REMEDIAL INVESTIGATION/ ALTERNATIVE ANALYSIS REPORT

AMHERST COMMONS
BCP SITE NO. C915397

47 EAST AMHERST STREET
BUFFALO, ERIE COUNTY, NEW YORK

Prepared for:

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ACRONYMS

AAR	Alternative Analysis Report
ACM	Asbestos Containing Material
ADA	Americans with Disabilities Act
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BE3	Brydges Engineering in Energy and Environment
bgs	Below Ground Surface
C&D	Construction and Demolition
CAMP	Community Air Monitoring Program
COC	Contaminants of Concern
CP	Commissioner Policy
DER	Division of Environmental Remediation
DNAPL	Dense Nonaqueous Phase Liquid
DO	Dissolved Oxygen
DUSR	Data Usability Summary Report
EC	Engineering Control
EE	Environmental Easement
EIFS	Exterior Insulation and Finish System
ELAP	Environmental Laboratory Approval Program
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
EWP	Excavation Work Plan
FEAF	Full Environmental Assessment Form
GPR	Ground Penetrating Radar
GPS	Global Positioning System
GSF	Gross Square Feet
HASP	Health and Safety Plan
HSA	Hollow Stem Auger
IC	Institutional Control
ID	Inside Diameter
$\mu g/m^3$	Micrograms per Cubic Meter
LNAPL	Light Nonaqueous Phase Liquid
NTU	Nephelometric Turbidity Units
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSHCR	New York State Homes and Community Renewal
ORP	Oxidation-Reduction Potential
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PDI	Pre-Remedial Design Investigation
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photoionization Detector
ppm	Parts Per Million
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control

QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
SCG	Standards, Criteria, and Guidance
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compound
SWPPP	Stormwater Pollution Prevention Plan
TAL	Target Analyte List
TCL	Target Compound List
TENORM	Technologically Enhanced Naturally Occurring Radioactive Material
TIC	Tentatively Identified Compound
TOGS	Technical and Operational Guidance Series
UST	Underground Storage Tank
VOC	Volatile Organic Compound

CERTIFICATION

I, Jason Brydges, certify that I am currently a New York State registered professional engineer as defined in 6 New York Codes, Rules and Regulations (NYCRR) Part 375 and that this Remedial Investigation/Alternative Analysis Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Department of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

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Jason M. Brydges, PE

1.0 INTRODUCTION

Amherst Commons LLC has obtained an executed Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) as a volunteer for 47 East Amherst Street, Buffalo, Erie County, New York (i.e., the Site). The Site is associated with Brownfield Cleanup Program (BCP) Index No. C915397-07-23 and BCP Site No. C915397. Amherst Commons LLC has contracted Brydges Engineering in Environment and Energy (BE3) to conduct a Remedial Investigation (RI) and prepare an Alternatives Analysis Report (AAR) as required by the BCA. The total BCP Site area is approximately 3.330 acres. A site location map is provided as **Figure 1** and the site survey as **Figure 2**.

The RI/AAR was completed in accordance with BCP requirements as defined in Section 375-3.8 of the NYSDEC 6 NYCRR Part 375 Environmental Remediation Program Regulations. It is anticipated that the remedial measure selected will lead to a site remedy as defined in Part 375-1.8(g)(2)(ii), achieve soil cleanup objectives (SCOs) as defined in Part 375-6.8(b) and mitigate environmental impacted media issues at the Site.

1.1 SITE BACKGROUND

The 3.33-acre Site is composed of a single parcel located at 47 East Amherst Street (SBL No. 90.21-8-1) in the City of Buffalo, Erie County, New York. The Site is located on the southwest corner of the intersection of East Amherst Street and Holden Street approximately 0.75 miles east-northeast of the Buffalo Zoo, less than one mile north-northwest of Erie County Medical Center (ECMC) and 1.25 miles southwest of the University at Buffalo South Campus.

The Site currently contains one vacant building surrounded by an asphalt parking lot. The building is two stories in addition to a partial basement with limited current access to the second floor due to structural issues. The interior and exterior of the building have significant deterioration.

The topography of the Site is uneven and slopes north towards city streets and Lake Erie. In general, groundwater flows northwest towards Niagara River.

A Phase I Environmental Site Assessment (ESA) was conducted in January 2023. A review of historical records was conducted, including street directories and Sanborn Maps, which suggest the Site was occupied as follows:

- From at least 1916-1935: Buffalo Cement Co.
- 1950-1986: Bowling alley (no owner specified)
- 1994: Amherst Bowling Center and Family Pro Shop (joint occupancy)
- 1999-2004: Amherst Bowling Center

Three gasoline tanks, two grouped near the central western border and one near the southwest corner, were noted on the Site in the 1935 Sanborn Map. These tanks did not appear on any prior or subsequent maps.

A subsequent Phase II ESA was conducted in February 2023 which concluded that there are impacted soils across the Site due to the presence of urban fill. Impacted soils primarily consisted of metals and polycyclic aromatic hydrocarbon (PAH) related compounds. A summary of the associated Phase II soil analytical results is provided in **Table 4**. Historical use and previous environmental investigations suggest petroleum, solvents and polychlorinated biphenyl (PCB) impacts may also exist at the Site.

1.2 IDENTIFICATION OF STANDARDS, CRITERIA, AND GUIDANCE

Standards, criteria, and guidance (SCGs) are promulgated requirements ("standards" and "criteria") and non-promulgated guidance ("guidance") that govern activities that may affect the environment and are used by the NYSDEC at various stages in the investigation and remediation of a site. The following are the primary SCGs for this project:

- NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, December 2006.
- NYSDEC DER-10 Technical Guidance for Site Investigations and Remediation, May 2010.
- NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998.
- NYSDEC Commissioner Policy (CP)-51 Soil Cleanup Guidance, October 2010.
- NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS), April 2023.
- NYSDEC 6 NYCRR 360 Solid Waste Management Facilities General Requirements, August 2020.
- New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion, May 2017.

2.0 REMEDIAL INVESTIGATION APPROACH

The RI was conducted in general accordance with the March 2025 *Remedial Investigation Work Plan (Revised March 2025 [RIWP]), Amherst Commons LLC, 47 East Amherst Street, City of Buffalo, New York, Site No. C915397*, *Supplemental RIWP* (dated April 1, 2025)*, Additional Supplemental RIWP* (dated April 14, 2025) and additional approved deviations. The Department issued an approval letter for the RIWP on March 12, 2025, and the subsequent supplemental investigations were informally approved by the Department before completion.

RI activities generally included the following:

- Test trenches
- Soil boring
- Bedrock groundwater monitoring well installation
- Vapor point installation
- Soil, groundwater and soil vapor sampling
- Ground penetrating radar (GPR) assessment

A qualified environmental professional (QEP) was present during all intrusive field activities. For prior field work, the utility locate center was contacted to mark buried utilities on the Site. The approximate locations of historic Phase II and current RI sampling locations are shown on **Figure 3.** Precise global positioning coordinates (GPS) for RI sampling locations are provided in **Table 5**. Daily field reports (DFRs) which detail site conditions/activities and contain an associated photolog and work location map are contained in **Appendix A**. Additional Site photographs are included in **Appendix B**.

A Community Air Monitoring Program (CAMP) was conducted during ground intrusive activities using dust monitors which provide real-time readings of particulate and volatile organic compound (VOC) concentrations. Downwind particulate levels did not exceed 100 micrograms per cubic meter ($\mu g/m^3$) greater than background concentrations (upwind particulate levels) for any 15-minute period. Concentrations of total organic vapors did not exceed 5 parts per million (ppm) above background levels at the work area for any 15-minute period. The particulate monitoring data is included as an attachment to the DFRs provided in **Appendix A**.

2.1 RI DEVIATIONS

During the RI, field conditions were encountered which required deviation from the initially approved RIWP. The proposed deviations and associated Department approvals are contained in **Appendix I**.

It is important to note that the RI deviations create a data gap in the central portion of the Site. In order to remedy this data gap, a Pre-Remedial Design Investigation (PDI) Work Plan will be submitted after the RI to outline the collection of additional samples, as applicable (i.e., if soil is encountered beneath the building post-demolition). If the PDI Work Plan is deemed acceptable by both NYSDEC and DOH the Remedial Investigation Report (RIR) approval can be issued without sampling under this section of the building. This sampling would be performed after demolition of the onsite building and prior to site remediation. See **Figure 10** for a Project Schedule.

2.1.1 Soil Investigation Deviations

The initially approved RIWP included the collection of seven native soil samples across the Site. Based on field conditions including shallow bedrock and poor recovery, no native samples were obtainable. As such,

two soil borings, RI-BH-8 and RI-BH-10, were removed from the investigation and supplemented with three test trenches, RI-TT-3, RI-TT-4, and RI-TT-5. These locations were selected to maintain uniform coverage of the Site. It was agreed that native samples would be collected from test trenches. If native soils are not encountered, two samples will be pulled from each trench, either from two distinct layers or from the top and bottom interval of the excavation. Additionally, as poor recovery was noted, some sample locations utilized multiple recoveries for single boring locations, as noted in the boring logs provided in **Appendix C**.

Two soil borings were initially proposed in the central portion of the onsite building and two proposed in the building wings. Upon field investigation, it was noted that the building had a centrally located partial basement which was deemed unsafe and potentially hazardous to human health. As such, two soil borings, RI-BH-13 and RI-BH-14, were approved and conducted on the eastern and western slab on grade portions of the building (i.e., on the first floor).

These deviations were both noted in the letter dated April 1, 2025, *Supplemental RIWP* and subsequently approved via email on April 3, 2025.

2.1.2 Groundwater Investigation Deviations

Three permanent monitoring wells installed to a depth of 20 feet below ground surface (bgs) and associated sampling was included in the RIWP. During well installation, the casing in RI-MW-3 was at risk of becoming dislodged around 18 feet bgs due to vibrational force from the drill rig. As the well demonstrated a significant volume of water and notable fractures in the first few feet of bedrock, the well was left at this depth.

This deviation was noted in the letter dated April 14, 2025, *Supplemental RIWP* and subsequently approved via email on April 15, 2025.

During field work it was determined that RI-MW-1 did not produce groundwater. After discussion with NYSDEC and in attempt to reach the water table, RI-MW-1 was extended an additional 9.4 feet. Since additional efforts did not produce groundwater and the other two wells were clean/unimpacted, it was determined, in conjunction with NYSDEC, that sampling of RI-MW-1 could be excluded from the investigation.

2.1.3 Soil Vapor Investigation Deviations

Eight exterior vapor points were initially proposed across the Site with the intent of sampling 1-2 feet above the water table. Upon investigation, no groundwater was encountered in the overburden and bedrock was relatively shallow across the Site. As such, three vapor points were eliminated from the investigation with an agreement that sub-slab soil vapor sampling would be performed as part of the PDI Work Plan, as noted in the April 14, 2025, *Supplemental RIWP,* approved April 15, 2025.

2.1.4 Radiological Survey

Based on Site history and previous investigation, a gamma walkover/radiological survey was not included in the scope of the RI. During the RI, material was encountered that may potentially contain technologically enhanced naturally occurring radioactive materials (TENORM). As this material was discovered in a localized area and at significant depth, it was deemed infeasible to conduct the survey as a part of the RI. As noted in the email provided by NYSDEC on May 13, 2025, a survey plan will be submitted prior to implementation as a component of the Remedial Action Work Plan (RAWP).

2.2 GPR SURVEY

Based on the potential presence of underground storage tanks (USTs), a GPR survey was conducted across the Site, specifically focused on these two historic areas. No indication of USTs was noted at the Site. The GPR survey results and an associated findings map are located in **Appendix J**.

2.3 SOIL INVESTIGATION

The soil investigation was composed of both soil borings and test trenches at select locations across the Site. A summary of soil analytical results is provided in **Table 1**. Soil boring and test trench logs are included in **Appendix C**.

2.3.1 Soil Boring Sampling

On March 27 and 28, 2025, ten exterior soil borings denoted RI-BH-1 through RI-BH-12 (excluding RI-BH-8 and RI-BH-10) were completed across the Site.

A track-mounted Geoprobe® 7720DT direct-push drilling rig was utilized to complete the exterior borings. The borings were positioned around the Site to provide representative coverage of the fill material. The precise locations of the borings were based on field observations and targeted potential contaminant features to gain representative samples across the Site. Soil samples were recovered on a continuous basis using 4-foot sampling sleeves. Each boring was advanced to refusal and ranged from approximately 2.5 to 8 feet bgs.

On April 9, 2025, two interior soil borings, denoted RI-BH-13 and RI-BH-14, were conducted on the first floor east and west wing of the building (i.e., portion of the building that is slab on grade).

It was determined that the building was inaccessible to large equipment (i.e., Geoprobe, drill rig, etc.). A concrete corer was first utilized to penetrate the concrete slab and a hand auger subsequently used to complete the boring. The borings were completed to refusal and depths ranged from approximately 2 to 3 feet bgs.

One soil sample was collected from each boring location. No native soils were confidently identified. All soil samples were visually evaluated for soil type and field screened for VOCs immediately following retrieval and opening of the sampling sleeves using a photoionization detector (PID). Screening was accomplished by holding the PID over the sample/core and recording the highest reading.

All soil samples were placed in appropriate containers, packaged in coolers with ice, and transferred to Eurofins Environment Testing – Buffalo, a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory, using standard chain-of-custody procedures.

2.3.2 Test Trench Sampling

On April 18 and 21, 2025, five test trenches, denoted RI-TT-1 through RI-TT-5, were completed across the Site. Two locations were selected in the areas of potential USTs. Based on the poor recovery noted in soil borings and lack of native soils, three additional test trenches were completed to provide a more accurate assessment of Site soils. Test trenching activities were conducted using a mini excavator and were completed to bedrock at all locations.

The excavated material was temporarily stockpiled on the ground surface adjacent to the trenches and field screened for VOCs using a PID as it was removed from each trench. No PID readings above background were noted.

Two soil samples were collected from each test trench, for a total of ten samples, and submitted for analysis. The samples were selected either from visually differing layers or from top and bottom intervals in areas where soils appeared homogenous.

Samples were placed in appropriate containers, packaged in coolers with ice, and transferred to Eurofins Environment Testing – Buffalo, a NYSDOH ELAP certified laboratory, using standard chain-of-custody procedures. Descriptions of soils encountered are presented on test trench logs in **Appendix C**.

Following screening and sampling, all test trenches were backfilled with the same material that was removed from the trench. The material was placed in the same order and at the approximate depth from which it was excavated. The soil was compacted with the excavator bucket during backfilling.

An associated bedrock contour map will be provided and amended to the report once final elevations are established.

2.3.3 Monitoring Well Sampling

Three soil samples were collected during monitoring well installation. These samples were completed to assess potential contaminant correlations/pathways between the overburden and underlying groundwater.

2.4 GROUNDWATER INVESTIGATION

2.4.1 Bedrock Well Construction

As groundwater was not encountered in the overburden, three bedrock wells were installed at select locations across the Site. Well construction/installation was conducted on April 4, 7, 8, 9, 10 and 23, 2025.

A 10-inch diameter hollow stem auger (HSA) was advanced to top of bedrock at all locations. A roller bit attachment was then utilized to complete a 5 7/8-inch diameter rock socket 3 feet into bedrock. A 4-inch diameter steel casing was then positioned three feet into bedrock and set with grout. All casings were undisturbed for a minimum of 24 hours to allow the grout to set per manufacturer specifications. Once set, an HQ-size core drill bit (3 7/8-inch diameter) was used to obtain bedrock cores and the steel casings cut to approximately 1-foot bgs. The wells were completed to the following depths bgs: 29.4 feet (RI-MW-1), 20.8 feet (RI-MW-2) and 18.2 feet (RI-MW-3).

The wells consist of a 2-inch inside diameter (ID), schedule 40 polyvinyl chloride (PVC) casing equipped with a 10-foot 0.010-inch slot size well screen.

All wells were completed at ground surface, covered with a curb box, fitted with a lockable J-plug and labeled with permanent markings for identification. Excess drill cuttings and spoils were containerized in sealed New York State Department of Transportation (NYSDOT) approved drums and labeled for subsequent characterization and disposal, which will be conducted in accordance with all Resource Conservation and Recovery Act (RCRA) standards. Well construction logs are provided in **Appendix D**.

2.4.2 Well Development

Well development occurred on April 17 and 18, 2025, for RI-MW-2 and RI-MW-3, respectively. Although well development can be conducted 24 hours after construction, development occurred seven days after construction to ensure drilling water utilized during bedrock drilling had significantly discharged into the surrounding formation. The wells were surged to ensure all incidental debris/drill cuttings were removed from the wells. Development water was containerized in NYSDOT approved drums and labeled per monitoring well location. No light nonaqueous phase liquid (LNAPL), dense nonaqueous phase liquid (DNAPL), odors, or sheen were encountered during well development. Based on the RI groundwater analytical results, it will be determined, in consultation with NYSDEC, if the containerized development water is acceptable for surface discharge in the vicinity of the monitoring well being developed or requires subsequent on-site treatment and/or off-site disposal. Field measurements for pH, temperature, turbidity, dissolved oxygen (DO), oxidation-reduction potential (ORP), specific conductance, flow rate and water level, as well as PID, visual and olfactory field observations were periodically recorded and monitored for stabilization and health and safety purposes. Well development logs are contained in **Appendix E**.

2.4.3 Groundwater Sampling

Groundwater sampling was completed on April 21 and 23, 2025, for RI-MW-2 and RI-MW-3, respectively. The wells were purged and sampled utilizing a low flow peristaltic pump with dedicated pump tubing following low flow/minimal drawdown purge and sample collection procedures. Field measurements were monitored and recorded using the same parameters outlined above in Section 2.4.2: Well Development. Purging was considered complete when the field measurements stabilized, and turbidity fell below 50 Nephelometric Turbidity Units (NTU).

Collected groundwater samples were placed in appropriate containers, packaged in coolers with ice, and transferred to Eurofins Environment Testing – Buffalo, a NYSDOH ELAP certified laboratory, using standard chain-of-custody procedures.

A summary of groundwater analytical results is provided in **Table 2** and purge logs are located in **Appendix F**.

2.5 VAPOR INVESTIGATION

2.5.1 Vapor Point Installation

On March 27 and 28, 2025, vapor points were installed simultaneously inside the following applicable predetermined soil borings: RI-BH-3, RI-BH-4, RI-BH-7, RI-BH-9 and RI-BH-11. Although it was initially intended that vapor points be completed 1 to 2 feet above the water table, no water was encountered in any borings. As such, all vapor probes were positioned directly above bedrock. A ¼ inch PVC tube with a 3/8-inch stainless steel screen was installed at the bottom of each probe hole. Porous sand was backfilled around the screen to a two-foot depth and a bentonite seal placed above the sand layer to seal off the hole around the tubing. Vapor point construction logs are contained in **Appendix G**.

2.5.2 Soil Vapor Sampling

Soil vapor sampling was conducted after reaching consensus with NYSDEC and NYSDOH regarding appropriate sampling locations. Locations were selected to provide uniform coverage across the Site and biased toward the deepest borings. The following borings were selected along with the associated vapor point pair: RI-BH-3/RI-VP-1, RI-BH-4/ RI-VP-2, RI-BH-7/ RI-VP-3, RI-BH-9/ RI-VP-4 and RI-BH-11/RI-VP-5. Sampling equipment consisting of a 6-liter summa canister and 24-hour regulator was deployed on April 17,

2025, and collected on April 18, 2025 (i.e., collected over a 24-hour period).

Sampling was conducted in accordance with the current NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York and its amendments. Canisters were shipped to Eurofins Environment Testing – Burlington, a NYSDOH ELAP certified laboratory, using standard chain-of-custody procedures. A summary of soil vapor analytical results is provided in **Table 3**.

