SITE-SPECIFIC ASSESSMENT WORK PLAN

CATHEDRAL PARK SITE
DEQ TASK ORDER 73-18-25

Prepared for
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
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Project No. M0785.22.001

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MAUL
FOSTER
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The material and data in this report were prepared under the supervision and direction of the undersigned.

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Senior Geologist

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
the City	City of Portland
COPC	chemical of potential concern
DEQ	Department of Environmental Quality (Oregon)
DU	decision unit
HASP	health and safety plan
ISM	Incremental Sampling Methodology
MFA	Maul Foster & Alongi, Inc.
PCB	polychlorinated biphenyl
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance and quality control
RBC	risk-based concentration
RSD	relative standard deviation
SAP	sampling and analysis plan
the Site	Cathedral Park Site, Portland, Oregon
SOP	Standard Operating Procedure
UPRR	Union Pacific Railroad

1 INTRODUCTION

Maul Foster & Alongi, Inc. (MFA) prepared this Work Plan to present the scope of work for a site-specific assessment at the Cathedral Park site in Portland, Oregon (the Site). Cathedral Park is associated with the address 6635 North Baltimore Avenue and is located between North Baltimore Avenue (to the north) and North Pittsburg Avenue (to the south) and is bound to the east and west by North Crawford Street and the Willamette River, respectively, with North Bradford Street and the Union Pacific Railroad (UPRR) railroad tracks bisecting the Site (Figure 1-1). The Site was selected for a site assessment by the Oregon Department of Environmental Quality (DEQ). This Work Plan was prepared for DEQ under Task 5 of Task Order 73-18-25 and will be implemented under Task 6.

1.1 Purpose

The purpose of this project is to evaluate surface soils in specific park areas identified by DEQ and local community groups to determine if further investigation or cleanup action is required at the Site.

1.2 Scope of Work

The scope of work that is described in this Work Plan is proposed for the purpose of:

- Assessment of surface soil conditions at the Site.
- Development of a sampling and analysis plan (SAP).
- Management of investigation-derived waste.
- Preparation of a report discussing the above activities and the analytical results.

The activities proposed for this scope of work are discussed in further detail in this Work Plan. A health and safety plan (HASP) is included in Appendix A.

2 BACKGROUND

2.1 Property Location, History, and Description

The Site is located in section 12, township 1 north, range 1 west of the Willamette Meridian in Portland, Oregon (Figure 1-1). The Site is a portion of the approximately 21.85-acre Cathedral Park located beneath the St. Johns Bridge. The portions of Cathedral Park that comprise the Site and are the focus of the assessment activities include areas of eight tax lots (100, 200, 300, 600, 700, 900, 5700, and 5900) totaling approximately 4 acres (see Figure 2-1).

2.2 Geology and Hydrogeology

The City of Portland's (the City) boring logs from 2011 indicate that silty sand was encountered at the Site down to a depth of 20 feet below ground surface (bgs). Groundwater was not encountered during the previous investigations. A review of nearby sites indicated that groundwater in the area may be encountered at approximately 5 to 10 feet bgs.

Topography at the Site and the vicinity slopes down to the west toward the Willamette River; site elevation is approximately 35 feet above mean sea level. The Willamette River is located approximately 300 feet west of the Site and flows northwest. Based on proximity to the Willamette River and the flow direction of the river, groundwater is expected to flow to the west-northwest.

2.3 Previous Environmental Activities

Between 2008 and 2010, the City conducted source investigations and source control activities for Outfall Basin 52 in order to identify potential sources of polychlorinated biphenyl (PCB) contamination in the basin. These activities included sampling catch basin and inline solids and storm line and catch basin cleaning. Results from these activities indicated the presence of a previously unidentified source of PCBs within Outfall Basin 52.

In 2011, to determine the source of PCB contamination identified in catch basin and inline solids, the City sampled erodible surface soils along the North Bradford Street/UPRR right-of-way and areas of Cathedral Park, as well as subsurface soils from the City-owned parking lot adjacent to the Peninsula Iron Works site. Total PCBs in surface soils ranged from 147 to 21,700 micrograms per kilogram, while concentrations in subsurface soils ranged from non-detect to 1,050 micrograms per kilogram. The City determined that these results indicated that contaminated erodible surface soils in the vicinity of the Peninsula Iron Works site are a source of PCB contamination, and that off-site migration of contaminants from Peninsula Iron Works operations may have results in observed contamination in the adjacent right-of-way and City property. A figure showing previous sampling locations and results is included in Appendix B.

In a letter dated September 14, 2021, a coalition of community groups expressed concerns related to PCB contamination in soil adjacent and possibly within Cathedral Park, primarily in the areas around North Bradford Street/UPRR railroad tracks and the Peninsula Iron Works property. As a result, DEQ is assessing portions of the park that are a concern to these community groups.

3 SITE ASSESSMENT ACTIVITIES

The proposed scope of work was determined based on a site visit, review of publicly available site-related files, and communications with the DEQ project manager. The planned activities include collecting surface soil samples (via Incremental Sampling Methodology [ISM)]) to assess soil

conditions at the Site. This section presents the scope of work that will be performed to accomplish these activities.

3.1 Preparatory Activities

Site Health and Safety Plan. A site-specific HASP has been prepared for the proposed activities (Appendix A). The HASP was prepared in general accordance with the Occupational Safety and Health Act and the Oregon Administrative Rules. A copy of the HASP will be available for use by MFA staff during the field activities.

Underground Utility Location. A public utility notification request will be submitted through the Oregon Utility Notification Center, which will in turn notify the various utilities in the area to mark any subsurface structures.

Property Access and Work Notification. MFA will coordinate Site access with DEQ. DEQ is securing Site access with the City through a Non-Park Use Permit issued by Portland Parks and Recreation. MFA will notify DEQ of the proposed work schedule.

3.2 Assessment Activities

Surface soil will be assessed for the chemical of potential concern (COPC) PCBs.

Representatives of MFA will collect surface soil samples for chemical analysis. MFA anticipates a three-day field effort for the assessment activities. The exploration locations are shown on Figures 2-2 through 2-14 and will be estimated with a high-accuracy global positioning system device.

3.2.1 Surface Soils Assessment

An ISM approach (DEQ, 2020) will be used to collect representative surface soil samples at the Site. ISM is a structured composite sampling and processing protocol that reduces data variability and increases the probability of identifying areas of elevated concentrations, thereby increasing data representativeness. ISM obtains data that are more representative of average concentrations than data from discrete or composite samples and is particularly appropriate when the receptors of concern are expected to be exposed to larger areas (i.e., multiple areas within a property) rather than discrete locations. ISM provides a single sample for analysis with a concentration representative of the mean concentration in a predefined area termed a decision unit (DU). The Site will be divided into 12 DUs to assess surface soil conditions (Figure 2-2).

Samples (called increments) will be manually collected from 0 to 2 inches bgs, following removal of the surface vegetation, at multiple locations placed in a systematic random sampling scheme in each DU. The increments will be combined into one ISM sample, processed by the laboratory, and analyzed to obtain a representative average contaminant concentration for each DU. For this work, 50 increments per DU will be collected. The systematic random sampling scheme that will be used during sampling is shown for each DU on Figures 2-3 through 2-14. The exact location of increments may be adjusted, depending on field conditions (i.e., when an obstruction such as a hard surface is

encountered). If increment locations need to be adjusted based on field conditions, the increment will be moved to the nearest location clear of the obstruction (maximum of one foot in any direction). Note, an ISM duplicate, and triplicate sample will be collected from DU02 for quality assurance. These replicate increment locations are also shown on Figure 2-3.

3.3 Waste Handling and Disposal

Excess soil following sampling will be replaced at the sampling location and covered with vegetation removed, if any, and decontamination liquid will be land-applied. Disposable sampling equipment and personal protective equipment will be disposed of as solid waste.

4 SAMPLING AND ANALYSIS PLAN

This section presents the field and sampling procedures and the analytical testing program MFA will use to complete the field and analytical work for this project. These activities will be performed in general accordance with the DEQ's Brownfield Program Quality Assurance Project Plan (QAPP) (DEQ, 2016). Quality assurance and quality control (QA/QC) procedures are discussed in Section 4.3.

4.1 Sampling Methods and Sampling Handling

Surface soil samples will be collected during the field activities in accordance with the following procedures and Standard Operating Procedures (SOPs). Equipment blanks will also be collected for analysis (see Section 4.3.2).

4.1.1 Surface Soil Sampling

Surface soils will be collected using ISM procedures. The following protocol was prepared based on the 2020 Interstate Technology & Regulatory Council and DEQ guidance documents (DEQ, 2020). The ISM samples will be collected from each DU using the following protocols:

- Each ISM sample will consist of 50 soil increments collected from each DU. The proposed increment locations were selected based on a systematic random approach using a rectangular grid as presented on Figures 2-3 through 2-14. Using a systematic random grid, as opposed to a simple random sampling approach, reduces the probability of missing areas with significantly elevated concentrations. Field personnel will make note of any increments collected from areas that have visual indications of chemical impacts (e.g., staining representative of petroleum hydrocarbons).
- The target mass of each increment will be approximately 30 grams (± approximately 20 percent) to achieve the overall target sample mass of 1.5 kilograms per sampling area. Sample increments will be retrieved using a stainless-steel soil core sampler or other stainless-steel sampling equipment as needed.

- The soil core sampler will be manually advanced to a depth of approximately 2 inches. If increment recovery is poor at certain locations, the increment will be discarded and resampled near the original location to the extent practicable. If the intended recovery amount cannot be obtained, it will be noted in the field observations.
- Organic debris (including surface vegetation and wood chips) and inorganic debris will be removed during sample collection using stainless steel sampling equipment (e.g., trowels, spoons, etc.) as needed. This effort will ensure that excessive organic matter is not included in soil collected and will maintain substrate consistency between sample increments.
- Soil from each increment will be placed in a dedicated laboratory-provided, 1-gallon glass jar, with the other increments from that DU, using a clean gloved-hand or decontaminated stainless-steel tool (e.g., spoon, trowel, knife, etc.).
- Sieving will be conducted by the laboratory as part of the sample-drying process, but care will be taken in the field to avoid particles larger than 2 millimeters where practicable. The type and nature of excluded particles will be recorded to ensure particles greater than 2 millimeters do not contain COPCs that may contribute to contamination of the soil fraction of interest. Purposefully excluding larger substrates will improve the probability that a consistent, uniform sample from each increment location will be incorporated, resulting in a representative average concentration.
- One ISM sample will be collected in triplicate from one of the DU sampling areas (DU02). The replicate samples will consist of 50 soil increments each and the replicate increment locations were selected using a systematic random grid. Triplicate sampling will provide a conservative measure of ISM variability through the calculation of the relative standard deviation (RSD) between replicate concentrations. These samples will be evaluated for uncertainty in the ISM DU concentrations and quality control, as described in Section 4.3.2.

4.1.2 Sampling Handling and Storage

Clean sample containers will be provided by the analytical laboratory ready for sample collection, including preservative, if required. A label will be affixed to each sample container and marked with identifying information. Sample containers will be stored in a cooled ice chest until being transported to refrigerated storage or to the analytical laboratory. Chain of custody will be maintained and documented at all times.

4.1.3 Laboratory Sampling Handling and Storage

After receipt of samples at the laboratory, ISM samples will be dried and processed following the site-specific SAP provided by Apex Laboratories LLC (Appendix C). Processing will include air drying at room temperature, disaggregation, and sieving (using a No. 10 sieve with a 2-millimeter sieve size). The entire less than 2-millimeter size fraction will be divided into representative processing aliquots of at least 200 grams using a rotary sectorial splitter. The representative aliquot will be processed for further particle size reduction to fine powder before analytical aliquots are taken. The final mass following air drying, and sieving will be recorded by the laboratory. In addition to mass analytical

requirements, sufficient mass of the processed sample will be archived for follow-up analysis, if necessary.

4.1.4 Decontamination

Decontamination of non-disposable field equipment (e.g., sampling tube, spoons, etc.) will be performed to prevent cross-contamination between sampling locations. Decontamination will be completed in accordance with SOP 1 (Appendix D).

4.2 Analyses for Chemicals of Concern

Surface soil samples will be submitted to an analytical laboratory for chemical analysis. COPCs at this Site include PCBs. Samples will be analyzed on a standard turnaround time (usually 10 business days) and will be archived for potential follow-up analyses. See Table 4-1 for a summary of the analytical methods and sample container requirements. See Table 4-2 for a summary of the analytical methods, anticipated sample number, and detection limit goals.

4.2.1 Surface Soil Samples

Surface soil samples will be analyzed for PCBs by U.S. Environmental Protection Agency Method 8082A.

The requested method reporting limits and method detection limits will be consistent with the DEQ RBCs (where practicable).

4.3 Quality Assurance and Quality Control

Soil samples will be collected and analyzed in general accordance with DEQ's Brownfield Program QAPP (DEQ, 2016). The QAPP presents quality objectives and procedures for sampling and analysis.

Laboratory QA/QC will include a method blank, a batch laboratory control sample and laboratory control sample duplicate, and laboratory replicate samples.

4.3.1 QA/QC Objectives

The general QA objectives for this project are to develop and implement procedures for obtaining and evaluating data of a specified quality that can be used to assess the nature and extent of contamination from current or past uses of hazardous substances and the risk posed to human health by contamination at the Site. To collect such information, analytical data must have an appropriate degree of accuracy and reproducibility, samples collected must be representative of actual field conditions, and samples must be collected and analyzed using unbroken chain-of-custody procedures.

4.3.2 Field QA/QC

The field QC samples will be used to assess the accuracy and precision of the field sample collection and handling activities. Blanks may be collected and held for analysis until it is determined contamination may be a concern. During fieldwork, disposable or decontaminated sampling equipment will be used to minimize or eliminate cross-contamination. Samples will be labeled with sample-specific identifying information. Chain of custody will be maintained at all times. Table 4-3 summarizes the following quality assurance samples to be collected.

