	ND	89.2 ppb	114 ppb	ND	ND
9795-GP3-W	79,800 ppb	17,600 ppb	8,480 ppb	1,950 ppb	10,200 ppb	ND	ND
9795-GP4-W	1,980 ppb	294 ppb	ND	189 ppb	523 ppb	ND	ND
		URS INVESTIGATION OF 2004					
G2	22,000 ppb	4,700 ppb	5,500 ppb	700 ppb	2,300 ppb	ND	
G4	950 ppb	260 ppb	ND	74 ppb	58 ppb	ND	
G7	190 ppb	21 ppb	34 ppb	5.0 ppb	10 ppb	ND	
G9	1,200 ppb	88 ppb	42 ppb	33 ppb	170 ppb	7.9 ppb	
G10	97 ppb	4.4 ppb	1.5 ppb	4.2 ppb	5.3 ppb	6.5 ppb	
G11	66 ppb	2.3 ppb	2.9 ppb	1.6 ppb	5.2 ppb	ND	
G12	ND	1.5 ppb	2.6 ppb	ND	ND	ND	
G13	ND	0.53 ppb	0.58 ppb	ND	ND	ND	
G17	ND	0.59 ppb	0.62 ppb	ND	ND	ND	
G19	ND	ND	ND	ND	ND	ND	
G20	64 ppb	ND	ND	ND	ND	ND	