2.6 QUALITY ASSURANCE/QUALITY CONTROL SAMPLING

Project-specific quality assurance/quality control (QA/QC) samples were collected during the soil and groundwater investigations as outlined in the approved RIWP. The purpose of these samples is to achieve the data quality indicators of precision, accuracy, representativeness, comparability and completeness. Additionally, this data is necessary to assist the third-party data usability assessment necessary to complete the Data Usability Summary Reports (DUSRs). A matrix spike/matrix spike duplicate (MS/MSD) pairing was collected from the RI-BH-2 soil boring and a duplicate sample was collected with the RI-BH-3 soil sample (RI-BH-3-DUP). The duplicate soil sample results are provided in **Table 1**. An MS/MSD pairing was collected from RI-MW-3 during the groundwater sample collection and transported to the laboratory with a trip blank. A duplicate groundwater sample was not collected as it was anticipated to be collected from RI-MW-1 which was not sampled. Laboratory analytical reports and DUSRs are located in **Appendix L** and **Appendix M**, respectively, and are provided as separate attachments.

3.0 PHYSICAL CHARACTERISTICS OF THE AREA

3.1 SURFACE FEATURES

The 3.33-acre Site is composed of a single parcel addressed at 47 East Amherst Street (SBL No. 90.21-8-1) located in the City of Buffalo, Erie County, New York. The Site is predominantly occupied by a dilapidated two-story vacant building surrounded by an asphalt parking lot and a small strip of greenspace. The central portion of the building is underlain by a partial basement and the remainder of the structure is slab on grade. A breakdown of the Site area is provided below.

Description	Location	Acreage	% of total Site area
Building	Center of Site	1.18	35
Greenspace	North of building	0.03	1
Hardscape	Remaining area	2.09	64

The entirety of the Site is surrounded by a chain link fence with the exception of an approximately 0.15 acre strip along the eastern border. The asphalt in this area is of notably better condition than the remainder of the Site and appears to be used for parking. Topography is notably uneven with a significant increase in elevation noted when moving from north to south across the Site. This elevation is by no means natural and is the result of the significant historic importation of fill.

3.2 SUBSURFACE FEATURES

3.2.1 Site Geology

In general, no native soil was positively identified at the Site. Based on the RI, it appears that the overburden (i.e., all materials above bedrock) is completely composed of urban backfill. The fill varied significantly in both color and consistency, including light/dark gray/brown sandy/silty/clayey fine/coarse rounded/angular gravel, light/dark yellow/brown/back silty clay and medium brown silty/sandy fines. The fill was often intermingled with construction and demolition (C&D) debris including bricks and piping and incidental debris such as coal rock fragments, coal ash, shells, glass bottles and grinded woodchips. Weathered bedrock was commonly observed at the interface between the overburden and underlying bedrock. Test pitting confirmed the presence of significant subsurface voids and cobbles/boulders and blasted/shot rock, which became more prevalent and increased in size at greater depths.

Bedrock cores obtained at each monitoring well location generally indicate the Site is underlain by finely crystalline Dolostone with a subtle gradient transition from light to medium gray/brown at increasing depths. Banding ranged in size from 1/10 inch to 1 inch and black wavy laminate was observed at various depths. Weathered zones were encountered in RI-MW-2 at depths of 13.6 feet and 23.5 feet bgs. A distinct 45° presumed natural fracture was observed at a depth of 10.5 feet in RI-MW-3.

The bedrock logs contained in **Appendix D** provide a more detailed description of each core.

3.2.2 Site Hydrogeology

Based on the RI, the water table is completely encapsulated within bedrock. Topographic/elevation data indicates that groundwater is at an elevation of 52.8 and 58.23 feet in RI-MW-2 and RI-MW-3, respectively. Groundwater was not encountered in RI-MW-1, therefore it exists at a maximum elevation of 48.76 feet. Based on these observations, groundwater appears to flow northwest.

3.3 DEMOGRAPHY AND LAND USE

The Site is zoned N-2E (Mixed-Use Edge) and is currently unoccupied. The proposed New York State Homes and Community Renewal (NYSHCR) affordable housing project will involve the construction of a 134 residential unit apartment building that forms a “U” as a singular building. The building will front on 3-streets consisting of Pannell, East Amherst and Holden Streets. This building is proposed as a 3-story Stacked Unit Type, with 134 affordable residential dwelling units of 1-, 2- and 3-bedroom unit types. Additional features are Americans with Disabilities Act (ADA) dwelling units, two ADA sized elevators, a tenant community space with kitchenette, tenant storage spaces within each unit, and ancillary building operation areas. This building is approximately 139,281 total gross square feet (GSF) with 46,626 GSF on the ground floor. Exterior finish systems include cultured stone with cement mortar joints, new brick with cement mortar joints, cement board panels, and exterior insulation and finish system (EIFS).

4.0 LABORATORY ANALYSIS

4.1 SOIL

All soil samples were analyzed for the full Part 375 Brownfields constituent list which includes the following:

- Target Compound List (TCL) VOCs + Tentatively Identified Compounds (TICs) – Environmental Protection Agency (EPA) Method 8260
- TCL semi-volatile organic compounds (SVOCs) + TICs – EPA Method 8270
- Target Analyte List (TAL) Metals (Including mercury and total cyanide) – EPA Method 6010/7470/7471
- PCBs – EPA Method 8280
- TCL Pesticides – EPA Method 8081
- 1,4-dioxane – EPA Method 8270SIM
- (PFAS – EPA Method 1633

4.2 GROUNDWATER

All groundwater samples were analyzed for the full Part 375 Brownfields constituent list which includes the following:

- TCL VOCs and TICs)-EPA Method 8260
- TCL SVOCs– EPA Method 8270
- TAL Metals + cyanide-EPA Method 6010/7470/7471
- PCBs– EPA Method 8280;
- Pesticides– EPA Method 8081;
- 1,4-dioxane– EPA Method 8270SIM
- PFAS – EPA Method 1633

4.3 SOIL VAPOR

Soil vapor samples were analyzed for TCL VOCs by EPA Method TO-15.

5.0 DISCUSSION OF RESULTS

5.1 SOIL SAMPLING ANALYTICAL RESULTS

All RI soil sampling results exceeding unrestricted and restricted residential SCOs are listed on **Figure 4** and **Figure 5**, respectively.

5.1.1 Metals

A multitude of soil samples exceeded various metal SCOs as specified in the tables below.

Unrestricted Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Arsenic	RI-BH-6	13.7	13
	RI-TT-1 (4-5')	14.0	
Chromium	RI-BH-1	11.3	1
	RI-BH-3	19.5	
	RI-BH-4	13.5	
	RI-BH-5	20.9	
	RI-BH-6	19.5	
	RI-BH-9	16.8	
	RI-BH-12	18.4	
	RI-BH-13	17.1	
	RI-BH-14	17	
	RI-MW-1	17.4	
	RI-MW-2	10.9	
	RI-MW-3	14.3	
	RI-TT-2 (4-10.3')	13.3	
	RI-TT-4 (4-7.5')	17.5	
	RI-TT-5 (1-4.5')	13.9	
Copper	RI-BH-5	85.6	50
	RI-BH-6	60.5	
	RI-BH-9	149	
	RI-BH-12	52.3	
	RI-BH-13	198	
	RI-MW-1	97.1	
	RI-MW-2	108	
Lead	RI-BH-1	74.4	63
	RI-BH-3	131	
	RI-BH-3-DUP	139	
	RI-BH-4	64.8	
	RI-BH-5	187	
	RI-BH-6	215	
	RI-BH-7	80.7	
	RI-BH-9	366	
	RI-BH-12	195	
	RI-BH-13	281	
	RI-MW-1	64.3	
	RI-TT-1 (4-5')	116	

	RI-TT-2 (4-10.3')	85.2	
	RI-TT-5 (1-4.5')	64.1	
Nickel	RI-BH-11	31.2	30
	RI-TT-3 (4-5')	41.9	
Zinc	RI-BH-6	124	109
	RI-BH-9	323	
	RI-BH-12	171	
	RI-BH-13	179	
Mercury	RI-BH-1	0.19	0.18
	RI-BH-3	0.66	
	RI-BH-6	0.25	
	RI-BH-13	0.27	
	RI-TT-2 (1-4')	0.36	
	RI-TT-2 (4-10.3')	0.19	
	RI-TT-3 (1.5-2.5')	0.2	
	RI-TT-3 (4-5')	0.32	
	RI-TT-4 (1-4')	0.19	

Residential Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Barium	RI-BH-4	359	350
Chromium	RI-BH-2	32.9	22
	RI-BH-3-DUP	40.9	
	RI-BH-7	23.3	
	RI-BH-11	33.2	
	RI-TT-1 (2-4')	41.2	
	RI-TT-1 (4-5')	25.9	
	RI-TT-2 (1-4')	23.6	
	RI-TT-3 (1.5-2.5')	22.9	
	RI-TT-3 (4-5')	62.7	
	RI-TT-4 (1-4')	23.9	
	RI-TT-5 (4.5-5.5')	24.6	

Restricted Residential Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Mercury	RI-BH-3-DUP	1.7	0.81

Commercial Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Barium	RI-BH-2	1,120	400

Industrial Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Arsenic	RI-BH-2	20.4	16
	RI-BH-12	17.4	
	RI-TT-3 (4-5')	19.8	

5.1.2 SVOCs

A multitude of soil samples exceeded various SVOC SCOs as specified in the tables below.

Unrestricted Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Benzo[k]fluoranthene	RI-BH-13	890	800

Residential Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Benzo[k]fluoranthene	RI-BH-11	1,800	1,000
	RI-MW-1	3,500	
Chrysene	RI-BH-2	1,300	1,000
	RI-BH-11	2,500	
	RI-BH-12	1,400	
	RI-BH-13	1,600	

Restricted Residential Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Benzo[a]anthracene	RI-BH-2	1,000	1,000
	RI-BH-11	2,400	
	RI-BH-12	1,400	
	RI-BH-13	1,500	
Benzo[b]fluoranthene	RI-BH-1	1,000	1,000
	RI-BH-2	1,400	
	RI-BH-11	3,600	
	RI-BH-12	1,600	
	RI-BH-13	1,800	
	RI-TT-3 (1.5-2.5')	1,100	
Benzo[k]fluoranthene	RI-TT-2 (1-4')	4,600	3,900
	RI-TT-2 (4-10.3')	13,000	
Chrysene	RI-MW-1	8,600	3,900
	RI-TT-2 (1-4')	8,800	
	RI-TT-2 (4-10.3')	22,000	
Indeno[1,2,3-cd]pyrene	RI-BH-11	2,000	500
	RI-BH-12	810	
	RI-BH-13	730	
	RI-MW-1	4,400	
	RI-TT-2 (1-4')	4,600	
	RI-TT-3 (1.5-2.5')	560	

Commercial Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Benzo[a]anthracene	RI-MW-1	9,100	5,600
	RI-TT-2 (1-4')	9,300	
Benzo[b]fluoranthene	RI-MW-1	10,000	5,600
Dibenz(a,h)anthracene	RI-BH-11	720	560

Industrial Exceedances			
Analyte	**Sample ID**	**Result**	**Standard**
Benzo[a]anthracene	RI-TT-2 (4-10.3')	23,000	11,000
Benzo[a]pyrene	RI-BH-13	1,500	1,100
	RI-MW-1	8,100	
	RI-TT-2 (1-4')	8,500	
	RI-TT-2 (4-10.3')	20,000	
Benzo[b]fluoranthene	RI-TT-2 (1-4')	11,000	11,000
	RI-TT-2 (4-10.3')	22,000	
Dibenz(a,h)anthracene	RI-MW-1	1,600	1,100
	RI-TT-2 (1-4')	1,600	
	RI-TT-2 (4-10.3')	4,000	
Indeno[1,2,3-cd]pyrene	RI-TT-2 (4-10.3')	11,000	11,000

5.1.3 VOCs

Low levels of the following VOCs were noted in specified samples: toluene in RI-BH-6 and RI-BH-13, acetone in RI-BH-11 and RI-MW-3, methylene chloride in RI-MW-3, and tetrachloroethene (PCE) in RI-BH-13 and RI-BH-14.

5.1.4 Organochlorine Pesticides

4,4'-DDT was noted above the unrestricted standard of 3.3 ppb in the following samples: RI-BH-4 (8.6 ppb), RI-BH-11 (5.9 ppb), RI-BH-13 (10 ppb), RI-BH-14 (15 ppb), RI-MW-1 (16 ppb) and RI-TT-2 (4-10.3' [9.7 ppb]). **4,4'-DDD was noted above the unrestricted standard** of 43.3 ppb in RI-BH-13 (4.2 ppb).

5.1.5 PCBs

No PCBs were detected in any samples with the exception of PCB-1260 in RI-BH-7 at a concentration of 0.096 parts per billion (ppb), over three orders of magnitude below the unrestricted standard of 100 ppb.

5.1.6 PFAS

The only regulated PFAS constituents are perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). No exceedances were noted in any soil samples. Some detections below guidance values were noted in the internal samples (RI-BH-13 and RI-BH-14), the composite well samples (RI-MW-1 through RI-MW-3), and test trench samples (RI-TT-1 through RI-TT-5).

5.2 Groundwater Sample Analytical Results

All RI groundwater sampling results exceeding TOGS 1.1.1 guidelines are listed on **Figure 6**.

5.2.1 Metals

Iron was noted above the TOGS 1.1.1 standard of 300 ppb in RI-MW-2 (340 ppb). **Sodium was noted above the TOGS 1.1.1 standard** of 20,000 ppb in RI-MW-2 (94,800 ppb) and RI-MW-3 (82,500 ppb).

5.2.2 SVOCs

No listed SVOCs were identified, however, TICs were noted in both wells below guidance values.

5.2.3 VOCs

No VOC exceedances were noted. Low levels of methylcyclohexane were identified in RI-MW-3.

5.2.4 Organochlorine Pesticides

No organochlorine pesticides were noted with the exception of low levels of gamma-BHC (Lindane) in both wells.

5.2.5 PCBs

No PCBs were noted in either well.

5.2.6 PFAS

The only regulated PFAS constituents are PFOS and PFOA. No exceedances were noted in any groundwater samples. Some detections below guidance values were noted in both wells.

5.3 VAPOR SAMPLE ANALYTICAL RESULTS

The only applicable air guideline values derived by NYSDOH are TCE, PCE and methylene chloride. All sampling results were well below guidance values. No results warrant mitigation.

5.4 CONTAMINANTS OF CONCERN

Based on the RI and previous environmental investigation results, the primary contaminants of concern (COC) in Site media are noted below.

5.4.1 Soil

The primary COC in Site soils are metals and PAHs.

5.4.2 Groundwater

There are no contaminants of concern in groundwater. Although sodium and iron were detected above guidance values, both constituents can be naturally occurring. Natural sources of sodium include weathered rocks and minerals and the presence of salt-bearing geological formations. Similarly, iron in groundwater can arise from iron-bearing rocks and minerals. These conditions were consistently noted throughout the Site, particularly in bedrock cores and in soil borings and test trenched at the interface of the overburden and underlying bedrock.

5.4.3 Soil Vapor

There are no contaminants of concern in soil vapor. Soil vapor intrusion (SVI) is not a concern at the Site.

6.0 FATE AND TRANSPORT OF CONTAMINANTS OF CONCERN

The soil, groundwater and soil vapor sample analytical results were incorporated with the physical Site conditions to evaluate the fate and transport of COC in Site media. The mechanisms through which the COC can migrate to other areas or media are briefly outlined below. The potential pathways are evaluated in the context of pre-remedial conditions including the proposed PDI and radiological survey. The planned remediation, as discussed in Section 8.0, includes placing a 2-foot clean soil cap or hardscape over the Site to meet Part 375 Track 4 Restricted Residential SCOs.

6.1 FUGITIVE DUST

Contaminants present in soil can be released into ambient air due to fugitive dust generation from disturbance of dry friable soils. The Site currently contains one dilapidated building surrounded by asphalt parking and minimal greenspace which limits any fugitive dust generation.

During demolition, redevelopment construction and remedial work, fugitive dust may be generated. A Health and Safety Plan (HASP) along with a CAMP will be prepared, as required, by the RAWP, which will minimize fugitive dust concerns during this time. The fugitive dust migration pathway is not presently a relevant pathway, however, during remediation activities, fugitive dust migration will be more relevant and not be relevant thereafter due to the proposed soil cover system and new development. During construction activities, the contractor will institute dust control measures per the Stormwater Pollution Prevention Plan (SWPPP) that will be generated prior to mobilization.

6.2 SURFACE WATER

The potential for impacted soil particle transport with surface water runoff is considered low due to the hardscape and minimal vegetative cover over the Site. Although heavy rainfall can cause erosion in greenspace areas, no sensitive receptors are present within close proximity to the Site.

The proposed remediation is a clean soil cover and hardscape. Redevelopment will include new structures, paved areas, and landscaping. A SWPPP will be prepared for the Site and included in the RAWP. The SWPPP will control storm water during construction and remediation activities. The redevelopment design includes substantial bioretention planters to handle surface water upon completion of redevelopment. Therefore, the movement of impacted soil by surface water runoff is not considered a relevant migration pathway.

6.3 VOLATILIZATION

No VOCs were detected above their SCOs in soil samples from the RI or previous investigations. Groundwater samples collected from on-site wells during the RI indicated that VOCs are not present in groundwater above TOGS 1.1.1 guidance values. The volatilization pathway is therefore not considered a relevant pathway.

6.4 LEACHING

Leaching refers to contaminants in soil/fill migrating into groundwater due to infiltration of stormwater.

VOCs, SVOCs, PCBs, and pesticides were not detected above TOGS 1.1.1 guidance values in the groundwater samples collected from the two monitoring wells during the RI. Although the metals sodium and iron were detected above TOGS 1.1.1 guidance values, both constituents are likely naturally occurring as a result of bedrock constituents.

VOCs were not detected in the soil samples above any SCOs, however, both SVOCs (primarily PAHs) and metals were detected in the site soils above restricted residential SCOs. PAHs and metals are not very mobile in soils in that they have low solubility with water and tend to adsorb to the soil grains.

6.5 GROUNDWATER TRANSPORT

Based on groundwater elevation data, groundwater on the Site appears to flow northwest. As previously noted in Section 5.4.2 (Contaminants of Concern – Groundwater), there are no contaminants of concern in groundwater. No exceedances of TOGS 1.1.1 guidance values were noted that could not be attributed to natural conditions.

Although sodium and iron were detected above guidance values, both constituents can be naturally occurring. Natural sources of sodium include weathered rocks and minerals and the presence of salt-bearing geological formations. Similarly, iron in groundwater can arise from iron-bearing rocks and minerals. These conditions were consistently noted throughout the Site, particularly in bedrock cores, soil borings and test trenches at the interface of the overburden and underlying bedrock.

In addition, the Site and surrounding area are serviced by municipal water. The Site Management Plan (SMP) will also prohibit the use of groundwater for drinking or process use. Therefore, significant potential exposure of local receptors to contaminants in the groundwater is minimal.

6.6 EXPOSURE PATHWAY SUMMARY

Based on the above assessment, the pathways through which COC could reach receptors at significant exposure concentrations are minimal. The more probable pathways of stormwater and fugitive dust will be mitigated using pollution prevention and dust suppression control measures during remedial and construction activities.

7.0 QUALITATIVE EXPOSURE ASSESSMENT

7.1 HUMAN EXPOSURE

A Qualitative Human Health Exposure Assessment (QHHEA) was completed in general accordance with Appendix 3B of DER-10 to identify potential exposure pathways associated with the COC at the Site. The exposure pathway elements are summarized as follows:

Qualitative Exposure Assessment Summary	
Environmental Media & Exposure Route	**Human Exposure Assessment**
Direct contact with surface soils (and incidental ingestion)	(Current) People should not come into contact with contaminated surface soils as they are primarily covered by asphalt and vegetative cover. Additionally, the Site is restricted by fencing, however, there is still potential for trespassers to come into contact with surface soils.
Direct contact with subsurface soils (and incidental ingestion)	(Future) People may come into contact with subsurface soils during ground-intrusive work.
Ingestion of groundwater	Groundwater at the Site does not appear impacted. The Site is currently served by municipal water as will the new development.
Direct contact with groundwater	Groundwater at the Site does not appear impacted. The Site is currently served by municipal water as will the new development.
Inhalation of air (exposures related to SVI)	Soil vapor at the Site does not appear impacted.

