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# Site Conceptual Model

580 Market Place Shopping Center
3735-4065 East Castro Valley Boulevard
Castro Valley, California
Cardno ATC Project No. 75.75354.0002

Prepared on Behalf of:

Mr. Charles Gurney
Weingarten Realty Investors
2600 Citadel Plaza Drive, Suite 300
Houston, Texas 77008

November 30, 2012

**WEINGARTEN REALTY**

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Gabe Stivala
Cardno ATC
701 University Drive m Suite 701
Sacramento, CA 95825

**Reference:** **Site Conceptual Model**
**580 Market Place Shopping Center**
**3735-4065 East Castro Valley Boulevard**
**Castro Valley, California**
**Alameda County LOP No. RO 3047**
**Cardno ATC Project No. 75.75354.0002**

Dear Mr. Stivala:

I have reviewed and approved the referenced report. Please submit it to the regulatory agencies listed in the distribution section of the report. Should any of the agencies require it, I am prepared to declare, under penalty of perjury, that to the best of my knowledge, the information contained in the report is true and correct.

Sincerely,

Charles Gurney

Weingarten Realty Investors

2600 Citadel Plaza Drive, Suite 300

Houston, Texas 77008

Date: 12-7-12

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November 30, 2012
75.75354.0002

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

Subject: Site Conceptual Model, 580 Market Place Shopping Center, 3735-4065 East Castro Valley Boulevard, Castro Valley, California, Case No. RO0003097

Dear Ms. Detterman:

On behalf of Weingarten Realty Investors, Cardno ATC has prepared a Site Conceptual Model for the above referenced site. The information provided in the Site Conceptual Model herein is primarily based on historical data collected in association with Phase I and Environmental Site Assessment and limited subsurface assessment activities conducted at the site between 1997 and 2012. If you have questions or comments regarding this report or our recommendations, please contact Gabe Stivala at (916) 386-3870.

Respectfully submitted,
Cardno ATC

Nathan Christman, P.G.
Senior Geologist


Gabe Stivala, P.G.
Senior Project Manager

cc: Mr. Chuck Gurney, Weingarten Realty Investors
Mr. Thomas J. Treacy, John Hancock Life Insurance Company USA

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# Site Conceptual Model

580 Market Place Shopping Center
3735-4065 East Castro Valley Boulevard
Castro Valley, California
Cardno ATC Project No. 75.75354.0002

## 1.0 INTRODUCTION

On behalf of Weingarten Realty Investors, Cardno ATC has prepared a Site Conceptual Model (SCM) for the 580 Market Place Shopping Center located in Castro Valley, California (**Figure 1**). This SCM was requested by the Alameda County Environmental Health Services (ACEH) through correspondence dated October 11, 2012.

## 2.0 BACKGROUND INFORMATION

### 2.1 Site Location

The site is located north of Interstate 580, southeast of East Castro Valley Boulevard, and west of Chaparral Lane in the City of Castro Valley, California, as shown on **Figure 1**. A site plan illustrating the layout of the shopping center and locations of recent soil borings are shown on **Figure 2**.

### 2.2 Land Usage

The property and surrounding area was used as agricultural land with rural residential developments prior to 1990. The property was developed as a 10.21 acre retail shopping center in 1990. Dryclean 580 has operated at 3937 East Castro Valley Boulevard since 1990. Current land use is commercial within the 580 Market Place Shopping Center surrounded by residential developments.

### 2.3 Environmental History

A soil gas survey was conducted as part of a Phase II Site Investigation in November 1997. During the soil gas survey, a total of 16 soil gas samples were collected from 11 soil gas sampling locations (SG-1 through SG-11) at the site. Trichloroethene (TCE) was detected at concentrations ranging from 1.4 to 6.8 micrograms per liter (µg/L). Tetrachloroethene (PCE) was detected at concentrations ranging from 1.7 to 119.7 µg/L. A soil sample collected at a depth of 7 feet below ground surface (bgs) from SB-1 located adjacent to an identified sewer line did not contain detectable concentrations of TCE and PCE.

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A limited subsurface assessment was conducted at the site in March 2012. Four soil borings (ATC-1 through ATC-4) were advanced to depths ranging from 24.5 to 31 feet bgs where refusal was encountered. Soil samples were collected continuously and field screened for the presence of volatile organic compounds (VOCs). Groundwater was not encountered in any of the soil borings advanced at the site.

## 3.0 GEOLOGY

The site is situated within the Coast Ranges geomorphic province. The Coast Ranges geomorphic province is bound on the north by the State of Oregon, on the east by the Klamath Mountains and the Great Valley geomorphic provinces, on the south by the Transverse Ranges geomorphic province, and on the west by the Pacific Ocean. This geomorphic province, which extends approximately 625 miles along the California coast line and is approximately 80 miles wide, is characterized as a series of long, northwest-trending ranges separated by parallel river valleys. The boundaries between ranges and valleys are generally defined by faults that separate more resistant rocks from weaker ones. This region is underlain by a complex assemblage of consolidated marine sedimentary rocks, semi-consolidated and unconsolidated terrestrial deposits, and metamorphic blocks.