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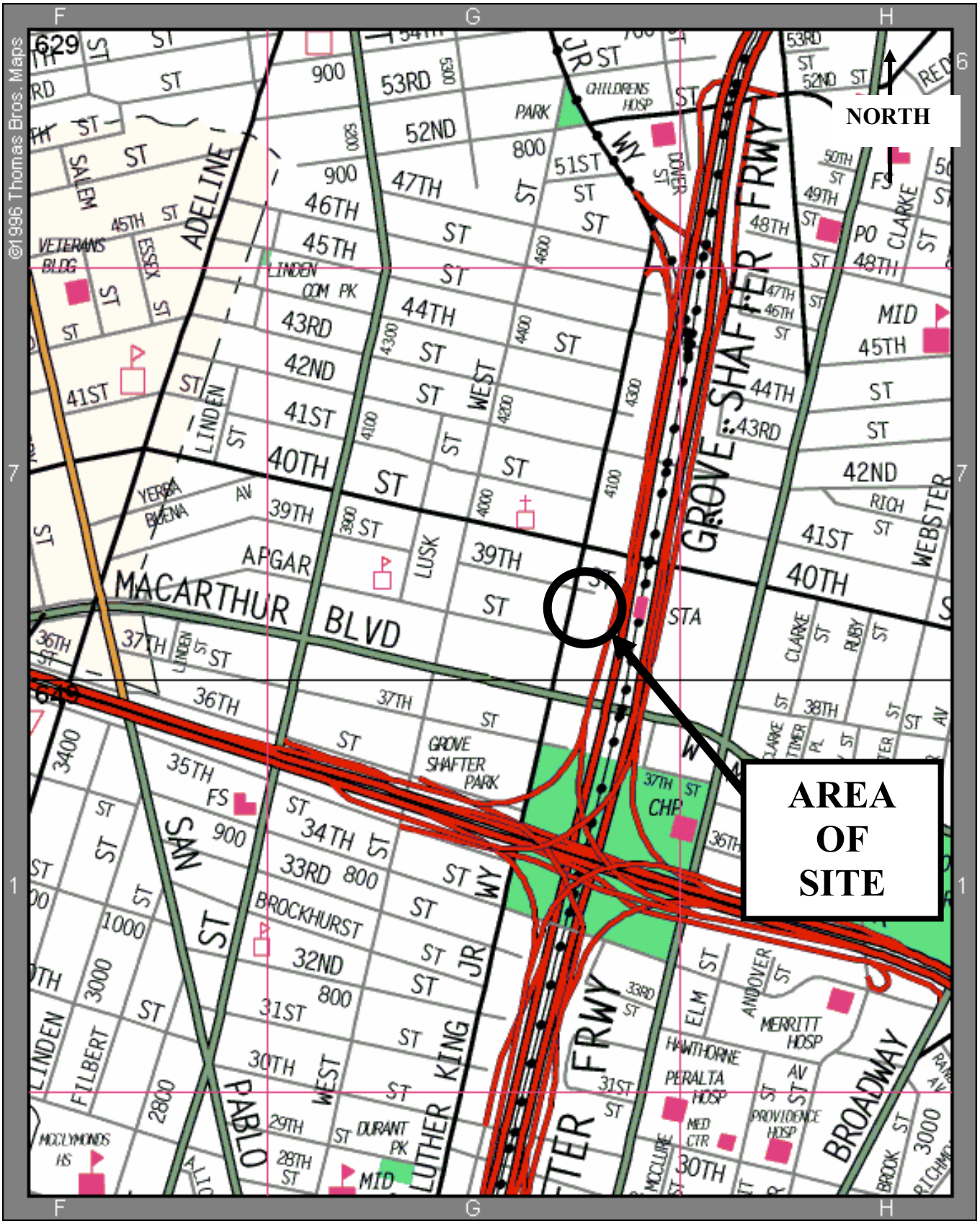
