



Via Email

November 10, 2015

Colby Northridge
Related California
44 Montgomery Street
San Francisco, CA 94104

**Re: Site Mitigation Plan
 9400-9500 International Boulevard
 Oakland, California**

Dear Mr. Northridge:

Iris Environmental is pleased to submit this Site Mitigation Plan documenting proposed site mitigation activities to be conducted at 9400-9500 International Boulevard, Oakland, California (the Site; Figure 1) on behalf of Related California and Oakland International Housing Partners, L.P (“clients”). The site is owned by Acts Community Development Corporation, Inc., is approximately 1.26 acres in size, and is partially occupied and utilized. Related California may acquire the site and redevelop it into a new 59-unit residential apartment building, with associated ground-floor community and retail space(s). As currently envisioned, the future building will front International Boulevard, and the rear of the property will be surface parking and landscaping.

BACKGROUND

The site location is depicted in Figure 1. Phase I and Phase II Environmental Site Assessment reports have been prepared for the site in 2015, and include:

- 1) *Phase I Environmental Site Assessment, 9400-9500 International Boulevard, Oakland, California.* Consulting Associates of California (CAC). June 25, 2015.
- 2) *Soil Investigation Report, 94th and International Blvd., Oakland, California.* Applied Remedial Services (ARS). July 26, 2015.
- 3) *Step-out Soil Investigation Report, 94th and International Blvd., Oakland, California.* Applied Remedial Services (ARS). September 14, 2015.
- 4) *Report of FOIA File Review Requests and Limited Phase II Subsurface Site Investigation, 9400-9500 International Boulevard, Oakland, California.* Iris Environmental. November 4, 2015.

As detailed in the existing reports, varied historic site use, potential shallow fill soils, and potential offsite properties have contributed limited impacts to the site. The known impacts include: elevated lead concentrations in shallow soils (generally 0-3 feet below current ground surface), and limited low-level detections of pesticides and total petroleum hydrocarbons in the same shallow soils. Detected impacts exceed both residential human health risk-based screening levels and/or hazardous waste screening criteria in numerous samples.

SITE MITIGATION APPROACH

Based upon the results of the July 2015 and September 2015 field investigations conducted at the Site (ARS Inc), limited Site mitigation via soil excavation is proposed for the Site. As Related California and Oakland International Housing Partners, L.P have elected to pursue an unrestricted site reuse scenario (thereby avoiding longterm engineering controls or operations and maintenance activities), the soil excavation mitigation activities are designed to remove the shallow lead and other impacts exceeding conservative residential screening-levels from the Site.

Approximately fifty-one (51) samples were collected from approximately thirty-three (33) borings between June and August 2015 by ARS Inc. Soil boring locations are shown in Figure 2. Soil sampling results were compared to human health risk screening criteria consisting of San Francisco Bay RWQCB Environmental Screening Levels (ESLs) for residential/unrestricted land use (ESLs Table K-1) (Cal/EPA 2013a, 2013b). The ESLs are protective of direct-contact soil exposures (soil ingestion, soil dermal contact, and dust and volatiles inhalation) under the specified land use scenario, at a target cancer risk level of 1×10^{-6} (one in a million) and target chronic noncancer hazard quotient of 1 (unity). In general, the presence of a chemical in soil at concentrations below the corresponding ESL can be assumed to not pose a significant threat to human health.

The detected impacts above residential site screening criteria include the metals antimony, arsenic, barium, cobalt, lead, mercury, and zinc; all such elevated impacts were detected in soils shallower than 3.0 feet below ground surface (bgs). All the arsenic detections exceed residential risk-based criteria. Arsenic is naturally present in Bay Area soils at concentrations above risk-based screening levels, however, and cleanup of naturally-occurring chemicals to less than background concentrations is not generally required. With a detected maximum onsite concentration of 14 mg/kg, and no obvious indications of an arsenic source or distribution pattern, Iris Environmental believes arsenic to be naturally occurring, and is not considered as a mitigation target.

In addition to metals detections above residential criteria, a single detection of total petroleum hydrocarbons as motor oil (TPHmo), and detections of the pesticides chlordane and dieldrin in two other shallow soil samples, were also above residential site reuse criteria. All three samples are collocated with elevated lead detections.

As all the impacts observed onsite (other metals, TPHmo, pesticides) appear to be collocated with elevated lead results, the proposed mitigation activities focus on lead-impacts only. In other words, once the elevated-lead impacts in shallow soil have been mitigated, all other site impacts will have been mitigated as well. The portions of Site requiring mitigation is defined by those

shallow soil samples with lead detections in excess of its residential ESL of 80 mg/kg (Cal/EPA 2013a, 2013b).