Based on a review of geological maps provided by the USGS, the site is situated on top of a thin veneer of Pleistocene aged alluvium overlying consolidated rocks of the Panoche Formation. The older alluvium is described as dissected alluvial deposits while the Panoche Formation is described as marine sandstone, siltstone, and shale with conglomerate lenses.

The subsurface geologic materials encountered during previous subsurface investigation activities at the site have been described as unconsolidated silt and clay. The unconsolidated materials appear to be correlated to the older alluvium. It is assumed that sample refusal was encountered where bedrock is present. A map depicting the line of section is provided as **Figure 3.** A cross section diagram illustrating the distribution of subsurface materials encountered beneath the site is provided as **Figure 4**. Copies of soil boring logs are provided in **Appendix A**.

## 4.0 HYDROGEOLOGY

The site is located within the Castro Valley Groundwater Basin of the San Francisco Bay Hydrologic Region. This groundwater basin is described as an intermontane valley located approximately five miles east of the San Francisco Bay. The Castro Valley Groundwater Basin is bound by the San Lorenzo Creek to the east and by the Hayward Fault to the west extending from Lake Chabot to the intersection of Highway 238 and Jackson Street in Hayward. The basin is primarily drained by the San Lorenzo Creek and its tributaries.

The principal water bearing formation within this groundwater basin is alluvium of Pleistocene age described as a heterogeneous unconsolidated mixture of gravel, sand, silt, and clay with a maximum thickness of 80 feet. Groundwater encountered within the alluvium is typically

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unconfined with limited yields to supply wells. The Pleistocene alluvium unconformably overlies consolidated bedrock that is not considered to be water bearing.

Site specific groundwater data has not been collected from the site. A review of other contamination sites located within a one mile search radius suggests that groundwater is encountered at depths ranging from 20 to 50 feet below grade. Groundwater has been reported to flow in a westerly direction.

## 5.0 CHEMICALS OF CONCERN

Information obtained from previous subsurface investigation activities indicates that VOCs have impacted soil and soil gas beneath the site. VOCs detected in soil samples collected from the site include acetone, TCE, and PCE. Groundwater has not yet been encountered beneath the site.

### 5.1 Contributing Sources of Contamination

A review of known contamination sites located within a one mile search radius from the site did not indicate that there were any current or historic contamination cases associated with properties adjacent to or up-gradient from the 580 Market Place Shopping Center.

### 5.2 Impact to Soil

Analytes detected in soil samples collected from the site include acetone, TCE, and PCE. Acetone was detected at concentrations ranging from 0.062 to 0.079 milligrams per kilogram (mg/Kg) in soil samples collected from ATC-1, ATC-2, and ATC-4; however, these concentrations did not exceed the Environmental Screening Level (ESL) for shallow soil in commercial exposure scenarios as established by the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. TCE was detected at a concentration of 0.047 mg/Kg in a shallow sample collected from ATC-2; however, the detected concentration of TCE did not exceed the ESL for shallow soil in commercial exposure scenarios as established by the California RWQCB, San Francisco Bay Region. PCE was detected at a concentration of 0.85 mg/Kg in a shallow sample collected from ATC-2, exceeding the ESL for shallow soil in commercial exposure scenarios as established by the California RWQCB, San Francisco Bay Region. VOCs were not detected in the soil samples collected from ATC-3.

A summary of soil analytical data is provided as **Table 2**. A map illustrating the estimated lateral distribution of acetone, TCE, and PCE in soil is provided as **Figures 5**, **6**, and **7**, respectively.

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### 5.3 Impact to Groundwater

Groundwater has not yet been encountered in soil borings advanced at the site.

## 6.0 POTENTIAL EXPOSURE PATHWAYS

### 6.1 General

Pathways of exposure are the means through which an individual may come into contact with a chemical. Exposure pathways are determined by environmental conditions, potential for a chemical regardless of phase to move from one medium to another, and the general lifestyle and activities of the surrounding population. Although several potential pathways may exist at a property, usually only a few contribute significantly to the total exposure. For a complete exposure pathway to exist, each of the following elements must be present:

- A source and mechanism for chemical release,
- An environmental transport medium (i.e., air, water, soil),
- A point of potential human contact with the medium, and
- A route of exposure (e.g., inhalation, ingestion, dermal contact).

VOCs may migrate from soil to groundwater and may be subjected to groundwater transport. VOCs can readily volatilize from soil and/or groundwater into the ambient air. The potential pathways of exposure to these VOCs present in the soil and groundwater generally include ingestion of soil and/or groundwater, dermal contact with soil, and inhalation of vapors.

### 6.2 Site Specific Pathways

DIRECT CONTACT WITH SOIL - Soil impacted by the release of volatile organic compounds at the site exists beneath an asphalt paved parking lot. Based on laboratory analytical data associated with previous subsurface investigations at the site, the shallowest depth of chlorinated hydrocarbon impacted soil is at approximately two feet below grade. Direct contact with the impacted soil is not expected without removing the pavement and excavating the soil.

DIRECT CONTACT WITH GROUNDWATER – Groundwater has not yet been encountered beneath the site. Additional assessment activities will be required to evaluate groundwater quality beneath the site.

