Master City of San José Consultant Agreement
Approved Service Order
(Non-Capital Projects)

Cover Page

1a. Intentionally Omitted **1b.** AC Contract No.: 32001 (GILES OC-000369)

2. Approved Service Order No. 20

3. Consultant's Name: Cornerstone Earth Group, Inc. ("Consultant")

4. Project Name: FS8 Additional Site Assessment ("Project")

5. Project Location: 1138 Olinder Court, San José, CA 95112

6. The Consultant and the City will implement this Approved Service Order in accordance with the Master Agreement, this cover page and Attachments "A" (Tasks), "B" (Terms and Conditions), and "C" (Compensation Table), which are incorporated herein by references.

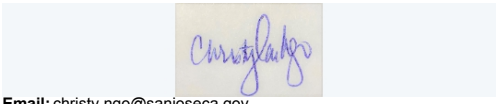
7. Budget/Fiscal:

a. Current **unencumbered** amount in Master Agreement:	$	523,461
b. **Maximum Service Order Compensation for this Approved Service Order:**	$	45,865
c. New unencumbered balance in Master Agreement (7.a – 7.b):	$	477,596

d. **Appropriation Certification**: I certify that an unexpended appropriation in the amount of the Maximum Service Order Compensation is available in the following fund(s) and that such fund(s) will be encumbered to pay for this Approved Service Order.

Fund: 498 Appn: 414Z RC: 198421 Amount: $45,865

Authorized Signature: Date: _____



Email: christy.ngo@sanjoseca.gov
Date: 10/31/2022 GMT

8. **Division Analyst Approval:** Date: _____

Email: sanjay.krishnaswamy@sanjoseca.gov
Date: 10/31/2022 GMT

9. **Consultant Approval:** Date: _____

Email: cheiny@cornerstoneearth.com
Date: 10/28/2022 GMT

10. **Approval as to Form (City Attorney):**

☒ Service Order Form Approved by the Office of the City Attorney
(Maximum Service Order Compensation is $100,000 or less, and the provisions of the service order form are not altered.)

☐ Approved as to Form: _____ Date: _____
(Sr.) Deputy City Attorney

11. City Director Approval: Date: _____

Napp Fukuda

Email: napp.fukuda@sanjoseca.gov
Date: 10/31/2022 GMT

Attachment A: Tasks

The Consultant shall provide the services and deliverables set forth in this **Attachment A**. The Consultant shall provide all services and deliverables required by this **Attachment A** to the satisfaction of the City's contract manager.

General Description of Project for which Consultant will Provide Services: Consultant understands that the City of San José (City) is planning to construct Fire Station 8 (FS8) on the approximately 0.33-acre Site. The Site is a former leaking underground storage tank (UST) case that was closed by the Santa Clara County Department of Environmental Health (DEH) and Regional Water Quality Control Board (Water Board) in 2015 (DEH case no. 07S1E08A02f; Water Board case no. 14-819). Consultant previously performed field investigations associated with UST closure activities, and more recently, in support of the FS8 project. Subsurface information obtained from these assessments indicated that residual soil and groundwater impacts are present that will require consideration of mitigation measures based on the extent of impacts present beneath the Site.

The City entered into an oversight agreement with the DEH on July 7, 2022. After review of the previous environmental reports, the DEH issued a directive letter on September 20, 2022 requesting submittal of a Site Assessment Workplan by November 21, 2022. The DEH letter recommended additional soil vapor assessment to determine the extent of impacts and if off-Site sources are contributing to the on-Site detections.

Consultant previously prepared a Preliminary Site Management Plan (SMP) in support of the Phase 1 demolition portion of the project, which consists of the demolition of above-grade features, removal of asphalt and near surface fill material, excavation, and removal of the fill material at the former UST location and backfilling of this excavation with clean fill material. The SMP provided protocols for handling soil during this work and for observing the subsurface conditions during excavation of the fill material associated within the former UST's. Consultant understands that the City Public Works Department retained a contractor to perform this work, and this contractor plans to begin in October or November 2022.

The purpose of this service order is to prepare a workplan for submittal to the DEH that will propose the collection and analysis of soil vapor and groundwater samples per their September 20, 2022 letter, implementation of the approved workplan, and preparation of a SMP that will include results from this assessment.

