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# SITE MANAGEMENT PLAN

**2455 Third Avenue  
Bronx County, Bronx, New York**

**NYSDEC Site Number: C203125**

*Prepared for:*

**E 135 and 3rd Ave Owner LLC  
316 West 118<sup>th</sup> Street  
New York, New York 10026**

*Prepared by:*

**Langan Engineering, Environmental, Surveying,  
Landscape Architecture and Geology, D.P.C.  
300 Kimball Drive  
Parsippany, New Jersey 07054**

## Revisions to Final Approved Site Management Plan:

<b>Revision No.</b>	<b>Date Submitted</b>	<b>Summary of Revision</b>	<b>NYSDEC Approval Date</b>

**DECEMBER 2022**

**190051701**

**LANGAN**

### CERTIFICATION STATEMENT

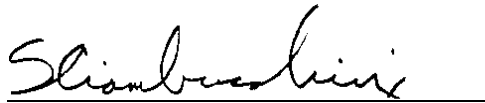
I, Satyajit Vaidya, certify that I am currently a Professional Engineer as defined in 6 NYCRR Part 375 and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



*Satyajit Vaidya*  
Satyajit Vaidya, P.E.  
NYS P.E. # 089797

9 December 2022  
DATE

I, Steve Ciambuschini, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



Steven Ciambuschini, P.G., NYS QEP

9 December 2022  
DATE

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**List of Acronyms**

AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Greenhouse Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
P.E. or PE	Professional Engineer
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report

QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

**ES EXECUTIVE SUMMARY**

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

Site Identification: 2455 Third Avenue – Site No. C203125

Institutional Controls (Site-Wide):	1. The property may be used for restricted-residential restricted use, commercial use, or industrial use;
	2. Require the remedial party or Site owner to complete and submit to the NYSDEC a periodic certification of IC/ECs in accordance with Part 375-1.9(h)(3);
	3. Allow for the use and development of the controlled property for restricted-residential restricted use as defined in Part 375-1.8(g), although land use is subject to local zoning laws;
	4. Prohibits vegetable gardening and farming on the controlled property;
	5. Restrict the use of groundwater as a source of potable or process water, without the necessary water quality treatment as determined by the NYSDOH and/or the New York City Department of Health and Mental Hygiene (NYCDOHMH);

Site Identification: 2455 Third Avenue – Site No. C203125

	<p>6. Require compliance with the NYSDEC-approved SMP, including the following:</p> <ul style="list-style-type: none"> <li>○ All ECs must be inspected at a frequency and in a manner defined in the SMP;</li> <li>○ Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;</li> <li>○ All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;</li> <li>○ Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;</li> <li>○ Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;</li> <li>○ Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement; and,</li> <li>○ An evaluation shall be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.</li> </ul>
<p>Engineering Controls:</p>	<p>1. Composite Cover system (Track 4 cleanup area only)</p>

Site Identification: 2455 Third Avenue – Site No. C203125

Inspections:	Frequency
1. Cover inspection (Track 4 cleanup area only)	Annually
Maintenance:	
1. Composite Cover System (Track 4 cleanup area only)	As needed
Reporting:	
1. Periodic Review Report	Annually

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

## **1.0 INTRODUCTION**

### **1.1 General**

This Site Management Plan (SMP) is a required element of the remedial program for the 2455 Third Avenue Site located in Bronx, New York (hereinafter referred to as the “Site”). See Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C203125, which is administered by New York State Department of Environmental Conservation (NYSDEC or Department).

The Participant, E 135 and 3rd Ave Owner LLC, entered into a Brownfield Cleanup Agreement (BCA) on 18 February 2020 with the NYSDEC to remediate the site. A figure showing the Site location and boundaries of this Site is provided in Figure 2. The boundaries of the Site are more fully described in the metes and bounds Site description that is part of the Environmental Easement provided in Appendix A. The BCA was amended on July 8, 2020 to reflect a subdivision of the Site (Amendment #1) and on November 19, 2021 (Amendment #2) to reflect a change in ownership of the Site.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as “remaining contamination”. Institutional and Engineering Controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Bronx County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor’s successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC);

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the BCA (Index No. C203125-01-20; Site No. C203125) for the site, and thereby subject to applicable penalties.

All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the Site is provided in Appendix B of this SMP.

This SMP was prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan), on behalf of E 135 and 3rd Ave Owner LLC, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated 3 May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

## **1.2 Revisions**

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. The NYSDEC can also make changes to the SMP or request revisions from the remedial party. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the Site conditions. In accordance with the Environmental Easement for the site, the NYSDEC project manager will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

## **1.3 Notifications**

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER-10 for the following reasons:

1. 60-day advance notice of any proposed changes in Site use that are required under the terms of the BCA, 6 NYCRR Part 375 and/or Environmental Conservation Law.
2. 7-day advance notice of any field activity associated with the remedial program.



3. 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan. If the ground-intrusive activity qualifies as a change of use as defined in 6 NYCRR Part 375, the above mentioned 60-day advance notice is also required.
4. Notice within 48 hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
5. Notice within 48 hours of any non-routine maintenance activities.
6. Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
7. Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

8. At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Brownfield Cleanup Agreement (BCA), and all approved work plans and reports, including this SMP.
9. Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

The table below includes contact information for the above notifications. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

**NYSDEC Notification Contact Information\***

<b>Name</b>	<b>Contact Information</b>	<b>Required Notification**</b>
Hasan Ahmed NYSDEC Project Manager	Telephone: (718) 482-6405 Email: hasan.ahmed@dec.ny.gov	All Notifications
Cris-Sandra Maycock NYSDEC Section Chief	Telephone: 718-482-4679 Email: cris-sandra.maycock@dec.ny.gov	All Notifications
Kelly Lewandowski NYSDEC Site Control	Telephone: (518) 402-0193 E-mail: kelly.lewandowski@dec.ny.gov	Notifications 1 and 8
Steven Berninger NYSDOH Project Manager	Telephone: (518) 402-0443 Email: beei@health.ny.gov	Notifications 4, 6, and 7

\* Note: Notifications are subject to change and will be updated as necessary.

\*\* Note: Numbers in this column reference the numbered bullets in the notification list in this section.

## **2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS**

### **2.1 Site Location and Description**

The Site is located in the Mott Haven neighborhood, Bronx County, New York and is identified as Block 2319 and Lots 38 and 39 on the Bronx Borough Tax Map. The Site encompasses an area of approximately 0.45-acres and is bounded by 135th Street/The Major Deegan Expressway followed by a hotel to the northeast, Third Avenue/Third Avenue Bridge ramp followed by mixed-use commercial and residential buildings to the southeast, a mixed-use commercial/office building followed by commercial and light industrial buildings to the southwest, and a concrete-paved lot used for storage and an active construction Site followed by a self-storage facility to the northwest. The boundaries of the Site are more fully described in Appendix A –Environmental Easement. A Site Location Map and Site Plan are included as Figures 1 and 2, respectively.

The owner of the Site at the time of issuance of this SMP is:

E 135 and 3rd Ave Owner LLC  
 316 West 118th Street  
 New York, New York

**2.2 Physical Setting**

**2.2.1 Land Use**

After remediation and upon completion of construction, the new development will consist of two 23-story buildings. The west building will contain parking space, lobby, and utility rooms on the ground floor; parking space and utility rooms on the second floor; utility space on the third floor; residential apartments and amenity space on the fourth floor; apartments on the fifth through twenty-third floors, and a boiler room and mechanical room on the roof. The east building will contain a partial cellar for storage; a lobby, commercial space, community facility, and utility space on the first floor, parking and utility space on the second floor, utility space on the third floor; and residential apartments on the fourth through twenty-third floors. The proposed end-use of the development is consistent with existing zoning regulations.

The following is a summary of the adjoining and surrounding properties:

Direction	Adjacent Properties		
	Block No.	Lot No.	Description
Northeast	N/A	N/A	East 135th Street and the Major Deegan Expressway
Northwest	2319	160	25-story mixed-use residential/commercial building
	2319	155	Concrete-paved lot used for storage
Southeast	N/A	N/A	Third Avenue and Third Avenue Bridge
Southwest	2319	37	Five-story mixed-use commercial/office building

### **2.2.2 Geology**

According to the 25 February 2014 Survey prepared by Apple Surveying, the Site ground surface elevation ranges from about elevation (el) 8 to 9, relative to the North American Vertical Datum of 1988 (NAVD88). According to the United States Geological Survey (USGS) Central Park Quadrangle 7.5-minute Series Topographic Map, the surrounding area slopes gradually to the south towards the Harlem River.

Based on the findings of the Remedial Investigation (RI) work completed by Langan, the Site, prior to remediation, was underlain by historic fill material predominantly consisting of fine sand with varying amounts of silt, gravel, tile, metal, concrete, brick, glass, wood, and slag beneath the surface cover to depths ranging from about 1.5 to 8 feet below ground surface (bgs). Native soil encountered below historic fill predominantly consists of an up to 14.5-foot thick layer of fine-grained sands with varying amounts of silt, clay, and gravel. A clay/peat layer with varying amounts of organic material (between 8 and 14 feet bgs) was observed in borings on the northern part of the Site (SB14 and SB17) followed by sand.

A geologic cross section is shown in Figure 3. Site specific boring logs are provided in Appendix C.

### **2.2.3 Hydrogeology**

Synoptic groundwater measurements were collected on 5 March 2020. Groundwater elevations ranged from el 0.51 to 0.60, which correspond to depths of 8.10 to 8.05 feet bgs, respectively. Based on the groundwater elevations recorded during the 2020 RI, groundwater flows to the west.

A groundwater contour map is shown in Figure 4. Groundwater monitoring well construction logs are provided in Appendix C.

## **2.3 Investigation and Remedial History**

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0 - References.

### **2.3.1 Previous Environmental Reports**

The following environmental assessment and investigation reports have been prepared for the Site:

- Phase I Environmental Site Assessment (ESA), dated June 2019 prepared for 225 East Realty Partners LLC by Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan);
- Limited Phase II Environmental Site Investigation, dated June 2019 prepared for 225 East Realty Partners LLC by Langan;
- Remedial Investigation Work Plan, dated March 2020, prepared for E 135 and 3rd Ave Owner LLC by Langan;
- Remedial Investigation Report, dated May 2020, prepared for E 135 and 3rd Ave Owner LLC by Langan;
- Remedial Action Work Plan, dated July 2020, prepared for E 135 and 3rd Ave Owner LLC by Langan;
- Environmental Soil Pre-Characterization Results Letter, dated September 2021, prepared for E 135 and 3rd Ave Owner LLC by Langan; and,
- Pre-Excavation Documentation Endpoint Sampling Analytical Results, dated October 2021, prepared for E 135 and 3rd Ave Owner LLC by Langan.

Summaries of environmental findings of these reports are provided below:

#### *Phase I Environmental Site Assessment (ESA)*

The Phase I ESA assessed Block 2319, Lot 155 and Lots 38 and 39 (formerly part of Lot 37). The following RECs were identified for the site:

- REC 1– Historical Site Operations: The Site was operated as a rail yard (1935 - 1951). Activities associated with treated rail ties from the rail yard and petroleum releases may have resulted in releases of polychlorinated biphenyls (PCBs), metals, or hazardous materials that impacted the soil, soil vapor and/or groundwater at the site. The Phase I ESA identified that treated rail ties may still exist at the Site and may need to be disposed of during future construction.

- REC 2 – Current and Historical Operations of Surrounding Properties: The adjoining cross-gradient property (Lot 155) to the west was historically used as an iron works foundry (1891). The adjoining up-gradient properties to the northeast were historically used as a filling station (1946 – 2003) and a drainpipe and fireproof material manufacturing facility. The adjoining cross-gradient property to the southeast was an auto repair shop (2000 – 2014), and an adjacent property, located about 150 feet to the southwest, has also operated as an auto repair shop (2000 – present). The Phase I ESA noted that migration of contaminants from these adjoining and surrounding properties had the potential to impact the soil vapor and groundwater at the site.

### Phase II Environmental Site Investigation (ESI) Report

Langan conducted a Limited Phase II ESI in April 2019 to evaluate possible impacts to soil, groundwater, and soil vapor because of historic use of the site. The ESI, conducted on Block 2319, Lot 155 and Lots 28 and 39 (formerly part of Lot 37), included a geophysical survey; advancement of 12 soil borings, installation of three temporary groundwater monitoring wells, and three soil vapor points; and soil, groundwater, and soil vapor sampling. Nine soil borings, two groundwater monitoring wells, and two soil vapor points were installed on the Site (part of Lot 37).

The geophysical survey did not identify any anomalies indicative of Underground Storage Tanks (USTs). A water retention tank was detected next to the northern corner of the one-story warehouse on site.

The stratigraphy of the Site consisted of historic fill material overlain by a surface cover of concrete up to 9 inches thick. Historic fill material predominantly consisted of brown, fine-grained sand with varying amounts of silt, gravel, tile, metal, concrete, brick, glass, wood, and slag which extended from beneath the surface cover to depths ranging from about 6.5 to 9.5 feet bgs. Historic fill was generally underlain by a 6.5 to 9.5 foot thick layer of brown, fine-grained sands with varying amounts of silt and organic material. A clay/peat layer with varying amounts of organic material (between 8.5 and 11 feet bgs) was observed in borings on the western part of the Site and was underlain by sand. Groundwater was observed at depths ranging from about 5.25 feet bgs in the western part of the Site to 8.25 feet bgs in the center of the site. Groundwater was inferred to flow west towards the Harlem River and may be tidally influenced.

Petroleum impacts, evidenced by photoionization detector (PID) readings above backgrounds, were observed in one boring (SB05) at depths ranging from surface grade to 2 feet bgs. A maximum PID reading of 10.2 parts per million (ppm) was detected in SB05 at 1 foot bgs.

Semi-volatile organic (SVOCs) compounds including benzo(b)fluoranthene, dibenzofuran, naphthalene, benzo(a)anthracene, benzo(a)pyrene, chrysene, dibenzo[a,h]anthracene, and indeno(1,2,3-cd)pyrene were detected at concentrations above the Unrestricted Use Soil Cleanup Objectives (SCOs) and/or the Restricted Residential Restricted Use SCOs (RUSCOs). Metals including copper, silver, zinc, barium, lead, and mercury were detected at concentrations exceeding the Unrestricted Use Soil Cleanup Objectives (SCOs) and/or Restricted Residential RUSCOs.

The metals trivalent chromium, mercury, copper, lead, and zinc were detected at concentrations exceeding the NYSDEC Unrestricted Use Soil Cleanup Objectives (SCOs) in all six soil borings at depths of up to 20 feet below grade.

Groundwater samples revealed concentrations of the SVOC naphthalene and total and dissolved metals iron, manganese, and sodium above the Standards and Guidance Values (SGVs) for Class GA water.

Soil vapor samples revealed concentrations of benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX) at concentrations between 76.3 and 2,063.94 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and tetrachloroethene (PCE) at a concentrations of 5.47 to 5.57  $\mu\text{g}/\text{m}^3$ , and carbon tetrachloride at a concentration of 0.44  $\mu\text{g}/\text{m}^3$ .

#### Remedial Investigation Work Plan (RIWP)

A RIWP dated March 2020 was prepared to investigate and characterize “the nature and extent of the contamination at and/or emanating from the brownfield site,” per ECL Article 27, Title 14 (Brownfield Cleanup Program) and to supplement the investigation activities and results documented in the June 2019 Phase II ESI Report.

The scope of work for the RI presented in the RIWP consisted of:

- A geophysical survey to locate any unidentified underground storage tanks (USTs) and underground structures and identify utilities in the vicinity of proposed sampling locations;

- Advancement of ten soil borings and collection of 28 soil samples (plus quality assurance/quality control [QA/QC] samples);
- Installation of four permanent monitoring wells and collection of four groundwater samples (plus QA/QC samples);
- Survey and gauging of monitoring wells to evaluate groundwater elevation and flow direction;
- Installation of three sub-slab soil vapor sampling points and collection of one co-located sub-slab soil vapor and indoor air sample within the former building (plus QA/QC samples).

The RIWP was approved by NYSDEC in a letter dated 20 July 2020.

#### Remedial Investigation Report

A Remedial Investigation Report dated May 2020 was prepared by Langan to document the Remedial Investigation completed at the Site in 2020. The results of the 2020 RI identified that the Site is underlain by a layer of historic fill consisting predominantly of a fine-grained sand with varying amounts of silt, gravel, tile, metal, concrete, brick, glass, wood, and slag to depths ranging from about 1.5 to 9.5 feet bgs. Native soil encountered below historic fill predominantly consists of fine-grained sands with varying amounts of silt, clay, and gravel. A clay/peat layer was encountered between 8 and 14 feet bgs in borings on the western part of the Site (and was underlain by sand).

Contaminants related to historic fill material include the VOC acetone, SVOCs, polychlorinated biphenyls (PCBs), metals, and pesticides, which were detected in soil at concentrations above Unrestricted Use SCOs, Restricted Residential RUSCOs, and/or Protection of Groundwater SCOs within the historic fill layer to depths of up to 8 feet bgs. The SVOC p-cresol and metals lead, trivalent chromium, hexavalent chromium, and zinc were detected above the Unrestricted Use SCOs and Restricted Residential RUSCOs in samples from the underlying soil.

Naphthalene was detected at concentrations above the SGV in a groundwater sample collected from monitoring well TMW05. Iron, manganese, and sodium were detected in dissolved and total groundwater samples above SGVs and are characteristic of naturally-occurring groundwater conditions and are not indicative of a release. Total per- and polyfluoroalkyl substances (PFAS) compounds were detected in soil and groundwater samples. PFOA and/or PFOS were detected above 10 ng/L in MW13, MW14, MW15,



and MW16. PFOA was detected at 100 ng/L in monitoring well MW16. Total PFAS were not detected above 500 ng/L. 1,4-dioxane was not detected in any groundwater samples. PFAS detections in groundwater are likely associated with an off-Site source because historical use of the Site was not associated with PFAS.

Soil vapor samples contained VOCs, including 1,1,1-trichloroethane (1,1,1-TCA), methylene chloride, and PCE. These concentrations did not exceed their respective NYSDOH minimum mitigation threshold criteria. Petroleum-related VOCs, including BTEX, were detected in sub-slab soil vapor and soil vapor samples at concentrations generally above VOC concentrations detected in indoor air and ambient air samples in each sample location, with the exception of methylene chloride, which was detected at a higher concentrations in two samples compared to the co-located samples soil vapor samples.