It should be noted that existing site data do not indicate any additional Site mitigation measures are warranted for future residential Site occupants. Specifically, a review of the limited soil gas and groundwater data collected from the Site indicate there are not vapor-intrusion concerns posed by current soil gas or groundwater conditions, and it is presumed shallow groundwater would not be utilized by future site occupants for potable use.

During redevelopment activities, any hazard to construction workers or Site visitors posed by site soils should be managed by a Site-specific Health and Safety Plan (HASP) prepared for and implemented at the Site. This Site Mitigation Plan only addresses future Site occupants and visitors.

SITE MITIGATION VIA EXCAVATION

Site mitigation is proposed for the Site, and will focus on shallow soils (less than 3.0 feet bgs) where elevated lead detections have been found. This area is shown on Figure 3, highlighting areas known to contain lead-impacted shallow soils above the residential ESL of 80 mg/kg that will be removed via excavation and managed separately during Site redevelopment activities. This area is called out as Soil Management Area #1 on Figure 3. The most elevated lead detection at sample location SB2-SO-25-E has been isolated as its own Soil Management Area #2. To allow for maximum site access (including room to stockpile), Iris Environmental assumes existing Site buildings and structures will have been demolished and removed prior to soil mitigation activities. All relevant stormwater and Bay Area Air Quality Management District regulations regarding excavations and stockpiling would apply to the redevelopment and mitigation work.

The area shown in Figure 3 is approximately 0.55 acres. Existing boring logs for the Site (ARS Inc.) show approximately 1.0 feet of hardscape (i.e. asphalt paving) and base rock overlying Site soils. Iris Environmental estimates the volume of soil requiring excavation and removal as approximately 0.55 acres from 1.0 to 3.0 feet bgs, resulting in approximately 1,800 cubic yards (roughly equivalent to 2,700 tons).

Stockpiling and Offsite Disposal

Soil Management Areas #1 and #2 (Figure 3) will be excavated by a licensed hazardous materials contractor. Excavated soils will be temporarily stockpiled on-Site and appropriately analyzed for offsite disposal purposes. In consultation with the General Contractor and potential landfill sites, soils will be “batched” into 100, 250, or 500 cubic yard piles for individual stockpiling sampling and profiling (Soil Management Area #2 will be its own stockpile). The stockpiles will be kept covered with Visqueen sheeting to prevent migration of contaminants via airborne dust or stormwater runoff.

Individual stockpiles will be sampled by four-point composite sampling. Each stockpile will be demarcated into quarters, with a single sample collected from each quadrant. The analytical laboratory will composite the four subsamples into a single stockpile sample prior to analyses.

Soil stockpiles will be tested for known Site contaminants of concern that may affect soil disposition, specifically:

- Title 22 metals, including lead, by USEPA Method 6010/7470.
- Total petroleum hydrocarbons as diesel and motor oil by Method 8015M
- Pesticides by USEPA Method 8081

In the event very elevated data are found in a four-point composite sample, Iris Environmental may elect, in consultation with the Client, to have the four individual subsamples run for that specific compound in an attempt to isolate the soils containing the worst impacts for disposal.

Confirmation Sampling

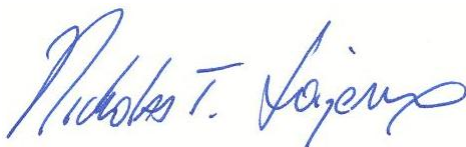
In areas where the excavation limits have been completed, Iris Environmental proposes confirmation soil samples for lead collected from the sidewalls and bottom of the excavation to determine whether the remaining soils can be left in place based on a comparison to CHHSL values. Should the confirmation samples collected from the sidewalls or bottom of the excavation indicate that an additional volume of soils require removal, additional limited excavation, and resampling will occur. To aid in real-time boundary and bottom delineation, Iris Environmental proposes the use of a Thermo Scientific Niton 898D XLt analyzer – a field instrument capable of reading real-time lead concentrations in soils. Once confidence in the boundary has been achieved using the field instrumentation, selected soil samples would be submitted for offsite confirmation analysis under Chain-of-Custody protocol.

Report

Following completion of the proposed Site Mitigation Plan described above, Iris Environmental will prepare a short letter report documenting the field activities and presenting the analytical data from confirmation sampling. This report will be submitted to Client within approximately 60 days from the completion of mitigation activities.

Please don't hesitate to contact me at (510) 834-4747 x 14 with any questions.

