

Type of Services	Risk Management Plan
Location	DCP Alma 1402 Monterey Highway San Jose, California
Client	DOWNTOWN COLLEGE PREP FACILITIES 2, LLC
Client Address	1400 Parkmoor Avenue, Suite 206 San Jose, California 96126
Project Number	687-2-2
Date	March 17, 2016



---

**Kurt M. Soenen, P.E.**  
Principal Engineer



## Table of Contents

<b>SECTION 1: INTRODUCTION .....</b>	<b>3</b>
1.1 SITE DESCRIPTION .....	3
1.2 PRELIMINARY REDEVELOPMENT PLANS .....	3
<b>SECTION 2: BACKGROUND .....</b>	<b>4</b>
2.1 HISTORY .....	4
2.2 SUMMARY OF ANALYTICAL DATA - CORNERSTONE, 2016.....	5
2.2.1 Environmental Screening Levels .....	5
2.2.2 Soil .....	5
2.2.3 Ground Water .....	6
2.2.4 Air.....	6
2.3 CONTAMINANTS OF CONCERN (COC).....	6
2.3.1 Arsenic and Petroleum Hydrocarbons .....	6
2.3.2 Naturally Occurring Asbestos / Other Metals .....	7
2.3.3 VOCs.....	7
<b>SECTION 3: RMP OBJECTIVES.....</b>	<b>7</b>
3.1 DESCRIPTION OF SELECTED REMEDY .....	7
3.2 SOIL MANAGEMENT OBJECTIVES .....	8
3.3 LONG-TERM O&M ACTIVITIES .....	8
<b>SECTION 4: SOIL MANAGEMENT APPROACH.....</b>	<b>9</b>
4.1 APPLICABILITY OF RISK MANAGEMENT PLAN .....	9
4.2 GENERAL RISK MANAGEMENT CONSTRUCTION PROCEDURES.....	9
4.2.1 Pre-Construction Planning and Notification .....	10
4.2.2 Site-Specific Health and Safety Worker Requirements .....	10
4.2.3 Site Control .....	10
4.2.4 Traffic Control .....	11
4.2.5 Equipment Decontamination.....	11
4.2.6 Dust Control .....	12
4.2.7 Storm Water Pollution Prevention Plan (SWPPP).....	12
4.2.8 Stockpiling .....	12
4.3 DEMOLITION OF BUILDINGS.....	12
4.3.1 Hazardous Materials .....	12
4.3.2 Asbestos.....	13
4.3.3 Lead-Based Paint.....	13
4.3.4 PCBs .....	13
4.3.5 Mercury.....	13
4.3.6 Batteries .....	13
4.3.7 CFC-Based Refrigerant.....	14
4.3.8 Miscellaneous Chemicals.....	14
4.3.9 Waste Disposal .....	14
4.3.10 General Demolition Risk Management Protocols .....	14
<b>SECTION 5: SOIL MANAGEMENT PROTOCOLS.....</b>	<b>14</b>
5.1 MANAGEMENT OF RESIDUAL COC-IMPACTED SOIL .....	14
5.1.1 Pre-Excavation Soil Characterization .....	14
5.1.2 General Excavation Procedures .....	15
5.1.3 Soil Management in Planned Softscape Areas .....	15
5.1.4 Soil Removal Near Location EB-3.....	16
5.1.5 Soil Profiling for Disposal and/or Reuse .....	16
5.1.6 Soil Sampling Protocol.....	16
5.2 SOIL LOADING PROCEDURES.....	17

5.3	FIELD DOCUMENTATION .....	17
5.4	DAILY FIELD REPORTS.....	17
5.5	CHAIN OF CUSTODY RECORDS .....	17
5.6	PHOTOGRAPHS.....	18
5.7	GENERAL PROTECTIVE MEASURES.....	18
5.8	IMPORT FILL .....	19
5.9	REPORTING .....	19
5.10	MANAGEMENT OF UNANTICIPATED CONTAMINATION OR HAZARDOUS DEBRIS .....	20
<b>SECTION 6:</b>	<b>LONG-TERM O&amp;M REQUIREMENTS .....</b>	<b>20</b>
6.1	CAPPING MATERIALS.....	20
6.2	ADMINISTRATIVE CONTROLS – O&M PLAN .....	21
6.2.1	Institutional Controls .....	21
6.2.2	Training.....	21
6.2.2.1	Awareness Training Requirements.....	21
6.2.2.2	O&M Observation Training .....	21
6.2.3	O&M Observations.....	22
6.2.3.1	Periodic Observations .....	22
6.2.3.2	Observations for Unplanned Events.....	22
6.2.4	Construction/Maintenance Work Activities.....	22
6.2.4.1	Non-Intrusive Activities .....	23
6.2.4.2	Intrusive Activities .....	23
6.2.5	Reporting and Record Keeping.....	24
<b>SECTION 7:</b>	<b>KEY SITE CONTACTS .....</b>	<b>24</b>
<b>SECTION 8:</b>	<b>LIMITATIONS .....</b>	<b>24</b>
<b>SECTION 9:</b>	<b>REFERENCES.....</b>	<b>25</b>

## FIGURES

FIGURE 1 – VICINITY MAP

FIGURE 2 – SITE PLAN

## APPENDICES

APPENDIX A – CORNERSTONE ESA REPORT – FEBRUARY 2016

APPENDIX B – HEALTH AND SAFETY PLAN

APPENDIX C – ASBESTOS DUST MITIGATION PLAN

Type of Services	Risk Management Plan
Location	DCP Alma 1402 Monterey Highway San Jose, California

## SECTION 1: INTRODUCTION

On behalf of Downtown College Prep Facilities 2, LLC (DCP), Cornerstone Earth Group (Cornerstone) prepared this Risk Management Plan (RMP) for the proposed charter school project located at 1402 Monterey Highway in San Jose, California (Site) as shown on Figures 1 and 2. This work was performed for DCP in accordance with our February 10, 2016 Agreement (Agreement).

The RMP provides the technical and operational protocols for the handling of soil impacted by metals and/or total petroleum hydrocarbons, as well as soil containing naturally occurring asbestos (NOA) that will be encountered during grading and excavation operations at the Site.

### 1.1 SITE DESCRIPTION

The Site is currently developed with three commercial vacant buildings, which were previous occupied by a lumber supply store. The buildings on-Site total 80,828 square feet and include the main former retail building (Building A - 64,793 square feet) and two accessory structures totaling 6,100 square feet (Building B) and 9,935 square feet (Building C). Building A is equivalent to a two-story structure and is located in the southwest portion of the Site. The two smaller single-story buildings are located in the southeast portion of the Site and are separated from the parking lot by a concrete wall. The wall has three metal access gates for vehicles and pedestrians. These buildings share a partition wall and are configured in an L-shape.

There is one main parking lot that runs adjacent to East Alma Avenue. Vehicular ingress and egress to the project Site is provided by three driveways on East Alma Avenue and one driveway on Monterey Road.

### 1.2 PRELIMINARY REDEVELOPMENT PLANS

The proposed charter school would consist of the relocation of two DCP charter schools to the Site: 1) El Primero High School (high school) located at 1460 The Alameda; and 2) El Camino Middle School (middle school) located at 1155 East Julian Street, to the Site. Following the relocation, the number of students at 1402 Monterey Highway is expected to be approximately 1237. The schools would operate from 8:00 AM to 5:00 PM (including drop-off and pick-up times), Monday through Friday, with school in session from 8:30 AM to 3:30 PM.



The project proposes to renovate the interior of Building A to accommodate the school. The existing entrance to the building, totaling 7,213 square feet, would be removed and windows would be added to the building. No other exterior alterations are proposed for Building A. Building C would be retained and utilized as a gymnasium. Building B would be demolished. The parking lot would be reconfigured to provide employee and visitor parking and a student drop-off area. The two easternmost driveways on Alma Avenue would be removed, providing one ingress driveway from Monterey Road and one egress driveway onto Alma Avenue.

Although not finalized, the remainder of the existing parking lot and the area between the existing buildings may be made into an outdoor recreational area for the students and may include some artificial turf and possibly a student garden. Within the courtyard, a new 4,000 square foot, one-story STEM center may be constructed.

The property is currently owned by the San Jose Unified School District (District). The District has entered into a 50-year land lease with DCP for school use.

## **SECTION 2: BACKGROUND**

In February 2016, Cornerstone prepared a Phase I and II Environmental Site Assessment (ESA) for the Site (Cornerstone, 2016) that included collection and analyses of soil, air, and ground water samples. The information summarized in Section 2 of this RMP was obtained directly from the ESA report. A copy of the report is included in Appendix A and should be reviewed for a more complete overview of the Site and our conclusions.

### **2.1 HISTORY**

The approximately 3.38-acre Site was occupied by the Southern Lumber Company since the early 1900's until 2015 for use as retail sale of lumber products and associated materials. A 1915 Sanborn map showed the following features at the lumber yard: 13 outdoor lumber storage areas, an office building along Monterey Highway (formerly 1st Street), a lumber and moulding building, two lumber sheds, a planing mill, a railroad spur from the Southern Pacific Railroad (SPRR) tracks located east of the Site, and several associated outbuildings, including a storage shed for hay and building materials (lime, cement) and a watchman's cabin along the northern and southern borders of the subject property, respectively. Through at least 1950, the Site was occupied predominately by lumber storage and planing and moulding buildings, and was converted to a retail lumberyard by at least 1961. In June 1973, the buildings were burned to the ground due to an electrical fire.

The current former retail warehouse building (Building A) was built after the fire, incorporating a small portion of the original retail building, and the facility reopened in 1974. Building A formerly included retail floor space with adjoining small storage room, retail lumber floor, floor/moulding and door showroom areas, a retail warehouse office, and a planing mill room and wood working shop. Mezzanine-level offices, copy room and wood working museum were located on the west side of the building, and a mezzanine-level break room and deck was located on the east side of the building.

The centrally located former planing mill/door shop building (Building B) was built in approximately 1977-1978. The building included a planing mill room, door assembly room and a paint room with enclosed paint booth and a drying room. Building C was constructed in approximately 1999-2000 and was used as a storage warehouse.

## **2.2 SUMMARY OF ANALYTICAL DATA - CORNERSTONE, 2016**

### **2.2.1 Environmental Screening Levels**

Soil and air sampling results from prior studies were compared to the Department of Toxic Substances Control (DTSC) recommended residential Screening Levels (SLs) presented in DTSC Office of Human and Ecological Risk (HERO) guidance document Human Health Risk Assessment (HHRA) Note 3 updated January 2016 (HERO, 2016). If an SL is not established, the soil results were compared to Regional Screening Levels (RSLs) established by the USEPA Region 9 (USEPA, October 2015). For detected chemicals for which SLs and RSLs have not been established, Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (December, 2016) were used for comparison. The results were also compared to Total Threshold Limit Concentration (TTLC) values established by the State of California (Title 26, California Code of Regulations) for hazardous waste designation.

Naturally occurring background concentrations of metals, such as arsenic, in soil may exceed their respective screening levels. CalEPA generally does not require cleanup of soil to below background concentrations. Thus, for the metals detected, these data also were compared to regional published background concentrations (Scott, 1991; Bradford, 1996; LBNL, 2009; and Duverge, 2011).

Asbestos results were compared to the DTSC School Property Evaluation and Cleanup Division soil screening level of 0.01 percent and the Bay Area Air Quality Management District (BAAQMD) threshold value of 0.25 percent.

Ground water analytical results were compared to drinking water maximum contaminant levels (MCLs) established by the State Water Resources Control Board (SWRCB, 2015). ESLs are used for detected chemicals for which MCLs have not been established.

### **2.2.2 Soil**

Laboratory analyses of the soil samples collected during Cornerstone's investigation detected arsenic concentrations above both its environmental screening level and typical regional natural background concentration in 6 of 19 soil samples. Concentrations in 5 of 6 exceedances ranged from 17 milligrams per kilogram (mg/kg) to 25 mg/kg; arsenic was detected in the other sample at 160 mg/kg.

Concentrations of total petroleum hydrocarbons as diesel (TPHd) and oil (TPHo) also were detected above their residential ESL for odor/nuisance concerns in 4 of 10 soil samples but less than their ESL for direct exposure human health concerns. The samples containing TPHd and TPHo at concentrations exceeding the residential ESLs were collected from fill soil within the upper approximately 3½ feet from the ground surface.

In addition to arsenic and petroleum hydrocarbons, the specialized asbestos laboratory reported chrysotile asbestos fibers in 2 of 3 fill samples at concentrations of 0.25 percent and 0.50 percent, respectively. These concentrations meet or exceed the California Air Resources Control Board (CARB) regulatory threshold of 0.25 percent. Additionally, in the third sample, the laboratory noted that asbestos was observed in the non-counted portion of the soil sample.

### **2.2.3 Ground Water**

Laboratory analyses of three ground water grab samples collected in the western portion of the Site detected low concentrations of volatile organic compounds (VOCs): 1,1-dichloroethene (DCA), cis-1,2-dichloroethene (DCE), and/or trichloroethene (TCE). Except for TCE detected in the sample collected from the boring near the corner of Monterey Highway and East Alma Avenue (EB-9), none of the detected VOCs exceeded their respective drinking water MCL. No VOCs were detected in the three grab samples collected from the eastern portion of the Site. Additionally, petroleum hydrocarbons and semi-VOCs were not detected in the six grab ground water samples.

### **2.2.4 Air**

To evaluate indoor air quality and potential vapor intrusion concerns, our investigation included collection and analyses of six indoor air samples and three outdoor air samples. Several VOCs were detected in the samples; however, none exceeded their respective residential screening level except for benzene, carbon tetrachloride, chloroform, and ethylbenzene. Similar concentrations of these VOCs were consistently detected in both the indoor and outdoor samples indicating the source of the VOC detections likely is due to outdoor ambient air entering the building.

## **2.3 CONTAMINANTS OF CONCERN (COC)**

### **2.3.1 Arsenic and Petroleum Hydrocarbons**

Except for one location (EB-3), the arsenic and petroleum impacted soil appears limited to portions of the fill that was observed in the upper approximate 2 to 4 feet of soil. The fill consists of gravel and sand with varying amounts of clay; the underlying native soil is a lean clay. At location EB-3, arsenic was detected at 160 mg/kg in the soil sample collected near the fill and native soil interface at an approximate depth of 1½ to 2 feet. A deeper soil sample collected from an approximate depth of 3½ to 4 feet contained an arsenic concentration of 6.4 mg/kg, which is typical of natural background concentrations. Laterally, the greatest arsenic and petroleum hydrocarbon concentrations are on the eastern portion of the Site.

The source of the arsenic and petroleum hydrocarbon impacted soil is not known but may be associated with historical activities performed near the former rail spurs and/or at the adjacent former Union Pacific railroad right-of-way. As discussed in Cornerstone's February 2016 ESA report, arsenic and petroleum hydrocarbons also were contaminants of concern at the adjacent Sun Garden facility, reportedly related to the former adjacent railroad right-of-way. Normal grading activities associated with prior Site development could have spread the impacted soil from its original location.

### **2.3.2 Naturally Occurring Asbestos / Other Metals**

Asbestos minerals were observed in the four fill samples collected at the Site with concentrations ranging up to 0.5 percent. The source of the asbestos is not known but likely is associated with the naturally occurring asbestos (NOA) in the imported fill. Based on the limited data, the fill appears present beneath most of the Site.

BAAQMD locally enforces the CARB Airborne Toxic Control Measures (ATCM) regulation. BAAQMD requires project sites that contain greater than 0.25 percent asbestos have an Asbestos Dust Mitigation Plan (ADMP). Additionally, for construction projects greater than 1 acre in size, the ADMP is required to be submitted to BAAQMD for review and comment.

Elevated concentrations of other metals including chromium, nickel, and cobalt also were detected in some of the fill samples collected at the Site; however, the reported concentrations may be considered natural background. High concentrations of these metals are more common in ultramafic rocks like serpentinite; asbestos occurs naturally in ultramafic rock.

### **2.3.3 VOCs**

Laboratory analyses of the ground water samples detected concentrations of volatile compounds 1,1-DCA, cis-1,2-DCE, and/or TCE in the three grab ground water samples collected from the western portion of the Site. Ground water was observed in these borings at approximate depths of 11 to 18 feet. Although a northerly regional ground water flow direction, following local topography, would be expected, prior data from the adjacent Sun Garden facility indicates a south-southwesterly flow direction. An easterly flow direction also was reported on the southern portion of Sun Garden (1600 Monterey Road). The source of the VOCs in ground water is not known but likely is associated with impacted ground water that has migrated beneath the property from off-Site releases.

As discussed, several VOCs also were detected in the indoor and outdoor air samples previously collected at the Site. Volatile compounds benzene, carbon tetrachloride, chloroform, and ethylbenzene were detected in both the indoor and outdoor air samples at concentrations that exceed residential screening criteria. Similar concentrations of these VOCs were consistently detected in both the indoor and outdoor samples indicating the source of the VOC detections likely is due to outdoor ambient air entering the building.

## **SECTION 3: RMP OBJECTIVES**

### **3.1 DESCRIPTION OF SELECTED REMEDY**

The remedy selected by DCP to address the COC-impacted soil at the Site includes the following main components:

1. Maintain the integrity of the existing concrete and asphalt pavement surfaces as a capping system to effectively eliminate direct exposure to underlying soil;

2. Where softscape improvements are planned (i.e. landscaping, turf, and garden areas), soil will be over-excavated and replaced with “clean” imported fill; an impermeable liner will be placed along the sidewalls of the excavation prior to backfilling;
3. Arsenic-impacted soil near location EB-3 will be over-excavated and off-hauled for landfill disposal;
4. Where the existing capping system will be breached to accommodate planned improvements, soil management protocols will be established including soil reuse options and soil profiling for landfill disposal; and
5. Additional pre-excavation soil characterization will be performed in areas where more significant soil disturbance is planned (i.e. in the area of a possible STEM building).

### **3.2 SOIL MANAGEMENT OBJECTIVES**

Site-specific soil management objectives include:

- Minimize or eliminate potential exposure of humans (receptors) to impacted soil through direct contact, ingestion and inhalation;
- Minimize or eliminate the potential for uncontrolled migration of impacted soil during construction activities;
- Minimize the potential for impacted soil to be encountered during construction activities;
- Protocols for the excavation and off-Site disposal of impacted soil in planned softscape areas;
- Provide protocols for the stockpiling and profiling of excess soil that will be generated during the construction of improvements so that appropriate mitigation, disposal or reuse alternatives, if necessary, can be determined;
- Health and Safety Plan (HSP) presenting worker training requirements, health and safety measures and soil handling procedures such that field activities can be conducted in a safe manner; and
- Site-specific Asbestos Dust Mitigation Plan (ADMP) to be implemented during planned construction, excavation and grading activities.

### **3.3 LONG-TERM O&M ACTIVITIES**

This RMP also includes long-term operation & maintenance (O&M) activities to help limit uncontrolled exposures to exposed soils that contain COC and protect the health of students, faculty, staff, O&M personnel, and visitors at the school. In order to

accomplish these goals, the O&M activities presented in this RMP address the following objectives:

- Minimize disturbances of exposed soil;
- Maintain the integrity of the hardscape surfaces (concrete and asphalt pavement) at the Site to help reduce risk to human health from the shallow impacted soil;
- Procedures to follow when the hardscape “cap” is breached and underlying soil is exposed and/or disturbed;
- Establish an observation and monitoring program to identify areas of exposed soil or damaged hardscape, and evaluate ongoing remedy effectiveness;
- Provide for timely repair or replacement needed to restore damaged hardscape;
- Train staff in personal health and safety protection and proper methods of observation and repair of hardscape; and
- Provide for record-keeping of observations and repairs.

## **SECTION 4: SOIL MANAGEMENT APPROACH**

### **4.1 APPLICABILITY OF RISK MANAGEMENT PLAN**

As noted above, soil with residual concentrations of COC are present at various locations within the Site. Earthwork operations may encounter these COC. This RMP presents protocols for the following construction activities that may lead to encountering residual COC:

- Demolition of pavements or other existing structures;
- Utility removal;
- Trenching, excavating, and grading;
- Subsurface utility installation;
- Building foundation construction;
- Hardscapes; and
- Landscapes.

### **4.2 GENERAL RISK MANAGEMENT CONSTRUCTION PROCEDURES**

During construction activities, measures will be taken by the Contractor to minimize dust generation, storm water runoff and tracking of soil off-Site. In addition, measures will be taken to reduce the potential for the creation of preferential pathways (vertical or



horizontal) if impacted soil and/or buried materials are encountered during construction. The general risk management construction protocols are described below.

#### **4.2.1 Pre-Construction Planning and Notification**

Prior to the start of any construction activity that involves below ground work (e.g. grading, foundation construction, excavating or utility trenching), information regarding Site risk management procedures (e.g., a copy of this RMP) shall be provided to the Contractors for their review and each Contractor shall provide such information to its Subcontractors.

#### **4.2.2 Site-Specific Health and Safety Worker Requirements**

A HSP has been prepared for construction activities planned at the Site. The HSP establishes health and safety protocols for personnel performing soil disturbing activities at the Site. The HSP meets federal and State of California (OSHA) standards for hazardous waste operations (29 CFR 1910.120 and 8 CCR 5192).

The Contractor shall be responsible for following the protocols presented in the HSP. The Contractor also shall prepare their own HSP and injury and illness prevention plan (IIPP) and shall maintain the responsibility for the health and safety of their workers. The Contractor's HSP shall, at a minimum, follow the protocols in the project HSP and establish health and safety protocols for Contractor personnel in accordance with federal and State of California OSHA standards. The Contractor's HSP shall contain provisions for limiting chemical exposure to construction workers, chemical and non-chemical hazards, emergency procedures, and standard safety protocols.

If unanticipated contamination is encountered during construction, the HSP may need to be modified to establish health and safety protocols for personnel working in these areas. A copy of the HSP is provided in Appendix B.

Unless specified otherwise in the HSP, work activities will be conducted with Level D protection:

- Nitrile gloves or similar when in contact with soil;
- Washable boots when in contact with soil;
- Safety glasses;
- Hard hat at all times; and
- Hearing protection (if noise levels exceed 85 dBA).

Contractors are also required to determine the requirements for worker training, based on the level of expected contact to soil associated with their workers' activities.

#### **4.2.3 Site Control**

During construction activities, the Site will be fenced and gated with lock. Access to the Site where hardscape surfaces will be removed will be limited by the Contractor to authorized personnel. Site control procedures will be implemented by the Contractor to control the flow of personnel, vehicles and materials in and out of these areas. Signs will be posted by the Contractor instructing visitors to sign in at the project support areas at all Site entrances.

#### **4.2.4 Traffic Control**

To reduce the potential impacts of construction traffic at the Site, the Contractor shall employ traffic management measures at the Site: 1) to provide for the safety of on-Site personnel; 2) to help facilitate concurrent construction activities with any remediation activities so that they do not adversely impact or compromise safe traffic flow within the Site; and 3) to limit the disruption of existing traffic flows on local roadways. Traffic management protocols may include:

- Visual monitoring of traffic movements on the Site will be performed by the Contractor to ensure safe movement of traffic and protection of persons and property around the Site.
- Construction roads will be observed by the Contractor to confirm road conditions support safe working and driving.
- Each sub-contractor is responsible for compliance with this plan for vehicle and transport safety of personnel and vehicles under their control.
- Drivers of vehicles are responsible for driving safely and exercising care.
- Any track-out on a paved public road at any location where vehicles exit the work Site will be cleaned by using wet sweeping or a HEPA filter equipped vacuum device by the end of each work day. Dry sweeping of paved roadways will be prohibited.
- A maximum vehicle speed limit of approximately 15 miles per hour or less.
- Vehicles maintained by covering holes or other openings in cargo compartments such that no spillage can occur.
- Loads covered with tarps or loaded such that the material does not contact the front, back, or sides of the cargo compartment at any point less than ½ foot from the top and that no point of the load extends above the top of the cargo compartment.
- Spills immediately cleared by engaging appropriate safety standards as relevant to the event.

#### **4.2.5 Equipment Decontamination**

Decontamination procedures shall be established and implemented by the Contractor to reduce the potential for construction equipment and vehicles to release COC-impacted soil onto public roadways or other off-Site transfer. At a minimum, excess soil shall be removed from construction equipment using dry methods (e.g., brushing or scraping) prior to moving the equipment to off-Site locations. All truck tires shall be cleaned prior to leaving the Site. Decontamination rinsate shall be captured and stored in DOT approved containers for subsequent testing and off-Site disposal.



#### **4.2.6 Dust Control**

The Contractor shall utilize effective means of dust and erosion control to minimize the generation of dust and erosion associated with excavation activities, truck and vehicle traffic onto and off the Site, and the effects of ambient wind traversing exposed soil.

Work activities, such as clearing, demolition, excavation and grading operations, construction vehicle traffic on unpaved ground, and wind blowing over disturbed soil surfaces may generate dust and particulate matter whenever exposed soil surfaces are dry. The Contractor shall minimize dust emissions to the maximum extent possible. To accomplish minimal dust emissions, the Contractor shall implement dust control measures in accordance with BAAQMD rules and regulations.

Due to the presence of fill containing NOA and other COC, soil disturbing activities must be performed in accordance with the dust control measures presented in the ADMP prepared for the Site. A copy of the ADMP is included in Appendix C.

#### **4.2.7 Storm Water Pollution Prevention Plan (SWPPP)**

The Clean Water Act and associated federal regulations (Title 40 of the Code of Federal Regulations [CFR] 123.25(a)(9), 122.26(a), 122.26(b)(14)(x) and 122.26(b)(15)) require nearly all sites engaged in clearing, grading, and excavating activities that disturb one acre or more, to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges. If required, a Site-specific Storm Water Pollution Prevention Plan (SWPPP) covering the activities of Site redevelopment will be prepared by the Civil Engineer (QSD). Contractors and their Subcontractors shall comply with the provisions and protocols of this plan. A copy of the SWPPP shall remain on-Site throughout construction.

#### **4.2.8 Stockpiling**

Excess soil shall be presumed contaminated and stockpiled in accordance with the approved SWPPP. In general, the stockpile area shall be clean and free of debris prior to the placement of the bottom liner. The liners shall consist of heavy duty plastic (minimum of 10-mil) as the bottom and top liners. Stockpiles shall be observed at least twice daily and repaired as needed. At the end of each shift or when the stockpile is not in use for two hours or longer, the pile(s) will be securely covered with the heavy duty plastic liner. All stockpiles will be handled as to help prevent and/or reduce potential dust generation.

### **4.3 DEMOLITION OF BUILDINGS**

#### **4.3.1 Hazardous Materials**

Some components encountered as part of the building demolition waste stream may contain hazardous materials. With proper planning, a majority of the environmental risk associated with the management of waste from a demolition project can be eliminated. Materials that may result in possible risk to human health and the environment when improperly managed include lamps, thermostats, and light switches containing mercury; batteries from exit signs, emergency lights, and smoke alarms; lighting ballasts which

contain PCBs; and lead pipes and roof vent flashings. A summary of these components and their potential risks are presented below.

#### **4.3.2 Asbestos**

NESHAP guidelines require the removal of potentially friable asbestos containing materials prior to building demolition. Friable asbestos containing materials greater than 1% asbestos shall be manifested, transported and disposed as a hazardous waste.

#### **4.3.3 Lead-Based Paint**

The Consumer Product Safety Commission banned the use of lead as an additive in paint in 1978. The removal of lead-based paint isn't required if it is bonded to the building materials. However, if the lead-based paint is flaking, peeling, or blistering, it should be removed prior to demolition. In either case, applicable OSHA regulations will be followed; these include requirements for worker training, air monitoring and dust control, among others.

#### **4.3.4 PCBs**

Caulking containing concentrations of PCBs equal to or greater than 50 mg/kg shall be disposed as hazardous waste.

Light ballasts (PCB or non-PCB) will be collected and recycled in accordance with universal waste requirements. Remaining ballasts (PCB and non-PCB) will be collected for disposal. Drums will be labeled and closed during accumulation. Drums should not be filled more than half due to weight. PCB ballasts will be segregated from non-PCB ballast.

Remaining light ballast suspected to contain PCBs will be inspected for the printed statement, "No PCBs". PCB ballasts missing the "No PCBs" label will be removed from the fixtures and disposed as PCB containing materials prior to the demolition of the buildings. Ballast marked as "No PCBs" could contain land-banned dielectric fluids and will be disposed in an appropriate manner. In addition, PCBs were commonly used in transformers; several transformers were observed on-Site. Transformers shall be appropriately removed and disposed prior to demolition activities.

#### **4.3.5 Mercury**

Mercury containing equipment may be present. Mercury containing devices shall be handled with caution to prevent spillage. Devices shall be handled intact, sealed and packaged to prevent breakage. All used mercury containing equipment must be labeled clearly as "Universal Waste – Mercury Containing Equipment". Examples of mercury containing equipment include: thermostats, tilt switches, pressure gauges, flow meters, float switches and drain traps.

#### **4.3.6 Batteries**

Storage batteries and other batteries than contain hazardous metals, such as mercury, lead, silver and cadmium, must be clearly labeled with the following phrases: "Universal

Waste – Battery(ies)”, “Waste Battery(ies)”, or “Used Battery(ies)” during accumulation.

#### **4.3.7 CFC-Based Refrigerant**

Accessible condenser-type air conditioning equipment may be present. Mechanical equipment shall be assumed to contain a CFC-based refrigerant. Refrigerant and lubricating fluids shall be captured from the equipment and properly disposed prior to demolition of the structures.

#### **4.3.8 Miscellaneous Chemicals**

Any hazardous chemicals found during demolition shall be handled as hazardous waste. Examples include: cylinders, bottles and cans with liquid.

#### **4.3.9 Waste Disposal**

Demolition waste such as fluorescent lamps, PCB ballasts, lead acid batteries, mercury thermostats, and lead flashings have special case-by-case requirements for generation, storage, transportation, and disposal. Before disposing of any demolition waste, the Demolition Contractor shall determine if the waste is hazardous and shall ensure proper disposal of waste materials.

#### **4.3.10 General Demolition Risk Management Protocols**

- Hazardous materials spills shall be immediately contained and remediated by trained personnel and reported to the key personnel listed in Section 6.0.
  - Cordoned off the spill area using delineators and caution tape, or similar materials;
  - Prevent the spread of dust and vapors;
  - Control the spread of liquids;
  - Neutralize acids and bases, if possible;
  - Absorb the liquid;
  - Collect and contain cleanup residue;
  - Dispose waste appropriately;
  - Decontaminate area; and
  - Contact Environmental Consultant to evaluate the effectiveness of the response action.
- Demolition activities shall be performed in a manner to minimize airborne dust as described in this RMP. All demolition activities shall be performed with the objective of preventing visible emissions of dust from the Site.

## **SECTION 5: SOIL MANAGEMENT PROTOCOLS**

### **5.1 MANAGEMENT OF RESIDUAL COC-IMPACTED SOIL**

#### **5.1.1 Pre-Excavation Soil Characterization**

Once a grading plan has been finalized for the proposed project, the plan shall be reviewed by the Environmental Consultant to assist in developing a soil sampling and

analyses plan (SAP). The SAP will focus on evaluating soil quality in areas where more significant soil excavation/grading will be performed (i.e. at the location of a possible planned STEM building, near sampling location EB-3). The SAP shall be implemented by the Environmental Consultant prior to the Contractor performing soil disturbing activities. A summary letter shall be prepared presenting the analytical results including a discussion of any necessary modifications or deviations to this RMP.

### **5.1.2 General Excavation Procedures**

Based on the limited data, COC are presumed to be present in shallow soil across most of the Site. Thus, the Contractor shall assume soil containing elevated concentrations of COC will be encountered during excavation or grading activities, particularly on the eastern portion of the Site where the greatest arsenic and petroleum hydrocarbon concentrations were found.

Excess soil generated during construction shall be presumed impacted and placed in its own stockpile. Each stockpile shall consist of soil generated from the same construction area and shall not be mixed with excess soil from other Site locations and excavations. The stockpiles shall be profiled to evaluate potential on-Site reuse options and/or for landfill disposal.

### **5.1.3 Soil Management in Planned Softscape Areas**

In areas where Site improvements do not include a hardscape cap (i.e., planned landscaping, artificial or natural turf, and/or garden areas), the soil shall be over-excavated and replaced with “clean” imported fill. The over-excavated soil shall be placed in its own stockpile and profiled for landfill disposal and/or possible reuse beneath planned hardscape surfaces in other Site locations. Depths of over-excavation shall be initially based on an approximate depth of 1 foot below the fill-native soil interface. Confirmation soil samples shall be collected by the Environmental Consultant from the bottom each over-excavated area. If COC are detected in the confirmation soil samples above the most current residential environmental screening criteria identified in Section 2.2.1, additional over-excavation shall be performed followed by another round of confirmation soil sampling. This process shall be repeated until the results of the confirmation samples do not exceed current environmental screening criteria.

Soil used as backfill in softscape areas shall meet the requirements of Section 5.8 of this RMP.

The sidewalls of the excavations where softscape areas are planned shall be lined with an impermeable geomembrane liner to provide separation between the “clean” fill soil and the presumed COC-affected sidewall soils. Possible liner systems may include: Herculine Sigma Smooth High Density Polyethylene (HDPE) Geomembrane, Firestone Ethylene Propylene Diene Monomer (EDPM) Geomembrane, and/or an approved equal by the project landscape architect. The Environmental Consultant shall be notified by the Contractor to observe installation of the impermeable liner prior to backfilling the excavation.

#### **5.1.4 Soil Removal Near Location EB-3**

Arsenic was detected in the soil sample collected from location EB-3 at concentration of 160 mg/kg. This concentration exceeds environmental screening criteria and likely would also exceed its soluble threshold limit concentration (STLC) which defines a waste as hazardous if excavated and off-hauled. Due to the elevated reported data, soil near this location will be over-excavated and off-hauled for landfill disposal. A preliminary soil removal area will be determined following the work performed in Section 5.1.1. The excavation will initially extend to an approximate depth of 3 feet. Soil excavated from this area will be placed in its own temporary soil stockpile and will be sampled by the Environmental Consultant to assist in profiling the material for off-Site disposal.