ISM Replicate Samples. Field replicates are collected to measure sampling and laboratory precision of ISM samples. Triplicates (three sets of 50 increment samples) will be collected for one DU (see Section 4.1.1), and the RSD between the triplicate concentrations will be calculated.

Equipment Rinsate Blanks. Analyses of equipment rinsate blanks will be used to assess the efficiency of field equipment decontamination procedures in preventing cross-contamination of samples. Equipment rinsate blanks will be collected by pouring certified distilled or deionized water over or through decontaminated (clean) non-disposable sampling equipment used in the collection of investigative samples and will be subsequently collected in prepared sampling containers. Additives or preservatives will be included in the equipment rinsate blanks as required for analysis. The rinsate blank will be shipped with the associated field samples. For each sample matrix, a rinsate blank will be collected and analyzed at a minimum frequency of one equipment rinsate blank per 20 samples, a minimum of one rinsate blank will be collected. Rinsate blanks will not be required if disposable or dedicated equipment is used for sampling. The rinsate blanks will be analyzed for the same parameters as the investigative samples.

4.3.3 Laboratory QA/QC

The laboratory will also perform QC analyses (e.g., matrix spikes, method blanks, and laboratory replicate samples) per the requirements of the analytical method and as indicated in the site-specific SAP (Appendix C). Detection limits will be consistent with industry standards and, when practicable, below or comparable to promulgated regulatory standards, unless raised due to high analyte concentrations in the sample or matrix effects.

5 REPORTING

After receipt of analytical results, a Site-Specific Assessment Report will be prepared, presenting general information about the Site and nearby vicinity, the Site activities, the chemical results, and sampling location maps.

The letter report will be prepared in general accordance with the following outline:

1. Introduction
    a. Purpose
    b. Scope of Work
2. Background
    a. Site Location and Description
    b. Geology and Hydrogeology
    c. Previous Environmental Activities
3. Site Activities
    a. Surface Soil Sampling
4. Chemical Analyses and Results
    a. Analyses Performed
    b. Chemical Results
5. Summary
6. Appendices
    a. Photographs
    b. Field Methods and Sampling Procedures
    c. Analytical Laboratory Testing Program and Documentation, including a QA review

The report will initially be prepared as a draft for review by the DEQ. Upon receipt of DEQ's comments, the report will be issued in final form and signed by a registered geologist.

LIMITATIONS

The services undertaken in completing this plan were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This plan is solely for the use and information of our client unless otherwise noted. Any reliance on this plan by a third party is at such party's sole risk.

Opinions and recommendations contained in this plan apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this plan.

REFERENCES

DEQ. 1998b. Consideration of land use in environmental remedial actions. Oregon Department of Environmental Quality. July 1. Updated October 2017.

DEQ. 1998c. Guidance for conducting beneficial water use determinations at environmental cleanup sites. Oregon Department of Environmental Quality. July 1. Updated November 2017.

DEQ. 2016. Quality assurance project plan, Brownfield program. Oregon Department of Environmental Quality. November.

DEQ. 2018. Table of generic risk-based concentrations. Oregon Department of Environmental Quality. May.

DEQ. 2020. Decision unit characterization. Oregon Department of Environmental Quality. September 14.

TABLES

Table 4-1
Analytical Methods and Sample Container Requirements
DEQ—Cathedral Park
Site-Specific Assessment Work Plan
Portland, Oregon

Sample Matrix	Method	Parameter or Parameter Group	Container	Preservation	Storage Temperature	Hold Time
ISM Soil	EPA 8082A	PCB Aroclors	1 gallon glass	None	4°C	365 days

NOTES:

°C = degrees Celsius.

DEQ = Oregon Department of Environmental Quality.

EPA = Environmental Protection Agency.

ISM = Incremental Sampling Methodology.

PCB = polychlorinated biphenyl.

Table 4-2
Analytical Methods, Anticipated Sample Number, and Detection Limit Goals
DEQ—Cathedral Park
Site-Specific Assessment Work Plan
Portland, Oregon

		ISM Soil (mg/kg)		
Method	Parameter	Number of Samples	MDL	MRL
Polychlorinated Biphenyls				
EPA 8082A	Aroclor 1016	14	0.005	0.01
EPA 8082A	Aroclor 1221	14	0.005	0.01
EPA 8082A	Aroclor 1232	14	0.005	0.01
EPA 8082A	Aroclor 1242	14	0.005	0.01
EPA 8082A	Aroclor 1248	14	0.005	0.01
EPA 8082A	Aroclor 1254	14	0.005	0.01
EPA 8082A	Aroclor 1260	14	0.005	0.01
EPA 8082A	Aroclor 1262	14	0.005	0.01
EPA 8082A	Aroclor 1268	14	0.005	0.01

Notes:

DEQ = Oregon Department of Environmental Quality.

EPA = Environmental Protection Agency.

ISM = Incremental Sampling Methodology.

MDL = method detection limit.

mg/kg = milligrams per kilogram.

MRL = method reporting limit.

Table 4-3
Quality Assurance Samples
DEQ—Cathedral Park
Site-Specific Assessment Work Plan
Portland, Oregon

Sample Matrix	Field QA Sample Type	Frequency of Collection	Analyses Requested
ISM Soil	Field Replicate Sample (Duplicate and Triplicate)	1/investigation (from one selected decision unit)	PCBs (EPA 8082A)
	Equipment Rinsate Blanks	1/20 samples[a]	

Notes:

DEQ = Oregon Department of Environmental Quality.

EPA = Environmental Protection Agency.

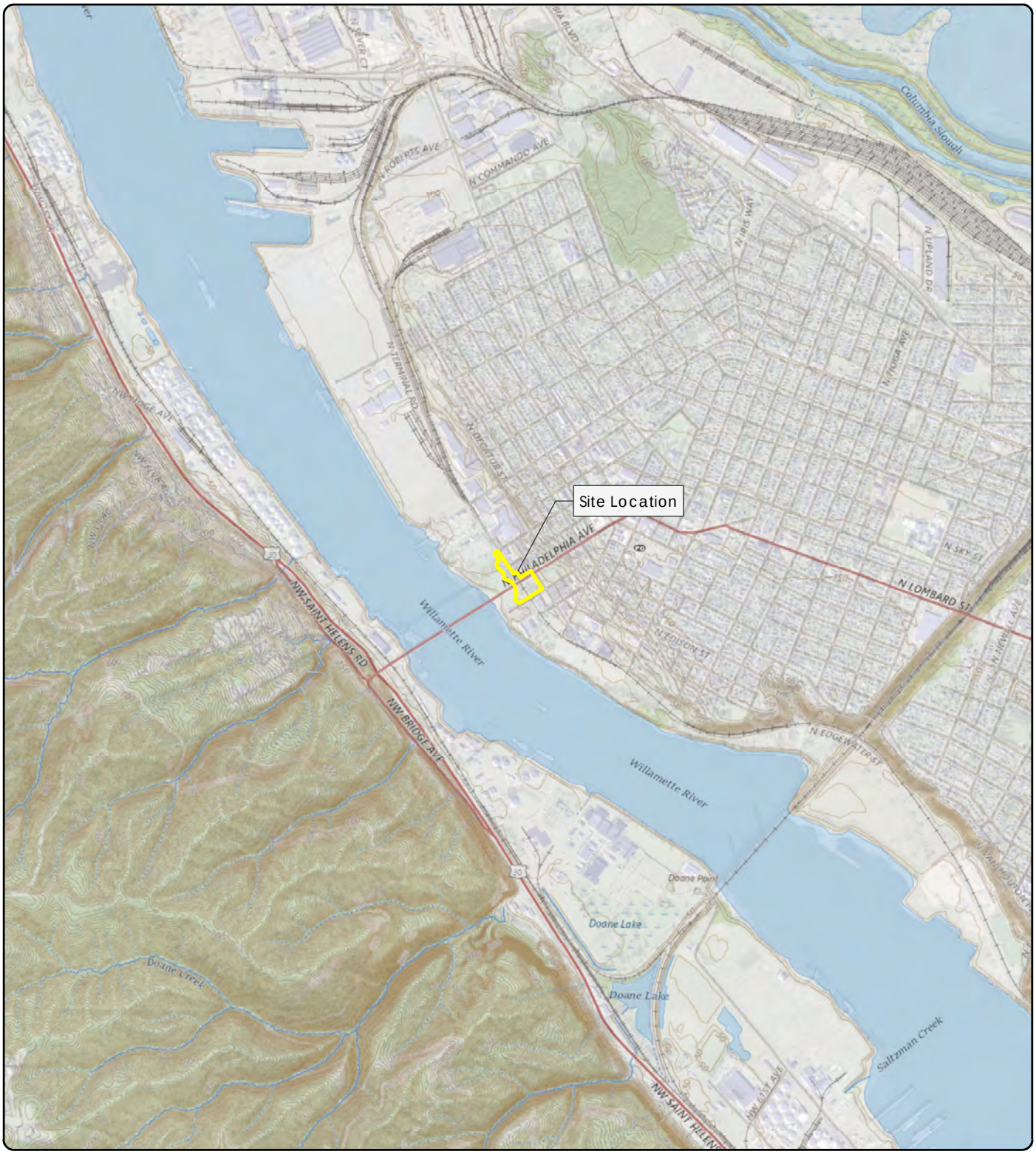
ISM = Incremental Sampling Methodology.

PCB = polychlorinated biphenyl.

QA = quality assurance.

[a]Equipment rinsate blanks will not be required if disposable or dedicated equipment is used for sampling.

FIGURES



Source:
U.S. Geological Survey (2021) 7.5-minute topographic quadrangle: Linton;
Township 1 north, range 1 west, section 12;
Property boundary obtained from Metro RLIS.

Legend

Site Boundary

Figure 1-1
Site Location

Oregon Department of Environmental Quality
Cathedral Park
Site-Specific Assessment
Portland, Oregon

0 1,000 2,000
Feet

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Figure 2-1
Site Overview

Oregon Department of Environmental Quality
Cathedral Park
Site-Specific Assessment
Portland, Oregon

Legend

- Site Boundary
- Tax Lot

0 25 50
Feet

Source:
Aerial photograph obtained from ESRI ArcGIS Online.
Tax lot data obtained from Metro RLIS.

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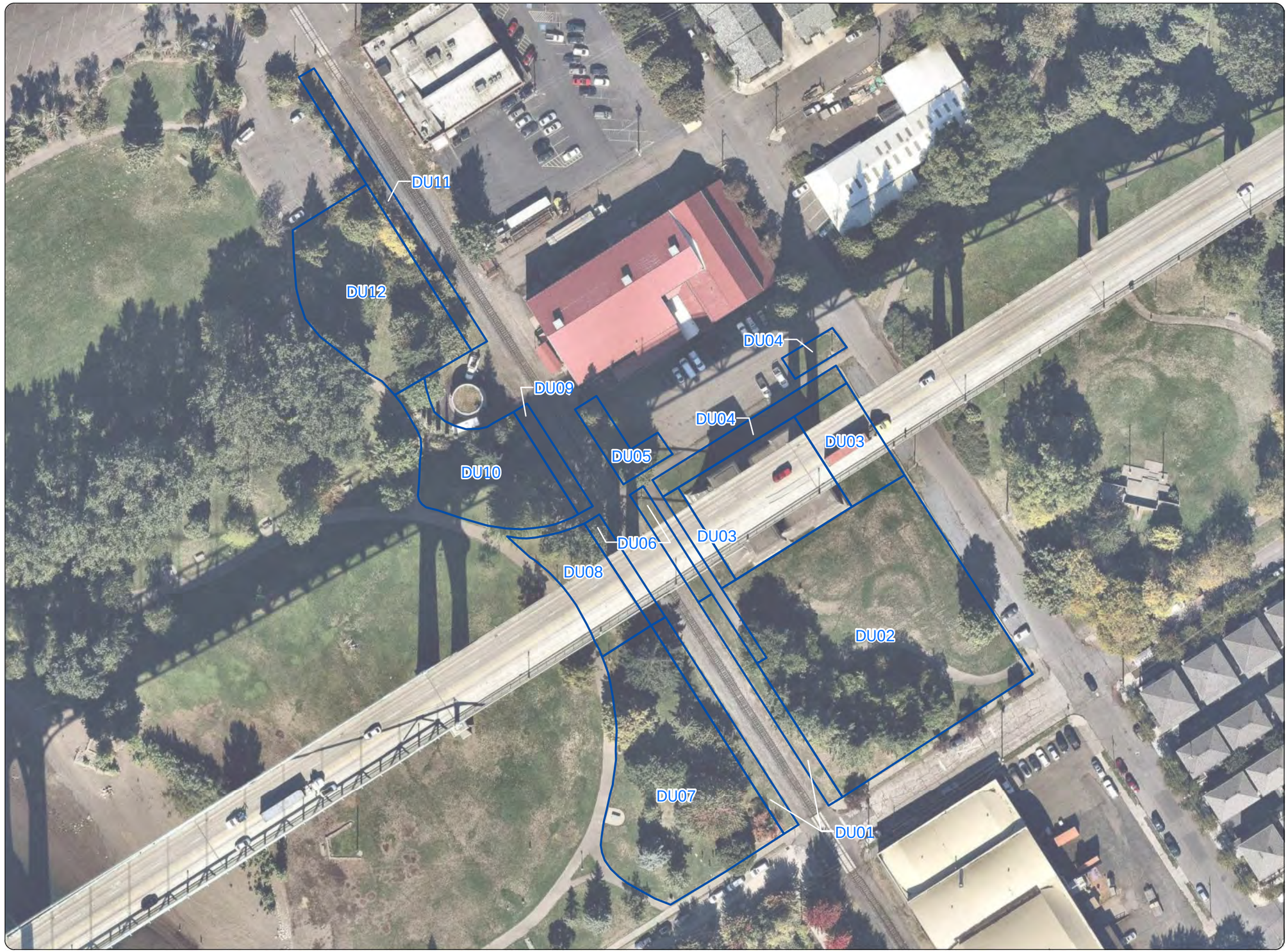

Figure 2-2
Proposed Decision Unit Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

Decision Unit (DU)

0 50 100
Feet

Source:
Aerial photograph obtained from Mapbox.