Sincerely,
IRIS ENVIRONMENTAL



Nicholas T. Loizeaux, P.G.
Principal

Attachments:

Figure 1: Site Location Map

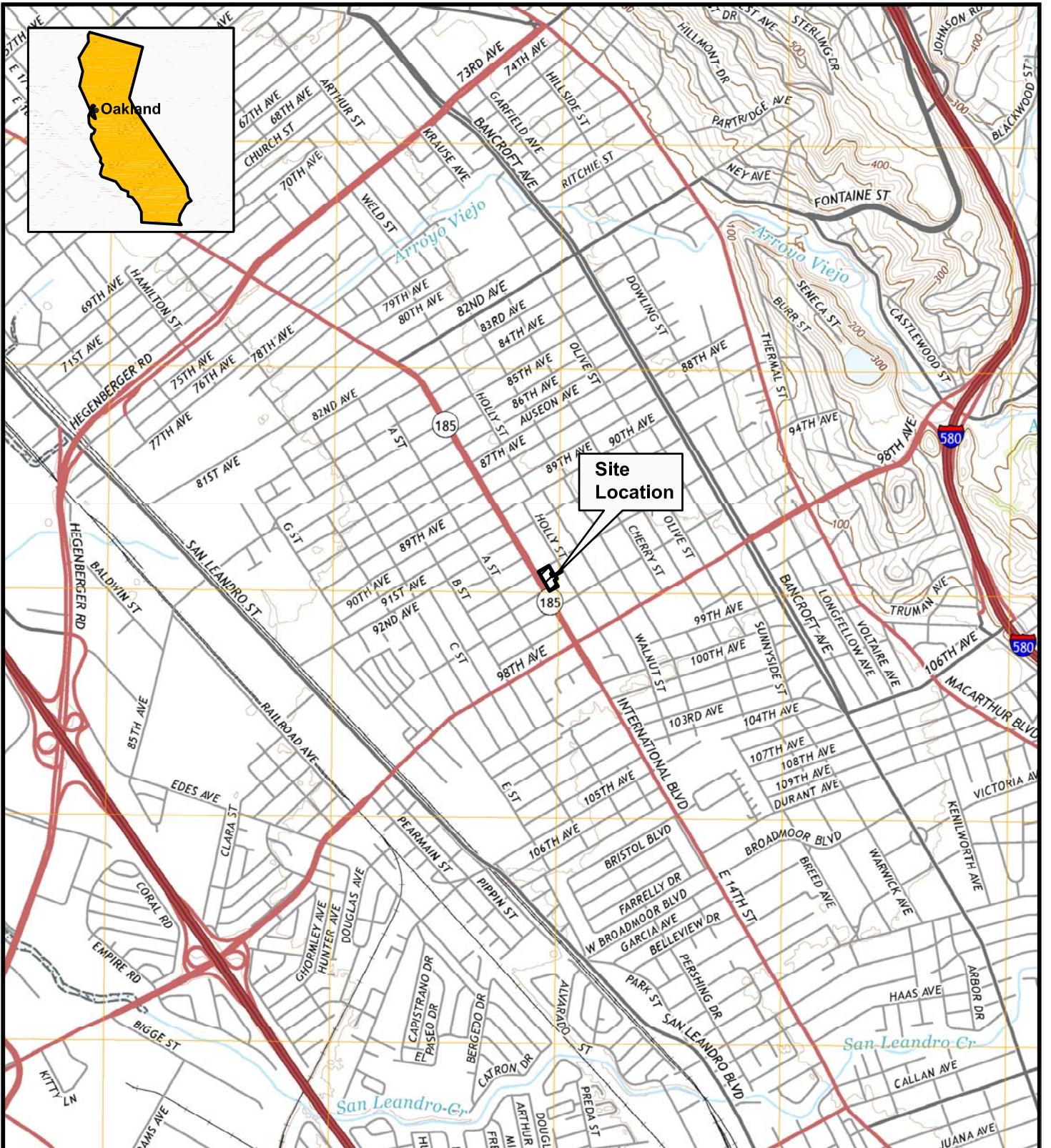
Figure 2: Site Layout showing Boring Locations

Figure 3: Site Layout showing Soil Management Areas

References:

Cal/EPA. 2013a. *December 2013 Update to Environmental Screening Levels*. California Regional Water Quality Control Board (RWQCB). San Francisco Bay Region. December 23.

Cal/EPA. 2013b. *User's Guide: Derivation and Application of Environmental Screening Levels*. California Regional Water Quality Control Board (RWQCB). San Francisco Bay Region. Interim Final. December.