#### Remedial Action Work Plan

A Remedial Action Work Plan dated July 2020 was prepared by Langan on behalf of E 135 and 3rd Ave Owner LLC to summarize the nature and extent of contamination as determined from data gathered during the Phase II ESI and RI and to select a remedy that is consistent with the procedures defined in DER-10 and complies with applicable standards, criteria, and guidance, as well as with applicable federal, state and local laws, regulations and requirements. A Track 4 Restricted Residential Restricted Use Remedy was selected for the remediation of the Site and included the following tasks:

1. Abatement and demolition of on-Site structures and surface cover to allow for invasive Site remediation pursuant to the NYSDEC-approved RAWP.
2. Development and implementation of a CHASP and CAMP for the protection of on-Site workers, community/residents, and the environment during remediation and construction activities.
3. Excavation, stockpiling, off-Site transport, and disposal of soil exceeding Restricted Residential RUSCOs to achieve a Track 4 remedy. Additional soil sampling analytical results and post-excavation soil sample analytical results revealed that a combined Track 2/4 Restricted Residential Restricted Use remedy was achieved.
4. Collection and analysis of documentation soil samples in accordance with DER-10 to document post-excavation conditions in relation to the Restricted Residential Restricted RUSCOs.

5. Import of materials for backfill in compliance with the Restricted Residential RUSCOs and PGW SCO, Title 6 of the New York Codes, Rules and Regulations (6 NYCRR) Part 360 regulations; and federal, state, and local rules and regulations for handling and transport of material.
6. Construction of a cover system consisting of concrete foundation slab as an Engineering Control in portions of the Site where a Track 4 cleanup was achieved.
7. Establishment of use restrictions (i.e., institutional controls [IC]) including restricting Site use to restricted-residential use or lower, prohibitions on the use of Site groundwater, and prohibitions on sensitive Site uses, such as farming or vegetable gardening in residual Site soil.
8. Establishment of an approved Site Management Plan (SMP) for the long-term management of EC and ICs, including the performance of periodic inspections and certification that the controls are performing as intended.
9. Recording of an Environmental Easement (EE) to provide for the maintenance of ECs and ICs as required.

The Remedial Action Work Plan was approved by NYSDEC in a letter dated 23 July 2020.

*Environmental Soil Pre-Characterization Results Letter, prepared by Langan*

Langan conducted environmental soil pre-characterization sampling in July 2021 at the Site in order to assess soil disposal options for the future development. Langan collected a total of 10 composite soil samples (WC 1A/B, WC-2 through WC-6, and HS-1 through HS-3) from 24 soil borings (LSB-1 through 10, LSB-12, LSB-13, and LSB-15 through LSB-26) in order to characterize the anticipated excavation depths at the Site.

Each composite sample was obtained by compositing at least five discrete soil samples collected from the appropriate depth interval from within up to five test borings. Hotspot characterization samples HS-1 through HS-3 were obtained by compositing at least five discrete soil samples from within each test boring. Characterization samples WC-1A, WC-2, WC-4, and WC-6 were composited from 0 to 5 feet to characterize the shallow material that would be. WC-1B and WC 3 were sampled from 5 to 10 feet and WC-5 was sampled from 5 to 16 feet to characterized isolated deeper excavations. Hotspot characterization samples were collected from 0 to 8 feet (HS-1 and HS-2) and from 0 to 3 feet (HS-3) to characterize material that would be excavated to achieve hotspot remediation. Soil samples were analyzed for VOCs, SVOCs, pesticides, herbicides,

metals including cyanide and hexavalent chromium, PCBs, extractable petroleum hydrocarbons (EPH) spiked for fractionation, full toxicity characteristic leaching procedure (TCLP) analyses, and Resource Conservation and Recovery Act (RCRA) hazardous characteristics.

Analytical results were compared to the New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objectives (SCOs), the lower of NYSDEC Residential Restricted-Residential SCOs and Protection of Groundwater SCOs, NYSDEC Restricted Residential Restricted Use SCOs, New Jersey Department of Environmental Protection (NJDEP) Residential Ingestion/Dermal and Inhalation Exposure Pathway (RIDIEP) Soil Remediation Standards (SRS), NJDEP Non-Residential Ingestion/Dermal and Inhalation Exposure Pathway (NRIDIEP) SRS, NJDEP Impact to Groundwater Soil Remediation Standards (IGWSRS), Pennsylvania Department of Environmental Protection (PADEP) Clean Fill Criteria, PADEP Regulated Fill Criteria, and the United States Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act (RCRA) Characteristics of Hazardous Waste. Elevated concentrations of SVOCs, pesticides, and metals were detected above the Unrestricted Use SCOs in the northern and western portions of the Site footprint. Lead was detected at a concentration of 15.5 mg/L by the TCLP analysis in WC-4; however, the TCLP lead result in the associated duplicate sample was reported at 0.649 mg/L.

*Pre-Excavation Documentation Endpoint Sampling Analytical Results*

Langan collected additional soil samples between 30 August through 2 September 2021 to supplement the data collected during the Phase II ESI and RI to delineate the vertical extents of the naphthalene hotspots HS-1 and HS-2 and to determine if a Track 2 Restricted Residential Restricted Use cleanup could be achieved at the Site. Twenty-seven soil borings were advanced to a maximum depth of 17 feet bgs by AARCO Environmental Services, Corp. (AARCO) of Lindenhurst, New York using a direct-push Geoprobe® 7822DT.

Soil was recovered continuously from the surface to the completion depth of each boring. Samples were collected into 5-foot-long acetate liners using a 2-inch-diameter Macro-Core® sampler. The soil was screened for visual, olfactory, and instrumental evidence of a chemical or petroleum release, and visually classified for soil type, grain size, texture, and moisture content. Instrument screening for the presence of organic vapors was performed using a PID equipped with a 10.6 electron volt (eV) lamp. Following sample collection, borings were backfilled with soil cuttings that did not display evidence of environmental impacts and patched with concrete.

Figures summarizing the analytical results of this sampling event were submitted to NYSDEC on 27 October 2021.

## **2.4 Remedial Action Objectives**

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated July 2020 are as follows:

### **Groundwater**

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.

### **Soil**

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

### **Soil Vapor**

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

## 2.5 Remaining Contamination

### 2.5.1 Soil

A combined Track 2/4 Restricted Residential Restricted Use remedy was achieved for the Site. The Unrestricted Use SCOs and Restricted Residential RUSCOs are provided in Tables 1 and 2, respectively. Based on the results of the pre-excavation and post-excavation endpoint documentation soil sampling, Track 2 Restricted Residential RUSCOs were achieved at 12 of the 23 endpoint documentation sampling locations across 8,927 square feet (corresponding to approximately 45.5% of the Site footprint) located primarily in the northern and south-central portions of the Site. Analytical results for samples collected from this area revealed no exceedances of the NYSDEC Unrestricted Use SCOs and Restricted Residential RUSCOs for VOCs, SVOCs, herbicides, or PCBs. The following exceedances of the SCOs were detected:

#### Pesticides above the Unrestricted Use SCOs

- 4,4'-DDD (0.011 mg/kg)
- 4,4'-DDE (0.0042 mg/kg – 0.0053 mg/kg)
- 4,4'-DDT (0.0052 mg/kg – 0.0088 mg/kg)

#### Metals above the Unrestricted Use SCOs

- lead (116 mg/kg – 142 mg/kg)
- mercury (0.39 mg/kg)
- zinc (112 mg/kg – 525 mg/kg)

The PFAS compound perfluorooctanesulfonic acid (PFOS) (0.9 ppb – 1.64 ppb) was also detected at concentrations exceeding the June 2021 guidance values for Unrestricted Use and Protection of Groundwater.

Elevated concentrations of VOCs, SVOCs, pesticides, and metals are present at concentrations exceeding the Unrestricted Use SCOs and/or Restricted Residential RUSCOs between 4 and 16 feet bgs throughout the 10,706 square feet, or 54.5% of the Site footprint, across which a Track 4 cleanup was achieved. Analytical results for samples collected from this area revealed no exceedances of the NYSDEC Unrestricted Use SCOs and Restricted Residential RUSCOs for herbicides or PCBs. The following exceedances of the SCOs were detected:

VOCs above the Unrestricted Use SCOs

- acetone (0.061 mg/kg – 0.25 mg/kg)
- benzene (0.08 mg/kg)
- methyl ethyl ketone (0.29 mg/kg)
- total xylenes (0.75 mg/kg)

SVOCs above the Unrestricted Use SCOs

- 3&4-methylphenol (0.56 mg/kg – 3.1 mg/kg)

SVOCs above the Unrestricted Use SCOs and the Restricted Residential RUSCOs

- benzo(a)anthracene (1.3 mg/kg – 13 mg/kg)
- benzo(a)pyrene (1.2 mg/kg – 11 mg/kg)
- benzo(b)fluoranthene (1.2 mg/kg – 15 mg/kg)
- benzo(k)fluoranthene (0.83 mg/kg – 4.7 mg/kg)
- chrysene (1.1 mg/kg – 12 mg/kg)
- dibenzo(a,h)anthracene (0.35 mg/kg – 1.6 mg/kg)
- indeno(1,2,3-cd)pyrene (0.57 mg/kg – 5.5 mg/kg)

Pesticides above the Unrestricted Use SCOs

- 4,4'-DDD (0.017 mg/kg – 0.13 mg/kg)
- 4,4'-DDE (0.016 mg/kg – 0.085 mg/kg)
- 4,4'-DDT (0.011 mg/kg – 0.42 mg/kg)

Metals above the Unrestricted Use SCOs

- cadmium (3.5 mg/kg)
- trivalent chromium (34.6 mg/kg)
- nickel (40.2 mg/kg – 64.5 mg/kg)
- zinc (114 mg/kg – 8,060 mg/kg)

Metals above the Unrestricted Use SCOs and the Restricted Residential RUSCOs

- arsenic (20 mg/kg – 21.8 mg/kg)
- barium (412 mg/kg)
- copper (82.3 mg/kg – 1,130 mg/kg)
- lead (89.4 mg/kg – 3,950 mg/kg)
- mercury (0.25 mg/kg – 2.6 mg/kg)

The PFAS compounds perfluorooctanesulfonic acid (PFOS) (0.9 ppb –2.8 ppb) and perfluorooctanoic acid (PFOA) (0.73 ppb) were detected at concentrations exceeding the June 2021 guidance values for Unrestricted Use and Protection of Groundwater.

Table 3 presents and Figures 5A and 5B summarize the results of all documentation endpoint soil samples collected at the Site, including those that exceed the Unrestricted Use SCOs and the Restricted Residential RUSCOs at the Site after completion of the remedial action.

### **2.5.2 Groundwater**

During the Phase II ESI, naphthalene was detected at a concentration above the SGV in a groundwater sample collected from monitoring well TMW05. Naphthalene was also detected above the PGW SCOs at the collated soil boring, SB05. These exceedances were addressed by the excavation of hotspot HS-2 to remove the source material of the impacts. Metals including iron, manganese, and sodium were detected in dissolved and total groundwater samples above SGVs and are characteristic of naturally-occurring groundwater conditions and are not indicative of a release. Total PFAS compounds were detected in soil and groundwater samples, but are likely associated with an off-Site source because historical use of the Site was not associated with PFAS usage. Groundwater and Site use restrictions will be in compliance local zoning and city ordinances.

### **2.5.3 Soil Vapor**

Soil vapor samples collected during the Phase II ESI and RI contained chlorinated VOCs, including 1,1,1-TCA, methylene chloride, and PCE. However, the concentrations did not exceed their respective NYSDOH minimum mitigation threshold criteria. Furthermore, no chlorinated VOCs were detected in groundwater or soil at the Site. Based on the RI soil vapor and groundwater results, there does not appear to be a source of contamination that would result in a soil vapor intrusion condition into a new building from on-Site sources.

### **3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN**

#### **3.1 General**

Since remaining contamination exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC project manager.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix E) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the Site remedy, as determined by the NYSDEC project manager.

#### **3.2 Institutional Controls**

A series of ICs is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the Site to restricted-residential restricted uses only. Adherence to these ICs on the Site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental



Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. These ICs are:

- Require the remedial party or Site owner to complete and submit to the NYSDEC a periodic certification of IC/ECs in accordance with Part 375-1.9(h)(3);
- Allow for the use and development of the controlled property for restricted-residential restricted use as defined in Part 375-1.8(g), although land use is subject to local zoning laws;
- Prohibits vegetable gardening and farming on the controlled property;
- Restrict the use of groundwater as a source of potable or process water, without the necessary water quality treatment as determined by the NYSDOH and/or the New York City Department of Health and Mental Hygiene (NYCDOHMH); and,
- Require compliance with the NYSDEC-approved SMP, including the following:
  - All ECs must be inspected at a frequency and in a manner defined in the SMP;
  - Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
  - All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
  - Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
  - Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
  - Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement; and,

- An evaluation shall be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.

### **3.3 Engineering Controls**

#### **3.3.1 Site Cover System**

Exposure to remaining contamination on the 10,706 square feet of the Site that achieved a Track 4 Restricted Residential Restricted Use cleanup (corresponding to 54.5% of the Site footprint) is prevented by a cover system placed over the Track 4 portion of the site. This cover system is comprised of a 1- to 4-foot-thick concrete slab. Figure 6 presents the location of the cover system and applicable demarcation layers, and as-built drawings are provided in Appendix D. The Track 2 and Track 4 remediation extents and the Track 4 cover system extents are shown in profile view on Figures 3A and 3B. The Excavation Work Plan (EWP) provided in Appendix E outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the Site and provided in Appendix F and G, respectively. Any disturbance of the site's cover system must be overseen by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

#### **3.3.2 Criteria for Completion of Remediation/Termination of Remedial Systems**

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10. Unless waived by the NYSDEC, confirmation samples of applicable environmental media are required before terminating any remedial actions at the site. Confirmation samples require Category B deliverables and a Data Usability Summary Report (DUSR).

The remedial party will also conduct any needed Site restoration activities and will conduct any necessary restoration of vegetation coverage, trees and wetlands, and will comply with NYSDEC and United States Army Corps of Engineers regulations and guidance. Also, the remedial party will ensure that no ongoing erosion is occurring on the site.

### **3.3.2.1 Site Cover System**

The site cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

## **4.0 MONITORING AND SAMPLING PLAN**

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC project manager.

The procedures described in this section address inspections and periodic monitoring for the following:

1. Site-wide Inspections
2. Site Cover System Inspections

This Monitoring and Sampling Plan describes the methods to be used for:

- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the monitoring activities.

To adequately address these issues, this Monitoring and Sampling Plan provides information on:

- Designed containment systems (e.g. the Site cover system);
- Site cover inspection and maintenance requirements; and
- Annual inspection.

Reporting requirements are provided in Section 7.0 of this SMP.

#### 4.1 Site-Wide Inspection

Site-wide inspections, the extents of which is fully described in Appendix A – Environmental Easement and presented on Figure 6, will be performed annually. Site-wide inspections will be performed by a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or duration of the inspections will require approval from the NYSDEC project manager. Inspections will also be performed after all severe weather conditions that may affect ECs. During these inspections, an inspection form will be completed as provided in Appendix H – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General Site conditions at the time of the inspection;
- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that Site records are up to date.

Inspections of all remedial components installed at the Site will be conducted. A Site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If Site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC project manager must be given by noon of the following day. In addition, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the Site by a qualified environmental professional, as defined in 6 NYCCR Part 375. Written confirmation must be provided to the NYSDEC project manager within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

#### **4.2 Site Cover Inspection and Monitoring**

The Site cover system provides a physical barrier in the area of the Site that achieved a Track 4 restricted residential restricted use cleanup to prevent exposure of contaminated Site material to sensitive receptors. Inspection of the Site cover system in the Track 4 remediation extents by a professional engineer, or a qualified environmental professional under the direction of a professional engineer, is required annually and following any severe weather or other condition that could compromise the cover performance. Observations made during inspections will be recorded on a Site cover inspection form (Appendix H) and will provide sufficient information to certify the integrity of each component of the Site cover system. Any identified damages to the Site cover system will be repaired in kind in compliance with this SMP.

#### **4.3 Soil Vapor Intrusion Evaluation**

As required in the decision document, a soil vapor intrusion (SVI) evaluation was completed.

During the 2020 RI, three co-located sub-slab vapor and indoor air samples and one ambient air sample were collected and submitted for laboratory analysis for USEPA TO-15 VOCs. Samples were evaluated using the NYSDOH Guidance for Evaluating Soil Vapor Intrusion. The matrices address eight VOCs (TCE, PCE, 1,1,1-TCA, 1,1-dichloroethene, cis-1,2-DCE, carbon tetrachloride, methylene chloride, and vinyl chloride) using three matrices that evaluate the relationship between sub-slab vapor and indoor air concentrations and provide recommendations for actions such as monitoring or mitigation. Three of the eight NYSDOH matrix VOCs (1,1,1-TCA, methylene chloride, and

PCE) were detected in sub-slab vapor; however, when sub-slab vapor concentrations were applied with its co-located indoor air samples to the NYSDOH decision matrices, the recommendation for each VOC stated “no further action”.

Chlorinated VOCs were also not detected above the SGVs in groundwater or soil at the Site. Based on the RI soil vapor and groundwater results, there does not appear to be a source of contamination that would result in a soil vapor intrusion condition into a new building from on-Site sources.

Soil vapor intrusion is not expected to be a concern for the new development due to the RI results.

## **5.0 OPERATION AND MAINTENANCE PLAN**

The Site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

## **6.0 PERIODIC ASSESSMENTS/EVALUATIONS**

### **6.1 Climate Change Vulnerability Assessment**

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given Site and associated remedial systems. Vulnerability assessments provide information so that the Site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

This section provides a summary of vulnerability assessments that will be conducted for the Site during periodic assessments, and briefly summarizes the vulnerability of the Site and/or engineering controls to severe storms/weather events and associated flooding.

According to the Effective National Flood Insurance Rate map for the City of New York published by FEMA (Community Panel No. 3604970091F, dated 5 September 2007), the Site is mapped within Zone AE. Zone AE is defined as a special flood hazard area and is subject to inundation by the 1 percent annual chance flood. The Site remedy does not rely on mechanical systems. In the event of a power loss, the effectiveness of the engineering controls will not be disrupted.

Site erosion is not expected during severe weather or precipitation events because soil will be covered with a concrete slab. ECs will be inspected after severe weather or other emergency conditions (natural disasters or fires) that are known to have inflicted damage at the Site or adjoining properties and repaired, as necessary.

Overall, the Site ECs are not expected to be vulnerable to the effects of global climate change, including severe weather and flooding events.

## **6.2 Green Remediation Evaluation**

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including Site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the SMP provides a summary of any green remediation evaluations to be completed for the Site during Site management, and as reported in the Periodic Review Report (PRR).

### **6.2.1 Timing of Green Remediation Evaluations**

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the NYSDEC project manager feels appropriate, e.g. during significant maintenance events or in conjunction with storm recovery activities.

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine inspection or maintenance activities. Reporting of these modifications will be presented in the PRR.