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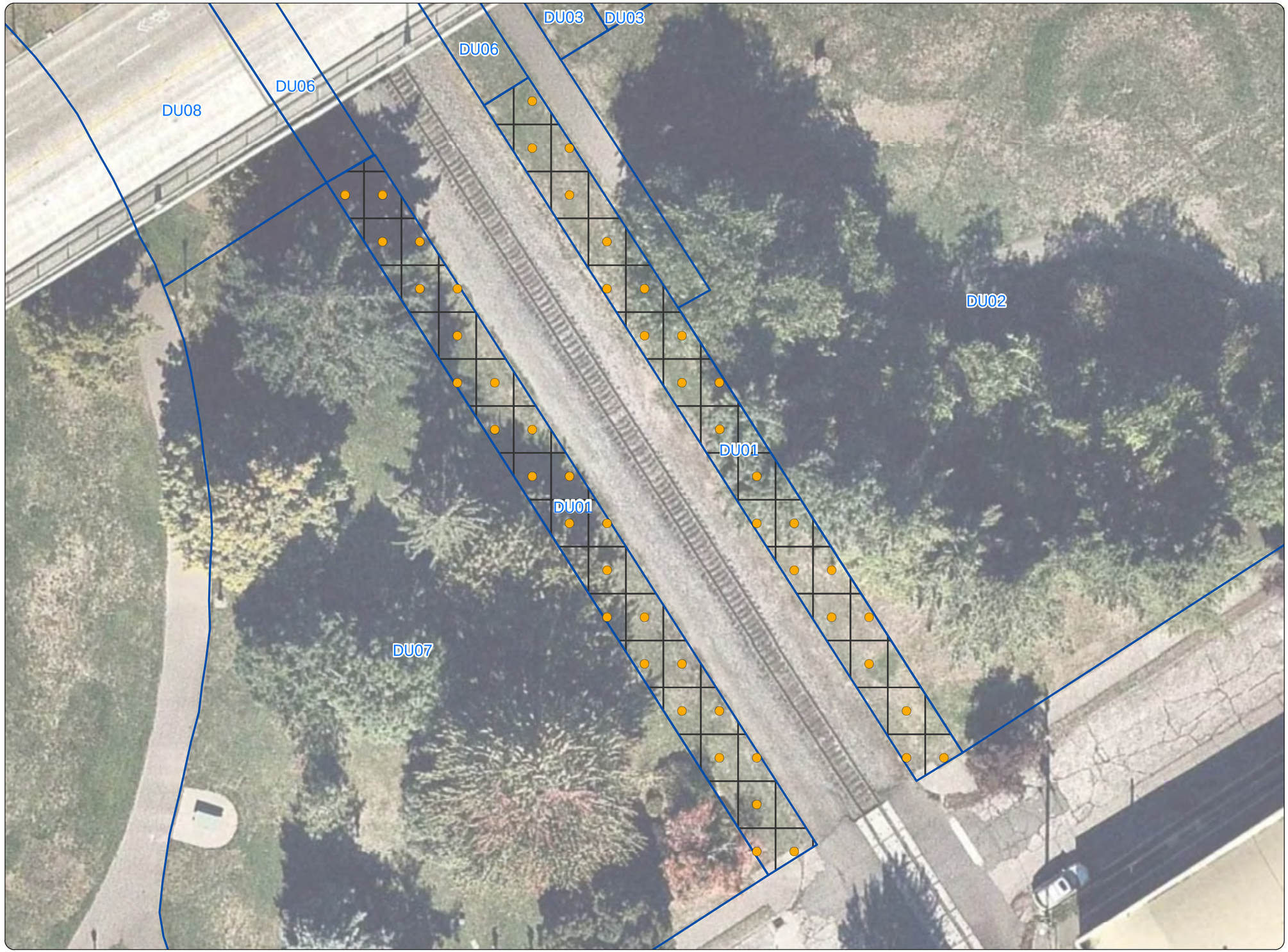

Figure 2-3
DU01 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
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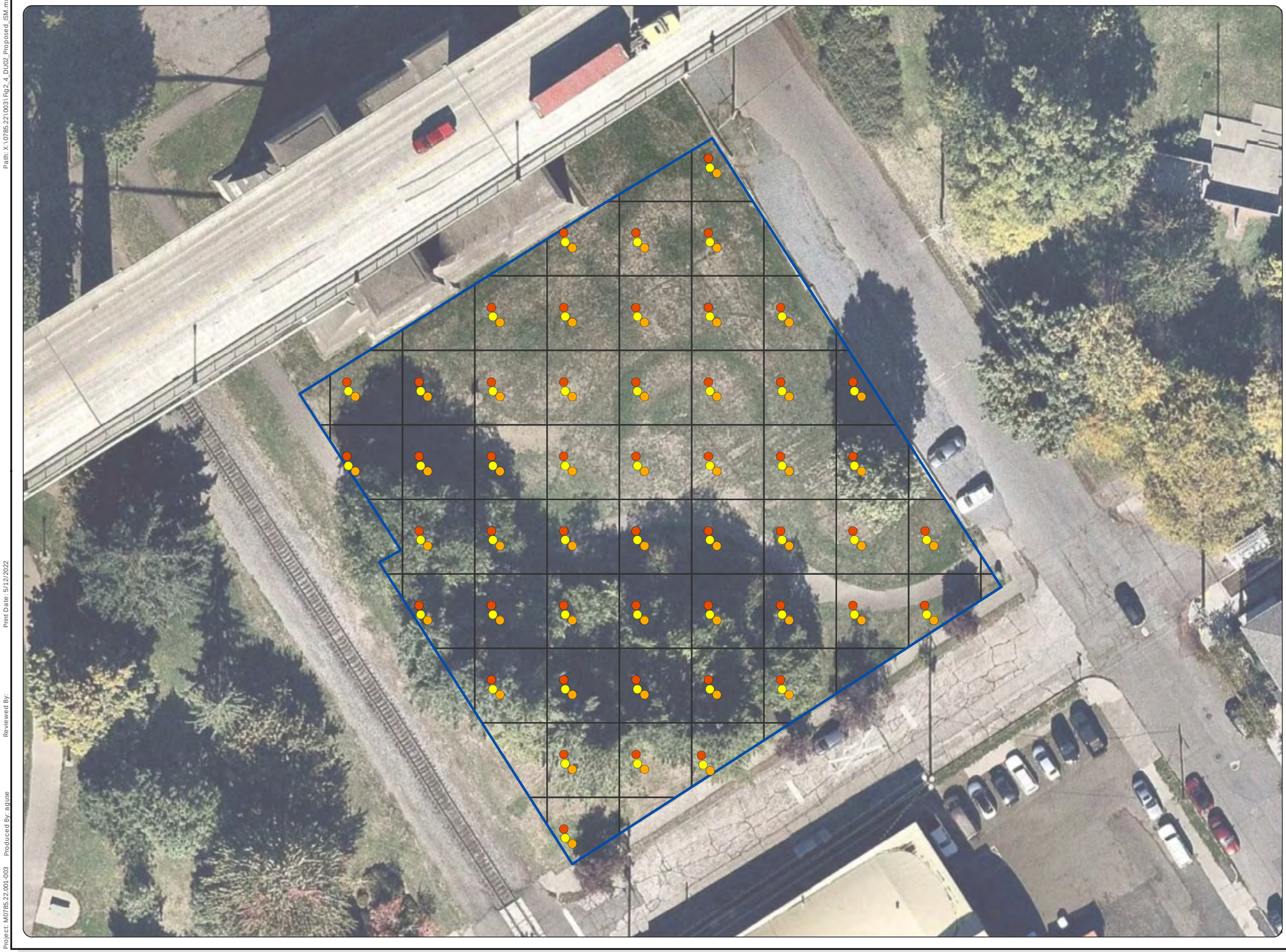

Figure 2-4
DU02 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Duplicate Increment Location
- Triplicate Increment Location
- Decision Unit (DU)
- Increment Grid

NOTE:
ISM = Incremental Sampling Methodology.

0 25 50
Feet

Source:
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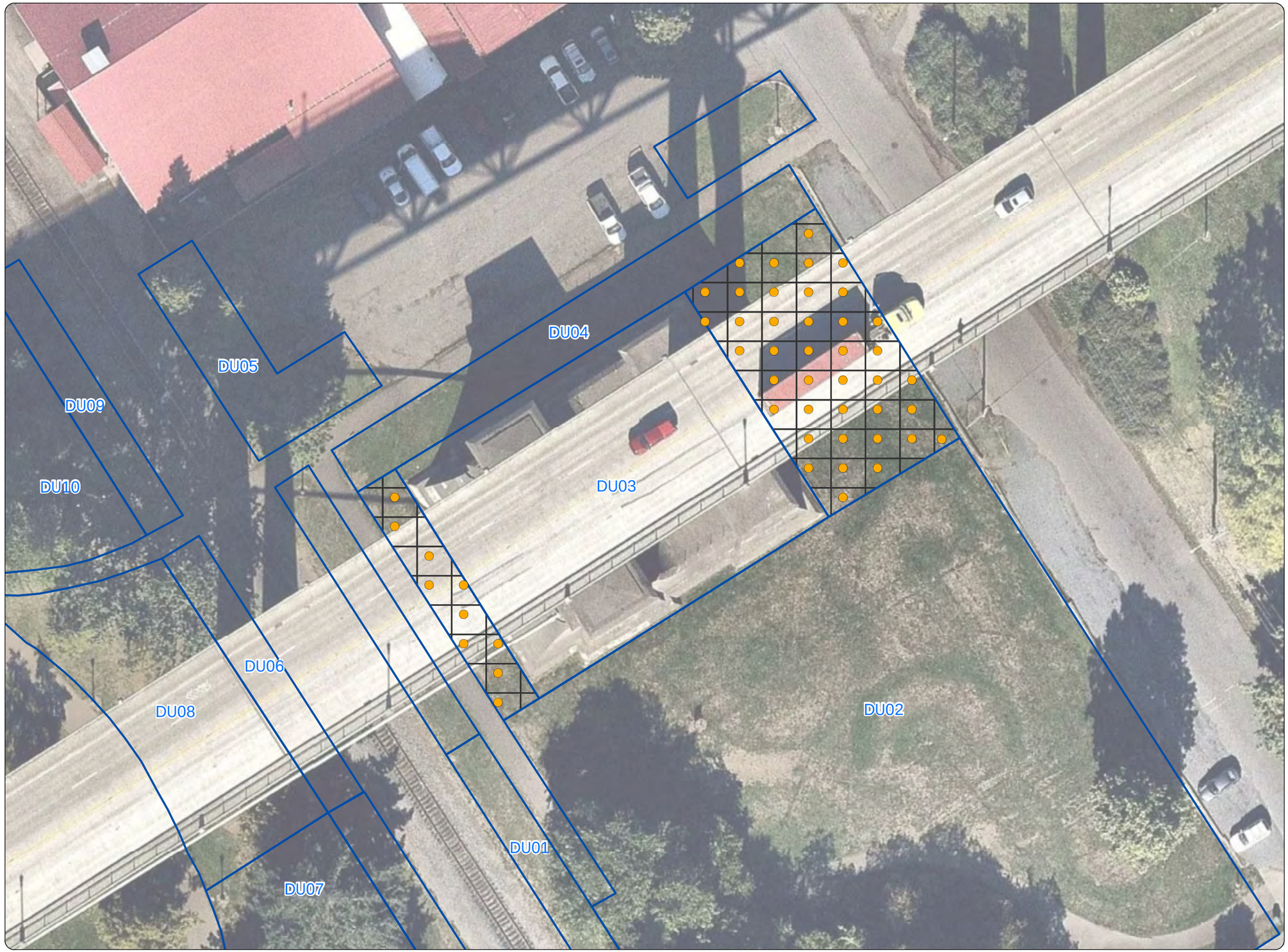

Figure 2-5
DU03 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
Aerial photograph obtained from Mapbox.