Task No. 1: Site Assessment Workplan

A. **Services:** Consultant will prepare a workplan that proposes the sampling and analysis work presented in Task 2. Consultant will submit a draft workplan for the City's review. After addressing any comments from the City, the final workplan will be submitted to the DEH via Geotracker for review and approval by November 21, 2022. Consultant anticipates the DEH will have comments to the first workplan submittal. Consultant cost includes addressing one round of comments from the DEH and issuance of a revised workplan.

B. **Deliverable:** The Consultant will provide the following to the City's Contract Manager: Workplan.

C. **Completion Time:** The Consultant must complete the services and deliverables for this task in accordance with whichever one of the following time is marked:

☒ On or before the following date: November 21, 2022.

☐ On or before ____ Business Days from _____.

Task No. 2: Groundwater and Soil Vapor Assessment Implementation

A. Services: The scope of work presented below is based on Consultant's previous experience at the Site and with the DEH on similar projects. Comments received from the DEH to the workplan prepared under Task 1 may require revisions to this scope of work. Consultant will discuss any required changes and cost impacts (if any) prior to proceeding. An amendment to this service order may be prepared to address significant changes to this scope of work.

Consultant will oversee the advancement of seven (7) exploratory borings to depths of approximately 15 to 20 feet for groundwater sample collection and twelve (12) exploratory borings to depths of approximately 5 feet for collection of soil vapor samples. Soil samples will also be collected from five (5) of the exploratory borings. The borings will be advance using a direct push drilling rig.

PRE-FIELD ACTIVITIES

Utility Clearance

Prior to performing field work, Consultant will mark boring locations at least two working days prior to beginning explorations as required by law and notify the regional utility notification center – Underground Service Alert (USA), and the City, so that public and private utilities can be identified and marked at the ground surface. Where practical, Consultant will mark locations in white paint, or otherwise designate exploration locations, as requested by USA. Utility operators/owners are required to mark their utilities at the ground surface prior to the start of work. California law requires that Consultant receive notification that marked exploration locations have been cleared by each subscribing utility operator with nearby facilities before proceeding with the exploration. Failure of these utility operators to respond with the status of their facilities may result in delays to the schedule that is outside of Consultant's control.

To reduce the risk of damaging unidentified underground utilities during drilling, Consultant will also contract with a private utility locator. Consultant requests that City forward a copy of utility location plans or drawings, if available, to aid in determining our exploration locations.

Permits and Site Access

Drilling permits through the Santa Clara Valley Water District (SCVWD) will not be required since the planned boring depth is less than 45 feet. The project is not within the public right-of-way and, therefore, encroachment permits will not be required.

Consultant will coordinate Site access through the City.

Groundwater Sample Collection and Analysis

Seven (7) exploratory borings will be advanced approximately 5 feet below the shallow groundwater surface. Groundwater was encountered at depths of approximately 10 to 15 feet during a previous subsurface investigation. The borings will not be advanced deeper than 45 feet, which is the depth that triggers a drilling permit through the SCVWD.

Once groundwater has been encountered, a slotted section of polyvinyl chloride (PVC) pipe will be inserted into the boring through the direct push rod. Enough blank PVC pipe will be connected to the slotted section until the bottom of the pipe reaches the total boring depth. The direct push rods will be withdrawn approximately 2 to 3 feet to allow groundwater flow into the open boring. Groundwater grab samples will be collected using either a peristaltic pump and clean (new) tubing or a new disposable bailer. The groundwater samples will be collected in laboratory-provided containers, preserved where appropriate, labeled with a unique identifier, and transported to the project laboratory under chain of custody control.

The seven (7) groundwater samples will be analyzed for volatile organic compounds (VOCs) and gasoline range petroleum hydrocarbons (TPHg) (EPA Test Method 8260B) and diesel range petroleum hydrocarbons (TPHd) and oil-range petroleum hydrocarbons (TPHo) (EPA Test Method 8015). Consultant will request a standard 5- to 7-business day laboratory response; however, the actual response will depend on the laboratory's workload.

One duplicate sample will be collected from a randomly selected location. The duplicate sample will be analyzed VOCs, TPHg, TPHd, and TPHo. Consultant will also submit one equipment blank, one field blank, and one trip blank samples for VOC and TPHg analyses. The duplicate and blank samples will be part of the field quality assurance / quality control (QA/QC) program implemented during this assessment.