7.1.1 Contaminant Sources

Metals and PAHs exceeding regulatory standards were consistently observed throughout Site soils. Based on previous investigations, the overburden is almost entirely composed of impacted fill, ranging in depth from 1 to 11 feet bgs. No point contaminant sources have been identified, and no groundwater or soil vapor concerns are noted.

7.1.2 Contaminant Release and Transport Mechanisms

The only release/transport of impacted soils to an exposed population would be through fugitive dust and rain that may result in soil erosion. However, as previously noted, the Site currently contains a large building surrounded by asphalt parking and minimal greenspace which limits any fugitive dust generation along with erodible soils.

7.1.3 Potential Exposure Points

Currently, direct contact exposure to impacted soil is low due to the predominantly hardscape and minimal soil cover over the Site. Additionally, the Site is secured with fencing which extremely reduces accessibility to the general public, with the exception of a small asphalt strip along the eastern Site border. Future contact may occur during soil excavation activities.

7.1.4 Routes of Exposure

The only viable current or future routes of exposure would be direct contact or inhalation/ingestion of impacted soils.

7.1.5 Receptor Populations

The receptor population is currently limited to trespassers. Future construction workers may encounter impacted soils during Site work.

7.2 ECOLOGICAL EXPOSURE RISKS

The Fish and Wildlife Resources Impact Analysis (FWRIA) Decision Key provided in Appendix 3C of DER-10 was completed during development of the RIWP and is included in **Appendix H**. No FWRIA is required based on the completed decision key process. This determination is based on the following:

- The Site is a commercial property in a mixed-use zone (N-2E).
- The contamination at the Site has very low potential to migrate into or impact any off-site habitat of endangered, threatened, or special concern species or other fish and wildlife resources. There are no critical habitats onsite, and the closest offsite habitat is more than 0.75 miles away with the Niagara River and Lake Erie more than 3 miles away. The Full Environmental Assessment Form (FEAF) and Environmental Resource Mapper were consulted to make this determination.

8.0 REMEDIAL ALTERNATIVES ANALYSIS

8.1 REMEDIAL ACTION OBJECTIVES

The final remedial measures for the Site must satisfy Remedial Action Objectives (RAOs), which are site-specific statements that convey the goals for minimizing or eliminating substantial risks to human health and the environment. No RAOs were identified in relation to groundwater or soil vapor. The primary RAOs identified in relation to Site soils are the following:

Human Health Protection. Prevent ingestion or direct contact with contaminated soil exceeding cleanup objectives for the Site.

Environmental Protection. Prevent migration of contaminants exceeding cleanup objectives for the Site that would result in groundwater or surface water contamination.

8.2 ALTERNATIVES SELECTION FACTORS

In addition to achieving RAOs, NYSDEC's BCP requires an evaluation of remedial alternatives in accordance with 6 NYCRR Part 375-3 and DER-10. This alternative analysis evaluates the remedial options developed for the Site against the following selection factors:

- **Overall Protection of Public Health and the Environment**. This criterion evaluates a remedy's ability to achieve the public health and environmental RAOs through the assessment of existing and potential exposure pathways to be eliminated, reduced, or mitigated through removal, treatment, or ECs/ICs.
- **Compliance with SCGs**. This criterion addresses whether a remedy will meet applicable environmental regulations, standards, and guidance. The SCGs applicable to this site are listed in Section 1.2.
- **Long-Term Effectiveness and Permanence**. This criterion evaluates the long-term effectiveness and permanence of an alternative or remedy after implementation.
- **Reduction of Toxicity, Mobility or Volume with Treatment**. This criterion evaluates the remedy's ability to reduce the toxicity, mobility, or volume of Site contamination through treatment. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the contamination at the Site.
- **Short-Term Effectiveness**. This criterion evaluates the potential short-term impacts to human health and the environment during remediation, including control measures of adverse conditions and their effectiveness (e.g., stormwater controls, dust controls, etc.). The length of time needed to achieve the RAOs and sustainability is also evaluated.
- **Implementability**. This criterion evaluates the technical and administrative feasibility of implementing the remedy including the difficulties associated with construction and monitoring the effectiveness of the remedy. The availability of labor, equipment, and material is evaluated in addition to operational approvals, logistics, permitting, etc.
- **Cost**. This criterion evaluates the overall cost of an alternative.
- **Community Acceptance**. This criterion evaluates the public's comments, concerns, and overall perception of the alternative.

8.3 LAND USE EVALUATION

In developing and screening remedial alternatives, NYSDEC's Part 375 regulations require that the reasonableness of the anticipated future land use be factored into the evaluation. The future land use of the

Site is practical as it will be similar in nature to the surrounding areas existing use and will meet restricted residential SCOs after the remediation is complete. The proposed development will be dedicated to affordable housing.

8.4 SELECTION OF ALTERNATIVES FOR EVALUATION

The results of the RI and historical Phase II ESA indicate the following:

- The Site is underlain by urban backfill containing elevated levels of metals and PAHs in soils above unrestricted, residential, restricted residential, commercial and industrial SCOs.
- A few organochlorine pesticide exceedances above unrestricted SCOs were identified in soils.
- No VOC, PCB or PFAS exceedances of SCOs were noted in any soil samples.
- No COCs were noted in groundwater. Iron and sodium were detected above TOGS 1.1.1 standards however these constituents are assumed to be naturally occurring.
- No VOC impacts exceeding NYSDOH Vapor Intrusion Guidance values were noted in soil vapor.

Based on the results of the RI program, the following remedial alternatives have been selected for evaluation:

1. **Alternative 1** – Track 4: Restricted Residential Remediation
2. **Alternative 2** – Track 1: Unrestricted Use Remediation

It is important to note that building demolition will occur before Site remediation. In order to properly assess the area of the data gap (i.e., the subsurface beneath the building basement), the building slab will be left in place, to the extent possible. Prior to demolition, the building will be assessed for asbestos containing materials (ACM) and abated accordingly. All demolition debris will be properly sorted, characterized, and disposed of at an approved landfill or recycling facility.

During analysis of the alternatives, it was assumed that the central portion of the building overlaying the partial basement is built on bedrock. Should drastically different conditions be encountered during demolition or the PDI, the alternatives will be reevaluated, as they are contingent upon no additional contaminates of concern being encountered.

8.4.1 Alternative 1 – Track 4: Restricted Residential Remediation

A Track 4 cleanup generally involves removing all Site soils exceeding restricted residential criteria to specified depth and the creation of a cover system to meet Part 375 3.8 and 6.8(b) restricted residential use SCOs. Removal includes all soils above final grade requirements and an additional 2 feet of removal in non-hardscaped areas. The hardscaped areas (i.e., building footprint, parking lot and sidewalks) would be composed of approximately one foot of material which would function as a component of the cover system. All non-hardscaped/greenspace areas would be covered with 2 feet of clean imported fill meeting the provisions of NYSDEC DER-10 Subdivision 5.4(e) Appendix 5 (see **Figure 7**). Details of this alternative include the following:

1. All soils across the Site above final grade requirements and an additional 2 feet of material in non-hardscape/greenspace areas will be removed and disposed of at an approved landfill. The estimated total volume of soil requiring removal is 8,500 tons.
2. Approximately 4,500 tons of clean fill will be imported to the Site to bring the area of the partial basement of the former existing building up to the design grade.
3. Approximately 2,000 tons of clean fill will be imported to the Site to provide a 2-foot cover system in

greenspace areas.

4. Upon completion of remediation, provisions for managing the Site will be provided through an Environmental Easement (EE) which outlines Institutional Controls (ICs) and Engineering Controls (ECs).
5. Imposition of an IC in the form of an EE for the controlled party includes the following:
    a. The remedial part or site owner must complete and submit a periodic certification of IC/EC in accordance with NYSDEC Part 375-1.8(h)(3).
    b. Allows the use and development of the controlled property for restricted residential, commercial, and industrial uses as defined by Part 375-1.8(g)., although land use is subject to local zoning laws.
    c. Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH.
    d. Requires monitoring of sub-slab vapor extraction for a set period of time.
    e. Requires compliance with the approved Site Management Plan.
6. An SMP is required that includes the following:
    a. An IC/EC plan that identifies all use restrictions and ECs for the Site and details the steps and media specific requirements necessary to ensure the IC and/or ECs remain in place and effective. The ICs are as discussed above, and the only EC is a soil cover system.
    b. An Excavation Plan which details provisions for management of future excavations in areas of remaining contamination.
    c. Descriptions of the provisions of the EE including any land use or groundwater use restrictions.
    d. Provisions for the management and inspection of the identified ECs.
    e. Maintaining site access controls and NYSDEC notifications.
    f. The steps necessary for the periodic reviews and certifications of the IC/ECs.

Overall Protection of Public Health and the Environment – Alternative 1 is protective of human health and the environment with the removal of two feet of impacted soil from open areas external to the building and backfilling with two feet of clean soil or hardscape. The clean soil and hardscape covered areas will be incorporated into the SMP as an EC for the Site and IC/ECs will be implemented to prevent more restrictive forms of future site use (e.g., unrestricted and residential) and restrict any use of the groundwater at the Site. Under ICs/ECs, the cover system will be inspected, monitored and maintained. The SMP Excavation Work Plan (EWP) will apply to any future disturbance of soils beneath the cover system. The SMP also requires the implementation of an approved HASP for all future work.

Compliance with SCGs – Alternative 1 is a Part 375 Track 4 remedy with some soils exceeding the restricted residential SCOs remaining below an approved cover system.

Long-Term Effectiveness and Permanence – The removal of the open area impacted fill soils to meet restricted residential SCOs and backfilling with clean fill and hardscape meets the RAOs for soil in this area. Although groundwater contamination is not a concern, there will be a restriction on the use of groundwater at the Site. The SMP requires periodic inspection and monitoring of the cover system for the Site to assure its integrity and the SMP EWP will apply to any future disturbance of the remaining impacted soils including the requirement to prepare an approved HASP for all work.

Reduction of Toxicity, Mobility, or Volume with Treatment – The remedial measure will either permanently or significantly reduce the mobility of contamination in the soils at the Site through the cover system. The volume of impacted soil will be reduced at the Site by excavation and offsite disposal of the top two feet of impacted soil across open areas and one foot in areas to be hardscaped.

The SMP will include an EWP to address any impacted soil/fill encountered during future development

and/or maintenance activities and include a site-wide Inspection program to assure that the ICs/ECs placed on the Site have not been altered and remain effective. This alternative will not, however, reduce the toxicity of the soil contaminants left in place upon completion of the remedial measure. Therefore, this alternative partially satisfies this criterion.

Short-Term Effectiveness – Although minimal, potential short-term adverse impacts and human exposures may occur during construction (remediation and new development). A RAWP will be implemented prior to remediation which will require the contractor to prepare and implement a site-specific HASP to cover all workers. Periodic inspections of the cover system per the SMP requirements will prevent ingestion/direct contact with contaminated soil and prevent inhalation of contaminants in soil that may remain below the cover system. This alternative is sustainable through the EE and implementation of the SMP.

Implementability – There are no implementation issues related to the proposed remediation or related to the ICs/ECs placed on the Site under this alternative.

Community Acceptance – Community acceptance will be evaluated based on comments to be received from the public in response to fact sheets, public comment periods, and other planned citizen participation activities. Currently, no public comments have been received regarding the Site.

Cost – The values used in estimating alternatives are order-of-magnitude estimates for comparing alternatives and are not meant to be a specific remedial criterion. The estimated cost for Alternative 1 – Track 4 Restricted Residential Use Alternative is approximately $1.5 million. The associated cost summary is provided in **Appendix K**.

Green Remediation – This alternative will follow a shorter remedial timeline as there will be less excavation and disposal of impacted materials. A shorter remedial timeline implies less total energy use and less emissions. Less excavation and disposal implies reduced waste/landfilling, use of heavy equipment, truck travel, localized noise, vibration and wear and tear on roads. Some additional efforts will be required to import clean fill to compose the required cover system.

8.4.2 Alternative 2 – Track 1: Unrestricted Use Remediation

A Track 1 cleanup involves removal of all Site soils exceeding unrestricted criteria to meet Part 375 3.8 and 6.8(a) unrestricted use SCOs. Based on the RI, all Site soils exceed unrestricted criteria and therefore excavation to bedrock across the entire Site would be required (see **Figure 8**). Details of this alternative include the following:

1. All soils across the entire Site will be removed. The approximate volume of soil amounts to 40,000 tons.
2. Clean fill meeting the provisions of NYSDEC DER-10 Subdivision 5.4(e) Appendix 5 will be imported to the Site to meet final grade requirements. The approximate volume of soil/stone amounts to 34,500 tons.

Overall Protection of Public Health and the Environment – This alternative would achieve the corresponding Part 375 SCOs, which are designed to be protective of human health under any reuse scenario.

Compliance with SCGs – This alternative would comply with SCOs, as all non-compliant material would be removed from the Site.

Long-Term Effectiveness and Permanence – This alternative would achieve removal of all contaminant sources and residual impacted soil. No soil exceeding the unrestricted SCOs would remain on the Site. As such, this alternative would provide long-term effectiveness and permanence. Post-remedial monitoring and controls would not be required.

Reduction of Toxicity, Mobility, or Volume with Treatment – This alternative would permanently reduce the toxicity and mobility of Site contamination through the removal of impacted Site soils. Although this is not considered a treatment technology and the volume of contamination would remain the same, removal is very effective in eliminating toxicity and mobility.

Short-Term Effectiveness – The short-term effectiveness of this alternative to the community, workers, and environment during implementation of the unrestricted use alternative would be marginal. The exposure time to community, workers, and the environment from possible fugitive dust or other migration pathways would increase during the excavation, packaging, and offsite disposal of significant quantities of soil and debris. However, within approximately 6 months, the site would be remediated of all soil contamination.

Implementability – Technical implementability of the unrestricted use alternative is high. Demolition, remediation, excavation, and removal activities are associated with standard construction techniques, but impacted soil removal may require excavation below the groundwater table.

Community Acceptance – There have been some community comments with respect to the project in general, and although the short-term impacts will be noticeable during remediation, a Track 1 Unrestricted Use scenario would be a preferred alternative to leaving residual contamination on-site underneath a cover system.

Cost – The cost of implementing a Track 1 Unrestricted Use alternative is estimated at approximately $3.9 million. (Refer to **Appendix K**).

Green Remediation –This alternative will follow a longer remedial timeline as there will be more excavation and disposal of impacted materials. A longer remedial timeline implies more total energy use and more emissions. More excavation and disposal implies additional waste/landfilling, use of heavy equipment, truck travel, localized noise, vibration and wear and tear on roads. This alternative will address the source of contamination more aggressively (i.e., complete removal of impacted materials), which will reduce long-term operation and maintenance of treatment or containment systems (i.e., a cover system).

8.5 RECOMMENDED REMEDIAL ALTERNATIVE

Based on the alternative's evaluation and the conceptual site model for existing contamination, Alternative 1 – Track 4 Restricted Residential Use Alternative is recommended for the Site. It is protective of human health and the environment, meets the requisite SCGs, and is the more cost-effective remedy. Given the current and future use of the Site and neighboring sites, Alternative 1 is more practical and significantly more implementable given the type and quantity of soil contamination at the Site.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The RI was completed in accordance with a defined scope of work, approved RIWP and approved deviations. The following provides a summary of the investigation activities:

- The assessment of soil conditions via:
  - Twelve soil borings and twelve associated samples.
  - Five test trenches and ten associated samples.
  - Three samples above bedrock wells.
- The assessment of groundwater conditions by installing three bedrock groundwater wells and collecting/analyzing two groundwater samples.
- The assessment of soil vapor conditions by installing five vapor probes and five associated samples.

The results of the investigation indicate that metals and PAHs are present in all Site soils above NYSDEC restricted residential SCOs. Site groundwater contains sodium and iron exceeding TOGS values; however, these analytes are naturally occurring and not a result of contamination. Based on the results of the PDI, which will be performed prior to beginning any site remedial work, additional remedial actions will be discussed with NYSDEC, if necessary. The PDI data must be analyzed to ensure the planned remedy is sufficient to address all on-site contamination.

Based on these results, Alternative 1 – Track 4 Restricted Residential Use Alternative is recommended at the Site.

Tables

TABLE 1 - SOIL SAMPLING RESULTS

Analyte	Sample Identification, Sample Depth and Sample Collection Date								NYSDEC Part 375 Soil Cleanup Objectives (SCOs)				
	RI-BH-1	RI-BH-2	RI-BH-3	RI-BH-3-DUP	RI-BH-4	RI-BH-5	RI-BH-6	RI-BH-7	Unrestricted	Residential	Restricted Residential	Commercial	Industrial
	0-2.5'	0-2.5'	5.5-7'	5.5-7'	10-11'	5-7'	0-1'	5-7'					
	3/27/2025												
METALS (ppm)													
Aluminum	7760	13800	9580	20100	5310	14500	9590	9730	NS	NS	NS	NS	NS
Antimony	ND	ND	1.1	1.6	ND	1.6	3.8	1.2	NS	NS	NS	NS	NS
Arsenic	8.5	20.4	8.5	8.3	4.8	10.3	13.7	9.0	13	16	16	16	16
Barium	52.7	1120	65.9	171	359	121	144	56.4	350	350	400	400	10000
Beryllium	0.54	1.2	0.61	1.3	0.53	0.77	0.87	0.69	7.2	14	72	590	2700
Cadmium	0.39	0.41	0.39	0.59	0.39	0.57	0.88	0.62	2.5	2.5	4.3	9.3	60
Calcium	131000	86800	128000	111000	104000	145000	123000	109000	NS	NS	NS	NS	NS
Chromium	11.3	32.9	19.5	40.9	13.5	20.9	19.5	23.3	1	22	110	400	800
Cobalt	4.6	7.2	6.1	8.5	3.6	8.9	7.0	9.5	NS	NS	NS	NS	NS
Copper	28.0	28.3	21.1	38.7	20.0	85.6	60.5	19.4	50	270	270	270	10000
Iron	13300	33900	17100	35100	14800	20900	20600	13800	NS	NS	NS	NS	NS
Lead	74.4	59.8	131	139	64.8	187	215	80.7	63	400	400	1000	3900
Magnesium	26300	6550	32600	18200	26900	31800	16100	27700	NS	NS	NS	NS	NS
Manganese	279	248	412	360	208	442	218	232	1600	2000	2000	10000	10000
Nickel	11.6	22.3	20.0	20.7	13.2	18.4	25.4	22.6	30	140	310	310	10000
Potassium	1840	1530	2200	2730	1360	3620	1800	3740	NS	NS	NS	NS	NS
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	3.9	36	180	1500	6800
Silver	ND	ND	ND	ND	ND	0.25	ND	ND	2	36	180	1500	6800
Sodium	180	451	211	551	155	257	191	189	NS	NS	NS	NS	NS
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Vanadium	18.0	24.3	35.9	31.3	16.0	39.3	26.8	54.3	NS	NS	NS	NS	NS
Zinc	55.7	41.5	61.1	86.9	62.9	108	124	64.6	109	2200	10000	10000	10000
Mercury	0.19	0.064	0.66	1.7	0.036	0.16	0.25	0.096	0.18	0.81	0.81	2.8	5.7
Cyanide, Total	ND	ND	ND	ND	2.1	ND	ND	ND	27	27	27	27	10000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCS) (ppb)													
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Acenaphthene	130	ND	ND	ND	ND	ND	ND	ND	20000	100000	100000	500000	1000000
Acenaphthylene	65	ND	ND	ND	ND	ND	ND	ND	100000	100000	100000	500000	1000000
Anthracene	300	ND	ND	ND	ND	330	ND	ND	100000	100000	100000	500000	1000000
Benzo[a]anthracene	830	1000	ND	370	560	950	820	ND	1000	1000	1000	5600	11000
Benzo[a]pyrene	810	910	ND	400	600	870	810	ND	1000	1000	1000	1000	1100
Benzo[b]fluoranthene	1000	1400	ND	520	840	950	940	ND	1000	1000	1000	5600	11000
Benzo[g,h,i]perylene	610	610	ND	350	520	580	560	ND	100000	100000	100000	500000	1000000
Benzo[k]fluoranthene	370	650	ND	260	ND	540	ND	ND	800	1000	3900	56000	110000
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Butyl benzyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Carbazole	100	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Chrysene	820	1300	ND	370	ND	900	ND	ND	1000	1000	3900	56000	110000
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Dibenz(a,h)anthracene	170	ND	ND	ND	ND	ND	ND	ND	330	330	330	560	1100
Dibenzofuran	57	ND	ND	ND	ND	ND	ND	ND	7000	14000	59000	350000	1000000
Fluoranthene	1800	3600	530	670	1200	2200	2000	ND	100000	100000	100000	500000	1000000
Fluorene	120	ND	ND	ND	ND	ND	ND	ND	30000	100000	100000	500000	1000000
Indeno[1,2,3-cd]pyrene	460	ND	ND	260	ND	480	ND	ND	500	500	500	5600	11000
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	12000	100000	100000	500000	1000000
Phenanthrene	1300	3400	ND	360	ND	1400	1600	ND	100000	100000	100000	500000	1000000
Pyrene	1600	2600	ND	560	900	1900	1500	ND	100000	100000	100000	500000	1000000
Total TICs	3740	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
VOLATILE ORGANIC COMPOUNDS (VOCS) (ppb)													
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	50	100000	100000	500000	1000000
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	370	10000	49000	350000	700000
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	50	51000	100000	500000	1000000
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	ND	ND	1300	5500	19000	150000	300000
Toluene	ND	ND	ND	ND	ND	0.46	ND	ND	700	100000	100000	500000	1000000
ORGANOCHLORINE PESTICIDES (ppb)													
4,4'-DDD	ND	ND	ND	ND	ND	ND	ND	ND	3.3	2600	13000	92000	180000
4,4'-DDT	0.47	ND	ND	ND	8.6	ND	ND	ND	3.3	1700	7900	47000	94000
alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	20	97	480	3400	6800
delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	40	100000	100000	500000	1000000
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	2400	4800	24000	200000	920000
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	14	2200	11000	89000	410000
Endrin ketone	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
gamma-BHC (Lindane)	ND	ND	ND	ND	ND	ND	ND	ND	100	280	1300	9200	23000
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
POLYCHLORINATED BIPHENYLS (PCBS) (ppb)													
PCB-1260	ND	ND	ND	ND	ND	ND	ND	0.096	NS	NS	NS	NS	NS
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) (ppb)													
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorodecanoic acid (PFDA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorododecanoic acid (PFDoA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluoroheptanoic acid (PFHpA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorohexanesulfonic acid (PFHxS)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorohexanoic acid (PFHxA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorononanoic acid (PFNA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorooctanesulfonamide (PFOSA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorooctanesulfonic acid (PFOS)	ND	ND	ND	ND	ND	ND	ND	ND	0.88	8.8	44	440	440
Perfluorooctanoic acid (PFOA)	ND	ND	ND	ND	ND	ND	ND	ND	0.66	6.6	33	500	600
Perfluoropentanoic acid (PFPeA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorotetradecanoic acid (PFTeDA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluoroundecanoic acid (PFUnA)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS

Notes:
(1) PFAS limits are guidance values only; there is still no official SCOs in New York State.
ND Not Detected
NS No Standard
NYSDEC New York State Department of Environmental Conservation
ppb parts per billion
ppm parts per million
' feet below ground surface
R result is rejected/unusable

TABLE 1 - SOIL SAMPLING RESULTS

Analyte	Sample Identification, Sample Depth and Sample Collection Date								NYSDEC Part 375 Soil Cleanup Objectives (SCOs)				
	RI-BH-9	RI-BH-11	RI-BH-12	RI-BH-13	RI-BH-14	RI-MW-1	RI-MW-2	RI-MW-3					
	0-7'	0-8'	0.5-4'	0.5-3'	0.5-2'	0-5'	0-4.5'	0-5'					
	3/28/2025			4/9/2025		4/4/2025		4/8/2025	Unrestricted	Residential	Restricted Residential	Commercial	Industrial
METALS (ppm)													
Aluminum	7450	18600	10100	8040	7750	8910	6450	6230	NS	NS	NS	NS	NS
Antimony	7.2	ND	ND	4.4	ND	1.3	ND	ND	NS	NS	NS	NS	NS
Arsenic	12.3	8.3	17.4	12.8	7.9	8.7	6.2	10.0	13	16	16	16	16
Barium	174	50.3	149	91.8	51.5	78.2	32.8	51.2	350	350	400	400	10000
Beryllium	0.46	1.3	0.92	0.8	0.52	0.69	0.55	0.50	7.2	14	72	590	2700
Cadmium	0.94	0.32	0.43	0.46	0.22	0.30	0.25	0.28	2.5	2.5	4.3	9.3	60
Calcium	58600	65900	12300	79800	137000	164000	132000	60600	NS	NS	NS	NS	NS
Chromium	16.8	33.2	18.4	17.1	17	17.4	10.9	14.3	1	22	110	400	800
Cobalt	11.2	12.3	13.0	6.9	8.7	6.6	3.9	4.7	NS	NS	NS	NS	NS
Copper	149	28.7	52.3	198	23.4	97.1	108	20.8	50	270	270	270	10000
Iron	42600	18700	18100	20900	13800	12000	12100	14200	NS	NS	NS	NS	NS
Lead	366	27.5	195	281	52.8	64.3	61.7	33.5	63	400	400	1000	3900
Magnesium	10300	42500	2570	15800	30900	42900	33400	11200	NS	NS	NS	NS	NS
Manganese	495	222	195	1100	313	336	236	280	1600	2000	2000	10000	10000
Nickel	18.6	31.2	24.6	18.6	17.4	14.8	10.2	13.0	30	140	310	310	10000
Potassium	1820	7950	1410	1590	2780	2470	1900	1550	NS	NS	NS	NS	NS
Selenium	ND	ND	ND	1.1	0.96	ND	ND	ND	3.9	36	180	1500	6800
Silver	ND	ND	0.27	0.28	ND	ND	ND	ND	2	36	180	1500	6800
Sodium	146	251	463	163	205	198	171	121	NS	NS	NS	NS	NS
Thallium	ND	1.9	1.4	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Vanadium	18.7	30.8	35.8	27	31.1	37.7	14.9	22.8	NS	NS	NS	NS	NS
Zinc	323	51.4	171	179	70.4	47.4	51.3	53.3	109	2200	10000	10000	10000
Mercury	0.15	0.11	0.13	0.27	0.15	0.14	0.094	0.16	0.18	0.81	0.81	2.8	5.7
Cyanide, Total	ND	ND	ND	ND	ND	ND	ND	ND	27	27	27	27	10000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCS) (ppb)													
2-Methylnaphthalene	ND	ND	140	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Acenaphthene	29	ND	410	320	ND	ND	ND	ND	20000	100000	100000	500000	1000000
Acenaphthylene	45	840	170	ND	ND	1200	ND	ND	100000	100000	100000	500000	1000000
Anthracene	110	ND	770	640	ND	3200	ND	ND	100000	100000	100000	500000	1000000
Benzo[a]anthracene	380	2400	1400	1500	260	9100	ND	130	1000	1000	1000	5600	11000
Benzo[a]pyrene	310	2800	1300	1500	250	8100	ND	ND	1000	1000	1000	1000	1100
Benzo[b]fluoranthene	410	3600	1600	1800	320	10000	ND	160	1000	1000	1000	5600	11000
Benzo[g,h,i]perylene	220	2300	950	920	170	5000	ND	ND	100000	100000	100000	500000	1000000
Benzo[k]fluoranthene	220	1800	660	890	160	3500	ND	ND	800	1000	3900	56000	110000
Biphenyl	ND	ND	35	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Butyl benzyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Carbazole	41	ND	350	210	ND	780	ND	ND	NS	NS	NS	NS	NS
Chrysene	390	2500	1400	1600	250	8600	ND	ND	1000	1000	3900	56000	110000
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Dibenz(a,h)anthracene	67	720	230	290	ND	1600	ND	ND	330	330	330	560	1100
Dibenzofuran	27	ND	280	220	ND	700	ND	ND	7000	14000	59000	350000	1000000
Fluoranthene	830	2800	3200	3700	430	19000	210	280	100000	100000	100000	500000	1000000
Fluorene	40	ND	380	220	ND	1300	ND	ND	30000	100000	100000	500000	1000000
Indeno[1,2,3-cd]pyrene	190	2000	810	730	140	4400	ND	ND	500	500	500	5600	11000
Naphthalene	ND	ND	ND	ND	ND	370	ND	ND	12000	100000	100000	500000	1000000
Phenanthrene	660	220	3100	3000	250	12000	150	210	100000	100000	100000	500000	1000000
Pyrene	600	2500	2600	2900	400	17000	150	220	100000	100000	100000	500000	1000000
Total TICs	870	6500	6530	1000	ND	42000	3550	ND	NS	NS	NS	NS	NS
VOLATILE ORGANIC COMPOUNDS (VOCS) (ppb)													
Acetone	ND	7.5	ND	ND	ND	ND	ND	5.4	50	100000	100000	500000	1000000
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	370	10000	49000	350000	700000
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	50	51000	100000	500000	1000000
Tetrachloroethene (PCE)	ND	ND	ND	18	1.5	ND	ND	ND	1300	5500	19000	150000	300000
Toluene	ND	ND	ND	0.67	ND	ND	ND	ND	700	100000	100000	500000	1000000
ORGANOCHLORINE PESTICIDES (ppb)													
4,4'-DDD	ND	ND	ND	4.2	ND	ND	ND	ND	3.3	2600	13000	92000	180000
4,4'-DDT	0.66	5.9	ND	10	15	16	ND	ND	3.3	1700	7900	47000	94000
alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	20	97	480	3400	6800
delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	40	100000	100000	500000	1000000
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	2400	4800	24000	200000	920000
Endrin	0.42	ND	ND	ND	ND	18	ND	ND	14	2200	11000	89000	410000
Endrin ketone	ND	ND	ND	ND	ND	ND	ND	7.5	NS	NS	NS	NS	NS
gamma-BHC (Lindane)	ND	ND	ND	ND	ND	ND	ND	ND	100	280	1300	9200	23000
Methoxychlor	ND	ND	ND	5.8	ND	8.3	ND	ND	NS	NS	NS	NS	NS
POLYCHLORINATED BIPHENYLS (PCBS) (ppb)													
PCB-1260	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) (ppb)													
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	ND	ND	ND	ND	ND	ND	0.78	NS	NS	NS	NS	NS
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	ND	ND	0.075	0.052	ND	ND	0.25	NS	NS	NS	NS	NS
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	ND	ND	0.96	0.73	ND	ND	1.4	NS	NS	NS	NS	NS
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	ND	ND	0.37	0.20	ND	ND	0.44	NS	NS	NS	NS	NS
Perfluorodecanoic acid (PFDA)	ND	ND	ND	0.082	0.65	ND	ND	0.056	NS	NS	NS	NS	NS
Perfluorododecanoic acid (PFDoA)	ND	ND	ND	ND	0.36	ND	ND	ND	NS	NS	NS	NS	NS
Perfluoroheptanoic acid (PFHpA)	ND	ND	ND	ND	0.037	ND	ND	0.049	NS	NS	NS	NS	NS
Perfluorohexanesulfonic acid (PFHxS)	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorohexanoic acid (PFHxA)	ND	ND	ND	ND	0.055	ND	ND	0.063	NS	NS	NS	NS	NS
Perfluorononanoic acid (PFNA)	ND	ND	ND	0.044	0.13	ND	ND	0.051	NS	NS	NS	NS	NS
Perfluorooctanesulfonamide (PFOSA)	ND	ND	ND	0.13	0.12	ND	ND	0.28	NS	NS	NS	NS	NS
Perfluorooctanesulfonic acid (PFOS)	ND	ND	ND	0.36	0.32	0.046	0.039	0.47	0.88	8.8	44	440	440
Perfluorooctanoic acid (PFOA)	ND	ND	ND	0.10	0.14	0.05	0.038	0.22	0.66	6.6	33	500	600
Perfluoropentanoic acid (PFPeA)	ND	ND	ND	ND	0.055	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorotetradecanoic acid (PFTeDA)	ND	ND	ND	ND	0.055	ND	ND	ND	NS	NS	NS	NS	NS
Perfluoroundecanoic acid (PFUnA)	ND	ND	ND	ND	0.11	ND	ND	ND	NS	NS	NS	NS	NS

Notes:
(1) PFAS limits are guidance values only; there is still no official SCOs in New York State.
ND Not Detected
NS No Standard
NYSDEC New York State Department of Environmental Conservation
ppb parts per billion
ppm parts per million
' feet below ground surface
R result is rejected/unusable

TABLE 1 - SOIL SAMPLING RESULTS

Analyte	Sample Identification, Sample Depth and Sample Collection Date										NYSDEC Part 375 Soil Cleanup Objectives (SCOs)				
	TT-1		TT-2		TT-3		TT-4		TT-5		Unrestricted	Residential	Restricted Residential	Commercial	Industrial
	2-4'	4-5'	1-4'	4-10.3'	1.5-2.5'	4-5'	1-4'	4-7.5'	1-4.5'	4.5-5.5'					
	4/18/2025		4/21/2025		4/18/2025										
METALS (ppm)															
Aluminum	9940	13000	12700	8400	8800	14400	11900	10700	8020	20700	NS	NS	NS	NS	NS
Antimony	2.2	3.2	ND	ND	ND	ND	ND	ND	1.2	ND	NS	NS	NS	NS	NS
Arsenic	4.9	14.0	9.8	9.7	9.7	19.8	8.2	5.5	7.1	3.5	13	16	16	16	16
Barium	163	109	116	R	27.6	50.3	43.5	41.3	103	144	350	350	400	400	10000
Beryllium	1.0	0.90	0.87	0.57	0.53	1.4	0.71	0.59	0.45	0.88	7.2	14	72	590	2700
Cadmium	0.36	0.33	0.34	0.19	0.33	0.39	0.24	0.29	0.29	0.32	2.5	2.5	4.3	9.3	60
Calcium	14300	62300	97200	117000	60800	37400	61500	119000	127000	46400	NS	NS	NS	NS	NS
Chromium	41.2	25.9	23.6	13.3	22.9	62.7	23.9	17.5	13.9	24.6	1	22	110	400	800
Cobalt	5.4	6.7	9.6	5.3	5.4	14.5	8.0	5.8	5.4	10.2	NS	NS	NS	NS	NS
Copper	29.6	34.2	39.9	38.5	12.9	16.5	11.7	14.6	20.3	18.0	50	270	270	270	10000
Iron	16700	22700	16200	12500	11800	24100	14300	12000	13200	21700	NS	NS	NS	NS	NS
Lead	79.9	116	51.7	85.2	13.7	43.1	21.9	36.7	64.1	17.1	63	400	400	1000	3900
Magnesium	1190	19300	26900	31100	4880	6490	7030	7470	8750	18400	NS	NS	NS	NS	NS
Manganese	73.6	327	457	270	174	296	418	401	321	473	1600	2000	2000	10000	10000
Nickel	14.0	15.9	24.2	14.6	19.7	41.9	19.3	13.1	14.3	21.1	30	140	310	310	10000
Potassium	1110	2490	3450	1630	3660	7620	3100	2470	2640	6850	NS	NS	NS	NS	NS
Selenium	1.4	1.2	ND	ND	ND	1.0	ND	ND	ND	ND	3.9	36	180	1500	6800
Silver	ND	ND	ND	ND	ND	0.25	ND	ND	ND	ND	2	36	180	1500	6800
Sodium	381	288	180	172	87.6	105	127	127	201	445	NS	NS	NS	NS	NS
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Vanadium	22.9	27.6	60.9	31.4	26.7	143	47.8	33.0	23.0	39.5	NS	NS	NS	NS	NS
Zinc	59.1	77.3	71.5	56.3	61.8	44.6	36.3	56.8	74.8	67.7	109	2200	10000	10000	10000
Mercury	0.067	0.058	0.36	0.19	0.20	0.32	0.19	0.11	0.12	0.028	0.18	0.81	0.81	2.8	5.7
Cyanide, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	27	27	27	27	10000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCS) (ppb)															
2-Methylnaphthalene	ND	ND	ND	930	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Acenaphthene	ND	ND	640	3500	ND	ND	ND	ND	ND	ND	20000	100000	100000	500000	1000000
Acenaphthylene	ND	ND	550	1300	ND	ND	ND	ND	ND	ND	100000	100000	100000	500000	1000000
Anthracene	ND	ND	2100	9000	ND	ND	ND	ND	47	ND	100000	100000	100000	500000	1000000
Benzo[a]anthracene	300	150	9300	23000	590	27	ND	49	180	ND	1000	1000	1000	5600	11000
Benzo[a]pyrene	330	210	8500	20000	750	ND	ND	47	180	ND	1000	1000	1000	1000	1100
Benzo[b]fluoranthene	420	300	11000	22000	1100	35	ND	62	230	ND	1000	1000	1000	5600	11000
Benzo[g,h,i]perylene	250	220	5200	12000	700	25	19	39	150	ND	100000	100000	100000	500000	1000000
Benzo[k]fluoranthene	170	100	4600	13000	390	ND	ND	ND	90	ND	800	1000	3900	56000	110000
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Butyl benzyl phthalate	ND	ND	ND	ND	150	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Carbazole	ND	ND	450	2300	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Chrysene	340	180	8800	22000	690	ND	ND	49	190	ND	1000	1000	3900	56000	110000
Di-n-butyl phthalate	ND	ND	ND	ND	320	37	ND	ND	ND	ND	NS	NS	NS	NS	NS
Dibenz(a,h)anthracene	ND	62	1600	4000	210	ND	ND	ND	43	ND	330	330	330	560	1100
Dibenzofuran	ND	ND	ND	1900	ND	ND	ND	ND	ND	ND	7000	14000	59000	350000	1000000
Fluoranthene	600	240	20000	53000	1000	51	32	100	370	37	100000	100000	100000	500000	1000000
Fluorene	ND	ND	400	3100	ND	ND	ND	ND	ND	ND	30000	100000	100000	500000	1000000
Indeno[1,2,3-cd]pyrene	210	170	4600	11000	560	ND	ND	30	120	ND	500	500	500	5600	11000
Naphthalene	ND	ND	ND	930	ND	ND	ND	ND	ND	ND	12000	100000	100000	500000	1000000
Phenanthrene	220	74	9000	37000	290	ND	ND	47	220	ND	100000	100000	100000	500000	1000000
Pyrene	430	200	16000	43000	820	42	25	77	330	33	100000	100000	100000	500000	1000000
Total TICs	ND	ND	22200	172400	ND	ND	ND	ND	ND	4480	NS	NS	NS	NS	NS
VOLATILE ORGANIC COMPOUNDS (VOCS) (ppb)															
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	100000	100000	500000	1000000
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	370	10000	49000	350000	700000
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	51000	100000	500000	1000000
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1300	5500	19000	150000	300000
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	700	100000	100000	500000	1000000
ORGANOCHLORINE PESTICIDES (ppb)															
4,4'-DDD	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.3	2600	13000	92000	180000
4,4'-DDT	3.2	0.65	1.6	9.7	ND	ND	ND	ND	0.89	ND	3.3	1700	7900	47000	94000
alpha-BHC	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND	20	97	480	3400	6800
delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	100000	100000	500000	1000000
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	0.49	ND	ND	2400	4800	24000	200000	920000
Endrin	ND	0.97	1.1	ND	ND	0.60	ND	0.56	0.99	ND	14	2200	11000	89000	410000
Endrin ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
gamma-BHC (Lindane)	ND	ND	0.73	ND	ND	ND	ND	ND	ND	ND	100	280	1300	9200	23000
Methoxychlor	ND	ND	0.82	9.6	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
POLYCHLORINATED BIPHENYLS (PCBS) (ppb)															
PCB-1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) (ppb)															
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorodecanoic acid (PFDA)	ND	ND	ND	ND	0.069	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorododecanoic acid (PFDoA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluoroheptanoic acid (PFHpA)	ND	0.045	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorohexanesulfonic acid (PFHxS)	ND	ND	ND	ND	ND	ND	0.19	0.056	0.037	ND	NS	NS	NS	NS	NS
Perfluorohexanoic acid (PFHxA)	ND	ND	ND	ND	ND	ND	ND	0.17	ND	ND	NS	NS	NS	NS	NS
Perfluorononanoic acid (PFNA)	ND	ND	ND	ND	ND	0.041	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorooctanesulfonamide (PFOSA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorooctanesulfonic acid (PFOS)	0.069	0.10	0.071	0.049	0.12	0.15	0.094	0.060	0.21	ND	0.88	8.8	44	440	440
Perfluorooctanoic acid (PFOA)	0.15	0.24	0.083	ND	ND	0.094	0.21	0.15	0.11	ND	0.66	6.6	33	500	600
Perfluoropentanoic acid (PFPeA)	ND	ND	ND	0.14	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluorotetradecanoic acid (PFTeDA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Perfluoroundecanoic acid (PFUnA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS

Notes:
(1) PFAS limits are guidance values only; there is still no official SCOs in New York State.
ND Not Detected
NS No Standard
NYSDEC New York State Department of Environmental Conservation
ppb parts per billion
ppm parts per million
' feet below ground surface
R result is rejected/unusable

TABLE 2 - GROUNDWATER SAMPLING RESULTS

Parameter Tested	Sample Identification and Sample Date		NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1)
	MW-2	MW-3	
	4/21/2025	4/23/2025	
METALS (ppb)			
Aluminum	350	ND	NS
Barium	24	17	1000
Calcium	79300	66300	NS
Cobalt	0.63	ND	5
Copper	ND	ND	200
Iron	**340**	ND	300
Magnesium	22100	19900	35,000
Manganese	18	3.5	300
Nickel	2.5	1.6	100
Potassium	2500	3100	NS
Sodium	**94800**	**82500**	20,000
Zinc	10	ND	2000
Mercury	ND	ND	0.7
Cyanide, total	4.8	7	200.0
SVOCS (ppb)			
Total TICs	1.9	25.7	50
VOCS (ppb)			
Chloroform	ND	2	7
Methylcyclohexane	ND	0.37	NS
PFAS (ppt)			
Perfluorobutanesulfonic acid (PFBS)	1.0	1.3	NS
Perfluorobutanoic acid (PFBA)	5.8	6.7	NS
Perfluorodecanoic acid (PFDA)	ND	0.79	NS
Perfluoroheptanoic acid (PFHpA)	0.94	2.5	NS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.85	NS
Perfluorohexanoic acid (PFHxA)	2.9	5.5	NS
Perfluorononanoic acid (PFNA)	ND	1.4	NS
Perfluorooctanoic acid (PFOA)	1.9	5.2	6.7
Perfluorooctanesulfonic acid (PFOS)	1.2	1.3	2.7
Perfluoropentanoic acid (PFPeA)	3.6	9.2	NS
PCBS (ppb)			
Total PCBs	ND	ND	0.09
ORGANOCHLORINE PESTICIDES (ppb)			
gamma-BHC (Lindane)	0.0088	0.009	NS

Notes:

ND Not Detected

NS No Standard

NYSDEC New York State Department of Environmental Conservation

ppb parts per billion

ppt parts per trillion

TICs Tentatively Identified Compounds

TABLE 3 - VAPOR SAMPLING RESULTS

Contaminants	Sample Identification, Type of Sample, and Date Analyzed					Table 3.1 NYSDOH Indoor Air Guideline Values
	RI-VP-1	RI-VP-2	RI-VP-3	RI-VP-4	RI-VP-5	
	4/17/2025					
	Volatile Organic Compounds (Method TO-15)					
1,1-Dichloroethene	0.32	0.47	ND	0.41	0.43	-
1,2,4-Trimethylbenzene	0.99	3.3	ND	0.95	ND	-
1,3-Butadiene	ND	ND	2.2	ND	ND	-
1,3,5-Trimethylbenzene	ND	0.78	ND	ND	ND	-
2,2,4-Trimethylpentane	0.61	0.60	ND	0.50	ND	-
3-Chloropropene	0.59	0.92	ND	0.84	ND	-
4-Ethyltoluene	ND	1.2	ND	ND	ND	-
Acetone	81	180	3000	160	160	-
Benzene	1.1	0.95	ND	0.85	0.30	-
Carbon disulfide	190	500	19	370	420	-
Carbon tetrachloride	0.44	0.26	ND	0.41	0.32	-
Chloroethane	0.60	1.1	ND	0.93	0.99	-
Chloroform	ND	ND	ND	ND	0.69	-
Chloromethane	10	15	ND	14	13	-
cis-1,2-Dichloroethene	ND	0.16	ND	0.15	ND	-
cis-1,3-Dichloropropene	0.28	0.51	ND	0.31	ND	-
Cumene	ND	0.50	ND	ND	ND	-
Cyclohexane	ND	ND	ND	0.19	0.79	-
Dichlorodifluoromethane	2.2	2.1	ND	2.1	2.2	-
Ethylbenzene	0.64	1.2	ND	0.59	ND	-
m,p-Xylene	2.0	3.9	2.9	1.8	ND	-
Methyl Butyl Ketone (2-Hexanone)	0.93	1.7	68	0.91	ND	-
Methyl Ethyl Ketone (2-Butanone)	7.1	13	3600	20	8.1	-
Methylene Chloride	ND	ND	ND	ND	0.86	60
n-Butane	3.0	2.1	26	2.6	ND	-
n-Butylbenzene	ND	0.40	ND	ND	ND	-
n-Heptane	560	1500	44	1100	16	-
n-Hexane	0.56	0.58	7.0	0.65	ND	-
n-Propylbenzene	0.30	1.1	ND	ND	ND	-
o-Xylene	0.70	ND	ND	0.72	ND	-
sec-Butylbenzene	ND	0.48	ND	ND	ND	-
tert-Butyl alcohol	100	270	ND	200	100	-
Tetrachloroethene	ND	2.2	4.4	0.29	ND	30
Toluene	1.9	2.0	2.5	1.5	ND	-
trans-1,2-Dichloroethene	0.14	0.24	ND	0.21	0.23	-
trans-1,3-Dichloropropene	0.42	0.72	ND	0.41	ND	-
Trichloroethene	ND	ND	ND	ND	0.16	2
Trichlorofluoromethane	1.2	1.2	ND	1.2	1.2	-
Vinyl chloride	2.6	4.4	ND	3.8	ND	-

Notes:

(1) All values are in micrograms per cubic meter (ug/m^3)

ND Not Detected

NYSDOH New York State Department of Health

\- Not applicable/no guidance value

TABLE 4
PHASE II SOIL SAMPLING RESULTS (all values in parts per million (PPM)

Parameter Tested	BE3 Phase II Report February 2023 - Sample Identification, Sample Depth in feet below ground surface (bgs), and Sample Date								NYSDEC Soil Cleanup Objectives (SCOs)				
	BH1 2-4	BH2 1-2	BH3 1-2	BH4 1-2	BH5 1-2	BH6 1	BH7 0.5-1	BH8 1-3	Unrestricted	Residential	Restricted Residential	Commerical	Industrial
	1/17/2023												
METALS/INORGANICS													
Arsenic	20	18.5	8.4	2.8	9.0	**5.4**	13.6	**15.4**	13	16	16	16	16
Barium	40	400	78.8	29.4	397	74.1	391	101	410	410	410	410	10,000
Beryllium	0.63	1.30	0.5	0.24	3.4	0.78	1.90	1.30	4.4	8.8	43	670	750
Cadmium	0.35	0.5	0.6	0.26	0.4	0.55	0.31	0.30	2.5	2.5	2.5	3.7	4.4
Chromium	21.2	23.2	12.4	7.5	204	17.3	59.7	12.0	30	30	110	1,700	2,000
Copper	18.3	229 F2	42.9	15.2	31.8	9.7	25.4	24.0	50	280	280	280	10,000
Lead	46	293 F2	139.0	27.9	107	21.6	71	39	63	400	400	1,000	3,900
Manganese	386 B	359 B	349 B	142 B	213 B	1920 B	203	234 B	1,600	2,000	2,000	10,000	10,000
Mercury	0.30 B	0.44	0.14 B	0.19 B	.054 B	.065 B	0.085	0.034 B	0.18	0.26	0.26	1.1	1.1
Nickel	24.2	18.1	18.3	7.5	64.7	29.9	30.9	20.3	30	44	210	320	3,400
Silver	ND	ND	ND	ND	0.36 J	ND	0.28	ND	2	22	110	1,700	2,000
Zinc	43	160 F1	95.7	36.3	36.7	46.3	39.3	23.7	109	1,300	6,600	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)													
Acenaphthene	ND	ND	0.31 J	ND	ND	ND	2.5	0.031 J	20	100	100	500	1,000
Acenaphthylene	ND	ND	ND	ND	ND	ND	1.4 J	ND	100	100	100	500	1,000
Anthracene	ND	ND	ND	ND	ND	ND	9.6	0.89 J	100	100	100	500	1,000
Benzo(a)anthracene	0.17 J	0.99 J	1.6 J	0.35 J	ND	ND	**18**	0.3	1	1	1.4	37	37
Benzo(a)pyrene	0.17 J	1.0 J	1.5 J	0.34 J	ND	ND	**16**	0.33	1	1	1	3.7	3.7
Benzo(b)fluoranthene	0.2	1.4 J	2.00	0.51 J	ND	ND	**16**	0.38	1	1	1.4	37	37
Benzo(g,h,i)perylene	0.1 J	0.68 J	.98 J	0.34 J	ND	ND	**10**	0.27	0.64	1.2	4.9	47	78
Benzo(k)fluoranthene	0.079 J	0.46 J	.71 J	0.19 J	ND	ND	8.90	0.19 J	0.8	1.2	4.9	47	78
Chrysene	0.18 J	1.2 J	1.7 J	0.38 J	ND	ND	**16.0**	0.34	1	1.2	4.9	47	78
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	2.70	0.07 J	0.33	0.33	0.33	3.7	3.7
Dibenzofuran	ND	ND	ND	ND	ND	ND	1.9	0.029 J	2.1	4.2	18	180	290
Fluoranthene	0.4	3.0	4	0.78 J	ND	ND	37	1	85	100	100	500	1,000
Fluorene	ND	ND	0.32 J	ND	ND	ND	3.8	.025 J	30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	0.096 J	0.58 J	0.92 J	0.27 J	ND	ND	**9.1**	0.23	0.5	0.5	1.4	37	37
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	12	84	100	500	1,000
Phenanthrene	0.17 J	2.9	3.7	0.43 J	ND	ND	**30**	0.45	1.1	1.2	4.9	47	78
Pyrene	0.31		3.1	0.6 J	ND	ND	29	0.48	64	100	100	500	1,000

ND Analyte not detected (values in parts per million ppm0

\- Not Applicable or sample not tested for this analyte

J Estimated Concentration

B Anaalyte detected in method blank

K Result is reported as Benzo(b)fluoranthene

E Results exceeded calibration range

T Result is Tentatively Identifies Compound and an estimated value

Analyte detected

Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

Reported concentration greater than or equal to the NYSDEC Residential SCO

Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

Reported concentration greater than or equal to the NYSDEC Commercial SCO

Reported concentration greater than or equal to the NYSDEC Industrial SCO

TABLE 4
PHASE II SOIL SAMPLING RESULTS

Parameter Tested	BE3 Phase II Report February 2023 - Sample Identification, Sample Depth in feet below ground surface (bgs), and Sample Date								NYSDEC Soil Cleanup Objectives (SCOs)				
	BH9 1-2	BH10 1-2	BH11 No Sample	BH12 1-2	BH13 1-2	BH14 2-3	BH15 1-2	BH16 1-3	Unrestricted	Residential	Restricted Residential	Commerical	Industrial
	1/17/2023												
METALS/INORGANICS													
Arsenic	3.0	1.2 J		1.2 J	10.1	4.8	52.5	11.3	13	16	16	16	16
Barium	20.4	5.3		5.3	69	171	89.4	54.3	410	410	410	410	10,000
Beryllium	0.19 J	0.098 J		0.73	0.86		1.70	0.53	4.4	8.8	43	670	750
Cadmium	0.87	0.24		0.55	1.10	0.87 J	0.63	0.15 J	2.5	2.5	2.5	3.7	4.4
Chromium	16.9	3.7		23.8	16.6	7.2	20.5	6.9	30	30	110	1,700	2,000
Copper	18.1	4.9 J		42.0	39.1	17.0	102.0	31.8	50	280	280	280	10,000
Lead	175.0	18.3		109.0	125	29	141.0	12.6	63	400	400	1,000	3,900
Manganese	140 B	63 B		271 B	270 B	394 B	152 B	85.1 B	1,600	2,000	2,000	10,000	10,000
Mercury	0.042 B	0.014 JB		0.10	0.27	0.069	0.067	0.064	0.18	0.26	0.26	1.1	1.1
Nickel	11.4	4.2 J		28.6	24.4	9.3	37.4	14.5	30	44	210	320	3,400
Silver	ND	ND		ND	ND	ND	0.50 J	ND	2	22	110	1,700	2,000
Zinc	99.6	18.6		92	187	21.5	103	17.7	109	1,300	6,600	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)													
Benzo(a)anthracene	16 J	9.7 J		0.46 J	1.4 J	1.1	0.26 J	0.16 J	1	1	1.4	37	37
Benzo(a)pyrene	22	12 J		0.77 J	1.4 J	1.2	0.29 J	0.19	1	1	1	3.7	3.7
Benzo(b)fluoranthene	26	15 J		1 J	1.4 J	1.6	0.34 J	0.24	1	1	1.4	37	37
Benzo(g,h,i)perylene	17 J	11 J		0.79 J	1 J	1	0.20 J	0.13 J	0.64	1.2	4.9	47	78
Benzo(k)fluoranthene	14 J	7.6 J		0.4 J	0.84 J	0.54 J	ND	0.067 J	0.8	1.2	4.9	47	78
Chrysene	19	12 J		ND	1.7 J	1.4	0.27 J	0.17 J	1	1.2	4.9	47	78
Dibenz(a,h)anthracene	5 J	ND		ND	ND	0.31 J	ND	0.041 J	0.33	0.33	0.33	3.7	3.7
Dibenzofuran	ND	ND		ND	ND	ND	ND	ND	2.1	4.2	18	180	290
Fluoranthene	21	19		1 J	2.8	1.9	0.51 J	0.25	85	100	100	500	1,000
Fluorene	ND	ND		ND	ND	ND	ND	ND	30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	16 J	8.8 J		0.7 J	0.86 J	0.88 J	0.20 J	0.12 J	0.5	0.5	1.4	37	37
Naphthalene	ND	ND		ND	ND	ND	ND	ND	12	84	100	500	1,000
Phenanthrene	ND	5.3 J		0.37 J	2.7	0.75 J	0.33 J	0.15 J	1.1	1.2	4.9	47	78
Pyrene	17 J	15 J		0.81 J	3.1	1.5	0.41 J	0.25	64	100	100	500	1,000

Notes: All units in parts per million (ppm)

ND Analyte not detected

\- Not Applicable or sample not tested for this analyte

J Estimated Concentration

B Anaalyte detected in method blank

K Result is reported as Benzo(b)fluoranthene

E Results exceeded calibration range

T Result is Tentatively Identifies Compound and an estimated value

Analyte detected

Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

Reported concentration greater than or equal to the NYSDEC Residential SCO

Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

Reported concentration greater than or equal to the NYSDEC Commercial SCO

Reported concentration greater than or equal to the NYSDEC Industrial SCO

TABLE 4
PHASE II SOIL SAMPLNG RESULTS

Parameter Tested	BE3 Phase II Report February 2023 - Sample Identification, Sample Depth in feet below ground surface (bgs), and Sample Date				NYSDEC Soil Cleanup Objectives (SCOs)				
	BH-17 1-2	BH-18 1-3							
	1/17/2023				Unrestricted	Residential	Restricted Residential	Commerical	Industrial
METALS/INORGANICS									
Arsenic	11.8	7.5			13	16	16	16	16
Barium	62.4	77			410	410	410	410	10,000
Beryllium	0.56	0.56			4.4	8.8	43	670	750
Cadmium	0.47	0.34			2.5	2.5	2.5	3.7	4.4
Chromium	10.7	12.2			30	30	110	1,700	2,000
Copper	35.7	26.2			50	280	280	280	10,000
Lead	88	77.2			63	400	400	1,000	3,900
Manganese	120 B	198 B			1,600	2,000	2,000	10,000	10,000
Mercury	0.15	0.097			0.18	0.26	0.26	1.1	1.1
Nickel	15.5	15.9			30	44	210	320	3,400
Zinc	75	92.4			109	1,300	6,600	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)									
Acenaphthene	ND	0.079 J			20	100	100	500	1,000
Acenaphthylene	ND	0.041 J			100	100	100	500	1,000
Anthracene	ND	0.19 J			100	100	100	500	1,000
Benzo(a)anthracene	0.84 J	0.55			1	1	1.4	37	37
Benzo(a)pyrene	1.3	0.55			1	1	1	3.7	3.7
Benzo(b)fluoranthene	1.7	0.57			1	1	1.4	37	37
Benzo(g,h,i)perylene	1.4	0.4			0.64	1.2	4.9	47	78
Benzo(k)fluoranthene	0.76 J	0.33			0.8	1.2	4.9	47	78
Chrysene	1.1	0.56			1	1.2	4.9	47	78
Dibenz(a,h)anthracene	0.29 J	0.099 J			0.33	0.33	0.33	3.7	3.7
Dibenzofuran	ND	0.056			2.1	4.2	18	180	290
Fluoranthene	1.7	1.4			85	100	100	500	1,000
Fluorene	ND	0.063 J			30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	1.1	0.36			0.5	0.5	1.4	37	37
Naphthalene	ND	0.043 J			12	84	100	500	1,000
Phenanthrene	0.53 J	1.0			1.1	1.2	4.9	47	78
Pyrene	1.3	1.1			64	100	100	500	1,000

Notes: All units in parts per million (ppm)

ND Analyte not detected

\- Not Applicable or sample not tested for this analyte

J Estimated Concentration

B Analyte detected in method blank

K Result is reported as Benzo(b)fluoranthene

E Results exceeded calibration range

Analyte detected

Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

Reported concentration greater than or equal to the NYSDEC Residential SCO

Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

Reported concentration greater than or equal to the NYSDEC Commercial SCO

Reported concentration greater than or equal to the NYSDEC Industrial SCO

TABLE 5

Boring, Monitoring Well and Test Trench GPS Coordinates

Hole ID	Easting	Northing
RI-BH-1	-78.89701	42.95156
RI-BH-2	-78.83653	42.93990
RI-BH-3	-78.83680	42.93975
RI-BH-4	-78.83642	42.93937
RI-BH-5	-78.83625	42.93953
RI-BH-6	-78.83592	42.93944
RI-BH-7	-78.83571	42.93941
RI-BH-9	-78.93588	42.93943
RI-BH-11	-78.83508	42.94007
RI-BH-12	-78.83568	42.94013
RI-BH-13	78.83632	42.93963
RI-BH-14	78.83537	42.93970
RI-TT-1	78.83683	42.93985
RI-TT-2	78.83662	42.93950
RI-TT-3	78.83557	42.93951
RI-TT-4	78.83508	42.93973
RI-TT-5	78.83535	42.94011
RI-MW-1	-78.83667	42.93952
RI-MW-2	-78.83679	42.93988
RI-MW-3	-78.83499	42.93964