### **6.2.2 Frequency of Inspections, Sampling and Other Periodic Activities**

Transportation to and from the Site, use of consumables in relation to visiting the Site in order to conduct inspections and/or collect samples, and shipping samples to a laboratory for analyses have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

### **6.3 Remedial System Optimization**

A Remedial Site Optimization (RSO) study will be conducted any time that the NYSDEC project manager or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;
- There is an anticipated transfer of the Site management to another remedial party or agency; and
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information



and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

**7.0. REPORTING REQUIREMENTS**

**7.1 Site Management Reports**

All Site management inspection, maintenance and monitoring events will be recorded on the appropriate Site management forms provided in Appendix H. These forms are subject to NYSDEC revision. All Site management inspection, maintenance, and monitoring events will be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the following table and summarized in the Periodic Review Report.

<b>Task/Report</b>	<b>Reporting Frequency*</b>
Site-Wide Inspection and Periodic Review Report	Annually, or as otherwise determined by the NYSDEC

\* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC project manager.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Any observations, conclusions, or recommendations; and,

- A determination as to whether contaminant conditions have changed since the last reporting event.

All interim monitoring/inspections reports will also include, if appropriate:

- Type of samples collected (e.g., soil);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations; and,
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format).

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;

- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link:

<http://www.dec.ny.gov/chemical/62440.html>

## **7.2 Periodic Review Report**

A Periodic Review Report (PRR) will be submitted to the NYSDEC project manager beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually to the NYSDEC project manager or at another frequency as may be required by the NYSDEC project manager. In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site described in Appendix A -Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual Site inspections, fire inspections and severe condition inspections, if applicable.
- All applicable Site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation.

- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.
- If samples are collected, data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These tables and figures will include a presentation of past data as part of an evaluation of contaminant concentration trends, including but not limited to:
  - Trend monitoring graphs that present groundwater contaminant levels from before the start of the remedy implementation to the most current sampling data;
  - Trend monitoring graphs depicting system influent analytical data on a per event and cumulative basis;
  - O&M data summary tables;
  - A current plume map for sites with remaining groundwater contamination; and
  - A groundwater elevation contour map for each gauging event.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQUIS™ database in accordance with the requirements found at this link: <http://www.dec.ny.gov/chemical/62440.html>.
- A Site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the site-specific Decision Document;
  - The operation and the effectiveness of all ECs;
  - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;

- Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan;
- An evaluation of trends in contaminant levels in the affected media to determine if the remedy continues to be effective in achieving remedial goals as specified by the Decision Document; and
- The overall performance and effectiveness of the remedy.

### **7.2.1 Certification of Institutional and Engineering Controls**

Following the last inspection of the reporting period, a qualified environmental professional as defined in 6 NYCRR Part 375 or Professional Engineer licensed to practice and registered in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

*"For each institutional or engineering control identified for the site, I certify that all of the following statements are true:*

- *The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any Site management plan for this control;*
- *Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *Use of the Site is compliant with the environmental easement;*
- *The engineering control systems are performing as designed and are effective;*

- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program and generally accepted engineering practices; and*
- *The information presented in this report is accurate and complete.*

*I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Steve Ciambuschini, of Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C., am certifying as the Remedial Party's Designated Site Representative: I have been authorized and designated by all Site owners/remedial parties to sign this certification for the site."*

I certify that the New York State Education Department has granted a Certificate of Authorization to provide Professional Engineering services to the firm that prepared this Periodic Review Report

Every five years, the following certification will be added to the above list:

- *The assumptions made in the qualitative exposure assessment remain valid.*

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager. The Periodic Review Report may also need to be submitted in hard-copy format if requested by the NYSDEC project manager.

### **7.3 Corrective Measures Work Plan**

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control or failure to conduct Site management activities, a Corrective Measures Work Plan will be submitted to the NYSDEC project manager for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC project manager.

## 7.4 Remedial Site Optimization Report

If an RSO is to be performed (see Section 6.3), upon completion of an RSO, an RSO report must be submitted to the NYSDEC project manager for approval. A general outline for the RSO report is provided in Appendix I. The RSO report will document the research/investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual Site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager.

## 8.0 REFERENCES

1. 6 NYCRR Part 375, Environmental Remediation Programs. December 14, 2006;
2. NYSDEC DER-10 – “Technical Guidance for Site Investigation and Remediation;”
3. NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum);
4. Phase I Environmental Site Assessment (ESA), dated June 2019 prepared for 225 East Realty Partners LLC by Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan);
5. Limited Phase II Environmental Site Investigation, dated June 2019 prepared for 225 East Realty Partners LLC by Langan;
6. Remedial Investigation Work Plan, dated March 2020, prepared for E 135 and 3<sup>rd</sup> Ave Owner LLC by Langan;
7. Remedial Investigation Report, dated May 2020, prepared for E 135 and 3rd Ave Owner LLC by Langan;

8. Remedial Action Work Plan, dated July 2020, prepared for E 135 and 3rd Ave Owner LLC by Langan;
9. Decision Document, dated July 2020, prepared by NYSDEC;
10. Environmental Soil Pre-Characterization Results Letter, dated September 2021, prepared for E 135 and 3rd Ave Owner LLC by Langan; and,
11. Pre-Excavation Documentation Endpoint Sampling Analytical Results, dated October 2021, prepared for E 135 and 3rd Ave Owner LLC by Langan.

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# **TABLES**

**Table 1**  
**Site Management Plan**  
**Track 1 Soil Cleanup Objectives**

**2455 Third Avenue**  
**Bronx, New York**  
**BCP No.: C203125**  
**Langan Project No. 190051701**

<b>VOCs (mg/kg)</b>	
1,1,1-Trichloroethane	0.68
1,1-Dichloroethane	0.27
1,1-Dichloroethylene	0.33
1,2-Dichlorobenzene	1.1
1,2-Dichloroethane	0.02
cis-1,2-Dichloroethene	0.02
trans-1,2-Dichloroethene	0.25
1,3-Dichlorobenzene	0.19
1,4-Dichlorobenzene	1.8
1,4-Dioxane	0.1
2-Butanone	0.12
Acetone	0.05
Benzene	0.06
Carbon tetrachloride	0.76
Chlorobenzene	1.1
Chloroform	0.37
Ethyl Benzene	1
Hexachlorobenzene	0.33
Methyl tert-butyl ether (MTBE)	0.93
Methylene chloride	0.05
n-Propylbenzene	3.9
sec-Butylbenzene	11
tert-Butylbenzene	5.9
Tetrachloroethylene	1.3
Toluene	0.7
Trichloroethylene	0.47
1,2,4-Trimethylbenzene	3.6
1,3,5-Trimethylbenzene	8.4
Vinyl Chloride	0.02
Xylenes, Total	0.26
<b>Metals (mg/kg)</b>	
Arsenic	13
Barium	350
Beryllium	7.2
Cadmium	2.5
Chromium, hexavalent	1
Chromium, trivalent	30
Copper	50
Total Cyanide	27
Lead	63
Manganese	2000
Mercury	0.18
Nickel	30
Selenium	3.9
Silver	2
Zinc	109

<b>SVOCs (mg/kg)</b>	
Acenaphthene	20
Acenaphthylene	100
Anthracene	100
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(g,h,i)perylene	100
Benzo(k)fluoranthene	0.8
Chrysene	1
Dibenzo(a,h)anthracene	0.33
Fluoranthene	100
Fluorene	30
Indeno(1,2,3-cd)pyrene	0.5
m-Cresol	0.33
Naphthalene	12
o-Cresol	0.33
p-Cresol	0.33
Pentachlorophenol	0.8
Phenanthrene	100
Phenol	0.33
Pyrene	100
<b>PCBs/Pesticides (mg/kg)</b>	
2,4,5-TP Acid (Silvex)	3.8
4,4'-DDE	0.0033
4,4'-DDT	0.0033
4,4'-DDD	0.0033
Aldrin	0.005
alpha-BHC	0.02
beta-BHC	0.036
Chlordane (alpha)	0.094
delta-BHC	0.04
Dibenzofuran	7
Dieldrin	0.005
Endosulfan I	2.4
Endosulfan II	2.4
Endosulfan sulfate	2.4
Endrin	0.014
Heptachlor	0.042
Lindane	0.1
Polychlorinated biphenyls	0.1

**Notes:**

1. The above criteria are the lower of Title 6 of the New York Codes, Rules and Regulations (6 NYCRR) Part 375 Unrestricted Use and Protection of Groundwater (PGW) SCOs. The NYSDEC Part 375 PGW SCOs were only applied to analytes that also exceeded groundwater regulatory standards in groundwater samples collected from the site. The PGW SCOs are applicable to those constituents that are in areas that could be a source of groundwater contamination.
2. SCO = Soil Cleanup Objective
3. SVOC = semivolatile organic compound
4. VOC = volatile organic compound
5. PCB = polychlorinated biphenyl
6. mg/kg = milligram per kilogram

**Table 2**  
**Site Management Plan**  
**Track 2/4 Restricted Residential Restricted Use Soil Cleanup Objectives**

**2455 Third Avenue**  
**Bronx, New York**  
**BCP No.: C203125**  
**Langan Project No. 190051701**

<b>VOCs (mg/kg)</b>	
1,1,1-Trichloroethane	100
1,1-Dichloroethane	26
1,1-Dichloroethene	100
1,2,4-Trimethylbenzene	52
1,2-Dichlorobenzene	100
1,2-Dichloroethane	3.1
1,3,5- Trimethylbenzene	52
1,3-Dichlorobenzene	49
1,4-Dichlorobenzene	13
1,4-Dioxane	13
Acetone	100
Benzene	4.8
Butylbenzene	100
Carbon tetrachloride	2.4
Chlorobenzene	100
Chloroform	49
cis-1,2-Dichloroethene	100
Ethylbenzene	41
Hexachlorobenzene	1.2
Methyl ethyl ketone	100
Methyl tert-butyl ether	100
Methylene chloride	100
n-Propylbenzene	100
sec-Butylbenzene	100
tert-Butylbenzene	100
Tetrachloroethene	19
Toluene	100
trans-1,2-Dichloroethene	100
Trichloroethene	21
Vinyl chloride	0.9
Xylene (mixed)	100
<b>Metals (mg/kg)</b>	
Arsenic	16
Barium	400
Beryllium	72
Cadmium	4.3
Chromium, hexavalent	110
Chromium, trivalent	180
Copper	270
Lead	400
Manganese	2000
Nickel	310
Selenium	180
Silver	180
Total Cyanide	27
Total Mercury	0.81
Zinc	10000

<b>SVOCs (mg/kg)</b>	
Acenaphthene	100
Acenaphthylene	100
Anthracene	100
Benz(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(g,h,i)perylene	100
Benzo(k)fluoranthene	3.9
Chrysene	3.9
Dibenz(a,h)anthracene	0.33
Fluoranthene	100
Fluorene	100
Indeno(1,2,3-cd)pyrene	0.5
m-Cresol	100
Naphthalene	12
o-Cresol	100
p-Cresol	100
Pentachlorophenol	6.7
Phenanthrene	100
Phenol	100
Pyrene	100
<b>PCBs/Pesticides (mg/kg)</b>	
2,4,5-TP Acid (Silvex)	100
4,4'- DDD	13
4,4'-DDE	8.9
4,4'-DDT	7.9
Aldrin	0.097
alpha-BHC	0.48
beta-BHC	0.36
Chlordane (alpha)	4.2
delta-BHC	100
Dibenzofuran	59
Dieldrin	0.2
Endosulfan I	24
Endosulfan II	24
Endosulfan sulfate	24
Endrin	11
Heptachlor	2.1
Lindane	1.3
Polychlorinated biphenyls	1

**Notes:**

1. The above criteria reflect the Title 6 of the New York Codes, Rules and Regulations (6 NYCRR) Part 375 Restricted Residential Restricted Use Soil Cleanup Objectives.
2. SCO: Soil Cleanup Objective
3. SVOC: semivolatile organic compound
4. VOC: volatile organic compound
5. PCB: polychlorinated biphenyl
6. mg/kg: milligram per kilogram



**Table 3**  
**Site Management Plan**  
**Documentation Soil Sample Analytical Results**

2455 Third Avenue  
 Bronx, New York  
 NYSDEC BDP Site No.: C203125  
 Langan Project No.: 190051701

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	Location											
				Sample Name	LB-27	LB-27	LB-27	LB-27	LB-28	LB-28	LB-28	LB-29	LB-29	LB-30	
				Sample Date	045_LB-27-6-8-20210831	046_LB-27-15-16-20210831	092_LB-27-6-8-20210902	093_LB-27-15-16-20210902	020_LB-28-5-7-20210830	083_LB-28-15-16-20210902	084_DUP-5-20210902	032_LB-29-5-7-20210830	033_LB-29-15-16-20210830	035_LB-30-16-17-20210830	
				Sample Depth	6-8	15-16	6-8	15-16	5-7	15-16	15-16	5-7	15-16	16-17	
Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result				
<b>Herbicides</b>															
Silvex (2,4,5-Tp)	93-72-1	3.8	100	mg/kg	<0.038 U	<0.038 U	NA	NA	<0.037 U	<0.04 U	<0.04 U	<0.039 U	<0.04 U	<0.04 U	
<b>Polychlorinated Biphenyl</b>															
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	ma/ka	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	ma/ka	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	ma/ka	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1254 (Aroclor 1254)	11097-69-1	NS	NS	mg/kg	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
Total PCBs	1336-36-3	0.1	1	mg/kg	<0.077 U	<0.077 U	NA	NA	<0.073 U	<0.08 U	<0.081 U	<0.078 U	<0.08 U	<0.08 U	
<b>Metals</b>															
Arsenic	7440-39-2	13	16	mg/kg	1.7	1.1	NA	NA	1.6	0.7 J	1 J	1.3	1.2	1.2	
Barium	7440-39-3	350	400	ma/ka	43.9	16.4 J	NA	NA	28.3	31	50.6	31	39	14	
Beryllium	7440-41-7	7.2	72	ma/ka	0.44	0.23 J	NA	NA	0.37 J	0.21 J	0.31 J	0.24 J	0.22 J	0.17 J	
Cadmium	7440-43-9	2.5	4.3	ma/ka	0.22 J	<1.1 U	NA	NA	<1.1 U	<1.2 U	<1.2 U	<1.1 U	<1.2 U	<1.2 U	
Chromium, Hexavalent	18540-29-9	1	110	ma/ka	<2.3 U	<2.3 U	NA	NA	<2.3 U	<2.3 U	<2.5 U	<2.3 U	<2.4 U	<2.4 U	
Chromium, Total	7440-47-3	1	110	mg/kg	9.5	11.6	NA	NA	11.6	11.8 B	12.8 B	9.4	10.7	7.7	
Chromium, Trivalent	16065-83-1	30	180	mg/kg	9.5	11.6	NA	NA	11.6	11.1	12.8	9.4	10.7	7.7	
Copper	7440-50-8	50	270	mg/kg	8.8	6.6	NA	NA	8.4	8.2	11.2	8	7.6	6.7	
Cyanide	57-12-5	27	27	mg/kg	<0.25 U	<0.26 U	NA	NA	<0.26 U	<0.24 U	<0.26 U	<0.23 U	<0.24 U	<0.24 U	
Lead	7439-92-1	63	400	mg/kg	22.3	3.5	NA	NA	4.8	3.3 J	5.6 J	22.2	28	9.2	
Manganese	7439-96-5	1600	2000	mg/kg	354	76	NA	NA	84.8	117	84	81.7	106	106	
Mercury	7439-97-6	0.18	0.81	mg/kg	0.058	<0.017 U	NA	NA	<0.019 U	<0.02 U	<0.02 U	0.28	0.45	<0.02 U	
Nickel	7440-02-0	30	310	mg/kg	12.4	6.8	NA	NA	10.8	10.3	12.9	8.9	8	6.4	
Selenium	7782-49-2	3.9	180	mg/kg	0.24 J	<1.4 U	NA	NA	<1.3 U	<1.5 U	<1.5 U	<1.4 U	<1.4 U	<1.5 U	
Silver	7440-22-4	2	180	mg/kg	<1.1 U	<1.1 U	NA	NA	<1.1 U	<1.2 U	<1.2 U	<1.1 U	<1.1 U	<1.2 U	
Zinc	7440-66-6	109	10000	mg/kg	525	16.2	NA	NA	21.9	22.5	32.9	33.7	30.2	16.9	
<b>General Chemistry</b>															
Solids, Percent	SOLID	NS	NS	Percent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Perfluorooctanoic acids</b>															
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	NS	NS	mg/kg	<0.00218 U	<0.00229 U	NA	NA	<0.00014 U	<0.00239 U	<0.00223 U	<0.00214 U	<0.00015 U	<0.00218 U	
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMeFOSAA)	2365-31-9	NS	NS	mg/kg	<0.00218 U	<0.00229 U	NA	NA	<0.00014 U	<0.00239 U	<0.00223 U	<0.00214 U	<0.00015 U	<0.00218 U	
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	NS	NS	mg/kg	<0.00218 U	<0.00229 U	NA	NA	<0.00014 U	<0.00239 U	<0.00223 U	<0.00214 U	<0.00015 U	<0.00218 U	
Perfluorobutanoic Acid (PFBA)	375-22-4	NS	NS	mg/kg	<0.00218 U	<0.00229 U	NA	NA	<0.00014 U	<0.00239 U	<0.00223 U	<0.00214 U	<0.00015 U	<0.00218 U	
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorodecanoic Acid (PFDA)	335-76-2	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorododecanoic Acid (PFDoA)	307-55-1	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluoroheptanoic Acid (PFHpA)	375-85-9	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	NS	NS	ma/ka	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorohexanoic Acid (PFHxA)	307-24-4	NS	NS	ma/ka	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorononanoic Acid (PFNA)	375-95-1	NS	NS	ma/ka	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorooctanesulfonamide (FOSA)	754-91-6	NS	NS	ma/ka	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.00088	0.044	mg/kg	0.0009	0.00023 J	NA	NA	0.00055	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00066	0.033	mg/kg	0.0005 J	<0.00069 U	NA	NA	0.00058	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	0.00044 J	
Perfluoropentanoic Acid (PFPeA)	2706-90-3	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorotetradecanoic Acid (PFTA)	376-06-7	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluorotridecanoic Acid (PFTDA)	72629-94-8	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Perfluoroundecanoic Acid (PFUNA)	2058-94-8	NS	NS	mg/kg	<0.00065 U	<0.00069 U	NA	NA	<0.00004 U	<0.00072 U	<0.00067 U	<0.00064 U	<0.000045 U	<0.00065 U	
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2) (8:2FTS)	39108-34-4	NS	NS	mg/kg	<0.00326 U	<0.00343 U	NA	NA	<0.00021 U	<0.00358 U	<0.00334 U	<0.00321 U	<0.00022 U	<0.00327 U	
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) (6:2FTS)	27619-97-2	NS	NS	mg/kg	<0.00218 U	<0.00229 U	NA	NA	<0.00014 U	<0.00239 U	<0.00223 U	<0.00214 U	<0.00015 U	<0.00218 U	

Table 3 Site Management Plan Documentation Soil Sample Analytical Results

2455 Third Avenue Bronx, New York NYSDEC BDP Site No.: C203125 Langan Project No.: 190051701

Table with columns for Analyte, CAS Number, NYSDEC Part 375 Unrestricted Use SCOs, NYSDEC Part 375 Restricted Use Residential SCOs, Location (Sample Name, Sample Date, Sample Depth, Unit), and 12 sampling locations (LB-31 to LB-35) showing analytical results.