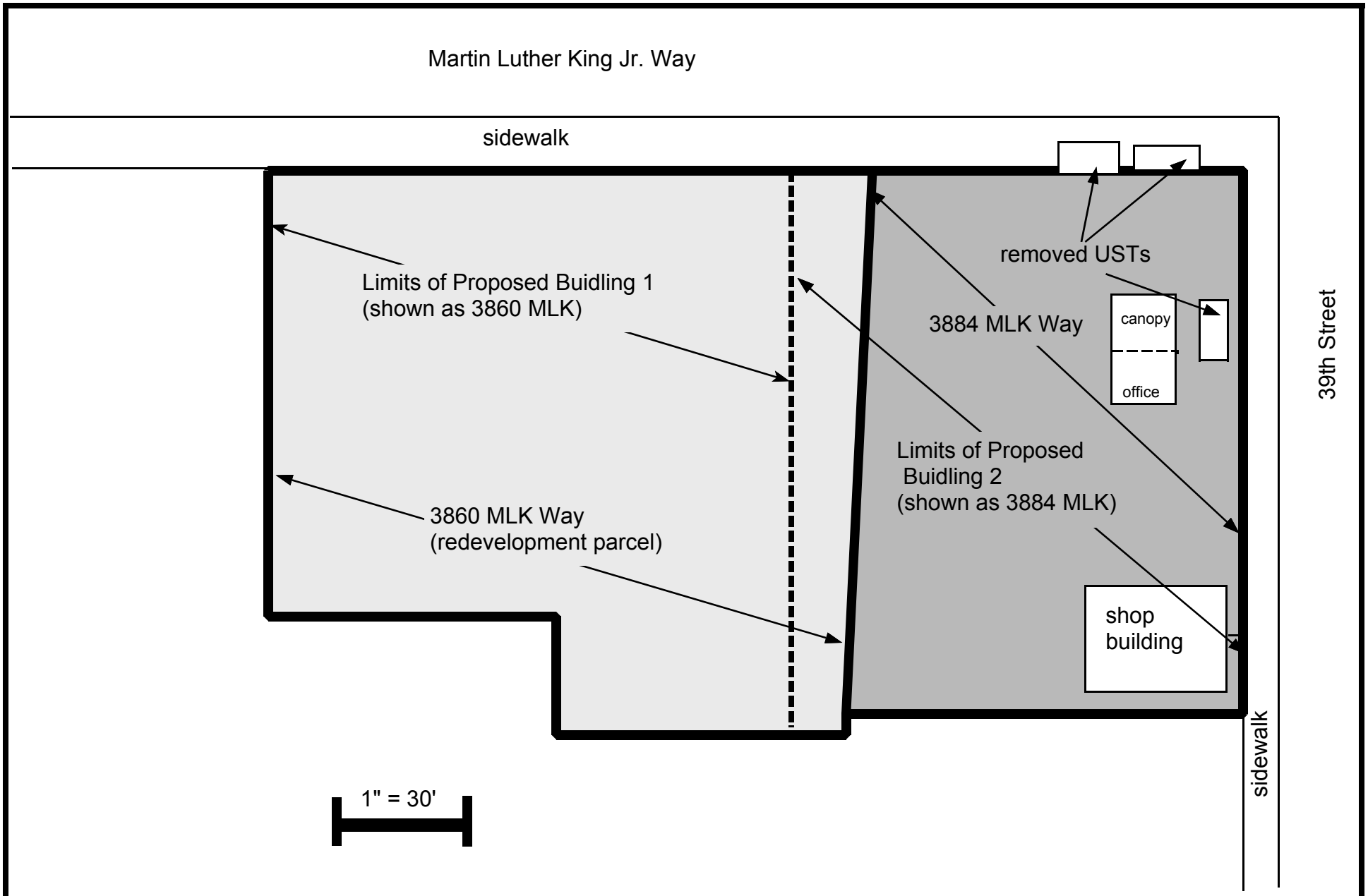
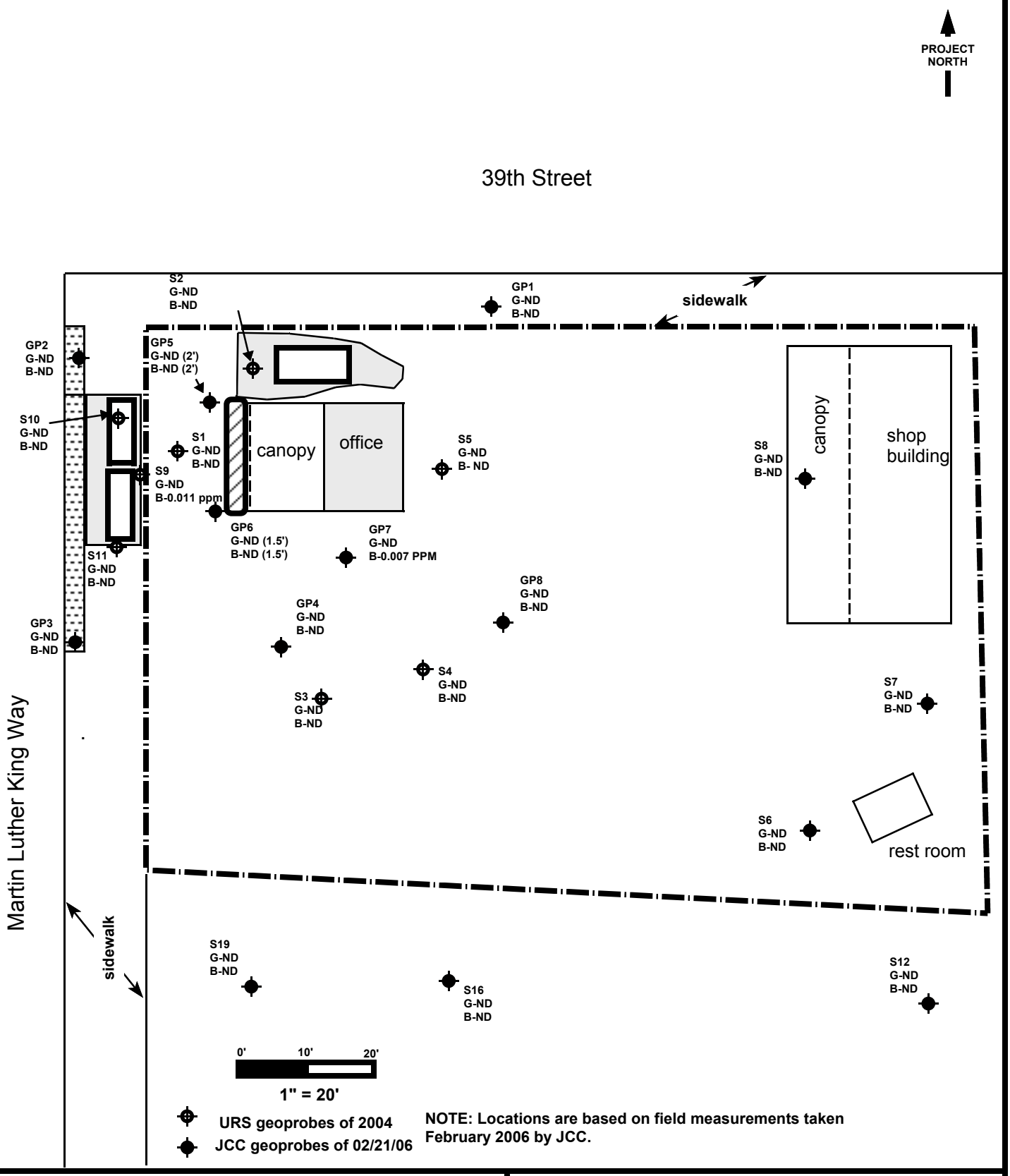