SOIL VAPOR PROBE INSTALLATION AND SAMPLING

Twelve (12) temporary soil vapor probes will be installed to depths of approximately 5 feet using a direct push drilling rig. The probe locations will be based on the locations and results from previous subsurface investigations. Deeper soil vapor probes will not be installed as groundwater typically is encountered at depths of approximately 10 to 12 feet.

Vapor Probe Construction

The twelve (12) temporary soil vapor probes will be installed to depth of up to approximately 5 feet using the direct push drilling rig. Each probe will consist of a stainless-steel expendable vapor tip and screen affixed to Teflon™ tubing. The probes will be constructed by first placing approximately 2 inches of coarse aquarium sand into the bottom of the borehole using a tremie pipe. The stainless-steel tip and tubing will then be lowered into the borehole via a tremie pipe. Additional sand is then placed in the borehole via tremie to create an approximately 1-foot sand pack interval around the vapor tip. Approximately 1 foot of granular bentonite (Benseal™) will be placed on top of the sand pack via the tremie pipe. Bentonite "gel" will be mixed utilizing a power drill and paddle (creating the consistency of porridge, but to the viscosity that would allow for flow in a ¾ inch diameter PVC tremie pipe through a funnel). The bentonite gel will then be placed via tremie pipe on top of the dry granular bentonite to the approximate ground surface. The Teflon™ tubing will be labeled with depth of placement and capped utilizing a vapor-tight Swagelok valve set in the "off "position. If necessary, the temporary wells will be protected from tampering by installing a surface mounted 6-inch diameter vault box.

Vapor Sampling Procedure

Per Department of Toxic Substances Control (DTSC) guidance for probes installed using a direct push drilling rig, vapor sampling will be performed at least 2 hours after completing well construction activities. The tubing emanating from the vapor points will be affixed to a sample shut-off valve in the "off" position during the time needed to reach equilibrium (at least 2 hours). A 167 milliliters-per-minute flow regulator inclusive of particulate filter will be fitted to the shut-off valve and the other end to a "T" fitting. One end of the "T" will be connected to the sampling summa canister. The other end of the "T" will be affixed to a digital vacuum gauge and a 1-liter summa canister utilized for purging.

A minimum 10-minute vacuum tightness test will be performed on the manifold and connections by opening and closing the 1-liter purge canister valve and applying and monitoring a vacuum on the vacuum gauge. The sample shut-off valve on the downhole side of the sampling manifold will remain in the "off" position. When gauge vacuum is maintained for at least 10 minutes without any noticeable decrease (less than approximately 0.1 inches of mercury (Hg) for properly connected fittings), purging will begin. The downhole shut off valve will be opened, and three pore volumes will be removed utilizing the purging summa. Purge volumes of vapor will be removed and verified by the calculated pressure drop in the 1-liter summa canister utilized for purging. The purge volume will be calculated based on the length and inner diameter of the sampling probe and the connected sampling tubing and equipment. Assuming the vapor probe has been properly sealed, the borehole sand pack vapor space will have

equilibrated with the surrounding vapors following the 2-hour equilibration period. Thus, the sand pack vapor space will not be included in the purge volume calculation.

Isopropyl alcohol will be utilized as a leak detection compound during sampling by applying five (5) drops to cotton gauze and placing the moistened gauze near the borehole. Sampling will begin by opening the summa canister valve. Immediately upon opening the sampling valve, a shroud will be placed over and enclose the atmosphere of the borehole and entire sampling train including all connections. Sampling will continue until the vacuum gauge indicates approximately 5 inches of Hg remaining. A datalogging photoionization detector (PID) will be utilized during sampling to monitor the atmosphere inside the shroud through a bulk-head fitting. The logged data (at minimum of 30 second intervals) will be corrected to parts per million by volume isopropyl alcohol concentrations and utilized to evaluate the integrity of the sampling train.

To confirm the isopropyl alcohol atmosphere, one confirmation Tedlar bag sample (approximately 20 percent of the total number of samples collected) will be collected from the shroud atmosphere through the sampling port of the PID. Alternatively, the confirmation samples may be collected using a summa connected to a flow controller within the shroud during sample collection. One simultaneous duplicate sample will be collected from one location utilizing a “T” fitting. All field data, including equilibrium time, purge volume calculations and leak check measurements will be recorded and presented in the final report.

The 12 soil vapor samples will be analyzed for VOCs and TPHg (EPA Test Method TO-15) and fixed gasses oxygen, carbon dioxide, and methane (ASTM D1946). We will also collect one replicate sample from a randomly selected soil vapor probe. The replicate sample will be analyzed for VOCs, TPHg, and fixed gasses. Consultant will request a standard one-week laboratory response. Actual laboratory response will depend on the laboratory’s availability.