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Figure 2-6
DU04 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

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Figure 2-7
DU05 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
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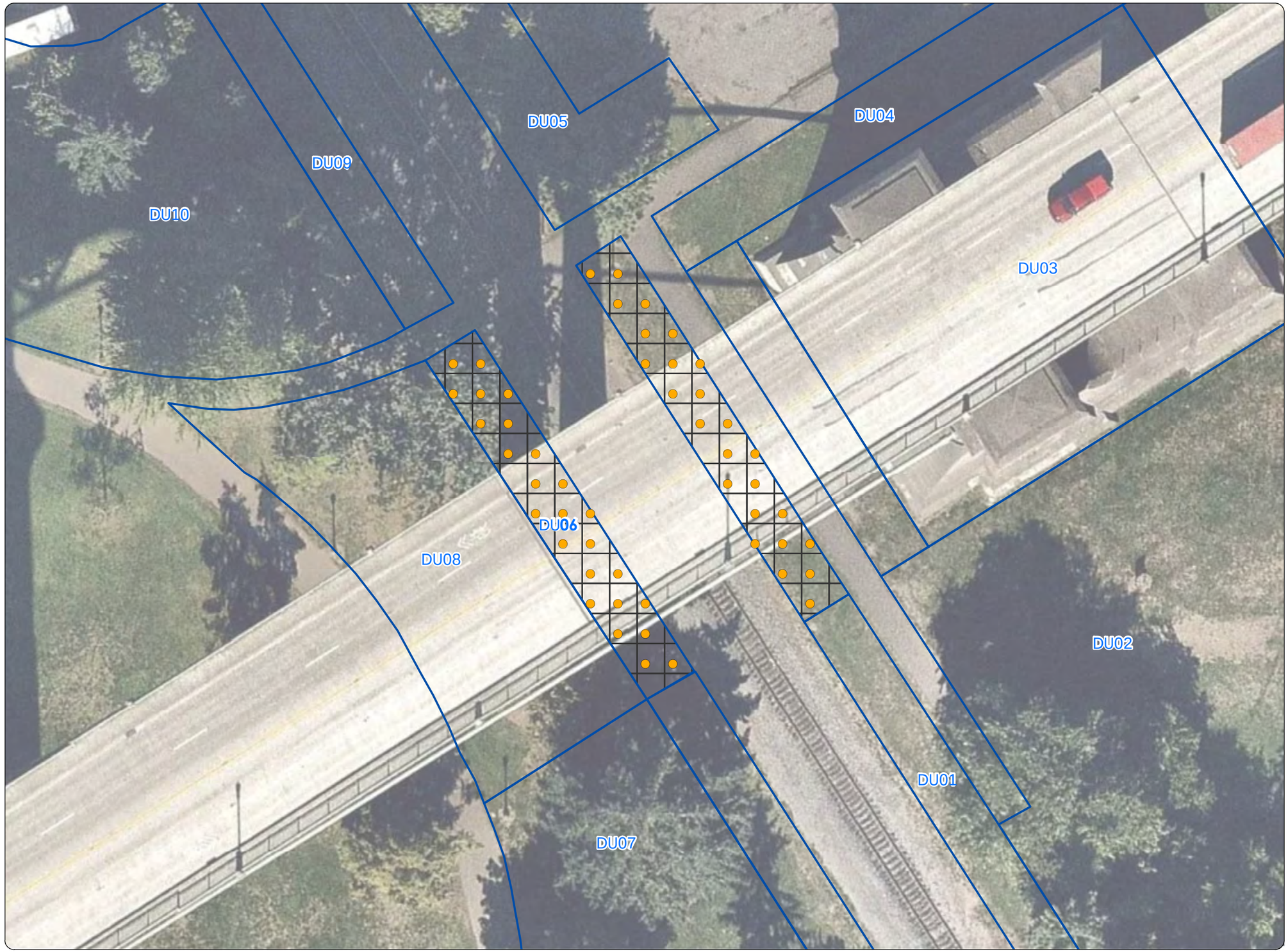

Figure 2-8
DU06 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
Aerial photograph obtained from Mapbox.

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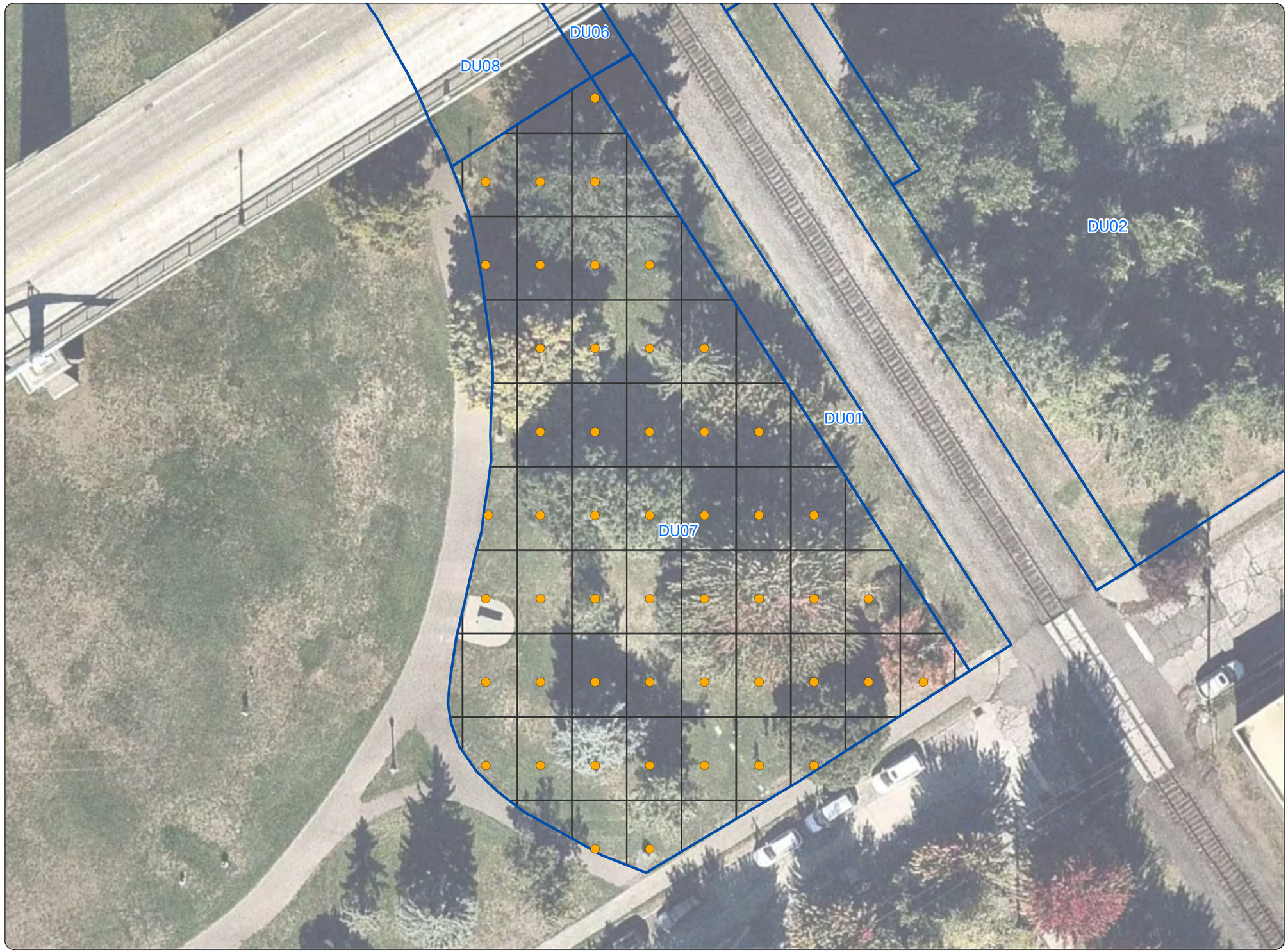

Figure 2-9
DU07 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

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Feet

Source:
Aerial photograph obtained from Mapbox.

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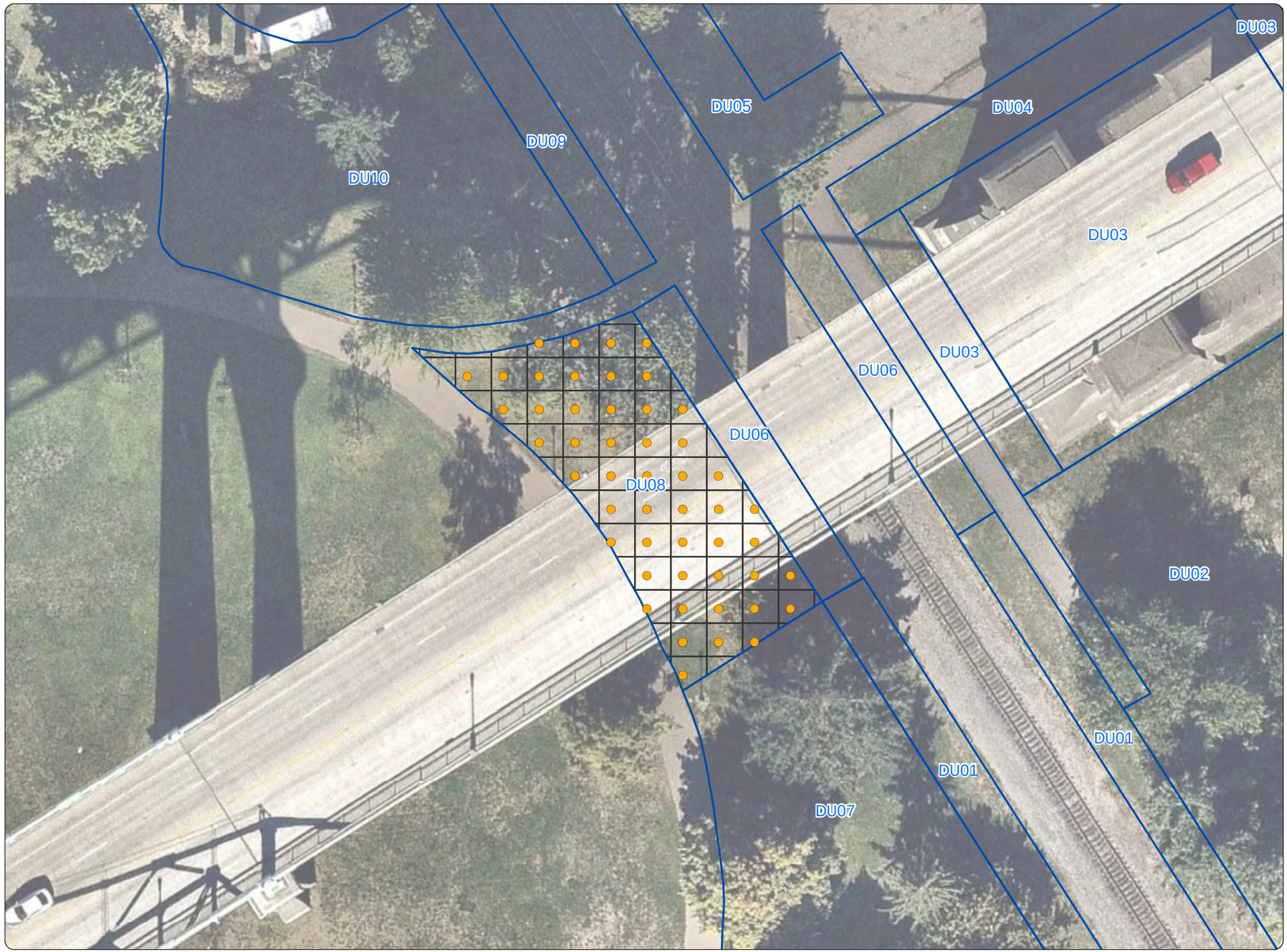

Figure 2-10
DU08 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
Aerial photograph obtained from Mapbox.

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Print Date: 5/11/2022
Reviewed By:
Produced By: aguse
Project: M0785.22.001-003

Figure 2-11
DU09 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
Aerial photograph obtained from Mapbox.

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Path: X:\0785.22\0031\Fig2-11_Proposed_DU09_Locations.mxd
Print Date: 5/11/2022
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Produced By: aguse
Project: M0785.22.001-003

Figure 2-12
DU10 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

Source:
Aerial photograph obtained from Mapbox.

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Path: X:\0785.22\003\Fig2-12_Proposed_DU10_Locations.mxd
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Project: M0785.22.001-003

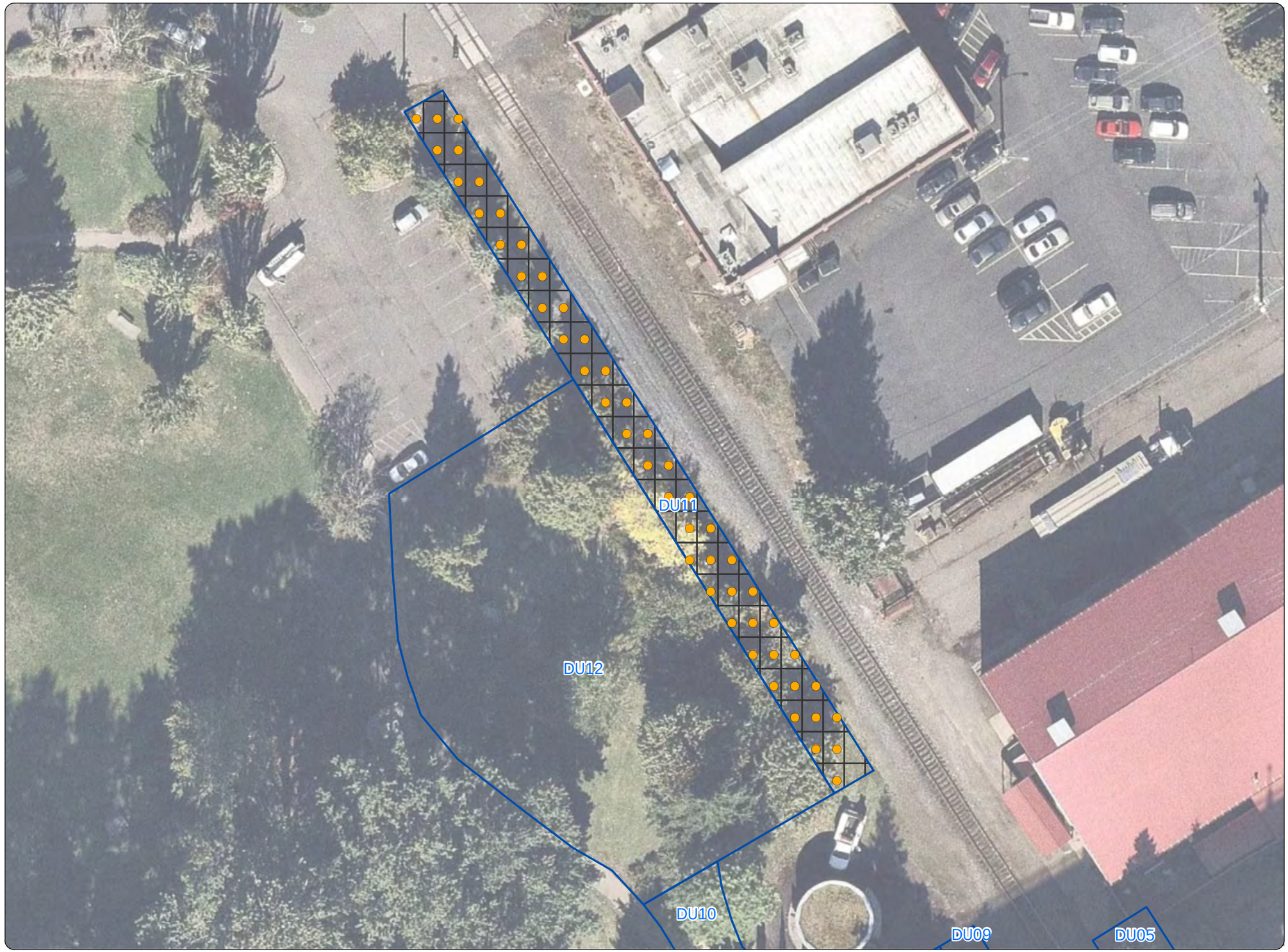

Figure 2-13
DU11 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
Aerial photograph obtained from Mapbox.