**Table 3  
Site Management Plan  
Documentation Soil Sample Analytical Results**

2455 Third Avenue  
Bronx, New York  
NYSDEC BDP Site No.: C203125  
Langan Project No.: 190051701

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	Location		LB-31	LB-31	LB-32	LB-32	LB-33	LB-33	LB-34	LB-34	LB-35	LB-35
				Sample Name	049_LB-31-5-7-20210831	050_LB-31-15-16-20210831	051_LB-32-5-7-20210831	052_LB-32-15-16-20210831	053_LB-33-5-7-20210831	054_LB-33-15-16-20210831	055_LB-34-5-7-20210831	056_LB-34-15-16-20210831	017_LB-35-5-7-20210830	016_LB-35-15-16-20210830	
				Sample Date	08/31/2021	08/31/2021	08/31/2021	08/31/2021	08/31/2021	08/31/2021	08/31/2021	08/31/2021	08/31/2021	08/30/2021	08/30/2021
				Sample Depth	5-7	15-16	5-7	15-16	5-7	15-16	5-7	15-16	5-7	15-16	
				Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Herbicides</b>															
Silvex (2,4,5-Tp)	93-72-1	3.8	100	mg/kg	<0.036 U	<0.039 U	<0.036 U	<0.039 U	<0.038 U	<0.038 U	<0.035 U	<0.04 U	<0.059 U	<0.044 U	
<b>Polychlorinated Biphenyl</b>															
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1254 (Aroclor 1254)	11097-69-1	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
Total PCBs	1336-36-3	0.1	1	mg/kg	<0.072 U	<0.078 U	<0.073 U	<0.078 U	<0.076 U	<0.077 U	<0.07 U	<0.08 U	<0.12 U	<0.089 U	
<b>Metals</b>															
Arsenic	7440-38-2	13	16	mg/kg	1.7	1.6	3.8	1.9	2.4	1.5	1.9	1.4	2.5	1.6	
Barium	7440-39-3	350	400	mg/kg	31	21.4	89.9	19.3	77.5	38.2	20.5	38.2	20.5	21.5	
Beryllium	7440-41-7	7.2	72	mg/kg	0.36 J	0.31 J	0.36 J	0.24 J	0.27 J	0.21 J	0.26 J	0.19 J	0.49 J	0.32 J	
Cadmium	7440-43-9	2.5	4.3	mg/kg	<0.99 U	<1.1 U	0.19 J	<1.1 U	0.3 J	<1.1 U	0.13 J	<1.1 U	<1.6 U	<1.3 U	
Chromium, Hexavalent	18540-29-9	1	110	mg/kg	<2.1 U	<2.3 U	<2.2 U	<2.3 U	<2.3 U	<2.3 U	<2.1 U	<2.4 U	<3.5 U	<2.7 U	
Chromium, Total	7440-47-3	1	110	mg/kg	12.6	9.8	12.9	10.6	10.3	12.2	11.7	12.3	13.8	12.3	
Chromium, Trivalent	16065-83-1	30	180	mg/kg	12.6	9.8	12.9	10.6	10.3	12.2	11.7	12.3	13.8	12.3	
Copper	7440-50-8	50	270	mg/kg	11.9	10.7	21.9	37.8	8.3	11.7	6.9	10.4	14.1	10	
Cyanide	57-12-5	27	27	mg/kg	<0.26 U	<0.28 U	<0.26 U	<0.26 U	<0.24 U	<0.24 U	<0.25 U	<0.29 U	<0.43 U	<0.29 U	
Lead	7439-92-1	63	400	mg/kg	13.2	19.3	387	21	242	7.2	36.5	3.4	12.9	17.9	
Manganese	7439-96-5	1600	2000	mg/kg	295	198	234	252	292	195	295	104	181	105	
Mercury	7439-97-6	0.18	0.81	mg/kg	0.0069 J	0.0063 J	0.3	0.095	<0.018 U	0.069	0.022	0.013 J	0.022 J	0.0062 J	
Nickel	7440-02-0	30	310	mg/kg	10.4	9.9	11.4	15.1	10.1	8.9	9.1	9.1	10	10	
Selenium	7782-49-2	3.9	180	mg/kg	0.12 J	<1.3 U	0.28 J	<1.3 U	<1.3 U	<1.3 U	<1.2 U	<1.4 U	<2.1 U	0.17 J	
Silver	7440-22-4	2	180	mg/kg	<0.99 U	<1.1 U	0.25 J	<1.1 U	0.19 J	<1.1 U	<0.97 U	<1.1 U	<1.6 U	<1.3 U	
Zinc	7440-66-6	109	10000	mg/kg	42.9	57.4	160	128	128	20.7	43.4	18.4	40.5	33.7	
<b>General Chemistry</b>															
Solids, Percent	SOLID	NS	NS	Percent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Perfluorooctanoic acids</b>															
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	NS	NS	mg/kg	<0.00212 U	<0.0022 U	<0.00205 U	<0.0023 U	<0.00207 U	<0.00221 U	<0.00191 U	<0.00225 U	<0.00354 U	<0.00254 U	
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMeFOSAA)	2365-31-9	NS	NS	mg/kg	<0.00212 U	<0.0022 U	<0.00205 U	<0.0023 U	<0.00207 U	<0.00221 U	<0.00191 U	<0.00225 U	<0.00354 U	<0.00254 U	
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	NS	NS	mg/kg	<0.00212 U	<0.0022 U	<0.00205 U	<0.0023 U	<0.00207 U	<0.00221 U	<0.00191 U	<0.00225 U	<0.00354 U	<0.00254 U	
Perfluorobutanoic acid (PFBA)	375-22-4	NS	NS	mg/kg	<0.00212 U	<0.0022 U	<0.00205 U	<0.0023 U	<0.00207 U	<0.00221 U	<0.00191 U	<0.00225 U	<0.00354 U	<0.00254 U	
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorodecanoic Acid (PFDA)	335-76-2	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorododecanoic Acid (PFDoA)	307-55-1	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluoroheptanoic acid (PFHpA)	375-85-9	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorohexanoic Acid (PFHxA)	307-24-4	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorononanoic Acid (PFNA)	375-95-1	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorooctanesulfonamide (FOSA)	754-91-6	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.00088	0.044	mg/kg	0.0009	<0.00066 U	0.00033 J	0.00073	<0.00062 U	<0.00066 U	0.0009	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00066	0.033	mg/kg	0.00038 J	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluoropentanoic Acid (PFPeA)	2706-90-3	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorotetradecanoic Acid (PFTA)	376-06-7	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluorotridecanoic Acid (PFTDA)	72629-94-8	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	NS	NS	mg/kg	<0.00064 U	<0.00066 U	<0.00061 U	<0.00069 U	<0.00062 U	<0.00066 U	<0.00057 U	<0.00068 U	<0.00106 U	<0.00076 U	
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2) (8:2FTS)	39108-34-4	NS	NS	mg/kg	<0.00318 U	<0.00331 U	<0.00307 U	<0.00345 U	<0.00311 U	<0.00331 U	<0.00338 U	<0.00338 U	<0.00532 U	<0.0038 U	
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) (6:2FTS)	27619-97-2	NS	NS	mg/kg	<0.00212 U	<0.0022 U	<0.00205 U	<0.0023 U	<0.00207 U	<0.00221 U	0.118	<0.00225 U	<0.00354 U	<0.00254 U	





**Table 3**  
**Site Management Plan**  
**Documentation Soil Sample Analytical Results**

2455 Third Avenue  
 Bronx, New York  
 NYSDEC BDP Site No.: C203125  
 Langan Project No.: 190051701

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	Location		LB-36	LB-36	LB-37	LB-38	LB-38	LB-39	LB-39	LB-40	LB-40	LB-41
				Sample Name	018_LB-36_5-7-20210830	019_LB-36_15-16-20210830	021_LB-37_15-16-20210830	070_LB-38_16-17-20210902	071_DUP-2-20210902	072_LB-39_15-16-20210902	073_DUP-3-20210902	074_LB-40_5-7-20210902	075_LB-40_15-16-20210902	076_LB-41_5-7-20210902	
				Sample Date	08/30/2021	08/30/2021	08/30/2021	09/02/2021	09/02/2021	09/02/2021	09/02/2021	09/02/2021	09/02/2021	09/02/2021	
				Sample Depth	5-7	15-16	15-16	16-17	16-17	15-16	15-16	5-7	15-16	5-7	
Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result				
<b>Herbicides</b>															
Silvex (2,4,5-Tp)	93-72-1	3.8	100	mg/kg	<0.04 U	<0.04 U	<0.041 U	<0.042 U	<0.042 U	<0.042 U	<0.039 U	<0.038 U	<0.04 U	<0.042 U	
<b>Polychlorinated Biphenyl</b>															
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	ma/ka	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	ma/ka	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	ma/ka	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1254 (Aroclor 1254)	11097-68-1	NS	NS	mg/kg	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
Total PCBs	1336-36-3	0.1	1	mg/kg	<0.081 U	<0.08 U	<0.082 U	<0.084 U	<0.085 U	<0.085 U	<0.078 U	<0.076 U	<0.08 U	<0.085 U	
<b>Metals</b>															
Arsenic	7440-38-2	13	16	mg/kg	2.9	1.1 J	1.5	0.93 J	0.95 J	1.5	1.3	4.1	0.7 J	2.4	
Barium	7440-39-3	350	400	mg/kg	48	24.2	19.7	15.9 J	15.9 J	14.9	11.7	79.4	12.5	49.6	
Beryllium	7440-41-7	7.2	72	mg/kg	0.34 J	0.18 J	0.31 J	0.18 J	0.18 J	0.19 J	0.19 J	0.37 J	0.12 J	0.28 J	
Cadmium	7440-43-9	2.5	4.3	mg/kg	0.32 J	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	0.32 J	<1.1 U	0.2 J	
Chromium, Hexavalent	18540-29-9	1	110	mg/kg	<2.4 U	<2.4 U	<2.4 U	<2.5 U	<2.6 U	<2.6 U	<2.5 U	<2.3 U	<2.4 U	<2.6 U	
Chromium, Total	7440-47-3	1	110	mg/kg	17.9	8.8	11.9	6.7	5.1	10.1	9.3	17.4	6.1	11.5	
Chromium, Trivalent	16065-83-1	30	180	mg/kg	17.9	8.8	11.9	6.7	5.1	10.1	9.3	17.4	6.1	11.5	
Copper	7440-50-8	50	270	mg/kg	26.5	6.3	7.5	5.8	5.2	7.1	5.9	35.2	4.4	12.9	
Cyanide	57-12-5	27	27	mg/kg	<0.29 U	<0.29 U	<0.24 U	<0.25 U	<0.27 U	<0.26 U	<0.26 U	0.14 J	<0.24 U	<0.29 U	
Lead	7439-92-1	63	400	mg/kg	52.2	15.5	4.4	2.3	2.5	3	2.9	234	3.3	30.3	
Manganese	7439-96-5	1600	2000	mg/kg	175	73.1	131	286	189	170	124	290	96.9	434	
Mercury	7439-97-6	0.18	0.81	mg/kg	0.014 J	<0.019 U	<0.02 U	0.011 J	0.012 J	0.011 J	0.011 J	0.011 J	0.011 J	0.037	
Nickel	7440-02-0	30	310	mg/kg	13.2	6.7	9.9	6.6	6	7.4	6.7	16.1	4	11	
Selenium	7782-49-2	3.9	180	mg/kg	0.15 J	<1.4 U	<1.4 U	<1.5 U	<1.5 U	<1.5 U	<1.4 U	0.59 J	<1.4 U	<1.5 U	
Silver	7440-22-4	2	180	mg/kg	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.1 U	0.15 J	<1.1 U	<1.2 U	
Zinc	7440-66-6	109	10000	mg/kg	92.6	21	20.3	13.8	18.7	16.5	15.4	139	9.8	50.4	
<b>General Chemistry</b>															
Solids, Percent	SOLID	NS	NS	Percent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Perfluorooctanoic acids</b>															
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEFOSAA)	2991-50-6	NS	NS	mg/kg	<0.00224 U	<0.00228 U	<0.00238 U	<0.00241 U	<0.00243 U	<0.00248 U	<0.00228 U	<0.00219 U	<0.00222 U	<0.0025 U	
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	NS	NS	mg/kg	<0.00224 U	<0.00228 U	<0.00238 U	<0.00241 U	<0.00243 U	<0.00248 U	<0.00228 U	<0.00219 U	<0.00222 U	<0.0025 U	
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	NS	NS	mg/kg	<0.00224 U	<0.00228 U	<0.00238 U	<0.00241 U	<0.00243 U	<0.00248 U	<0.00228 U	<0.00219 U	<0.00222 U	<0.0025 U	
Perfluorobutanoic acid (PFBA)	375-22-4	NS	NS	mg/kg	<0.00224 U	<0.00228 U	<0.00238 U	<0.00241 U	<0.00243 U	<0.00248 U	<0.00228 U	<0.00219 U	<0.00222 U	<0.0025 U	
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorodecanoic Acid (PFDA)	335-76-2	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorododecanoic Acid (PFDoA)	307-55-1	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluoroheptanoic acid (PFHpA)	375-85-9	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	NS	NS	ma/ka	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorohexanoic Acid (PFHxA)	307-24-4	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorononanoic Acid (PFNA)	375-95-1	NS	NS	ma/ka	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorooctanesulfonamide (FOSA)	754-91-6	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.00088	0.044	mg/kg	0.00037 J	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	0.00117	
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00066	0.033	mg/kg	0.00022 J	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluoropentanoic Acid (PFPeA)	2706-90-3	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorotetradecanoic Acid (PFTA)	376-06-7	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	NS	NS	mg/kg	<0.00067 U	<0.00069 U	<0.00071 U	<0.00072 U	<0.00073 U	<0.00074 U	<0.00068 U	<0.00066 U	<0.00067 U	<0.00075 U	
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2) (8:2FTS)	39108-34-4	NS	NS	mg/kg	<0.00336 U	<0.00343 U	<0.00356 U	<0.00362 U	<0.00365 U	<0.00372 U	<0.00342 U	<0.00333 U	<0.00333 U	<0.00375 U	
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) (6:2FTS)	27619-97-2	NS	NS	mg/kg	<0.00224 U	<0.00228 U	<0.00238 U	<0.00241 U	<0.00243 U	<0.00248 U	<0.00228 U	<0.00219 U	<0.00222 U	<0.0025 U	

Table 3
Site Management Plan
Documentation Soil Sample Analytical Results

2455 Third Avenue
Bronx, New York
NYSDEC BDP Site No.: C203125
Langan Project No.: 190051701

Table with columns: Analyte, CAS Number, NYSDC Part 375 Unrestricted Use SCOs, NYSDC Part 375 Restricted Use Residential SCOs, Location (Sample Name, Sample Date, Sample Depth, Unit), and Results for various sample locations (LB-41, LB-42, LB-43, LB-44) including Volatile Organic Compounds, Semi-Volatile Organic Compounds, and Pesticides.