SOIL SAMPLING AND ANALYSIS

Consultant will collect up to two soil sample from five of the exploratory borings advanced as part of the soil vapor and/or groundwater quality evaluation. Sampling depths will be based on observations and/or OVM measurements. The 10 soil samples will be analyzed for VOCs and TPHg (EPA Test Method 8260B) and TPHd and TPHo (EPA Test Method 8015). Additional soil samples may be recommended based on subsurface observations. Consultant will obtain City authorization before proceeding with additional laboratory analyses.

Reporting

Consultant will include results from the groundwater and soil vapor assessment in the SMP included under Task 3. Note that the DEH may require a stand-alone report if the results from this assessment do not fully delineate the contaminants of concern (COC) in soil vapor or groundwater. Consultant will discuss any changes to the required reporting with the City, if needed.

Site Management Plan Preparation

Consultant will prepare a SMP for the planned Fire Station 8 development. The SMP will present the results of the Site assessment (Task 2) along with a summary of the previous analytical results. The SMP will include protocols for the management of soil and groundwater (if encountered) during construction and preliminary vapor intrusion mitigation measures. A vapor intrusion mitigation system (VIMS) design will be submitted to the DEH under separate cover. Consultant will present a separate scope and fee for the VIMS design.

A draft SMP will be issued for the City’s review. After incorporating any comments from the City, Consultant will issue a final SMP to the DEH for their review. Consultant’s cost includes addressing one

round of comments from the DEH and submittal of a revised SMP. The SMP, along with the analytical data from Task 2, will be uploaded to Geotracker per DEH requirements.

B. Deliverable: The Consultant will provide the following to the City's Contract Manager: N/A

C. Completion Time: The Consultant must complete the services and deliverables for this task in accordance with whichever one of the following time is marked:

☐ On or before the following date: _____.

☒ On or before 10 Calendar Days from Task 1 completion.

Task No. 3: Site Management Plan

A. Services: Consultant will prepare a Site Management Plan (SMP) for the planned Fire Station 8 development. The SMP will present the results of the Site assessment (Task 2) along with a summary of the previous analytical results. The SMP will include protocols for the management of soil and groundwater (if encountered) during construction and preliminary vapor intrusion mitigation measures. A vapor intrusion mitigation system (VIMS) design will be submitted to the DEH under separate cover. Consultant will present a separate scope and fee for the VIMS design.

B. Deliverable: The Consultant will provide the following to the City's Contract Manager: Site Management Plan.

C. Completion Time: The Consultant must complete the services and deliverables for this task in accordance with whichever one of the following time is marked:

☐ On or before the following date: _____.

☒ On or before 10 Business Days from Task 2 completion.

Attachment B: Terms and Conditions

1. **City's Contract Manager:** The City's contract manager for this Approved Service Order is:

Name: Geoff Blair	Phone No.: 408-975-2576
Department: Environmental Services	Email: Geoffrey.Blair@sanjoseca.gov
Address: 200 E. Santa Clara Street, San José, CA 95113	

2. **Consultant's Contract Manager and Other Staffing:** Identified below are the following: (a) the Consultant's contract manager for this Approved Service Order, and (b) the Consultant(s) and/or employee(s) of the Consultant who will be principally responsible for providing the services and deliverables. ***If an individual identified below does not have a current Form 700 on file with the City Clerk for a separate agreement with the City, and is required to file a Form 700, the Consultant must comply with the requirements of Subsection 17.2 of the Master Agreement, entitled "Filing Form 700."***

			Required to File Form 700?		
Consultant's Contract Manager			**Yes Already Filed (Date Filed)**	**Yes Need to File**	**No**
Name: Chris Heiny, Principal Geologist	Phone No.: 925-705-5063				X
Address: 1220 Oakland Blvd, Suite 220, Walnut Creek, CA 94596	Email: cheiny@cornerstoneearth.com				
Other Staffing					
Name:	Assignment:	Email:			
1.					
2.					
3.					

3. **Subconsultants:** Whichever of the following is marked applies to this Approved Service Order:

☐ The Consultant can ***not*** use any subconsultants.