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Print Date: 5/11/2022
Reviewed By:
Produced By: aguse
Project: M0785.22.001-003

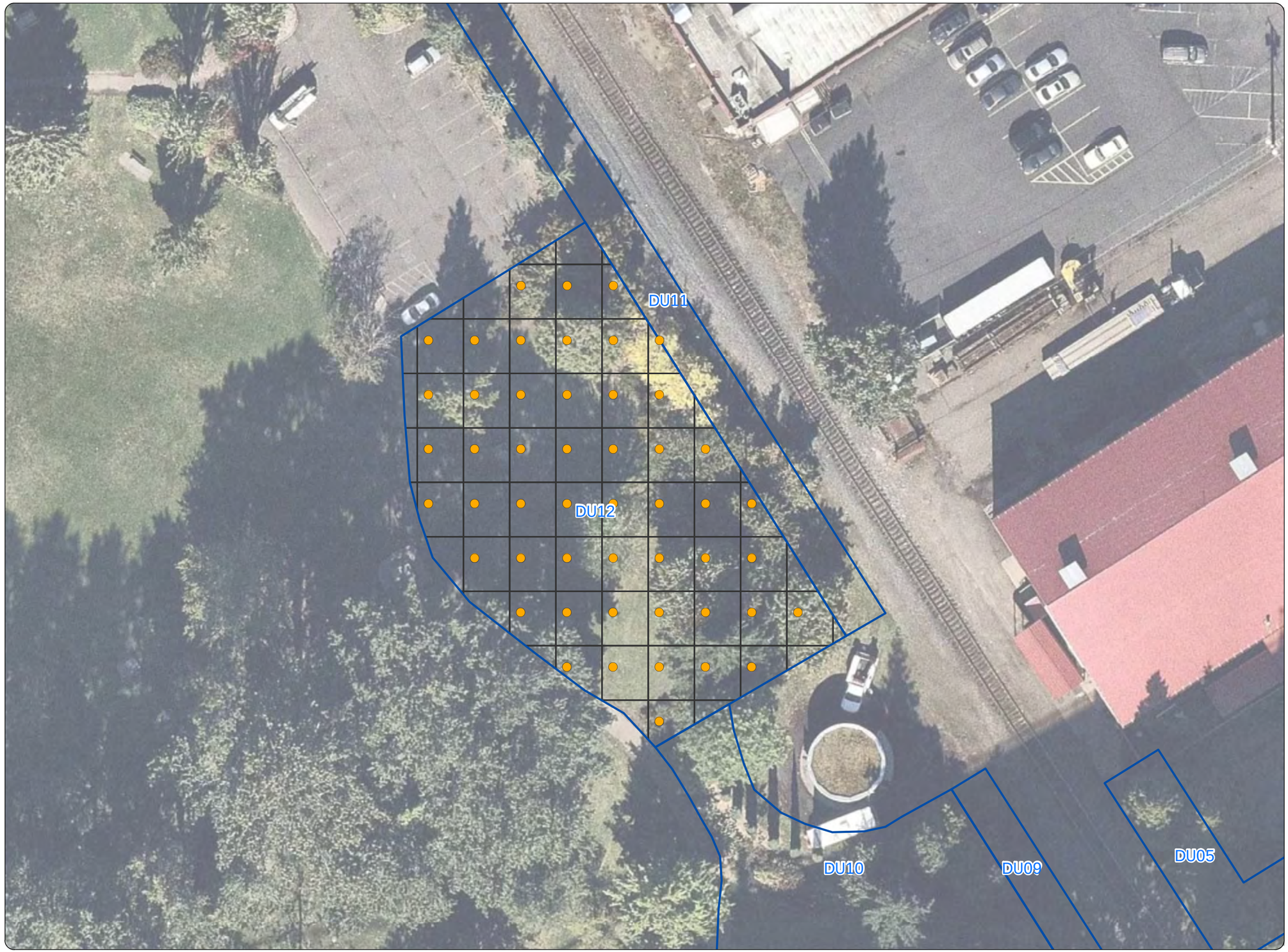

Figure 2-14
DU12 Proposed Increment Sampling Locations

Oregon Department of Environmental Quality
Cathedral Park Site-Specific Assessment
Portland, Oregon

Legend

- Increment Location
- Decision Unit (DU)
- Increment Grid

0 15 30
Feet

Source:
Aerial photograph obtained from Mapbox.

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APPENDIX A

HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN

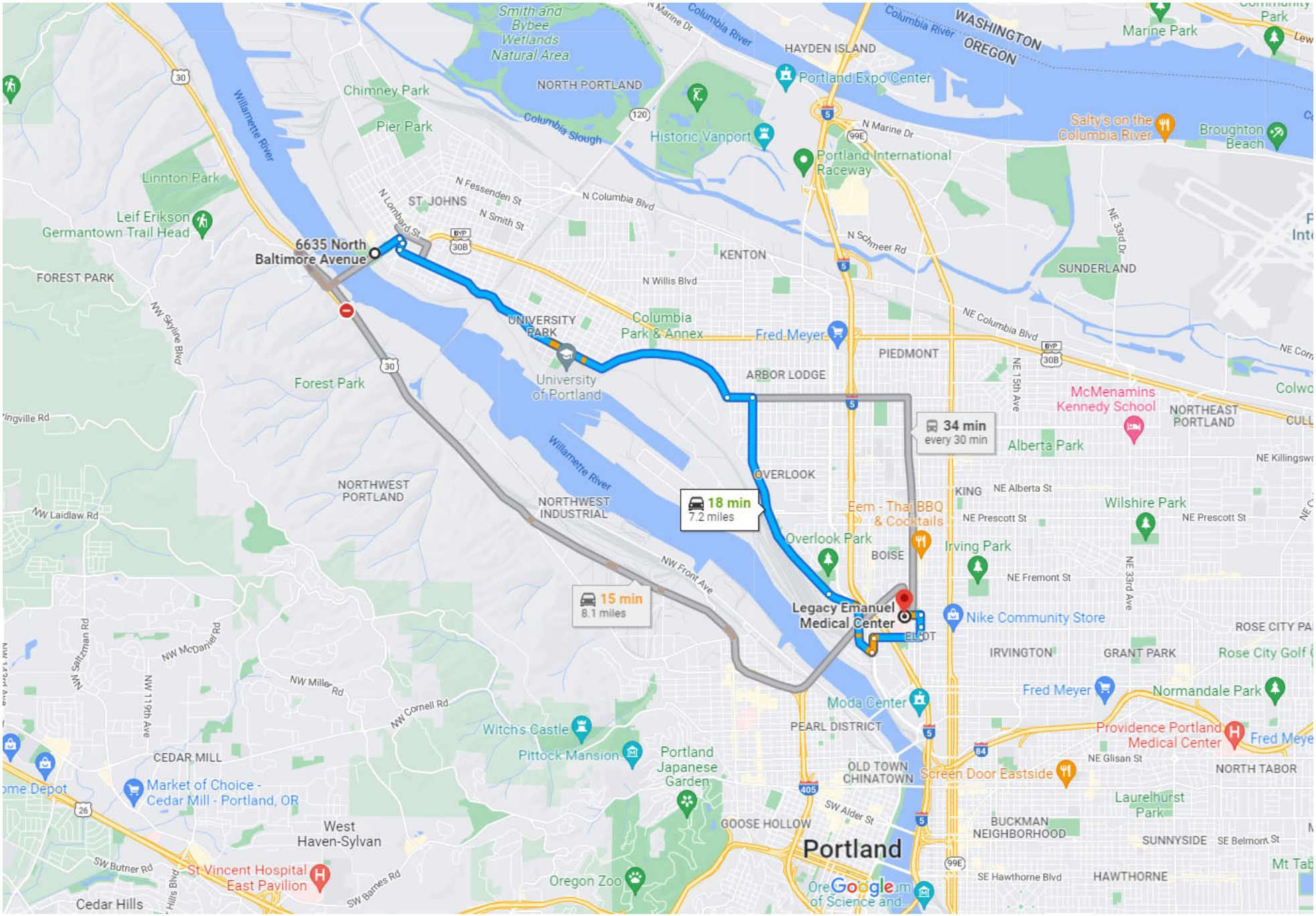
CATHEDRAL PARK SITE
DEQ TASK ORDER 73-18-25

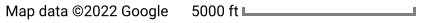
Prepared for
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
May 12, 2022
Project No. M0785.22.001

MAUL FOSTER ALONGI

Prepared by
Maul Foster & Alongi, Inc.
3140 NE Broadway Avenue, Portland, OR 97232

Google Maps 6635 N Baltimore Ave, Portland, OR 97203 to Legacy Emanuel Medical Center Drive 7.2 miles, 18 min





6635 N Baltimore Ave
Portland, OR 97203

Take N Willamette Blvd and N Greeley Ave to N Albina Ave

15 min (6.3 mi)

1. Head northeast on N Philadelphia Ave toward N Syracuse St

0.2 mi

2. Turn right at the 1st cross street onto N Syracuse St

240 ft

3. Turn right onto N Burlington Ave

305 ft

4. Turn left onto N Willamette Blvd

3.2 mi

5. N Willamette Blvd turns slightly left and becomes N Rosa Parks Way

0.2 mi

6. Turn right onto N Greeley Ave

1.8 mi

7. Keep left to stay on N Greeley Ave

0.2 mi

8. Turn right onto N Interstate Ave/Pacific Hwy W

0.4 mi

Take N Russell St to N Williams Ave

2 min (0.5 mi)

9. Turn left onto N Albina Ave

0.1 mi

10. Turn right onto N Russell St

0.4 mi

Follow N Williams Ave to N Stanton St

45 s (0.2 mi)

11. Turn left onto N Williams Ave

466 ft

12. Keep right to stay on N Williams Ave

0.1 mi

13. Turn left onto N Stanton St

Destination will be on the right

2 min (0.2 mi)

Legacy Emanuel Medical Center

HEALTH AND SAFETY PLAN

CATHEDRAL PARK SITE

DEQ TASK ORDER 73-18-25

The material and data in this plan were prepared under the supervision and direction of the undersigned.

MAUL FOSTER & ALONGI, INC.

Dana Domenighini
Project Environmental Scientist

Michael Pickering, RG
Senior Geologist

CONTENTS

1 NEAREST HOSPITAL/EMERGENCY MEDICAL CENTER

1.1 Nearest Hospital

Legacy Emanuel Medical Center
2801 N Gantenbein Avenue
Portland, Oregon 97227

Phone: (503) 413-2200

Distance: 7.2 miles

Travel Time: 18 minutes

1.2 Route to Hospital from Site

See map on first page of this document.

1.2.1 Driving Directions to Hospital from Site

1. Head northeast on N Philadelphia Avenue toward N Syracuse Street (0.2 miles)
2. Turn right at the 1st cross street onto N Syracuse Street (240 feet)
3. Turn right onto N Burlington Avenue (305 feet)
4. Turn left onto N Willamette Boulevard (3.2 miles)
5. N Willamette Boulevard turns slightly left and becomes N Rose Parks Way (0.2 miles)
6. Turn right onto N Greeley Avenue (1.8 miles)
7. Keep left to stay on N Greeley Avenue (0.2 miles)
8. Turn right onto N Interstate Avenue/Pacific Highway W (0.4 miles)
9. Turn left onto N Albina Avenue (0.1 miles)
10. Turn right onto N Russell Street (0.4 miles)
11. Turn left onto N Williams Avenue (466 feet)
12. Keep right to stay on N Williams Avenue (0.1 miles)

13. Turn right onto N Stanton Street (0.2 miles)

14. Destination will be on the right

1.3 Emergency Phone Numbers

Ambulance, Police, Fire	**Dial 911**
Dana Domenighini Task Order Manager	Phone: (971) 254-8071 Cell: (503) 396-0803
Michael Pickering Program Manager	Phone: (971) 713-3585 Cell: (971) 227-2566
Emily Curtis Health and Safety Coordinator	Phone: (503) 501-5233 Cell: (503) 410-1524

2 PLAN SUMMARY

This health and safety plan (HASP) was developed to describe the procedures and practices necessary for protecting the health and safety of Maul Foster & Alongi, Inc. (MFA) employees conducting activities at the Cathedral Park site in Portland, Oregon (the Site). Other employers, including contractors and subcontractors, are expected to develop and implement their own HASPs to manage the health and safety of their personnel.

MFA personnel conducting activities at the Site are responsible for understanding and adhering to this HASP. Before fieldwork begins, a site safety officer (SSO) who is familiar with health and safety procedures and with the Site will be designated by the on-site personnel. Safety deficiencies should be immediately communicated to the SSO and, if necessary, to MFA's health and safety coordinator (HSC).

All contractors and subcontractors have the primary responsibility for the safety of their own personnel on the Site. All personnel on the Site have "stop work" authority if they observe conditions that they believe create an imminent danger.

If MFA employees work on the Site for more than a year, this HASP will be reviewed at least annually. The plan will be updated as necessary to ensure that it reflects the known hazards, conditions, and requirements associated with the Site.