Table 6

Monitoring Well and Groundwater Elevation Data

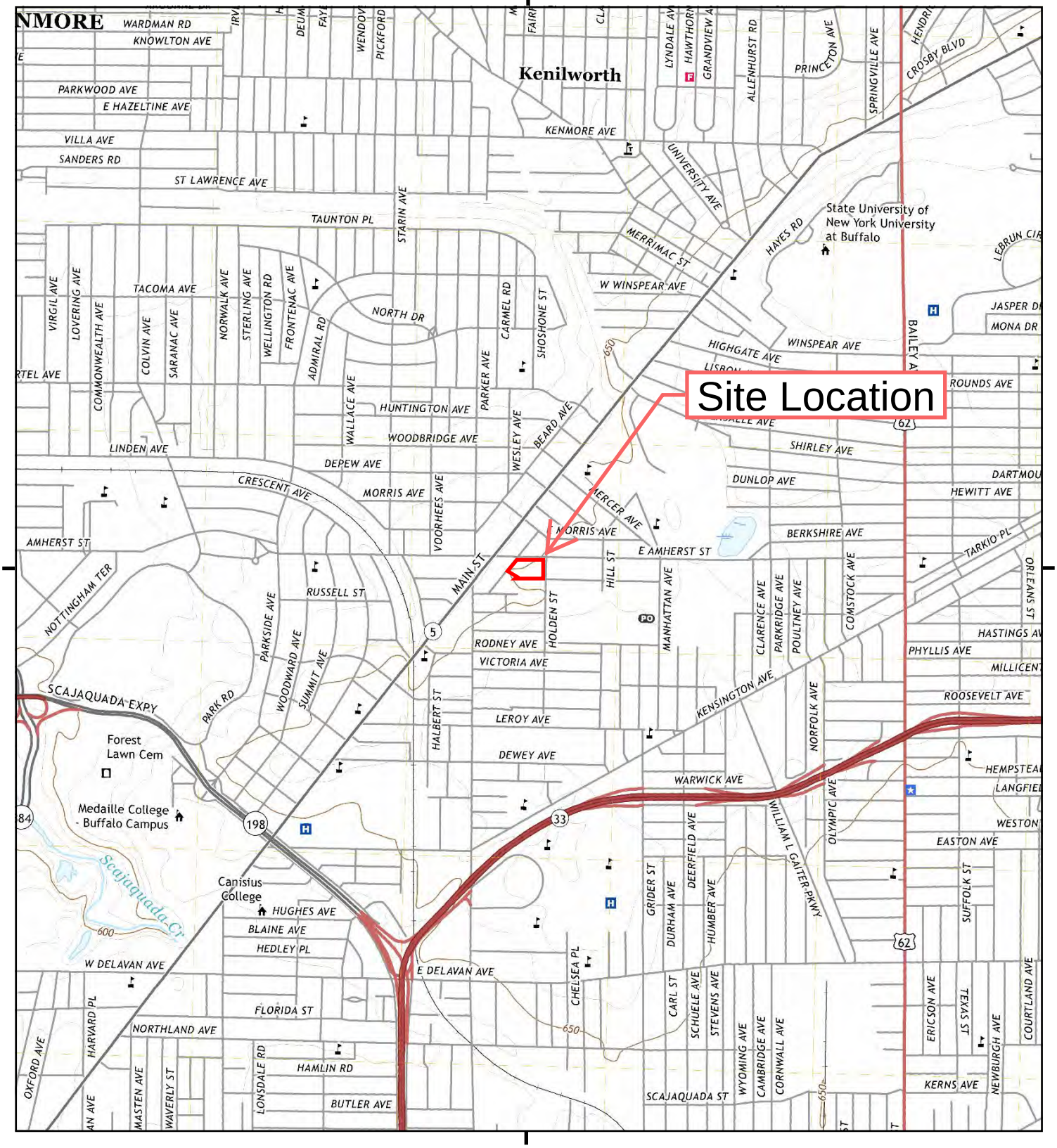
Well ID	Top of Riser	Depth to Water	GW Elevation
RI-MW-1	78.16	>29.4	<48.76
RI-MW-2	72.2	19.4	52.8
RI-MW-3	75.08	16.85	58.23

NOTE: Groundwater was not encountered in RI-MW-1, therefore only inequalities were provided.

Figures

Figure 1
Historical Topo Map

2019



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

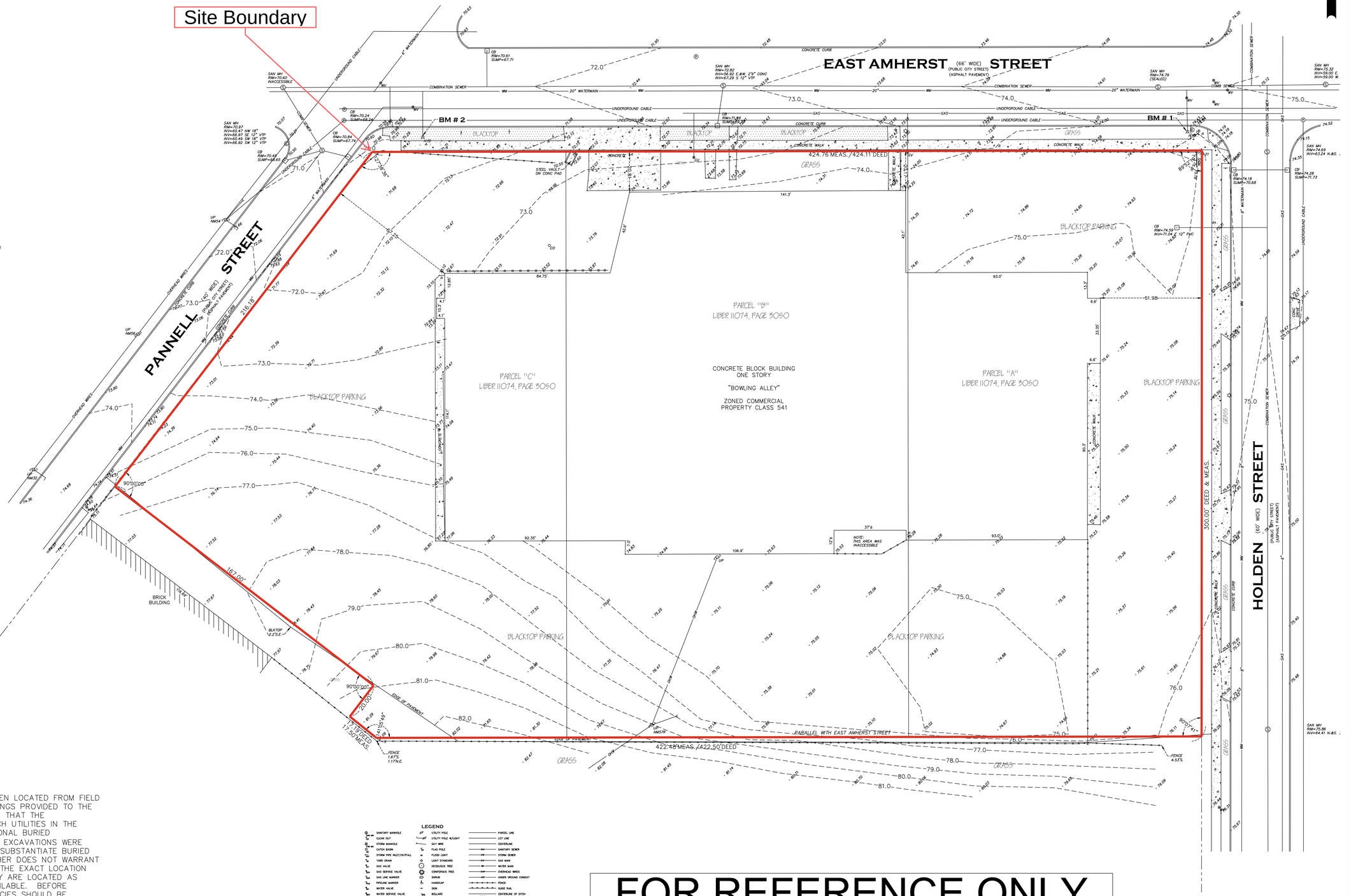
NW N NE
W E
SW S SE

TP, Buffalo NE, 2019, 7.5-minute

SITE NAME: 47 East Amherst Street - Buffalo NY
ADDRESS: 47 East Amherst Street - Buffalo NY
Buffalo, NY 14214
CLIENT: BE3

N

Figure 2
Site Boundary Survey



UTILITIES

RESPONDED ☒ NATURAL GAS COMPANY:

NAME/TITLE	ERIC SCHULTZ
COMPANY/DEPT.	NATIONAL FUEL DISTRIBUTION CORPORATION
ADDRESS	6363 MAIN STREET WILLIAMSVILLE, NEW YORK 14221
TELEPHONE	PHONE: 716/857-7076

RESPONDED ☐ ELECTRIC COMPANY:

NAME/TITLE	DIANE KEICHER
COMPANY/DEPT.	NATIONAL GRID
ADDRESS	144 KENSINGTON AVENUE BUFFALO, NEW YORK 14214
TELEPHONE	PHONE: 716/831-7108

RESPONDED ☒ BUFFALO SEWER AUTHORITY:

NAME/TITLE	ANTHONY HAZZAN
COMPANY/DEPT.	BUFFALO SEWER AUTHORITY
ADDRESS	1038 BUFFALO CITY HALL BUFFALO, NEW YORK 14202
TELEPHONE	PHONE: 716/851-4664

RESPONDED ☒ DIVISION OF WATER:

NAME/TITLE	JAMES CAMPOLONG
COMPANY/DEPT.	CITY OF BUFFALO, DIVISION OF WATER
ADDRESS	2 PORTER AVENUE BUFFALO, NEW YORK 14201
TELEPHONE	PHONE: 716/851-4766

RESPONDED ☒ CABLE TELEVISION COMPANY:

NAME/TITLE	PAM GRACI
COMPANY/DEPT.	TIME WARNER CABLE
ADDRESS	355 CHICAGO STREET BUFFALO, NEW YORK 14204
TELEPHONE	PHONE: 716/558-8551

RESPONDED ☒ TELEPHONE COMPANY:

NAME/TITLE	JIM MURPHY
COMPANY/DEPT.	VERIZON
ADDRESS	65 FRANKLIN STREET BUFFALO, NEW YORK 14202
TELEPHONE	PHONE: 716/840-8698

AS OF MAY 23, 2007, NOT ALL INFORMATION REGARDING UNDERGROUND UTILITY LOCATIONS WAS AVAILABLE FOR REVIEW PRIOR TO COMPLETION OF SURVEY.

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORD DRAWINGS PROVIDED TO THE SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO SUBSTANTIATE BURIED UTILITIES AND STRUCTURES. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. BEFORE EXCAVATIONS ARE BEGUN, THE APPROPRIATE AGENCIES SHOULD BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.

LEGEND

SANITARY MANHOLE	UTILITY POLE
CLEAN OUT	UTILITY POLE W/LIGHT
STORM MANHOLE	GUY WIRE
CATCH BASIN	FLAG POLE
STORM PIPE INLET/OUTFALL	FLOOD LIGHT
YARD DRAIN	LIGHT STANDARD
GAS VALVE	DECIDUOUS TREE
GAS SERVICE VALVE	COMIFEROUS TREE
GAS LINE MARKER	SHRUB
PIPELINE MARKER	HANDICAP
WATER VALVE	SIGN
WATER SERVICE VALVE	BOLLARD
FIRE HYDRANT	MAILBOX
WELL	UNKNOWN MANHOLE
ELECTRIC MANHOLE	TELEPHONE MANHOLE
PARCEL LINE	
LOT LINE	
CENTERLINE	
SANITARY SEWER	
STORM SEWER	
GAS MAIN	
WATER MAIN	
OVERHEAD WIRES	
UNDER GROUND CONDUIT	
FENCE	
GUIDE RAIL	
CENTERLINE OF DITCH	
BERM	
TREE LINE	

FOR REFERENCE ONLY

DRAWING REVISIONS		
ITEM	DATE	DESCRIPTION

MEMBER OF NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS

MEMBER OF NIAGARA FRONTIER LAND SURVEYORS ASSOCIATION INC.

BENCHMARK TABLE (CITY OF BUFFALO DATUM)

DESIGNATION	ELEVATION	DESCRIPTION
1	77.43	TOP OF HYDRANT SHUTOFF VALVE SOUTHWEST CORNER OF HOLDEN STREET AND EAST AMHERST STREET
2	74.07	TOP OF HYDRANT SHUTOFF VALVE SOUTHEAST CORNER OF PANNELL STREET AND EAST AMHERST STREET

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN UP-TO-DATE ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.

0 20 30 40 60 80

SCALE: 1"=20'
GRAPHIC SCALE IN FEET

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MAP MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL AND SIGNATURE SHALL BE CONSIDERED TO BE VALID TRUE COPIES

DESIGNED BY:
DRAWN BY: TJM
CHECKED BY: GCW
DATE: 05/15/07

WARNING:
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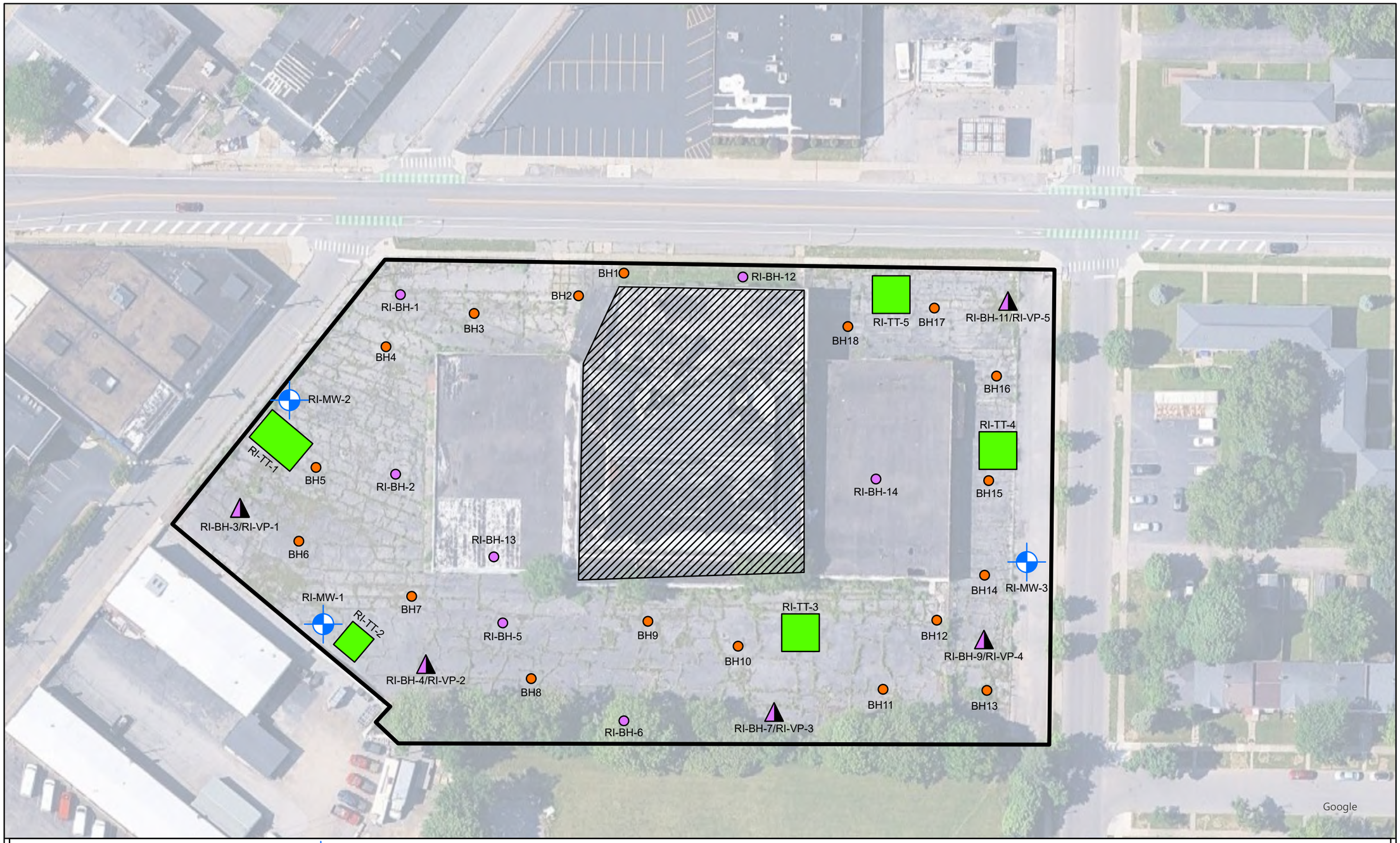
CITY OF BUFFALO
COUNTY OF ERIE, STATE OF NEW YORK
PART OF LOT 44, TOWNSHIP 11, RANGE 8
HOLLAND LAND COMPANY'S SURVEY

47 EAST AMHERST STREET
BOUNDARY AND TOPOGRAPHIC SURVEY

ENGINEERING
LAND SURVEYING
WM. SCHUTT & ASSOCIATES, P.C.
37 CENTRAL AVE.
LANCASTER, NY 140862143
PH.716/683-5961
FAX716/683-0169
WWW.WMSCHUTT.COM
SUSTAINING MEMBER-THE NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS

C101
1"=20'
E/07137/01
WSA PROJECT NO. 07137

Drawing File: GCenterstoneDevelopment\LBJ Mid Rise-47 EAmherst\060302\8-DRAWINGS\Civil\60302-C102-SURVEY.dwg



LEGEND

- Property Boundary
- Test Trench Location
- PDI Area
- RI Monitoring Well (RI-MW-1)
- Phase II ESA Boring Locations (1/17/23) (BH1)
- RI Boring Locations (RI-BH-1)
- RI Boring & Vapor Point (RI-VP-1/BH-1)

NOTES

1. Vapor points were removed from interior locations as the depth to refusal/potential bedrock was too shallow to warrant vapor probes.
2. A vapor point was added to RI-BH-7 to provide more representative coverage of the site.

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CLIENT: REGAN DEVELOPMENT

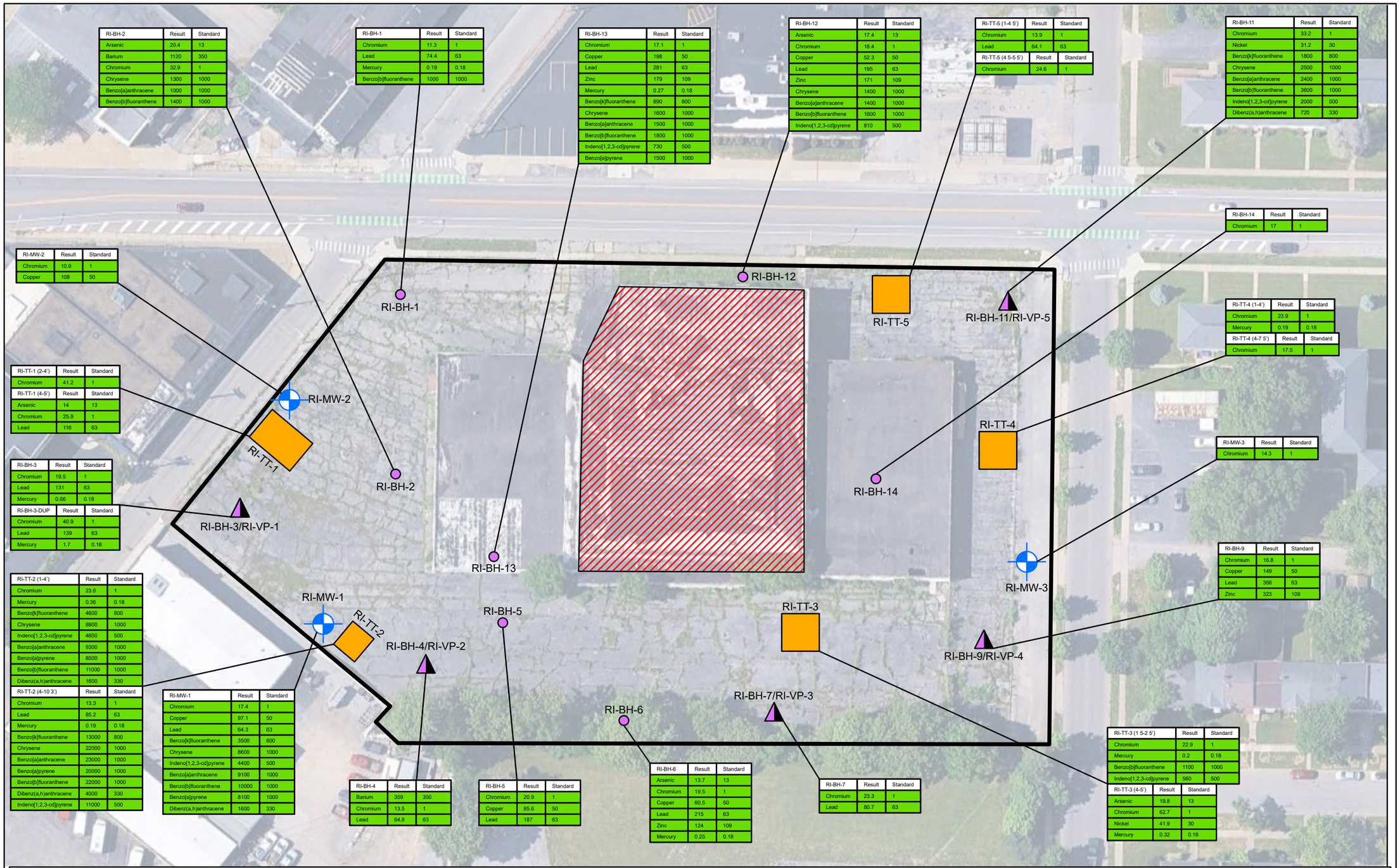
Figure 3
Phase II and RI Sampling Locations

47 E. Amherst Street
BCP SITE NO. C915397
Buffalo, NY 14214

N
W E
S

DATE ISSUED:
May 21, 2025
Δ

SCALE: 1:1,288



LEGEND

- Property Boundary
- RI Test Trench
- PDI Area
- RI Monitoring Well (RI-MW-1)
- RI Soil Boring (RI-BH-1)
- RI Soil Boring/Vapor Point (RI-VP-1/BH-1)

NOTES

1. Metal results and standards are listed in parts per million (ppm).
2. Semi-volatile organic compound (SVOC) results and standards are listed in parts per billion (ppb).