Source: USGS 7.5' Quadrangle, San Leandro/Oakland East, California, 2015



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 Oakland, California 94612
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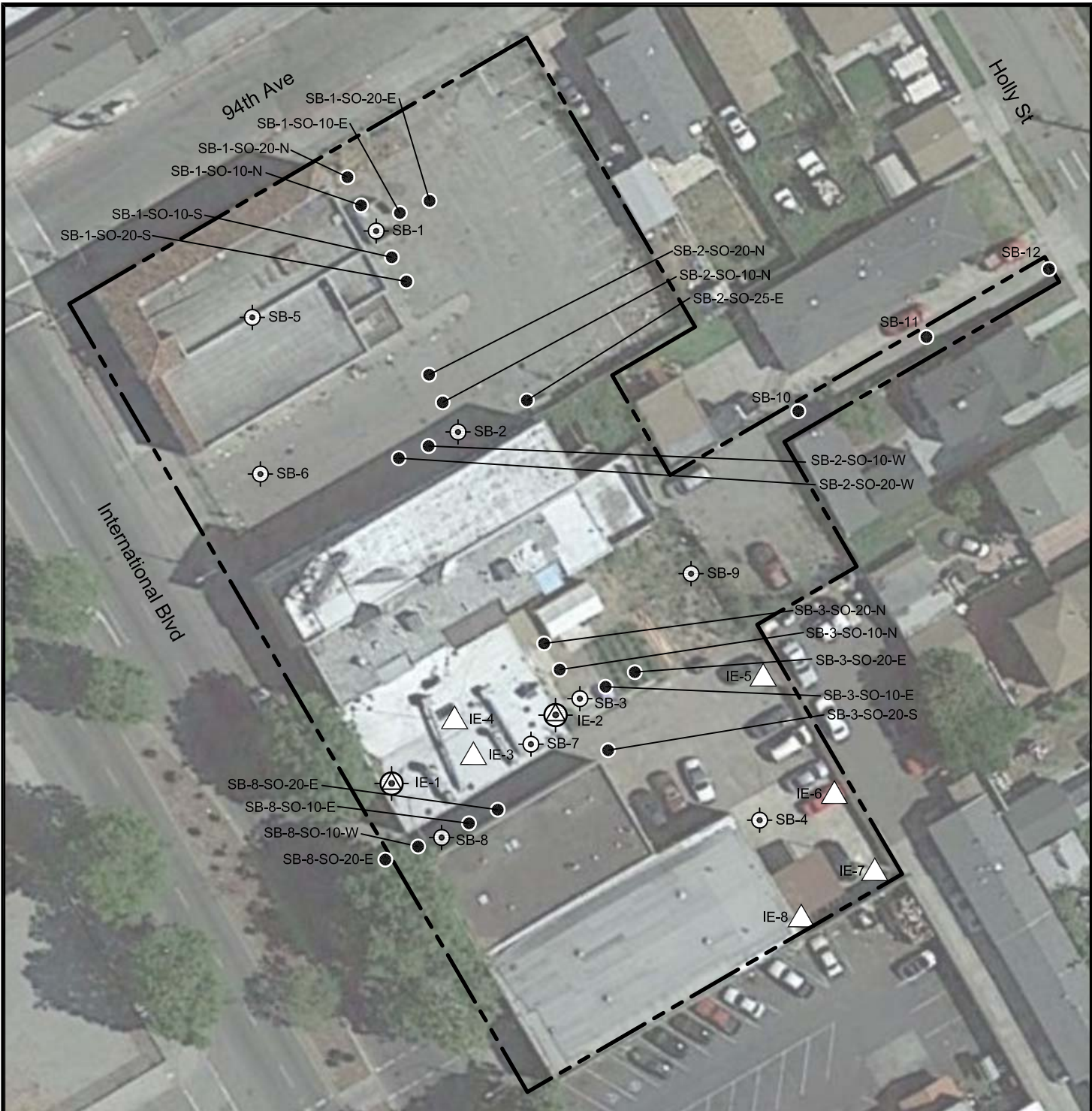
Site Location Map
 9400-9500 International Boulevard
 Oakland, California

Figure
1

Drafter: EC






Date: 11/04/15

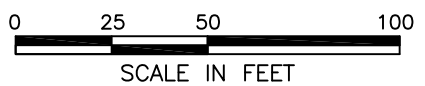
Contract Number: 15-1325A



Basemap: Google Earth May 11, 2015

LEGEND:

-  Approximate site boundary
-  Boring location (ARS, Inc. 2015)
-  Step-out sample location (ARS, Inc. 2015)
-  Soil gas sampling location (Iris 2015)
-  Soil, soil gas, and groundwater sampling location (Iris 2015)

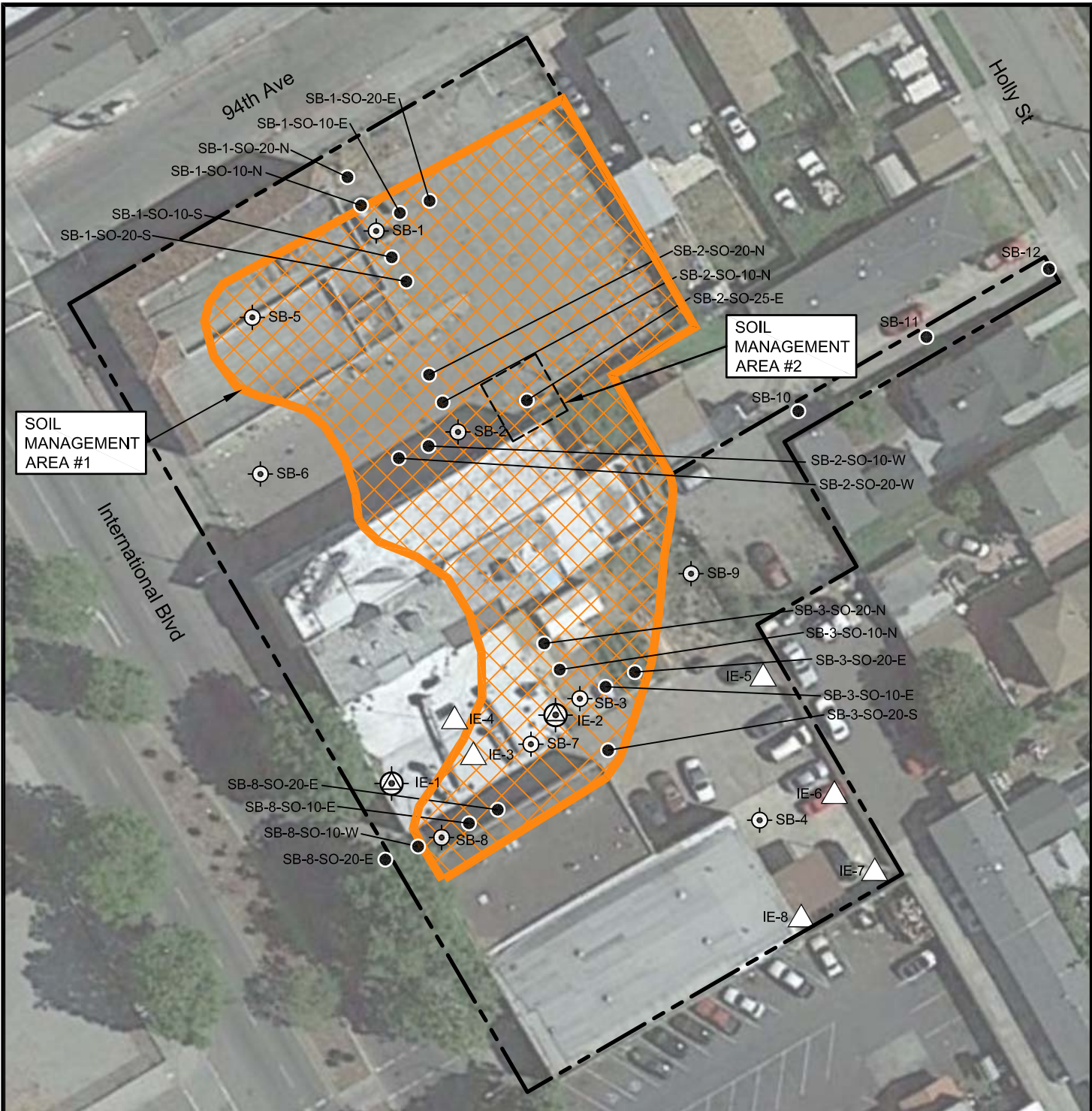


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Site Layout showing Boring Locations
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 Oakland, California

Figure
2

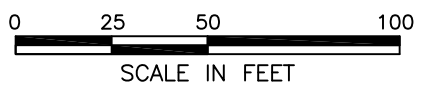
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Site Layout showing Soil Management Areas
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 Oakland, California

Figure
3

Drafter: EC

Date: 11/10/15

Contract Number: 15-1325A