To document soil quality of the remaining in-place soil, the Environmental Consultant will collect confirmation soil samples from the base and in the sidewalls of the soil excavation.

#### **5.1.5 Soil Profiling for Disposal and/or Reuse**

To profile stockpiled soil for off-Site disposal and/or on-Site reuse beneath hardscaped areas, the Environmental Consultant will collect discrete and/or 4-point composite soil samples from each stockpile in random areas and depths. The number of samples and laboratory testing program will be determined based on professional judgement and/or the Contractor's selected waste disposal facility's acceptance criteria. At a minimum, the samples shall be submitted to a state-certified laboratory and analyzed for California Assessment Manual (CAM17 metals (EPA Test Methods 6000/7000), TPHd/o (EPA Test Method 8015), TPHg and VOCs (EPA Test Method 8260). Based on these results, selected composite samples may also be analyzed for soluble metals using Soluble Threshold Limit Concentration (STLC) and/or Toxicity Characteristic Leaching Procedure (TCLP) extraction techniques.

For landfill disposal, the Environmental Consultant will provide the analytical results to the Contractor who will then forward the data to disposal facilities to determine the appropriate destination of the stockpiled material. Prior to off-Site disposal, additional analytical testing may be required in accordance with the requirements of the selected disposal facility. DCP will be responsible for signing all waste profile forms and manifests.

Stockpiled soil proposed for on-Site reuse shall be evaluated prior to placement beneath planned hardscape areas.

#### **5.1.6 Soil Sampling Protocol**

Soil samples for laboratory analyses will be collected in new (unused) or pre-cleaned, stainless steel liners. Soil samples for VOC analysis will be collected in 5-gram Core N' One™ capsules following DTSC guidance. The ends of the liners will be covered in a Teflon film, fitted with plastic end caps, taped, and labeled with a sample identification number. Each sample will be assigned a unique sample number. The assigned number will provide a tracking procedure to allow ease of data retrieval, data reduction, and evaluation. The sample identification numbers will be maintained by the Environmental Consultant's field staff on the Daily Field Reports and on the chain-of-custody records. The sample label or tags will be affixed to each sample container. The samples will then

be placed in an ice-chilled cooler and transported to a state-certified laboratory with chain of custody documentation.

## **5.2 SOIL LOADING PROCEDURES**

During loading activities, the Contractor shall place heavy plastic sheeting beneath the trucks to collect any spilled soil. To avoid spreading of the contamination, after each truck is loaded and prior to moving off the plastic sheeting, the top rails, fences, tires, and all other surfaces with visible dust or soil spilled during loading shall be removed by dry brushing methods at the point of loading. The collected soil on the plastic shall be periodically removed to avoid the spreading of impacted soil on the truck tires.

## **5.3 FIELD DOCUMENTATION**

The Environmental Consultant will be present on-Site during excavation work and responsible for observing soil conditions and Contractor's activities. As part of this process, daily field reports documenting Site activities shall be completed and made available for inspection by authorized oversight personnel for the duration of the project.

## **5.4 DAILY FIELD REPORTS**

The Environmental Consultant shall complete daily field reports for each day that we are present on-Site. Entries should be complete and accurate enough to permit reconstruction of the Environmental Consultant's field activities. Each page will be dated and the time of entry noted.

The following information shall be recorded during the collection of each sample:

- Sample identification number
- Sample location and description
- Site sketch showing sample location and measured distances
- Sampler's name(s)
- Date and time of sample collection
- Designation of sample as composite or grab
- Type of sample (i.e., matrix)
- Type of preservation
- Type of sampling equipment used
- Field observations and details important to analysis or integrity of samples (e.g., heavy rains, odors, colors, etc.)
- Instrument readings (e.g., photoionization detector [PID], etc.)
- Chain-of-custody form numbers and chain-of-custody seal numbers
- Transport arrangements (courier delivery, lab pickup, etc.)

## **5.5 CHAIN OF CUSTODY RECORDS**

Chain-of-custody records are used to document sample collection and shipment to the laboratory for analysis. All sample shipments for analyses shall be accompanied by a chain-of-custody record. Form(s) shall be completed and sent with the samples for each laboratory and each shipment. If multiple coolers are sent to a single laboratory on a single day, chain-of-custody form(s) will be completed and sent with the samples for



each cooler. The chain-of-custody record will identify the contents of each shipment and maintain the custodial integrity of the samples. Generally, a sample is considered to be in someone's custody if it is either in someone's physical possession, in someone's view, locked up, or kept in a secured area that is restricted to authorized personnel. Until receipt by the laboratory, the custody of the samples will be the responsibility of the sample collector.

## **5.6 PHOTOGRAPHS**

Photographs will be taken by the Environmental Consultant to help document information entered in the daily field report. When a photograph is taken, the following information will be written in the daily field report:

- Time, date, location, and, if appropriate, weather conditions
- Description of the subject photographed
- Name of person taking the photograph

## **5.7 GENERAL PROTECTIVE MEASURES**

- All excavating, trenching and grading activities shall be conducted according to Cal OSHA regulations.
- Trenches/excavations 5 feet or deeper shall be sloped, shored or benched.
- Trenches/excavations that extend below the concrete section shall be screened daily with an organic vapor meter (OVM) or similar equipment. Total VOCs at a sustainable concentration of 5 parts per million by vapor (ppm<sub>v</sub>) above background shall require personnel to stop work and leave area. If concentrations do not recede, the trench/excavation shall be barricaded and the Environmental Consultant contacted.
- Open trenches/excavations shall be inspected daily for readily observable indications of possible cave-ins, hazardous atmosphere or other hazardous conditions.
- If readily observable conditions are noted that could result in cave-in, hazardous atmosphere or other hazardous condition, exposed workers shall be removed from the area until the necessary precautions have been taken to address the concern.
- Trenches/excavations shall be protected with adequate barriers or physical protection.
- Stockpiles of soil shall not be stored within 2 feet of a trench/excavation.
- Where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, the atmosphere shall be tested before workers enter the work area.

- Adequate precautions shall be taken to prevent exposures to atmospheres containing less than 19.5 percent oxygen and or hazardous atmospheres, including proper respiratory protection or ventilation.
- Workers shall not work in excavations/trenches in which there is accumulated water or in trenches/excavations in which water is accumulating, unless adequate precautions have been taken against the hazards posed by the accumulation. These measures can include PPE, shoring or water removal.
- Workers shall wash hands thoroughly after handling Site soil or ground water even if they were wearing protective gloves.

## **5.8 IMPORT FILL**

“Clean” fill must be used to backfill excavations in planned softscape areas. To minimize the potential introduction of contaminated fill onto the Site, all possible sources of import fill shall have adequate documentation so it can be verified that the fill source is appropriate for the Site. Documentation shall be provided by the Contractor and must include detailed information on previous land use of the fill source, any Phase I Environmental Site Assessments performed and the findings, and the results of any analytical testing performed (Phase II Investigations). If no documentation is available, the documentation is inadequate, or if no analytical testing has been performed, samples of the potential fill material shall be collected and analyzed by the Contractor’s environmental professional. The analyses selected shall be based on the fill source and knowledge of the previous land use as determined by the Contractor’s environmental consultant. The sample frequency for potential fill material shall be in accordance with that outlined in the technical document titled, “Information Advisory on Clean Imported Fill Material” (DTSC, October 2001). The Contractor’s environmental consultant shall provide guidance to the contractor regarding the approval of the use of imported fill; no fill material will be accepted if it exceeds the environmental screening criteria presented in Section 2.2.1 of this RMP. Soil from industrial properties and/or properties with current or historic incidents will not be accepted as import fill.

## **5.9 REPORTING**

Following construction activities, the Environmental Consultant shall prepare a Completion Report that will present the following information:

- Results of the confirmation soil samples, if collected from the excavation areas;
- Summary of soil grading and reuse activities based on the Environmental Consultant’s field observations and/or information provided by DCP and the Contractor;
- Stockpile sampling results and disposal documentation for COC-impacted soil off-hauled to a landfill;
- Deviations from this RMP.



The report shall present the Environmental Consultant's conclusions and recommendations and include data summary tables, a site plan, and copies of the analytical data sheets.

#### **5.10 MANAGEMENT OF UNANTICIPATED CONTAMINATION OR HAZARDOUS DEBRIS**

During construction activities, if unanticipated contamination (e.g., if soil discoloration or odors are noted), buried structures (e.g., sumps or tanks), or hazardous debris are encountered that may pose a risk to human health or the environment, earthwork in the suspect area shall be immediately stopped and worker access to the suspect area will be restricted. The area shall be cordoned off using delineators and caution tape, or similar materials by the Contractor. Subsequently, the Environmental Consultant and DCP must be notified (refer to Section 7. Key Site Contacts). The quality of soil suspected to be contaminated will be evaluated through analytical testing by the Environmental Consultant so that appropriate handling and disposal alternatives can be determined.

Soil samples shall be collected from the stockpile or in-place soil and analyzed for contaminants of potential concern (COPC). If COPC are detected below the most current environmental screening criteria presented in Section 2.2.1 of this RMP, then re-use of the soil would be appropriate. If COPC are detected above these levels, then regulatory agency approval should be obtained to use the soil on-Site, or it should be disposed off-Site. Prior to off-Site disposal, additional analytical testing may be required in accordance with the requirements of the selected disposal facility. Any cleanup/remediation of the Site will be required to meet applicable regulatory requirements.

If unanticipated contamination is encountered (e.g., leaking drum) that may pose a risk to human health or the environment, earthwork activities in these contaminated materials shall be performed by licensed hazardous materials contractors and personnel trained in hazardous waste operations (40-hour OSHA training), if warranted based on COPC concentrations. The soil management procedures described in this document and the Contractor's HSP will be followed. Soil suspected of being contaminated that is excavated during construction shall be stockpiled separately from "clean" soil.

### **SECTION 6: LONG-TERM O&M REQUIREMENTS**

#### **6.1 CAPPING MATERIALS**

The remedy selected by DCP for the planned project includes limiting exposure to exposed soils by maintaining a hardscape "cap" consisting of concrete or asphalt pavement. As discussed in Section 5.1, COC-impacted soil in non-hardscape areas will be over-excavated and replaced with "clean" imported fill.

## **6.2 ADMINISTRATIVE CONTROLS – O&M PLAN**

### **6.2.1 Institutional Controls**

There is a potential that a regulatory agency may require a deed restriction and/or institutional controls for the Site due to the presence of COC in shallow soil that exceed unrestricted use environmental screening criteria. The requirement for institutional controls should be discussed with the regulatory agency selected by DCP.

### **6.2.2 Training**

#### **6.2.2.1 Awareness Training Requirements**

Awareness training is recommended for all facility maintenance and custodial staff (i.e. custodians, electricians, heating/air conditioning engineers, and plumbers) who may come into contact with soil at the Site (hereinafter O&M Personnel). In accordance with California Code of Regulations (CCR), Title 8, Subchapter 4, Construction Safety Order, §1529(k)(9)(g), persons who may at any time be exposed to concentrations greater than the permissible exposure limit (PEL) for asbestos of 0.1 fibers per cubic centimeter of air (measured on an 8-hour time weighted average using the PCM method) must attend asbestos awareness training within sixty (60) days of hire, and must also attend annual refresher training.

Training initially provided to O&M Personnel shall include, but not be limited to, the following subjects: health effects associated with NOA and other COC; and appropriate hazard controls and work practices to limit disturbing these materials (such as use of wet methods for dust suppression; protective clothing; dust or asbestos monitors; respirators; proper cleanup and disposal; decontamination of equipment and clothing; relationship between smoking, asbestos and cancer).

If construction work within soils beneath the cap is proposed, personnel performing the work must be trained in accordance with CCR Title 8, §1529 for asbestos.

The DCP Project Coordinator shall designate a competent person to carry out training requirements for O&M personnel.

#### **6.2.2.2 O&M Observation Training**

The DCP Project Coordinator shall designate a competent person to perform cap system observation training. The curriculum for observation training shall include, but not be limited to, the following subjects: overview of this RMP; descriptions and locations of on-Site mitigation measures/engineering controls; required observation locations; recognition of deteriorated, eroded or damaged engineering controls; observation checklist completion; observation of standard operating procedures (SOPs) for intrusive O&M work; and maintenance and repairs, documentation of repairs, roles and responsibilities of O&M Personnel and contact list of responsible persons.

New maintenance staff employees assigned to the school, if expected to perform periodic observations of the engineering controls, will need to obtain appropriate training prior to performing observations at the Site.

### **6.2.3 O&M Observations**

#### **6.2.3.1 Periodic Observations**

Periodic observations of the engineering controls shall be conducted on an annual basis and performed by appropriately trained personnel under the direction of the DCP Project Coordinator.

School employees who are assigned to conduct O&M observations shall be responsible for identification of any required repairs, and documentation of changes in Site conditions or usage, descriptions of any on-Site construction activities, or any other significant information related to effectiveness of the engineering controls. Examples of such conditions include cracks in the capping materials, soil movement, rivulets (a small stream), run-on or run-off or water (storm or irrigation), worn grass areas, and visible exposed soils.

Periodic observation inspection records shall be maintained on-Site. Photographs will be taken as needed by O&M Personnel to help demonstrate stability and/or failure of engineering controls.

The DCP Project Coordinator shall be responsible for confirming that identified repairs are completed on schedule.

#### **6.2.3.2 Observations for Unplanned Events**

O&M Personnel shall also conduct observations of engineering controls during or immediately following unplanned events such as fires, broken utility lines, floods and/or heavy rain, seismic events, etc., where caps may be comprised and soils with COC may be exposed. "Heavy" rain for this Site may be defined as a precipitation event exceeding 0.5 inches per hour, using an on-Site rain gauge or report by the national weather service. "Significant" seismic events may include those earthquakes occurring nearby of a magnitude exceeding 5.0 on the Richter Scale. O&M Personnel shall document all observations and required repairs or maintenance and maintain copies on-Site at the school.

### **6.2.4 Construction/Maintenance Work Activities**

O&M Personnel are required to submit all Site construction and maintenance work order requests to the DCP Project Coordinator. The DCP Project Coordinator will evaluate whether or not activities described in the work orders are considered "non-intrusive" or "intrusive". "Intrusive" activities are prohibited at the Site unless conducted in accordance with this RMP. "Intrusive" work includes any construction or maintenance work activities that disturb soil beneath the cap system including but not limited to: digging, drilling, excavating, grading, repairing, removing, trenching, filling, gardening, and other soil movement that may penetrate or otherwise compromise the caps in place, thereby opening pathways for possible human exposures to soil containing COC. If work is determined to be intrusive, the DCP Project Coordinator is responsible for confirming that work practices are followed as specified in this RMP.

#### **6.2.4.1 Non-Intrusive Activities**

“Non-intrusive work” is defined as including construction, repairs, and/or maintenance activities at the Site where soil exposure is not anticipated and where the integrity of engineered controls, such as hardscaped or landscaped caps, is not compromised. The following procedures shall be taken when conducting non-intrusive work at the Site:

- DCP Project Coordinator will provide information regarding the cap systems to selected contractors and O&M Personnel to minimize likelihood of COC exposure.
- O&M Personnel will conduct visits during construction and/or maintenance activities at the Site to help evaluate if soil at the Site is being disturbed.
- In the event that soil is inadvertently disturbed or the integrity of engineered controls is compromised, the DCP Project Coordinator will be responsible for implementing the appropriate procedures presented in this RMP.

#### **6.2.4.2 Intrusive Activities**

The procedures presented below will be performed for intrusive construction, repair, and/or maintenance activities to: 1) help limit COC exposures to anyone at the Site; 2) prevent untrained or unauthorized personnel from performing intrusive work in soil containing COC; and 3) restore the integrity of engineering controls (cap systems if impaired or compromised by such activities). The DCP Project Coordinator is responsible for confirming that the following procedures are performed for intrusive work activities performed at the Site.

- Information must be provided to the selected contractors regarding location of cap systems;
- Selected contractors and their employees must comply with Federal and State OSHA requirements;
- O&M Personnel must follow established Site-specific health and safety requirements before starting intrusive work;
- Construction and maintenance work must be performed in accordance with protocols presented in this RMP;
- Intrusive work activities performed at the Site must be documented in a Completion Report prepared by the Environmental Consultant;
- Evaluate timelines, school and work schedules to help confirm intrusive work is completed as soon as possible to minimize exposure risks; and
- Limit Site access to reduce exposures to non-workers during intrusive activities.

### 6.2.5 Reporting and Record Keeping

All documented records (i.e. data, reports and other documents) prepared under the RMP will be maintained by the DCP Project Coordinator at the school Site. The records will include, but are not limited to:

- Periodic observation checklist, completion reports for intrusive work, photographs associated with all of the above.
- Records of training for asbestos awareness including the name of the company providing the training, instructor's name and title and qualifications, names and signatures of staff persons attending training, with staff job title, and date(s) of training.
- Records of personal air monitoring and perimeter air sampling during construction and maintenance work activities.
- Records of public inquiries for information about COC at the Site.
- Investigation and mitigation documents including surveys, photographs, design specifications and as-built drawings, and appendices.

All records will be preserved by the DCP Project Coordinator for a minimum of 7 years after the conclusion of each relevant activity.

## SECTION 7: KEY SITE CONTACTS

Organization	Personnel	Responsibility	Email	Phone
DCP Representative	Mr. Peter Geraghty	Construction Development Coordinator	<a href="mailto:peterigeraghty@gmail.com">peterigeraghty@gmail.com</a>	408-938-6365
Cornerstone Earth Group	Kurt M. Soenen, P.E.	Environmental Consultant	<a href="mailto:ksoenen@cornerstoneearth.com">ksoenen@cornerstoneearth.com</a>	408-245-4600
DCP	To be determined	School Project Coordinator	---	---
To be determined	---	Regulatory Agency Selected by DCP	---	---

## SECTION 8: LIMITATIONS

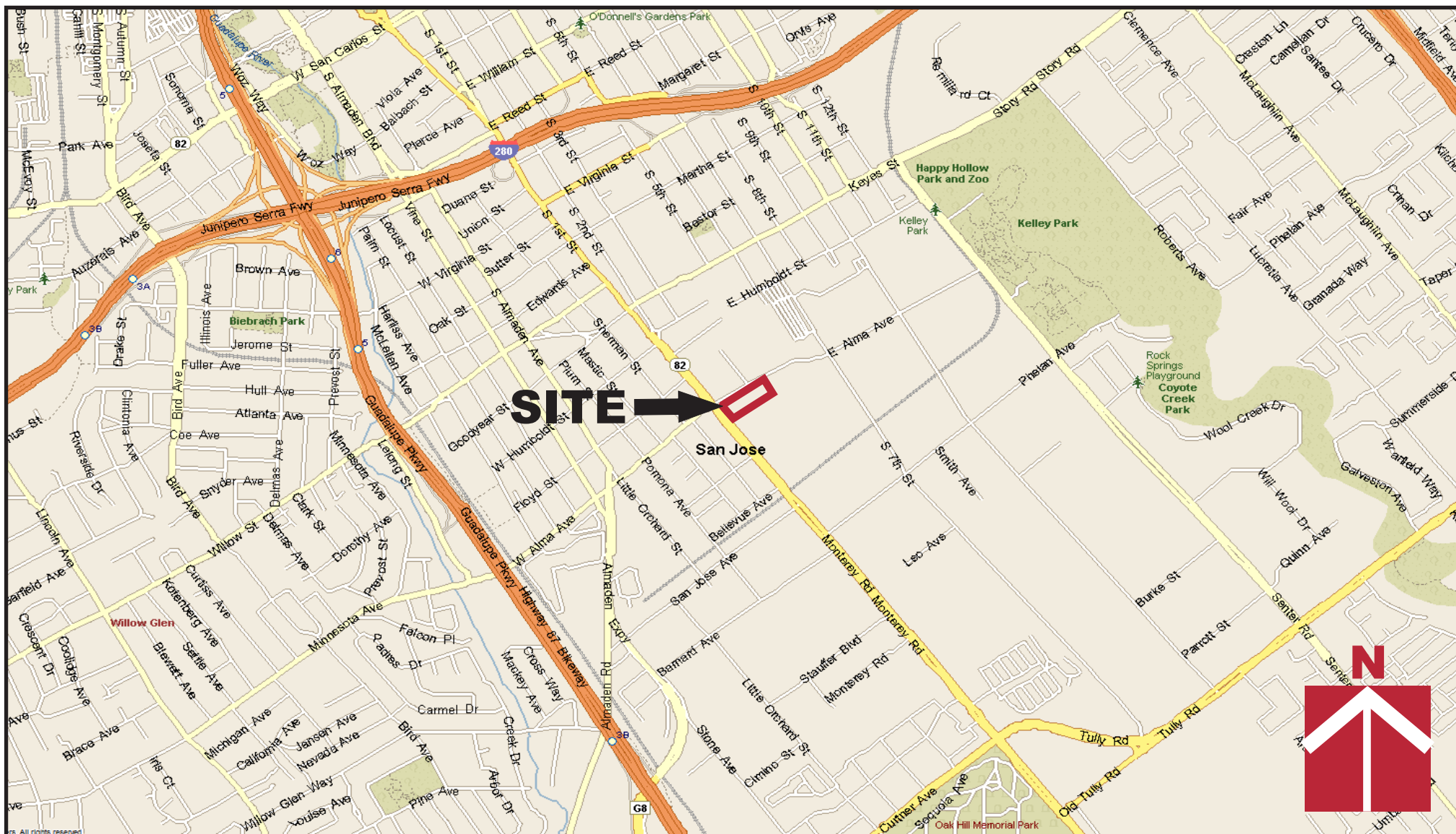
Contractors working on-Site are responsible for the health and safety of their employees and subcontractors. In addition, DCP is responsible for implementing the guidelines presented in this RMP; integrating these guidelines into the project specifications and construction plans; and for seeking clarification should they have questions regarding this RMP prior to starting work.

This document, an instrument of professional service, was prepared for the sole use of DCP and their contractors, and may not be reproduced or distributed to others without written authorization from Cornerstone. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

## **SECTION 9: REFERENCES**

Cornerstone, 2016. *Phase I and II Environmental Site Assessment, 1402 Monterey Highway, San Jose, California*, dated February 4, 2016.





**CORNERSTONE**  
**EARTH GROUP**

### Vicinity Map

**DCP Alma**  
**1402 Monterey Highway**  
**San Jose, CA**

Project Number

687-2-1

Figure Number

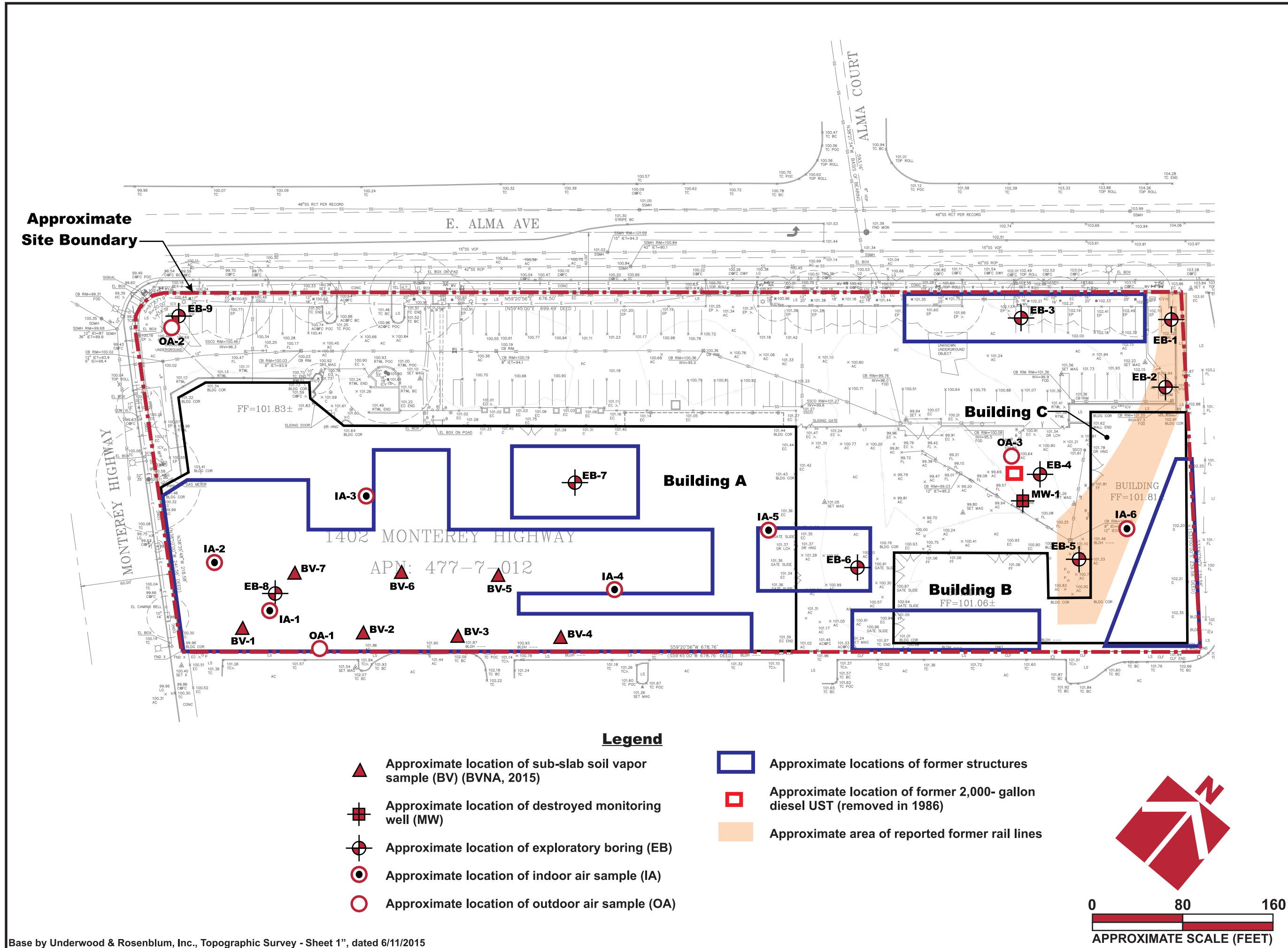
Figure 1

Date

October 2015

Drawn By

RRN



Project Number

687-2-2

Figure Number

Figure 2

Date

December 2015

Drawn By

RRN

Site Plan

DCP Alma

1402 Monterey Highway

San Jose, CA

CORNERSTONE

EARTH GROUP



## **APPENDIX A – CORNERSTONE ESA REPORT – FEBRUARY 2016**



# CORNERSTONE EARTH GROUP

**Type of Services****Location**

**Phase I and II Environmental Site Assessment**

**1402 Monterey Highway  
San Jose, California**

**Client****Client Address**

**DOWNTOWN COLLEGE PREP FACILITIES 1, LLC**

**1400 Parkmoor Avenue, Suite 206  
San Jose, California 96126**

**Project Number****Date**

**687-2-1**

**February 4, 2016**

---

**Kevin O'Halloran, P.E.**

Senior Staff Engineer

---

**Kurt M. Soenen, P.E.**

Principal Engineer



## Table of Contents

<b>SECTION 1: INTRODUCTION</b>	<b>1</b>
1.1 PROJECT DESCRIPTION,	1
1.2 PURPOSE	2
1.2.1 Phase I ESA	2
1.2.2 Nearby Vicinity Hazards	2
1.2.3 Phase II Soil, Ground Water and Air Quality Evaluation	2
1.3 SCOPE OF WORK	3
1.4 ASSUMPTIONS	3
1.5 ENVIRONMENTAL PROFESSIONAL	3
<b>SECTION 2: SITE DESCRIPTION</b>	<b>4</b>
2.1 LOCATION AND OWNERSHIP	4
2.2 CURRENT/PROPOSED USE OF THE PROPERTY	4
2.3 SITE SETTING AND ADJOINING SITE USE	4
<b>SECTION 3: USER PROVIDED INFORMATION</b>	<b>4</b>
3.1 CHAIN OF TITLE	5
3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS	5
3.3 SPECIALIZED KNOWLEDGE AND/OR COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION	5
3.4 DOCUMENTS PROVIDED BY DCP	5
3.5 SITE HISTORY AND PRIOR USE	6
3.6 LIMITED SUBSURFACE INVESTIGATION – APRIL 1998	7
3.7 FORMER UST	7
3.8 SUB-SLAB SOIL VAPOR SAMPLING – AUGUST 2015	7
3.9 SITE VICINITY	8
<b>SECTION 4: RECORDS REVIEW</b>	<b>8</b>
4.1 STANDARD ENVIRONMENTAL RECORD SOURCES	8
4.1.1 On-Site Database Listings	9
4.1.2 Adjoining Property Database Listings and Nearby Spill Incidents	9
4.1.3 Further Review of Database Listings	9
4.2 ENVIRONMENTAL RECORD SOURCES	11
4.2.1 City and County Agency File Review	11
4.2.2 Request for Information from Other Agencies	12
4.2.3 National Pipeline Mapping System	13
4.2.4 Radon	14
4.2.5 Additional Research	14
<b>SECTION 5: PHYSICAL SETTING</b>	<b>18</b>
5.1 RECENT USGS TOPOGRAPHIC MAP	18
5.2 GEOLOGY AND HYDROGEOLOGY	18
5.2.1 Ground Water	18
5.2.2 Naturally Occurring Asbestos	19
<b>SECTION 6: SITE RECONNAISSANCE</b>	<b>19</b>
6.1 METHODOLOGY AND LIMITING CONDITIONS	19
6.2 OBSERVATIONS	19
6.2.1 Site Photographs	21
6.3 DRIVE BY VICINITY SURVEY	23
<b>SECTION 7: ENVIRONMENTAL QUESTIONNAIRE AND INTERVIEWS</b>	<b>23</b>
7.1 ENVIRONMENTAL QUESTIONNAIRE / OWNER INTERVIEW	23

7.2 INTERVIEWS WITH PERSON(S) KNOWLEDGEABLE OF SITE USE.....	23
7.3 INTERVIEWS WITH PREVIOUS OWNERS AND OCCUPANTS .....	24
<b>SECTION 8: SOIL, GROUND WATER, AND AIR QUALITY EVALUATION .....</b>	<b>24</b>
8.1 INDOOR AND AMBIENT AIR SAMPLING .....	24
8.1.1 Building Observations.....	24
8.1.2 Sample Locations .....	24
8.1.3 Air Sample Collection and Analyses .....	25
8.1.4 Data Quality Assurance.....	25
8.2 SOIL AND GROUND WATER SAMPLING .....	25
8.2.1 Subsurface Investigation .....	25
8.2.2 Soil and Ground Water Sample Collection and Analyses .....	26
8.3 ANALYTICAL RESULTS .....	28
<b>SECTION 9: RAIL SAFETY STUDY .....</b>	<b>28</b>
<b>SECTION 10: FINDINGS, OPINIONS AND CONCLUSIONS (WITH</b>	
<b>    RECOMMENDATIONS) .....</b>	<b>28</b>
10.1 HISTORICAL SITE USAGE .....	28
10.2 CHEMICAL STORAGE AND USE .....	29
10.3 FORMER UST.....	29
10.4 SOIL QUALITY .....	29
10.5 GROUND WATER QUALITY .....	31
10.6 AIR QUALITY .....	31
10.7 IMPORTED SOIL .....	32
10.8 POTENTIAL ENVIRONMENTAL CONCERNS WITHIN THE SITE VICINITY ...	32
10.8.1 Tanks, Pipelines, and Facilities that Handle Hazardous Materials .....	32
10.8.2 Railroad Tracks.....	33
10.8.3 Water Pipelines and Storage Tanks.....	33
10.8.4 Power Transmission Lines.....	33
10.8.5 Proximity to Major Roadways and Noise .....	33
10.9 ASBESTOS CONTAINING BUILDING MATERIALS (ACBMS) .....	33
10.10 LEAD-BASED PAINT .....	34
10.11 SCHOOL SITE REGULATORY AGENCY ENVIRONMENTAL REVIEW AND	
APPROVAL PROCESS .....	34
10.12 DATA GAPS .....	34
10.13 DATA FAILURES.....	34
10.14 RECOGNIZED ENVIRONMENTAL CONDITIONS.....	35
<b>SECTION 11: LIMITATIONS .....</b>	<b>35</b>
<b>SECTION 12: REFERENCES.....</b>	<b>36</b>

## **FIGURES**

**FIGURE 1 – VICINITY MAP**

**FIGURE 2 – SITE PLAN**

**FIGURE 3 – FORMER SUN GARDEN FACILITY LOCATION MAP**

**FIGURE 4 – SAMPLING LOCATION MAP**

**FIGURE 5 – TPH/VOC CONCENTRATIONS IN GROUND WATER**

**FIGURE 6 – ARSENIC CONCENTRATIONS IN SOIL**

## **DATA SUMMARY TABLES**

**TABLE 1 – SOIL METALS**

**TABLE 2 – SOIL TPH**

**TABLE 3 – SOIL SVOCS / VOCS / OCPS / PCBS**

**TABLE 4 – GROUND WATER VOCS / SVOCS / TPH**

**TABLE 5 – INDOOR AND OUTDOOR AIR**

## **APPENDICES**

**APPENDIX A – TERMS AND CONDITIONS**

**APPENDIX B – DOCUMENTS PROVIDED BY CLIENT**

**APPENDIX C – DATABASE SEARCH REPORT**

**APPENDIX D – DOCUMENTS PROVIDED BY AGENCIES**

**APPENDIX E – HISTORIC AERIAL PHOTOGRAPHS**

**APPENDIX F – BORING LOGS**

**APPENDIX G – ANALYTICAL DATA SHEETS**

**APPENDIX H – RAIL SAFETY STUDY**

**Type of Services  
Location****Phase I and II Environmental Site Assessment  
1402 Monterey Highway  
San Jose, California**

## **SECTION 1: INTRODUCTION**

This report presents the results of the Phase I and II Environmental Site Assessment (ESA) performed at 1402 Monterey Road in San Jose, California (Site) as shown on Figures 1 and 2. This work was performed for Downtown College Prep Facilities 1, LLC (DCP) in accordance with our July 23, 2015 and October 12, 2015 Agreements. We understand San Jose Unified School District (District) has bought the property through a land swap with Imwalle Properties and the District has entered into a 50-year land lease with DCP for school use.