**Table 3**  
**Site Management Plan**  
**Documentation Soil Sample Analytical Results**

2455 Third Avenue  
 Bronx, New York  
 NYSDEC BDP Site No.: C203125  
 Langan Project No.: 190051701

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	Location																	
				LB-41			LB-42			LB-42			LB-43			LB-43			LB-44		
				Sample Name	077_LB-41_15-16-20210902	064_LB-42-5-7-20210831	065_LB-42-15-16-20210831	078_LB-42_5-7-20210902	062_LB-43-9-11-20210831	063_LB-43-15-16-20210831	082_LB-43_9-11-20210902	060_LB-44-8-10-20210831	061_LB-44-15-16-20210831	080_LB-44_8-10-20210902							
				Sample Date	09/02/2021	08/31/2021	08/31/2021	09/02/2021	08/31/2021	08/31/2021	09/02/2021	08/31/2021	08/31/2021	09/02/2021							
Sample Depth	15-16	5-7	15-16	5-7	9-11	15-16	9-11	8-10	15-16	8-10											
Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result											
<b>Herbicides</b>																					
Silvex (2,4,5-Tp)	93-72-1	3.8	100	mg/kg	<0.042 U	<0.044 U	<0.04 U	NA	<0.042 U	<0.064 U	NA	<0.04 U	<0.039 U	<0.041 U							
<b>Polychlorinated Biphenyl</b>																					
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1254 (Aroclor 1254)	11097-69-1	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
Total PCBs	1336-36-3	0.1	1	mg/kg	<0.084 U	<0.088 U	<0.081 U	NA	<0.085 U	<0.13 U	NA	<0.081 U	<0.078 U	<0.082 U							
<b>Metals</b>																					
Arsenic	7440-38-2	13	16	mg/kg	0.7 J	5	2.2	NA	2.2	4.4	NA	2.1	1.4	1.5							
Barium	7440-39-3	350	400	mg/kg	13.7	128	27	NA	13.3	25.8	NA	32.2	6.8	26.3							
Beryllium	7440-41-7	7.2	72	mg/kg	0.13 J	0.49 J	0.34 J	NA	0.42 J	0.26 J	NA	0.35 J	0.25 J	0.34 J							
Cadmium	7440-43-9	2.5	4.3	mg/kg	<1.2 U	<1.3 U	<1.1 U	NA	<1.2 U	<1.9 U	NA	<1.1 U	<1.2 U	<1.2 U							
Chromium, Hexavalent	18540-29-9	1	110	mg/kg	<2.5 U	<2.6 U	<2.4 U	NA	<2.5 U	<3.8 U	NA	<2.4 U	<2.4 U	<2.4 U							
Chromium, Total	7440-47-3	1	110	mg/kg	6.5	17.5	12.3	NA	9.3	10.8	NA	11	8.3	10.9							
Chromium, Trivalent	16065-83-1	30	180	mg/kg	6.5	17.5	12.3	NA	9.3	10.8	NA	11	8.3	10.9							
Copper	7440-50-8	50	270	mg/kg	4.3	35.9	8.9	NA	5.7	7.6	NA	7.3	5	6.1							
Cyanide	57-12-5	27	27	mg/kg	<0.29 U	<0.32 U	<0.28 U	NA	<0.3 U	<0.4 U	NA	<0.29 U	<0.28 U	<0.26 U							
Lead	7439-92-1	63	400	mg/kg	1.9	443	12.8	NA	5.6	16	NA	4.7	3.5	5.3							
Manganese	7439-96-5	1600	2000	mg/kg	241	351	159	NA	62.3	173	NA	161	51.3	131							
Mercury	7439-97-6	0.18	0.81	mg/kg	0.012 J	0.8	0.015 J	NA	0.014 J	0.16	NA	<0.02 U	0.0052 J	0.0061 J							
Nickel	7440-02-0	30	310	mg/kg	5.2	15.5	10.2	NA	9.1	8.4	NA	10.6	7.1	10.8							
Selenium	7782-49-2	3.9	180	mg/kg	<1.5 U	0.98 J	<1.4 U	NA	<1.5 U	0.27 J	NA	<1.4 U	<1.4 U	<1.5 U							
Silver	7440-22-4	2	180	mg/kg	<1.2 U	0.18 J	<1.1 U	NA	<1.2 U	<1.9 U	NA	<1.1 U	<1.2 U	<1.2 U							
Zinc	7440-66-6	109	10000	mg/kg	11.6	118	27.8	NA	20.4	22.4	NA	23.8	17.2	28.8							
<b>General Chemistry</b>																					
Solids, Percent	SOLID	NS	NS	Percent	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA							
<b>Perfluorooctanoic acids</b>																					
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEFOSAA)	2991-50-6	NS	NS	mg/kg	<0.00237 U	NA	<0.00233 U	<0.00216 U	NA	<0.00351 U	<0.00233 U	NA	<0.00212 U	<0.00225 U							
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	NS	NS	mg/kg	<0.00237 U	NA	<0.00233 U	<0.00216 U	NA	<0.00351 U	<0.00233 U	NA	<0.00212 U	<0.00225 U							
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	NS	NS	mg/kg	<0.00237 U	NA	<0.00233 U	<0.00216 U	NA	<0.00351 U	<0.00233 U	NA	<0.00212 U	<0.00225 U							
Perfluorobutanoic acid (PFBA)	375-22-4	NS	NS	mg/kg	<0.00237 U	NA	<0.00233 U	<0.00216 U	NA	<0.00351 U	<0.00233 U	NA	<0.00212 U	<0.00225 U							
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorodecanoic Acid (PFDA)	335-76-2	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorododecanoic Acid (PFDoA)	307-55-1	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluoroheptanoic acid (PFHpA)	375-85-9	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorohexanoic Acid (PFHxA)	307-24-4	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorononanoic Acid (PFNA)	375-95-1	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorooctanesulfonamide (FOSA)	754-91-6	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.00088	0.044	mg/kg	<0.00071 U	NA	0.00024 J	<0.00065 U	NA	0.00066 J	0.00066 J	NA	<0.00064 U	0.00044 J							
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00066	0.033	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluoropentanoic Acid (PFPeA)	2706-90-3	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorotetradecanoic Acid (PFTA)	376-06-7	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluorotridecanoic Acid (PFTDA)	72629-94-8	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	NS	NS	mg/kg	<0.00071 U	NA	<0.0007 U	<0.00065 U	NA	<0.00105 U	<0.0007 U	NA	<0.00064 U	<0.00067 U							
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2) (8:2FTS)	39108-34-4	NS	NS	mg/kg	<0.00356 U	NA	<0.0035 U	<0.00324 U	NA	<0.00526 U	<0.0035 U	NA	<0.00319 U	<0.00337 U							
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) (6:2FTS)	27619-97-2	NS	NS	mg/kg	<0.00237 U	NA	<0.00233 U	<0.00216 U	NA	<0.00351 U	<0.00233 U	NA	<0.00212 U	<0.00225 U							

Table 3
Site Management Plan
Documentation Soil Sample Analytical Results

2455 Third Avenue
Bronx, New York
NYSDEC BDP Site No.: C203125
Langan Project No.: 190051701

Table with columns: Analyte, CAS Number, NYSDEC Part 375 Unrestricted Use SCOs, NYSDEC Part 375 Restricted Use Residential SCOs, Location (Sample Name, Sample Date, Sample Depth, Unit), and 12 columns of analytical results for various locations (LB-45, LB-46, LB-47, LB-48).

**Table 3**  
**Site Management Plan**  
**Documentation Soil Sample Analytical Results**

2455 Third Avenue  
 Bronx, New York  
 NYSDEC BDP Site No.: C203125  
 Langan Project No.: 190051701

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	Location																	
				LB-45		LB-45		LB-46		LB-47		LB-47		LB-48		LB-48					
				Sample Name	058_LB-45-11-13-20210831	059_LB-45-15-16-20210831	057_LB-46-15-16-20210831	042_LB-47-15-16-20210831	089_LB-47-15-16-20210902	040_LB-48-5-7-20210831	041_LB-48-15-16-20210831	087_LB-48-5-7-20210902	088_LB-48-15-16-20210902								
				Sample Date	08/31/2021	08/31/2021	08/31/2021	08/31/2021	09/02/2021	08/31/2021	08/31/2021	09/02/2021	09/02/2021								
Sample Depth	11-13	15-16	15-16	15-16	15-16	5-7	15-16	5-7	15-16												
Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result												
<b>Herbicides</b>																					
Silvex (2,4,5-Tp)	93-72-1	3.8	100	mg/kg	<0.047 U	<0.046 U	<0.044 U	<0.039 U	NA	<0.039 U	<0.039 U	NA	NA								
<b>Polychlorinated Biphenyl</b>																					
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1254 (Aroclor 1254)	11097-69-1	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
Total PCBs	1336-36-3	0.1	1	mg/kg	<0.095 U	<0.092 U	<0.089 U	<0.079 U	NA	<0.078 U	<0.078 U	NA	NA								
<b>Metals</b>																					
Arsenic	7440-38-2	13	16	mg/kg	2.1	2.4	1.5	0.8 J	NA	2.1	0.88 J	NA	NA								
Barium	7440-39-3	350	400	mg/kg	17.4	24.4	14.9	11.6 J	NA	17	19.4	NA	NA								
Beryllium	7440-41-7	7.2	72	mg/kg	0.38 J	0.43 J	0.31 J	0.16 J	NA	0.25 J	0.17 J	NA	NA								
Cadmium	7440-43-9	2.5	4.3	mg/kg	<1.4 U	<1.3 U	<1.2 U	<1.2 U	NA	<1.1 U	<1.1 U	NA	NA								
Chromium, Hexavalent	18540-29-9	1	110	mg/kg	<2.8 U	<2.8 U	<2.7 U	<2.4 U	NA	<2.3 U	<2.3 U	NA	NA								
Chromium, Total	7440-47-3	1	110	mg/kg	11.5	14.1	11.5	8.4	NA	9	7.7	NA	NA								
Chromium, Trivalent	16065-83-1	30	180	mg/kg	11.5	14.1	11.5	8.4	NA	9	7.7	NA	NA								
Copper	7440-50-8	50	270	mg/kg	6.9	8.2	8.1	6.2 J	NA	8.8	7.9	NA	NA								
Cyanide	57-12-5	27	27	mg/kg	<0.34 U	<0.3 U	<0.3 U	<0.28 U	NA	<0.28 U	<0.27 U	NA	NA								
Lead	7439-92-1	63	400	mg/kg	3.9	5.1	5.1	2.7 J	NA	10	38	NA	NA								
Manganese	7439-96-5	1600	2000	mg/kg	107	171	389	95.7 J	NA	111	83.7	NA	NA								
Mercury	7439-97-6	0.18	0.81	mg/kg	0.019 J	0.02 J	0.014 J	<0.02 U	NA	0.057	0.0045 J	NA	NA								
Nickel	7440-02-0	30	310	mg/kg	9.6	11.1	10.6	6.7 J	NA	9.4	7	NA	NA								
Selenium	7782-49-2	3.9	180	mg/kg	<1.7 U	<1.6 U	<1.5 U	<1.5 U	NA	<1.4 U	<1.4 U	NA	NA								
Silver	7440-22-4	2	180	mg/kg	<1.4 U	<1.3 U	<1.2 U	<1.2 U	NA	<1.1 U	<1.1 U	NA	NA								
Zinc	7440-66-6	109	10000	mg/kg	23.6	27.4	19.8	12	NA	25.2	32.6	NA	NA								
<b>General Chemistry</b>																					
Solids, Percent	SOLID	NS	NS	Percent	NA	NA	NA	NA	NA	NA	NA	NA	NA								
<b>Perfluorooctanoic acids</b>																					
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	NS	NS	mg/kg	<0.00277 U	<0.0026 U	<0.00248 U	<0.00218 U	NA	<0.00223 U	<0.00224 U	NA	NA								
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMtFOSAA)	2355-31-9	NS	NS	mg/kg	<0.00277 U	<0.0026 U	<0.00248 U	<0.00218 U	NA	<0.00223 U	<0.00224 U	NA	NA								
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	NS	NS	mg/kg	<0.00277 U	<0.0026 U	<0.00248 U	<0.00218 U	NA	<0.00223 U	<0.00224 U	NA	NA								
Perfluorobutanoic acid (PFBA)	375-22-4	NS	NS	mg/kg	<0.00277 U	<0.0026 U	<0.00248 U	<0.00218 U	NA	<0.00223 U	<0.00224 U	NA	NA								
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorodecanoic Acid (PFDA)	335-76-2	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorododecanoic Acid (PFDoA)	307-55-1	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluoroheptanoic acid (PFHpA)	375-85-9	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorohexanoic Acid (PFHxA)	307-24-4	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorononanoic Acid (PFNA)	375-95-1	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorooctanesulfonamide (FOSA)	754-91-6	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorooctanoic Acid (PFOS)	1763-23-1	0.00088	0.044	mg/kg	<0.00083 U	0.00026 J	<0.00075 U	0.0003 J	NA	0.00042 J	<0.00067 U	NA	NA								
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00066	0.033	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluoropentanoic Acid (PFPeA)	2706-90-3	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorotetradecanoic Acid (PFTA)	376-06-7	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluorotridecanoic Acid (PFTDA)	72629-94-8	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	NS	NS	mg/kg	<0.00083 U	<0.00078 U	<0.00075 U	<0.00065 U	NA	<0.00067 U	<0.00067 U	NA	NA								
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (B:2) (B:2FTS)	39108-34-4	NS	NS	mg/kg	<0.00415 U	<0.0039 U	<0.00373 U	<0.00327 U	NA	<0.00335 U	<0.00335 U	NA	NA								
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (B:2) (B:2FTS)	27619-97-2	NS	NS	mg/kg	<0.00277 U	<0.0026 U	<0.00248 U	<0.00218 U	NA	<0.00223 U	<0.00224 U	NA	NA								

Table 3 Site Management Plan Documentation Soil Sample Analytical Results

2455 Third Avenue Bronx, New York NYSDEC BDP Site No.: C203125 Langan Project No.: 190051701

Table with columns for Analyte, CAS Number, NYSDEC Part 375 Unrestricted Use SCOs, NYSDEC Part 375 Restricted Use Residential SCOs, Location (Sample Name, Sample Date, Sample Depth), and analytical results for various sites (LB-49, PE-1, etc.) and depths (8-10, 15-16, 8-8.5, 8-8.5).



Table 3
Site Management Plan
Documentation Soil Sample Analytical Results

2455 Third Avenue
Bronx, New York
NYSDEC BDP Site No.: C203125
Langan Project No.: 190051701

Table with 25 columns for analytes and 25 columns for sample locations (PE-7 to PE-22). Rows include Volatile Organic Compounds, Semi-Volatile Organic Compounds, and Pesticides. Each cell contains a numerical value or a unit (e.g., mg/kg, ug/kg).





**Table 3**  
**Site Management Plan**  
**Documentation Soil Sample Analytical Results**

2455 Third Avenue  
 Bronx, New York  
 NYSDEC BDP Site No.: C203125  
 Langan Project No.: 190051701

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	Location	PE-23	PE-23	PE-23_6	PE-23_E	PE-23_N	PE-23_S	PE-23_W	
				Sample Name	109_PE-23	110_DUP-6	138_PE-23_6	140_PE-23_E	139_PE-23_N	141_PE-23_S	142_PE-23_W	
				Sample Date	10/28/2021	10/28/2021	02/15/2022	02/15/2022	02/15/2022	02/15/2022		
				Sample Depth	4-4.5	4-4.5	6-6.5	6-6.5	6-6.5	6-6.5		
Unit	Result	Result	Result	Result	Result	Result						
<b>Volatile Organic Compounds</b>												
1,1,1-Trichloroethane	71-55-6	0.68	100	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA	NA	
1,1-Dichloroethane	75-34-3	0.27	26	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,1-Dichloroethene	75-35-4	0.33	100	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,2,4-Trimethylbenzene	95-63-6	3.6	52	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,2-Dichlorobenzene	95-50-1	1.1	100	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,2-Dichloroethane	107-06-2	0.02	3.1	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	8.4	52	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,3-Dichlorobenzene	541-73-1	2.4	49	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,4-Dichlorobenzene	106-46-7	1.8	13	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
1,4-Dioxane (P-Dioxane)	123-91-1	0.1	13	mg/kg	<0.024 U	<0.023 U	NA	NA	NA	NA		
Acetone	67-64-1	0.05	100	mg/kg	<0.0071 U	0.011	NA	NA	NA	NA		
Benzene	71-43-2	0.06	4.8	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Carbon Tetrachloride	56-23-5	0.76	2.4	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Chlorobenzene	108-90-7	1.1	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Chloroform	67-66-3	0.37	49	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Cis-1,2-Dichloroethene	156-59-2	0.25	100	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Ethylbenzene	100-41-4	1	41	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Methyl Ethyl Ketone (2-Butanone)	78-93-3	0.12	100	ma/ka	<0.0059 U	<0.0057 U	NA	NA	NA	NA		
Methylene Chloride	75-09-2	0.05	100	mg/kg	<0.0024 U	<0.0023 U	NA	NA	NA	NA		
n-Butylbenzene	104-51-8	12	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
n-Propylbenzene	103-65-1	3.9	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Sec-Butylbenzene	135-98-8	11	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
T-Butylbenzene	98-06-6	5.9	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Tert-Butyl Methyl Ether	1634-04-4	0.93	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Tetrachloroethene (PCE)	127-18-4	1.3	19	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Toluene	108-88-3	0.7	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Total Xylenes	1330-20-7	0.26	100	mg/kg	<0.0024 U	<0.0023 U	NA	NA	NA	NA		
Trans-1,2-Dichloroethene	156-60-5	0.19	100	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Trichloroethene (TCE)	79-01-6	0.47	21	ma/ka	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
Vinyl Chloride	75-01-4	0.02	0.9	mg/kg	<0.0012 U	<0.0011 U	NA	NA	NA	NA		
<b>Semi-Volatile Organic Compounds</b>												
1,4-Dioxane (P-Dioxane)	123-91-1	0.1	13	ma/ka	<0.04 U	<0.039 U	NA	NA	NA	NA		
2-Methylphenol (o-Cresol)	95-48-7	0.33	100	mg/kg	<0.4 U	<0.39 U	NA	NA	NA	NA		
3 & 4 Methylphenol (m&p Cresol)	65794-96-9	0.33	100	mg/kg	<0.4 U	<0.39 U	NA	NA	NA	NA		
Acenaphthene	83-32-9	20	100	mg/kg	<0.4 J	0.014 J	NA	NA	NA	NA		
Acenaphthylene	208-96-8	100	100	mg/kg	0.014 J	0.014 J	NA	NA	NA	NA		
Anthracene	120-12-7	100	100	mg/kg	0.033 J	0.034 J	NA	NA	NA	NA		
Benzo(a)anthracene	56-55-3	1	1	mg/kg	0.087	0.13	NA	NA	NA	NA		
Benzo(a)pyrene	50-32-8	1	1	mg/kg	0.072	0.13	NA	NA	NA	NA		
Benzo(b)fluoranthene	205-99-2	1	1	mg/kg	0.089 J	0.17 J	NA	NA	NA	NA		
Benzo(g,h,i)Perylene	191-24-2	100	100	mg/kg	0.39 J	0.067 J	NA	NA	NA	NA		
Benzo(k)fluoranthene	207-08-9	0.8	3.9	ma/ka	0.035 J	0.062	NA	NA	NA	NA		
Chrysene	218-01-9	1	3.9	ma/ka	0.068 J	0.12 J	NA	NA	NA	NA		
Dibenz(a,h)anthracene	53-70-3	0.33	0.33	ma/ka	0.054	<0.039 U	NA	NA	NA	NA		
Dibenzofuran	132-64-9	7	59	ma/ka	0.0091 J	0.0055 J	NA	NA	NA	NA		
Fluoranthene	206-44-0	100	100	mg/kg	0.15 J	0.27 J	NA	NA	NA	NA		
Fluorene	86-73-7	30	100	mg/kg	0.0098 J	0.0086 J	NA	NA	NA	NA		
Hexachlorobenzene	118-74-1	0.33	1.2	mg/kg	<0.04 U	<0.039 U	NA	NA	NA	NA		
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	mg/kg	0.41 J	0.11 J	NA	NA	NA	NA		
Naphthalene	91-20-3	12	100	mg/kg	0.024 J	<0.39 U	NA	NA	NA	NA		
Pentachlorophenol	87-86-5	0.8	6.7	mg/kg	<0.32 U	<0.32 U	NA	NA	NA	NA		
Phenanthrene	85-01-8	100	100	mg/kg	0.098 J	0.16 J	NA	NA	NA	NA		
Phenol	108-95-2	0.33	100	mg/kg	<0.4 U	<0.39 U	NA	NA	NA	NA		
Pyrene	129-00-0	100	100	mg/kg	0.14 J	0.24 J	NA	NA	NA	NA		
<b>Pesticides</b>												
4,4'-DDD	72-54-8	0.0033	13	ma/ka	<0.0081 U	<0.008 U	NA	NA	NA	NA		
4,4'-DDE	72-55-9	0.0033	8.9	ma/ka	<0.0081 U	<0.008 U	NA	NA	NA	NA		
4,4'-DDT	50-29-3	0.0033	7.9	ma/ka	0.0044 J	0.0034 J	NA	NA	NA	NA		
Aldrin	309-00-2	0.005	0.097	ma/ka	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Alpha BHC (Alpha Hexachlorocyclohexane)	319-84-6	0.02	0.48	mg/kg	<0.0024 U	<0.0024 U	NA	NA	NA	NA		
Alpha Chlordane	5103-71-9	0.094	4.2	mg/kg	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Alpha Endosulfan	959-98-8	2.4	24	mg/kg	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Beta Bhc (Beta Hexachlorocyclohexane)	319-85-7	0.036	0.36	mg/kg	<0.0024 U	<0.0024 U	NA	NA	NA	NA		
Beta Endosulfan	33213-65-9	2.4	24	mg/kg	<0.0081 UT	<0.008 UT	NA	NA	NA	NA		
Chlordane (Technical)	12789-03-6	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA		
Delta Bhc (Delta Hexachlorocyclohexane)	319-86-8	0.04	100	mg/kg	<0.0024 U	<0.0024 U	NA	NA	NA	NA		
Dieldrin	60-57-1	0.005	0.2	mg/kg	<0.0024 U	<0.0024 U	NA	NA	NA	NA		
Endosulfan Sulfate	1031-07-8	2.4	24	mg/kg	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Endrin	72-20-8	0.014	11	ma/ka	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Endrin Aldehyde	7421-93-4	NS	NS	ma/ka	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Endrin Ketone	53494-70-5	NS	NS	ma/ka	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Gamma Bhc (Lindane)	58-89-9	0.1	1.3	ma/ka	<0.0024 U	<0.0024 U	NA	NA	NA	NA		
Heptachlor	76-44-8	0.042	2.1	mg/kg	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Heptachlor Epoxide	1024-57-3	NS	NS	mg/kg	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Methoxychlor	72-43-5	NS	NS	mg/kg	<0.0081 U	<0.008 U	NA	NA	NA	NA		
Toxaphene	8001-35-2	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA		