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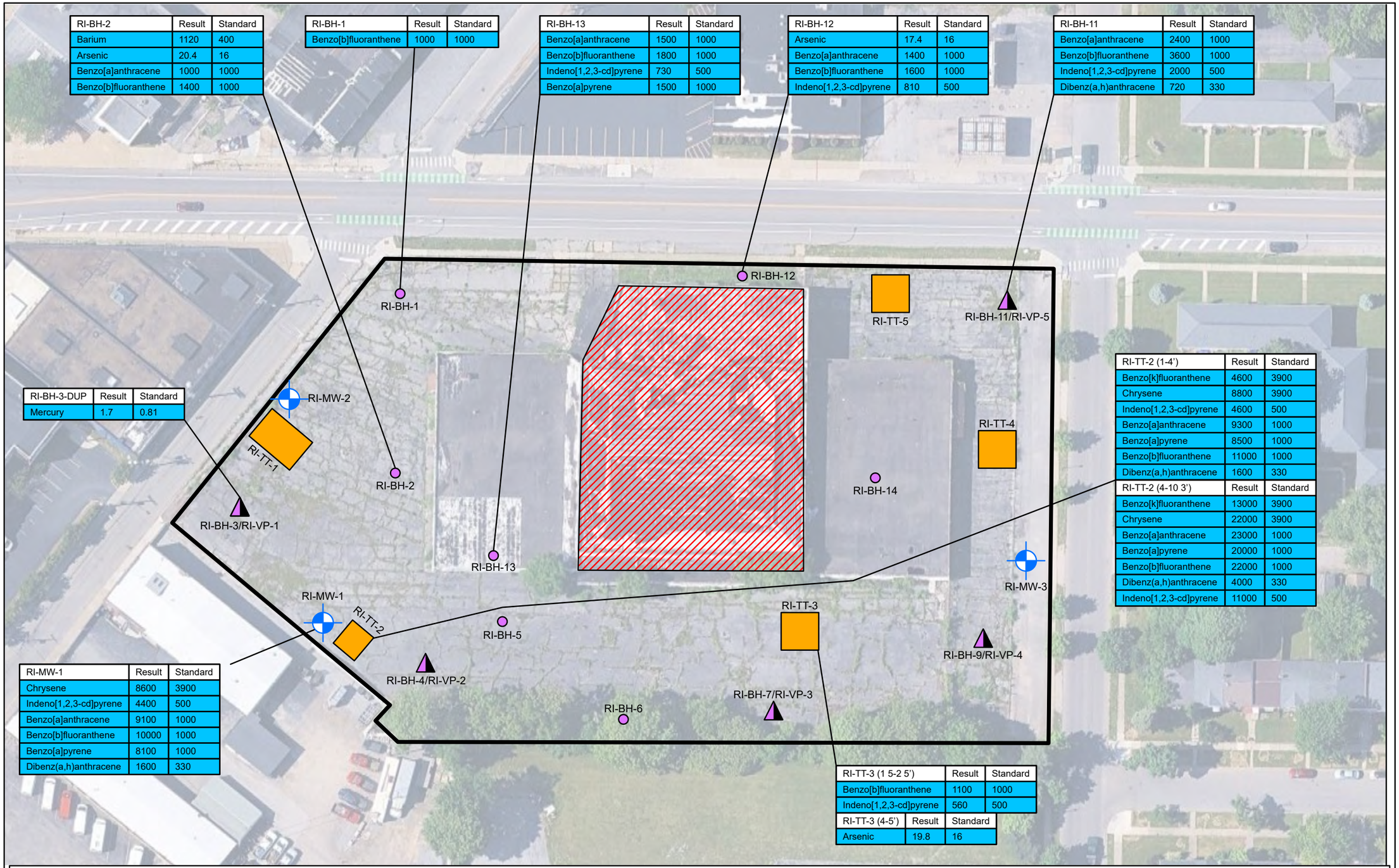
Figure 4
RI Unrestricted Soil Exceedances

47 E. Amherst Street
Buffalo, NY 14214
BCP Site No. C915397

N W E S

DATE ISSUED:
May 22, 2025
△

SCALE: 1:1,000



RI-BH-2	Result	Standard
Barium	1120	400
Arsenic	20.4	16
Benzo[a]anthracene	1000	1000
Benzo[b]fluoranthene	1400	1000

RI-BH-1	Result	Standard
Benzo[b]fluoranthene	1000	1000

RI-BH-13	Result	Standard
Benzo[a]anthracene	1500	1000
Benzo[b]fluoranthene	1800	1000
Indeno[1,2,3-cd]pyrene	730	500
Benzo[a]pyrene	1500	1000

RI-BH-12	Result	Standard
Arsenic	17.4	16
Benzo[a]anthracene	1400	1000
Benzo[b]fluoranthene	1600	1000
Indeno[1,2,3-cd]pyrene	810	500

RI-BH-11	Result	Standard
Benzo[a]anthracene	2400	1000
Benzo[b]fluoranthene	3600	1000
Indeno[1,2,3-cd]pyrene	2000	500
Dibenz(a,h)anthracene	720	330

RI-BH-3-DUP	Result	Standard
Mercury	1.7	0.81

RI-TT-2 (1-4')	Result	Standard
Benzo[k]fluoranthene	4600	3900
Chrysene	8800	3900
Indeno[1,2,3-cd]pyrene	4600	500
Benzo[a]anthracene	9300	1000
Benzo[a]pyrene	8500	1000
Benzo[b]fluoranthene	11000	1000
Dibenz(a,h)anthracene	1600	330

RI-TT-2 (4-10 3')	Result	Standard
Benzo[k]fluoranthene	13000	3900
Chrysene	22000	3900
Benzo[a]anthracene	23000	1000
Benzo[a]pyrene	20000	1000
Benzo[b]fluoranthene	22000	1000
Dibenz(a,h)anthracene	4000	330
Indeno[1,2,3-cd]pyrene	11000	500

RI-MW-1	Result	Standard
Chrysene	8600	3900
Indeno[1,2,3-cd]pyrene	4400	500
Benzo[a]anthracene	9100	1000
Benzo[b]fluoranthene	10000	1000
Benzo[a]pyrene	8100	1000
Dibenz(a,h)anthracene	1600	330

RI-TT-3 (1 5-2 5')	Result	Standard
Benzo[b]fluoranthene	1100	1000
Indeno[1,2,3-cd]pyrene	560	500

RI-TT-3 (4-5')	Result	Standard
Arsenic	19.8	16

LEGEND

- Property Boundary
- RI Test Trench
- PDI Area
- RI Monitoring Well (RI-MW-1)
- RI Soil Boring (RI-BH-1)
- RI Soil Boring/Vapor Point (RI-VP-1/BH-1)

NOTES

1. Metal results and standards are listed in parts per million (ppm).
2. Semi-volatile organic compound (SVOC) results and standards are listed in parts per billion (ppb).

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CLIENT: REGAN DEVELOPMENT

Figure 5
RI Restricted Residential Soil Exceedances
47 E. Amherst Street
Buffalo, NY 14214
BCP Site No. C915397

N
W E
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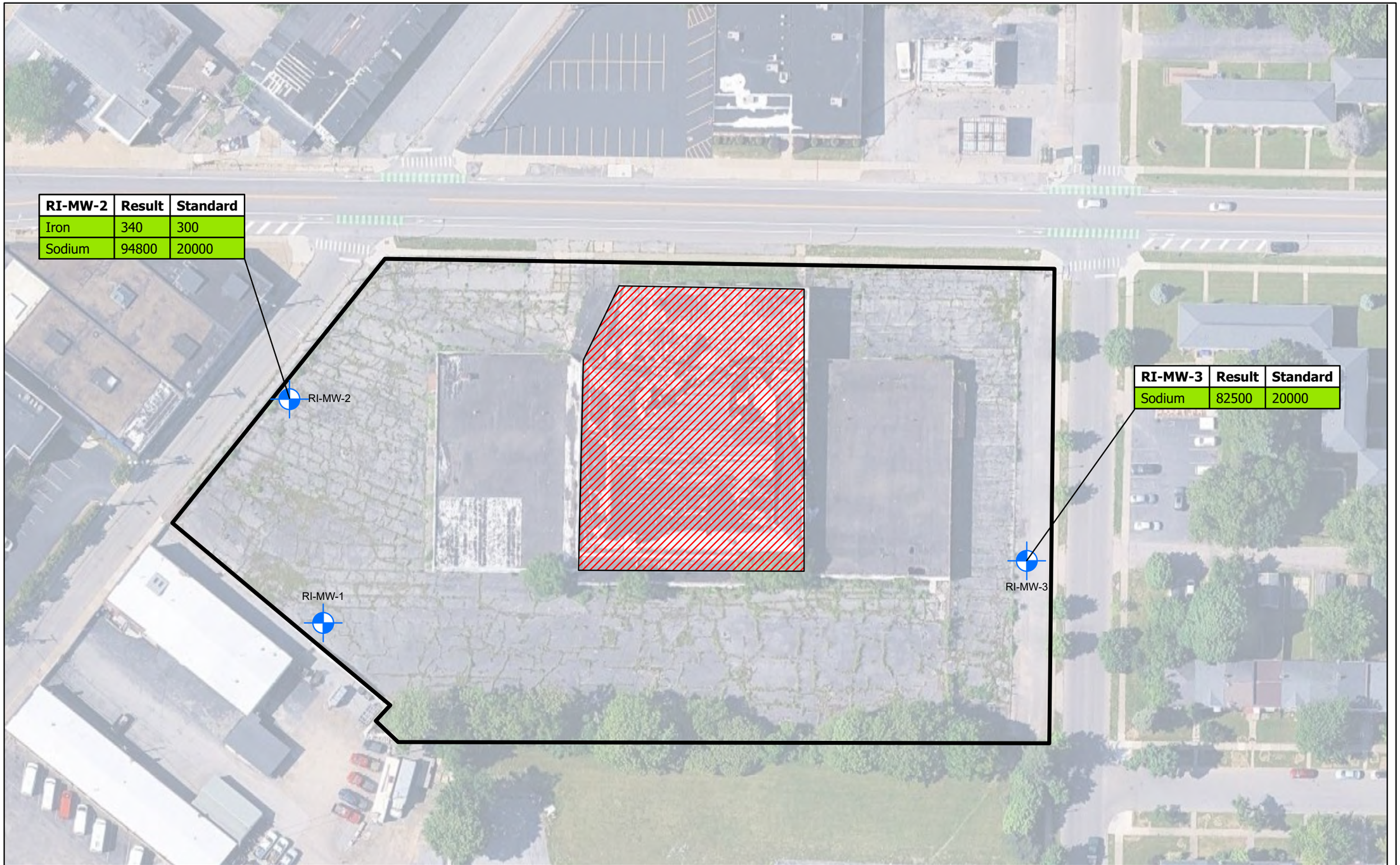
DATE ISSUED:
May 27, 2025
△

SCALE: 1:1,000



LEGEND

- Property Boundary
- RI Monitoring Well (RI-MW-1)
- PDI Area

NOTES

1. Values were compared to TOGS 1.1.1 GA standards.

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CLIENT: REGAN DEVELOPMENT

Figure 6
RI Groundwater Exceedances

47 E. Amherst Street
Buffalo, NY 14214
BCP Site No. C915397

N
W E
S

DATE ISSUED:
May 22, 2025
△

SCALE: 1:1,000

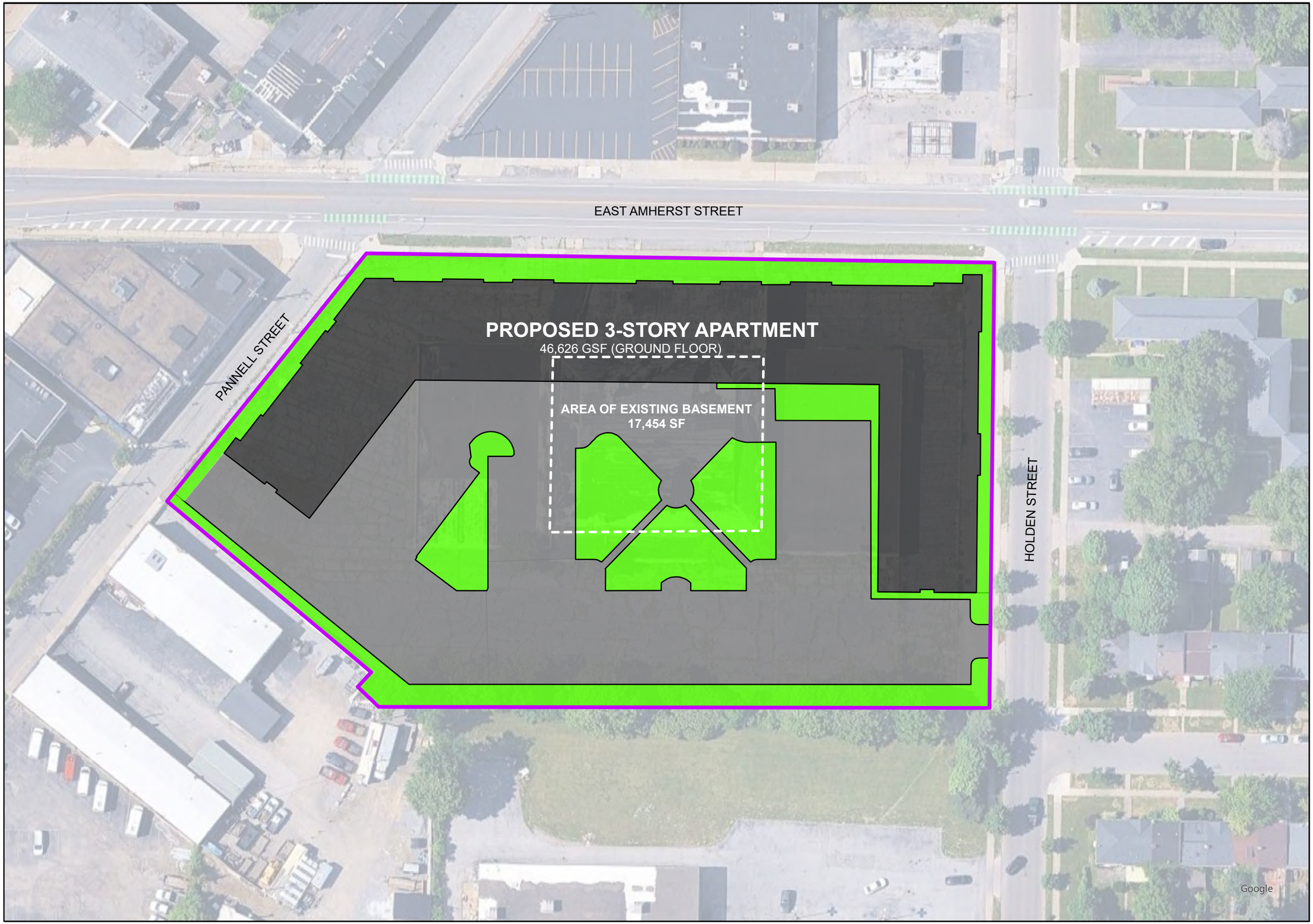

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FIGURE 7

ALTERNATIVE 1: TRACK 4
RESTRICTED RESIDENTIAL

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE ISSUED:
MAY 27, 2025

LEGEND

- Property Boundary
- Green Space (remove 2' impacted soil and import 2' of clean fill)
- Building Footprint (remove 1' impacted soil)
- Hardscape (remove 1' impacted soil)

NOTES

1.) 8,309 TONS OF SOIL REQUIRE REMOVAL.

2.) 2,403 TONS OF CLEAN FILL MUST BE IMPORTED TO MEET COVER REQUIREMENTS.

3.) 4,356 TONS OF CLEAN FILL MUST BE IMPORTED TO BRING THE EXISTING BASEMENT TO FINAL GRADE REQUIREMENTS (BASED ON AVERAGE 5.5 FOOT DEPTH).

4.) ESTIMATES ARE BASED ON AN ASSUMED AVERAGE DEPTH TO BEDROCK OF 5.5 FEET.

5.) (G)SF: (GROSS) SQUARE FEET

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FIGURE 8

ALTERNATIVE 1: TRACK 4
RESTRICTED RESIDENTIAL

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE ISSUED:
MAY 27, 2025

LEGEND

- Property Boundary
- Area requiring removal of all Site soils
- Area requiring import of clean fill (i.e., no removal necessary)

NOTES

1.) 38,998 TONS OF SOIL REQUIRE REMOVAL (I.E., ALL SITE SOILS).

2.) 33,185 TONS OF CLEAN FILL MUST BE IMPORTED TO BRING THE SITE TO FINAL GRADE REQUIREMENTS.

3.) 4,356 TONS OF CLEAN FILL MUST BE IMPORTED TO BRING THE EXISTING BASEMENT TO FINAL GRADE REQUIREMENTS (BASED ON AVERAGE 5.5 FOOT DEPTH).

4.) ESTIMATES ARE BASED ON AN ASSUMED AVERAGE DEPTH TO BEDROCK OF 5.5 FEET.