### **1.1 PROJECT DESCRIPTION,**

The project Site is developed with three commercial vacant buildings, which were previous occupied by a lumber supply store. The buildings on-Site total 80,828 square feet and include the main retail building (Building A - 64,793 square feet) and two accessory structures totaling 6,100 square feet (Building B) and 9,935 square feet (Building C). Building A is equivalent to a two-story structure and is located in the southwest portion of the Site. The two smaller single-story buildings are located in the southeast portion of the Site and are separated from the parking lot by a concrete wall. The wall has three metal access gates for vehicles and pedestrians. These buildings share a partition wall and are configured in an L-shape.

There is one main parking lot that runs adjacent to East Alma Avenue. Vehicular ingress and egress to the project Site is provided by three driveways on East Alma Avenue and one driveway on Monterey Road.

The proposed school project would result in the relocation of two DCP charter schools, El Primero High School (high school) located at 1460 The Alameda and El Camino Middle School (middle school) located at 1155 East Julian Street, to the Site. Following the relocation the total number of students at 1402 Monterey Highway is expected to be approximately 1237. The schools would operate from 8:00 AM to 5:00 PM (including drop-off and pick-up times), Monday through Friday, with school in session from 8:30 AM to 3:30 PM.

The project proposes to renovate the interior of Building 1 to accommodate the school. The existing entrance to the building, totaling 7,213 square feet, would be removed and windows would be added to the building. No other exterior alterations are proposed for Building 1. Building 3 would be retained and utilized as a gymnasium. Building 2 would be demolished. The parking lot would be reconfigured to provide employee and visitor parking and a student drop-off area. The two easternmost driveways on Alma Avenue would be removed, providing one ingress driveway from Monterey Road and one egress driveway onto Alma Avenue. The remainder of the existing parking lot and the area between the existing buildings will be made

into an outdoor recreational area for the students and may include some artificial turf and possibly a student garden.

Within the courtyard, a new 4,000 square foot, one-story STEM center may be constructed. With the possible new building, the total building square footage on-Site would be 71,515.

## **1.2 PURPOSE**

### **1.2.1 Phase I ESA**

The scope of work presented in the Agreement was prepared in general accordance with ASTM E 1527-13 titled, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Standard). The ASTM Standard is in general compliance with the Environmental Protection Agency (EPA) rule titled, "Standards and Practices for All Appropriate Inquiries; Final Rule" (AAI Rule). The purpose of this Phase I ESA is to strive to identify, to the extent feasible pursuant to the scope of work presented in the Agreement, Recognized Environmental Conditions at the property.

As defined by ASTM E 1527-13, the term Recognized Environmental Condition means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not Recognized Environmental Conditions.

Cornerstone Earth Group, Inc. (Cornerstone) understands that DCP intends to lease the property for use as a charter high school. We performed this Phase I ESA to support DCP in evaluation of Recognized Environmental Conditions at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions at the Site.

### **1.2.2 Nearby Vicinity Hazards**

*Education Code* Section 17521 and the *California Code of Regulations (CCR)*, Title 5, sections 14001 through 14012, outline the powers and duties of the California Department of Education (CDE) regarding school sites and the construction of school buildings. School districts seeking state funding must comply with the *Education Code* and Title 5 sections cited above. Site approval from CDE must be granted before the State Allocation Board will apportion funds. Districts not using state funds are still encouraged to seek the Department's approval for the benefits that such outside, objective reviews provide to the school district and the community.

As part of an evaluation of the property as a potential school site, this report includes an assessment of environmental hazards associated with nearby power lines, railroad tracks, aboveground storage tanks, hazardous pipelines, high volume water pipes, traffic corridors, and air/hazardous facilities. These hazards are applicable to Kindergarten through grade 12 public schools as noted in certain sections of Title 5 California Code of Regulations.

### **1.2.3 Phase II Soil, Ground Water and Air Quality Evaluation**

As part of this investigation, soil, ground water, indoor air, and outdoor air samples were collected to help evaluate potential environmental concerns identified at the Site.

### **1.3 SCOPE OF WORK**

As presented in our Agreements, the scope of work performed included the following:

- A reconnaissance of the Site to note readily observable indications of significant hazardous materials releases to structures, soil or ground water;
- Drive-by observation of adjoining properties to note readily apparent hazardous materials activities that have or could significantly impact the Site;
- Acquisition and review of a regulatory agency database report of public records for the general area of the Site to evaluate potential impacts to the Site from reported contamination incidents at nearby facilities;
- Review of readily available information on file at selected governmental agencies to help evaluate past and current Site use and hazardous materials management practices;
- Review of readily available maps and aerial photographs to help evaluate past and current Site uses;
- Collection and analyses of soil, ground water, indoor air, and outdoor air samples for laboratory analyses;
- Review readily available information provided by governmental agencies to help evaluate nearby environmental hazards such as pipelines and hazardous materials facilities with toxic air emissions;
- Preparation of a Rail Safety Study; and
- Preparation of a written report summarizing our findings and recommendations.

The limitations for our work is presented in Section 11. Terms and conditions are included in Appendix A.

### **1.4 ASSUMPTIONS**

In preparing the Phase I ESA, Cornerstone assumed that all information received from interviewed parties is true and accurate. In addition, we assumed that all records obtained by other parties, such as regulatory agency databases, maps, related documents and environmental reports prepared by others are accurate and complete. We also assumed that the boundaries of the Site, based on information provided by DCP, are as shown on Figure 2. We have not independently verified the accuracy or completeness of any data received.

### **1.5 ENVIRONMENTAL PROFESSIONAL**

The Phase I ESA was performed by Kurt Soenen who meets the qualification requirements of an Environmental Professional described in ASTM E 1527-13 and 40 CFR 312 § 312.10 based on professional licensing, education, training and experience to assess a property of the nature, history and setting of the Site.



## SECTION 2: SITE DESCRIPTION

This section describes the Site as of the date of this Phase I ESA. The location of the Site is shown on Figures 1 and 2. Tables 1 through 3 summarize general characteristics of the Site and adjoining properties. The Site is described in more detail in Section 7, based on our on-Site observations.

### 2.1 LOCATION AND OWNERSHIP

Table 1 describes the physical location, and ownership of the property, based on information provided by DCP.

**Table 1. Location and Ownership**

<b>Assessor's Parcel No. (APN)</b>	477-07-012
<b>Reported Address/Location</b>	1402 Monterey Highway, San Jose, California 95110
<b>Owner</b>	San Jose Unified School District
<b>Approximate Lot Size</b>	3.38 Acres
<b>Approximate Bldg. Size</b>	82,000 square feet (total of 3 buildings)
<b>Construction Date</b>	1974 (Building A); late 1970's (Building B); and 1999 (Building C)

### 2.2 CURRENT/PROPOSED USE OF THE PROPERTY

The current and proposed uses of the property are summarized in Table 2.

**Table 2. Current and Proposed Uses**

<b>Current Use</b>	Vacant buildings formerly used by a lumber retail store
<b>Proposed Use</b>	High school and middle school

### 2.3 SITE SETTING AND ADJOINING SITE USE

Land use in the general Site vicinity appears to be primarily commercial. Based on our Site vicinity reconnaissance, adjoining Site uses are summarized below in Table 3.

**Table 3. Adjoining Site Uses**

<b>Northeast</b>	Sun Garden retail shopping center
<b>Southeast</b>	
<b>Southwest</b>	America's Best Value Inn motel and Wendy's restaurant
<b>Northwest</b>	Denny's restaurant and Spartan Business Center industrial park

## SECTION 3: USER PROVIDED INFORMATION

The ASTM standard defines the User as the party seeking to use a Phase I ESA to evaluate the presence of Recognized Environmental Conditions associated with a property. For the purpose of this Phase I ESA, the User is DCP. The "All Appropriate Inquiries" Final Rule (40 CFR Part 312) requires specific tasks be performed by or on behalf of the party seeking to qualify for Landowner Liability Protection under CERCLA (*i.e.*, the User).

Per the ASTM standard, if the User has information that is material to Recognized Environmental Conditions, such information should be provided to the Environmental Professional. This information includes: 1) specialized knowledge or experience of the User, 2) commonly known or reasonably ascertainable information within the local community, and 3) knowledge that the purchase price of the Site is lower than the fair market value due to contamination. A search of title records for environmental liens and activity and use limitations also is required.

### **3.1 CHAIN OF TITLE**

A preliminary chain-of-title was not provided for our review.

### **3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS**

An environmental lien is a financial instrument that may be used to recover past environmental cleanup costs. Activity and use limitations (AULs) include other environmental encumbrances, such as institutional and engineering controls. Institutional controls (ICs) are legal or regulatory restrictions on a property's use, while engineering controls (ECs) are physical mechanisms that restrict property access or use.

The regulatory agency database report described in Section 4.1 did not identify the Site as being in 1) US EPA databases that list properties subject to land use restrictions (*i.e.*, engineering and institutional controls) or Federal Superfund Liens or 2) lists maintained by the California Department of Toxic Substances Control (DTSC) of properties that are subject to AULs or environmental liens where the DTSC is a lien holder.

A Preliminary Title Report by First American Title Company (dated January 6, 2016) was provided for our review (Appendix B). No environmental liens or records of ownership (including leases) indicative of significant hazardous materials use associated with the Site were listed in the title report.

### **3.3 SPECIALIZED KNOWLEDGE AND/OR COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION**

Based on information provided by or discussions with DCP, we understand that DCP does not have such specialized knowledge or experience, commonly known or reasonably ascertainable information regarding the Site, or other information that is material to Recognized Environmental Conditions except for the information contained in the provided reports described in Section 3.4.

### **3.4 DOCUMENTS PROVIDED BY DCP**

To help evaluate the presence of Recognized Environmental Conditions at the Site, Cornerstone reviewed and relied upon the documents provided by DCP listed in Table 4. Please note that Cornerstone cannot be liable for the accuracy of the information presented in these documents. ASTM E1527-13 does not require the Environmental Professional to verify independently the information provided; the Environmental Professional may rely on the information unless they have actual knowledge that certain information is incorrect. A summary of the provided documents is provided below; please refer to the original reports for complete details (Appendix B).

**Table 4. Documents Provided by DCP**

Date	Author	Title
August 21, 2015	Bureau Veritas	Limited Subsurface Investigation Report, 1402 Monterey Road, San Jose, California.
August 20, 2015	Bureau Veritas	Phase I Environmental Site Assessment, 1402 Monterey Road, San Jose, California.
February 19, 2015	ENGEO	Phase I Environmental Site Assessment, 1402 Monterey Highway, San Jose.

Other documents referenced in the provided reports and discussed below included Phase I ESAs by ATC (1999) and Clayton (2005), a subsurface investigation report by ATC (1998), an underground storage tank (UST) removal report by Geonomics (1999), and a well destruction letter by ATC (1999). Excerpts of the UST removal report, well destruction letter, and subsurface investigation report were included as an appendix in Engco's Phase I ESA.

### 3.5 SITE HISTORY AND PRIOR USE

The approximately 3.38-acre Site was occupied by the Southern Lumber Company since the early 1900's until 2015 for use as retail sale of lumber products and associated materials. A 1915 Sanborn map showed the following features at the lumber yard: 13 outdoor lumber storage areas, an office building along Monterey Highway (formerly 1st Street), a lumber and moulding building, two lumber sheds, a planing mill, a railroad spur from the Southern Pacific Railroad (SPRR) tracks located east of the Site, and several associated outbuildings, including a storage shed for hay and building materials (lime, cement) and a watchman's cabin along the northern and southern borders of the subject property, respectively. Through at least 1950, the Site was occupied predominately by lumber storage and planing and moulding buildings, and was converted to a retail lumberyard by at least 1961. In June 1973, the buildings were burned to the ground due to an electrical fire.

The current retail warehouse building (Building A) was built after the fire, incorporating a small portion of the original retail building, and the facility reopened in 1974. Based on information from the Bureau Veritas Site visit, the approximately 65,000-square-foot building included retail floor space with adjoining small storage room, retail lumber floor, floor/moulding and door showroom areas, a retail warehouse office, and a planing mill room and wood working shop. Mezzanine-level offices, copy room and wood working museum were located on the west side of the building, and a mezzanine-level break room and deck was located on the east side of the building.

The centrally located former planing mill/door shop building (Building B) was built in approximately 1977-1978. The approximately 7,000 square foot building included a planing mill room, door assembly room and a paint room with enclosed paint booth and a drying room.

A 10,000-square-foot storage warehouse (Building C) is located on the east side of the Site and included an asphalt-paved central yard area enclosed by concrete-block wall and iron gates. This building was constructed in approximately 1999-2000.

### 3.6 LIMITED SUBSURFACE INVESTIGATION – APRIL 1998

In 1998, Terra Search conducted an initial subsurface investigation at the Site to evaluate soil and ground water quality near the common property line with the adjacent former Sun Garden Packing facility (Sun Garden); this adjacent former facility is further discussed in Section 4.1.3. Petroleum hydrocarbon releases were documented at Sun Garden. Southern Lumber was planning to expand their facility (construction of Building C), and prior to implementing construction activities, sampling beneath the proposed addition was desired.

Two soil borings were advanced at the easternmost end of the Site near proposed location of Building C. The borings were extended to an approximate depth of 17 feet and three soil samples and one grab ground water sample were collected from each boring. A ground water sample was also collected from an existing monitoring well located near a diesel UST. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd), total oil and grease, and BTEX (benzene, toluene, ethylbenzene, and xylenes). No contaminants were detected in the soil and ground water samples above laboratory reporting limits. Based on these results, Terra Search concluded that the soil and ground water beneath the Building C area had not been impacted by petroleum hydrocarbons released from Sun Garden.

### 3.7 FORMER UST

On October 14, 1986 a 2,000-gallon diesel UST was removed from the Site. Geonomics reported that the UST was in good condition with no visible holes. San Jose Fire Department records were reviewed by ATC (1999). Clayton (2005), and Bureau Veritas (2015) did not identify a UST case file or closure letter pertaining to the UST. Geonomics collected one soil sample from the former UST pit at 11 feet below the ground surface, directly beneath the UST. Laboratory analysis of the sample detected less than 10 milligrams per kilogram (mg/kg) of TPHd. ATC concluded that the former UST did not present an environmental concern for the Site and recommended destruction of a monitoring well that was located near the former UST. ATC prepared a letter in 1999 summarizing the destruction activities for the monitoring well.

### 3.8 SUB-SLAB SOIL VAPOR SAMPLING – AUGUST 2015

In August 2015, Bureau Veritas installed and sampled seven sub-slab soil vapor probes in the rear of Building A. Sampling locations are shown on Figure 4. This work was performed to help evaluate general soil vapor quality near the common property line with Sun Garden.

Laboratory analyses of a soil vapor sample (SV-L1) collected in 2013 at Sun Garden (approximately 60 feet from the Site boundary) detected perchloroethene (PCE) at a concentrations of 450 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and 360  $\mu\text{g}/\text{m}^3$  at approximate depths of 5 feet and 8 feet, respectively. For comparison purposes, these concentrations exceeds the residential ESL<sup>1</sup> of 210  $\mu\text{g}/\text{m}^3$  and adjusted DTSC-recommended screening level<sup>2</sup>

---

<sup>1</sup> Environmental Screening Levels (ESLs) were developed by the San Francisco Bay Regional Water Quality Control Board (Water Board, December 2013).

<sup>2</sup> The Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) has not established environmental screening levels for comparison to sub-slab and subsurface soil vapor data. To evaluate potential vapor intrusion concerns, DTSC recommends using their guidance document *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* dated October 2011 (DTSC, 2011). The DTSC-recommended indoor air screening levels established in HERO Human Health Risk Assessment (HHRA) Note 3 (September 2015) were adjusted using the attenuation factors provided in

of 240 µg/m<sup>3</sup>. Other volatile organic compounds were detected in the soil vapor sample; however, the detected concentrations did not exceed their respective residential ESL or DTSC-recommended screening level.

Based on the results of the Bureau Veritas sub-slab vapor sampling investigation, several VOCs were detected however none exceeded their respective screening criteria except for benzene. Also note that PCE (and its breakdown product trichloroethene [TCE]) were not detected above their respective laboratory limits.

Benzene was detected in 2 of 7 sub-slab soil vapor samples at concentrations of 4.4 µg/m<sup>3</sup> and 2.9 µg/m<sup>3</sup>. These concentrations exceed the calculated DTSC-recommended screening level of 1.9 µg/m<sup>3</sup>. Note that the reporting limit for benzene in the other 5 sub-slab soil vapor samples exceeded the DTSC-recommended screening level; reporting limits ranged from less than 2.8 µg/m<sup>3</sup> to 3.0 µg/m<sup>3</sup>.

Since none of the detected VOCs exceeded their respective screening levels for commercial use, Bureau Veritas concluded no further investigation was needed.

### **3.9 SITE VICINITY**

Surrounding uses from at least 1915 included industrial facilities primarily related to canning operations to the south and commercial and residential uses to the west. The northern adjoining property was vacant until approximately 1950 when a drive-in movie theater was built, with a corner gasoline station added by 1955. This area was redeveloped by the mid/late 1970's with the current restaurant (Denny's) and light industrial park. The Site is bordered to the east by the former Union Pacific railroad easement. Beyond the former railroad easement, the eastern adjoining property was vacant until the 1950s when it was developed with several large, light industrial and warehouse buildings.

The southern adjoining property was occupied since at least 1915 predominantly by fruit canning/packaging companies (Bisceglia Brothers, Dry Pack Corporation, Mayfair Packing and Sun Garden Packing). Additional information regarding this facility is discussed in Section 4.1.3.

## **SECTION 4: RECORDS REVIEW**

### **4.1 STANDARD ENVIRONMENTAL RECORD SOURCES**

Cornerstone conducted a review of federal, state and local regulatory agency databases provided by Environmental Data Resources (EDR) to evaluate the likelihood of contamination incidents at and near the Site. The database sources and the search distances are in general accordance with the requirements of ASTM E 1527-13. A list of the database sources reviewed, a description of the sources, and a radius map showing the location of reported facilities relative to the project Site are attached in Appendix C.

The purpose of the records review was to obtain reasonably available information to help identify Recognized Environmental Conditions. Accuracy and completeness of record

---

the DTSC guidance. For this study, attenuation factors of 0.05 and 0.002 were used to calculate sub-slab and subsurface screening criterion, respectively.

information varies among information sources, including government sources. Record information is often inaccurate or incomplete. The Environmental Professional is not obligated to identify mistakes or insufficiencies or review every possible record that might exist with the Site. The customary practice is to review information from standard sources that is reasonably available within reasonable time and cost constraints.

#### 4.1.1 On-Site Database Listings

The subject property was identified in the CA SAN JOSE HAZMAT and CA EMI databases. The CA SAN JOSE HAZMAT lists the property as Southern Lumber Company and describes the property as “Auto Wrecking/Misc Simple Facility” with no other information provided. The CA EMI or California Emission Inventory Control database lists the property as Southern Lumber Co with an SIC classification code of 5211 which corresponds to “Lumber and other Building Materials Dealers.”

#### 4.1.2 Adjoining Property Database Listings and Nearby Spill Incidents

Database listings for adjoining properties are summarized in Table 5. Based on the information presented in the agency database report, no off-Site spill incidents were reported that appear likely to significantly impact soil, soil vapor or ground water beneath the Site. The potential for impact was based on our interpretation of the types of incidents, the locations of the reported incidents in relation to the Site and the assumed ground water flow direction.

**Table 5. Adjoining Property Database Listings and Nearby Spill Incidents**

<b>Facility Name and Address</b>	<b>Map I.D.</b>	<b>Approximate Distance and Direction from Site</b>	<b>Database Listings/Comments</b>
Sun Garden	C14	Adjacent to Southeast	See Discussion Below

Note: Facility name, address, distance and direction from Site, and database listing were provided by EDR. Cornerstone did not verify the accuracy or completeness of this information.

#### 4.1.3 Further Review of Database Listings

To obtain additional information regarding the Sun Garden Packing contamination case, a cursory review of readily available documents obtained from the state Geotracker (<http://geotracker.waterboards.ca.gov>) was performed. Geotracker is a database and geographic information system (GIS) that provides online access to environmental data. It tracks regulatory data about leaking underground storage tank (LUST), Department of Defense, Site Cleanup Program and Landfill sites. Because of the property history, a large volume of environmental documents pertaining to the Sun Garden facility have been generated over the past approximately 25 years. A cursory review of the documents obtained was performed and, based on our professional judgment, those documents that appeared to be of greater relevance were selected for further evaluation. Our review focused on recent documents prepared for the property, along with agency correspondence documenting the current regulatory status. Summaries of the documents reviewed are presented in Table 6; if a more complete understanding of the environmental setting of the property is desired, the original documents should be reviewed.



**Table 6. Selected Prior Environmental Documents – Sun Garden**

Date	Author	Title
December 2012	Cornerstone	Final Site Management Plan, 1420 to 1600 Monterey Road, San Jose, California
June 2013	Cornerstone	Soil Vapor Quality Evaluation, Sun Garden Center, Western Developer Tract, 1420 to 1496 Monterey Road, San Jose, California
June 2014	Cornerstone	Site Assessment report, Sun Garden Center, Western Developer Tract, San Jose, California
October 2014	Cornerstone	Addendum to the Site Assessment Report, Sun Garden Center, Western Developer Tract, San Jose, California

#### 4.1.3.1 Property Use and Background Information

The southerly adjacent former Sun Garden facility was occupied since at least 1915 predominantly by fruit canning/packaging companies (Bisceglia Brothers, Dry Pack Corporation, Mayfair Packing and Sun Garden Packing). The packing plant historically occupied the northern/eastern area of the property and included several buildings with the following uses: warehouse, fruit and vegetable packing, processing and storage and other miscellaneous structures used as a garage, boiler room, machine shop, laboratory and office space. The canning/packing plant structures (except for the warehouse [Building 1] and office building) were demolished in 2002 and 2003. Property features are shown on Figure 3.

The northwestern portion of the property along Monterey Road was occupied by cannery/hotel cottages, a trucking facility and an automobile wrecking yard; these structures subsequently were demolished and replaced by six commercial buildings (mainly auto repair, restaurant, laboratory and retail businesses) in the late 1960s. The six commercial buildings (1420 to 1496 Monterey Road) also were demolished in 2002 and 2003.

In 2012, Cornerstone prepared a Site Management Plan (SMP) for proposed redevelopment activities at Sun Garden. The SMP was prepared to provide a decision framework during development activities to manage residual localized contamination in soil, soil vapor and ground water associated with the three LUST cases closed by the Santa Clara Valley Water District (SCVWD) in 2001 and 2002. The SMP provided background information regarding the removal of twelve USTs and two oil water separators (OWSs) and the environmental investigations that were completed to evaluate soil and ground water quality at Sun Garden and adjacent on-property buildings formerly occupied by Bay Transmissions and other automotive repair businesses. As noted in the closure letters, Sun Garden and Bay Transmissions are listed as two separate fuel leak cases; however, they were investigated concurrently as part of one overall investigation that was completed in multiple phases between 1986 and 2002.

In addition to soil sampling conducted during removal of the USTs and OWSs, numerous borings were drilled at Sun Garden to collect soil and ground water samples for laboratory analyses; 14 ground water monitoring wells also were installed. The main contaminants of concern (COC) detected in ground water were TPHg, TPHd and BTEX. The monitoring wells



were sampled periodically during the 1990s. The detected COC concentrations in ground water generally revealed a decreasing trend from 1992 to 1998. The analytical data are summarized in the SCVWD closure letters included in the SMP; the closure letters state that the 14 monitoring wells were decommissioned. The closure letters also present a chronological summary of the past work.

Railroad tracks historically have been present east of Sun Garden with spur lines extending on the property. Investigations performed near spur tracks at Sun Garden identified railroad ballast material impacted with arsenic, nickel and lead and to a lesser extent, polychlorinated biphenols (PCBs). The depth of the ballast materials generally ranged from approximately 3 to 5 feet with pockets extending to depths of approximately 7 feet.

#### **4.1.3.2 SMP Implementation Activities**

During grading activities performed in early 2014 for the new development, five Areas of Concern (AOC1 to AOC5; see Figure 3) were encountered that contained odorous or discolored soil and/or underground structures of potential concern associated with previous activities performed at Sun Garden. Approximately 300 cubic yards of impacted soil were over-excavated and off-hauled to a permitted facility. Approximate 50 soil samples were collected for laboratory analyses to document soil quality. Investigation and remediation activities associated with these areas of concern were presented in Cornerstone's Site Assessment Report dated June 24, 2014.

Cornerstone concluded that the potential for significant human health risks in a commercial setting resulting from residual petroleum hydrocarbons appears insignificant, especially upon completion of property redevelopment activities. The residual TPHd and TPHo concentrations do not appear to pose a significant human health risk concern for future commercial redevelopment based on the following: 1) the majority of contamination mass appears present at depth (capillary fringe); 2) the lack of petroleum-based VOC compounds (e.g. benzene); 3) the lack of PAH compounds; and 4) the immobility of medium and heavy range petroleum hydrocarbons in the environment. Cornerstone recommended that the previous regulatory requirement of the SCVWD continue to be followed: *"If this residual contamination is disturbed, [County Health] shall be notified, an appropriate Health and Safety Plan prepared, and additional work may be necessary to reduce the risk of adverse impact due to contamination"*.

## **4.2 ENVIRONMENTAL RECORD SOURCES**

The following additional sources of readily ascertainable public information for the Site also were reviewed during this Phase I ESA.

### **4.2.1 City and County Agency File Review**

During Bureau Veritas' Phase I ESA (July 2015), available files pertaining to 1402 Monterey Road and 1402 South First Street were reviewed at the San Jose Building Department (BD), San Jose Fire Department (FD) and Santa Clara County Department of Environmental Health (DEH). BD records included general building permits from 1973 through 2000 except for a 1983 electrical permit to upgrade the on-Site fuel pump.

FD records included Hazardous Materials Business Plans (HMBP) from 2002 to 2003, a 1999 routine hazardous materials inspection, and 2011 routine fire safety inspection. The following petroleum products or hazardous substances were identified in the HMBP chemical inventory

lists: oil-based paint and stains, paint thinner, acetone, aerosol spray paint and petroleum distillate solvents in the indoor mill room in Building A plus standard janitorial supplies in the rear storage room of this building; all substances listed for Building A plus gasoline, motor oil, hydraulic oil, brake fluid, ethylene glycol coolant and kerosene in Building B. The largest reported containers were 5-gallon containers of gasoline and hydraulic oil stored in Building B. The remaining containers were approximately one gallon or less in size. The chemical inventories also listed retail products in manufacturer's containers stored on shelving in the hardware and building supplies section of Building A, including motor oil and other automotive products, cleaners, aerosol spray paint, pesticides/herbicides and other miscellaneous household or home improvement products containing hazardous substances. Bureau Veritas reported that a DEH representative indicated they had no files pertaining to 1402 Monterey Road and 1402 South First Street.

To review readily available information since July 2015, Cornerstone requested available files pertaining to 1402 Monterey Road and 1402 South First Street at the BD, FD, and DEH. Additionally, we also requested available file information for historical Site addresses presented on Sanborn maps including 1400, 1404, and 1412 Monterey Highway and 1400 East Alma Avenue.

No new BD and FD files (post July 2015) were available for 1402 Monterey Road and 1402 South First Street. Additionally, no records were available for the additional addresses searched. A representative of the DEH indicated that they have no files pertaining to the Site.

#### **4.2.2 Request for Information from Other Agencies**

Cornerstone also contacted the public agencies presented below to obtain readily available public information regarding hazardous pipelines, high volume water pipes (water pipe equal or greater than 12 inches diameter), and air/hazardous facilities within up to an approximate 1,500 foot radius of the Site.

- Bay Area Air Quality Management District (BAAQMD)
- Pacific Gas and Electric (PG&E)
- Santa Clara Valley Water District (SCVWD)
- San Jose Water Company (SJWC)
- State of California Department of Conservation – Division of Oil, Gas, and Geothermal Resources (DOGGR)

Agency responses are summarized in Table 7 and selected copies of information received is included in Appendix D.

**Table 7. Summary of Agency Responses**

Agency Name	Remarks
BAAQMD	<p>A representative from BAAQMD reported five registered facilities within the ¼ mile search radius but none of the five facilities had toxic emissions exceeding the toxic trigger levels. The five facilities are as follows:</p> <ul style="list-style-type: none"> <li>• Lardie &amp; Company, 1261 Alma Court, 0.07 miles</li> <li>• Glencore Recycling, 1695 Monterey Highway, 0.11 miles*</li> <li>• Universal Restoration Services, 1259 Alma Court, 0.06 miles</li> <li>• Y2K Auto Body Repair, 1571 Monterey Road, 0.21 Miles</li> <li>• Sun Garden Chevron, 1418 Monterey Highway, 0.02 miles</li> </ul> <p>*BAAQMD listed Glencore Recycling as being located 0.11 miles from the Site; however, based on our drive-by survey, the listed address of 1695 Monterey Highway is located at a distance greater than 0.25 miles from the Site.</p>
PG&E	<p>A representative from PG&amp;E reported there are no gas transmission pipelines within an approximate 1,500 foot radius of the Site.</p> <p>A representative from PG&amp;E reported there are no electrical transmission lines, 50kV or greater, within 350 feet of the Site.</p>
SCVWD	<p>A representative from the SCVWD reported there are no pipeline easements, high volume water lines, and/or storage tanks within an approximate 1,500 foot radius of the Site.</p>
SJWC	<p>A representative from the SJWC provided an engineering drawing of SJWC facilities within the vicinity of the Site. This drawing extends to at least 1,500 feet south and east of the Site and approximately 1000 feet north and west of the Site.</p> <p>Based on our review of the provided drawing, water pipelines within the search radius varied in size from approximately 8 to 12.75 inches diameter. A 12.75 inch diameter pipeline was shown beneath the concrete curbing and/or sidewalk on the south side of East Alma Avenue.</p>
DOGGR	<p>To evaluate the presence of oil or gas wells on-Site and in the immediate Site vicinity, maps available on-line at the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (<a href="http://www.consrv.ca.gov/dog">http://www.consrv.ca.gov/dog</a>) were reviewed. Review of the available map for the Site area did not show oil or gas wells on-Site or within an approximately 1,500-foot radius of the Site.</p>

#### 4.2.3 National Pipeline Mapping System

*Education Code* Section 17213 prohibits the acquisition of a school site by a school district if the site "contains one or more pipelines, situated underground or aboveground, which carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood."

Cornerstone reviewed readily available public maps at the National Pipeline Mapping System website to help identify potential hazardous pipelines within an approximate 1,500 foot radius of the Site. No such pipelines were identified based on the information reviewed.

#### **4.2.4 Radon**

Elevated levels of radon in indoor air are a result of radon moving into buildings from the soil, either by diffusion or flow due to air pressure differences. The ultimate source of radon is the uranium that is naturally present in rock, soil, and water. Some types of rocks are known to have uranium concentrations greater than others and, consequently, there is an increased chance of elevated radon concentrations in soils and weathered bedrock where they are located. Areas down-slope which received sediments and/or surface and ground water from rock units with above average uranium content also have an increased likelihood of elevated radon concentrations in soil gas. In California, bedrock that can contain above average uranium concentrations includes the Monterey formation, asphaltic rocks, marine phosphatic rocks, granitic rocks, felsic volcanic rocks, and certain metamorphic rocks.

The federal EPA has established an action level of 4 pCi/L, above which the EPA recommends taking action to reduce radon levels in structures. To help local, state, and federal agencies prioritize resources and implement radon-control building codes, the EPA published maps of radon hazards for each county in California ([www.epa.gov/radon/zonemap/california.htm](http://www.epa.gov/radon/zonemap/california.htm)).

The Site is located in Santa Clara County, which is designated by the EPA as Zone 2 with a moderate potential (from 2 to 4 pCi/L). It is important to note that EPA has identified structures with elevated levels of radon in all three zones, and the EPA recommends Site-specific testing in order to determine radon testing at a specific location.

#### **4.2.5 Additional Research**

An online search for information pertaining to the Site revealed that the Southern Lumber business (formerly McAbee Brothers) moved to the Site in 1910. In June 1973, a fire destroyed the buildings in what was described as one of the largest commercial fires in San Jose history. In a little more than a year, the existing warehouse building was constructed and the store reopened. Provided below are historical photographs obtained from [www.southernlumber.com](http://www.southernlumber.com).



Photo 1: View from Alma Avenue after Southern Lumber was remodeled in the late 1940's.



Photo 2: View from Alma Avenue east of Photo 1. Photo is from the mid-1950's.





Photo 3: View of Southern Lumber from western side of Monterey Road prior to the 1960's.



Photo 4: Southern Lumber's "Mill Office" in the early 1920's; fronting Monterey Road.



Photo 5: Southern Lumber's Monterey Road storefront around the 1930's. "Mill Office" in Photo 4 is located to the north.



Photo 6: Photo taken in 1923 from Monterey Road. Note the "Mill Office" (Photo 4) and storefront building (Photo 5) at right.





Photo 7: Southern Lumber burned to the ground in June 1973 in what many veteran firefighters described as "one of the largest commercial fires in San Jose history".

## **SECTION 5: PHYSICAL SETTING**

We reviewed readily available geologic and hydrogeologic information to evaluate the likelihood that chemicals of concern released on a nearby property could pose a significant threat to the Site and/or its intended use.