INGESTION OF GROUNDWATER – The potential for ingestion of groundwater by the public in the vicinity of the site is low since the site and surrounding area is provided potable water from a municipal drinking water source. A sensitive receptor study will need to be conducted to further evaluate groundwater ingestion with respect to the potential impact to groundwater beneath the site.

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INHALATION OF VAPORS – Soil gas samples collected from the site in contained detectable concentrations of TCE exceeding the general ESL for commercial land use scenarios. Additional assessment of sub-slab vapor will be required to further evaluate the potential for vapor intrusion concerns.

## 7.0 REMEDIAL EFFORTS

No remedial efforts have been conducted to date at the site.

## 8.0 SENSITIVE RECEPTOR SURVEY

Sensitive receptors have not yet been identified in the vicinity of the site.

## 9.0 DATA GAPS

Identified data gaps associated with the site include an assessment of groundwater for potential impact by VOCs, evaluation of sub-slab vapor, and conducting a sensitive receptor study. To date, subsurface assessment activities have focused on the unconsolidated materials beneath the site. Since the consolidated materials are considered by the Department of Water Resources to be non-water bearing, it may not be necessary to evaluate impacts within this zone.

## 10.0 RECOMMENDATIONS

Based on the findings of the site conceptual model and historical information, we recommend the following:

- A data gap assessment should be performed to including an assessment of groundwater for potential impact by VOCs, a sub-slab vapor study, and a search for sensitive receptors within a 2,000 foot search radius.

Cardno ATC has submitted simultaneously with this SCM, prepared a Data Gap Assessment Work Plan dated November 30, 2012, and will implement the work plan upon approval by the ACEH.

**TABLE 1**
**SUMMARY OF SOIL GAS ANALYTICAL RESULTS**
**580 Market Place Shopping Center**
**3735-4065 East Castro Valley Boulevard, Castro Valley, California**


| Sample ID | Date | Sample Depth (feet) | Reported in ug/L | | | | |
|---|---|---|---|---|---|---|---|
| | | | Vinyl Chloride | trans-1,2 Dichloroethene | cis-1,2 Dichloroethene | Trichloroethene | Tetrachloroethene |
| SG-1 | 11/11/97 | 3.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| SG-2 | 11/11/97 | 3.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| SG-3 | 11/11/97 | 3.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| SG-4 | 11/11/97 | 2.5 | <1.0 | <1.0 | <1.0 | <1.0 | 5.8 |
| SG-4 | 11/11/97 | 7.5 | <1.0 | <1.0 | <1.0 | <1.0 | 4.0 |
| SG-5 | 11/11/97 | 1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 65.0 |
| SG-5 | 11/11/97 | 7.5 | <1.0 | <1.0 | <1.0 | 6.8 | 119.7 |
| SG-5 | 11/11/97 | 11.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| SG-6 | 11/11/97 | 3.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.7 |
| SG-7 | 11/11/97 | 2.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| SG-8 | 11/12/97 | 5.0 | <1.0 | <1.0 | <1.0 | 2.1 | 29.7 |
| SG-8 | 11/12/97 | 10.0 | <1.0 | <1.0 | <1.0 | 1.4 | 30.3 |
| SG-8 | 11/12/97 | 10.0 | <1.0 | <1.0 | <1.0 | 1.1 | 24.6 |
| SG-9 | 11/12/97 | 1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 33.5 |
| SG-10 | 11/12/97 | 1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 14.0 |
| SG-10 | 11/12/97 | 10.0 | <1.0 | <1.0 | <1.0 | <1.0 | 4.7 |
| SG-11 | 11/12/97 | 2.0 | <1.0 | <1.0 | <1.0 | 1.4 | 105.9 |