JOHN CARVER CONSULTING	VICINITY MAP 3884 Martin Luther King Way Oakland, California			
Project 9795	by: jnc	not to scale	November 2006	Figure Number 1

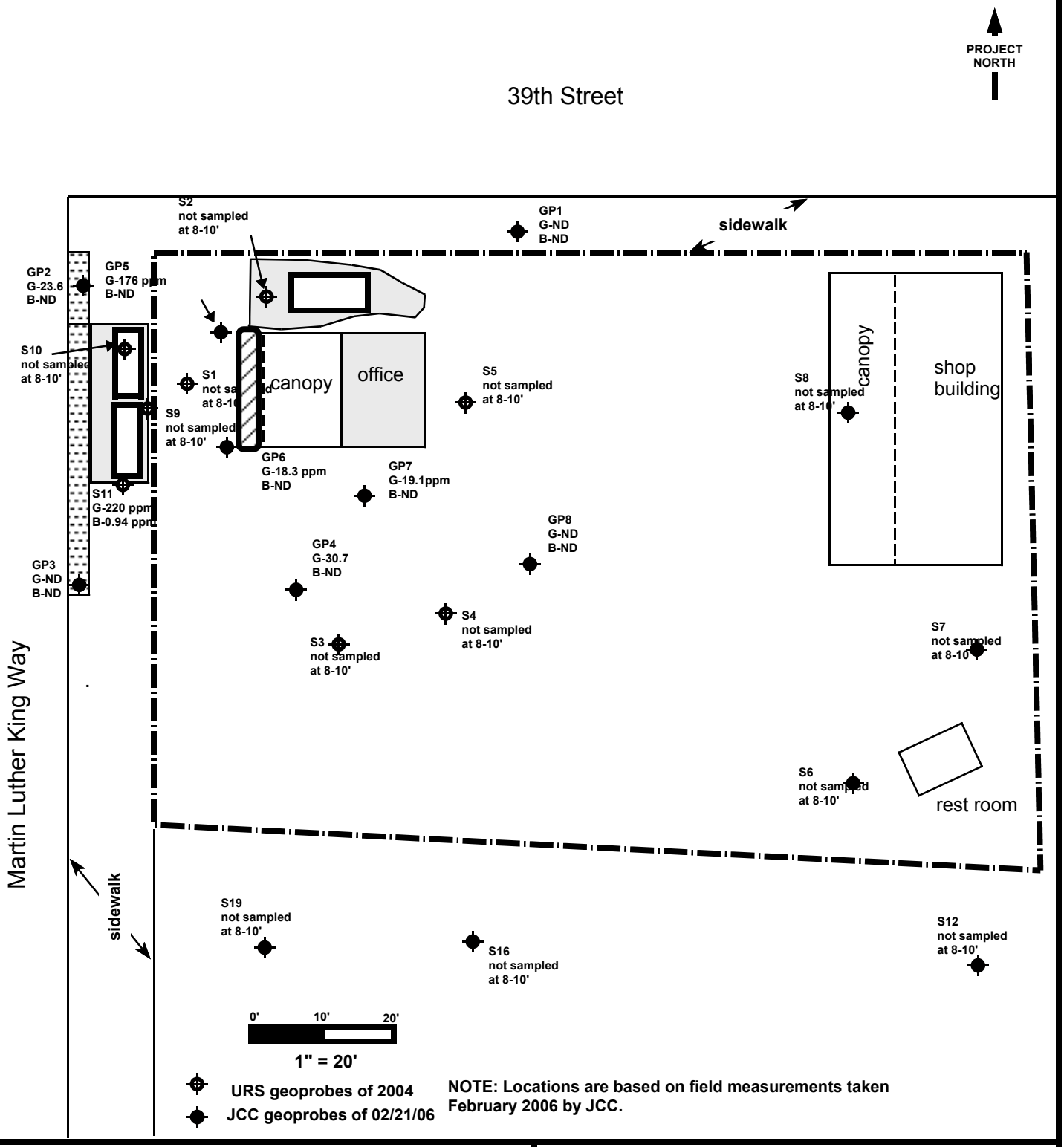


JOHN CARVER CONSULTING 415 235 4648			DEVELOPMENT AREA 3884 Martin Luther King Jr Way Oakland, California	
Project No. 9795	By: jnc	Not to scale	November 2006	Figure 2