### **5.1 RECENT USGS TOPOGRAPHIC MAP**

A 1980 USGS 7.5 minute topographic map was reviewed to evaluate the physical setting of the Site. The Site's elevation is approximately 115 feet above mean sea level; topography in the vicinity of the Site slopes downward gently to the northwest, towards the San Francisco Bay.

### **5.2 GEOLOGY AND HYDROGEOLOGY**

#### **5.2.1 Ground Water**

Based on our concurrent soil and ground water quality investigation, ground water was observed in the borings at approximate depths of 11 to 18 feet.

Readily available documents for Sun Garden were reviewed to help evaluate ground water flow at the Site. Although a northerly regional ground water flow direction, following local topography, would be expected, prior data from Sun Garden indicates a south-southwesterly

flow direction. An easterly flow direction also was reported on the southern portion of Sun Garden(1600 Monterey Road).

### **5.2.2 Naturally Occurring Asbestos**

Asbestos occurs naturally in ultramafic rock (such as serpentine). When this material is disturbed in connection with construction or grading, asbestos-containing dust can be generated. Exposure to asbestos can result in health ailments. The DTSC 2004 interim guidance document titled *Naturally Occurring Asbestos (NOA) at School Sites* recommends soil sampling when a proposed school site is located within a 10-mile radius of an NOA geologic formation. Based on our review of geologic maps, the Site is located approximately 1.2 miles from the nearest ultramafic rock outcrop that may contain NOA.

## **SECTION 6: SITE RECONNAISSANCE**

We performed a Site reconnaissance to evaluate current Site conditions and to attempt to identify Site Recognized Environmental Conditions. The results of the reconnaissance are discussed below. Additional Site observations are summarized in Table 8 in Section 6.2. Photographs of the Site are presented in Section 6.2.1.

### **6.1 METHODOLOGY AND LIMITING CONDITIONS**

To observe current Site conditions (readily observable environmental conditions indicative of a significant release of hazardous materials), on Cornerstone staff Kurt M. Soenen, P.E. visited the Site on October 9, 2015, and was accompanied by John Razumuch of Imwalle Properties. Cornerstone staff only observed those areas that were reasonably accessible, safe, and did not require movement of equipment, materials or other objects. Physical obstructions that limited our ability to view the ground surface at the Site included asphalt paved vehicle drives and parking areas, and concrete paved walkways adjacent to buildings.

### **6.2 OBSERVATIONS**

At the time of our Site visit, the Site was developed with three vacant and empty buildings formerly occupied by the Southern Lumber retail store. Building A consisted of a former retail floor space with an adjoining small storage room, retail lumber floor, floor/moulding and door showroom areas, a retail warehouse office, planing mill room wood working shop. Mezzanine-level offices, copy room and wood working museum were formerly located on the west side of the building, and a mezzanine-level break room and deck formerly located on the east side of the building. The centrally located planing/door shop building (Building B) is approximately 7,000 square feet in size and included a former planing mill room, door assembly room and a paint room with enclosed paint booth and a drying room.

At the time of our Site visit, Building C was not accessible; however, the building was later accessed during indoor air sampling activities performed on December 1, 2015. The approximately 10,000 square foot vacant and empty building was formerly used as a storage warehouse.

The remainder of the Site was mostly developed with asphalt pavement drive aisles and parking areas with a landscaping strip behind the sidewalk fronting East Alma Avenue. A PG&E owned pad-mounted transformer was observed within the landscape strip.

Electricity and/or natural gas fuel sources appeared to be used for building heating/cooling purposes. The HVAC system reportedly has been turned off since Southern Lumber vacated the property earlier in August. Potable water appeared to be supplied by the local water service provider. The building presumably is connected to the publically owned sanitary sewer system; no on-Site septic systems were obvious. On-Site storm water catch basins were observed in the parking lot fronting East Alma Avenue and in the courtyard area north of Building B. The catch basins presumably discharge via below ground piping to the City's storm water drainage system in Monterey Highway.

**Table 8. Summary of Readily Observable Site Features**

General Observation	Comments
Aboveground Storage Tanks	Not Observed
Agricultural Wells	Not Observed
Air Emission Control Systems	Not Observed
Boilers	Not Observed
Burning Areas	Not Observed
Chemical Mixing Areas	Not Observed
Chemical Storage Areas	Not Observed
Clean Rooms	Not Observed
Drainage Ditches	Not Observed
Elevators	Not Observed
Emergency Generators	Not Observed
Equipment Maintenance Areas	Not Observed
Fill Placement	Not Observed
Ground Water Monitoring Wells	Not Observed
High Power Transmission Lines	Not Observed
Hoods and Ducting	Not Observed
Hydraulic Lifts	Not Observed
Incinerator	Not Observed
Petroleum Pipelines	Not Observed
Petroleum Wells	Not Observed
Ponds or Streams	Not Observed
Railroad Lines	Not Observed
Row Crops or Orchards	Not Observed
Stockpiles of Soil or Debris	Not Observed
Sumps or Clarifiers	Not Observed
Transformers	Observed as noted above
Underground Storage Tanks	Not Observed
Vehicle Maintenance Areas	Not Observed
Vehicle Wash Areas	Not Observed
Wastewater Neutralization Systems	Not Observed

The comment "Not Observed" does not warrant that these features are not present on-Site; it only indicates that these features were not readily observed during the Site visit.

## 6.2.1 Site Photographs



Photograph 1. View of interior of Building A – facing northeast.



Photograph 2. View of former mill shop inside Building A.



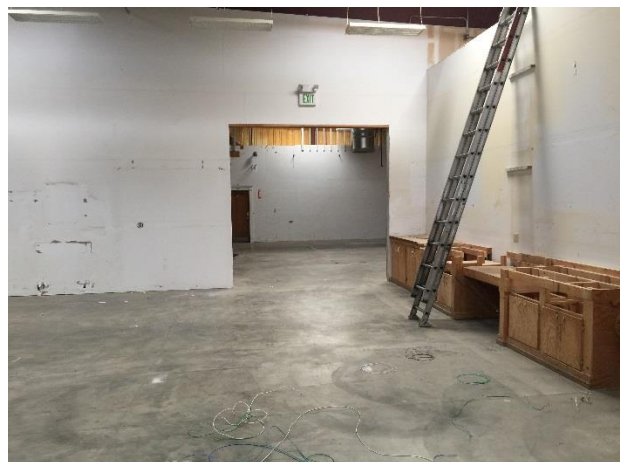
Photograph 3. View of northeast elevation of Building A – facing southwest.



Photograph 4. View of northeast elevation of Building A – facing west.



Photograph 5. View of interior of Building B.



Photograph 6. View of interior Building B.





Photograph 7. View of interior of Building B.



Photograph 8. View of exterior courtyard wall, facing southwest.



Photograph 9. View of Building 3 – facing south.



Photograph 10. View of Building B (right) and Building C (left) – facing east.



Photograph 11. View of exterior parking lot – facing southwest.



Photograph 12. View of exterior parking lot – facing northeast.

### 6.3 DRIVE BY VICINITY SURVEY

Cornerstone staff also conducted a drive-by survey within a radius of approximately ¼ mile from the Site to note the current land use and, to the extent readily observable, note facilities that appeared likely to use, handle, or store significant quantities of hazardous materials. The Site vicinity also was observed for readily apparent high power transmission lines, cell phone towers, pipeline easements, and railroad tracks. This reconnaissance was made from public roadways. Site vicinity observations are summarized in Table 9.

**Table 9. Summary of Readily Observable Nearby Features**

General Observation	Comments
Aboveground Storage Tanks (ASTs)/Chemical Storage Facilities	The adjacent Chevron service station was observed. Gasoline at the station is stored in underground storage tanks (USTs). Additionally, other hazardous materials associated with vehicle maintenance work are presumably present.  An aboveground propane tank (less than 100 gallons) was observed approximately 700 feet northeast of the Site.
Aboveground Water Storage Tanks	Not Observed
Cell Phone Towers	Not Observed
High Power Transmission Lines	Not Observed
Major Roadways	Not Observed
Pipeline Easements	Not Observed. Natural gas and water distribution piping are presumably present below streets.
Railroad Lines	Railroad line was observed northeast of the Site.
Sources of Significant Air Emissions	Not Observed.

Note: The comment "Not Observed" does not warrant that these features are not present in the search area; it only indicates that these features were not readily apparent during the drive-by survey.

## SECTION 7: ENVIRONMENTAL QUESTIONNAIRE AND INTERVIEWS

### 7.1 ENVIRONMENTAL QUESTIONNAIRE / OWNER INTERVIEW

To help obtain information on current and historical Site use and use/storage of hazardous materials on-Site, we provided an environmental questionnaire to John Razamich with Imwalle Development. The questionnaire was not returned to us as of the date of this report.

### 7.2 INTERVIEWS WITH PERSON(S) KNOWLEDGEABLE OF SITE USE

Contact information for persons knowledgeable of existing and prior site uses was not provided to us prior to or at the Site visit.

### 7.3 INTERVIEWS WITH PREVIOUS OWNERS AND OCCUPANTS

Contact information for previous Site owners and occupants was not provided to us. Therefore, interviews with previous Site owners and occupants could not be performed.

## SECTION 8: SOIL, GROUND WATER, AND AIR QUALITY EVALUATION

As part of this study, environmental sampling was performed to evaluate potential impacts to soil and/or ground water quality associated with: 1) the building fire that occurred in June 1973; 2) former rail spurs that extended onto the Site; 3) the former diesel UST removed in 1986; 4) the Site's long history as a lumber storage and retail business; and 5) impacts from potential off-Site releases at Sun Garden and at a former service station to the northwest (currently occupied by Denny's). Additionally, based on the reported elevated benzene concentrations detected in the sub-slab samples collected/analyzed by Bureau Veritas in August 2015, air sampling was performed to assist in evaluating potential impacts to indoor air quality.

### 8.1 INDOOR AND AMBIENT AIR SAMPLING

#### 8.1.1 Building Observations

On December 1, 2015 a Cornerstone representative conducted a walk-through of Building A and Building C to: 1) attempt to identify storage and indoor uses of chemicals or products that may serve as indoor sources of contamination and affect indoor air sampling results; 2) identify potential vapor intrusion pathways based on visual observations and field screening using a PpbRAE 3000 handheld volatile organic compound (VOC) meter, such as cracking in the floor slab, foundation penetrations, joints, plumbing drains, or other vapor-entry points; and 3) attempt to gather information on the HVAC system set up and operation.

The vacant buildings were observed to be mostly empty and the HVAC system reportedly has been turned off for several months. The OVM survey was performed throughout the building, with particular focus on cracks or penetrations in the floor slab where VOCs could potentially enter from the subsurface including in bathrooms, office and break rooms, electrical rooms near a patched cleanout on the floor of Building A, near electrical plates on the floor of Building A, near PVC stubs that appeared to penetrate the slab of Building A (near southeast corner), near sewer vault boxes observed in Building C, and along observed cracks in the floor slab. No VOCs were detected during the OVM survey.

#### 8.1.2 Sample Locations

On December 1, 2015, six indoor air samples (IA-1 to IA-6) were collected from the breathing space at selected locations in Building A and C. Samples IA-1, IA-3 and IA-4 were located in the former showroom of Building A; samples IA-2 and IA-5 were located in separate office rooms on the second level of Building A; and sample IA-6 was located in a central location of Building C.

To evaluate background concentrations of the target compounds in outdoor air, three ambient air samples were collected: sample OA-1 was located on the rooftop of Building A near the southeast corner; OA-2 was located at corner of the Site near the intersection of East Alma Avenue and Monterey Highway; and OA-3 was located in central area of the courtyard.

Approximate indoor and outdoor sampling locations are shown on Figure 4.



### **8.1.3 Air Sample Collection and Analyses**

The six indoor air samples and three outdoor air samples were collected using 24-hour flow controllers. As discussed, the HVAC system had been turned off for several months and the doors and windows remained closed during sampling. Canister pressures were measured before and after the monitoring period, and were verified on receipt at the laboratory. The samples were submitted under standard chain of custody to Eurofins Airtoxics, for analysis of VOCs using EPA Method TO-15 GC/MS analysis by selective ion monitoring (SIM) mode for the highest sensitivity analysis. Eurofins Airtoxics is an accredited laboratory in California and several other states under the National Environmental Laboratory Accreditation Program (NELAP).

At the time of both sample setup and takedown, the differential pressure inside versus outside the building was recorded using an Energy Conservatory DG-700 micro-manometer differential pressure gauge with a resolution of 0.0001 inches of water column or 0.025 Pascals. In general, the measured values indicate the buildings were under a slight negative pressure compared to outdoor ambient air. The differential pressure readings measured in Building A ranged from -0.6 to -0.2 Pascals. In Building C, readings ranged from -1.52 to +0.2 Pascals.

### **8.1.4 Data Quality Assurance**

Data quality for the air samples was evaluated by implementing quality assurance procedures and review of analytical data. The following is a summary of the data quality review:

- Canister sampling trains were individually certified by the laboratory for low level SIM analyses;
- Samples were analyzed within the required holding times for the requested analyses;
- The results of the laboratory control samples were within acceptable ranges; and
- The canister vacuum pressures following the sampling period ranged from 4.7 to 5.2 inches of mercury indicating the sampled air generally was collected over the targeted 24-hour sampling interval.

## **8.2 SOIL AND GROUND WATER SAMPLING**

### **8.2.1 Subsurface Investigation**

On December 16 and 17, 2015 our field geologist directed a subsurface investigation, continuously logged in general accordance with the Unified Soil Classification System (ASTM D-2487), and sampled nine exploratory borings (EB-1 through EB-9) to depths ranging from approximately 5 feet to 20 feet. Borings EB-1, EB-2 and EB-3 were located near the former rail spurs; borings EB-3 and EB-6 were located within the footprint of former structures that were either demolished or destroyed by the 1973 fire; boring EB-4 was located near the former diesel UST; and borings EB-7 and EB-8 were located inside Building A and within the footprint of the former structure that burned down in 1973. The approximate boring locations are shown on Figure 4. Borings logs are included in Appendix F.

The borings were advanced using limited access direct push technology. The Dual Wall Sampling System was used to help reduce cross contamination between sampling intervals.

The Dual Wall Sampler was comprised of two main components: an exterior steel casing and an inner sample barrel (Single Wall Sampler). The outer casing had a 2-inch outer diameter (OD) and a 1.5-inch inner diameter (ID). The sample barrel (Single Wall Sampler) was 5 feet in length with a 1.375-inch outside diameter (OD) and a 1-inch inner diameter (ID). The Dual Wall sample barrel was loaded with a 5-foot acetate liner and installed inside the outer casing. The outer drive casing and inner sample barrel were then hydraulically pushed to a depth of approximately 5 feet. At some boring locations, shorter drive intervals of approximately 2½ feet were used. As these tools were advanced, the inner sampling barrel collected the soil core sample. This sampler was then retrieved while the outer casing remained in place, protecting the integrity of the hole. A new sampler was lowered into place and advanced another 5 feet to collect the next soil sample. This process continued until a desired depth was reached.

Upon completion, the borings were backfilled with neat cement from the base of the boring to the surface. The small volume of drill cuttings and rinse water were placed in an on-Site landscape area.

### **8.2.2 Soil and Ground Water Sample Collection and Analyses**

Soil samples were collected in acetate liners from borings EB-1 through EB-9 for laboratory analyses. Ends of soil samples for laboratory analyses were covered in a Teflon film, fitted with plastic end caps, and labeled with a unique sample identification number. For VOC analyses, approximately 5 grams of soil was collected from selected liners using the Core-N-One™ Sampler in general accordance with EPA Method 5035. The coring body of the Core-N-One™ Sampler was pushed into a freshly exposed soil surface, filling the sampling chamber. Any excess soil extruding from the sample chamber was carefully removed by trimming away the excess with a clean field blade. A paper towel was used to wipe the sampler head to remove excess soil from the exterior so the cap can be tightly attached. The cap was gently treaded onto place on the sampling chamber, taking care to properly seat the sealing gasket on the chamber. Samples for laboratory analyses were placed in an ice-chilled cooler and transported to a state-certified laboratory with chain of custody documentation. Samples collected in the Core N' One capsules were extracted and preserved by the laboratory within approximately 48 hours of sample collection.

To evaluate ground water quality, ground water grab samples were collected from borings EB-4, EB-5, EB-6, EB-7, EB-8, and EB-9. Ground water was encountered at approximate depths of 11 to 18 feet. At each location, ¾-inch diameter PVC casing with slots in the lower portion was lowered into the hydraulic coring casing. The coring casing was removed from the borehole and the PVC remained. Polyethylene tubing equipped with a check valve was lowered into the PVC casing to collect the water sample. The order of sample container filling was from most volatile to least volatile compounds. Ground water grab samples were collected in appropriate containers and labeled with a unique sample ID, project number, date, and the time of collection. Samples were placed in an ice-chilled cooler and transported to a state-certified laboratory with chain of custody documentation.

The soil and grab ground water samples were selectively analyzed for various organic and inorganic compounds including California Assessment Manual (CAM 17) metals (EPA Test Method 6000/7000), organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs) (EPA Test Method 8081/8082), volatile organic compounds (VOCs) and total petroleum hydrocarbons in the gasoline range (TPHg) (EPA Test Method 8260B), total petroleum hydrocarbons in the diesel (TPHd) and oil-range (TPHo) with a silica gel cleanup (EPA Test Method 8015M), and/or semi-volatile organic compounds (SVOCs) (EPA Test Method 8270C).

Selected soil samples were also analyzed for asbestos using the California Air Resources Board (CARB) 435 preparation method and Polarized Light Microscopy (PLM) Methods with a reporting limit of 0.25 percent. Table 10 presents a summary of the analyses selected for the soil and grab ground water samples.

**Table 10. Soil and Ground Water Sampling Plan**

Boring ID	Location	Sample Depth (feet)	Media	Laboratory Analyses									
				OCPs	CAM 17 Metals	Chromium, Copper, and Arsenic	Arsenic and Lead	Arsenic	Cobalt and Nickel	VOCs & TPHg	TPHd/o	PCBs	SVOCs
EB-1	Former Rail Spur	1	Fill Soil	X	X						X	X	
		2					X						
		4	Native Soil					X					
EB-2	Former Rail Spur	1	Fill Soil		X						X	X	
		2					X						
EB-3	Former Structure Footprint	1 1/2	Fill Soil			X							X
		2	Native Soil				X						
		4						X					
EB-4	Near Former UST	1	Fill Soil	X	X								
		3				X							X
		4	Native Soil					X					
		11								X	X		
		15-20	Water							X	X		X
EB-5	Former Rail Spur	1	Fill Soil		X							X	
		2					X						
		11	Native Soil							X	X		
		15-20	Water							X			X
EB-6	Former Structure Footprint	1	Fill Soil	X	X						X		
		2				X			X		X		X
		3	Native Soil						X				
		12								X	X		
		15-20	Water							X	X		X
EB-7	Inside Main Building	1	Fill Soil	X	X								
		2				X							X
		6.5	Native Soil							X	X		
		15-20	Water							X	X		X
EB-8	Inside Main Building	1	Fill Soil	X							X		
		2				X							
		16	Native Soil							X	X		X
		15-20	Water							X	X		X
EB-9	Near Alma and Monterey	16	Native Soil							X	X		X
		15-20	Water							X	X		X

### 8.3 ANALYTICAL RESULTS

Data summary tables and analytical data sheets (Appendix G) are attached to this report. The soil and air sampling results were compared to the DTSC recommended Screening Levels (SLs) presented in DTSC Office of Human and Ecological Risk (HERO) guidance document *Human Health Risk Assessment (HHRA) Note 3* dated October 2015 (HERO, 2015). If an SL is not established, the soil results were compared to Regional Screening Levels (RSLs) established by the USEPA Region 9 (USEPA, October 2015). For detected chemicals for which SLs and RSLs have not been established, direct exposure Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (December, 2013) were used for comparison. The results were also compared to Total Threshold Limit Concentration (TTLC) values established by the State of California (Title 26, California Code of Regulations) for hazardous waste designation.

Naturally occurring background concentrations of metals, such as arsenic, in soil may exceed their respective screening levels. CalEPA generally does not require cleanup of soil to below background concentrations. Thus, for the metals detected, these data also were compared to regional published background concentrations (Scott, 1991; Bradford, 1996; LBNL, 2009; and Duverge, 2011).

Asbestos results were compared to the DTSC School Property Evaluation and Cleanup Division soil screening level of 0.01 percent and the Bay Area Air Quality Management District (BAAQMD) threshold value of 0.25 percent.

Ground water analytical results were compared to drinking water maximum contaminant levels (MCLs) established by the State Water Resources Control Board (SWRCB, 2015). ESLs are used for detected chemicals for which MCLs have not been established.

## SECTION 9: RAIL SAFETY STUDY

Due to the proximity of the adjacent railroad line, a Rail Safety Study was prepared for the Site. The Rail Safety Study identifies rail lines within a 1,500-foot radius of the proposed school Site and evaluates the actual or potential endangerment to school occupants from an incident (derailment or other accident) that could occur along the rail lines. A copy of the Rail Safety Study is included in Appendix H.

## SECTION 10: FINDINGS, OPINIONS AND CONCLUSIONS (WITH RECOMMENDATIONS)

Cornerstone performed this Phase I ESA in general accordance to ASTM E1527-13 to support Downtown College Pre Facilities 1, LLC in evaluation of Recognized Environmental Conditions. Our findings, opinions and conclusions are summarized below.

### 10.1 HISTORICAL SITE USAGE

Based on the information obtained during this study, the approximately 3.38-acre Site was occupied by the Southern Lumber Company since the early 1900's until 2015 for use as retail sale of lumber products and associated materials. Through at least 1950, the Site was occupied predominately by lumber storage and planing and moulding buildings and was converted to a

retail lumberyard by at least 1961. In June 1973, the buildings were burned to the ground due to an electrical fire.

The current retail warehouse building (referred to by others as Building A) was built after the fire, incorporating a small portion of the original retail building, and the facility reopened in 1974. The centrally located former planing mill/door shop building (Building B) was built in the late 1970's. The approximately 7,000 square foot building included a planing mill room, door assembly room and a paint room with enclosed paint booth and a drying room. A 10,000-square-foot storage warehouse (Building C) is located on the east side of the Site and included an asphalt-paved central yard area enclosed by concrete-block wall and iron gates. This building was constructed in approximately 1999. In 2015 Southern Lumber closed their business and vacated the property by September 2015. The buildings have remained vacant since that time.

## **10.2 CHEMICAL STORAGE AND USE**

Based on the Bureau Veritas Phase I ESA report, chemical storage and use associated with the former Southern Lumber business included various retail products and small quantities of hazardous materials stored in single flammable storage cabinets in the former planing mill room in Building A and paint room in Building B. The cabinets included small containers, typically 1 gallon or less, of petroleum distillate-based stains, paints, and solvents, acetone, denatured alcohol and aerosol spray paints and petroleum distillate solvents. A few small containers of motor oil, gear oil and other petroleum products were also observed on open shelving in the planing mill room of Building B.

Retail products in manufacturer's containers were observed on shelving in the western portion of Building B. Most products have been removed from the shelves since the store has closed, but remnant products included small quantities of motor oil and other automotive products, cleaners, aerosol spray paint, pesticides/herbicides and other miscellaneous household or home improvement products containing hazardous substances. Products in retail containers were typically one gallon or less in volume with the exception of some paint products in 5-gallon containers, no bulk storage of hazardous substances was observed.

Standard janitorial cleaners were also present in the janitor's closet located in storage room on the west side of Building A.

## **10.3 FORMER UST**

On October 14, 1986 a 2,000-gallon diesel UST was removed from the Site. The UST was reportedly in good condition with no visible holes. Laboratory analysis of the soil sample collected at the base of the tank excavation following its removal detected less than 10 mg/kg of TPHd.

## **10.4 SOIL QUALITY**

Laboratory analyses of the soil samples collected during Cornerstone's investigation detected arsenic concentrations above both its residential (unrestricted use) screening level and typical regional natural background concentration. TPHd and TPHo concentrations also were detected above the residential ESL for odor/nuisance concerns but less than the ESL for direct exposure human health concerns. Except for one location (EB-3), the arsenic and petroleum impacted soil

appears limited to portions of the fill that was observed in the upper approximate 2 to 4 feet of soil. The fill consists of gravel and sand with varying amounts of clay; the underlying native soil is a lean clay. At location EB-3, arsenic was detected at 160 mg/kg in the soil sample collected near the fill and native soil interface at approximately 1½ to 2 feet. A deeper soil sample collected from 3½ to 4 feet contained an arsenic concentration of 6.4 mg/kg, which is typical of natural background. Laterally, the greatest arsenic and petroleum hydrocarbon concentrations on the eastern portion of the Site.

The source of the arsenic and petroleum hydrocarbon impacted soil is not known but likely is associated with historical activities performed near the former rail spurs and/or at the adjacent former Union Pacific railroad right-of-way. As discussed in Section 4.1.3.1, arsenic and petroleum hydrocarbons also were contaminants of concern at Sun Garden, reportedly related to the former adjacent railroad right-of-way. Normal grading activities associated with prior Site development could have spread the impacted soil to other portions of the Site.

In addition to arsenic and petroleum hydrocarbons, the specialized asbestos laboratory reported chrysotile asbestos fibers in 2 of 3 fill samples at concentrations of 0.25 percent and 0.50 percent, respectively. These concentrations meet or exceed the California Air Resources Control Board (CARB) regulatory threshold of 0.25 percent. Additionally, in the third sample, the laboratory noted that asbestos was observed in the non-counted portion of the soil sample. The source of the asbestos is not known but likely is associated with the naturally occurring asbestos (NOA) in the imported fill and/or possible asbestos-containing building materials related to the 1973 fire.

As shown in Table 1, elevated concentrations of other metals including chromium, nickel, and cobalt also were detected in some of the fill samples collected at the Site; however, the reported concentrations may be considered natural background. High concentrations of these metals are more common in ultramafic rocks like serpentinite; asbestos occurs naturally in ultramafic rock.

Because the Site is capped by the existing development, risk to human health from the shallow impacted soil is significantly reduced. If the planned school development includes landscape and/or other softscape features, we recommend evaluating the extent of impact and over-excavating and disposing the impacted soil that is present in these areas. Confirmation soil sampling should be performed to confirm the remaining in-place soil does not exceed residential screening levels and “clean” imported fill should be used to backfill the excavations.

Based on our experience, the elevated levels of arsenic and nickel may contain soluble concentrations that exceed its Soluble Threshold Limit Concentration (STLC), which defines a waste as hazardous in California. If excess excavated soil generated during Site development requires off-haul, there is a potential this soil will be classified as a hazardous waste and thus require disposal at a Class I hazardous landfill. Soil planned for off-haul will need to be properly characterized and profiled prior to off-haul.

Information reviewed by CARB has shown that activities associated with construction grading in areas known to have soil with asbestos can result in elevated levels of airborne asbestos. The threat posed by the disturbance of these materials during such activities can be reduced and/or minimized through the use of dust mitigation measures that address specific emission sources, such as track-out onto paved public roads, active storage piles, inactive disturbed surface areas and storage piles, traffic on unpaved on-site roads, earthmoving activities, off-site transport of materials, and post-project stabilization of disturbed soil surfaces. BAAQMD requires project sites that contain greater than 0.25 percent asbestos have an Asbestos Dust Mitigation Plan



(ADMP). For project sites greater than 1 acre in size, the ADMP is required to be submitted to BAAQMD for review and comment.

We recommend preparing a Risk Management Plan (RMP) to establish appropriate practices to manage the impacted soil both during construction and post-construction. The RMP should include the following key components:

- Protocols for the excavation and disposal of impacted soil in planned softscape areas;
- Procedures to follow when the hardscape “cap” is breached and underlying soil is exposed and/or disturbed;
- A long-term operation and maintenance plan to confirm the integrity of the “cap”;
- Protocols to evaluate the quality of soil suspected of being contaminated so that appropriate mitigation, disposal or reuse alternatives, if necessary, can be determined.
- Health and Safety Plan (HASP) presenting worker training requirements, health and safety measures and soil handling procedures such that field activities can be conducted in a safe manner;
- Site-specific ADMP specifying dust mitigation practices to be implemented during planned construction, excavation and grading activities.

## **10.5 GROUND WATER QUALITY**

As shown on Table 4, laboratory analyses of the ground water samples detected low concentrations of volatile compounds 1,1-DCA, cis-1,2-DCE, and/or TCE in the three grab ground water samples collected from the western portion of the Site. Except for TCE detected in the sample collected from the boring near the corner of Monterey Highway and East Alma Avenue (EB-9), none of the detected VOCs exceeded their respective drinking water MCL. No VOCs were detected in the other three grab samples collected from the eastern portion of the site. Additionally, petroleum hydrocarbons and semi-VOCs were not detected in the six grab ground water samples.

Based on the information obtained during this study, the source of the detected VOCs is not known but likely is associated with impacted ground water that has migrated beneath the property from off-Site releases. As discussed in Section 10.6, the relatively low concentrations of VOCs in ground water do not appear to pose a significant vapor intrusion risk at the Site.

## **10.6 AIR QUALITY**

To evaluate indoor air quality and potential vapor intrusion concerns, our investigation included collection and analyses of six indoor air samples and three outdoor air samples. As shown in Table 5, several VOCs were detected in the samples; however, none exceeded their respective residential screening level except for benzene, carbon tetrachloride, chloroform, and ethylbenzene. Similar concentrations of these VOCs were consistently detected in both the indoor and outdoor samples indicating the source of the VOC detections likely is due to outdoor ambient air entering the building.



Based on the indoor air data, the likelihood that the VOC impacted ground water beneath the western portion of the Site could pose a significant vapor intrusion risk and adversely impact air quality inside the building appears low. The greater concern appears to be the intrusion of outdoor ambient air into the buildings. To help limit outdoor air intrusion, and provide added protection against the migration of subsurface vapors, we recommend operating the building cooling/heating ventilation systems under positive pressure. We also recommend all cracks and penetrations in the floor slabs be properly sealed.

## **10.7 IMPORTED SOIL**

If the planned development will require importing soil for Site grading, we recommend documenting the source and quality of imported soil. The DTSC's October 2001 Clean Fill Advisory (or latest version) provides useful guidance on evaluating imported fill.

## **10.8 POTENTIAL ENVIRONMENTAL CONCERNS WITHIN THE SITE VICINITY**

### **10.8.1 Tanks, Pipelines, and Facilities that Handle Hazardous Materials**

The California Code of Regulations, Title 5, Section 14010(h) indicates that a proposed school *"shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission."* No nearby hazardous substance pipelines, or large above ground fuel storage tanks were identified during this study. Additionally, a representative from PG&E reported there were no high pressure gas transmission pipelines within an approximate 1,500 foot radius of the Site.

An aboveground propane tank (less than 100 gallons) is located approximately 700 feet northeast of the Site. Due to its distance from the Site and the presence of a large commercial warehouse building between the Site and the tank, the likelihood the tank could significantly impact the Site during an accidental catastrophic release appears low.

During this study, we also requested that BAAQMD provide a list of facilities within an approximate ¼-mile radius of the Site that had hazardous air emissions in 2014. Four facilities were identified by BAAQMD, however, based on 2014 emissions data, none of the facilities had toxic emissions exceeding the BAAQMD toxic trigger levels.

The Sun Garden Chevron station located adjacent and southwest of the Site at 1418 Monterey Highway was one of the facilities reported by the BAAQMD. This business appears most likely to impact the Site in the event of a catastrophic accidental release. A significant impact at the Site is possible in the unlikely event of a large bulk release of gasoline during UST refilling operations at the service station. Fuel deliverers typically are trained, however, to follow the industry standard practices for tank filling (API recommended Practice 1007, "Loading and Unloading of MC306 DOT 406 Cargo Tank Motor Vehicles" and NFPA 385 "Standard for Tank Vehicles for Flammable and Combustible Fuels"). In our opinion, based on the large number of daily fuel deliveries throughout the Bay Area (and other locations), the lack of readily available information concerning releases of this nature occurring during filling operations, and the level of training and procedural requirements for gasoline deliveries, the likelihood of a large fuel release during UST filling operations should be classified as improbable. To help mitigate potential risks to Site occupants, we recommend that a Site Safety Plan/Emergency Preparedness Plan be prepared.

### **10.8.2 Railroad Tracks**

The *California Code of Regulations, Title 5, Section 14010(d)*, established the following regulations pertaining to proximity to railroads: *If the proposed site is within 1,500 feet of a railroad track easement, a safety study shall be done by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track, need for sound or safety barriers, need for pedestrian and vehicle safeguards at railroad crossing, presence of high pressure gas lines near the tracks that could rupture in the event of a derailment, preparation of an evacuation plan. In addition to the analysis, possible and reasonable mitigation measures must be identified.*

Due to the Site's proximity to the adjacent rail line, a Rail Safety Study was prepared and is included in Appendix H. No mitigation measures were identified in the report.

### **10.8.3 Water Pipelines and Storage Tanks**

CDE requires that high-volume water lines (defined as greater than or equal to 12 inches diameter) and tanks be evaluated for potential flooding and subterranean erosion concerns at proposed school facilities. A large leak or rupture of a high-volume water line or tank will release a large quantity of water in a short time that could potentially flood adjacent areas in its drainage zone, which may involve a school campus.

A 12.75 inch diameter water pipeline reportedly is located within the right-of-way of East Alma Avenue, adjacent to the Site and beneath the concrete curbing and/or sidewalk. If a large leak or rupture were to occur, the concrete curbing in East Alma Avenue and storm water collection and drainage system in the on-Site parking lot and drive aisle likely would serve to collect the runoff and prevent significant flooding at the Site. For a higher level of protection, we recommend the school's emergency response plan include measures to address possible flooding from an accidental catastrophic water release.

### **10.8.4 Power Transmission Lines**

Title 5 Section 14010(c) of the California Code of Regulations requires that proposed school facilities meet minimum setback requirements (ranging from 100 to 350 feet) from all power transmission lines rated at 50 kilovolts (kV) and above. No such power transmission lines were identified.