☒ The Consultant can use the following subconsultants to assist in providing the required services and deliverables:

Subconsultant's Name	Area of Work
1. Torrent Laboratories	Laboratory Testing
2. Penecore Drilling	Drilling Subcontractor
3. SVC Environmental	Soil Vapor Sampling
4. Underground Locating Specialist	Utility Locating

4. **Reimbursable Expenses:** If the Compensation Table set forth in **Attachment C** of this Approved Service Order states that the City will reimburse the Consultant for expenses, then only the expenses identified in Subsection 10.5.3 of the Master Agreement are Reimbursable Expenses unless the following box is marked and additional reimbursable expenses are set forth:

☐ In addition to the expenses identified in Subsection 10.5.3 of the Master Agreement, the following expenses are Reimbursable Expenses:

Additional Reimbursable Expense(s)	Mark-up
1. _____	_____
2. _____	_____
3. _____	_____

Notwithstanding the foregoing, any additional reimbursable expense(s) set forth in the above table will be disregarded if the Compensation Table states that the City will *not* reimburse the Consultant for any expenses.

Attachment C: Compensation Table

The City will compensate the Consultant for providing the services and deliverables set forth in **Attachment A** in accordance this Compensation Table. This Compensation Table is subject to the terms and conditions set forth in the Master Agreement, including without limitation Section 10 of the Master Agreement.

Part 1 – Compensation for Services and Deliverables			
Column 1	**Column 2**	**Column 3**	**Column 4**
Task Nos. from Attachment A	**Basis of Compensation**	**Invoice Period**	**Compensation**
1	☐ Time & Materials ☒ Fixed Fee	☒ Monthly ☐ Completion of Task(s) ☐ Completion of Work	$ 3,500
2	☐ Time & Materials ☒ Fixed Fee	☒ Monthly ☐ Completion of Task(s) ☐ Completion of Work	$35,865
3	☐ Time & Materials ☒ Fixed Fee	☒ Monthly ☐ Completion of Task(s) ☐ Completion of Work	$ 6,500
Part 2 – Reimbursable Expenses			
☐ No expenses are separately reimbursable. The amount(s) in Column 4 of Part 1 include(s) payment for all expenses.		☐ Expenses are separately reimbursable in the maximum amount of:	$
Part 3 – Subconsultant Costs			
☐ Subconsultant costs are ***not*** separately compensable. The amount(s) in Column 4 of Part 1 include(s) subconsultant costs.		☐ Subconsultant costs are separately compensable in the maximum amount of:	$
		Maximum Service Order Compensation (sum of Parts 1 through 3):	$45,865

Attachment D: Sub Consultant Schedule of Rates and Charges

Torrent Laboratories	
Analytical (Standard Turnaround Time)	
Description	**Rate**
TPH as Diesel and Motor Oil (8015)	$65 per sample
PAHS (8270 SIM)	$225 per sample
SVOCS (8270C)	$180 per sample
VOCs TPH as gas (8260)	$135 per sample
PCBs (8082)	$60 per sample
Pesticides (8081)	$90 per sample
CAM 17 metals (6010/7471A)	$135 per sample
Individual Metal (6010B)	$30 per sample
Individual Metal (7471A; Mercury)	$50 per sample
STLC/TCLP extraction	$85 per sample
VOCs and TPHg (TO-15) Soil Vapor	$275 per sample
Fixed Gasses (ASTM D1946)	$150 per sample
Asbestos TEM	
Analytical (Standard Turnaround Time)	
Description	**Rate**
Asbestos (CARB 435 Prep/PLM 400 Point Count)	$135 per sample
SVC Environmental, Inc.	
Soil Vapor Probe Sampling	
Description	**Rate**
Hourly Rate	$135 per hour
Soil Vapor Sampling Manifold and Connections	$100 per day
Miscellaneous consumables/ sample materials	$30 each
PID Meter	$75 per day
Penecore Drilling	
Drilling	
Description	**Rate**
Mobilization/Demobilization	$650 per day
Geoprobe DPT Rig	$2,400 per day
DT Liners	$13 each
Cement Grout	$1.50 per foot
Drums	$75 each
Support truck and steam cleaner	$150 per day
Concrete Coring	$55 each
Soil Vapor Probe Materials	$1.50 per foot
PVC and Tubing for Groundwater Sampling	$6.00 per foot

Fuel Surcharge	$150 per day
Underground Locating Specialists	
Utility Locating	
Description	**Rate**
Hourly Rate	$140 per hour