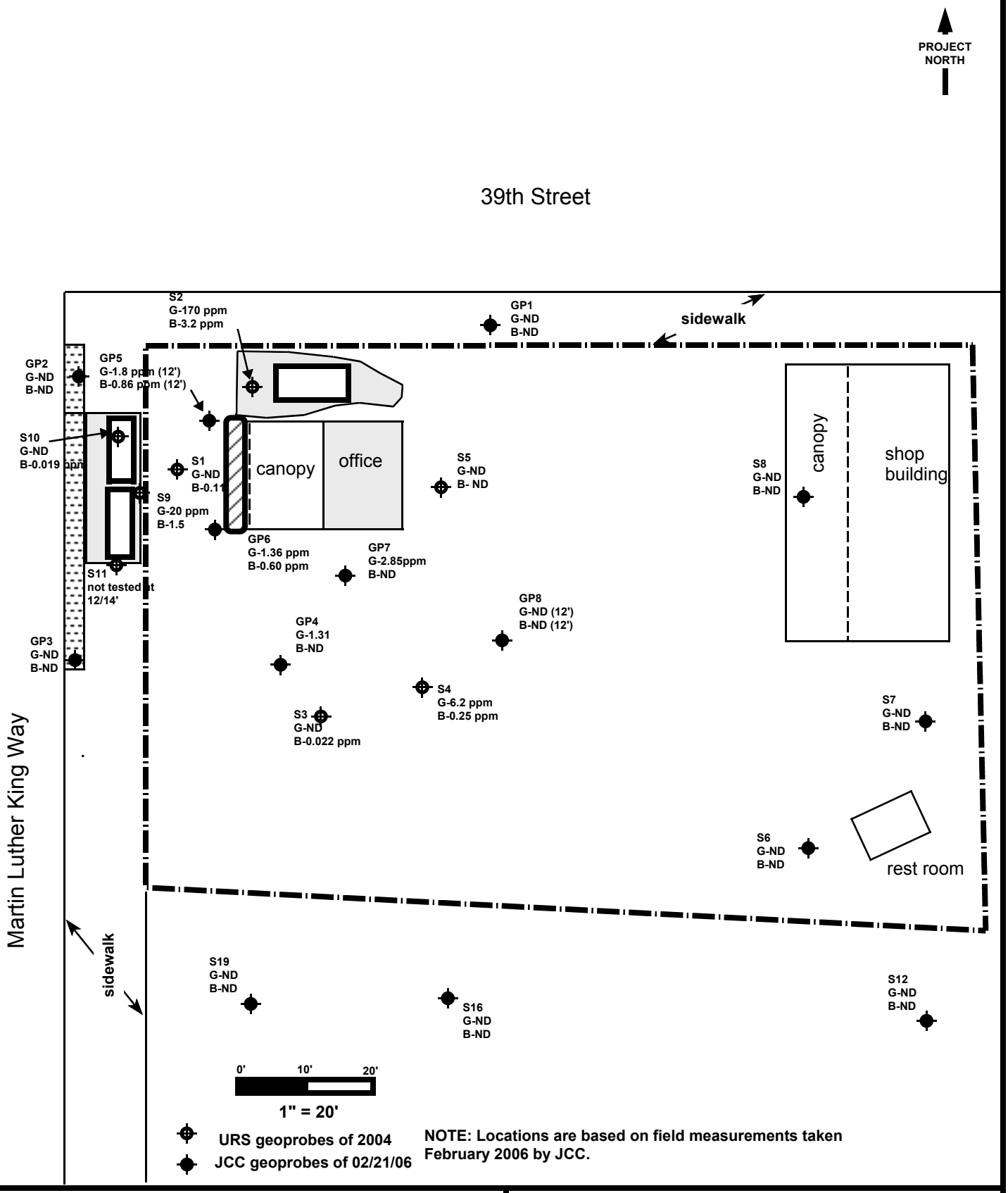
JOHN CARVER CONSULTING 415 235 4648	**TPH-G & Benzene at 1.5/5.0 FEET** 3884 Martin Luther King Way Oakland, California

Project 9795	by: jnc	Scale 1" = 20'	November 2006	Figure 3



JOHN CARVER CONSULTING 415 235 4648	**TPH-G & Benzene at 8/10.0 FEET** 3884 Martin Luther King Way Oakland, California