### **10.8.5 Proximity to Major Roadways and Noise**

The California Code of Regulations, Title 5, Section 14010(e) indicates that a proposed school "shall not be adjacent to a road or freeway that any site-related traffic and sound level studies have determined will have safety problems or sound levels which adversely affect the educational program." No highways were identified within the 1,500 foot search radius.

## **10.9 ASBESTOS CONTAINING BUILDING MATERIALS (ACBMS)**

Due to the age of the on-Site structures, building materials may contain asbestos. If demolition, renovation, or re-roofing of the building is planned, an asbestos survey is required by local authorities and/or National Emissions Standards for Hazardous Air Pollutants (NESHAP)

guidelines. NESHAP guidelines require the removal of potentially friable ACBMs prior to building demolition or renovation that may disturb the ACBM.

#### **10.10 LEAD-BASED PAINT**

The Consumer Product Safety Commission banned the use of lead as an additive in paint in 1978. Based on the age of the building, lead-based paint may be present. If demolition is planned, the removal of lead-based paint isn't required if it is bonded to the building materials. However, if the lead-based paint is flaking, peeling, or blistering, it should be removed prior to demolition. In either case, applicable OSHA regulations must be followed; these include requirements for worker training, air monitoring and dust control, among others. Any debris or soil containing lead must be disposed appropriately.

#### **10.11 SCHOOL SITE REGULATORY AGENCY ENVIRONMENTAL REVIEW AND APPROVAL PROCESS**

The DTSC has established a process for evaluation of environmental conditions at school sites. The process is intended for schools that receive state funding for construction. We recommend forwarding this report to DTSC's School Property Evaluation and Cleanup Division for their review and approval if DCP is considering state funding for planned construction/improvement projects.

#### **10.12 DATA GAPS**

ASTM Standard Designation E 1527-13 requires the Environmental Professional to comment on significant data gaps that affect our ability to identify Recognized Environmental Conditions. A data gap is a lack of or inability to obtain information required by ASTM Standard Designation E 1527-13 despite good faith efforts by the Environmental Professional to gather such information. A data gap by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. The following data gaps were identified:

- Contact information for the former occupants and owners of the Site was not provided to us. Thus, former occupants and owners were not interviewed during this study. The general environmental setting of the Site appears to have been established based on the information reviewed from other data sources. We do not consider this data gap to be significant.
- The environmental questionnaire provided for completion by the Site owner was not returned to us as of the date of this report. The general environmental setting of the Site appears to have been established based on the information reviewed from other data sources. We do not consider this data gap to be significant.

#### **10.13 DATA FAILURES**

As described by ASTM Standard Designation E 1527-13, a data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the historical research objectives have not been met. Data failures are not uncommon when attempting to identify the use of a Site at five year intervals back to the first use or to 1940 (whichever is earlier). ASTM Standard Designation E 1527-13 requires the Environmental Professional to comment on the significance of data failures and whether the data failure affects our ability to identify Recognized Environmental Conditions. A data failure

by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. No significant data failures were identified during this Phase I ESA.

## 10.14 RECOGNIZED ENVIRONMENTAL CONDITIONS

Cornerstone has performed a Phase I ESA in general conformance with the scope and limitations of ASTM E 1527-13 of 1402 Monterey Highway in San Jose, California. This assessment identified the following Recognized Environmental Conditions.

- Metals and petroleum hydrocarbons were detected in the soil samples at concentrations that exceed unrestricted use environmental screening levels. The source of the impacted soil is not known but likely is associated with one or more of the following: historical activities performed near the former on-Site rail spurs and/or off-Site and adjacent Union Pacific railroad right-of-way; fill that was imported to the Site; and/or residual impacts relating to the 1973 fire. The impacted soil will require special handling and/or management during redevelopment.
- The chlorinated solvent TCE was detected on 1 of 6 grab ground water samples at a concentration that exceeds its drinking water MCL. The extent of TCE-impacted ground water appears limited to the western corner of the Site. The source of the contamination is not known but likely is associated with an off-Site release that has migrated in ground water beneath the Site.
- Several VOCs were detected in the indoor air samples at concentrations that exceed unrestricted use environmental screening levels. The source of these VOCs appears to be outdoor ambient air migrating into the building.

Although the occurrence of asbestos in selected soil samples does not appear to meet the definition of a REC, the elevated concentrations are an environmental concern and mitigation measures will be required during construction.

This assessment did not identify Controlled<sup>3</sup> or Historical<sup>4</sup> Recognized Environmental Conditions.

## SECTION 11: LIMITATIONS

Cornerstone performed this Phase I ESA to support DCP in evaluation of Recognized Environmental Conditions associated with the Site. DCP understands that no Phase I ESA can wholly eliminate uncertainty regarding the potential for Recognized Environmental Conditions to be present at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions. DCP understands that the extent of information obtained is based on the reasonable limits of time and budgetary constraints.

---

<sup>3</sup> A Recognized Environmental Condition that has been addressed to the satisfaction of the applicable regulatory agency with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls or restrictions.

<sup>4</sup> A past Recognized Environmental Condition has been addressed to the satisfaction of the applicable regulatory agency or meeting of unrestricted use criteria established by the applicable regulatory agency without subjecting the Site to required controls or restrictions.

Findings, opinions, conclusions and recommendations presented in this report are based on readily available information, conditions readily observed at the time of the Site visit, and/or information readily identified by the interviews and/or the records review process. Phase I ESAs are inherently limited because findings are developed based on information obtained from a non-intrusive Site evaluation. Cornerstone does not accept liability for deficiencies, errors, or misstatements that have resulted from inaccuracies in the publicly available information or from interviews of persons knowledgeable of Site use. In addition, publicly available information and field observations often cannot affirm the presence of Recognized Environmental Conditions; there is a possibility that such conditions exist. If a greater degree of confidence is desired, soil, ground water, soil vapor and/or air samples should be collected by Cornerstone and analyzed by a state-certified laboratory to establish a more reliable assessment of environmental conditions.

Cornerstone acquired an environmental database of selected publicly available information for the general area of the Site. Cornerstone cannot verify the accuracy or completeness of the database report, nor is Cornerstone obligated to identify mistakes or insufficiencies in the information provided (ASTM E 1527-13, Section 8.1.3). Due to inadequate address information, the environmental database may have mapped several facilities inaccurately or could not map the facilities. Releases from these facilities, if nearby, could impact the Site.

DCP provided Cornerstone environmental documents prepared by others. DCP understands that Cornerstone reviewed and relied on the information presented in these reports and cannot be responsible for their accuracy.

Cornerstone performed this investigation to support DCP in evaluation of soil, ground water and air quality at the Site. DCP understands that the extent of soil, ground water and air data obtained is based on the reasonable limits of time and budgetary constraints. In addition, the chemical information presented in this report can change over time and is only valid at the time of this investigation and for the locations sampled.

This report, an instrument of professional service, was prepared for the sole use of DCP and may not be reproduced or distributed without written authorization from Cornerstone. It is valid for 180 days. An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

## **SECTION 12: REFERENCES**

Bradford, et.al. March 1996. *Background Concentrations of Trace and Major Elements in California Soils*. Kearney Foundation Special Report.

DTSC, Office of Human and Ecological Risk (HERO). October 2015. *HERO HHRA Note Number 3*.

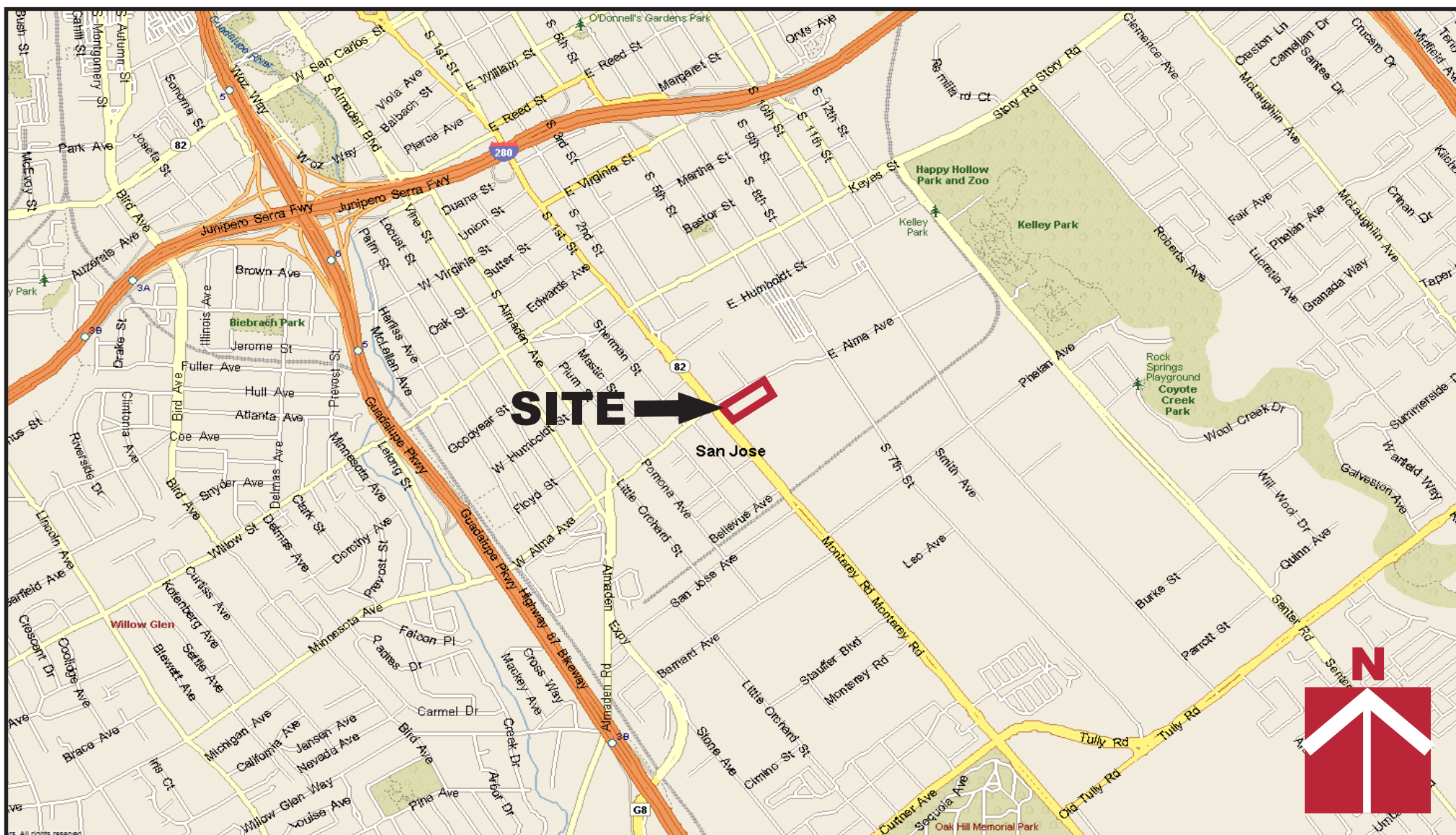
Duverge, Dylan Jacques. December 2011. *Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region*.

San Francisco Bay, Regional Water Quality Control Board. Revised December 2013.  
Environmental Screening Levels.  
<http://www.waterboards.ca.gov/sanfranciscobay/water/chemicalcontaminants.shtml/>

Scott, Christina M. 1991. *Background Metal Concentrations in Soils in Northern Santa Clara County, California*.

U.S. EPA. Revised November 2015. *Regional Screening Level (RSL) Summary Table*.  
<http://www.epa.gov/region9/superfund/prg/>





**CORNERSTONE  
EARTH GROUP**

### Vicinity Map

**DCP Alma  
1402 Monterey Highway  
San Jose, CA**

Project Number

687-2-1

Figure Number

Figure 1

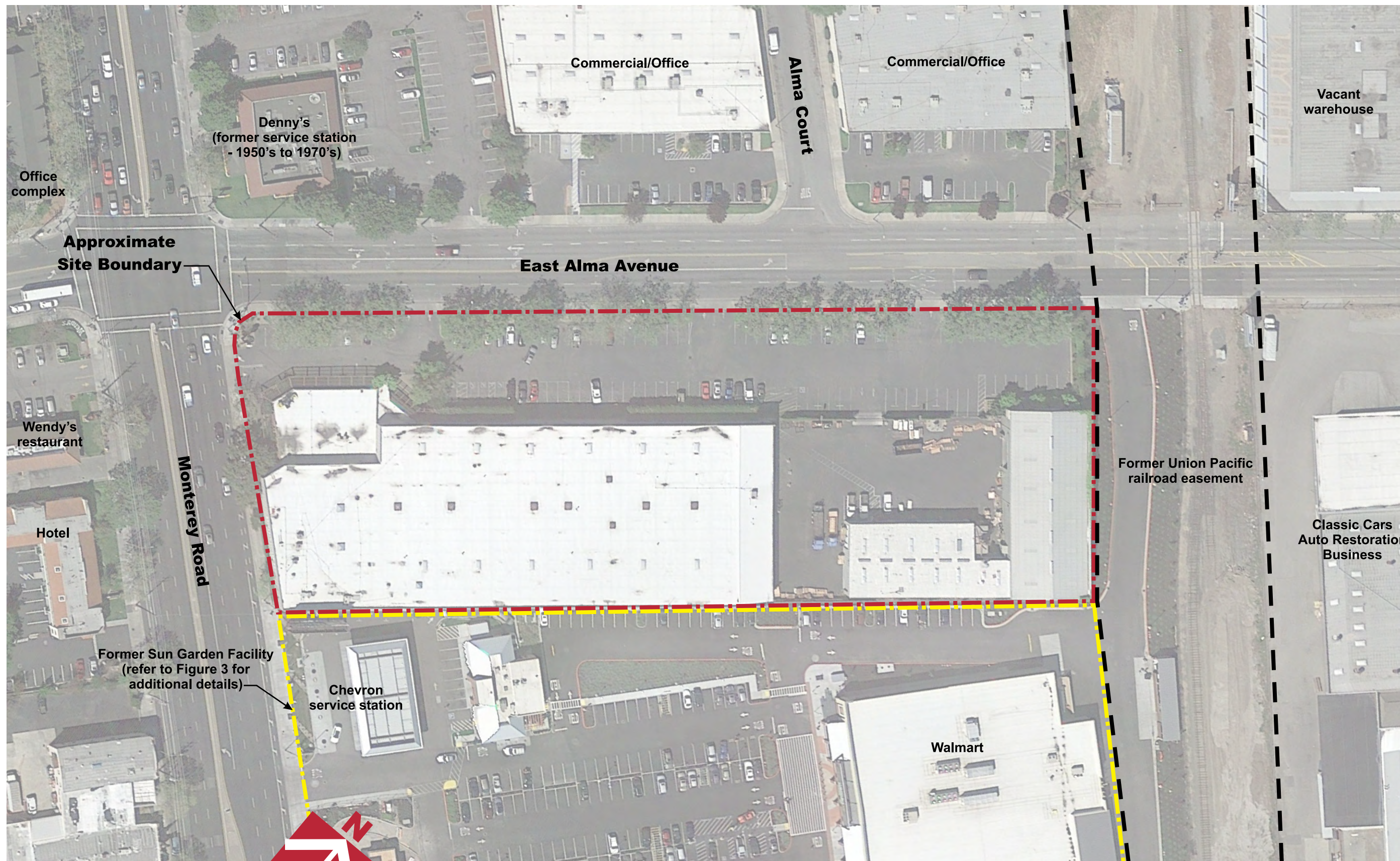
Date

October 2015

Drawn By

RRN





0 80 160  
APPROXIMATE SCALE (FEET)



**CORNERSTONE**  
**EARTH GROUP**

Site Plan

DCP Alma  
1402 Monterey Highway  
San Jose, CA

Project Number

687-2-1

Figure Number

Figure 2

Date

October 2015

Drawn By

RRN






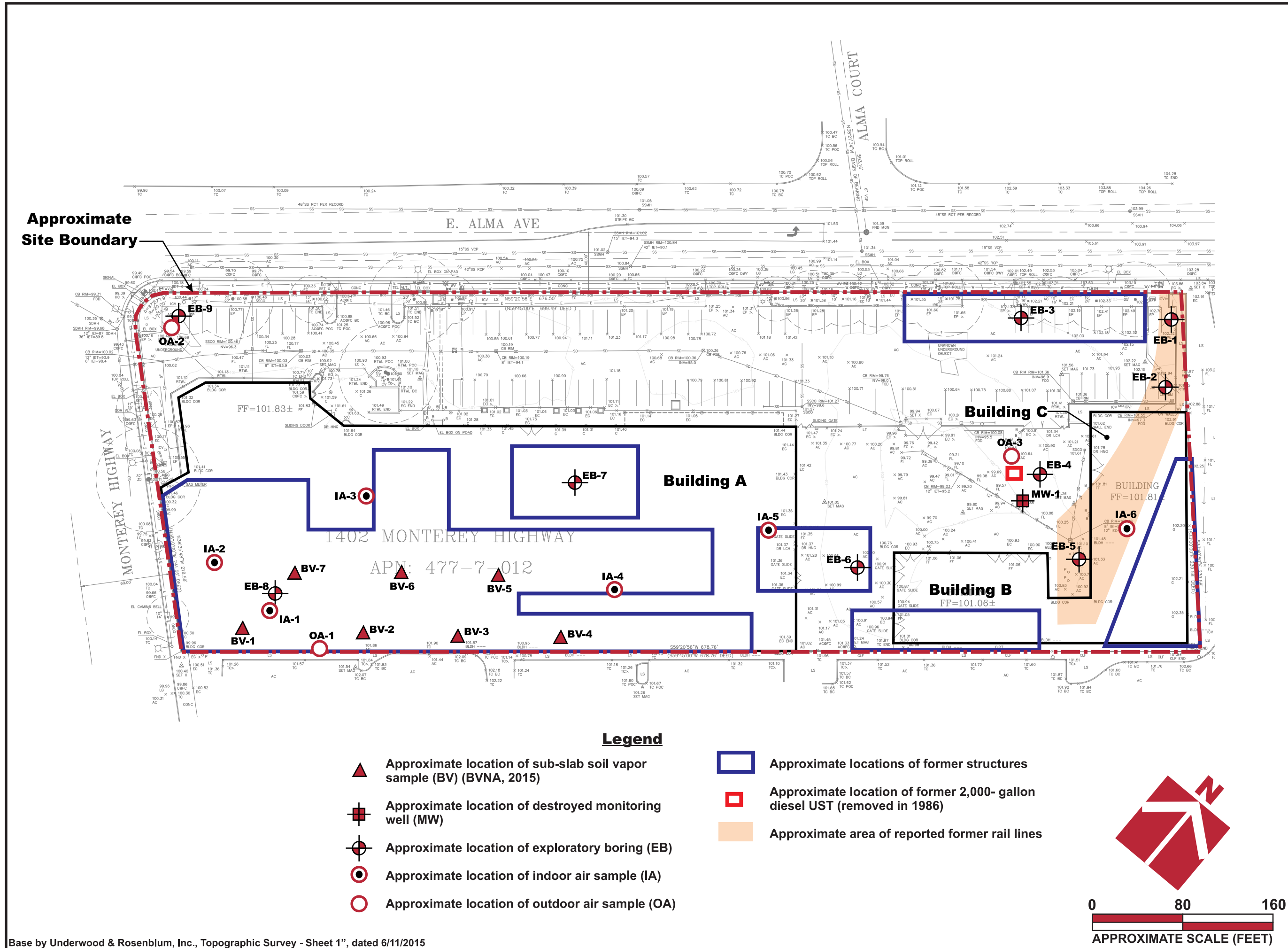
- #1 500 gallon gasoline UST removed 07/1989
- #2 500 gallon waste oil UST removed 07/1989
- #3 8000 gallon fuel oil UST removed 12/1997
- #4 300 gallon unknown fuel UST and OWS removed 12/1997
- #5 Two 5,000 gallon fuel oil USTs removed 07/2002
- #6 Five 1,200 gallon diesel and one 1,200 gallon gasoline USTs removed 01/1991

**Legend**  
 Approximate location of former UST excavation



Project Number 687-2-1	Former Sun Garden Location Map	
	DCP Alma 1402 Monterey Highway San Jose, CA	
Figure Number Figure 3		
Date October 2015		
Drawn By FLL, RRN		





Project Number

687-2-1

Figure Number

Figure 4

Date

December 2015

Drawn By

RRN

Sampling Location Map

DCP Alma

1402 Monterey Highway

San Jose, CA

CORNERSTONE

EARTH GROUP

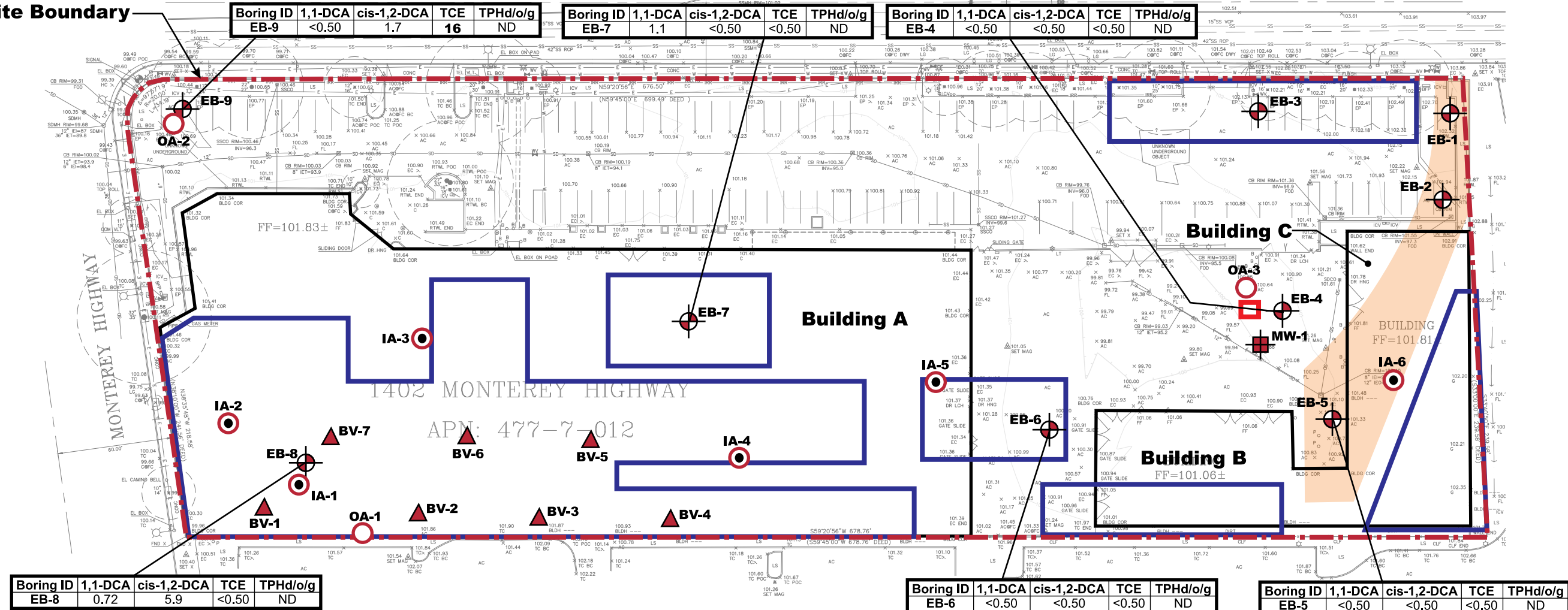
## Screening Levels

	<u>Drinking Water MCL <sup>1</sup></u>
1,1-DCA	5.0
cis-1,2-DCA	6.0
TCE	5.0
TPHd (diesel)	100 <sup>2</sup>
TPHo (oil)	100 <sup>2</sup>
TPHg (gasoline)	100 <sup>2</sup>









Concentrations measured in µg/L

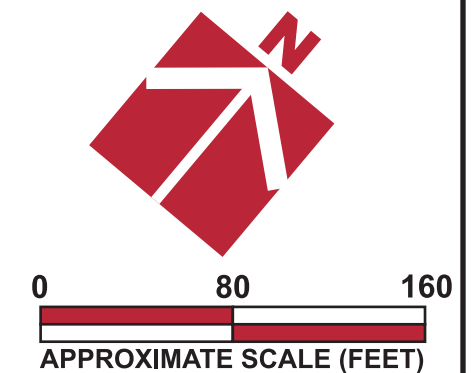
- |             |   |
|-------------|---|
| 1           | Maximum Contaminant Level (MCL),<br>CA Department of Public Health - September 2015 |
| 2           | Environment Screening Level (ESL),<br>RWQCB, SF Bay Region - December 2013          |
| <           | Not detected at or above laboratory reporting limit                                 |
| <b>BOLD</b> | Concentration exceeds ESL or MCL  |

**BOLD** Concentration exceeds ESL or MCL



### Legend

- |   |  |   |   |
|---|--|---|---|
|  | Approximate location of sub-slab soil vapor sample (BV) (BVNA, 2015) |  | Approximate locations of former structures                                |
|  | Approximate location of destroyed monitoring well (MW)               |  | Approximate location of former 2,000- gallon diesel UST (removed in 1986) |
|  | Approximate location of exploratory boring (EB)                      |  | Approximate area of reported former rail lines                            |
|  | Approximate location of indoor air sample (IA)                       |   |   |
|  | Approximate location of outdoor air sample (OA)                      |   |   |



Base by Underwood & Rosenblum, Inc., Topographic Survey - Sheet 1", dated 6/11/2015

## TPH/VOC Concentrations in Ground Water

**DCP Alma  
1402 Monterey Highway  
San Jose, CA**

**CORNERSTONE**  
**EARTH GROUP**



687-2-1

Figure 5

January 2016	RRN
--------------	-----



< Not detected at or above laboratory reporting limit

**BOLD** Concentration is greater than an assumed regional background concentration of 11 mg/kg (Duverge, 2011)

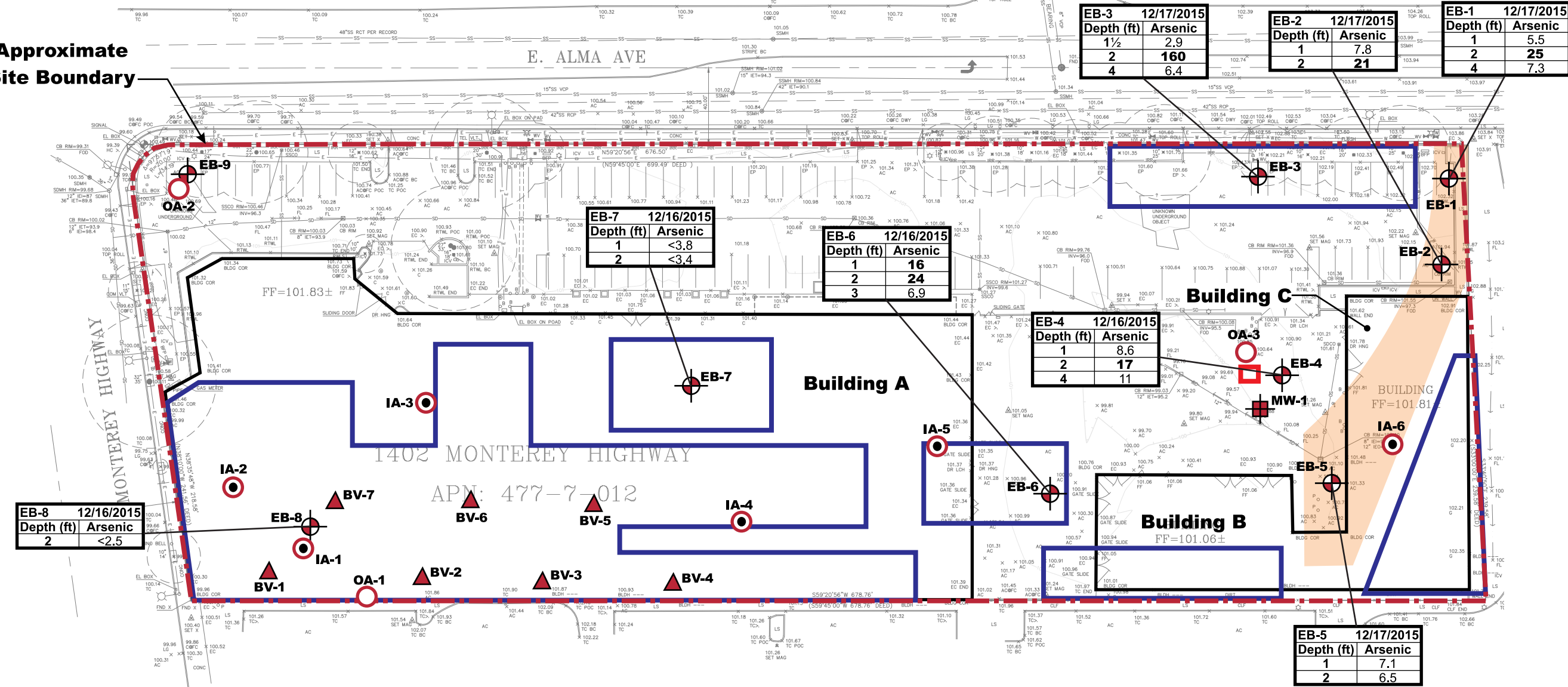
Project Number 687-2-1

Figure Number Figure 6

Date January 2016

Drawn By RRN

Approximate Site Boundary



Arsenic Concentrations in Soil

DCP Alma

1402 Monterey Highway

San Jose, CA

CORNERSTONE  
EARTH GROUP

Legend

- Approximate location of sub-slab soil vapor sample (BV) (BVNA, 2015)
- Approximate location of destroyed monitoring well (MW)
- Approximate location of exploratory boring (EB)
- Approximate location of indoor air sample (IA)
- Approximate location of outdoor air sample (OA)
- Approximate locations of former structures
- Approximate location of former 2,000- gallon diesel UST (removed in 1986)
- Approximate area of reported former rail lines

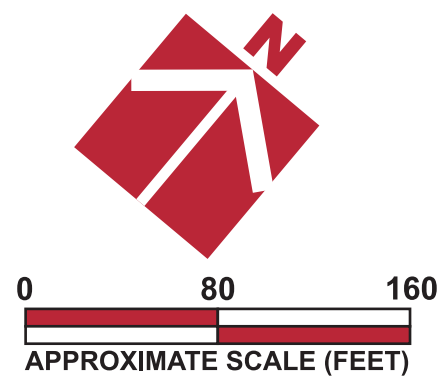




Table 1. Analytical Results of Selected Soil Samples - Metals  
(Concentrations in mg/kg Unless Noted Otherwise)

Sample Location	Boring ID	Date	Depth (feet)	Soil Type	Antimony	Arsenic	Barium	Cadmium	Total Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Thallium	Vanadium	Zinc	Asbestos (%)
Former Rail Spur	EB-1	12/17/2015	1	Fill	<1.3	5.5	180	<0.32	72	12	29	22	0.76	<1.3	100	<1.3	49	42	<0.25
		12/17/2015	2		---	25	---	---	---	---	---	---	---	---	---	---	---	---	
		12/17/2015	4	Native	---	7.3	---	---	---	---	---	---	---	---	---	---	---	---	---
	EB-2	12/17/2015	1	Fill	1.1	7.8	160	0.24	41	12	26	14	0.17	0.49	77	0.75	49	64	---
		12/17/2015	2		---	21	---	---	---	---	---	31	---	---	---	---	---	---	---
	EB-5	12/17/2015	1	Fill	<1.4	7.1	350	<0.34	43	12	22	7.7	0.055	<1.4	55	<1.4	28	42	---
12/17/2015		2	---		6.5	---	---	---	---	---	5.9	---	---	---	---	---	---	---	
Former Structure Footprint	EB-3	12/17/2015	1½	Fill	---	2.9	---	---	150	---	81	---	---	---	---	---	---	---	---
		12/17/2015	2	Native	---	160	---	---	---	---	---	33	---	---	---	---	---	---	---
		12/17/2015	4		---	6.4	---	---	---	---	---	---	---	---	---	---	---		
	EB-6	12/16/2015	1	Fill	<1.8	16	120	<0.45	170	34	22	21	0.12	<1.8	580	<1.8	33	70	---
		12/16/2015	2		---	24	---	---	73	14	32	---	---	---	130	---	---	---	---
		12/16/2015	3	Native	---	6.9	---	---	---	12	---	---	---	---	84	---	---	---	---
Near Former UST	EB-4	12/16/2015	1	Fill	<1.6	8.6	380	<0.40	50	9.4	20	6.9	0.065	<1.6	75	<1.6	31	47	---
		12/16/2015	3		---	17	---	---	69	---	30	---	---	---	---	---	---	---	
		12/16/2015	4	Native	---	11	---	---	---	---	---	---	---	---	---	---	---	---	---
Inside Main Building	EB-7	12/16/2015	1	Fill	<1.9	<3.8	25	<0.47	210	44	6.2	<1.9	0.02	<1.9	830	<1.9	11	20	0.25
		12/16/2015	2		---	<3.4	---	---	340	81	6.2	---	---	---	1700	---	---	---	---
	EB-8	12/16/2015	2	Fill	---	<2.5	---	---	300	---	6.8	---	---	---	---	---	---	---	0.5
Residential RSL <sup>1</sup> (HQ=1)					31	0.067 <sup>2</sup>	15,000	5.2 <sup>2</sup>	2,500 <sup>3</sup>	23	3,100	80 <sup>4</sup>	0.89 <sup>2</sup>	390	490 <sup>2</sup>	0.78	390	23,000	0.01 <sup>5</sup> /0.25 <sup>6</sup>
Scott, 1991 <sup>7</sup>	Background Range				---	0.2 to 5.5	---	0.05 to 1.7	30.5 to 72	---	23.8 to 47.5	6.8 to 16.1	0.05 to 0.90	---	46.4 to 101	---	39 to 288	47.7 to 82.8	---
	Maximum Background Detection				22	20	---	14	170	---	67	54	1.3	---	145	3.8	---	120	---
Bradford, 1996 <sup>8</sup>	Background Range				0.15 to 1.95	0.6 to 11	133 to 1,400	0.05 to 1.7	23 to 1,579	2.7 to 46.9	9.1 to 96.4	12.4 to 97.1	0.05 to 0.90	0.1 to 9.6	9 to 509	0.42 to 0.9846	39 to 288	88 to 236	---
LBNL, 2009 <sup>9</sup>	Upper Quartile				0.73	4.7	625	0.44	115	18.3	36.6	26.7	0.34	1.4	56	1.1	134	170	---
	99 <sup>th</sup> Percentile				<6	28	410	5.6	120	25	63	43	0.42	4.8	272	10	90	140	---
95% Upper Tolerance Limit (UTL)				5.5	19.1	323.6	2.7	99.6	22.2	69.4	16.1	0.4	7.4	119.8	7.6	74.3	106.1	---	
Duverge, 2011 <sup>10</sup>	Mean				---	4.6	---	---	---	---	---	---	---	---	---	---	---	---	---
	99 <sup>th</sup> Percentile				---	11	---	---	---	---	---	---	---	---	---	---	---	---	---
TTLC <sup>11</sup>					500	500	10000	100	2500	8000	2500	1000	20	3500	2000	700	2400	5000	---
STLC <sup>12</sup> (mg/L)					15	5	100	1	5	80	25	5	0.2	350	20	7	24	250	---

1

Regional Screening Level (RSL), USEPA Region 9 - November 2015.