**Table 3**  
**Site Management Plan**  
**Documentation Soil Sample Analytical Results**

2455 Third Avenue  
 Bronx, New York  
 NYSDEC BDP Site No.: C203125  
 Langan Project No.: 190051701

Analyte	CAS Number	NYSDEC Part 375 Unrestricted Use SCOs	NYSDEC Part 375 Restricted Use Residential SCOs	Location							
				PE-23	PE-23	PE-23_6	PE-23_E	PE-23_N	PE-23_S	PE-23_W	
				Sample Name	109_PE-23	110_DUP-6	138_PE-23_6	140_PE-23_E	139_PE-23_N	141_PE-23_S	142_PE-23_W
				Sample Date	10/28/2021	10/28/2021	02/15/2022	02/15/2022	02/15/2022	02/15/2022	02/15/2022
Sample Depth	4-4.5	4-4.5	6-6.5	6-6.5	6-6.5	6-6.5	6-6.5				
Unit	Result	Result	Result	Result	Result	Result	Result				
<b>Herbicides</b>											
Silvex (2,4,5-Tp)	93-72-1	3.8	100	mg/kg	<0.04 U	<0.04 U	NA	NA	NA	NA	NA
<b>Polychlorinated Biphenyl</b>											
PCB-1016 (Aroclor 1016)	12674-11-2	NS	NS	ma/ka	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1221 (Aroclor 1221)	11104-28-2	NS	NS	ma/ka	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1232 (Aroclor 1232)	11141-16-5	NS	NS	ma/ka	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1242 (Aroclor 1242)	53469-21-9	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1248 (Aroclor 1248)	12672-29-6	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1254 (Aroclor 1254)	11097-69-1	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1260 (Aroclor 1260)	11096-82-5	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1262 (Aroclor 1262)	37324-23-5	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
PCB-1268 (Aroclor 1268)	11100-14-4	NS	NS	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
Total PCBs	1336-36-3	0.1	1	mg/kg	<0.081 U	<0.08 U	NA	NA	NA	NA	NA
<b>Metals</b>											
Arsenic	7440-39-2	13	16	mg/kg	20.4	20	NA	NA	NA	NA	NA
Barium	7440-39-3	350	400	ma/ka	8,890	8,580	NA	NA	NA	NA	NA
Beryllium	7440-41-7	7.2	72	ma/ka	0.51	0.39 J	NA	NA	NA	NA	NA
Cadmium	7440-43-9	2.5	4.3	ma/ka	0.28 J	0.3 J	NA	NA	NA	NA	NA
Chromium, Hexavalent	18540-29-9	1	110	ma/ka	<2.4 U	2.2 J	NA	NA	NA	NA	NA
Chromium, Total	7440-47-3	1	110	mg/kg	23.9	21.5	NA	NA	NA	NA	NA
Chromium, Trivalent	16065-83-1	30	180	mg/kg	23.9	19.3	NA	NA	NA	NA	NA
Copper	7440-50-8	50	270	mg/kg	229	347	NA	NA	NA	NA	NA
Cyanide	57-12-5	27	27	mg/kg	0.24 J	<0.37 U	NA	NA	NA	NA	NA
Lead	7439-92-1	63	400	mg/kg	78,100	72,200	579 J	256 J	3,180 J	1,230 J	3,950 J
Manganese	7439-96-5	1600	2000	mg/kg	862	656	NA	NA	NA	NA	NA
Mercury	7439-97-6	0.18	0.81	mg/kg	0.15 J	0.066 J	NA	NA	NA	NA	NA
Nickel	7440-02-0	30	310	mg/kg	10.8	10.8	NA	NA	NA	NA	NA
Selenium	7782-49-2	3.9	180	mg/kg	0.39 J	0.38 J	NA	NA	NA	NA	NA
Silver	7440-22-4	2	180	mg/kg	1.6	1.7	NA	NA	NA	NA	NA
Zinc	7440-66-6	109	10000	mg/kg	8,060	5,790	NA	NA	NA	NA	NA
<b>General Chemistry</b>											
Solids, Percent	SOLID	NS	NS	Percent	NA	NA	87.7	91.8	86	88.5	84.4
<b>Perfluorooctanoic acids</b>											
N-ethyl perfluorooctane- sulfonamidoacetic Acid (NEFOSAA)	2991-50-6	NS	NS	mg/kg	<0.00236 U	<0.00227 U	NA	NA	NA	NA	NA
N-methyl perfluorooctane- sulfonamidoacetic Acid (NMeFOSAA)	2365-31-9	NS	NS	mg/kg	<0.00236 U	<0.00227 U	NA	NA	NA	NA	NA
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	NS	NS	mg/kg	<0.00236 U	<0.00227 U	NA	NA	NA	NA	NA
Perfluorobutanoic acid (PFBA)	375-22-4	NS	NS	mg/kg	<0.00236 U	<0.00227 U	NA	NA	NA	NA	NA
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorodecanoic Acid (PFDA)	335-76-2	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorododecanoic Acid (PFDoA)	307-55-1	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluoroheptanoic acid (PFHpA)	375-86-9	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	NS	NS	ma/ka	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorohexanoic Acid (PFHxA)	307-24-4	NS	NS	ma/ka	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorononanoic Acid (PFNA)	375-95-1	NS	NS	ma/ka	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorooctanesulfonamide (FOSA)	754-91-6	NS	NS	ma/ka	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.00088	0.044	mg/kg	<0.00071 U	0.00026 J	NA	NA	NA	NA	NA
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00066	0.033	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluoropentanoic Acid (PFPeA)	2706-90-3	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorotetradecanoic Acid (PFTA)	376-06-7	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluorotridecanoic Acid (PFTDA)	72629-94-8	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	NS	NS	mg/kg	<0.00071 U	<0.00068 U	NA	NA	NA	NA	NA
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2) (8:2FTS)	39108-34-4	NS	NS	mg/kg	<0.00354 U	<0.00341 U	NA	NA	NA	NA	NA
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) (6:2FTS)	27619-97-2	NS	NS	mg/kg	<0.00236 U	<0.00227 U	NA	NA	NA	NA	NA

**Table 3**  
**Site Management Plan**  
**Documentation Soil Sample Analytical Results**

**2455 Third Avenue**  
**Bronx, New York**  
**NYSDEC BDP Site No.: C203125**  
**Langan Project No.: 190051701**

**Notes:**

Material represented by documentation endpoint soil samples PE-1-NW (8-8.5 ft) and PE-23 (4-4.5 ft) was over-excavated based on the analytical results. These sample locations were removed by excavation and are no longer present on site.

CAS - Chemical Abstract Service  
 NS - No standard  
 mg/kg - milligram per kilogram  
 NA - Not analyzed  
 RL - Reporting limit  
 <RL - Not detected

Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Use Restricted-Residential Soil Cleanup Objectives (SCO).

Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Part 375 Remedial Programs Guidelines for Sampling and Analysis of Per- and Polyfluoroalkyl Substances (PFAS) Unrestricted Use, Restricted Use Restricted-Residential, and Protection of Groundwater Guidance Values (June 2021).

Criterion comparisons for 3- & 4-methylphenol (m&p cresol) are provided for reference. Promulgated SCOs are for 3-methylphenol (m-cresol) and 4-methylphenol (p-cresol).

The criteria comparison for total chromium is provided for reference. The promulgated SCO shown is for hexavalent chromium.

**Qualifiers:**

J - The analyte was detected above the method detection limit (MDL), but below the RL; therefore, the result is an estimated concentration.

B - The analyte was found in the associated analysis batch blank.

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ - The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.

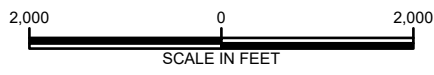
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

**Exceedance Summary:**

- 10** - Result exceeds Unrestricted Use SCOs
- 10** - Result exceeds Restricted Use Restricted-Residential SCOs

# FIGURES





**NOTES:**  
 1. TOPOGRAPHIC BASEMAP PROVIDED THROUGH LANGAN'S SUBSCRIPTION TO ESRI'S ARCGIS SOFTWARE LICENSING.  
 2. PARCEL BOUNDARIES PROVIDED THROUGH THE NYC DEPARTMENT OF PLANNING'S MAPPLUTO 22V1, UPDATED 2022.

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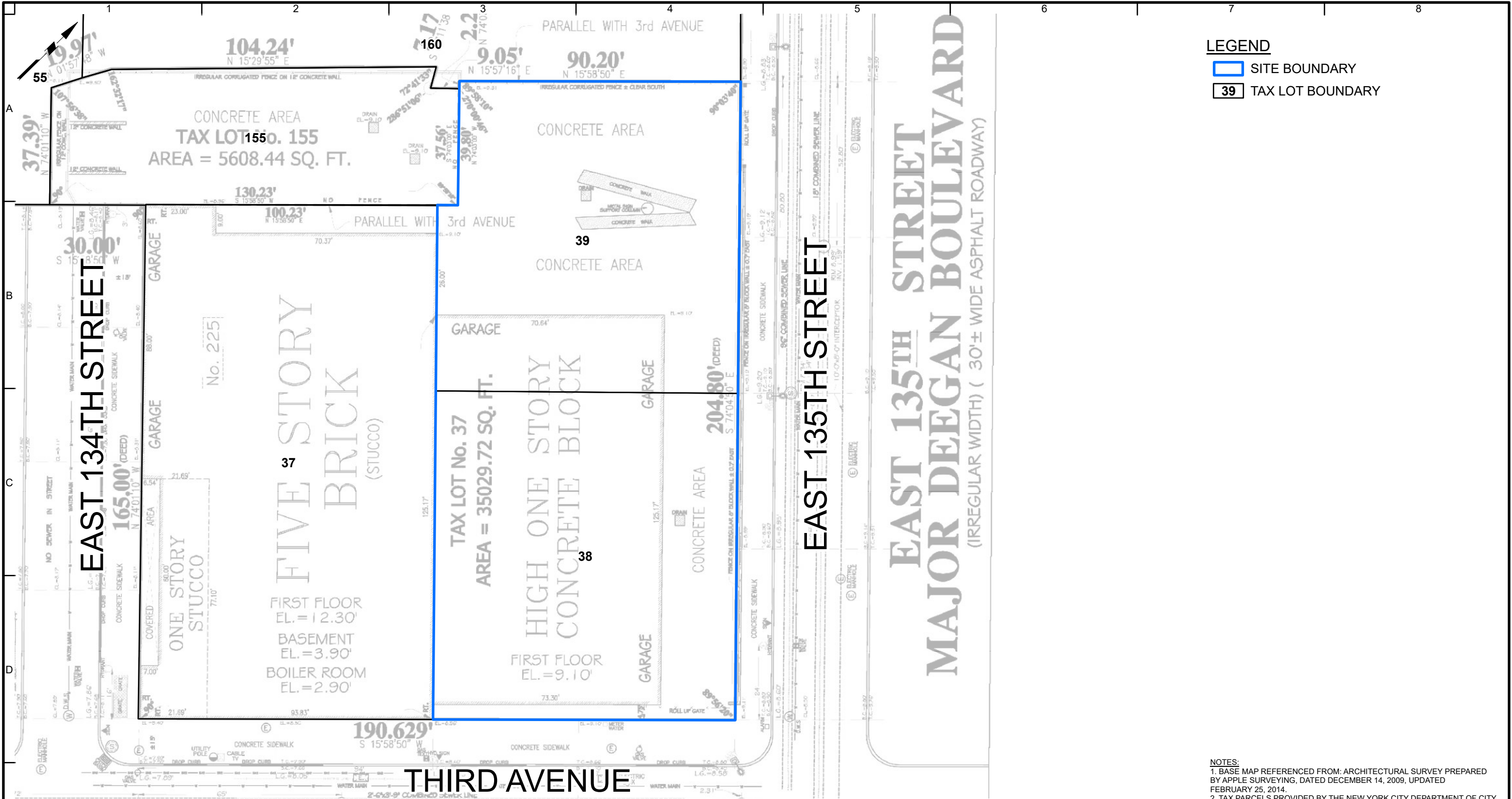
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 Langan Engineering, Environmental, Surveying,  
 Landscape Architecture and Geology, D.P.C.  
 Langan International LLC  
 Collectively known as Langan

Project  
**2455 THIRD AVENUE**  
 BLOCK No. 2319, LOT Nos. 38 & 39  
 BRONX NEW YORK

Figure Title  
**SITE LOCATION MAP**

Project No. 190051701	Figure No. 1
Date 7/12/2022	
Scale 1"=2,000'	
Drawn By IHB	
Submission Date	
	Sheet 1 of 10

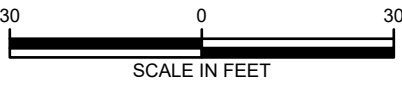




**LEGEND**  
 [Blue Outline] SITE BOUNDARY  
 [Black Outline] TAX LOT BOUNDARY

**NOTES:**  
 1. BASE MAP REFERENCED FROM: ARCHITECTURAL SURVEY PREPARED BY APPLE SURVEYING, DATED DECEMBER 14, 2009, UPDATED FEBRUARY 25, 2014.  
 2. TAX PARCELS PROVIDED BY THE NEW YORK CITY DEPARTMENT OF CITY PLANNING, PLUTO 22V1 COPYRIGHT 2022.

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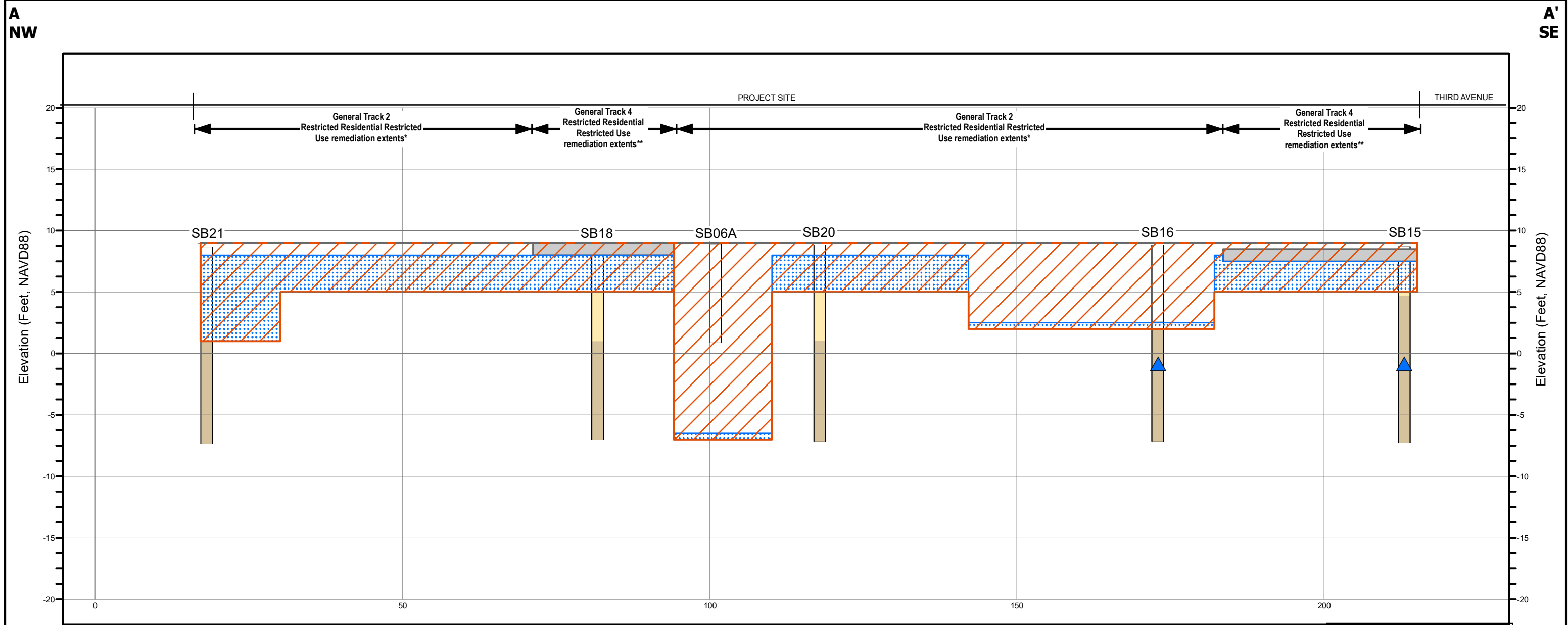


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Project  
**2455 THIRD AVENUE**  
 BLOCK No. 2319, LOT Nos. 38 & 39  
 BRONX NEW YORK

Figure Title  
**SITE PLAN**

Project No. 190051701	Figure No.
Date 7/12/2022	<b>2</b>
Scale 1"=30'	
Drawn By IHB	Sheet 2 of 10



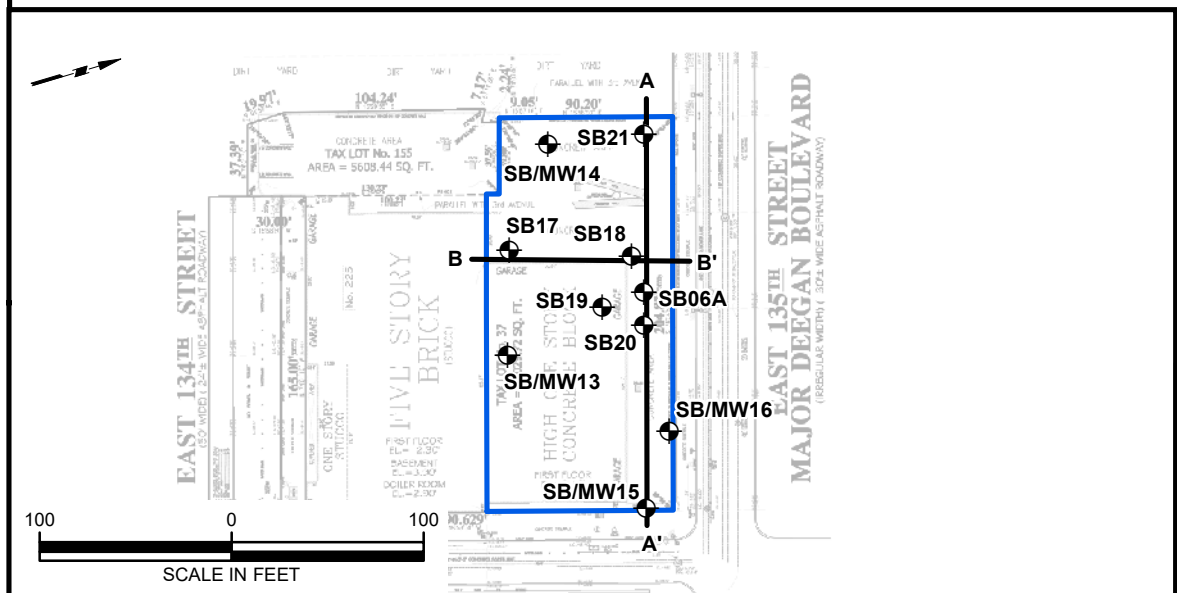
\*No cover system required.  
 \*\*Cover system is comprised of a 1- to 4- foot-thick concrete slab.