MFA personnel who will be working on the Site are required to read and understand this HASP. MFA personnel entering the work area must sign the Personnel Acknowledgment Sheet (Section 16), certifying that they have read and that they understand this HASP and agree to abide by it.

3 KEY PROJECT PERSONNEL

Name	Responsibility
Michael Pickering	Project Director
Dana Domenighini	Project Manager
Riley Paul	Field Personnel
Connor Anderson	Field Personnel
Emily Curtis	Health and Safety Coordinator

4 SITE DESCRIPTION AND BACKGROUND

4.1 Type of Site

The Site is located in Portland, Oregon. The Site currently a park.

4.2 Building/Structures

No structures are present on the Site.

4.3 Topography

In general, the Site slopes down to the west toward the Willamette River. The Site elevation is approximately 35 feet above mean sea level.

4.4 General Geologic/Hydrologic Setting

Boring logs from 2012 indicate that silty sand was encountered at the Site down to a depth of 20 feet below ground surface (bgs). Groundwater was not encountered during the previous investigations. A review of nearby sites indicated that groundwater in the area may be encountered at approximately 5 to 10 feet bgs.

4.5 Site Status and General Site History

The Site is currently in use as a park. In 2011, the City of Portland sampled surface soils and stormwater ponding along the North Bradford Street right-of-way. Polychlorinated biphenyls (PCBs) were detected at concentrations up to 21.7 milligrams per kilogram. In a letter dated September 14, 2021, a coalition of community groups expressed concerns related to PCB contamination in soil adjacent and possibly within Cathedral Park, primarily in the areas around the United Pacific Railroad railroad tracks and Peninsula Iron Works property. As a result, DEQ is assessing portions of the park that are a concern to these community groups.

5 HAZARD EVALUATION

5.1 Site Tasks and Operations

MFA has completed job hazard analyses (JHAs) for specific tasks that likely could be completed on the Site, depending on the scope of work. These tasks are provided in Appendix A. The following list generally summarizes planned tasks and operations:

- Collecting soil samples

The control measures that field personnel must use to eliminate or minimize these hazards, such as air monitoring, personal protective equipment (PPE), and decontamination procedures, are detailed in the JHAs and in subsequent sections of this plan.

5.2 Chemical Hazard Evaluation

Chemicals of potential concern (COPCs) on the Site are summarized in Appendix B. Action levels and associated controls are specified in Appendix C.

5.3 Physical Hazards

The specific physical hazards and associated controls for work on the Site are described in Appendix A, JHAs.

6 HEALTH AND SAFETY TRAINING

MFA personnel working on site and who could be exposed to COPCs will have completed training consistent with the HAZWOPER requirements in 29 Code of Federal Regulations (CFR) 1910.120(e). The training will include:

- Identity of site safety and health personnel
- Safety and health hazards identified on the Site
- Proper use of required PPE
- Safe work practices required on the Site, e.g., fall protection, confined space entry procedures, hot work permits, general safety rules
- Safe use of engineering controls and equipment on the Site

- Medical surveillance requirements, including the recognition of signs and symptoms that might indicate overexposure to hazards
- The site emergency response plan/spill containment plan

The HSC will oversee training for site personnel. Training records, including an outline, sign-offs, and competency records, will be maintained by the HSC.

7 SAFETY EQUIPMENT

7.1 Personal Protective Equipment

PPE must be worn by individuals on the Site to protect against physical hazards. PPE required on the Site is modified Level D, which consists of:

- High-visibility vest
- Work boots
- Safety glasses with side shields
- Nitrile gloves or equivalent when handling known or potentially impacted media
- Work gloves (if handling materials that that might have sharp edges, protrusions, or splinters)

Additional PPE may be necessary for specific tasks with additional hazards. The SSO will be responsible for designating additional PPE for specific tasks. Depending on the activity, additional PPE may include:

- Type 1 hard hat
- Hearing protection (during high-noise tasks)
- Chemical-resistant clothing, e.g., Tyvek® coveralls
- Chemical-resistant boots
- Chemical-resistant goggles
- Chemical-resistant gloves
- Faceshield
- Respiratory protection

Additional PPE may be required if workers discover unexpected contamination. Characteristics of unexpected contamination could include unusual odors, discolored media, a visible sheen, etc. The SSO and, if necessary, the HSC will be contacted as soon as possible after the discovery of unexpected contamination, and the SSO and/or the HSC will determine the need for additional controls and/or training.

PPE used at the Site must meet the requirements of recognized consensus standards (e.g., American National Standards Institute, National Institute for Occupational Safety and Health [NIOSH]), and respiratory protection shall comply with the requirements set forth in 29 CFR 1910.134.

Project personnel are not permitted to reduce the level of specified PPE without approval from the SSO or the HSC.

7.2 Safety Equipment

The SSO will be responsible for ensuring that the following safety equipment is available on site and is properly inspected and maintained:

- Soap and water for decontamination
- Caution tape, traffic cones, and/or barriers
- First-aid kit
- Fire extinguisher
- Fluids for hydration, e.g., drinking water or sports drink

7.3 Air Monitoring Equipment

Air monitoring is not anticipated during field activities. However, the following air monitoring equipment will be available to identify site conditions that may require additional controls. See Appendix C for specified action levels and followup actions.

- Photoionization detection (PID) instrument

7.4 Communications Equipment

MFA personnel should have a mobile phone or a radio available in case of emergency.

8 DECONTAMINATION PROCEDURES

8.1 Partial Decontamination Procedure

MFA employees will implement the following partial decontamination procedures when exiting the exclusion zone but remaining on the Site.

- Wash and rinse boots in containers in the contamination-reduction zone.
- Remove gloves. Inspect and discard in a container labeled for disposable items if ripped or damaged.

- Remove respirator, if worn, and clean with premoistened alcohol wipes. Discard used cartridges at the frequency dictated by the SSO.
- Wash hands and face with soap and water.

8.2 Full Decontamination Procedures

MFA employees will follow the full decontamination procedures listed below when exiting the exclusion zone and leaving the Site, e.g., at the end of the work shift.

- Wash and rinse boots in containers in the contamination-reduction zone.
- Remove respirator, if worn, and discard used cartridges at the frequency dictated by the SSO.
- Wash and rinse respirator in a "respirators only" decontamination container.
- Remove work boots and put on street shoes. Place work boots in a plastic bag or container for later reuse.
- Wash hands and face with soap and water.
- Shower as soon after the work shift as practicable.

9 MEDICAL SURVEILLANCE

MFA will ensure that its employees who meet the following criteria are enrolled in a medical surveillance program consistent with 29 CFR 1910.120(f):

- The employees are, or may be, exposed to hazardous substances or health hazards at or above established permissible exposure limits for 30 or more days per year.
- The employees are required to wear a respirator for 30 or more days per year.

MFA employees who exhibit signs or symptoms consistent with overexposure to site contaminants will be offered medical surveillance consistent with Oregon Administrative Rule 1910.120(f)(iii).

MFA will ensure that its employees who are authorized to wear respirators are medically evaluated consistent with the respiratory protection standard (29 CFR 1910.134). The HSC or administrative designee (e.g., human resources manager) will maintain medical evaluation records.

10 AIR MONITORING

Based on site conditions, air monitoring is not anticipated; however, air monitoring equipment will be available in case workers encounter conditions that indicate the presence of unexpected contamination, such as unusual odors, discolored media, or a visible sheen. If such conditions are discovered, workers will exit the area and contact the SSO and, as needed, the HSC. If necessary, MFA will use the air monitoring equipment to evaluate the conditions and determine if additional controls and/or training are required. Action levels and followup actions are provided in Appendix C.

Air monitoring, if conducted, must be performed by individuals familiar with the calibration, use, and care of the required instruments. Measurements shall be documented, and the records should include the following information:

- The name of the person conducting the measurements
- The identity of workers, if any, who have exposure indicated by measurement result
- Information about the instrument, e.g., type, make, model, serial number
- The location of the measurement
- The measurement date and start/stop time
- Conditions represented by the measurement, including applicable activities, work practices, weather conditions, site conditions, and controls in place
- Measurement results
- Other relevant observations or notes

10.1 Air Monitoring Action Levels

If air monitoring is conducted, the results will be compared to the action levels provided in Appendix C. The air monitoring action levels are established to comply with OSHA Permissible Exposure Levels, American Conference of Governmental Industrial Hygienists threshold limit values, and NIOSH recommendations for the chemicals that may be encountered on the Site. The action levels are also adjusted for the relative response of common PID instruments to motor-fuel vapors.

10.2 Explosion Hazard Action Levels

MFA employees working on site will take measurements when working near known or suspected sources of explosive gases or vapors. The instrument alarm should be set to sound at 10 percent of the LEL. When measurements exceed this level, MFA employees on site will:

1. Extinguish ignition sources and shut down powered equipment in the work area.

2. Move personnel at least 100 feet away from the work area.
3. Contact the SSO and the HSC.
4. At the instruction of the HSC and after waiting 15 minutes for explosive gases to dissipate, the SSO may use the combustible gas meter to approach the worksite to measure combustible gases in the work area. The SSO shall not enter (or allow any personnel to enter) any area where the combustible gas meter readings exceed the explosivity action level, nor shall the SSO approach if there is a potential for fire or explosion.
5. The SSO may authorize personnel to reenter the work area after the source of the combustible gases has been identified and controlled.

10.3 Instrument Calibrations

Instruments shall be calibrated consistent with manufacturers' recommendations. Calibrations shall be coordinated by the SSO. Calibration and monitoring records shall be maintained by the SSO and/or the project manager.

11 SITE CONTROL MEASURES

Access to the Site will be controlled as part of the site preparation. Control measures may include fencing, gates, and signs limiting access to everyone except authorized personnel. Work zones and contaminant reduction zones will be designated by the SSO.

MFA requires the "buddy system" if personnel conduct operations that may involve exposure to site hazards. The buddy system may involve working with non-MFA personnel.

12 EMERGENCY RESPONSE / SPILL CONTAINMENT / CONFINED SPACE

MFA employees on site will follow the emergency response, spill response, and confined space procedures described in the MFA Health and Safety Manual. Incidents will be documented on the incident report form included with Appendix D.

13 PRE-ENTRY BRIEFING

MFA employees on site will conduct pre-entry briefings, e.g., tailgate meetings, before starting work on the Site and/or as the scope of work changes throughout the project to ensure that employees are familiar with the HASP and that the plan is being followed. Attendance and discussion topics will be documented on sign-in sheets, which will be maintained by the SSO. A tailgate safety meeting checklist is included as Attachment E.

14 PERIODIC EVALUATION

The project manager or designee will evaluate the effectiveness of this HASP. As part of the evaluation, the project manager or designee will track ongoing health and safety feedback from field personnel working on the project. This feedback will be reviewed and incorporated into either immediate or annual updates of the HASP. HASPs will be reviewed and updated at least annually. Updating the plan as necessary ensures that it reflects the known hazards, conditions, and requirements associated with the Site. MFA will maintain periodic evaluation records and will track all HASP revisions.

15 SAFE WORK PRACTICES

The following safe work practices are provided to supplement the other information included with this HASP.

1. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of materials is prohibited in areas with potentially contaminated materials.
2. Field personnel will, whenever practicable, remain upwind of drilling rigs, open excavations, and other site-disturbing activities.
3. Subsurface work shall not be performed at any location until the area has been confirmed by a utility-locator firm to be free of underground utilities or other obstructions.
4. In addition, a COVID-19 Addendum is included as Appendix F and should be adhered to, to ensure the health and safety of personnel.

16 ACKNOWLEDGMENT

MFA cannot guarantee the health or safety of any person entering the Site. Because of the potentially hazardous nature of visits to active sites, it is not possible to discover, evaluate, and provide protection against all possible hazards that may be encountered. Strict adherence to the health and safety guidelines set forth herein will reduce, but not eliminate, the potential for injury and illness at the Site. The health and safety guidelines in this plan were prepared specifically for the Site and should not be used on any other site without prior evaluation by trained health and safety personnel.

MFA personnel who will work at the Site are to read, understand, and agree to comply with the specific practices and guidelines described in this HASP regarding field safety and health hazards.

This HASP has been developed for the exclusive use of MFA personnel. MFA may make this plan available for review by contracted or subcontracted personnel for information only. This plan does not cover the activities performed by employees of any other employer on the Site. All contracted or subcontracted personnel are responsible for implementing their own health and safety program, including generating and using their own plan.

I have read and I understand this HASP and all attachments, and agree to comply with the requirements described herein:

Name	Title	Date

APPENDIX A

JOB HAZARD ANALYSES

Job Hazard Analysis (JHA)

Task/Operation: Soil Sampling		
Project Number: M0785.22.001	**Location/Site where Task/Operation Performed:** Cathedral Park Site, Portland, Oregon	
Date Prepared: 4/13/2022	**Employee Preparing this JHA:** Riley Paul	
Date Reviewed: 4/20/2022	**Employee Reviewing and Certifying this JHA:** Michael Pickering	

Job/Task Description
Employees will conduct soil sampling.

Physical Hazards		
Physical Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Eye injury	Dust or sediment coming into contact with eyes.	Wear eye protection with side shields.
Injuries caused by improper lifting	Equipment, core sampler, sample coolers.	Use proper bending/lifting techniques by bending and lifting with legs and not with back. Do not twist at the waist when turning the core sampler. Use buddy system for heavy objects.
Accidents with equipment/tools	Sample-collection equipment/tools.	Verify you have the appropriate equipment/tools for tasks. Use equipment/tools only as intended by the manufacturer. Stow all tools in vehicle properly; use appropriate cases and bags. Secure equipment in vehicle with netting or straps—do not leave loose.

Biological/Chemical Hazards		
Biological/Chemical Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Biological—Animals	Stinging insects, spiders, and snakes.	Use bug repellent and sunscreen as necessary. Use snake chaps or shin guards when grass is above the ankle. Use a bar to clear out objects and/or vegetation, as well as spiders and/or snakes (do not use your hands or feet).
Chemical	Personnel performing tasks may come into direct contact with contaminated materials in the soil.	If necessary, see Chemical Hazards Summary Table for applicable chemical hazards. Wear the appropriate PPE, including nitrile gloves, during sampling to prevent direct contact with contaminants in soil. If appropriate, use of a half-face respirator may be necessary.