2

Value is DTSC - Recommended Screening Level (HERO Note 3) - October 2015.

3

Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - December 2013.

4

California Human Health Screening Level (CHHSL) - CALEPA - September 2010.

5

Department of Toxic Substances Control (DTSC) recommended soil screening value - DTSC 2004.

6

Bay Area Air Quality Management District (BAAQMD) recommended soil screening value for construction and grading

7

Scott, Christina. December 1991. Background Metal Concentrations in Soils in Northern Santa Clara County.

8

Bradford, et. al. March 1996. Background Concentrations of Trace and Major Elements in California Soils.

9

LBNL, 2009. Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory.

10

Duverge, 2011. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region.

11

Total Threshold Limit Concentration - California Code of Regulations, Title 22, Chapter 11, Article 3.

12

Soluble Threshold Limit Concentration - California Code of Regulations, Title 22, Chapter 11, Article 3.

<

Not detected at or above laboratory reporting limit

**BOLD**

Concentration exceeds RSL and regional natural background. Bold asbestos concentration exceeds BAAQMD trigger level.

**Table 2. Analytical Results of Selected Soil Samples - TPH**  
 (Concentrations in mg/kg)

Sample Location	Boring ID	Date	Depth (feet)	Soil Type	TPHd	TPHo	TPHg
Former Rail Spur	EB-1	12/17/2015	1	Fill	<b>450</b>	<b>2,500</b>	---
	EB-2	12/17/2015	1	Fill	<b>740</b>	<b>3,800</b>	---
	EB-5	12/16/2015	11	Native	1.2	<50	<0.19
Courtyard	EB-4	12/16/2015	11	Native	<1.0	<50	<0.2
Near Former UST	EB-6	12/16/2015	1	Fill	<b>320</b>	<b>1,100</b>	---
	EB-6	12/16/2015	2		72	<b>250</b>	---
	EB-6	12/16/2015	12	Native	1.2	<50	<0.19
Inside Main Building	EB-7	12/16/2015	6½	Native	1.3	<50	<0.2
	EB-8	12/16/2015	1	Fill	3.2	<50	---
	EB-8	12/16/2015	16	Native	1.5	<50	<0.18
Western Corner of Lot	EB-9	12/16/2015	16	Native	---	---	<0.2
Residential ESL <sup>1</sup>					100(240)	100(10,000)	100(770)

1 Environmental Screening Level (ESL) for odor/nuisance concerns, RWQCB, San Francisco Bay Region - December 2013. Value in parenthesis is ESL for direct exposure human health concerns.

--- Not Analyzed

**BOLD** Concentration exceeds ESL for odor/nuisance concerns.

**Table 3. Analytical Results of Selected Soil Samples - SVOCs / VOCs / OCPs / PCBs**  
 (Concentrations in mg/kg)

Sample Location	Boring ID	Date	Depth (feet)	Soil Type	Benzo[b]fluoranthene	Fluoranthene	Phenanthrene	Other SVOCs	VOCs	OCPs	PCBs
Former Rail Spur	EB-1	12/17/2015	1	Fill	<0.57	0.64	<0.57	---	---	ND	ND
		12/17/2015	2		---	---	---	---	---	---	---
	EB-2	12/17/2015	1	Fill	<0.5	<0.5	<0.5	---	---	---	ND
		12/17/2015	2		---	---	---	---	---	---	---
	EB-3	12/17/2015	1½	Fill	<0.33	<0.33	<0.33	ND	---	---	---
Courtyard	EB-4	12/16/2015	1	Fill	---	---	---	---	---	ND	---
		12/16/2015	3		<0.27	<0.27	<0.27	ND	---	---	---
		12/16/2015	11	Native	---	---	---	---	ND	---	---
	EB-5	12/17/2015	1	Fill	0.0052	<0.005	0.0067	---	---	---	ND
		12/17/2015	2		---	---	---	---	---	---	---
		12/16/2015	11	Native	---	---	---	---	ND	---	---
	EB-6	12/16/2015	1	Fill	---	---	---	---	---	ND	---
		12/16/2015	2		<0.27	<0.27	<0.27	ND	---	---	---
		12/16/2015	12	Native	---	---	---	---	ND	---	---
Inside Main Building	EB-7	12/16/2015	1	Fill	---	---	---	---	---	ND	---
		12/16/2015	2		<0.067	<0.067	<0.067	ND	---	---	---
		12/16/2015	6½	Native	---	---	---	---	ND	---	---
	EB-8	12/16/2015	1	Fill	---	---	---	---	---	ND	---
		12/16/2015	2		<0.066	<0.066	<0.066	ND	---	---	---
		12/16/2015	16	Native	---	---	---	---	ND	---	---
Western Corner of Lot	EB-9	12/16/2015	16	Native	---	---	---	---	ND	---	---
Residential RSL <sup>1</sup> (HQ=1)					0.16	2,400	11 <sup>2</sup>	Varies	Varies	Varies	Varies

1 Regional Screening Level (RSL), USEPA Region 9 - November 2015.

2 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - December 2013.

< Not detected at or above laboratory reporting limit

ND Not detected at or above laboratory reporting limit

--- Not Analyzed

**Table 4. Analytical Results of Selected Ground Water Samples**  
 (Concentrations in µg/L)

Sample ID	Date	1,1-DCA	cis-1,2-DCE	TCE	Other VOCs	TPHd	TPHo	TPHg	SVOCs
EB-4	12/16/2015	<0.50	<0.50	<0.50	ND	<59	<120	<50	ND
EB-5	12/17/2015	<0.50	<0.50	<0.50	ND	---	---	<50	ND
EB-6	12/17/2015	<0.50	<0.50	<0.50	ND	<60	<120	<50	ND
EB-7	12/16/2015	1.1	<0.50	<0.50	ND	<54	<110	<50	ND
EB-8	12/17/2015	0.72	5.9	<0.50	ND	<54	<110	<50	ND
EB-9	12/16/2015	<0.50	1.7	<b>16</b>	ND	<58	<120	<50	ND
Drinking Water MCL <sup>1</sup>		5	6	5	Varies	100 <sup>2</sup>	100 <sup>2</sup>	100 <sup>2</sup>	Varies

1 Maximum Contaminant Level (MCL), California Department of Public Health - September 2015.

2 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - December 2013.

< Not detected at or above laboratory reporting limit

--- Not Analyzed

**BOLD** Concentration exceeds MCL

Table 5. Analytical Results of Selected Indoor and Outdoor Air Samples  
(Concentrations in µg/m<sup>3</sup>)

Sample Location	Sample ID	2-Butanone (Methyl Ethyl Ketone)	2-Propanol	4-Ethyltoluene	Acetone	Benzene	Carbon Tetrachloride	Chloroform	Chloromethane	Cyclohexane	Ethanol	Ethyl Benzene	Freon 11	Freon 12	Heptane	Hexane	m,p-Xylene	Methylene Chloride	o-Xylene	Toluene	Trichloroethene
Indoor	IA-1	3.3	3.2	1.4	31	<b>2.3</b>	<b>0.55</b>	<b>0.18</b>	1.1	0.92	23	<b>1.2</b>	1.6	2.8	1.4	2.2	4	<1.1	1.4	6.6	<0.16
	IA-2	<2.5	2.7	1.2	22	<b>2.3</b>	<b>0.5</b>	<b>0.17</b>	1.1	0.92	21	1.1	1.6	2.8	1.5	2.2	3.6	<1.2	1.3	6.2	<0.18
	IA-3	<2.3	2.9	1.3	24	<b>2.3</b>	<b>0.52</b>	<b>0.18</b>	1.1	0.87	21	<b>1.2</b>	1.6	2.7	1.4	2.2	3.9	1.1	1.4	6.6	0.19
	IA-4	2.7	3.1	1.2	25	<b>2.3</b>	<b>0.52</b>	<b>0.17</b>	1.1	0.91	22	1.1	1.6	2.7	1.4	2.2	3.7	<1.1	1.4	6.4	<0.17
	IA-5	<2.3	3.2	1.3	25	<b>2.3</b>	<b>0.52</b>	<b>0.18</b>	1.1	0.9	22	1.1	1.7	2.7	1.4	2.2	3.9	<1.1	1.5	6.6	<0.17
	IA-6	<2.3	2.8	1.2	23	<b>2.1</b>	<b>0.53</b>	<b>0.17</b>	1.1	0.85	20	1.1	1.6	2.9	1.1	2.2	3.7	<1.1	1.4	6.1	<0.16
Outdoor	OA-1	3.2	3.7	1.6	30	<b>2.8</b>	<b>0.54</b>	<b>0.18</b>	1.1	1.3	32	<b>1.5</b>	1.6	2.8	2.1	3	5	<1.1	1.8	8.3	<0.17
	OA-2	2.5	3.4	1.6	26	<b>2.6</b>	<b>0.53</b>	<b>0.17</b>	1.1	0.94	24	<b>1.3</b>	1.6	2.7	1.5	2.2	4.6	<1.1	1.7	7.7	<0.17
	OA-3	<2.0	9.4	1.1	32	<b>2.1</b>	<b>0.48</b>	<b>0.21</b>	1.2	0.96	50	1.1	1.8	2.8	2.8	3	3.8	38	1.4	9.9	<0.15
Residential Ambient Air Screening Level <sup>1</sup>		5,200 <sup>2</sup>	210 <sup>2</sup>	NE	32,000 <sup>2</sup>	0.097	0.067	0.12 <sup>2</sup>	94 <sup>2</sup>	6,300 <sup>2</sup>	NE	1.1 <sup>2</sup>	NE	100 <sup>2</sup>	NE	730 <sup>2</sup>	100 <sup>2</sup>	100 <sup>2</sup>	100 <sup>2</sup>	310	0.48 <sup>2</sup>

1 DTSC Recommended Screening Level (DTSC-SL) for Ambient Air (HERO Note 3) - October 2015

2 DTSC-SL not established, value shown is Residential Regional Screening Level (RSL) for Ambient Air

**BOLD** Concentration exceeds screening criteria.

## **APPENDIX B – HEALTH AND SAFETY PLAN**



# PROJECT HEALTH AND SAFETY PLAN



**Earthwork and Demolition  
Former Southern Lumber Company  
1402 Monterey Highway  
San Jose, California**

*Plan Prepared For:*

**Downtown College Prep Facilities 2, LLC  
1400 Parkmoor Avenue, Suite 206  
San Jose, CA 95125  
(408) 298-4264**

*Prepared By:*

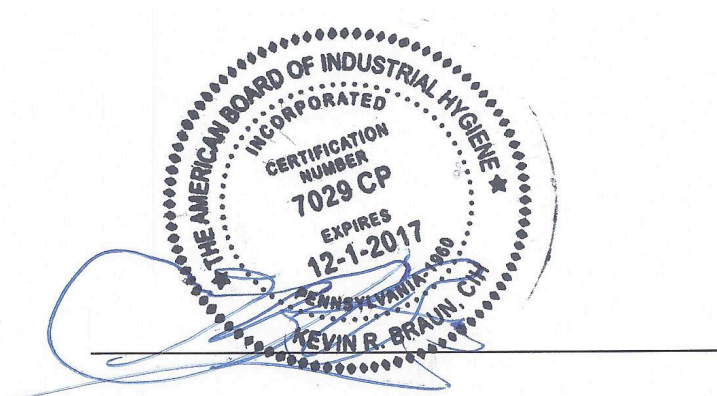
**Earth Safety Dynamics  
70 Rockrose Street  
Livermore, CA 94551  
(925) 455-6601**

**(Revision 1)**

**March 17<sup>th</sup>, 2016**

## Limitations

Services provided by Earth Safety Dynamics, Inc. and its subcontractors have been provided in accordance with generally accepted professional practices for the nature and conditions of similar work completed in the same or similar localities, at the time the work was performed. The scope of work for the project was conducted within the limitations prescribed by the client. This Health and Safety Plan reflects conditions as reported to Earth Safety Dynamics at the time of production, and is not meant to represent a legal opinion. This Plan is provided as a framework and may be adopted by tiered subcontractors, or they may develop their own equally protective Plan. No other warranty, expressed or implied, is made. This Plan was prepared for the sole use of Downtown College Prep Facilities 2, LLC and their designees and may not be duplicated or used by any other party without the expressed consent of the client.



Kevin R. Braun, CIH  
Certified Industrial Hygienist

ABIH Certification # 7029

March 17<sup>th</sup>, 2016

# *Downtown College Prep Facilities Health and Safety Plan*

---

## **Contents**

<b>1.0</b>	<b>Introduction</b>	<b>1</b>
<b>2.0</b>	<b>Project Description</b>	<b>2</b>
<b>3.0</b>	<b>Organization and Responsibilities</b>	<b>3</b>
<b>3.1</b>	<b>Industrial Hygienist</b>	<b>3</b>
<b>3.2</b>	<b>Site Safety Officer</b>	<b>4</b>
<b>3.3</b>	<b>Employee Safety Responsibility</b>	<b>4</b>
<b>3.3.1</b>	<b>Buddy System</b>	<b>4</b>
<b>3.4</b>	<b>Logs, Reports, and Recordkeeping</b>	<b>4</b>
<b>4.0</b>	<b>Job Hazard Analysis</b>	<b>5</b>
<b>4.1</b>	<b>Chemical Hazards</b>	<b>5</b>
<b>4.2</b>	<b>Exposure Prevention</b>	<b>7</b>
<b>4.2.1</b>	<b>Hazard Communication Program</b>	<b>8</b>
<b>4.3</b>	<b>Physical Hazards</b>	<b>10</b>
<b>4.3.1</b>	<b>Tripping, Slipping, and Falling Hazards</b>	<b>10</b>
<b>4.3.2</b>	<b>Head and Back Injuries</b>	<b>10</b>
<b>4.3.3</b>	<b>Falling Objects</b>	<b>10</b>
<b>4.3.4</b>	<b>Heavy Equipment and Traffic</b>	<b>10</b>
<b>4.3.5</b>	<b>Site Pre-Inspection of Equipment</b>	<b>11</b>
<b>4.3.6</b>	<b>Operator Qualifications</b>	<b>11</b>
<b>4.3.7</b>	<b>Electrical Hazards</b>	<b>11</b>
<b>4.3.8</b>	<b>Welding Hazards</b>	<b>11</b>
<b>4.3.9</b>	<b>Fire and Explosion</b>	<b>11</b>
<b>4.3.10</b>	<b>Rigging and Hoisting</b>	<b>12</b>
<b>4.3.11</b>	<b>Excavation/ Trenching</b>	<b>12</b>
<b>4.4</b>	<b>Environmental Hazards</b>	<b>12</b>
<b>4.4.1</b>	<b>Weather and Heat Stress</b>	<b>12</b>
<b>4.4.2</b>	<b>Hearing Conservation Program</b>	<b>14</b>
<b>4.4.3</b>	<b>Confined Space Entry</b>	<b>14</b>
<b>4.5</b>	<b>Hazard Analysis Summary</b>	<b>14</b>
<b>4.6</b>	<b>Task Specific Risk Assessment</b>	<b>15</b>
<b>5.0</b>	<b>Work and Support Areas</b>	<b>16</b>
<b>5.1</b>	<b>Exclusion Zone</b>	<b>17</b>
<b>5.2</b>	<b>Contamination Reduction Zone</b>	<b>17</b>
<b>5.3</b>	<b>Support Zone</b>	<b>17</b>
<b>5.4</b>	<b>Access Controls</b>	<b>17</b>

# *Downtown College Prep Facilities Health and Safety Plan*

---

## **Contents (Continued)**

<b>6.0</b>	<b>Protective Equipment</b>	<b>18</b>
<b>6.1</b>	<b>Excavation Exclusion Zone</b>	<b>18</b>
<b>6.2</b>	<b>Contamination Reduction Zone</b>	<b>19</b>
<b>6.3</b>	<b>Support Zone</b>	<b>19</b>
<b>6.4</b>	<b>Respirator Cartridges</b>	<b>19</b>
<b>6.5</b>	<b>Cartridge Changes</b>	<b>19</b>
<b>6.6</b>	<b>Inspection and Cleaning</b>	<b>19</b>
<b>6.7</b>	<b>Fit Testing</b>	<b>19</b>
<b>6.8</b>	<b>Facial Hair</b>	<b>19</b>
<b>6.9</b>	<b>Corrective Lenses</b>	<b>19</b>
<b>6.10</b>	<b>Medical Certification</b>	<b>20</b>
<b>7.0</b>	<b>Decontamination Procedures</b>	<b>20</b>
<b>7.1</b>	<b>Personnel Decontamination</b>	<b>20</b>
<b>7.2</b>	<b>Equipment Decontamination</b>	<b>20</b>
<b>7.3</b>	<b>Suspected Contamination</b>	<b>21</b>
<b>7.4</b>	<b>Personal Hygiene</b>	<b>21</b>
<b>7.5</b>	<b>Other Decontamination Procedures</b>	<b>21</b>
<b>8.0</b>	<b>Air Monitoring</b>	<b>21</b>
<b>9.0</b>	<b>Emergency Response</b>	<b>22</b>
<b>9.1</b>	<b>Emergency Services</b>	<b>22</b>
<b>9.2</b>	<b>Emergency Evacuation</b>	<b>22</b>
<b>9.3</b>	<b>First Aid</b>	<b>22</b>
<b>9.4</b>	<b>Emergency Actions</b>	<b>22</b>
<b>9.5</b>	<b>General Evacuation Plan</b>	<b>23</b>
<b>9.6</b>	<b>Emergency Phone Numbers</b>	<b>23</b>
<b>9.7</b>	<b>Reporting Emergencies</b>	<b>24</b>
<b>10.0</b>	<b>Training Requirements</b>	<b>24</b>
<b>11.0</b>	<b>Medical Surveillance Program</b>	<b>25</b>

# *Downtown College Prep Facilities Health and Safety Plan*

---

## **Contents (Continued)**

### **Appendices**

<b>Site Location</b>	<b>26</b>
<b>HASP Acknowledgement</b>	<b>27</b>
<b>Appendix A - Changes to This Health and Safety Plan</b>	
<b>Appendix B - Safety Inspection Reports</b>	
<b>Appendix C - Employee Exposure Monitoring Records</b>	
<b>Appendix D - OSHA Log 300 Summary</b>	
<b>Appendix E - Employee Medical Surveillance Records</b>	
<b>Appendix F - Employee Respirator Fit-Test Records</b>	
<b>Appendix G - Employee Training Records</b>	
<b>Appendix H - Safety Meeting Forms</b>	
<b>Appendix I - Incident Reports</b>	

# *Downtown College Prep Facilities Health and Safety Plan*

---

## **List of Abbreviations and Acronyms**

ACGIH	American Conference of Governmental Industrial Hygienists
A.L.	Action Level
A.P.R.	Air Purifying Respirator
C	Ceiling Limit (8 CCR 5155)
COC	Chemical Of Concern
c.y.	Cubic Yard
bgs	Below Ground Surface
Cal/OSHA	California Department of Labor; Division of Occupational Safety and Health
CHHSL	California Health Hazard Screening Level
C.I.H.	Certified Industrial Hygienist (American Board of Industrial Hygiene)
dBA	Decibels; A-Weighted Range
ESL	Environmental Screening Level
ESLI	End of Service Life Indicator
f/cc	Fibers per Cubic Centimeter
GFCI	Ground Fault Circuit Interrupter
IDLH	Immediately Dangerous to Life or Health
LEL	Lower Explosive Limit
mg/m <sup>3</sup>	Milligrams per Cubic Meter
MSHA	Mine Safety and Health Administration
M.U.C.	Maximum Use Concentration
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
PEL	Permissible Exposure Limit
PID	Photoionization Detector
PNAs	Polynuclear (Polycyclic) Aromatic Hydrocarbons
ppm	Parts Per Million (by volume)
PRG	Preliminary Remediation Goal
RCRA	Resource Conservation & Recovery Act
SAR	Supplied Air Respirator
SSO	Site Safety Officer
STEL	Short Term Exposure Limit
STLC	Solubility Threshold Limit Concentration
TCLP	Toxicity Characteristic Leaching Procedure
TTL	Total Threshold Limit Concentration
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WET	Waste Extraction Test



# *Downtown College Prep Facilities Health and Safety Plan*

---

## **SECTION 1 INTRODUCTION**

Downtown College Prep Facilities 2, LLC (DCP) has developed this site Health And Safety Plan (HASP) framework specifically for earthwork associated with the redevelopment/repurposing project at 1402 Monterey Highway in San Jose, California.

The potential exists for encountering contaminated soils, ground water, railroad ballast, and possible hazardous building materials during various phases of the project. Client EH&S personnel, the environmental consultant, and the project Certified Industrial Hygienist (CIH) will be contacted immediately before work in areas of identified contamination is performed, or if any indications of additional (unforeseen) contamination are encountered, including but not limited to:

- Stained or discolored soil
- Characteristic or unidentified odor
- Visible unidentified residues

Work will not proceed in areas found to be contaminated with gasoline or other VOCs until notification has been made to the Bay Area Air Quality Management District (BAAQMD) under Regulation 8, Rule 40, Section 402. (Notification must be made a minimum of five days before commencement of excavation.)

This HASP establishes the policies and procedures that protect workers and the public from potential hazards posed by work with these materials at this site. DCP considers safety the highest priority, especially during work at a site containing potentially hazardous materials, and has established a policy of maintaining exposures as low as reasonably achievable. All work performed by DCP and its subcontractors will be executed in a

reasonable manner that minimizes the probability of injury, accident, or incident. This HASP is written and all site activities will be conducted in compliance with applicable regulations and guidelines, including but no limited to:

1) United States Department of Labor, OSHA Standards, specifically:

- Title 29 CFR Part 1910.120 - Hazardous Waste Site Operations and Emergency Response
- Title 29 CFR Part 1926 - Safety and Health Regulations for Construction

2) California Occupational Safety and Health Regulations, specifically:

- Title 8 CCR §5192 - Hazardous Waste Operations and Emergency Response
- Title 8 CCR §1532.1 - Lead in Construction
- Title 8 CCR §5194 - Hazard Communication
- Title 8 CCR §5095-5100 - Hearing Conservation
- Title 8 CCR Chapter 4, Subchapter 4 - Construction Safety Orders
- Title 8 CCR §3203 and §1509 - Injury and Illness Prevention Programs

3) USEPA Standard Operating Safety Guides, July 1988.

4) NIOSH/OSHA/USCG/USEPA:  
*Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, October 1985

# *Downtown College Prep Facilities Health and Safety Plan*

---

## 5) DCP's Corporate Safety Program (available on site)

This Plan is written in accordance with applicable Federal OSHA and California Division of Occupational Safety and Health requirements contained respectively in 29 CFR 1910.120 and 1926, and California Title 8, § 1529, and 1500 – 1938, and 5192. It is based primarily on information contained in the document entitled: "Phase I and II Environmental Site Assessment; 1402 Monterey Highway, San Jose, California" (February 4, 2016; Cornerstone Earth Group.)

## **SECTION 2 PROJECT DESCRIPTION**

Downtown College Prep Facilities 2, LLC currently has plans to repurpose the referenced parcel as a school facility. One building will be demolished and two others reconfigured. The parking lot also will be reconfigured to provide employee and visitor parking and a student drop-off area. The two easternmost driveways on Alma Avenue would be removed, providing one ingress driveway from Monterey Road and one egress driveway onto Alma Avenue. The remainder of the existing parking lot and the area between the existing buildings will be made into an outdoor recreational area for the students and may include some artificial turf and possibly a student garden.

This development will require management of contaminated soils, demolition of one existing building, and some demolition of existing foundations, pavement and possible subsurface encumbrances in both paved and unpaved areas. If contaminated soil is encountered during development activities, earthwork activities will be performed in accordance with applicable State and Federal regulations and

## Cornerstone's Risk Management Plan (March 2016).

The approximately 3.38-acre Site was occupied by the Southern Lumber Company since the early 1900's until 2015 for use as retail sale of lumber products and associated materials. Through at least 1950, the Site was occupied predominately by lumber storage and planing and moulding buildings and was converted to a retail lumberyard by at least 1961. In June 1973, the buildings were burned to the ground due to an electrical fire.

The current retail warehouse building (referred to by others as Building A) was built after the fire, incorporating a small portion of the original retail building, and the facility reopened in 1974. The centrally located former planing mill/door shop building (Building B) was built in the late 1970's. The approximately 7,000 square foot building included a planing mill room, door assembly room and a paint room with enclosed paint booth and a drying room. A 10,000-square-foot storage warehouse (Building C) is located on the east side of the Site and included an asphalt-paved central yard area enclosed by concrete-block wall and iron gates. This building was constructed in approximately 1999. In 2015 Southern Lumber closed their business and vacated the property by September 2015. The buildings have remained vacant since that time. In addition, underground storage tanks used to store motor fuel/heating oil were installed and used on and near the site. Residues of hazardous building materials may exist as well.

The property is bounded to the east by Union Pacific Railroad (UPRR) tracks, running roughly north-south. Former railroad tracks located in portions of the site and spurs reported to have extended on site have been removed, but ballast, gravel, and

# *Downtown College Prep Facilities Health and Safety Plan*

---

some ties reportedly remain in the alignments.

Investigation results indicate that a number of hazardous residues persist in site soils including metals, organic compounds, and naturally occurring asbestos. Shallow ground water on the western portion of the site has been impacted by VOCs as well.

Corrective actions / mitigation measures required during soil disturbance are presented in this HASP and detailed in the Risk Management Plan (RMP; Cornerstone 2016). Impacted soil will be capped in place beneath hardscape surface features. Buried structures, loosely backfilled excavations and utility trenches will be removed, if encountered. If pockets of suspected contaminated materials are encountered, the suspected materials will be evaluated for Site COCs. If detected above Site cleanup goals, COC-affected soil will be over-excavated and removed for appropriate off-site disposal.

The potential for direct contact with hazardous soils and groundwater and exposure to airborne volatile organic compounds (VOCs) and particulate-bound contaminants and metals exists during all demolition and disposal of existing subsurface encumbrances and all excavation and transfer or disposal of spoils. These activities likely would be classified as “voluntary cleanup actions.” Site personnel therefore are required to satisfy the Cal-OSHA requirements for Hazardous Waste Operations and Emergency Response (as defined in accordance with 8 CCR 5192), and will be trained in accordance with that standard. Dust control and other engineering control measures will be strictly enforced to maintain exposures as low as reasonably achievable on site.

DCP (or subcontractor) tasks affected by this HASP may include exploratory excavation, demolition of an existing building and foundations, pavement and cap materials, and various subsurface obstructions, handling and disposal of contaminated groundwater, excavation and stockpiling of soils, and loading and transfer/disposal of contaminated soils.

## **SECTION 3 ORGANIZATION AND RESPONSIBILITIES**

DCP maintains a policy of providing its employees, subcontractors, and authorized visitors with information and procedures in accordance with the requirements of the California OSHA Hazard Communication Standard in order to protect them and the adjacent community from any adverse effects that might result from work at a job site involving potentially hazardous substances. All personnel working on this project will follow the health and safety procedures set forth in this plan. Visitors will not be allowed entry unless they have read and agreed to comply with this plan. The HASP acknowledgment will be signed by all DCP employees and representatives who actively participate at this project.

The Project Organizational Chart is presented in Figure 3.1. The responsibilities and authorities for key personnel are discussed below.

### **3.1 INDUSTRIAL HYGIENIST**

Downtown College Prep Facilities 2, LLC, through Cornerstone Earth Group has designated Earth Safety Dynamics to provide industrial hygiene support.

Kevin Braun of Earth Safety Dynamics has been designated as the Project Certified

# *Downtown College Prep Facilities Health and Safety Plan*

---

Industrial Hygienist (CIH) and shall have the following responsibilities:

- Health surveillance of all site employees
- Assuring that safety procedures in effect are in compliance with all appropriate federal, state, and local regulations
- Maintaining personnel exposure and perimeter air monitoring records
- Ensuring that appropriate personal protective equipment is used
- Assuring that site control zones are enforced for all personnel
- Assuring that all personnel follow site rules

The C.I.H. will maintain a safety log (in the Appendices), which will be kept for all site activities. This log will include safety meeting topics, training records, air monitoring information, and any incidents related to employee or contractor health and safety. The I.H. has responsibility for implementing and enforcing all aspects of this HASP. He will oversee any personnel monitoring and will decide when action levels have been reached which require work stoppage. The I.H. establishes and enforces the protective equipment to be used by site personnel for various site activities.

## **3.2 SITE SAFETY OFFICER (SSO)**

The contractor will designate a project site safety officer, and he or she shall assume the responsibilities outlined in Section 3.1 when the CIH is not on site, and will determine when a change in conditions warrants consultation with or the additional presence of the CIH. He or his designated SSO alternate shall be on site at all times during the execution of work.

## **3.3 EMPLOYEE SAFETY RESPONSIBILITY**

Although the employer is responsible for providing a safe and healthful workplace, each employee is responsible for his/her own safety as well as the safety of those around him/her. All DCP personnel are aware that they are responsible for ensuring that all unsafe conditions and actions are isolated and corrected, either by direct action (fix it themselves) or by alerting their respective supervisors after isolating the problem. All employees shall use provided equipment in a safe and responsible manner as directed by his supervisor.

### **3.3.1 Buddy System**

No work will be performed in any designated exclusion zone without benefit of the "buddy system". Workers will be paired in buddy teams at the start of each shift for any and all hazardous waste operations or emergency response work to be undertaken during the day. Buddy teams will remain in communication for the duration of the shift.

## **3.4 LOGS, REPORTS, AND RECORD KEEPING**

Recordkeeping is a crucial component of any effective health and safety program. Site safety records shall therefore be updated daily. The following logs, reports, and records shall be maintained in the appendices of this HASP:

- Safety meetings;
- Training logs - site specific and visitors;
- Weekly safety inspection logs;
- Employee/visitor sign-in;
- Ambient and personal air monitoring results; and
- OSHA Log 300 Summary

# Downtown College Prep Facilities Health and Safety Plan

## SECTION 4 JOB HAZARD ANALYSIS

This section discusses chemical, physical, and environmental hazards to workers on the site.

### 4.1 CHEMICAL HAZARDS

The chemicals listed in Table 4.1 are believed or suspected to be present on this site. This table is based on geotechnical investigations and information summarized in the site characterization prepared by Cornerstone Earth Group.

Chemical hazards present at the site include the hazards associated with potential exposure to metals, naturally occurring asbestos (NOA) and Semi-Volatile and volatile organic compounds (SVOCs and VOCs). These hazards are discussed below.

#### METALS/ INORGANIC COMPOUNDS

Hazardous building materials or coatings potentially present on site include:

- Arsenic
- Lead
- Nickel
- Naturally Occurring Asbestos (NOA)

#### Inorganic Arsenic; Arsenates

Health problems from arsenic exposure occur as a result of inhalation (breathing), absorption (through the skin) or ingestion (swallowing) of arsenic dust and fumes. The common hazards of occupational exposure to arsenic compounds are:

- Irritation of the skin, eyes, mouth, throat and lungs, skin rashes or dermatitis. The moist mucous membranes of the body are most sensitive to the irritant action.

- Chronic poisoning, including cancer of the skin and lungs.

- Acute Effects: Poisoning that may result in

death. This rarely occurs in industry but can occur as a result of inhalation and skin absorption, as well as ingestion. Symptoms of acute exposure include cough, chest pain, difficult breathing, giddiness, headache, and a general weakness of the body. These may be followed by gastrointestinal or stomach pains.

- Chronic Effects: Symptoms of chronic are weight loss, nausea, and diarrhea alternating with constipation, pigmentation, and eruption of the skin, loss of hair, and peripheral neuritis. Horizontal white lines on the fingernails and toenails are commonly seen in arsenic poisoning.

In addition, it has been proven that arsenic exposure can cause lung cancer. It is also believed that arsenic poisoning may cause liver damage.

#### Nickel

Nickel is a compound that occurs in the environment only at very low levels. It is used extensively as an ingredient of steel and other metal products. Ingestion or skin contact with nickel-contaminated soil or water may result in exposure, as will inhalation of nickel-laden dusts. Nickel fumes are respiratory irritants and may cause pneumonitis. Exposure to nickel and its compounds may result in the development of a dermatitis known as "nickel itch" in sensitized individuals. The first symptom is usually itching, which occurs up to 7 days before skin eruption occurs. Nickel sensitivity, once acquired, appears to persist indefinitely. Other sensitivity/allergic reactions may include asthma, chronic bronchitis, and heart disorders. Nickel may also be associated with birth defects.