**LEGEND**

**MATERIAL SYMBOLS:**

- FILL
- CONCRETE SLAB COVER SYSTEM
- SAND
- EXCAVATION EXTENTS
- GROUNDWATER ELEVATION
- NYSDEC-APPROVED BACKFILL CONSISTING OF #57 BLUE STONE, MANUFACTURED STONE, RECYCLED STONE, SAND, OR RCA.

- NOTES:**
1. VERTICAL EXAGGERATION 2:1
  2. BASE MAP REFERENCED FROM: ARCHITECTURAL SURVEY PREPARED BY APPLE SURVEYING, DATED DECEMBER 14, 2009, UPDATED FEBRUARY 25, 2014.
  3. GROUND ELEVATION DERIVED FROM LIDAR, PROVIDED BY THE CITY OF NEW YORK, DATED 2010.
  4. NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
  5. REMEDIAL EXCAVATION EXTENTS BASED ON ENVIRONMENTAL EASEMENT SURVEY PREPARED BY MONTROSE SURVEYING CO., LLP AND DATED 10 MAY 2022.
  6. FOUNDATION CONSTRUCTION DETAILS TAKEN FROM FO-100 FULL FOUNDATION PLAN PREPARED BY ENGINEERING GROUP ASSOCIATES, P.C. DATED 21 JANUARY 2022.
  7. THE EXCAVATION AND BACKFILL DEPTHS PRESENTED ON THIS DRAWING ARE BASED ON VISUAL OBSERVATION IN THE FIELD BY A LANGAN REPRESENTATIVE AND FIELD-TAPE MEASUREMENTS.
  8. REFER TO FIGURE 6 FOR PLAN VIEW EXTENTS OF THE COMPOSITE COVER SYSTEM.



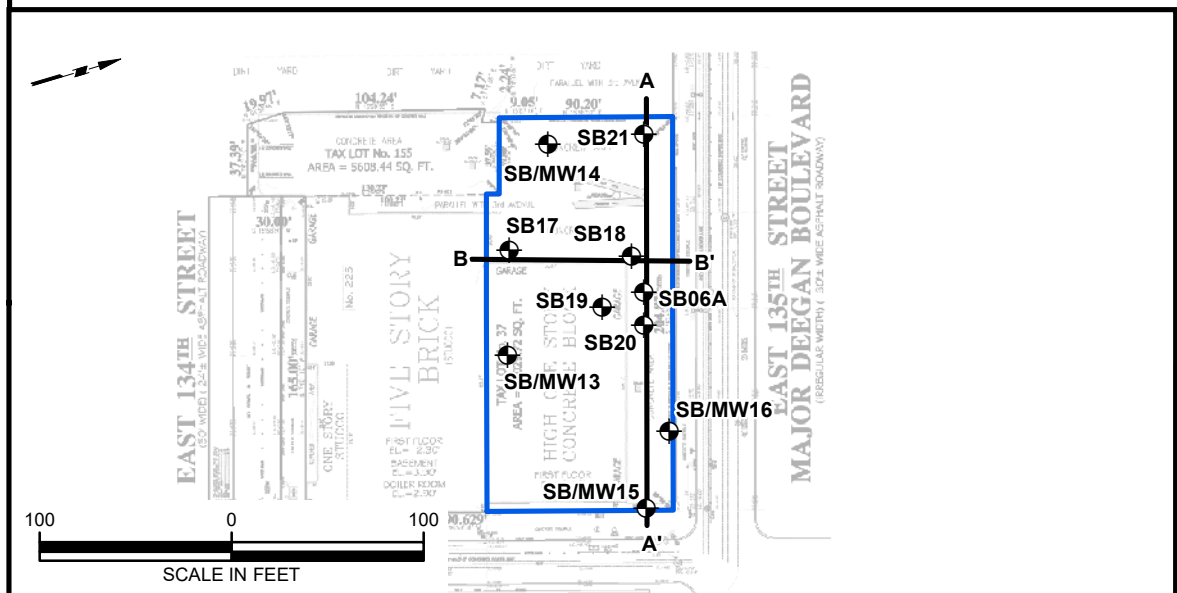
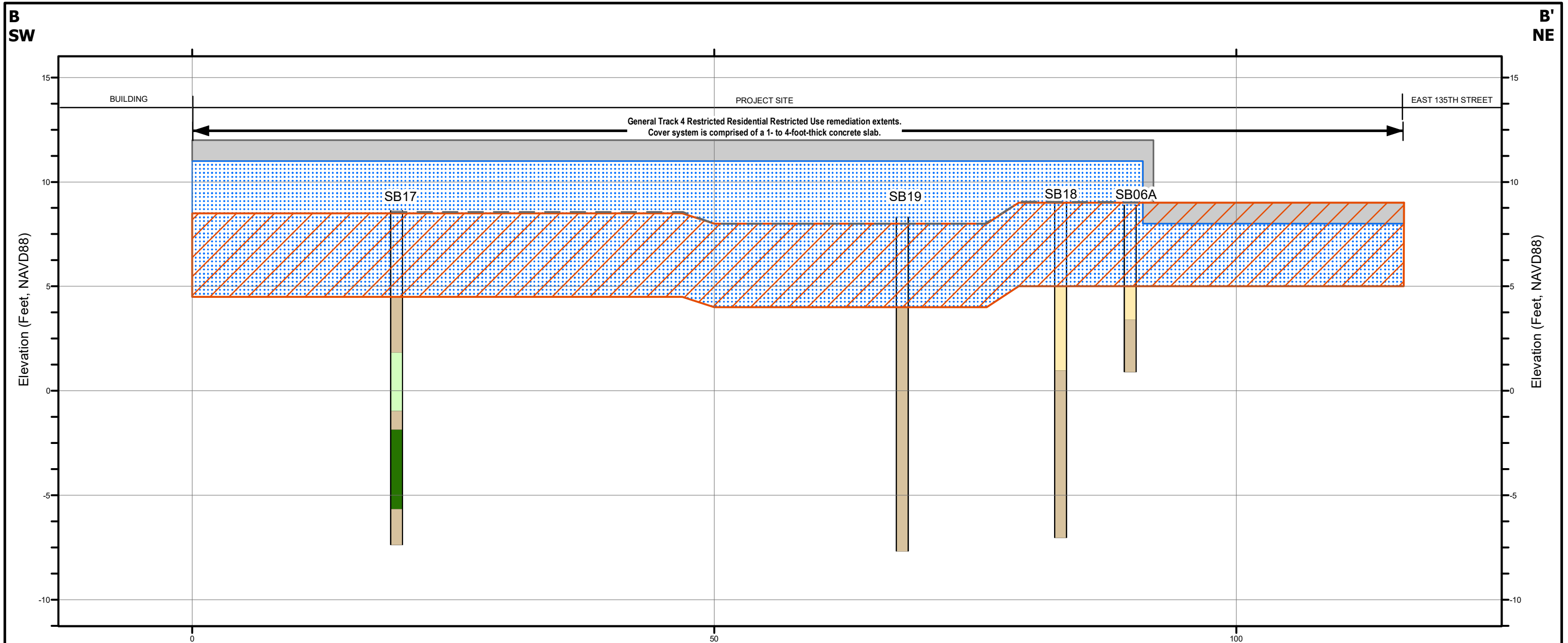
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Project  
**2455 THIRD AVENUE**  
 BLOCK No. 2319, LOT Nos. 38 & 39  
 BRONX NEW YORK

Drawing Title  
**SUBSURFACE  
 PROFILE  
 A-A'**

Project No. 190051701	<b>3A</b>
Date 12/9/2022	
Scale As Shown	
Drawn By IHB	





**LEGEND**

**MATERIAL SYMBOLS:**

- SILT
- FILL
- SAND
- PEAT
- CONCRETE SLAB COVER SYSTEM
- EXCAVATION EXTENTS
- NYSDEC-APPROVED BACKFILL CONSISTING OF #57 BLUE STONE, MANUFACTURED STONE, RECYCLED STONE, SAND, OR RCA.

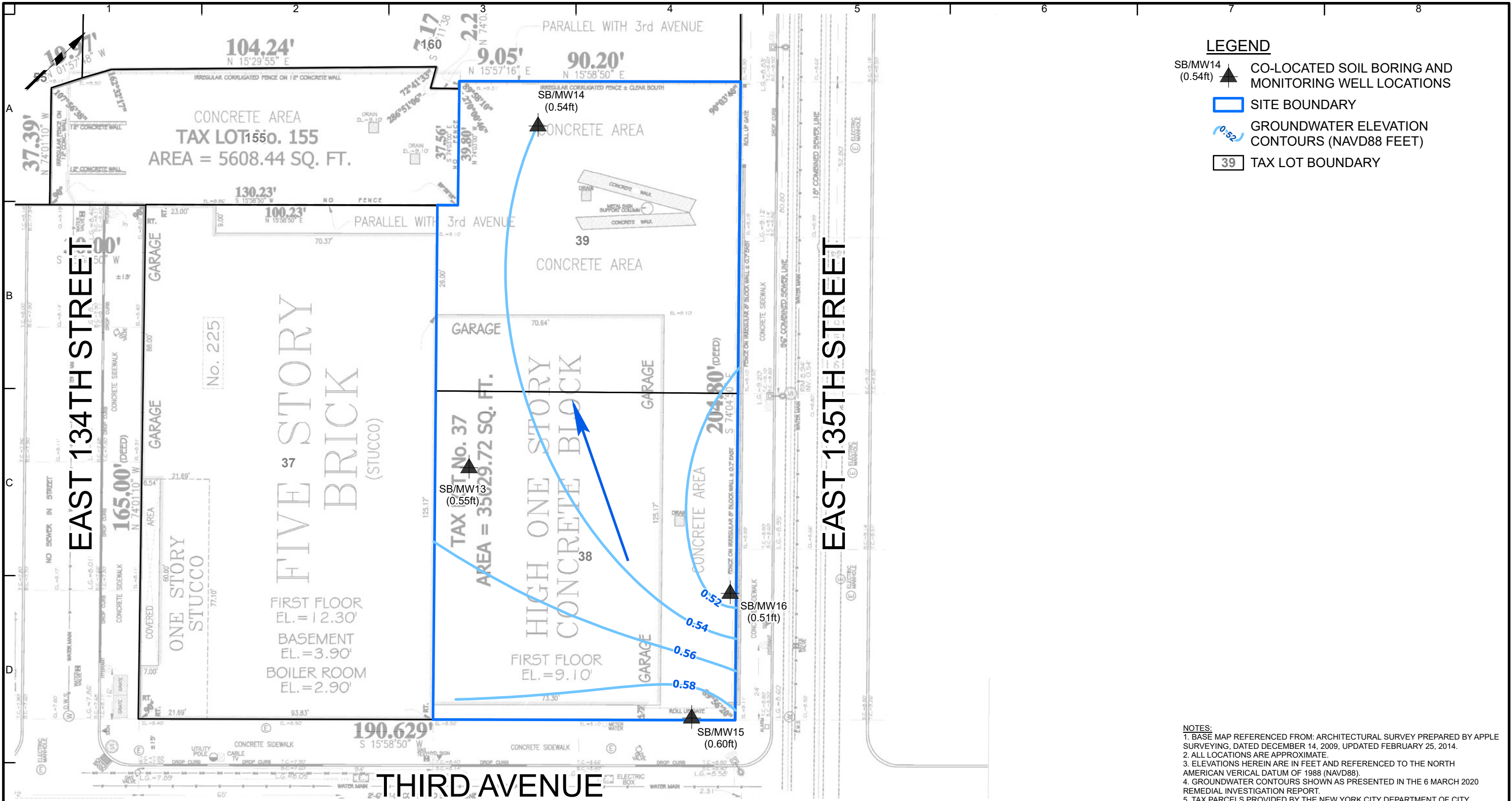
- NOTES:**
1. VERTICAL EXAGGERATION 2:1
  2. BASE MAP REFERENCED FROM: ARCHITECTURAL SURVEY PREPARED BY APPLE SURVEYING, DATED DECEMBER 14, 2009, UPDATED FEBRUARY 25, 2014.
  3. GROUND ELEVATION DERIVED FROM LIDAR, PROVIDED BY THE CITY OF NEW YORK, DATED 2010.
  4. NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
  5. REMEDIAL EXCAVATION EXTENTS BASED ON ENVIRONMENTAL EASEMENT SURVEY PREPARED BY MONTROSE SURVEYING CO., LLP AND DATED 10 MAY 2022.
  6. FOUNDATION CONSTRUCTION DETAILS TAKEN FROM FO-100 FULL FOUNDATION PLAN PREPARED BY ENGINEERING GROUP ASSOCIATES, P.C. DATED 21 JANUARY 2022.
  7. THE EXCAVATION AND BACKFILL DEPTHS PRESENTED ON THIS DRAWING ARE BASED ON VISUAL OBSERVATION IN THE FIELD BY A LANGAN REPRESENTATIVE AND FIELD-TAPE MEASUREMENTS.
  8. REFER TO FIGURE 6 FOR PLAN VIEW EXTENTS OF THE COMPOSITE COVER SYSTEM.

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Project  
**2455 THIRD AVENUE**  
 BLOCK No. 2319, LOT Nos. 38 & 39  
 BRONX NEW YORK

Drawing Title  
**SUBSURFACE  
 PROFILE  
 B-B'**

Project No. 190051701	<b>3B</b>
Date 12/9/2022	
Scale As Shown	
Drawn By IHB	



**LEGEND**

- SB/MW14 (0.54ft) CO-LOCATED SOIL BORING AND MONITORING WELL LOCATIONS
- SITE BOUNDARY
- GROUNDWATER ELEVATION CONTOURS (NAVD88 FEET)
- TAX LOT BOUNDARY

**NOTES:**

1. BASE MAP REFERENCED FROM: ARCHITECTURAL SURVEY PREPARED BY APPLE SURVEYING, DATED DECEMBER 14, 2009, UPDATED FEBRUARY 25, 2014.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ELEVATIONS HEREIN ARE IN FEET AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. GROUNDWATER CONTOURS SHOWN AS PRESENTED IN THE 6 MARCH 2020 REMEDIAL INVESTIGATION REPORT.
5. TAX PARCELS PROVIDED BY THE NEW YORK CITY DEPARTMENT OF CITY PLANNING, PLUTO 21V4 COPYRIGHT 2021.

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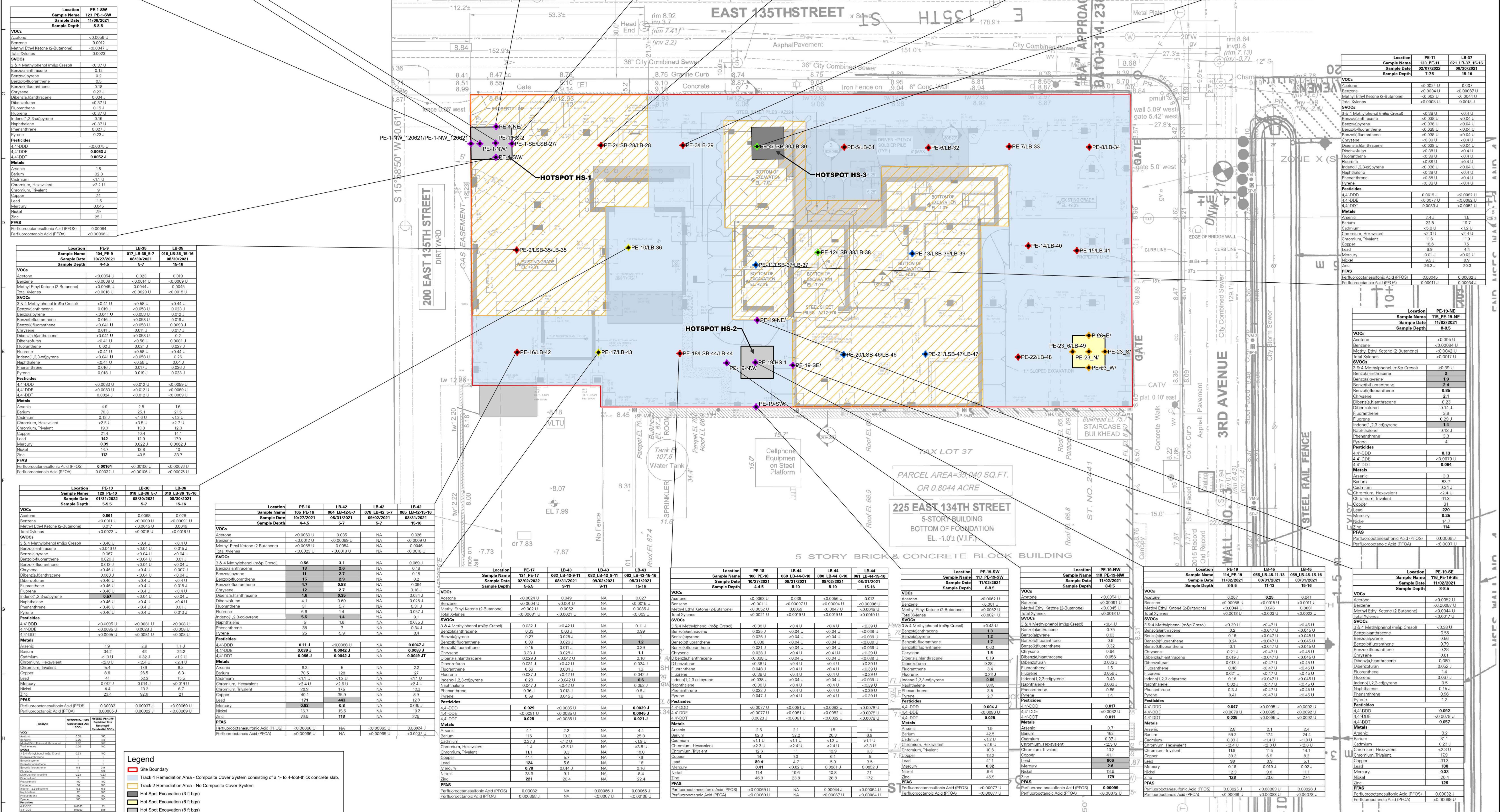
Project  
**2455 THIRD AVENUE**  
 BLOCK No. 2319, LOT Nos. 38 & 39  
 BRONX NEW YORK