**Notes:**
ug/L denotes micrograms per liter
All analytes were analyzed by a mobile laboratory utilizing EPA Method 8010

**TABLE 2**

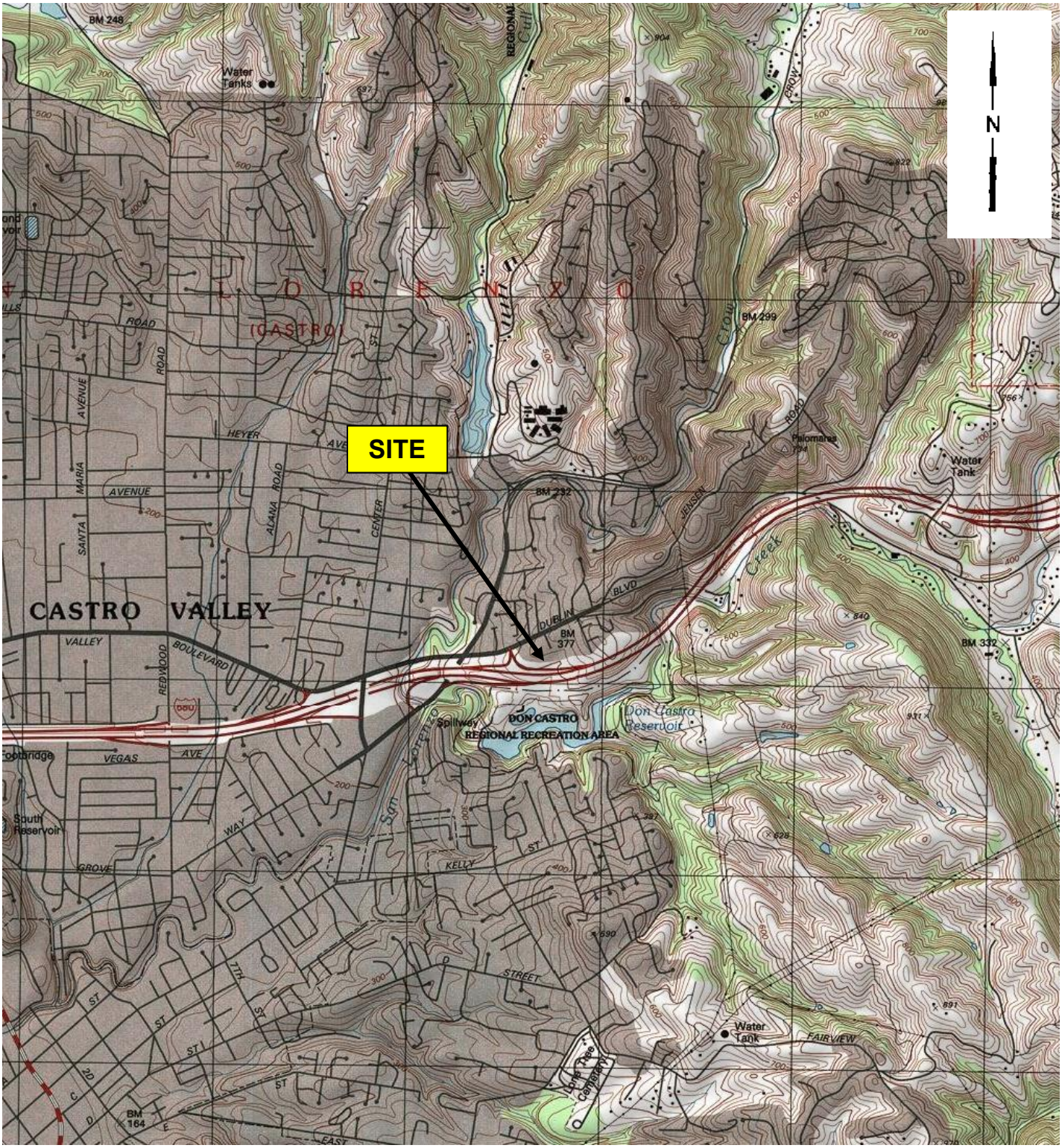
## Summary of Soil Sample Laboratory Analytical Data

580 Market Place Shopping Center
3735-4065 East Castro Valley Boulevard
Castro Valley, California 94552

| Sample ID | Depth (feet bgs) | Sample Date | PCE (mg/kg) | TCE (mg/kg) | Acetone (mg/kg) |
|---|---|---|---|---|---|
| | | | EPA Method 8260B | | |
| ATC-1 (2') | 2-3 | 3/1/2012 | <0.0048 | <0.0048 | <0.048 |
| ATC-1 (15') | 14-15 | 3/1/2012 | <0.0048 | <0.0048 | 0.062 |
| ATC-1 (31') | 30-31 | 3/1/2012 | --- | --- | --- |
| ATC-2 (2') | 2-3 | 3/1/2012 | **0.85** | 0.047 | <0.22 |
| ATC-2 (7.5') | 7-8 | 3/1/2012 | <0.0047 | <0.0047 | 0.071 |
| ATC-2 (12') | 11-12 | 3/1/2012 | --- | --- | --- |
| ATC-3 (2') | 2-3 | 3/1/2012 | <0.0044 | <0.0044 | <0.044 |
| ATC-3 (8') | 7-8 | 3/1/2012 | <0.0045 | <0.0045 | <0.045 |
| ATC-4 (2') | 2-3 | 3/1/2012 | <0.0049 | <0.0049 | <0.049 |
| ATC-4 (8') | 7-8 | 3/1/2012 | <0.0047 | <0.0047 | 0.079 |
| ESL Shallow (<9.8 feet) | | | *0.7* | *0.46* | *0.5* |
| ESL Deep (>9.8 feet) | | | *0.7* | *0.46* | *0.5* |

**NOTES:**

| | |
|---|---|
| EPA | Environmental Protection Agency |
| PCE | Tetrachloroethene |
| TCE | Trichloroethene |
| bgs | Below ground surface. |
| mg/kg | Milligrams per kilogram. |
| ESL Shallow ^ | Environmental screening level (Table A - Commercial Land Use)/SWRCB Region 2 ESL Tables Interim Final - November 2007 (Revised May 2008) |
| --- | No Data / Not Analyzed |
| ESL Deep ^^ | Environmental screening level (Table C - Commercial Land Use)/SWRCB Region 2 ESL Tables Interim Final - November 2007 (Revised May 2008) |
| <0.0048 | Constituent not detected above specific minimum laboratory reporting limit. |
| **BOLD** | Reported value exceeds ESL. |




SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP
CASTRO VALLEY QUADRANGLE, CALIFORNIA, DATED 1968, PHOTOREVISED 1987.