Nickel and certain nickel compounds have been listed by the National Toxicology Program (NTP) as being reasonably

## *Downtown College Prep Facilities Health and Safety Plan*

---

anticipated to be carcinogens, increasing chances of lung, nasal, laryngeal, and prostate cancers. It is on the ACGIH Notice of Intended Changes as a Category A1, confirmed human carcinogen, although OSHA does not regulate nickel as a carcinogen.

### **Crystalline Silica**

Crystalline silica is a basic component of the existing concrete structures and mortar lining of pipes to be demolished, as well as of mortar, grout, concrete, and other materials to be used. Quartz is the most common form of crystalline silica. Cristobalite and tridymite are two other forms of crystalline silica, but are not expected on this job site. All three forms may form respirable dusts when workers chip or scale the existing lining or grind installed patch.

Acute Effects: Acute silicosis occurs after a few months or as long as 2 years following exposures to extremely high concentrations of respirable crystalline silica. Symptoms of acute silicosis include severe disabling shortness of breath, weakness, and weight loss, which often leads to death.

Chronic / Classic Effects: Crystalline silica has been classified as a human lung carcinogen. Additionally, breathing crystalline silica dust can cause silicosis, which in severe cases can be disabling, or even fatal. Respirable silica dust enters the lungs and causes the formation of scar tissue, reducing the lungs' gas exchange capacity. Silicosis also increases susceptibility to lung infections. Smoking exacerbates these effects.

Symptoms: Silicosis is classified into three types: Chronic/classic, accelerated, and acute. Chronic/classic silicosis, the most common, occurs after 15–20 years of moderate to low exposures to respirable crystalline silica. Symptoms associated with chronic silicosis may or may not be obvious; therefore, workers need to have a chest x-ray to determine if there is lung damage.

As the disease progresses, the worker may experience shortness of breath upon exercising and have clinical signs of poor oxygen/carbon dioxide exchange. (Cyanosis, clubbed fingers.)

*Cancer Risk:* Classified as probable human carcinogen.

### **Asbestos**

Naturally occurring asbestos at the site is in the form of decomposed native serpentine rock (a jade-like mineral) in soil. It is usually found as white or greenish, fibrous inclusions in greenish rock. Exposure to airborne asbestos can cause fibrotic lung disease and pleural plaques (asbestosis), lung cancer, and mesothelioma. Swallowing of asbestos-laden mucus (deposited in the digestive tract by the mucociliary escalator) has been linked to a variety of digestive cancers. Creation of high concentrations of airborne dust could result in exposures approaching action levels.

Potential for release of asbestos fibers is expected to occur during all soil-disturbing activities in areas containing decomposed serpentine. Excavation work at the site presents two principal exposure routes: ingestion and inhalation of dust contaminated with asbestos. These risks will be minimized by use of engineering controls as well as appropriate personal protective equipment and personal hygiene.

### **ORGANIC (PETROLEUM BASED) COMPOUNDS**

#### **Volatile Organic Compounds (VOCs):**

Fuel oils (primarily heating oil or other diesel-range hydrocarbons) are the primary organic contaminants identified as possibly existing on site that present potential



## *Downtown College Prep Facilities Health and Safety Plan*

---

exposure. Hazardous components and subcomponents of these wastes are expected to include:

- Diesel

### **Diesel Fuel/Heating Oil**

Heating oils generally are brown, combustible liquids. Typically, it contains more than 150 aliphatic and aromatic hydrocarbons, including small amounts of benzene, toluene, ethylbenzene, xylene and sometimes lead or other additives. Specific formulation determines type and percentage of constituents. The actual composition varies with the source of the crude petroleum, the manufacturer, and the time of year.

Many of the harmful effects seen after exposure are due to individual chemicals in the mixture, such as benzene. Inhaling high concentrations of vapor is irritating to the lungs, and ingestion is irritating to the lining of the stomach when swallowed. Inhalation of high levels of vapor for short periods or swallowing large amounts of fuel may also cause harmful effects on the nervous system, including coma and the inability to breathe, while less serious effects include dizziness and headaches.

There is not enough information available to determine if heating oil causes birth defects or affects reproduction.

### **4.2 Exposure Prevention**

Assuming that nickel (the highest concentrated COPC with respect to its PEL) is represented in all generated dust in concentrations equal to its maximum detected concentration in soil, the calculation for nickel content of dust on site is:

$$\text{mg/m}^3 = [(\text{mg/m}^3 \text{ dust}) \times (\text{mg/kg Ni})]/10^6$$

Assuming uniform contamination at a concentration of 1700 mg/kg (the maximum detected value), the PEL for soluble nickel (the species with highest toxicity) of 0.05 mg/m<sup>3</sup> (8 CCR 5155) would be reached only at total dust concentrations of approximately 28 mg/m<sup>3</sup>, a value well in excess of the PEL for total nuisance dust.

Dust becomes visible (depending on lighting, reflectivity, background, etc.) generally at or below a concentration of 2 mg/m<sup>3</sup>. Specifications call for no visible fugitive dust evolution during earthwork, so the Action Level or PEL for dust is unlikely to be reached or exceeded. Required engineering controls (No earthwork will be performed without active dust suppression, achieved through application of water before and during soil-disturbing activities.) and protective equipment requirements combined with the requirement to wash arms, face, and hands before eating or smoking will prevent exposures due to inhalation or ingestion of contaminated dust. A wash facility will be located on site at all times. In addition, the Site Safety Officer and Site Supervisor shall observe and warn the crew members to be aware of the initial symptoms of chemical exposure. The severity of exposure depends primarily on the specific activities undertaken and the care with which the activities are performed.

Any crew member will be removed from the work site and placed under watch immediately if these initial symptoms are noted:

- Dizziness or stupor
- Nausea, headaches, or cramps
- Irritation of the eyes, nose, or throat
- Euphoria
- Chest pains and coughing
- Rashes or burns

## *Downtown College Prep Facilities Health and Safety Plan*

---

Aggressive dust control requirements are expected to control exposures to asbestos as well, but the correlation is not as quantifiable as with metals. Air monitoring for airborne asbestos fibers in accordance with Section 8 therefore will be performed in order to quantify worker exposures.

Respiratory protection will be required only in the event that unexpected contaminant concentrations are encountered or dust control efforts prove ineffective at controlling asbestos exposures. Action levels for respiratory protection are established for the site based on maximum known concentrations. Respiratory protection will be utilized in accordance with Section 6.4 – 6.10 if action levels are exceeded or in the event that the following sustained ( $\geq 5$  minutes) breathing zone concentrations are recorded:

<u>Contaminant</u>	<u>Action Level</u>
Total (nuisance) Dust	4 mg/m <sup>3</sup>
VOCs (total)	5 ppm

### **4.2.1 Hazard Communication Program**

A written hazard communication program has been established for DCP, and each subcontractor is required to produce one covering information programs informing employees about all potential workplace exposures. The purpose of this program is to transmit information about the various chemical hazards in the workplace to the workers using various media. The transmittal of information will be accomplished by means of a comprehensive hazard communication program, which will include container labeling and other forms of warning, Safety Data Sheets (SDSs), and employee training in accordance with Title 8 CCR §5194.

The project program will be available at the DCP office for review by all employees. DCP will fulfill the hazard communication

requirements through formal safety training, departmental safety meetings, and job site safety meetings. Safety Data Sheets for all chemicals likely to be encountered on this job will be maintained and available on site.

## Downtown College Prep Facilities Health and Safety Plan

**TABLE 4.1  
SUMMARY OF SIGNIFICANT CONTAMINANTS ON-SITE**

Compound or Class	Description	Exposure Limits (TWA)	Exposure Routes	Exposure Signs and Symptoms
Inorganic Arsenic**	Lustrous grey metal	PEL = 10 µg/m <sup>3</sup>	Inhalation Absorption Ingestion	Acute GI disturbance; CNS disorders; irritation of the skin and mucous membranes. Chronic exposure causes anemia, peripheral neuro-pathy, skin lesions, hyper-pigmentation, and liver or kidney damage in humans. Lung, liver, skin, and bladder cancer linked to chronic exposure. (C)
Nickel (soluble) **  Nickel (metallic)	Silvery, lustrous metal.	PEL = 50 µg/m <sup>3</sup> REL = 15 µg/m <sup>3</sup> † **  PEL = 0.5 mg/m <sup>3</sup>	Inhalation Ingestion Absorption	Skin rash, allergic dermatitis, allergic asthma, pneumonitis. Suspected carcinogen, possible teratogen. (C)
Asbestos **	White, brown, or blue fibrous material. Will appear as odorless nuisance dust; visually non-detectable at PEL	PEL = 0.1 fibers/cc AL = 0.05 fibers/cc	Inhalation Ingestion	Causes pulmonary fibrosis (asbestosis); GI cancers. Regulated and non-regulated forms (amphiboles) indicated in pleural plaques and mesothelioma. Symptoms (chronic) include shortness of breath, cough, chronic hypoxia. (C)
Crystalline Silica ** (Quartz,); Total	Fine dust generated by demolition and loading activities	PEL = 300 µg/m <sup>3</sup> AL = 150 µg/m <sup>3</sup>	Inhalation	Respiratory irritation; Impaired pulmonary function (silicosis); lung cancer
Crystalline Silica ** (Quartz,); Respirable		PEL = 100 µg/m <sup>3</sup> AL = 50 µg/m <sup>3</sup>		
Diesel	Mixture of aliphatic and aromatic hydrocarbons. Colorless to light yellow liquid with characteristic odor	PEL = 300 ppm (AL = 25 ppm)	Inhalation Ingestion	Headache, narcosis, defatting dermatitis.

### **Notes :**

TWA Time-Weighted Average concentration value

PEL Permissible Exposure Limit; 8-hour TWA unless otherwise noted (8 CCR 5155)

REL Recommended Exposure Limit; National Institute for Occupational Safety and Health (NIOSH)

STEL Short-Term Exposure Limit; 15-minute TWA unless otherwise noted (8 CCR 5155)

AL Project Action Level for Respiratory Protection

\*\* Exposure to carcinogens maintained As Low As Reasonably Achievable

(C) Known or suspected occupational carcinogen

## **4.3 PHYSICAL HAZARDS**

In order to minimize physical hazards, DCP has developed standard safety protocols that will be followed at all times. Hazard analyses are produced, updated frequently, and reviewed daily with all affected crew members for every jobsite operation. Failure to follow safety protocols or continued negligence of these policies will result in expulsion of a crew member from the site as well as possible termination of employment.

All DCP personnel are familiar with the field activities that will be conducted at the site. They are trained to work safely under various field conditions. In addition, DCP personnel will use work practices designed to minimize physical hazards.

Hard hats, safety vests, and leather work boots will be required in all areas of the site.

### **4.3.1 Tripping, Slipping, and Falling Hazards**

DCP personnel will be reminded daily to maintain sure footing on all surfaces. Use of safety harnesses and fall arrest/restraint will be required for any personnel working 6 or more feet above any surface, including on manlifts, and whenever they are exposed to impalement hazards.

In order to minimize tripping hazards caused by construction debris, material will be removed daily from the work areas and stockpiled in appropriate designated storage areas. This “house cleaning” effort will be enforced by the SSO at the end of each day.

### **4.3.2 Head, Eye, and Back Injuries**

As minimum requirements, hard hats and safety glasses will be donned prior to entering any active work area or performing any related job tasks. (This

includes visitors, outside service contractors, etc.) Personnel will be trained in and required to use proper lifting techniques for all lifts.

### **4.3.3 Falling Objects**

DCP believes that all tasks can be accomplished without any object free-falling to the ground. No personnel shall work under equipment or elevated loads at any time. Areas beneath elevated work will be barricaded and posted with warning signs.

### **4.3.4 Heavy Equipment and Traffic**

The use of heavy excavators, scrapers, and other equipment on site presents the greatest potential for injury to personnel. In order to minimize these hazards, designated routes will be established for transport of material through the site and specific traffic patterns will be established. All trucks will be equipped with operable backup alarms and shall use spotters for backing procedures.

Personnel needing to approach heavy equipment during operation will observe the following protocols:

1. Make eye contact with the operator.
2. Signal the operator to cease heavy equipment activity.
3. Approach the equipment and inform the operator of intentions.

Only qualified personnel, as determined by the Site Superintendent, will operate heavy equipment. Those crew members directly involved with spotting for the operator will be the only personnel allowed within the operating radius of the heavy equipment. All other personnel will remain a safe distance away from these operations.

DCP personnel and subcontractors will follow all Client traffic rules and instructions, including use of reflective safety vests. Barricades will be erected

## *Downtown College Prep Facilities Health and Safety Plan*

---

around any work sites within the roadway, and all personnel will remain within barricaded area. Road and lane closures will be permitted by the City of Newark. Only trained flaggers will be used to direct traffic around and through the work area.

### **4.3.5 Site Pre-inspection of Equipment**

DCP will only use equipment that is in safe working order. To maintain this policy, all equipment brought onto the project site will be inspected for structural integrity, smooth operational performance, and proper functioning of all critical safety devices in accordance with the manufacturer's specifications. This inspection will be performed by a qualified equipment operator. Also, every operator will perform and document a Daily Equipment Inspection at the start of each work shift and turn the form in to the foreman by the end of shift. Equipment found during this inspection that does not conform to operational and safety requirements will not be put into service until all necessary repairs are made to the satisfaction of the inspection group.

### **4.3.6 Operator Qualifications**

Only qualified operators familiar with the equipment to be used will be permitted to operate. Subcontractors will supply proof of operators' qualifications to operate in a safe manner, including certification for any equipment requiring it (lift trucks, etc.).

### **4.3.7 Electrical Hazards**

In order to prevent accidents caused by electric shock, the SSO will inspect all electrical connections on a daily basis. He will shut down and lock out any equipment that is found to have frayed wiring or loose connections until a qualified electrician can be contacted and repairs effected.

Electrical equipment will be de-energized and tested by qualified personnel before

any electrical work is done. All equipment will be properly grounded before and during all work.

In addition, ground fault circuit interrupters (GFCIs) will be used with portable hand power tools between the power source and tool, unless the presence of a potentially explosive atmosphere precludes this procedure. Generators used to supply power will be equipped with GFCIs.

### **4.3.8 Welding Hazards**

Personnel who will be performing or observing welding operations are required to use approved welding shields or glasses. Welding shields and glasses are to be inspected prior to each use for scratches and pits that would inhibit their ability to shield harmful ultraviolet light.

Workers will be required to wear protective clothing to shield the skin from slag and harmful ultraviolet light produced by welding operations. Persons working near welding operations that could ignite chemical protective clothing must wear flame retardant outer apparel (Nomex or equivalent).

### **4.3.9 Fire and Explosion**

Permits will be required for all torch-cutting and other "hot work". All ignitable materials within 30 feet of hot work will be removed or covered with a fire blanket or equivalent. All flammable liquids will be stored in UL-Approved safety containers in designated areas. Oxygen and acetylene cylinders will be stored secured upright in separate areas except when on carts for immediate use. All high-pressure cylinders will be transported with caps in place, and all valves and gauges will be inspected before each use. Periodic monitoring for explosive vapors (primarily gasoline) will be performed in excavations deeper than 3 feet. Continuous monitoring for explosive

# *Downtown College Prep Facilities Health and Safety Plan*

---

vapors will be performed for all hot work undertaken in exclusion zone(s), and no hot work will be permitted if combustible gas or vapor concentrations at the lowest point exceed 10 percent of the Lower Explosive Limit (LEL).

## **4.3.10 Rigging and Hoisting**

Only qualified riggers and operators will be permitted to perform these operations. Only approved rigging (slings, chokers, wire rope, shackles, etc.) will be used on site. (No Chinese or other unapproved manufacturers.) Load charts will be posted in all cranes and boom trucks. Hoisting performed using heavy equipment (excavators, etc.) will be done using engineered hard points. (Bucket teeth, etc. will not be used for hoisting.) All equipment and rigging will be inspected at least daily (in accordance with Construction Safety Orders and Foundation Safety Program), and all damaged or otherwise unacceptable (tags illegible, etc.) gear will be removed from service and destroyed. Tag lines of at least ½-inch diameter will be used to control all elevated loads, and no workers will be permitted beneath an elevated load at any time.

## **4.3.11 Excavation/ Trenching**

DCP and the excavation contractor will possess a valid and current excavation permit before the start of the job. A survey for underground utilities will be performed and all existing utilities marked before any excavation. All spoils will be placed a minimum of two feet from the edge of the trench. All excavations will be shored or sloped as required prior to any entry for confirmation sampling or any other reason.

## **4.4 ENVIRONMENTAL HAZARDS**

### **4.4.1 Weather and Heat Stress**

With the possible combination of ambient factors such as high air temperature, high

relative humidity, low air movement, high radiant heat, and protective clothing use, the potential for heat stress is a concern.

The potential exists for:

- Heat Rash is caused by continuous exposure to hot and humid air and aggravated by chafing clothes. Heat rash decreases ones ability to tolerate heat.
- Heat Cramps are caused by profuse perspiration with inadequate fluid intake and chemical replacement (especially salts). Signs of heat cramps include muscle spasm and pain in the extremities and abdomen.
- Heat Exhaustion is caused by increased stress on various organs to meet increased demands to cool the body. Signs of heat exhaustion include shallow breathing; pale, cool, moist skin; profuse sweating; dizziness; and listlessness.
- Heat Stroke is the most severe form of heat stress. The body must be cooled immediately to prevent severe injury or death. Signs and symptoms of heat stroke are red, hot, dry skin; no perspiration; nausea; dizziness and confusion; strong, rapid pulse; and coma.

Daytime temperatures at the Site may be expected to range from 2° C to 32° C (35° F to 91° F). Wearing an impermeable suit with rubber boots, gloves, hard hat, and full-face respirator imposes an additional 6° C to 11° C (10° F to 20° F) burden on the worker. For the purposes of this Environmental Health and Safety Plan, it is assumed that workers at the Site wearing Level C protective gear (if required) with impermeable suits will experience the same additional temperature burdens as described above. It is therefore



## *Downtown College Prep Facilities Health and Safety Plan*

---

possible that workers wearing Level C safety gear, with an impermeable suit, could be exposed to working temperatures inside their suits of approximately 8°C to 38°C (45°F to 100°F). DCP's action level for heat stress observation is set at 80°F. Whenever the ambient temperature is greater than or equal to this action level, the SSO will alert his crew to be vigilant for symptoms of heat stress. The SSO will also advise the crew to increase the amount of water intake.

Heat stroke, heat cramps, and heat exhaustion are covered in detail during general and site-specific training program. In addition, this information is discussed during safety "tailgate" meetings. Workers are encouraged to increase consumption of water and electrolyte-containing beverages such as Gatorade during warm weather. Water and electrolyte-containing beverages will be provided on-site and will be available for consumption during work breaks.

### **Protective Measures**

Regular monitoring and other precautions relating to heat stress have been prescribed by NIOSH. The following protective measures will be taken by workers at the Site if ambient temperatures exceed 70°F.

- 1) Workers will take rest periods every two to four hours. Rest periods will be a minimum of fifteen minutes. Liquids (particularly electrolyte-replenishing fluids) will be available to all workers during rest periods.
- 2) Workers will wear lightweight clothing under impervious suits (i.e. short sleeve shirts are acceptable depending on anticipated chemical exposure levels).
- 3) NIOSH recommends that workers

wearing impervious clothing receive physiological monitoring at regular intervals when the ambient air temperature approaches or exceeds 70°F. Physiological monitoring will consist of the following measurements (taken during prescribed rest periods):

- a) Measure heart rate (HR) as early as possible in the rest period and record.
- b) Check for the physical reactions related to heat stress. Physical reactions include fatigue, irritability, anxiety, and decreased concentration, dexterity or movement. If the measured heart rate exceeds 110 beats per minute, or any of the above physical symptoms are noted, the work period will be shortened by 30 percent (NIOSH 1985). Work may resume after the heart rate and physical condition of the worker has returned to normal.

### **Cold Stress**

Cool and wet conditions are possible during the execution of this work should the schedule carry through to the fall. The Site Safety Officer (SSO) and workers will be alert for signs and symptoms of cold stress (hypothermia). This is commonly caused by prolonged exposure to cool / windy conditions while wearing clothing that has become wet, either from precipitation, dust control measures, or paradoxically by perspiration caused by heavy work in protective suits.

The SSO will monitor the ambient air temperature using a thermometer in the support zone. At temperatures below 40°F, actual temperature or corrected for wind chill, the most current published ACGIH cold stress standard will be followed.

# *Downtown College Prep Facilities Health and Safety Plan*

---

Field personnel will be observed for the following signs and symptoms:

- Pain in the extremities
- Uncontrolled shivering
- Malaise or reduced responsiveness

Any team member who exhibits these signs will be monitored for cold stress. Any individual with an oral temperature of less than 97° F will be taken immediately to a warming shelter.

A warming shelter will be provided on any job site where the ambient temperature is less than 40° F. Breaks will be taken in the shelter as needed according to ACGIH TLV for cold stress.

## **4.4.2 Hearing Conservation Program**

DCP has a comprehensive Hearing Conservation Program and requires use of hearing protection for all personnel working on or within 50 feet of heavy equipment or within any areas designated by management. DCP's hearing conservation program complies with both the California and Federal Hearing Conservation Standards.

## **4.4.3 Confined Space Entry**

All trenches deeper than five feet into contaminated soils will be treated as Non-Permit-Required Confined Spaces in accordance with DCP's Confined Space Entry Program. Initial and hourly monitoring will be performed throughout the work area for flammable gases or vapors, oxygen, carbon monoxide, and total VOCs. Continuous monitoring will be performed during all hot work and work involving use of internal combustion engines of any type in or around occupied spaces.

Work will cease and all spaces will be evacuated immediately in the event any meter goes into "alarm" mode, or any of the following parameters for acceptable entry is exceeded:

<u>Parameter</u>	<u>Acceptable Range</u>
Oxygen	19.5% - 23%
Combustible Gas	≤ 10% LEL
H <sub>2</sub> S	≤ 2 ppm
CO	≤ 10 ppm
Organic Vapor	< 5 ppm

The space will not be re-entered for any reason until the condition has abated or the condition has been further evaluated and deemed safe by the Site Safety Officer in consultation with the project Industrial Hygienist.

## **4.5 HAZARD ANALYSIS SUMMARY**

This work involves risk from several sources. Physical hazards and construction activity present a higher than normal risk due to the confined work areas, use of protective equipment, and proximity to traffic. These risks will be minimized by adequate traffic control, planning, and worker education.

Excavation work at the site presents two principal exposure routes: inhalation of volatile organic vapors and inhalation or ingestion of dust contaminated with metals and particulate-bound contaminants. These risks will be minimized by use of engineering controls as well as appropriate personal protective equipment and personal hygiene.

Assuming all dust generated on site contains the maximum detected soil concentrations of contaminants, the action level (at which use of respiratory protection becomes mandatory) for any listed contaminant would be expected to be

## *Downtown College Prep Facilities Health and Safety Plan*

---

reached at a total dust concentration significantly in excess of the PEL for respirable nuisance dust of 5 mg/m<sup>3</sup>; this dust concentration (with additional 20% safety margin) therefore is the established action level for respiratory protection. This concentration is unlikely to be reached because of the stringent dust control requirements detailed in the specifications. (Contract specifications allow for no visible dust generation.) A requirement for Level C respiratory protection is therefore not anticipated unless organic vapors accumulate in the work area in excess of project action levels. Dust monitoring will be performed using a real-time aerosol monitor (MIE PDR-1000 or equivalent), and an organic vapor monitor will be used to determine VOC concentrations, and representative personal and ambient air sampling for PNAs will be performed using calibrated sampling pumps and appropriate collection media to confirm compliance with the Permissible Exposure Limits. Perimeter monitoring will also be performed in order to evaluate site engineering and administrative controls.

Potential for generation of airborne contamination (volatile and particulate) is expected to occur during all earthwork activities that disturb or aerate contaminated soils. Monitoring equipment will be used to identify downwind releases and upwind (background) concentrations. Respirators may be used to minimize exposure of workers in these areas should dusty conditions or air monitoring data indicate such a need.

In most areas, work will proceed without respiratory protection unless or until additional soil sampling or air monitoring results indicate protection is required or advisable. Protective clothing ensembles for each of the levels of protection are described in Section 6.

### **4.6 TASK SPECIFIC RISK ASSESSMENT**

**TASK:** Demolition of structures, foundations, pavement, and subsurface encumbrances

**SPECIFIC HAZARDS:** Utilities, equipment, slips, trips, & falls, noise, contact with contaminated materials, dust/atmospheric hazards, fire and explosion

**CONTROL MEASURES:** All utilities will be disconnected and disconnect verified by SSO or his designee before commencement of any demolition activity. A clearance survey for underground utilities (USA or equivalent) will be performed before any excavation. The work area will be surrounded by a barricade to exclude ground personnel from projectile and impalement hazards. All potentially exposed personnel shall wear hearing protection. Only qualified and experienced operators (as detailed in Section 4.3.6 of this HASP) will operate equipment. Hard hats and safety glasses will be required at all times. All hazardous building materials (asbestos, etc.) will have been removed and removal verified in writing by "soft demolition" subcontractor before commencement of demolition. Dust control will be utilized to reduce the potential for airborne concrete dust. All saw-cutting will use wet saws. Disturbance of structures coated with lead-based paint will be performed in accordance with this HASP, 8 CCR 1532.1, and DCP's lead protection program. Air monitoring and sampling will be conducted in accordance with Section 8 of this HASP. Any USTs encountered will have contents evacuated and internal atmosphere completely inerted (0% LEL) before any permitted removal is performed.

## *Downtown College Prep Facilities Health and Safety Plan*

---

**TASK:** Demolition of utilities and process piping, Line Breaking

**SPECIFIC HAZARDS:** Utilities, equipment, slips, trips, & falls, noise, contact with contaminated residues, trench entry, atmospheric hazards, unanticipated chemical reactions.

**CONTROL MEASURES:** All utilities and process piping will be disconnected and disconnect verified by SSO before commencement of any demolition activity. The work area will be surrounded by a barricade to exclude unauthorized personnel. All exposed personnel shall wear hearing protection as dictated by noise levels. Only qualified and experienced operators (as detailed in Section 4.3.6 of this HASP) will operate equipment. Hard hats and safety glasses will be required at all times. All hazardous materials (asbestos insulation) will have been removed and removal verified in writing by "soft demolition" subcontractor. Lines will be drained and purged whenever possible. All trenches will be properly shored or sloped before entry, and will be treated as non-permit required confined spaces. Air monitoring and sampling will be conducted in accordance with Section 8 of this HASP.

**TASK:** Excavation, Grading, Transport, and Compaction of Contaminated Soils

**SPECIFIC HAZARDS:** Utilities, noise, heavy equipment and truck/scrapper operations, vehicular traffic, particulate contaminants and projectiles.

**CONTROL MEASURES:** A survey for underground utilities shall be conducted prior to any excavation. Personnel will use care when walking around excavation edges. Level "D" personal protection will be used unless otherwise specified by Client or DCP Site Safety Officers. The work area will be clearly marked. Ground personnel shall maintain eye contact with the equipment operator and wear hearing protection while inside the operating radius of the

equipment, and shall otherwise maintain a minimum distance of 40 feet from the equipment unless spotting for the operator. Only qualified and experienced operators will operate equipment. Hard hats, safety glasses, gloves and work boots are mandatory for all personnel, and rubber overboots and tyvek suits (or equivalent) will be worn by all personnel entering exclusion zones or performing any job tasks with potential for significant soiling by contaminated soils. An aggressive program of dust control will be utilized to prevent any visible dust generation and will thereby reduce the potential for airborne contaminants. Sufficient water will be applied to all exposed soils to maintain surfaces above 70 percent of soil capacity, thereby preventing dust suspension. Scrapers (if used) will follow specified routes (standard left-hand traffic unless otherwise marked) and other traffic will be excluded to the greatest extent possible. Spotters/flaggers will be used to direct traffic and spot trucks and flag other traffic across or through scraper spreads. Haul trucks will be securely tarped before transport of hazardous or contaminated material on any public road outside of project limits. Spilled material will be cleaned immediately from vehicles and (open) road surface and returned to excavation.

### **SECTION 5 WORK AND SUPPORT AREAS**

To prevent migration of contamination caused by personnel or equipment, work areas and personal protective equipment are clearly specified prior to beginning operations. Site Safety has designated work areas or zones as suggested by the NIOSH/OSHA/USCG/EPA document, "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities". Each work area will be divided

# *Downtown College Prep Facilities Health and Safety Plan*

---

into three zones: an exclusion (or "hot") zone (EZ), a contamination reduction zone (CRZ), and a support zone.

## **5.1 EXCLUSION ZONE**

The exclusion zones will consist of areas where inhalation, oral contact, or dermal contact with contaminants is considered to be possible. It is anticipated that each EZ will encompass open excavations in contaminated (known or suspected) areas of the site prior to installation of clean base as well as the immediate confines of any stockpiles and disposal cells before capping. The size and configuration of each area may vary according to air monitoring results. Each exclusion zone boundary will be clearly and conspicuously marked. A single entry and exit point will be established at each zone. Entry shall be limited to essential personnel or pre-approved visitors.

## **5.2 CONTAMINATION REDUCTION ZONE**

The CRZ will be established between the exclusion zone and support zone. In this area, personnel will begin the sequential decontamination process required to exit the exclusion zone. To prevent off-site migration of contamination and to facilitate personnel accountability, all personnel will enter and exit the exclusion zone through the CRZ. Decontamination is expected to be limited only to tools (augers, shovels, etc.) used to handle contaminated materials and contaminated PPE. Potentially contaminated material that is removed will be added to stockpile area, and rinsates generated by decontamination activities will be used for dust control on the contaminated stockpiles, which will be located in lined and bermed areas.

## **5.3 SUPPORT ZONE**

The support zone will consist of a clearly marked area where the administrative area, break areas, and changing facilities are located. Smoking, drinking, and eating will be allowed only in designated areas. Sanitation facilities (with hand wash) are provided in the support zone.

## **5.4 ACCESS CONTROLS**

The DCP Site Safety Officer or designee shall establish the physical boundaries of each zone and shall instruct all workers and visitors on the limits of the restricted areas. No one shall be allowed to enter a restricted area without the required protective equipment for that area. The SSO shall ensure compliance with all restricted area entry and exit procedures.

The SSO shall also designate a decontamination corridor through which personnel may exit from a contaminated area and enter into adjacent clean break areas.

Visitors should check in immediately upon arrival. Only authorized visitors will be allowed access to active work areas. Each visitor will be required to provide and wear the necessary protective equipment for use during site visits and shall be escorted by the Supervisor while on site. All visitors, subcontractors and other personnel will be required to sign a safety plan acknowledgement sheet to certify that they have read and will comply with this site health and safety plan. Failure to comply with this site entry procedure will result in expulsion from the site.

# *Downtown College Prep Facilities Health and Safety Plan*

## SECTION 6 PROTECTIVE EQUIPMENT

The following lists define the required personal protective equipment for each work location and task within a specific zone.

### 6.1 EXCAVATION EXCLUSION ZONE(S)

**Tasks:** All DCP employees

**EPA Level:** D/C \*

**Respiratory Protection:** None \*

**Head:** Hard hat

**Hand:** Work gloves.

**Suit:** Cloth or Tyvek™ coveralls

**Foot:** Work boots (with overboots only as needed to facilitate decontamination)

**Eye:** Safety Glasses; Face Shields\*\*

**Special Requirements:** Coveralls and gloves needed only as required to prevent contact with and soiling by contaminated materials. Workers not in direct contact with contaminated soils may substitute work clothes and gloves for coveralls and Nitrile/Liner system.

**Comments:** Hearing protection is required within 50 feet of operating heavy equipment and all other areas found to present noise levels in excess of 85 dBA.

\* Respiratory protection will be necessary only in the event that sustained levels of total VOCs in worker breathing zones exceed project action level of 5 ppm, total dust concentrations in worker breathing zones exceed a 10-minute or longer time-weighted average of 4.0 mg/m<sup>3</sup>, or sampling results indicate asbestos or other site contaminants in excess of respective Permissible Exposure Limits (PELs). Respirators will also be necessary if areas of higher than expected concentrations of soil contaminants are encountered or engineering controls are unable to maintain

airborne dust concentrations below established action levels.† Respiratory protection will be used in accordance with State and Federal respiratory protection standards as well as DCP's Respiratory Protection Program.

\* Respiratory protection will be necessary only in the event that sustained levels of airborne contaminants exceed the following project action levels:

<u>Contaminant</u>	<u>Project Action Level</u>
Asbestos *	0.05 f/cc
Chromium	25 µg/m <sup>3</sup>
Crystalline Silica	100 µg/m <sup>3</sup> **
Nuisance Dust †	450 µg/m <sup>3</sup> (BZ) 250 µg/m <sup>3</sup> (area)

\* Asbestos will be defined as all mineral fibers identified by Phase Contrast Microscopy analysis in accordance with NIOSH Method 7400.

\*\* Assignment of respiratory protection for crystalline silica (quartz) will be based on 95% Upper Confidence Limit exposure values for respirable quartz obtained through worker breathing zone sampling in accordance with NIOSH Method 7500.

† Work area action level established at 250 250 µg/m<sup>3</sup> above upwind values

Respirators also will be necessary if areas of higher than expected concentrations of soil contaminants are encountered or engineering controls are unable to maintain airborne dust concentrations below established action levels. Respiratory protection will be used in accordance with State and Federal respiratory protection standards as well as Flatiron Construction Company's Respiratory Protection Program.



# *Downtown College Prep Facilities Health and Safety Plan*

---

\*\* Face shields required only as needed for splash hazards from contaminated ground water and other free liquids.