Figure Title  
**GROUNDWATER CONTOUR MAP**

Project No. 190051701	Figure No. <b>4</b>
Date 7/26/2022	
Scale 1"=30'	
Drawn By IHB	



Location	PE-1-NW	PE-1-NE	PE-1-SW	PE-1-SE	PE-2	PE-3	PE-4	PE-4	LB-30
Sample Name	126 PE-1-NW	121 PE-1-NE	125 PE-1-SW	122 PE-1-SE	097 PE-2	099 PE-3	092 PE-4	178 DWP-7	095 LB-30
Sample Date	12/08/2021	11/02/2021	11/08/2021	11/02/2021	10/27/2021	10/27/2021	02/18/2022	02/18/2022	02/18/2021
Sample Depth	8-8.5	4-4.5	8-8.5	4-4.5	4-4.5	4-4.5	4-4.5	4-4.5	4-4.5
<b>VOCS</b>	Acetone <0.0050 U	Acetone <0.0050 U	Acetone <0.0050 U	Acetone <0.0050 U	Acetone <0.0050 U	Acetone <0.0050 U	Acetone <0.0050 U	Acetone <0.0050 U	Acetone <0.0050 U
Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U	Benzene <0.0043 U
Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U	Methyl Ethyl Ketone (2-Butanone) <0.0091 U
Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U	Toluene <0.0091 U
<b>SVOCs</b>	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U	3,4-Methylenedioxy Aniline <0.37 U
Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12	Benzo(a)anthracene 0.12
Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5	Benzo(b)fluoranthene 0.5
Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18	Benzo(k)fluoranthene 0.18
Chrysene 0.21	Chrysene 0.21	Chrysene 0.21	Chrysene 0.21	Chrysene 0.21	Chrysene 0.21	Chrysene 0.21	Chrysene 0.21	Chrysene 0.21	Chrysene 0.21
Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034	Dibenz(a,h)anthracene 0.034
Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12	Dibenzofuran 0.12
Fluorene 0.16	Fluorene 0.16	Fluorene 0.16	Fluorene 0.16	Fluorene 0.16	Fluorene 0.16	Fluorene 0.16	Fluorene 0.16	Fluorene 0.16	Fluorene 0.16
Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011	Indeno(1,2,3-cd)pyrene 0.011
Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U	Naphthalene <0.37 U
Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23	Phenanthrene 0.23
Pyrene 0.092	Pyrene 0.092	Pyrene 0.092	Pyrene 0.092	Pyrene 0.092	Pyrene 0.092	Pyrene 0.092	Pyrene 0.092	Pyrene 0.092	Pyrene 0.092
<b>Pesticides</b>	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U
4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U	4,4'-DDD <0.0075 U
4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U
4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U	4,4'-DDE <0.0075 U
<b>Metals</b>	Arsenic 1.6	Arsenic 1.6	Arsenic 1.6	Arsenic 1.6	Arsenic 1.6	Arsenic 1.6	Arsenic 1.6	Arsenic 1.6	Arsenic 1.6
Barium 29.7	Barium 29.7	Barium 29.7	Barium 29.7	Barium 29.7	Barium 29.7	Barium 29.7	Barium 29.7	Barium 29.7	Barium 29.7
Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U	Cadmium <1.1 U
Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U	Chromium, Hexavalent <2.4 U
Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8	Chromium, Trivalent 8.8
Copper 6.7	Copper 6.7	Copper 6.7	Copper 6.7	Copper 6.7	Copper 6.7	Copper 6.7	Copper 6.7	Copper 6.7	Copper 6.7
Lead 14.1	Lead 14.1	Lead 14.1	Lead 14.1	Lead 14.1	Lead 14.1	Lead 14.1	Lead 14.1	Lead 14.1	Lead 14.1
Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U	Mercury 0.05 U
Nickel 3.4	Nickel 3.4	Nickel 3.4	Nickel 3.4	Nickel 3.4	Nickel 3.4	Nickel 3.4	Nickel 3.4	Nickel 3.4	Nickel 3.4
Zinc 25.1	Zinc 25.1	Zinc 25.1	Zinc 25.1	Zinc 25.1	Zinc 25.1	Zinc 25.1	Zinc 25.1	Zinc 25.1	Zinc 25.1
<b>PFAS</b>	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U	Perfluorooctanesulfonic Acid (PFOS) <0.0006 U
Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U	Perfluorooctanoic Acid (PFCA) <0.0006 U



**Legend**

- Site Boundary
- Track 2 Remediation Area - Composite Cover System consisting of a 1-to 4-foot-thick concrete slab.
- Track 2 Remediation Area - No Composite Cover System
- Hot Spot Excavation (3 ft bgs)
- Hot Spot Excavation (6 ft bgs)
- Hot Spot Excavation (8 ft bgs)

**Post Excavation Sample Locations**

- Post Excavation Sample Collected from 16 ft bgs
- Post Excavation Sample Collected from 8 ft bgs
- Post Excavation Sample Collected from 6 ft bgs
- Post Excavation Sample Collected from 5 ft bgs
- Post Excavation Sample Collected from 4 ft bgs

**Notes**

1. BASE MAP REFERENCED FROM 'SUPPORT OF EXCAVATION PLAN (SOP) 10/07 FOR BOTH EAST AND WEST BUILDINGS, PREPARED 15 SEPTEMBER 2020 BY WOODS BAGOT.

2. ALL ENDPOINT SAMPLES AND SOIL BORING LOCATIONS ARE BASED ON FIELD MEASUREMENTS.

3. TAX PARCELS PROVIDED BY THE NEW YORK CITY DEPARTMENT OF FINANCE.

4. TRACK 2 AND 4 REMEDIATION LOCATIONS OBTAINED FROM SURVEY NO. 66667-11, DRAWN BY WOODS BAGOT. TRACK 2 AND 4 REMEDIATION ARE SHOWN BASED ON THE ANALYTICAL RESULTS. THESE SAMPLE LOCATIONS WERE REMOVED BY EXCAVATION AND ARE NO LONGER PRESENT ON SITE.

**SCALE IN FEET**

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Project: 2455 THIRD AVENUE

Drawing Title: DOCUMENTATION ENDPOINT SAMPLE LOCATION AND ANALYTICAL RESULTS MAP - WEST

Project No: 190051701

Date: 9/23/2022

Scale: 1"=10'

Drawn by: IHS

Revision: 5A

Block No: 2319, LOT No. 38 & 39

BRONX NEW YORK

Figure: 5A

Project No: 190051701

Date: 9/23/2022

Scale: 1"=10'

Drawn by: IHS

Revision: 5A

Block No: 2319, LOT No. 38 & 39

BRONX NEW YORK





Table with 4 columns: Location, PE-13, LB-39, LB-39. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-6, LB-31, LB-31. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-6, LB-32, LB-32. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-14, LB-40, LB-40. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-7, LB-33, LB-33. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-8, LB-34, LB-34. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-12, LB-38, LB-38. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-21, LB-47, LB-47. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-22, LB-48, LB-48. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-20, LB-46, LB-46. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-21, LB-47, LB-47. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-22, LB-48, LB-48. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-20, LB-46, LB-46. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-21, LB-47, LB-47. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-22, LB-48, LB-48. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-20, LB-46, LB-46. Includes VOCs, SVOCs, PFAS, and Metals data.

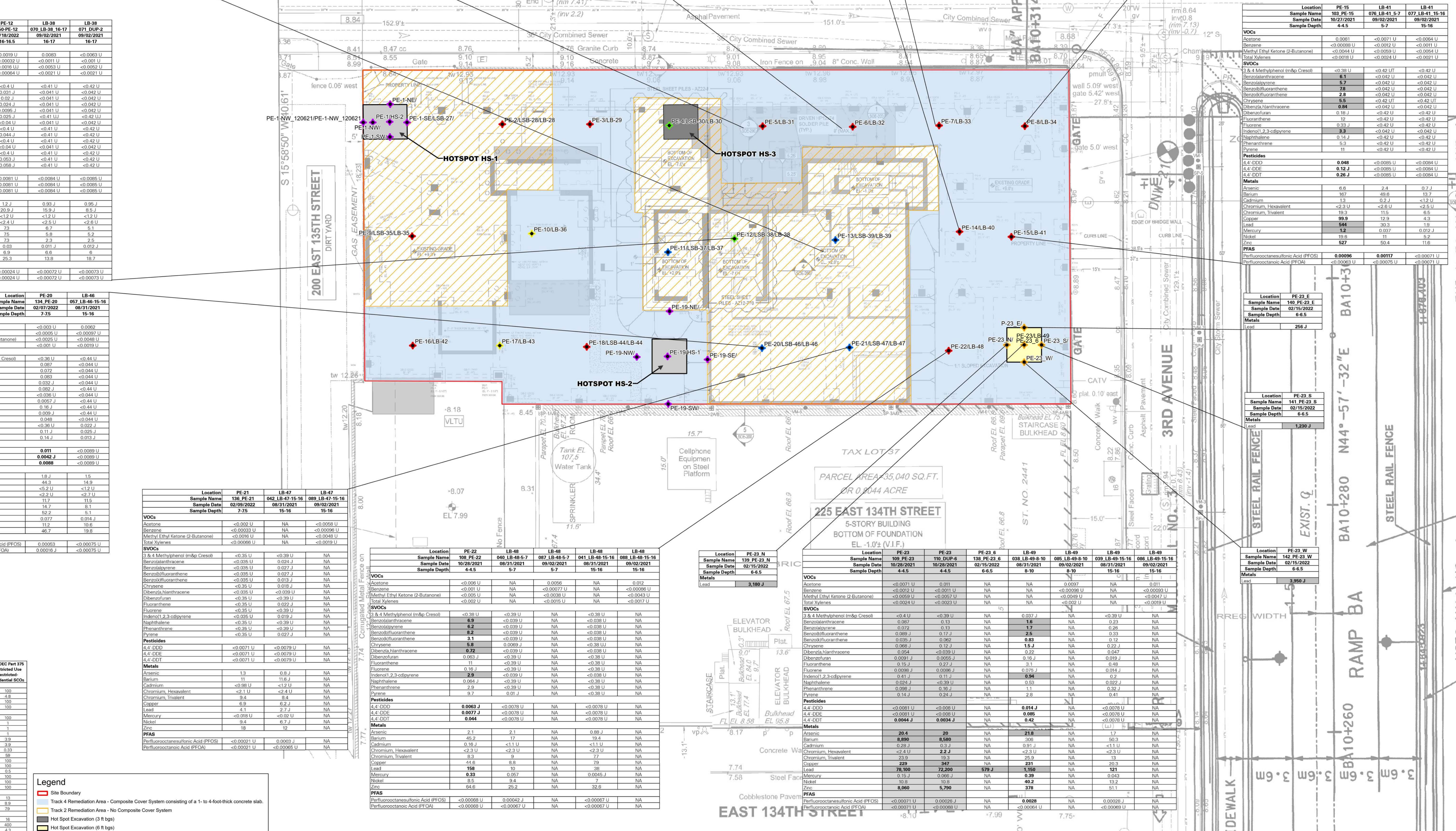
Table with 4 columns: Location, PE-21, LB-47, LB-47. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-22, LB-48, LB-48. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

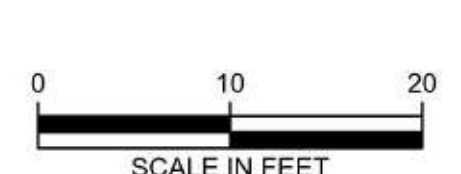
Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.

Table with 4 columns: Location, PE-23, LB-49, LB-49. Includes VOCs, SVOCs, PFAS, and Metals data.



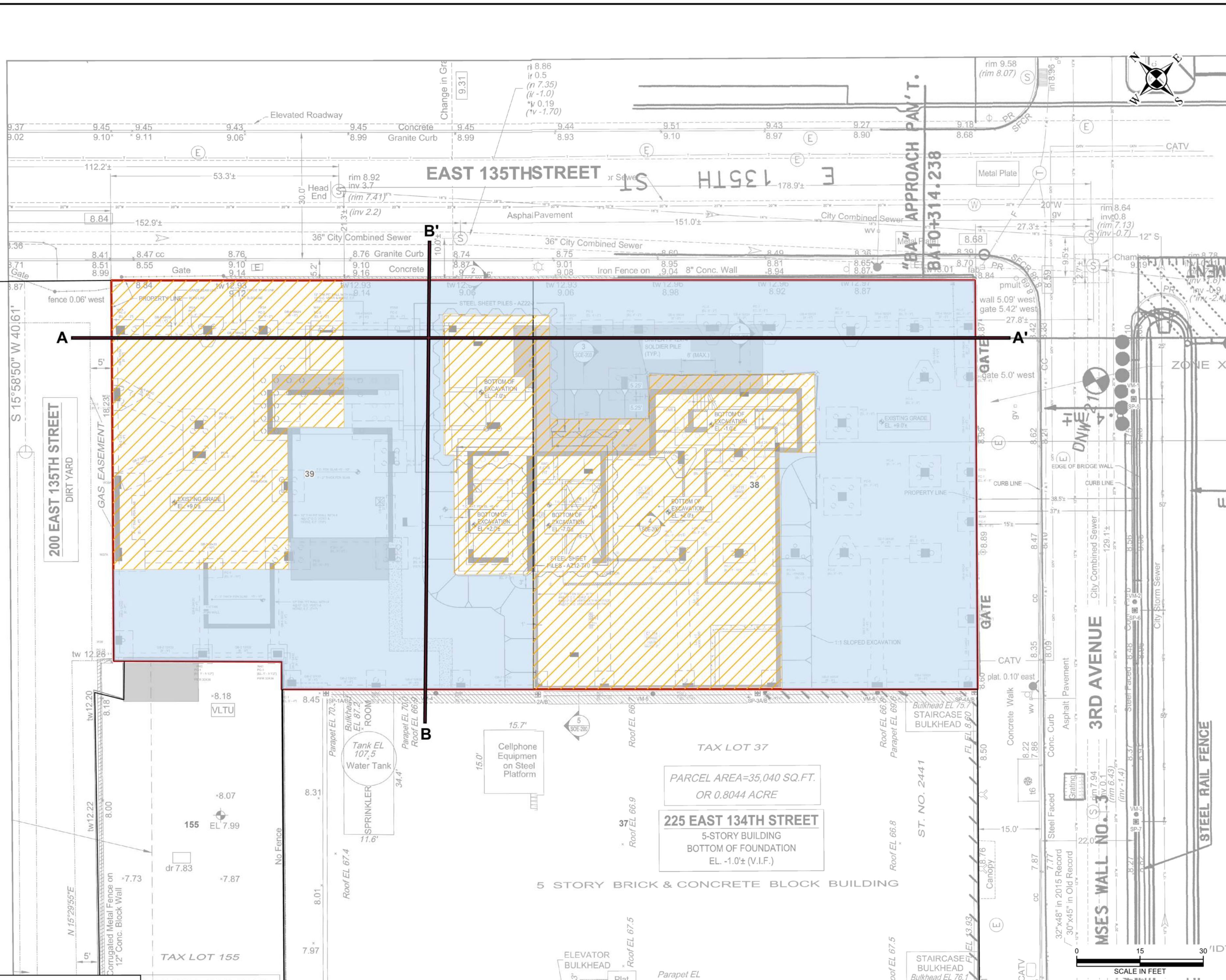
Legend and Post Excavation Sample Locations. Legend includes symbols for Site Boundary, Track 4 Remediation Area, Hot Spot Excavation, etc. Post Excavation Sample Locations list various sample types and their corresponding locations.

Notes: 1. BASE MAP REFERENCED FROM 'SUPPORT OF EXCAVATION PLAN (SOE) FOR TRACK 4 AND TRACK 5 REMEDIATION' PREPARED BY WOODS BAGOT... 2. ALL ENDPOINT SAMPLES AND SOE BORING LOCATIONS ARE BASED ON THE REFERENCED MEASUREMENTS... 3. TAX PARCELS IDENTIFIED BY THE NEW YORK CITY DEPARTMENT OF FINANCE... 4. TRACK 2 AND 4 REMEDIATION EXTENTS OBTAINED FROM SURVEY NO. 66687-11... 5. MATERIAL REMOVED BY EXCAVATION AND NOT UNDER PRESENT CONTROL... 6. MATERIAL REMOVED BY EXCAVATION AND NOT UNDER PRESENT CONTROL... 7. MATERIAL REMOVED BY EXCAVATION AND NOT UNDER PRESENT CONTROL... 8. MATERIAL REMOVED BY EXCAVATION AND NOT UNDER PRESENT CONTROL... 9. MATERIAL REMOVED BY EXCAVATION AND NOT UNDER PRESENT CONTROL... 10. MATERIAL REMOVED BY EXCAVATION AND NOT UNDER PRESENT CONTROL...



LANGAN logo and project information. Project: 2455 THIRD AVENUE. Drawing Title: DOCUMENTATION ENDPOINT SAMPLE LOCATION AND ANALYTICAL RESULTS MAP - EAST. Project No: 190051701. Date: 9/23/2022. Scale: 1"=10'. Drawn by: IHS.





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**Legend**

- Site Boundary
- Approximate Tax Lot Boundary
- Track 2 Remediation Area - No Composite Cover System
- Track 4 Remediation Area - Composite Cover System consisting of a 1- to 4-foot-thick concrete slab.

**NOTES:**  
 1. BASE MAP REFERENCED FROM "SUPPORT OF EXCAVATION PLAN (SOE-100.00)" FOR BOTH EAST AND WEST BUILDINGS, PREPARED 15 SEPTEMBER 2020 BY WOODS BAGOT.  
 2. ALL END POINT SAMPLE AND SOIL BORING LOCATIONS ARE BASED ON FIELD MEASUREMENTS.  
 3. REMEDIATION EXTENTS AND COMPOSITE COVER SYSTEM EXTENTS REFERENCED FROM SURVEY NO. 66697-01 BY MONTROSE SURVEYING CO., LLP LAST REVISED 10 MAY 2022.

**LANGAN**

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 Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.  
 Langan International LLC  
 Collectively known as Langan

Project  
**2455 THIRD AVENUE**  
 BLOCK No. 2319, LOT No. 38 & 39  
 BRONX NEW YORK

Drawing Title  
**COMPOSITE COVER SYSTEM EXTENTS**

Project No.	190051701	Figure	<b>6</b>
Date	9/27/2022		
Scale	1" = 15'		
Drawn By	IHB		