Project 9795	by: jnc	Scale 1" = 20'	November 2006	Figure 4



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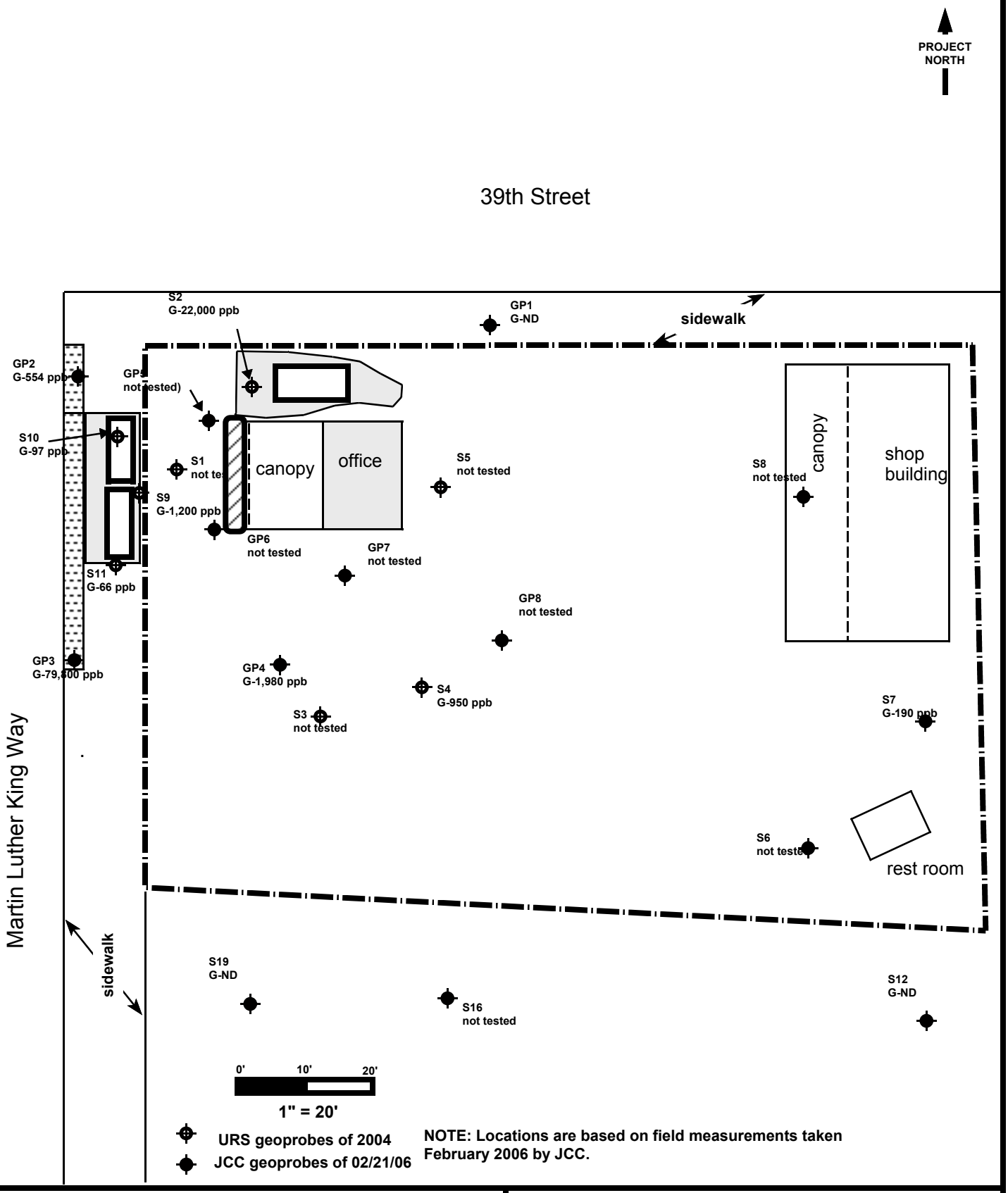
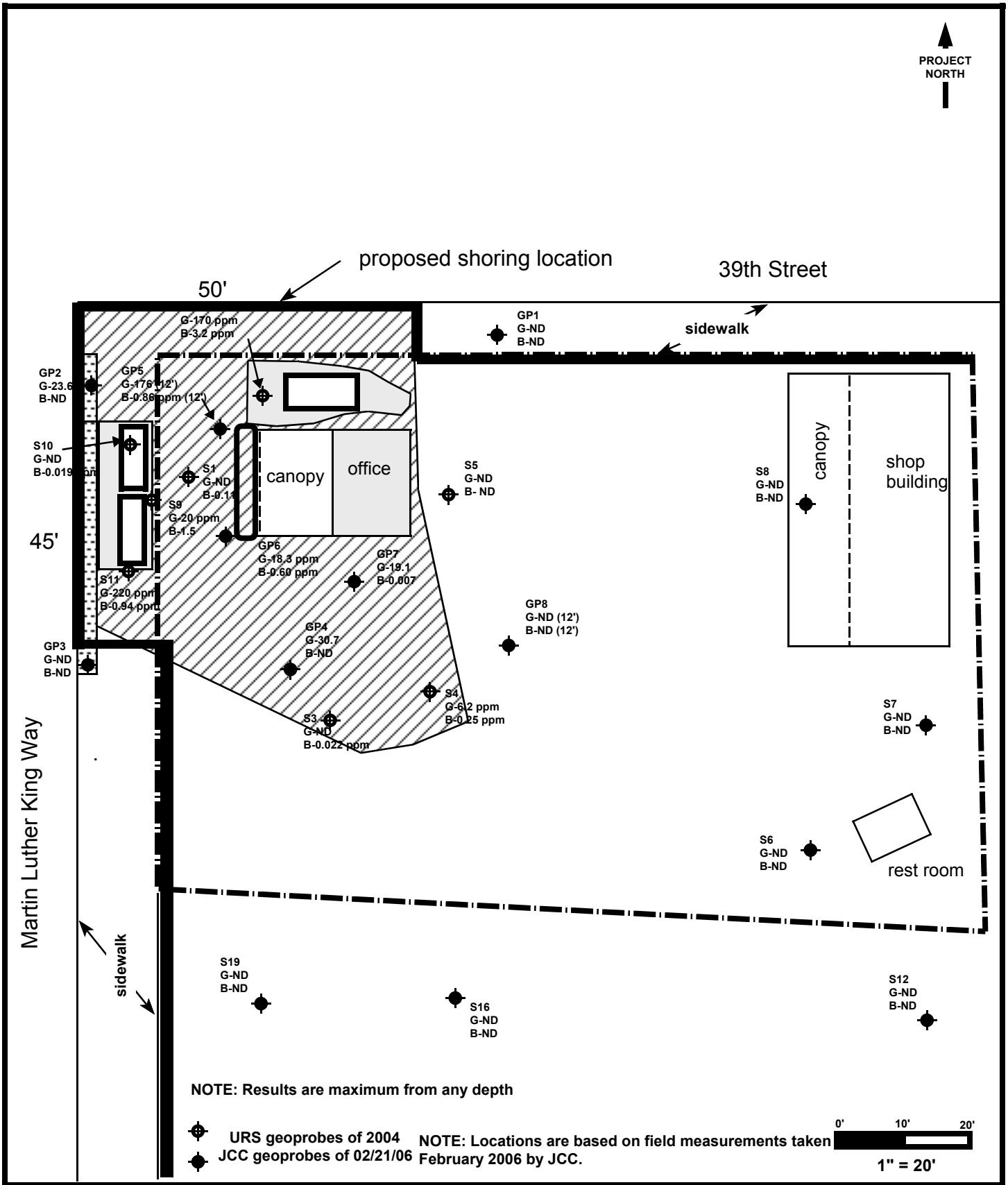
TPH-G & Benzene at 12/14.0 FEET
3884 Martin Luther King Way
Oakland, CA