Task/Operation: Soil Sampling
Additional Control Measures and Guidance
Engineering Controls: No engineering controls specified.
General Safe-Work Practices and Guidance: • Triple-rinse sampling equipment using distilled or deionized water and alconox for first rinse, and distilled water for second and third rinses. • Always clean materials between locations at the site to avoid cross-contamination. • Do not bring equipment back to the office without proper decontamination.
Personal Protective Equipment (PPE): Hard hat, work boots, high-visibility vest, safety glasses with side shields, nitrile gloves, hearing protection if sampling using a drill-rig, and respiratory protection if necessary.

APPENDIX B

CHEMICALS OF POTENTIAL CONCERN

Table
Chemical Hazards

Analyte	OSHA PEL (TWA)	ACGIH TLV (TWA)	NIOSH IDLH[(a)]	LEL (%)	IP (eV)	Other Hazard
Additional						
Polychlorinated Biphenyls	0.5 mg/m^3	1 mg/m^3	5 mg/m^3	NA	NA	C

NOTES:

IDLH values taken from http://www.cdc.gov/niosh/idlh/intridl4.html.

ACGIH = American Conference of Governmental Industrial Hygienists.®

C = carcinogen.

IDLH = immediately dangerous to life and health.

IP (eV) = ionization potential.

LEL = lower explosive limit.

mg/m^3 = milligrams per cubic meter.

NA = not available.

NIOSH = National Institute for Occupational Safety and Health.

OSHA = Occupational Safety and Health Administration.

PEL = permissible exposure level.

TLV = threshold limit value.

TWA = time-weighted average.

APPENDIX C

AIR MONITORING ACTION LEVELS

Air Monitoring Procedures and Toxicity Action Levels

Instrument	Action Level	Initial Action	Follow Up Action
FID or PID[a]	Detection of **1 part per million (ppm)** (above ambient) or greater in breathing zone **sustained for two minutes.**	Dräger tube test for **benzene**. If **1 ppm benzene** detected with Dräger tube, upgrade to level C.	Ventilate area, always work upwind.
FID or PID[a]	Detection of 10 ppm (above ambient) in breathing zone **and determined not to be benzene.**	Upgrade to Level C and continue to monitor breathing zone with Dräger tube. **If 50 ppm, leave exclusion zone**. Return only if levels decrease to below 50 ppm.	Ventilate area, always work upwind.

[a]Some PIDs do not work in high (e.g., greater than 90%) humidity or rainy weather. Under these atmospheric conditions, only PIDs certified for use in high humidity should be used.

APPENDIX D

INCIDENT REPORT FORM

MAUL FOSTER & ALONGI, INC. HEALTH & SAFETY INCIDENT REPORT

THIS REPORT MUST BE COMPLETED IN FULL AND SUBMITTED WITHIN 24 HOURS TO THE MFA HEALTH AND SAFETY COORDINATOR

Project Name: _____

Project Number: _____

Date of Incident: _____

Time of Incident: _____

Location: _____

Type of Incident (Check all applicable items)

- ☐ Illness
- ☐ Injury
- ☐ Property Damage
- ☐ Spill
- ☐ Health & Safety Infraction
- ☐ Fire, Explosion, Flash
- ☐ Unexpected Exposure
- ☐ Other (describe): _____
- ☐ Vehicular Accident
- ☐ Electric Shock
- ☐ Near Miss

DESCRIPTION OF INCIDENT

Describe what happened and the possible cause of the incident. If reporting a spill, include the quantity or estimated quantity. Identify individual(s) involved, witnesses, and their affiliations. Describe emergency or corrective action taken. Attach additional sheets, drawings, or photographs as needed.

INCIDENT REPORTER

PRINT NAME	SIGNATURE	DATE

Site Safety Officer must deliver this report to the Health & Safety Coordinator within 24 hours. Reviewed by:

MFA Health & Safety Coordinator PRINT NAME	MFA Health & Safety Coordinator SIGNATURE	DATE

APPENDIX E

TAILGATE SAFETY MEETING CHECKLIST

Tailgate Safety Meeting Checklist

MAUL FOSTER ALONGI

Client Name:	
Project No.:	
Communicated By:	
Date:	

Yes	NA	Information Reviewed
☐	☐	Emergency Procedures and Site Evacuation Routes
☐	☐	Route to Hospital
☐	☐	HASP Review and Location
☐	☐	Key Project Personnel
☐	☐	Emergency Phone Numbers
☐	☐	Stop-Work Authority
☐	☐	General Site Description/History and Chemical Hazards
☐	☐	For Active Sites - Site Activities and Vehicular/Equipment Traffic
☐	☐	Site-Specific Physical Hazards
☐	☐	Required Personal Protective Equipment
☐	☐	Available Safety Equipment and Location
☐	☐	Daily Scope of Work (Reference JHAs as applicable)
☐	☐	Decontamination Procedures
☐	☐	Identify Work Zones, Exclusion Zones, and Decontamination Zones
☐	☐	Hazardous Atmospheres
☐	☐	Air Monitoring Equipment and Procedures
☐	☐	Identify Potential Site-Specific Slip, Trip, and Fall Hazards
☐	☐	Dust and Vapor Control
☐	☐	Confined Space(s)
☐	☐	Open Pits and Excavation
☐	☐	Extreme Temperatures
☐	☐	Incident Reporting
☐	☐	Other: _____

Suggestions to Improve HS Practices

Attendees		
Name	Signature	Company
1)		
2)		
3)		
4)		
5)		
6)		
7)		
8)		

APPENDIX F

COVID-19 ADDENDUM

HASP/SAFE WORK PLAN SUPPLEMENT:
COVID-19 EXPOSURE CONTROL, MITIGATION, AND RECOVERY PLAN

BACKGROUND

The novel coronavirus disease 2019 (COVID-19) is a respiratory illness that can spread from person to person. The SARS-CoV-2 virus, which causes COVID-19, is thought to spread primarily between and among people who are in close contact with one another (within approximately 6 feet) through respiratory droplets produced when an infected person coughs or sneezes. There is evidence that smaller respiratory droplets that can remain suspended may increase the risk of transmission. It also may be possible to contract COVID-19 by touching a virus-impacted surface or object and then touching one's own mouth, nose, and/or eyes. People with COVID-19 have reported a wide range of symptoms—from mild symptoms to severe illness. Symptoms may appear **two to 14 days after exposure to the virus.** People with the following symptoms or combinations of these symptoms may have COVID-19:

- Fever or chills
- Cough
- Shortness of breath
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

The virus may also lead to pneumonia, multiorgan failure, and/or death.

COVID-19 POLICIES AND PROCEDURES

To help prevent the spread of COVID-19 and comply with measures issued by public health agencies and government officials, Maul Foster & Alongi, Inc. (MFA) is implementing the following policies and procedures.

For the purposes of this HASP/safe work plan supplement, we define the following terms as such:

- "Close Contact" is defined as having been within 6 feet of a person for a cumulative total of 15 minutes over a 24-hour period or being exposed to a person's cough or sneeze.

- "Fully Vaccinated" is defined as having at least two weeks after you received the second dose in a two-dose COVID-19 vaccine series or at least two weeks after you have received a single-dose COVID-19 vaccine.

General

- Employees are prohibited from working in our offices or conducting fieldwork if they:

- Are experiencing symptoms consistent with COVID-19 based on current Centers for Disease Control (CDC) guidance.
- Have returned from domestic or international travel in the last 5 days and are not fully vaccinated.[1]
- Have had close contact with someone diagnosed with COVID-19 within the past 10 days and have not received a COVID-19 vaccine series and booster.
- Have been advised by a health care provider to self-quarantine, and the self-quarantine has not yet been completed.

Employees and visitors (i.e., deliveries including sample bottles and lab pickups) to MFA offices will be subject to these polices.

Work Practices Beyond Offices or Home

- Carpooling is allowed for individuals that are comfortable with carpooling. Carpooling recommendations:
  - Maximum of 2 people.
  - Each person drives their own vehicle to a location with safe parking as close as possible to the carpooling site.
  - Weather-dependent, the car windows remain open while they travel in the same vehicle.
  - Personnel wash/sanitize hands before and after riding in the vehicle together.
  - Personnel sit opposite in the car (e.g., driver's seat and rear right side).
  - If a driver or passenger requests the other occupants to wear a face covering or N95, all vehicle occupants will.
- Individuals must comply with CDC's domestic travel guidance[2]. As of February 25, 2022, individuals that are not fully vaccinated will need to quarantine for five days post-travel and get a viral test 3-5 days after travel.
- Only single-occupancy rooms are allowed for work-related hotels/lodging. Upon arrival at their hotel rooms, as a voluntary good practice, employees should disinfect surfaces they will contact in their rooms with disposable disinfectant wipes. Keep the number of people coming in and out of the room to a minimum.
- If you are concerned about COVID-19 protocols at an off-site location, contact the HSC for a consultation. Employees should default to the most stringent protocols when off-site and MFA protocols conflict.

[1] See CDC guidance for testing following domestic travel for not fully vaccinated individuals and testing following international travel for all individuals: https://www.cdc.gov/coronavirus/2019-ncov/travelers/travel-during-covid19.html

[2] https://www.cdc.gov/coronavirus/2019-ncov/travelers/travel-during-covid19.html

Hygiene and Sanitation

- **Wash your hands frequently.** Use soap and water for at least 20 seconds, getting the whole hand—including the back of the hand, between your fingers, and under your nails. Alcohol-based hand sanitizers with more than 60 percent ethanol or 70 percent isopropanol can also be used, but they do not replace the water requirement.
  - If handwashing facilities are not readily available on or near the site, then project managers will arrange for a portable handwashing station.
  - Portable handwashing stations may be used only for washing hands, i.e., no equipment decontamination or disposal of materials. Buckets with tight-fitting lids will be provided for transport-related use. Spent handwashing water may be discharged into a sanitary drain, e.g., the MFA warehouse sink, with approval from the project manager.
- **Cover your nose and mouth with a tissue when you cough or sneeze** and then place the used tissue into a wastebasket. If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands. Remember to wash your hands after coughing or sneezing. Avoid touching your eyes, nose, and mouth with unwashed hands, and avoid touching other surfaces with unwashed hands after touching these areas of your face.
- **Routinely clean frequently touched surfaces.** Use disposable disinfectant wipes, e.g., Clorox® bleach wipes, to wipe down touched surfaces in field vehicles and the equipment warehouse before and after entry.

Personal Protective Equipment

Federal and state public health agencies support the use of cloth face coverings to slow the spread of COVID-19. The CDC provides additional information about cloth face coverings here: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/masks.html. MFA is following CDC guidance in accordance with local, state, and federal regulations and guidance regarding face coverings at offices/work sites.

Face coverings are not required when conducting outdoor work. As of March 12, 2022, masks are not required in indoor spaces as Oregon and Washington masks mandates are lifted. Employees are able to wear a mask based on personal preference. If an employee tested positive for COVID-19 or had exposure to someone with COVID-19, they should reference section 3.1 of MFA's COVID-19 Exposure Control, Mitigation, and Recovery Plan.

Symptom Monitoring

- Stay home if you have COVID-19 symptoms or other illnesses. If you start experiencing COVID-19 symptoms in the field, leave the site as soon as practicable, avoid contact with others, and notify the site safety officer (SSP)and HR.
- MFA personnel should take their temperature before their work begins each day. An employee whose temperature is 100.4°F or higher should immediately notify the site SSO or designee and should stay home. An employee whose temperature reaches 100.4°F or higher during the workday should cease work, notify the SSO or designee and HR, and return home.

- The SSO should ask each person before the start of each workday if they have reviewed and are complying with this HASP/safe work plan addendum and are fit for work (e.g., no fever or symptoms / combination of symptoms consistent with COVID-19 as described at the beginning of this document).
- If in the field, MFA personnel should report to the SSO or designee and HR if they develop a fever or symptoms/combination of symptoms consistent with COVID-19 as described at the beginning of this document. If symptoms develop during work, the person should be immediately sent home.
- Consistent with CDC guidance, MFA may not treat every employee with a single, nonspecific symptom (e.g., a headache) as a suspected case of COVID-19.[3] MFA, in consultation with the employee, will exercise discretion based on the perceived likelihood that the symptom or symptoms are due to other reasons, such as allergies.[4]

Incident Reporting, Exposure Response Procedures, Decontamination Procedures, and Recovery Plan

- MFA will immediately remove an employee from the workplace if they have received a positive COVID-19 test or have been diagnosed with COVID-19 by a licensed healthcare provider (i.e., immediately send them home or to seek medical care, as appropriate).
- Promptly notify HR if you experience symptoms consistent with COVID-19. HR will inform you of protections available to you and ask what worksites you have frequented and any individuals you may have had close contact with at those worksites.
- HR will coordinate communications with people who may have had close contact with a confirmed or probable case of COVID-19 and will discuss any follow-up actions MFA is taking in response (i.e., additional cleaning, work area closures).
- The decision to conduct COVID-19 testing should be guided by advice from state and local health departments and healthcare providers.
- Individuals who have had close contact with a symptomatic- or confirmed-COVID-19 individual will be asked to do the following based on vaccination/COVID-19 status:
  - If they have not received recommended vaccine series and booster and have not had confirmed COVID-19 with a viral test in the past 90 days; telework for 10 days after close contact.
  - If they have received recommended vaccine series and booster and are not symptomatic: wear a mask when indoors around others for 10 days after close contact and test 5 days after close contact. If close contact occurred at an office or worksite, contact HR for testing recommendations and guidance.
  - If they had confirmed COVID-19 with a viral test in the past 90 days: wear a mask when in indoors around others for 10 days after close contact.