## **6.2 CONTAMINATION REDUCTION ZONE**

**Tasks:** All decontamination procedures

**EPA Level:** D

**Respiratory Protection:** None.

**Head:** Hardhat.

**Hand:** Work or Nitrile gloves.

**Suit:** Tyvek™ or cloth taped to boots and gloves.

**Feet:** Leather work boots

**Eye:** Safety Glasses / Face Shield

**Special Requirements:** Waterproof suit, rubber boots, and face shield required only for pressure washing of tools and equipment.

**Comments:** See Section 4.6

## **6.3 SUPPORT ZONE**

Personnel working in the support zone will use the following Level "D" protective gear:

- Leather work boots
- Hard hat
- Safety glasses

## **6.4 RESPIRATOR CARTRIDGES**

Should conditions require an upgrade to Level "C" protection for some tasks, crew members working in Level "C" will wear NIOSH/MSHA-approved respirators equipped with combination organic vapor and P-100 HEPA air purifying cartridges. These cartridges hold approval for:

- Dusts, fumes and mists with a TLV of 0.05 mg/m<sup>3</sup> or greater
- Asbestos containing dusts and mists
- Radon daughters and radionuclides
- Organic Vapors

## **6.5 CARTRIDGE CHANGES**

All cartridges will be changed a minimum of once daily. However, water saturation of the HEPA filter or extremely dusty conditions may necessitate more frequent changes. Changes will occur when personnel begin to experience increased breathing resistance, notice any unusual odor inside the respirator, or experience excessive heat generation in the cartridges.

## **6.6 INSPECTION AND CLEANING**

Respirators will be inspected daily before use by the individual user(s) and will be checked periodically by the DCP SSO. All respirators and associated equipment will be decontaminated, cleaned, and disinfected by the user after each shift using materials that will be provided on site.

## **6.7 FIT TESTING**

Annual respirator fit tests are required of all personnel wearing negative pressure respirators. Qualitative fit tests will utilize isoamyl acetate or irritant smoke. Fit tests must incorporate the style and size of respirator to be used. Additionally, a positive and negative pressure fit check shall be conducted each time any tight-fitting respirator is donned.

## **6.8 FACIAL HAIR**

No personnel with facial hair that interferes with the respirator's sealing surface will be permitted to wear a respirator.

## **6.9 CORRECTIVE LENSES**

Normal eyeglasses cannot be worn under full-face respirators because the temple bars interfere with the respirator's sealing surfaces. For workers requiring corrective lenses who also must don full-face

# *Downtown College Prep Facilities Health and Safety Plan*

---

respiratory protection, special spectacles designed for use with respirators will be provided. Eyeglasses rated as safety glasses (ANSI Approval Z87 displayed on frame) are acceptable provided they are fitted with rigid side shields.

## **6.10 MEDICAL CERTIFICATION**

In accordance with DCP's Respiratory Protection Program, only workers who have been certified by a physician as being physically capable of respirator use will be issued a respirator. Documentation of this approval will be maintained on site.

## **SECTION 7 DECONTAMINATION PROCEDURES**

This section describes the procedures necessary to ensure that both personnel and equipment are free from contamination when they leave the work site.

### **7.1 PERSONNEL DECONTAMINATION**

Decontamination of personnel shall be accomplished to ensure that any material that they may have contacted in the exclusion zone is removed in the contamination reduction zone. Decontamination of personnel exiting the exclusion zone will utilize the following steps as appropriate to the specific site:

#### Step 1: Segregated equipment drop

Deposit equipment used on-site on plastic drop cloths or in containers with plastic liners.

#### Step 2: Overboot and glove wash

Scrub overboots and gloves with soap and water if visibly soiled.

#### Step 3: Overboot and glove rinse

Rinse boots and gloves with water.

#### Step 4: Outer glove removal

Remove outer gloves and deposit in container with plastic liner.

#### Step 5: Suit and boot removal

Remove Tyvek suit with assistance of helper or buddy as needed. Deposit in container with plastic liner. Pull off rubber boots.

#### Step 6: Respirator removal (Level C)

Remove respirator. Avoid touching face with gloves. Place respirator in wash basin.

#### Step 7: Inner glove removal

Remove inner gloves and dispose of in container with plastic liner.

#### Step 8: Wash

Wash hands, face, and neck before breaks and lunch.

All rinsates and dislodged soils and other potentially contaminated material will be added to stockpiles or directly to haul trucks for disposal.

### **7.2 EQUIPMENT DECONTAMINATION**

Brushing and establishment of a 50-foot track-out zone is expected suffice for decontamination of vehicles and equipment. A separate decontamination pad will be established for the decontamination of all equipment and vehicles leaving established hazardous waste exclusion zones. The following steps will be performed sequentially:

#### Step 1: Gross Contamination Removal

Gross soil deposits will be removed manually from tracks, tires, drives, etc. using digging bars, scrapers, etc. before moving onto decontamination pad.

# *Downtown College Prep Facilities Health and Safety Plan*

---

## Step 2: Pressure Wash

All surfaces that cannot be sufficiently decontaminated manually and by track out buffer will be pressure washed with surfacted water to remove any remaining adhering contamination.

## Step 3: Final water rinse

A final rinse is performed to remove dissolved contaminant, water, and surfactant residues.

### **7.3 SUSPECTED CONTAMINATION**

Any employee suspected of sustaining skin contact with hazardous materials will proceed to the contamination reduction zone and wash off the contamination. If chemical contact causes injury, the employee will remove clothing, shower, don clean clothing, and immediately be taken to the First Aid Station.

### **7.4 SANITATION/ HYGIENE**

Before any eating, smoking, or drinking, personnel will exit exclusion zones and wash hands, arms, neck, and face. Separate - sex sanitation facilities will be available in the support zone if ten or more employees are to be accommodated.

### **7.5 OTHER DECONTAMINATION PROCEDURES**

All decontamination liquids and disposable clothing will be handled as contaminated waste and disposed of properly at the direction of the client.

## **SECTION 8 EXPOSURE MONITORING**

Personal and ambient air monitoring will be conducted by Site Safety personnel as necessary in order to determine airborne contamination levels. Air sampling to

ensure and document that exposure control measures in use are adequate to protect personnel against the contaminants present on site will be conducted in accordance with 8 CCR Sections 1529, 1532.1, 5155 and 5192.

Real - time monitoring will be performed for dust as required by and outlined in the RMP.

Real - time monitoring for VOCs will be performed at the discretion of the SSO and IH as dictated by sampling results in the area being excavated or graded. VOC monitoring will be performed using a calibrated ThermoEnvironmental OVM (or equivalent PID) fitted with a 10.6 eV lamp. Work will stop and the CIH will be notified of any sustained (5 minute) breathing zone readings exceeding 5 ppm.

Representative personal air sampling will be performed for the following contaminants at the outset of each job task and whenever site conditions (atmospheric or subsurface) change:

- Asbestos (NIOSH 7400)

Otherwise, objective data (site characterization data and integrated aerosol measurements) may be used to document the lack of airborne hazard as long as dust control measures are implemented in accordance with Construction Safety Orders and this Plan.

All personal and ambient sampling will be performed in accordance with either NIOSH/OSHA or EPA methods, and results will be shared with full crew at the next scheduled safety meeting.

Noise levels will be evaluated and safe (85 dBA or less) perimeters established for all operations and equipment. Dosimetry will be performed for non-routine job tasks and those requiring frequent transit of areas

# *Downtown College Prep Facilities Health and Safety Plan*

---

requiring hearing protection to determine requirements for these tasks.

All exposure monitoring records will be kept in the appendices of this Plan and made available to all employees and their designated representatives on request.

## **SECTION 9 EMERGENCY RESPONSE**

Prior to start of field activities, the SSO shall plan emergency egress routes and discuss them with all personnel who will be conducting the field work. Initial planning includes establishing and posting of emergency warning signals and evacuation routes in case of an emergency.

### **9.1 EMERGENCY SERVICES**

A tested system shall exist for rapid and clear distress communication. All personnel shall be provided concise and clear directions and accessible transportation to local emergency services. A map outlining directions to the nearest hospital will be posted on site.

The following emergency equipment shall be present on the site:

- Fire extinguishers
- Industrial first aid kit
- Portable eye washes, capable of supplying 15 minutes of water

### **9.2 EMERGENCY EVACUATION FROM EXCLUSION AND CONTAMINATION REDUCTION ZONES**

Any personnel requiring emergency medical attention shall be evacuated immediately from exclusion and contamination reduction zones. Personnel shall not enter the area to attempt a rescue

if their own lives would be threatened. The decision whether or not to decontaminate a victim prior to evacuation is based on the type and severity of the illness or injury and the nature of the contaminant. For some emergency victims, immediate decontamination may be an essential part of life saving first aid. For others, decontamination may aggravate the injury or delay life saving treatment. If decontamination does not interfere with essential treatment, it should be performed.

If decontamination can be performed:

- Wash external clothing and cut it away.

If decontamination cannot be performed:

- Wrap the victim in blankets or plastic to reduce contamination of other personnel.
- Alert emergency and off-site medical personnel to potential contamination; instruct them about specific decontamination procedures.
- Send along site personnel familiar with the incident

### **9.3 FIRST AID**

Only qualified personnel shall give first aid and stabilize an individual needing assistance. Life support techniques such as CPR and treatment of life threatening problems such as airway obstruction and shock will be given top priority. Professional medical assistance shall be obtained at the earliest possible opportunity.

At least two persons currently certified in first aid and CPR will be on site at all times during site activity.

# *Downtown College Prep Facilities Health and Safety Plan*

---

To provide first-line assistance to field personnel in the case of sickness or injury, the following items will be immediately available:

- First aid kit
- Portable emergency eye wash
- Supply of clean water

## **9.4 EMERGENCY ACTIONS**

*Note: Only individuals with minor injuries requiring minor medical attention (beyond first aid provided at the job site) will be transported to the hospital in company vehicles. If actual or suspected serious injury occurs, these steps shall be followed:*

- Remove the exposed or injured person(s) from immediate danger.
- Render first aid if necessary. Affected personnel will be decontaminated after critical first aid is given.
- Obtain paramedic services or ambulance transport to local hospital. This procedure shall be followed even if there is no visible injury.
- Other personnel in the work area shall be evacuated to a safe distance until the site supervisor determines that it is safe for work to resume. If there is any doubt regarding the condition of the area, work shall not commence until all hazard control issues are resolved.
- Notify SSO and Project Manager of incident.
- Notify Cal/OSHA within 8 hours of serious injury or death.

## **9.5 GENERAL EVACUATION PLAN**

In the general case of a large fire, explosion, or toxic vapor release, a site evacuation shall be ordered and shall follow these steps:

- Sound alarm (repeated long blast) and advise SSO and client representative.

- Evaluate the immediate situation and wind direction. All personnel will evacuate in the upwind or crosswind direction to the designated assembly area immediately outside the main gate. (Specific routes will depend on wind direction – check wind directions on site and choose route that will avoid areas downwind of any release.)
- All personnel will assemble in a designated upwind area when the situation permits, and a head count will be taken.
- Determine the extent of the problem.
- Coordinate with emergency response personnel to dispatch or direct a response team to evacuate any missing personnel or to correct the problem. If no trained Emergency Response Team is available on site, the off site emergency response provider designated below will be summoned immediately and directed by SSO upon arrival.

## **9.6 EMERGENCY PHONE NUMBERS**

**Fire /Medical Emergency** 911

**Office of Emergency Services**  
State O.E.S. (800) 852-7550

**Cal/OSHA (Regional):** (415) 703-5210

**Project Manager, DCP:** Mr. Peter Geraghty  
Mobile (408) 938-6365

**Project Manager:** To Be Determined  
Office (925) 988-9500

**Environmental Consultant:** Kurt Soenen  
Cornerstone Earth Group, Inc.  
Office (408) 245-4600  
Mobile (408) 605-3037

**Project CIH:** Kevin Braun  
Earth Safety Dynamics, Inc.  
Office (925) 455-6601  
Mobile (925) 980-0568

# *Downtown College Prep Facilities Health and Safety Plan*

---

**Medical Services** (408) 885 - 5000  
Santa Clara Valley Medical Center  
751 Bascomb Avenue  
San Jose, CA 95128

*Note: Each contractor will have own designated Medical Service provider.*

## **Directions to Hospital:**

Leaving the site, head northwest on Monterey Rd. toward Alma Avenue. Continue onto S. 1<sup>st</sup> St. and follow for .2 miles; turn right onto E. Humboldt St. After 1 block take slight left onto S. 3<sup>rd</sup> St. After .7 miles, turn right onto E. Reed St., then turn right onto I 280 N. After 1.9 miles, take the Leigh Avenue / Bascomb Rd. exit, merge onto Parkmoor Avenue, then turn left onto South Bascomb. Hospital will be on the right; follow signs for emergency department.

## **9.7 STANDARD PROCEDURES FOR REPORTING EMERGENCIES**

When calling for assistance in an emergency situation, the following information should be provided:

1. Call the appropriate emergency phone number (Posted on site; see above).
2. Provide the following information upon request:
  - Name of person making the call.
  - Telephone number at location of person making call.
  - Name of person(s) exposed or injured.
  - Nature of emergency.
  - Actions already taken.
3. Remain on line until instructed by dispatch to hang up.

## **SECTION 10 TRAINING REQUIREMENTS**

Workers potentially exposed to NOA will receive Asbestos Hazard Awareness Level Training. All personnel entering exclusion zones before capping will be trained in the provisions of this site Health and Safety Plan and be required to sign the Health and Safety Plan Acknowledgement. All field employees engaged in tasks covered by the Scope and Application of the Hazardous Waste Operations and Emergency Response standard (HAZWOPER; 8 CCR 5192) are required to take a training class and pass a written examination in compliance with State and Federal standards.



# *Downtown College Prep Facilities Health and Safety Plan*

---

## **SECTION 11**

### **MEDICAL SURVEILLANCE PROGRAM**

Personnel working in exclusion zones or other areas with potential exposures at or above Permissible Exposure Limits (without regard to use of respiratory protection) for 30 or more days per year will participate in a medical monitoring program. This program is initiated when the employee starts work on the project with a complete physical and medical history and is continued as required. Other medical consultants will be retained if additional expertise is required.

#### **Medical Surveillance Elements**

<b><u>Item</u></b>	<b><u>Initial</u></b>	<b><u>Annual</u></b>
Medical History	X	X
Work History	X	X
Visual Acuity	X	X
Pulmonary Function *	X	X
Audiometry	X	X
Chest X-Ray †	X	
Complete Blood Count	X	X
Blood Chemistry (SMAC)	X	X
Blood Lead / ZPP	X	X
Urinalysis	X	X
Dermatology Exam	X	X

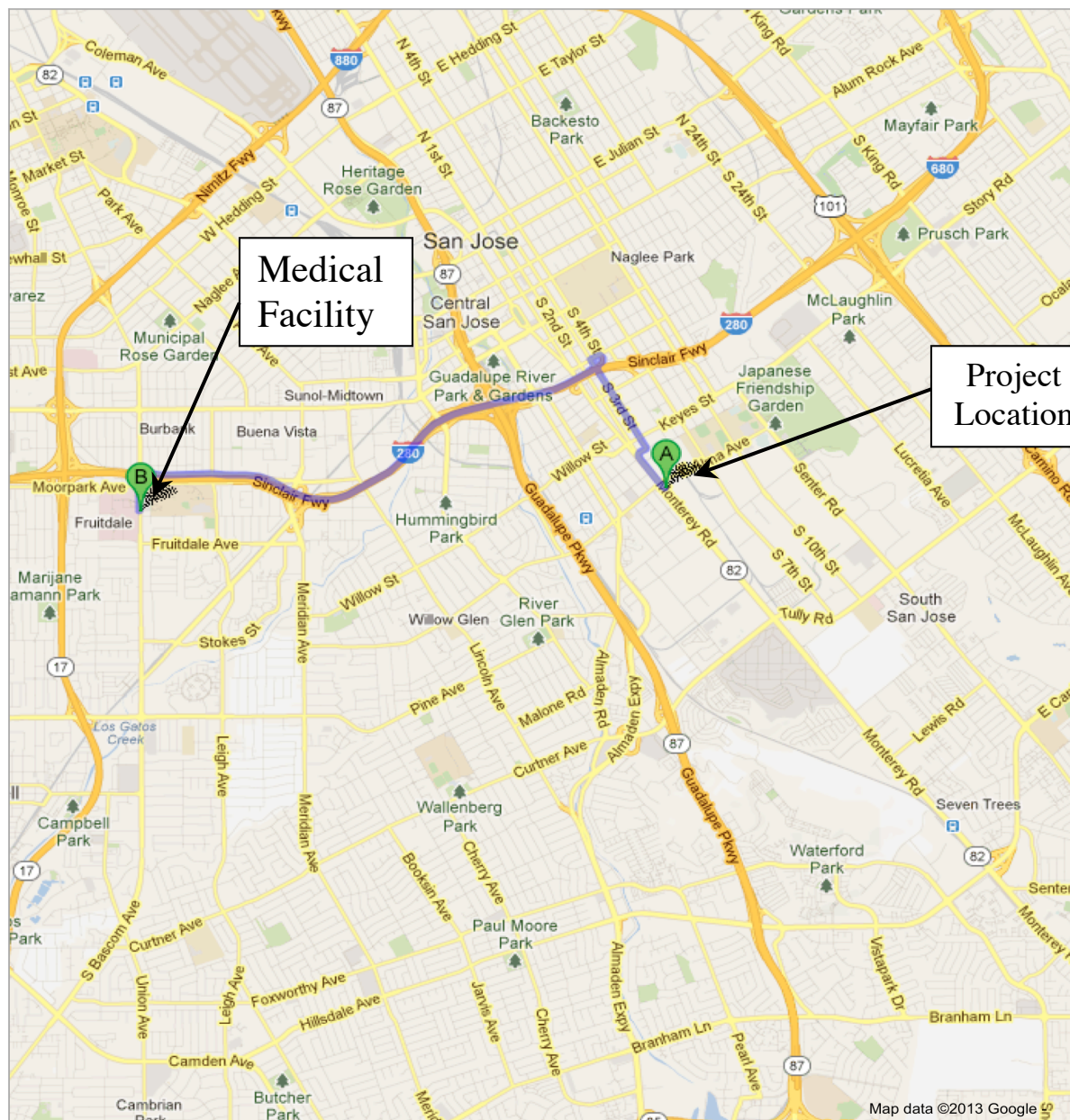
\* Pulmonary function test at discretion of physician after review of Pulmonary Fitness Questionnaire.

† Chest X-Ray required only for full asbestos physical. Not expected for this project.

# Downtown College Prep Facilities Health and Safety Plan

**Figure 1: Project Location**

Google



e, San Jose, CA 95128

3D ▶

*Downtown College Prep Facilities Health and Safety Plan*

## Health and Safety Plan Acknowledgement

I have read, understand, accept and will abide by all provisions of this Health and Safety Plan. I also agree to inform my supervisor and/or the Site Safety Officer of any conditions which are or appear to be unsafe.

[illegible]

**APPENDIX A: CHANGES TO THIS HEALTH AND SAFETY PLAN**

**APPENDIX B: SAFETY INSPECTION REPORTS**

**APPENDIX C: EMPLOYEE EXPOSURE MONITORING RECORDS**



**APPENDIX D: OSHA LOG 300 SUMMARY**

**APPENDIX E: EMPLOYEE MEDICAL SURVEILLANCE AND IMMUNIZATION RECORDS**

**APPENDIX F: RESPIRATOR FIT TEST RECORDS**

**APPENDIX G: EMPLOYEE TRAINING RECORDS**

**APPENDIX H: SAFETY MEETING FORMS**

**APPENDIX I: INCIDENT REPORTS**



## **APPENDIX C – ASBESTOS DUST MITIGATION PLAN**

Type of Services	Asbestos Dust Mitigation Plan
------------------	-------------------------------

Location	DCP Alma 1402 Monterey Highway San Jose, California
----------	---

## SECTION 1: INTRODUCTION

This Asbestos Dust Mitigation Plan (ADMP) presents the dust mitigation practices to be implemented during planned excavation and grading activities for the Downtown College Prep (DCP) school project located at 1402 Monterey Highway (Site, Figures 1 and 2).

This ADMP is part of Cornerstone Earth Group's (Cornerstone) Risk Management Plan (RMP) prepared for the Site. The RMP provides the technical and operational protocols for handling of soil containing naturally occurring asbestos (NOA) and other contaminants of concern (COC) that will be encountered during redevelopment of the Site. The RMP contains: 1) a description of the Site background; 2) a general description of the planned development of the Site; and 3) general soil management protocols to be implemented during construction of the planned development. Please refer directly to the RMP for further details.

### 1.1 BACKGROUND

In December 2015, Cornerstone performed soil sampling at the Site that included collection and analyses of three soil samples for asbestos. The samples were transported to the analytical laboratory (Asbestos TEM Laboratories of Berkeley, California) and analyzed using the California Air Resources Control Board (CARB) Method 435, which specifies a crushing and sieving method to provide a uniform sample. An aliquot of each sample was analyzed using the polarized light microscopy (PLM) method using a 400 point count, which has a detection limit of 0.25 percent. Chrysotile asbestos fibers were observed in 2 of 3 samples at concentrations 0.25 percent and 0.5 percent, respectively. Asbestos was also observed in the non-counted portion of the third sample. These concentrations meet or exceed the CARB Asbestos Airborne Toxic Control Measure (ATCM) regulatory threshold of 0.25 percent.

### 1.2 ASBESTOS DUST MITIGATION RATIONALE

*"Asbestos occurs naturally in ultramafic rock (which includes serpentine). When this material is disturbed in connection with construction, grading, excavating, quarrying or surface mining operations, asbestos-containing dust can be generated. Exposure to asbestos can result in health ailments such as lung cancer, mesothelioma (cancer of the linings of the lungs and abdomen), and asbestosis (scarring of lung tissues that results*

*in constricted breathing*)" - from Bay Area Air Quality Management District Regulatory Advisory, 2002.

Information reviewed by CARB has shown that activities associated with construction, grading, quarrying, and surface mining in areas known to have NOA can release elevated levels of asbestos. The threat posed by the disturbance of NOA during such activities can be reduced and/or minimized through the use of dust mitigation measures that address specific emission sources such as track-out onto paved public roads, active storage piles, inactive disturbed surface areas and storage piles, traffic on unpaved on-site roads, earthmoving activities, off-site transport of materials, and post-project stabilization of disturbed soil surfaces.

Bay Area Air Quality Management District (BAAQMD) locally enforces the CARB ATCM regulation. BAAQMD requires sites that contain greater than 0.25 percent asbestos prepare an ADMP. For construction projects greater than 1 acre in size, the ADMP is required to be submitted to BAAQMD for review and comment. If the site location is within one quarter-mile of sensitive receptors, such as schools, residential housing, commercial structures, parks, or hospitals, air monitoring may be additionally required during earth-movement activities.

### **1.3 PURPOSE**

The purpose of this ADMP is to provide dust mitigation practices to be implemented by contractors when performing soil disturbing activities at the Site. This ADMP includes the following goals:

- Reduce dust emissions to a level that will not be readily visible across the perimeter of the regulated construction work area and/or property line of the Site;
- Protect workers, subcontractors and visitors to the Site from potential hazards from exposure to dust containing NOA and/or other COC;
- Monitor and document airborne asbestos fiber levels at the Site during soil disturbing activities by performing air monitoring, if required by the BAAQMD and/or DCP;
- Comply with applicable local, state and federal regulations governing construction, grading and excavation that may disturb NOA.

## **SECTION 2: ASBESTOS DUST MITIGATION PLAN**

As required by 17 CCR 93105, Section 93105 of the California Air Resources Board Final Regulation Order for "Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surfacing" the following asbestos dust mitigation measures shall be used to minimize and control potential asbestos dust emissions from excavation and grading activities in material suspected to contain NOA.

### **2.1 PROTECTIVE MEASURES – PRE CONSTRUCTION**

- Secure areas where soil disturbance is planned with signs and fencing; and
- Apply water to the areas to be excavated prior to any ground disturbance.

## **2.2 PROTECTIVE MEASURES – DURING CONSTRUCTION**

- Providing equipment and staffing during normal working hours for watering of all exposed or disturbed soil surfaces sufficient to suppress dust plumes.
- Using dust suppressant additives in the water, which can be a small amount of ordinary liquid detergent.
- Limit on-Site vehicle speed to approximately 15 miles per hour or less as needed to minimize visible dust generation;
- Cover on-Site unpaved traffic routes with “clean” materials;
- Apply water to the areas to be excavated and/or graded, and continue watering throughout the grading and/or excavation activities to minimize visible dust generation;
- Suspend excavation/grading activities when wind speeds are high enough to result in visible dust emissions (e.g. two gusts of greater than 25 miles per hour within 30 minutes), see Section 3.1 for additional details;
- Keep soil stockpiles adequately wetted or covered when not in use and at the end of each work day;
- Wash down and decontaminate equipment (including tires) that may have been exposed to the aggregate base before moving them from the Site onto a paved public road or onto a portion of the Site where the aggregate base is not present;
- If track-out occurs, clean track-out on paved public roads using a high efficiency particulate air filter (HEPA filter) equipped vacuum device at the end of each work day and upgrade decontamination procedure to help prevent future track-out, see Section 2.3 for additional details;
- Maintain vehicles used to transport the aggregate base such that spillage from holes or other openings in cargo compartments such that no spillage can occur;
- Manage the removed aggregate base in accordance with local, state, and federal laws and requirements; and

## **2.3 TRACK-OUT PREVENTION**

Any track-out on a paved on-site and/or public road at any location where vehicles exit the work area will be cleaned by using wet sweeping or a HEPA filter equipped vacuum device by the end of each work day. Dry sweeping of paved roadways will be prohibited.

The following track-out prevention measure will be utilized at the work area entrance/exit by on-Site contractors:

- A gravel pad near the exit for vehicle decontamination.

The following additional track-out measures may be implemented at the Site by the on-Site contractors:

- A tire shaker; and
- A wheel wash system.

## **2.4 ACTIVE STORAGE PILES**

Active storage piles are stockpiles that are actively being worked and have not been idle for more than 7 days.

- Active storage piles will be kept adequately wetted; they will be covered with tarps by the end of each work day.

## **2.5 INACTIVE, DISTURBED SURFACE AREAS AND STORAGE PILES**

If applicable, inactive storage piles are stockpiles that have not been worked for 7 days or more. To control the dust emanating from inactive stockpile(s), one or more of the following measures will be completed:

- Apply water to keep the surface adequately wetted; and
- Cover with tarp(s).

## **2.6 TRAFFIC ON UNPAVED ON-SITE ROADS**

The following control measures for traffic on on-Site unpaved roads, parking lots and staging areas will include: 1) a maximum vehicle speed limit of approximately 15 miles per hour or less; and 2) water approximately every 2 hours of active operations or sufficiently often to keep the area adequately wetted.

## **2.7 EARTHMOVING ACTIVITIES**

Contractors will minimize dust emissions from earthmoving activities by:

- Wetting the soil to the depth of the anticipated cuts; and
- Applying water prior to land clearing.

## **2.8 OFF-SITE TRANSPORT OF MATERIALS**

For material to be transported off-Site, the following measures will apply:

- Maintain vehicles by covering holes or other openings in cargo compartments such that no spillage can occur;
- Adequately wet loads; and either
  - Cover with tarps; or
  - Load such that the material does not contact the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.

## **2.9 SOIL CAPPING**

Soil at the Site must be capped with asphalt pavement or concrete surfaces. Please refer to the RMP for additional details.

## **2.10 RECORD KEEPING AND REPORTING**

In accordance with BAAQMD requirements, DCP will maintain records related to asbestos and dust compliance for at least seven years following Site redevelopment activities; these records will include the following, if performed:

- The results of air monitoring; and
- The results of asbestos sampling.

During Site grading/excavation activities associated with the aggregate base, the Contractor will maintain daily logs of watering, dust mitigation and air monitoring (if performed) activities at the Site. Upon request, these records will be made available to a BAAQMD and/or other oversight agency staff/inspector(s). At the conclusion of excavation/grading activities, the Contractor shall provide these records to DCP and their Environmental Consultant as part of final close out documentation.

## **SECTION 3: AIR MONITORING**

If required by the BAAQMD, DCP, and/or the regulatory agency selected by DCP, the air and meteorological monitoring protocols presented in Section 3 of this ADMP will be performed by DCP's Environmental Consultant (also referred to as the Air Monitoring Officer [AMO]) during soil disturbing activities.

On-Site weather conditions (wind speed, wind direction, and relative humidity) will be monitored during soil disturbing activities. Meteorological data collected at the Site will be documented by the AMO. If two gusts exceeding 25 mph are recorded within a 30-minute period, the soil disturbance activities will be stopped until favorable weather conditions are re-established.

The AMO will be responsible for the following:

- Monitoring of real-time air particulate matter (dust) and recording of results;
- Monitoring weather conditions using on-Site meteorological equipment and data collected from the National Weather Service and informing Site personnel regarding changing weather conditions.

## **3.1 AIR/DUST MONITORING AND SAMPLING**

### **3.1.1 Site Worker Monitoring**

Worker protection monitoring will be conducted by the Contractor for their employees in compliance with Cal-OSHA regulations (Title 8, California Code of Regulations, Sections 5208 and 1531).

### **3.1.2 Community Fence Line Air Monitoring and Sampling**

Prior to beginning soil disturbing activities, a windsock or anemometer will be used to monitor the wind direction at the Site and to help determine the location of monitoring/sampling stations along the fence lines. Fence line monitoring/sampling will be conducted at three locations. One dust monitoring/sampling position will be placed



along the perimeter fence line in an upwind position and the other two will be placed along the perimeter fence line in a downwind position. Each dust monitor will be positioned within the breathing zone at approximately 5 feet above the ground level.

#### **3.1.2.1 Dust Monitoring**

- Dust monitoring will be conducted during significant soil disturbing activities.
- Periodic real time monitoring of total dust ( $<10\ \mu\text{m}$  diameter) will be performed using three DataRAM PDR-1000 particulate monitors. These meters log the detected airborne dust concentrations.
- The particulate meters will be monitored by DCP's Environmental Consultant to evaluate if excessive dust is migrating beyond the project area. Each time the meters are checked, the differences between the average upwind dust concentration and the average downwind concentration will be compared to the ambient air quality standard of  $150\ \mu\text{g}/\text{m}^3$  (8-hour average) for respirable dust. If this standard is exceeded, increased dust control measures will be implemented. The California Ambient Air Quality Standard for respirable particulate matter (PM<sub>10</sub>) is  $50\ \mu\text{g}/\text{m}^3$  over an averaging time of 24 hours. Based on an 8-hour construction work day,  $150\ \mu\text{g}/\text{m}^3$  over an averaging time of 8 hours will average  $50\ \mu\text{g}/\text{m}^3$  over 24 hours (16 hours of non-activity). Significant concentrations are defined as exceeding  $150\ \mu\text{g}/\text{m}^3$  over an averaging time of 8 hours.

#### **3.1.2.2 Air Monitoring**

- Asbestos air monitoring will be performed daily during significant grading/excavation activities.
- Asbestos samples will be collected on 25 mm 0.45  $\mu\text{m}$  asbestos air monitoring cartridges, provided by the analytical laboratory. Sample collection will be conducted by drawing air through the cartridge using a high-volume pump (Gast 1532 or similar) throughout the 8-hour workday. The pump will be powered by a portable gasoline-powered electric generator.
- Asbestos air samples will be analyzed using the CARB Modified AHERA method, which uses the standard Transmission Electron Microscopy (TEM) by the United States Environmental Protection Agency, Asbestos Hazard Emergency Response Act (AHERA) criteria for asbestos (40 CFR, Part 763 Subpart E, Appendix A, adopted October 30, 1987) and includes the following exceptions:
  - The analytical sensitivity will be 0.001 structures per cubic centimeter (0.001 s/cc).
  - All asbestos structures with an aspect ratio greater than three to one (3 to 1) will be counted irrespective of length.
  - Analysis will be performed by a laboratory certified to perform these analyses with an expedited turnaround time (approximately 24 hours) during the first week.

- Asbestos results will be compared to DTSC's suggested perimeter fence line monitoring "trigger levels" defined for school projects: 35 s/mm<sup>2</sup>, which is one-half of the USEPA AHERA indoor abatement clearance limit for indoor air quality.

## SECTION 4: REPORTING

If air monitoring is performed, field monitoring data will be recorded on daily field logs. The field data will be reviewed by the AMO to evaluate completeness and applicability of field methods used. Field records will be retained in the project file. Activities performed associated with implementing this ADMP will be presented in the completion report and will include a discussion of the work performed, any deviations from the ADMP, Site plans showing sampling locations, copies of laboratory reports, copies of soil disposal documentation, results of air monitoring and daily field records.

## SECTION 5: LIMITATIONS

Contractors working on-Site are responsible for the health and safety of their employees and subcontractors. In addition, Downtown College Prep Facilities 2, LLC is responsible for implementing the guidelines presented in this ADMP; integrating these guidelines into the project specifications and construction plans; and for seeking clarification should they have questions regarding this SMP prior to starting work.

This document, an instrument of professional service, was prepared for the sole use of Downtown College Prep Facilities 2, LLC and their consultants and contractors, and may not be reproduced or distributed to others without written authorization from Cornerstone. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

## SECTION 6: REFERENCES

- Bay Area Air Quality Management District, 2002. *Regulatory Advisory, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*, November 19, 2002.
- Bay Area Air Quality Management District, 2006. *Compliance Advisory: Asbestos Airborne Toxic Control Measure (ATCM) for Construction and Grading Projects*, August 8, 2006.
- California Air Resources Board, 1991. *Method 435, Determination of Asbestos Content of Serpentine Aggregate*, June 6, 1991.
- California Code of Regulations, 2002. *Title 17, Section 93105, Final Regulation Order, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*, November 19, 2002.
- California Geological Survey, 2002. *Special Publication 124: Guidelines for Geologic Investigations of Naturally Occurring Asbestos in California*, 2002.