Project 9795	by: jnc	Scale 1" = 10'	November 2006	Figure 5



JOHN CARVER CONSULTING 415 235 4648	TPH-G in Groundwater 3884 Martin Luther King Way Oakland, California			
Project 9795	by: jnc	Scale 1" = 20'	November 2006	Figure 6



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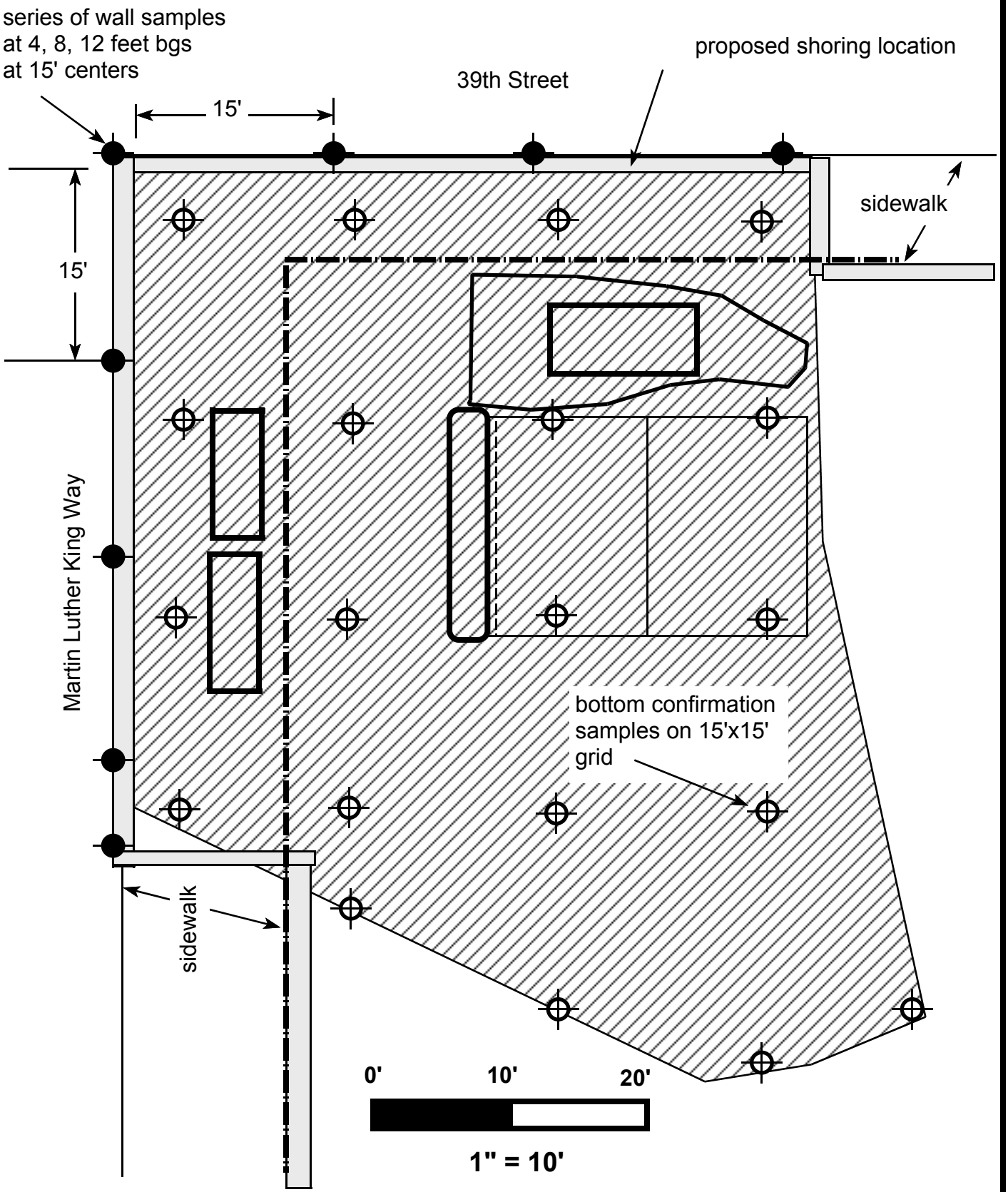
Limits of Excavation/Contamination
3884 Martin Luther King Way
Oakland, California