[3] https://www.cdc.gov/coronavirus/2019-ncov/community/general-business-faq.html
[4] https://www.aaaai.org/Aaaai/media/MediaLibrary/Images/Promos/Coronavirus-Symptoms.pdf

COVID-19 Safety Training and Information

- Conduct or participate in a tailgate meeting (maintaining physical distance) at the start of the workday and at least weekly to explain the exposure-control measures.
- The SSO or designee should record the attendance, so attendees do not need to pass along a sign-in sheet.
- These procedures must be posted and available on site.

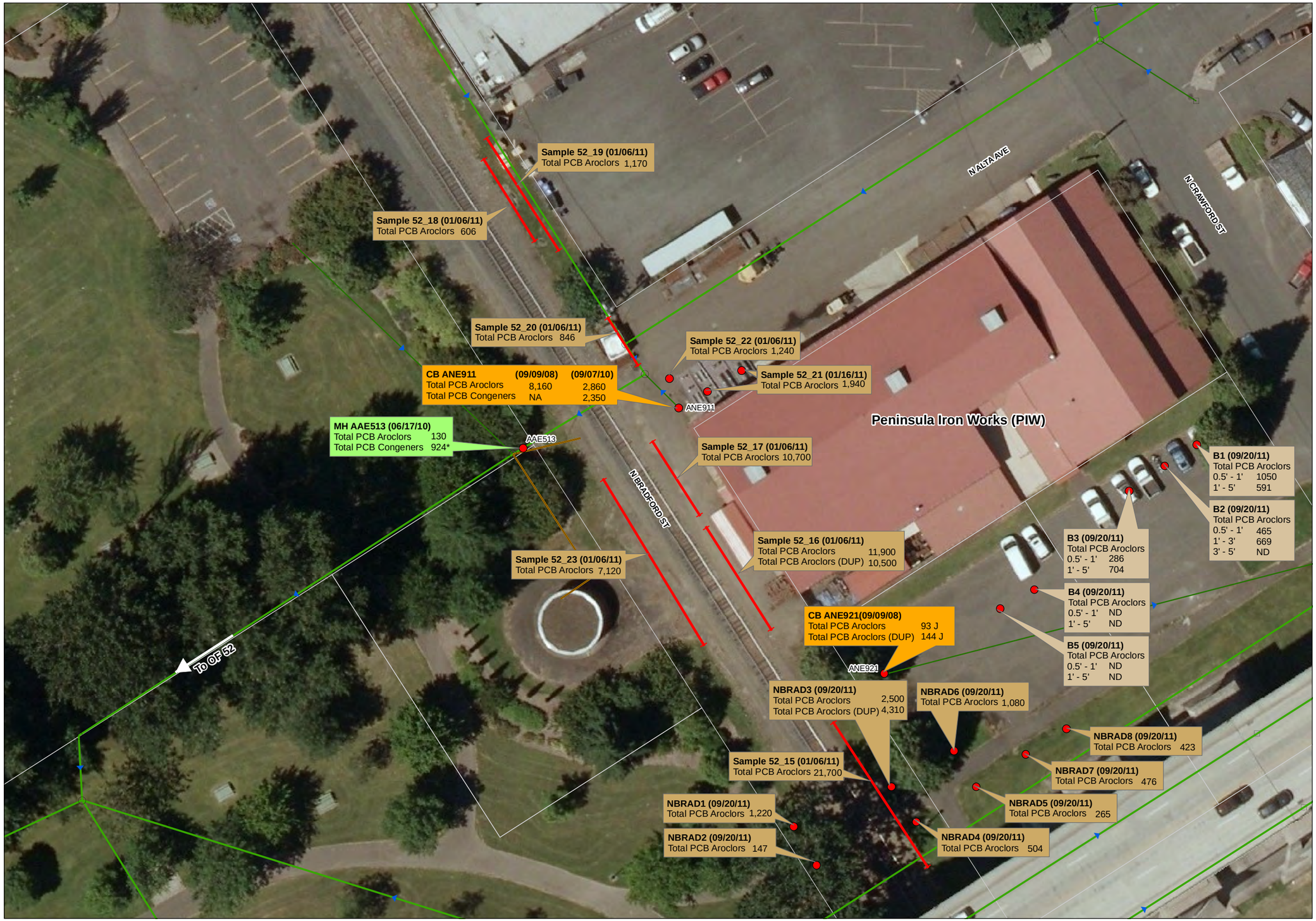
REVISION HISTORY

This document was originally issued as Revision 0. It has been revised as follows:

Date	Revision Details	Revised By:	Revision
4/9/2020	Updated addendum to include frequently asked questions section and information about cloth face coverings.	WHB	1
5/7/2020	Updated to address Washington's construction safety requirements, new COVID-19 symptoms, and information about cloth face coverings. This included the addition of information about handwashing, temperature/symptom screening, tailgate meetings, and the requirement to wear cloth face coverings.	WHB	2
5/21/2020	Removed reference to K. Lombardi and A. Clary. Updated to reference the social distancing point of contact, the health and safety coordinator (E. Curtis).	EMC	3
7/22/2020	Updated symptoms to be consistent with CDC guidance. Updated response to question #2 regarding face coverings (removed references to outdated rules). Updated symptom monitoring guidance to make it consistent with MFA's COVID plan. Clarified that out-of-office meetings should be approved by HSC. Added revision history.	WHB	4
2/22/2021	Removed requirement to coordinate with social distancing coordinator prior to conducting fieldwork. Removed requirement to coordinate with analytical laboratories prior to conducting fieldwork. Removed requirement to carry letter of essential workforce for Washington.	KJL	5
2/23/2021	Update personal protective equipment section to clarify cloth face covering requirements.	EMC	6
5/26/2021	Allowance for fully vaccinated individuals and symptom information update	JLK	7
1/7/2022	Update to be consistent with 1/6/2022 updates to COVID-19 policy.	EMC	8
3/9/2022	Update to be consistent with 3/12/2022 updates to COVID-19 policy.	EMC	9

APPENDIX B

PREVIOUS INVESTIGATIONS FIGURE



LEGEND

- Outfall Basin 52
- Sample Locations

Sample Type

- Surface Soil Sample
- Subsurface Soil Sample
- Inline Solids Sample
- Sediment Trap Sample
- Composite Sample

All Other Features

- Storm Line
- Manhole (MH)
- Catch Basin (CB)
- Tax Lot

NOTE:
NA = Not analyzed
ND = Not detected
J = Estimated
Total PCBs Aroclor and congener results in µg/Kg.
*Total PCBs concentration includes one or more estimated value(s). Because estimated values are not significant relative to the total concentration (i.e. <1%), the PCBs concentration is only slightly biased.

N

0 20 40
Feet

FIGURE 1

Total PCBs Concentrations in Vicinity of Peninsula Iron Works

Disclaimer:
Information contained on this map is accurate according to available records, however the City of Portland makes no warranty, expressed or implied, as to the completeness or accuracy of the information published.

Prepared By:
GSI, October 28, 2011
005_SC\RI\OF_Basin_52

Source:
City of Portland BES, Aerial Photo 2010

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APPENDIX C

ISM LABORATORY SITE-SPECIFIC SAMPLING AND ANALYSIS PLAN

Apex Laboratories LLC Site Specific RSM SAP for MFA Cathedral Park DU Sampling.

It is understood that due to differences between sites and project objectives a site specific RSM SAP should be developed for each project where representative sampling methodology is being used.

For the 2022 sampling at the Cathedral Park Project Site, the contaminants of concern for multiple decision units (DUs) is polychlorinated biphenyls (PCBs). Surface and near surface sample mean concentration is of concern at the site. One DU will be collected as three specific replicate DU samples at a depth 0-2 inches. Mass of each increment will depend on diameter of coring device but estimated for SAP at 40-60 grams per increment. The samples were collected in one-gallon jar composed of 50 field increments. Target processing mass is 2-3 kg

Apex Labs Sample control will provide Apex RSM group with (1) 16 oz jar to place processed sample for the testing of PCBs.

Apex Laboratories Sample Processing Outline
Samples for PCBs by EPA Method 8082

When processing the samples from the Cathedral Park DUs, Apex Laboratories, LLC will use the entire sample volume from each one-gallon jar. The ISM sample for each DU will be processed following the procedures of using Apex Laboratories SOP G-105 RSM. This SOP is consistent with the ITRC ISM Update October 2020. The process for this project is summarized below:

- The DU sample composite including any interstitial water will be air-dried at room temperature inside a low humidity-controlled room that is kept dark and supplied with filtered air. The samples will be dried on baking sheets covered with Teflon sheeting to protect the sample from both metals and phthalate contamination.
- Wet soil will be worked and turned following Apex SOP G-105 RSM during drying to prevent sediments from hardening into “bricks.’’ This processing will also decrease the sample drying time. To speed drying soil should be turned regularly during business hours.
- Below is an example of typical soil sample after drying.

- If trash or unique non-soil material is observed in sample, photographs will be taken for archival.
- Once air dried, all of the DU sample from the pans will disaggregated with a stainless-steel flail mill, reducing agglomerations of caked soil to individual grains while preserving true grain size. All particles will be run through #10 sieve (<2 mm dia). Under ITRC guidelines, soil is defined as particles < 2mm. All soil particles will be loaded into hopper of rotary sectorial splitter for representative mass reduction.
- Approximately 200-250 grams split will be of soil <2mm dia. particles of soil will be ground using a cool grinding technique until soil is a fine powder (60 to 70-micron diameter). Since no metals will be testing in soil milling can be accomplished in zirconia, tungsten or stainless-steel puck mills.
- Entire ground sample is placed in 16 oz jar and placed in Paul Schatz Inversina powder mixer and thoroughly re-mixed. Due to the small uniform size of particles, sampling and segregation errors are significantly reduced while maintaining standard sample masses for the PCB method proposed.
- The blank matrix is borosilicate 2 mm glass beads that are processed with samples from time of drying through grinding.
- Laboratory processing blanks will be placed on hold with exception of metals.
- The remaining ground sample will be returned to an RSM container for archiving.
- Unprocessed bulk sample remaining will be stored at ambient temperature in RSM lab until disposal.
- Sufficient sample volume will be representatively subsampled by the laboratory to create laboratory QA/QC samples.

Site-Specific Quality Control (QC)

For each batch of 20 RSM soil samples, Apex shall perform standard method and laboratory batch QC and the following site-specific QC:

Source Specific QC Cathedral Park sample will be selected at random from samples submitted.

For PCBs : Batch QC Select site sample will include DUP1, DUP2 and MS

APPENDIX D

STANDARD OPERATING PROCEDURES

STANDARD OPERATING PROCEDURE

Decontamination of Field Equipment

SOP Number: 1
Date: 3/9/2021
Revision Number: 0.1

SCOPE AND APPLICATION

This standard operating procedure (SOP) describes the decontamination procedure for field equipment that may come in contact with contaminated media and that Maul Foster & Alongi, Inc. (MFA) staff may reuse at multiple sample locations or sites. Decontamination is performed to reduce the potential for cross-contamination of samples that will be collected with multiuse equipment and that will undergo physical or chemical analyses. Other equipment that is multiuse—not used specifically for sample collection (e.g., water level meter, pump used for well development)—also requires decontamination. Finally, decontamination is necessary to minimize the potential for MFA staff's exposure to chemicals.

Typically, decontamination is not necessary for field equipment that is disposable and intended to be used only once (e.g., disposable bailer). Additionally, this SOP does not apply to equipment used by subcontractors, such as drilling equipment. However, MFA staff should confirm that subcontractors are implementing appropriate decontamination procedures to minimize the potential for cross-contamination of samples or MFA staff's exposure to chemicals.

EQUIPMENT AND MATERIALS REQUIRED

The following materials are necessary for this procedure:

- Nonphosphate detergent solution (e.g., Alconox, Liquinox)
- Distilled and potable water
- Personal protective equipment (as specified in the site-specific health and safety plan)
- Buckets to contain rinsate, brushes, paper towels

Depending on the site conditions and the types of contaminants that may be present, the use of other decontamination materials, such as deionized water, methanol, hexane, or isopropyl alcohol, may be necessary. The need for other materials should be determined prior to fieldwork. The decontamination procedures using other materials should be described in a site-specific sampling and analysis plan (SAP).

METHODOLOGY

When the site-specific SAP specifies additional or different requirements for decontamination, it takes precedence over this SOP. In the absence of a SAP, the following procedures shall be used.

General Sampling Procedure:

1. Rinse the equipment with potable water to remove visible soil, petroleum sheen, or contamination.
2. Scrub the equipment with a brush and solution of distilled water and nonphosphate detergent.
3. Rinse the equipment with distilled water.
4. Allow equipment to air dry, or dry it with paper towels.
5. At all times, ensure that the decontaminated equipment is stored so as to prevent it from becoming contaminated while not in use. Depending on the size of the equipment, it can be wrapped with new aluminum foil or placed in a new plastic bag.

Rinsate Storage:

All fluids resulting from equipment decontamination shall initially be contained in a bucket and then transferred to a Department of Transportation-approved container (e.g., 55-gallon drum) stored on site at a location that

does not interfere with on-site activities (e.g., vehicle traffic, pedestrian areas). Place a label on each container and include the following information:

- The date on which fluids were placed in the container
- Contents (e.g., "water from equipment decontamination")
- Contact information, including MFA staff or client phone number

Note that labels on containers exposed to sunlight or precipitation are prone to fading. Use a waterproof, indelible ink pen (e.g., Sharpie®) whenever possible. In the field notebook, keep a detailed inventory of all containers, including the number of containers, the approximate quantity of liquids generated, and a description of the source of the fluids. Provide this information to the MFA project manager. For future reference, take photographs of (1) each drum label, (2) the drum(s), and (3) the drum storage vicinity on site.

Note that some clients and site owners have specific requirements for labeling and storage of containers. The requirements should be determined in advance of the fieldwork.