FIGURE 1

## SITE VICINITY MAP

**580 MARKET PLACE SHOPPING CENTER**
**3735-4065 EAST CASTRO VALLEY BOULEVARD**
**CASTRO VALLEY, CALIFORNIA 94552**

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Shaping the Future
1117 Lone Palm Ave, Ste 201B
Modesto, CA 95351
(209) 579-2221

| | | |
|---|---|---|
| PROJECT NO: 075.75356.0002 | | |
| DESIGNED BY: JK | SCALE: 1:24,000 | REVIEWED BY: JH |
| DRAWN BY: JK | DATE: 10/12 | FILE: LOCATION |


NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

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## SITE PLAN

580 MARKET PLACE
3735 - 4065 E. CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CA

| | | | |
|---|---|---|---|
| PROJECT NUMBER: 75.75354.0002 | | DATE: 11/21/12 | FIGURE |
| APPROVED BY: GS | | DRAWN BY: BK | 2 |

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LEGEND

- ● SOIL BORING
- ○ SOIL GAS SAMPLE
- A – A' CROSS SECTION

0 30 60

SCALE, FT

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

S:\Projects\75\75354 Marketplace\0002\3SECTMAP.dwg

## LINE OF CROSS SECTION A - A'

580 MARKET PLACE
3735 - 4065 E. CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CA

| | | | |
|---|---|---|---|
| PROJECT NUMBER: 75.75354.0002 | | DATE: 11/21/12 | FIGURE |
| APPROVED BY: GS | | DRAWN BY: BK | 3 |

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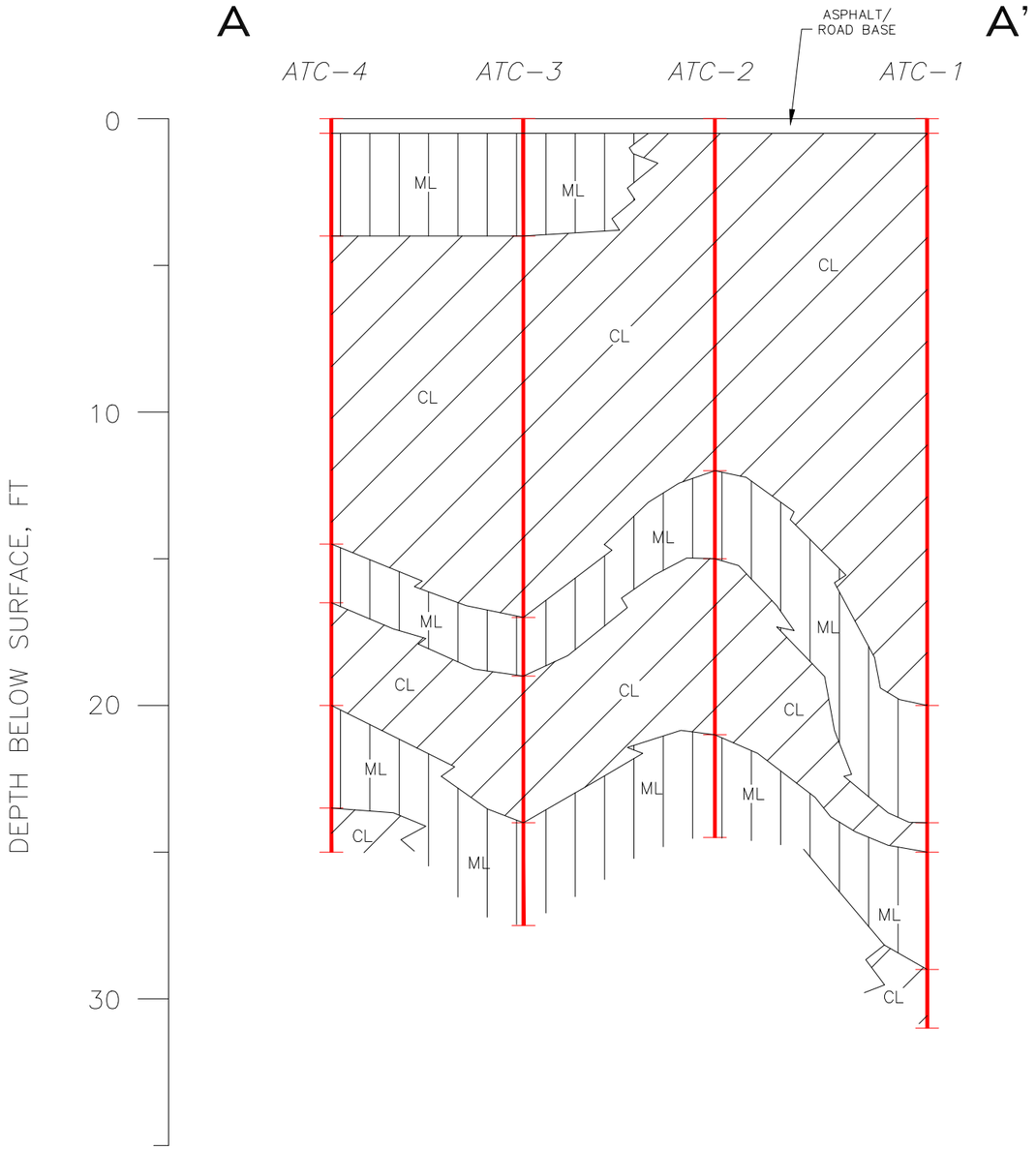


LEGEND

SILT (ML)

CLAY (CL)

0 5 10

HORIZONTAL/VERTICAL SCALE, FT

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

NOTES:

1. THE DEPTH AND THICKNESS OF THE SUBSURFACE STRATA INDICATED ON THE SECTIONS WERE GENERALIZED FROM AND INTERPOLATED BETWEEN THE SOIL BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE SOIL BORINGS AND IT IS POSSIBLE THAT SUBSURFACE CONDITIONS BETWEEN THE SOIL BORINGS MAY VARY FROM THOSE INDICATED.

2. THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND WATER LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURING AT THESE BORING LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE IN THE CONDITIONS AT THESE BORING LOCATIONS.

# GENERALIZED CROSS SECTION A - A'

580 MARKET PLACE
3735 - 4065 E. CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CA

| | | | |
|---|---|---|---|
| PROJECT NUMBER: 75.75354.0002 | | DATE: 11/29/12 | FIGURE 4 |
| APPROVED BY: GS | | DRAWN BY: BK | |

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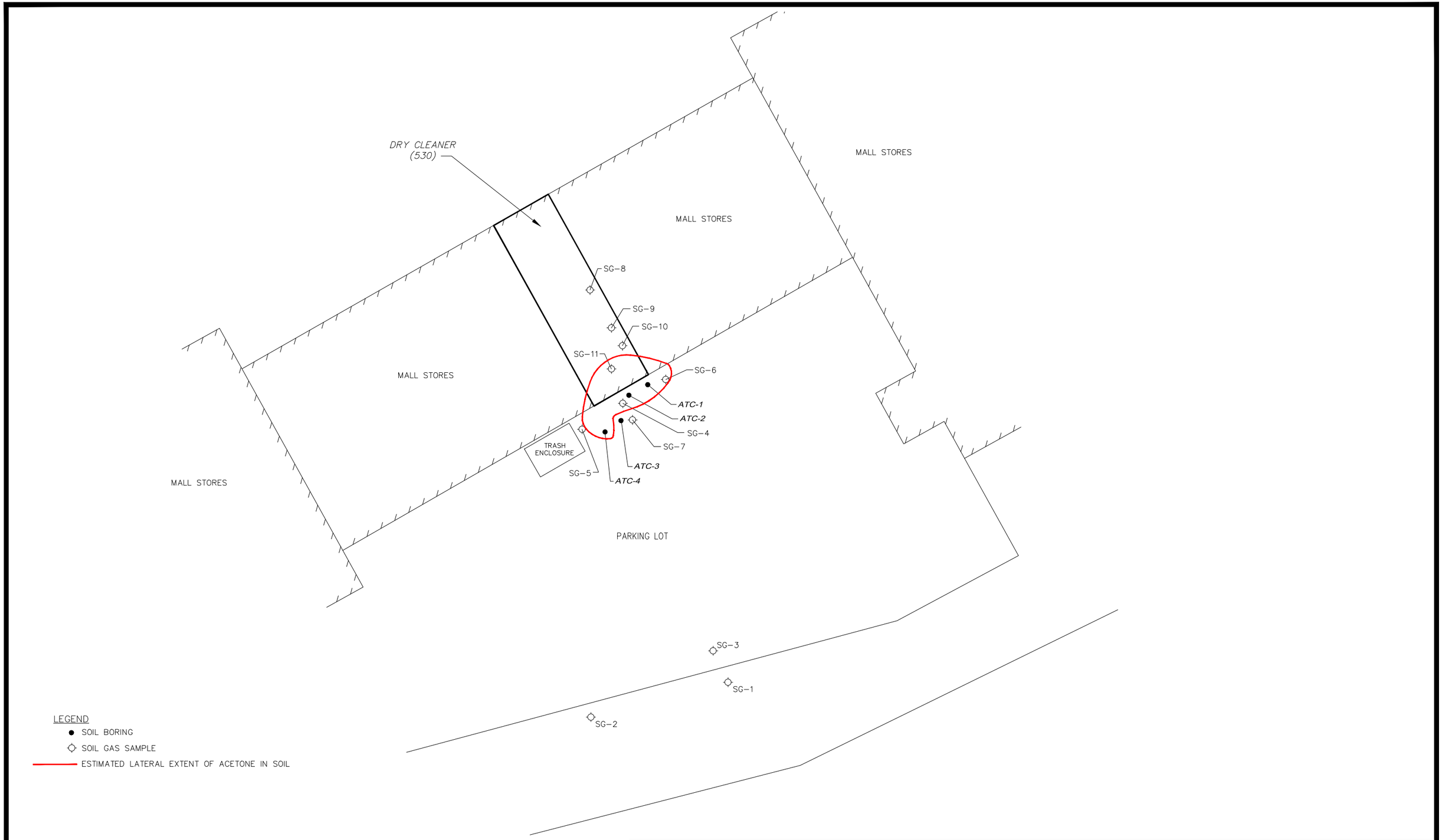


NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

# LATERAL EXTENT OF ACETONE IN SOIL

580 MARKET PLACE
3735 - 4065 E. CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CA

| | | | |
|---|---|---|---|
| PROJECT NUMBER: 75.75354.0002 | | DATE: 11/21/12 | FIGURE |
| APPROVED BY: GS | | DRAWN BY: BK | 5 |

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NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

# LATERAL EXTENT OF TRICHLOROETHENE IN SOIL

580 MARKET PLACE
3735 - 4065 E. CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CA

| | | | |
|---|---|---|---|
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| APPROVED BY: GS | | DRAWN BY: BK | 6 |

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NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

# LATERAL EXTENT OF TETRACHLOROETHENE IN SOIL

580 MARKET PLACE
3735 - 4065 E. CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CA

| | | | |
|---|---|---|---|
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| APPROVED BY: GS | | DRAWN BY: BK | 7 |

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# Appendix A

ATC Associates
3600 Madison Avenue Suite 64
North Highlands, CA 95660
Telephone: 916-339-0477

# BORING NUMBER ATC-1



**CLIENT** Wenigarten Realty Investors
**PROJECT NAME** 580 Market Place
**PROJECT NUMBER** 75.75354.0002
**PROJECT LOCATION** 3735-4065 E. Castro Valley Blvd. Castor Valley, CA
**DATE STARTED** 3/1/12 **COMPLETED** 3/1/12
**GROUND ELEVATION** **HOLE SIZE** 2 inches
**DRILLING CONTRACTOR** Cascade Drilling
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct Push Technology
**AT TIME OF DRILLING** ---
**LOGGED BY** PK **CHECKED BY** GS
**AT END OF DRILLING** ---
**NOTES**
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE NUMBER | BLOW COUNTS (N VALUE) | ENVIRONMENTAL DATA | GRAPHIC LOG | MATERIAL DESCRIPTION | WELL DIAGRAM |
|---|---|---|---|---|---|---|
| 0 | | | | | 0.5 Asphalt and Road Base 6-inches. Hand cleared to 5 ft bgs | |
| | | | | | SILTY CLAY, (CL) 5 % gravel, 10 % sand, 85 % fines, medium dense, low plasticity | |
| | ATC-1 (2') | | PID = 0 | | | |
| | | | | | 4.0 | |
| 5 | | | PID = 0 | | SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| | | | PID = 0 | | | |
| | | | PID = 0 | | | |
| 10 | | | | | 10.0 | |
| | | | PID = 0 | | SILTY CLAY, (CL) moist, Same as above | |
| | | | PID = 0 | | Brick and gravel at 11.5 ft bgs | |
| 15 | | | | | 15.0 | |
| | ATC-1 (15') | | PID = 0 | | SILTY CLAY, (CL) Same as above. Slight discoloration at 15 ft bgs | |
| | | | PID = 0 | | | |
| 20 | | | PID = 0 | | 20.0 | |
| | | | PID = 0 | | CLAYEY SILT, (ML) 5 % sand, 95 % fines, medium dense, non plastic | |
| | | | PID = 0 | | | |
| | | | | | 24.0 | |
| 25 | | | PID = 0 | | SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| | | | | | 25.0 | |
| | | | | | CLAYEY SILT, (ML) 5 % sand, 95 % fines, medium dense, non plastic | |
| | | | PID = 0 | | | |
| | | | | | 29.0 | |
| 30 | | | | | SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| | | | PID = 0 | | 31.0 | |
| | ATC-1 (31') | | | | Refusal at 31.0 feet.<br>Bottom of borehole at 31.0 feet. | |

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ATC Associates
3600 Madison Avenue Suite 64
North Highlands, CA 95660
Telephone: 916-339-0477

# BORING NUMBER ATC-2



**CLIENT** Wenigarten Realty Investors
**PROJECT NAME** 580 Market Place
**PROJECT NUMBER** 75.75354.0002
**PROJECT LOCATION** 3735-4065 E. Castro Valley Blvd. Castor Valley, CA
**DATE STARTED** 3/1/12 **COMPLETED** 3/1/12
**GROUND ELEVATION** _____ **HOLE SIZE** 2 inches
**DRILLING CONTRACTOR** Cascade Drilling
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct Push Technology
**AT TIME OF DRILLING** ---
**LOGGED BY** PK **CHECKED BY** GS
**AT END OF DRILLING** ---
**NOTES** _____
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE NUMBER | BLOW COUNTS (N VALUE) | ENVIRONMENTAL DATA | GRAPHIC LOG | MATERIAL DESCRIPTION | WELL DIAGRAM |
|---|---|---|---|---|---|---|
| 0 | | | | | 0.5 Asphalt and Gravel 6-inches. Hand cleared to 5 ft bgs | |
| | ATC-2 (2') | | PID = 10 | | SILTY CLAY, (CL) 5 % sand, 95 % fines, medium dense, low plasticity, trace fine sand | |
| | | | PID = 2.8 | | 4.0 SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| 5 | | | | | | |
| | ATC-2 (7.5') | | PID = 0 | | Wood debris/discoloration at 7.5 ft bgs | |
| 10 | | | | | 12.0 | |
| | ATC-2 (12') | | PID = 0 | | CLAYEY SILT, (ML) 100 % fines, medium dense, non plastic | |
| 15 | | | | | 15.0 | |
| | | | PID = 0 | | SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| | | | PID = 0 | | | |
| 20 | | | | | 21.0 | |
| | | | PID = 0 | | CLAYEY SILT, (CL) 100 % fines, medium dense, non plastic | |
| | | | | | 24.5 | |

Refusal at 24.5 feet.
Bottom of borehole at 24.5 feet.