Project 9795	by: jnc	Scale 1" = 20'	November 2006	Figure 7



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Confirmation Sample Locations
3884 Martin Luther King Way
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Project 9795	by: jnc	Scale 1" = 20'	November 2006	Figure 8

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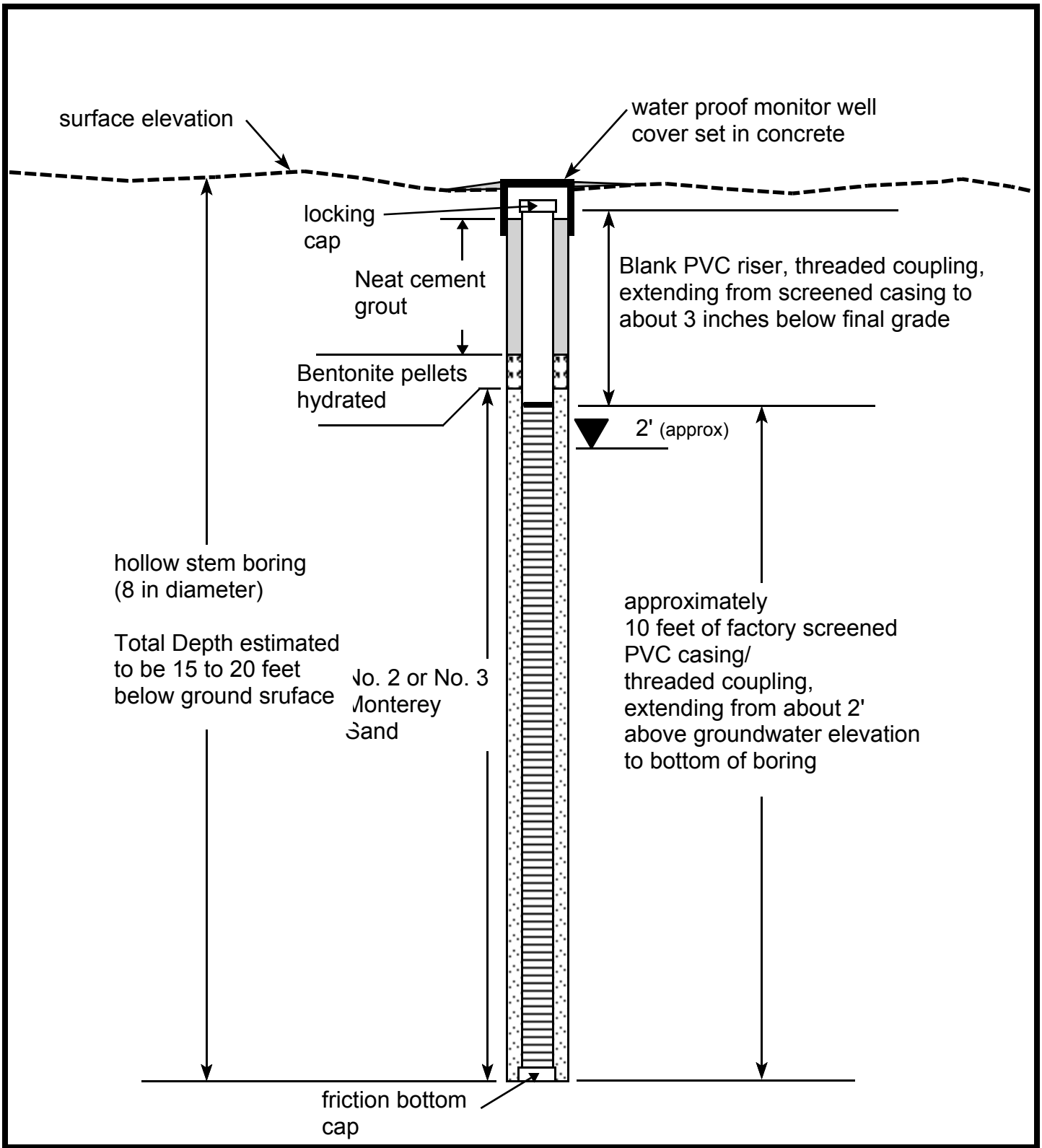
Proposed Monitoring Well Locations
3884 Martin Luther King Way
Oakland, California

Project 9795	by: jnc	Scale 1" = 20'	November 2006	Figure 9



JOHN CARVER CONSULTING 415 235 4648		Proposed Monitoring Well Detail 3884 Martin Luther King Jr. Way San Francisco, California		
Project No. 9795	By: jnc	Not To Scale	November 2006	Figure 10