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ATC Associates
3600 Madison Avenue Suite 64
North Highlands, CA 95660
Telephone: 916-339-0477

# BORING NUMBER ATC-3



**CLIENT** Wenigarten Realty Investors
**PROJECT NAME** 580 Market Place
**PROJECT NUMBER** 75.75354.0002
**PROJECT LOCATION** 3735-4065 E. Castro Valley Blvd. Castor Valley, CA
**DATE STARTED** 3/1/12 **COMPLETED** 3/1/12
**GROUND ELEVATION** _____ **HOLE SIZE** 2 inches
**DRILLING CONTRACTOR** Cascade Drilling
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct Push Technology
**AT TIME OF DRILLING** ---
**LOGGED BY** PK **CHECKED BY** GS
**AT END OF DRILLING** ---
**NOTES**
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE NUMBER | BLOW COUNTS (N VALUE) | ENVIRONMENTAL DATA | GRAPHIC LOG | MATERIAL DESCRIPTION | WELL DIAGRAM |
|---|---|---|---|---|---|---|
| 0 | | | | | 0.5 Asphalt and Road Base 6-inches. Hand cleared to 5 ft bgs | |
| | | | | | CLAYEY SILT, (ML) 5 % sand, 95 % fines, medium dense, non plastic, trace sand | |
| | ATC-3 (2') | | PID = 0 | | | |
| | | | | | 4.0 | |
| 5 | | | PID = 0 | | SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| | ATC-3 (8') | | PID = 0 | | | |
| 10 | | | | | Discoloration and trace gravel at 9 ft bgs | |
| | | | PID = 0 | | | |
| | | | PID = 0 | | | |
| 15 | | | | | | |
| | | | | | 17.0 | |
| | | | PID = 0 | | CLAYEY SILT, (ML) 5 % sand, 95 % fines, medium dense, non plastic, trace sand | |
| | | | | | 19.0 | |
| 20 | | | PID = 0 | | SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| | | | | | 24.0 | |
| 25 | | | PID = 0 | | CLAYEY SILT, (ML) 10 % sand, 90 % fines, dense, non plastic, trace sand | |
| | | | | | 27.5 | |

Refusal at 27.5 feet.
Bottom of borehole at 27.5 feet.

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ATC Associates
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North Highlands, CA 95660
Telephone: 916-339-0477

# BORING NUMBER ATC-4



**CLIENT** Wenigarten Realty Investors
**PROJECT NAME** 580 Market Place
**PROJECT NUMBER** 75.75354.0002
**PROJECT LOCATION** 3735-4065 E. Castro Valley Blvd. Castor Valley, CA
**DATE STARTED** 3/1/12 **COMPLETED** 3/1/12
**GROUND ELEVATION** _____ **HOLE SIZE** 2 inches
**DRILLING CONTRACTOR** Cascade Drilling
**GROUND WATER LEVELS:**
**DRILLING METHOD** Direct Push Technology
**AT TIME OF DRILLING** ---
**LOGGED BY** PK **CHECKED BY** GS
**AT END OF DRILLING** ---
**NOTES**
**AFTER DRILLING** ---

| DEPTH (ft) | SAMPLE NUMBER | BLOW COUNTS (N VALUE) | ENVIRONMENTAL DATA | GRAPHIC LOG | MATERIAL DESCRIPTION | WELL DIAGRAM |
|---|---|---|---|---|---|---|
| 0 | | | | | 0.5 Asphalt and Road Base 6-inches. Hand cleared to 5 ft bgs | |
| | ATC-4 (2') | | PID = 0 | | CLAYEY SILT, (ML) 10 % sand, 90 % fines, medium dense, non plastic, trace fine sand | |
| | | | | | 4.0 | |
| 5 | | | PID = 0 | | SILTY CLAY, (CL) 100 % fines, medium dense, low plasticity | |
| | ATC-4 (8') | | PID = 0 | | Discoloration at 8 ft bgs | |
| 10 | | | | | 14.0 | |
| 15 | | | PID = 0 | | CLAYEY SILT, (ML) 100 % fines, medium dense, non plastic | |
| | | | | | 16.0 | |
| | | | PID = 0 | | SILTY CLAY, (CL) 5 % sand, 95 % fines, medium dense, non plastic, trace fine sand | |
| | | | PID = 0 | | | |
| 20 | | | | | 20.0 | |
| | | | PID = 0 | | CLAYEY SILT, (ML) 100 % fines, medium dense, non plastic | |
| | | | | | 23.0 | |
| | | | PID = 0 | | SILTY CLAY, (CL) 100 % fines, dense, low plasticity | |
| 25 | | | | | 25.0 | |

Refusal at 25.0 feet.
Bottom of borehole at 25.0 feet.

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