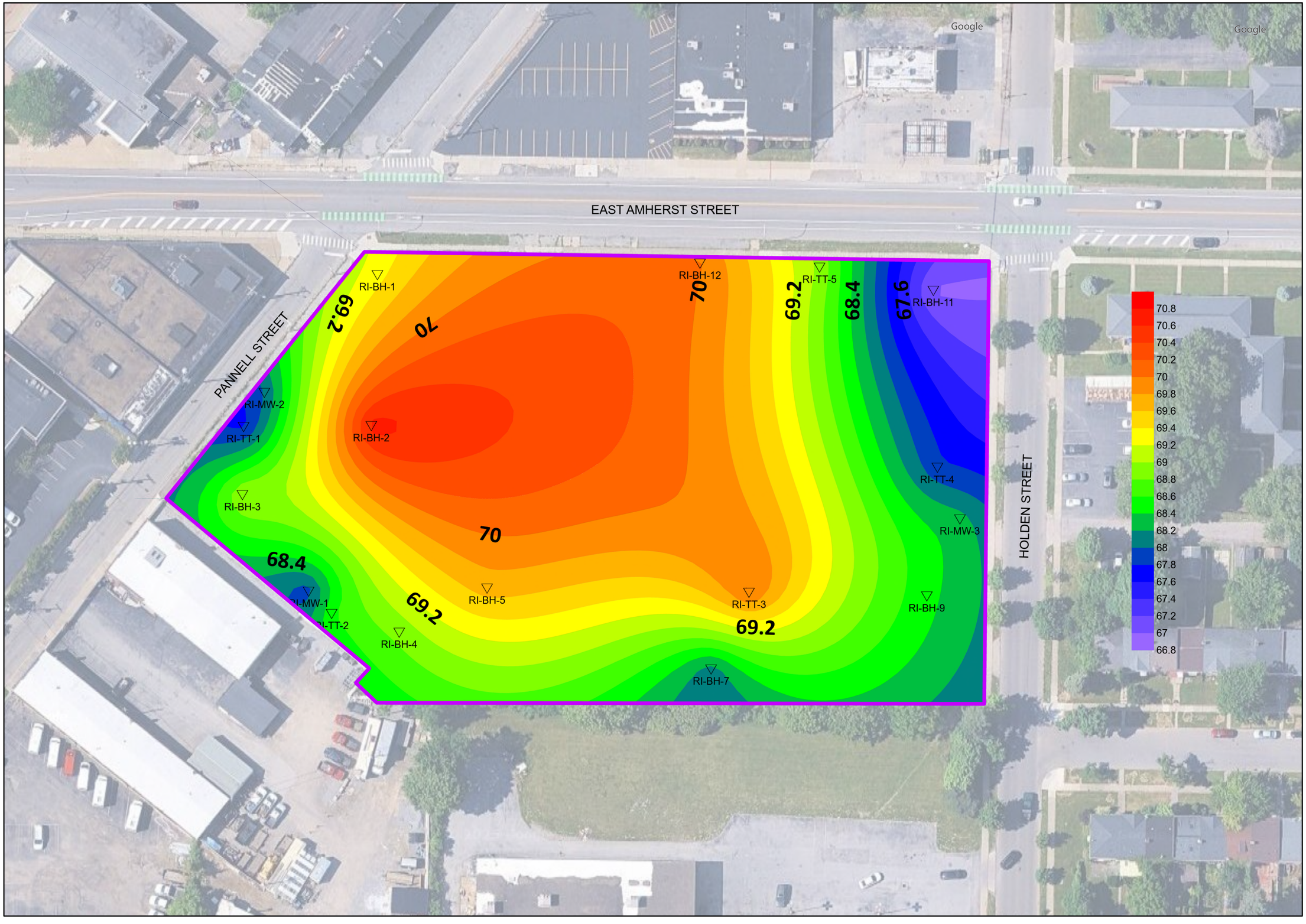

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FIGURE 9

BEDROCK ELEVATION CONTOUR MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE ISSUED:
JUNE 16, 2025

LEGEND

- Property Boundary
- Surveyed Location
- **68.4** Contour Elevation

NOTES

1.) CONTOURS ARE PRESENTED IN FEET.

2.) ELEVATIONS ARE BASED ON TOPOGRAPHIC SURVEY INFORMATION OBTAINED FROM RI SOIL BORINGS. TEST PITS AND MONITORING WELLS.

3.) RI-BH-6 WAS EXCLUDED FROM THE DATA SET AS IT WAS AN EXTREME OUTLIER.

SCALE: 1:1,000

N

Figure 10
Project Schedule
Amherst Commons
47 East Amherst Street, Buffalo, NY
BCP Site No. 915397

TASK	JUN				JUL				AUG				SEP				OCT				NOV				DEC				2026 JAN				FEB				MAR				APR				MAY			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
III. Remedial Investigation/Alternative Analysis Report (RI/AAR)																																																	
45-Day Public Comment Period/DEC Review																																																	
Final Submittal/Report Approval																																																	
IV. Remedial Action Work Plan (RAWP)																																																	
Initial Submittal																																																	
DEC Review																																																	
Final Submittal/Report Approval																																																	
V. Building Demolition																																																	
VI. Pre-Remedial Design Investigation (PDI) Work Plan																																																	
Initial Submittal																																																	
DEC Review																																																	
Final Submittal/Plan Approval																																																	
PDI Fieldwork																																																	
VII. Remediation																																																	
VIII. Site Management Plan (if needed)																																																	
Initial Submittal																																																	
DEC Review																																																	
Final Submittal/Report Approval																																																	
IX. Final Engineering Report																																																	
Initial Submittal																																																	
DEC Review																																																	
Final Submittal/Report Approval																																																	

Appendices

Appendix A

Daily Field Reports

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Thursday, March 27, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Sunny 40 ˚F SW 12 MPH

Description of Work Performed:

8:00	Arrived on site and met with Tim Burmeier (Professional Geologist) and Chuck Guzzetta (driller with Empire Geo Exploration). Deployed upwind and downwind air monitors.
8:30	Began completing borings at BH-1/VP-1 location and traversed in counter-clockwise direction
10:50	Veronica Kreutzer (DEC PM) and Taylor Monnin (DEC) arrived on-site.
	Completed RI-BH-1 through RI-BH-7 and the associated vapor points.
	No native soils were identified in any of the borings.
16:00	Broke down equipment and demobilized site.
16:30	Samples delivered to laboratory.

Problems/Observations:	RI DEVIATION: No native soil samples were collected.
Health and Safety Concerns:	None.
Contractor Work Force:	1 driller, 1 helper
Contractor Equipment	Geoprobe (Model 7720DT)
Attachments : Photolog, Work Location Map	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

Date:	Thursday, March 27, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. RI-BH-1 location, facing SE.

2. RI-BH-2 location, facing E.

3. RI-BH-3 location, facing SE.

4. RI-BH-4 location, facing E.

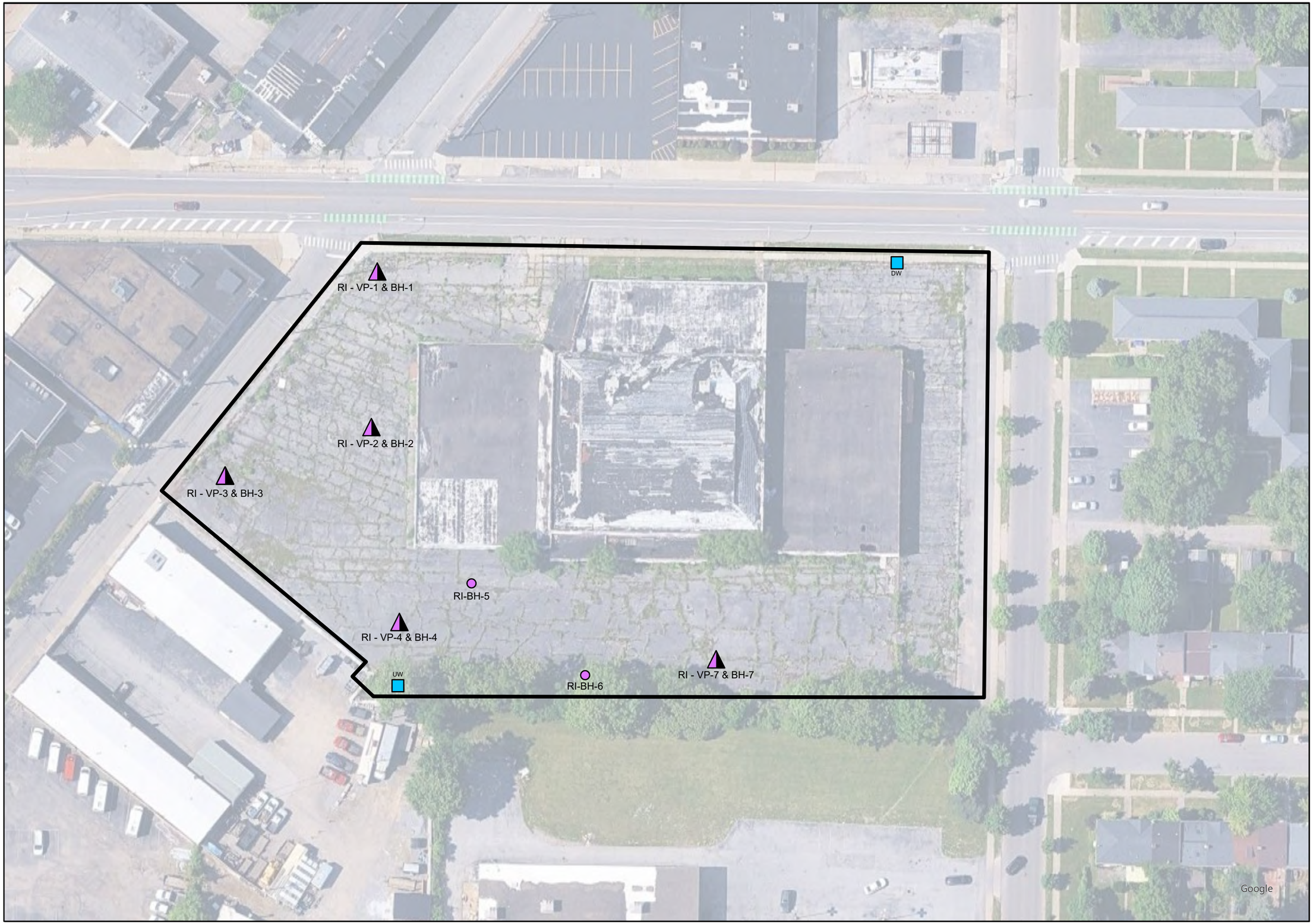
PHOTO LOG

Date:	Thursday, March 27, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

5. RI-BH-5 location, facing NE.

6. RI-BH-6 location, facing E.

7. RI-BH-7 location, facing E.



BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue
Buffalo, NY 14213
716.249.6880
jbrydges@be3corp.com

WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: MARCH 27, 2025
WEATHER: SUNNY, 40 ˚F
WIND: SW 12 MPH

LEGEND

- Property Boundary
- Soil Boring (RI-BH-1)
- Boring/Vapor Point (RI-VP-1/BH-1)
- CAMP Station (DW/UW)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Thursday, March 27, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
3/27/2025 8:45	-	3/27/2025 8:45	-	0	0
3/27/2025 9:00	5	3/27/2025 9:00	6.6	0	1.6
3/27/2025 9:15	3.6	3/27/2025 9:15	4.4	0	0.8
3/27/2025 9:30	2.2	3/27/2025 9:30	4.1	0	1.9
3/27/2025 9:45	2.9	3/27/2025 9:45	3.6	0	0.7
3/27/2025 10:00	2.8	3/27/2025 10:00	4.1	0	1.3
3/27/2025 10:15	2.3	3/27/2025 10:15	3	0	0.7
3/27/2025 10:30	2.9	3/27/2025 10:30	3.5	0	0.6
3/27/2025 10:45	2.4	3/27/2025 10:45	3.4	0	1
3/27/2025 11:00	1.8	3/27/2025 11:00	3.1	0	1.3
3/27/2025 11:15	2.6	3/27/2025 11:15	2.8	0	0.2
3/27/2025 11:30	2.3	3/27/2025 11:30	2.4	0	0.1
3/27/2025 11:45	2.5	3/27/2025 11:45	2.7	0	0.2
3/27/2025 12:00	2.2	3/27/2025 12:00	3.4	0	1.2
3/27/2025 12:15	1.6	3/27/2025 12:15	3	0	1.4
3/27/2025 12:30	1.8	3/27/2025 12:30	2.9	0	1.1
3/27/2025 12:45	3.5	3/27/2025 12:45	3	0	-0.5
3/27/2025 13:00	2.9	3/27/2025 13:00	2.6	0	-0.3
3/27/2025 13:15	4.9	3/27/2025 13:15	4	0	-0.9
3/27/2025 13:30	3.1	3/27/2025 13:30	3.5	0	0.4
3/27/2025 13:45	2.2	3/27/2025 13:45	2.7	0	0.5
3/27/2025 14:00	2.9	3/27/2025 14:00	3.4	0	0.5
3/27/2025 14:15	2.7	3/27/2025 14:15	3.1	0	0.4
3/27/2025 14:30	2.5	3/27/2025 14:30	3.6	0	1.1
3/27/2025 14:45	2.8	3/27/2025 14:45	4.5	0	1.7
3/27/2025 15:00	2.7	3/27/2025 15:00	3.4	0	0.7
3/27/2025 15:15	4.7	3/27/2025 15:15	4.5	0	-0.2
3/27/2025 15:30	2.9	3/27/2025 15:30	4.5	0	1.6
3/27/2025 15:45	3.2	3/27/2025 15:45	-	0	-3.2

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Friday, March 28, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Cloudy 44 ˚F SE 6 MPH

Description of Work Performed:

8:00	Arrived on site and met with Tim Burmeier, P.G., Jim Hull (BE3 field technician) and Chuck Guzzetta (driller with Empire Geo Exploration). Deployed upwind and downwind air monitors.
9:00	Set up on RI-BH-9.
10:50	Veronica Kreutzer (DEC PM) and Taylor Monnin (DEC) arrived on-site.
	Completed RI-BH-9, -11 and -12 and the associated vapor points.
	No native soils were identified in any of the borings.
12:00	Broke down equipment and demobilized site.
12:30	Samples delivered to laboratory.

Problems/Observations:	RI DEVIATION: Removed RI-BH-8 and RI-BH-10 from Work Plan and proposed to supplement with test trenches to get a more representative view of the subsurface.
Health and Safety Concerns:	The interior borings were not completed. The basement was unsafe for equipment transport and suspect ACM was observed throughout the building. First floor conditions will be assessed to determine if borings can safely be completed on this floor.
Contractor Work Force:	1 driller, I helper
Contractor Equipment	Geoprobe (Model 7720DT)
Attachments : Photolog, Work Location Map	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

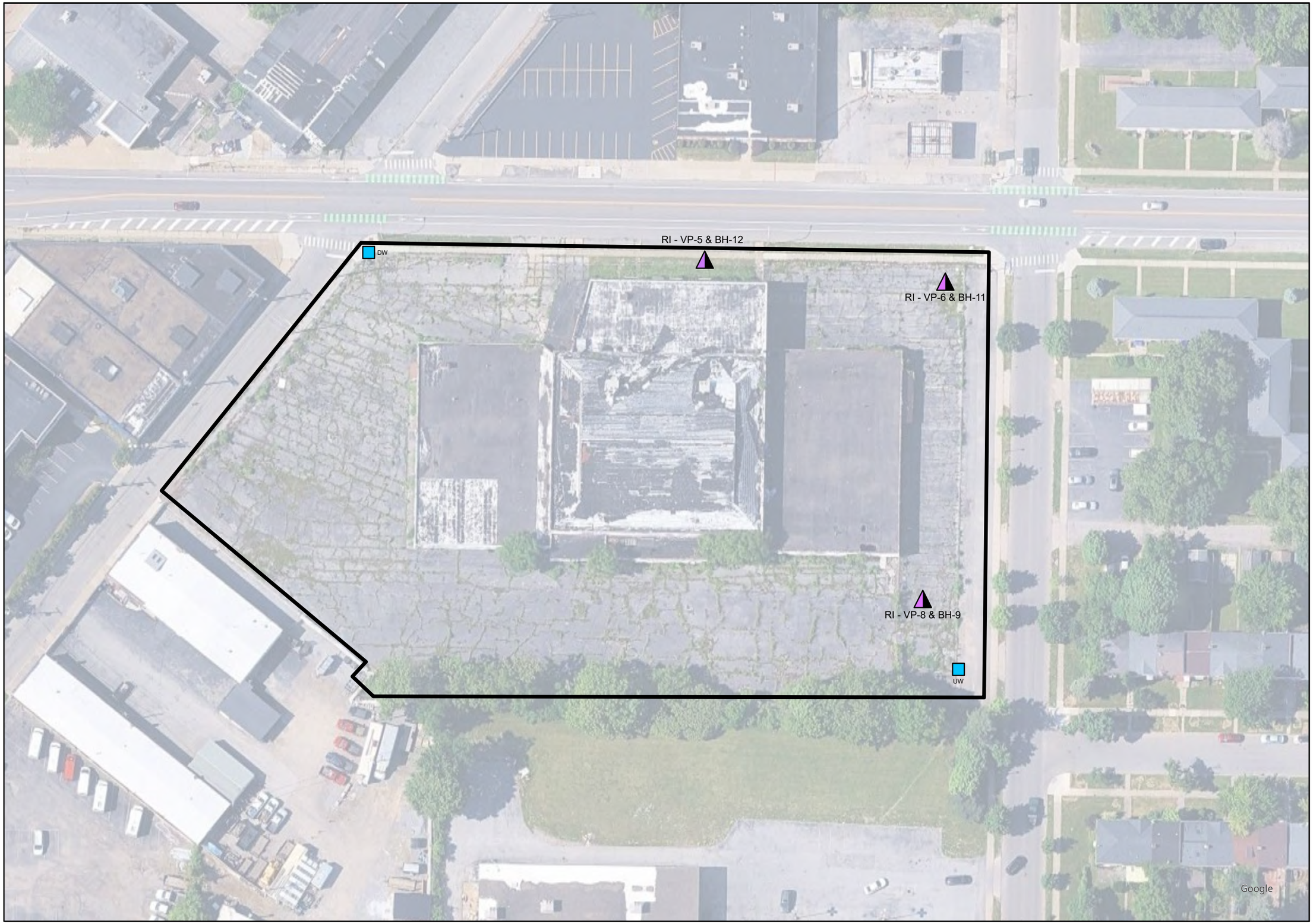
PHOTO LOG

Date:	Friday, March 28, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. RI-BH-9 location, facing NW.

2. RI-BH-11 location, facing SE.

3. RI-BH-12 location, facing E.



BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busi Avenue
Buffalo, NY 14213
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WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: MARCH 28, 2025
WEATHER: CLOUDY, 44 ˚F
WIND: SE 6 MPH

LEGEND

- Property Boundary
- Soil Boring (RI-BH-1)
- Boring/Vapor Point (RI-VP-1/BH-1)
- CAMP Station (DW/UW)

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Friday, March 28, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
3/28/2025 9:15	-	3/28/2025 9:15	-	0	0
3/28/2025 9:30	3.6	3/28/2025 9:30	9.1	0	5.5
3/28/2025 9:45	5	3/28/2025 9:45	19.7	0	14.7
3/28/2025 10:00	4.2	3/28/2025 10:00	9.8	0	5.6
3/28/2025 10:15	5.5	3/28/2025 10:15	9	0	3.5
3/28/2025 10:30	3.8	3/28/2025 10:30	11.7	0	7.9
3/28/2025 10:45	4.9	3/28/2025 10:45	8.7	0	3.8
3/28/2025 11:00	1.4	3/28/2025 11:00	1	0	-0.4
3/28/2025 11:15	0.7	3/28/2025 11:15	1.2	0	0.5
3/28/2025 11:30	2.1	3/28/2025 11:30	1.8	0	-0.3

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Friday, April 4, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Partly Cloudy 46 ˚F NNW 9 MPH

Description of Work Performed:

8:00	Arrived on site and met with Tim Burmeier, P.G., Jason Tadarski (driller) and Jason (DEC). Deployed upwind and downwind air monitors.
9:00	Set up on RI-MW-2 to begin drilling 3' rock socket.
10:30	Encountered top of bedrock at 4.5', collected composite soil sample and began coring bedrock.
11:30	Drilled 2.7' into bedrock. Drillers left site to obtain more water.
12:30	Drillers returned to site and continued drilling RI-MW-2.
13:45	Hole was terminated at 7.5' (i.e., 3 feet into bedrock) and the steel casing was set with grout.
14:50	Driller decontaminated lead auger and set up at RI-MW-1.
15:30	Encountered top of bedrock at 10.5' and collected composite soil sample.
16:00	Broke down equipment and demobilized site.
16:30	Samples delivered to laboratory.

Problems/Observations:	Drillers had some surface water loss. No water left the site.
Health and Safety Concerns:	None.
Contractor Work Force:	1 driller, 1 helper
Contractor Equipment	Geoprobe (Model 7720DT)
Attachments : Photolog, Work Location Map	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

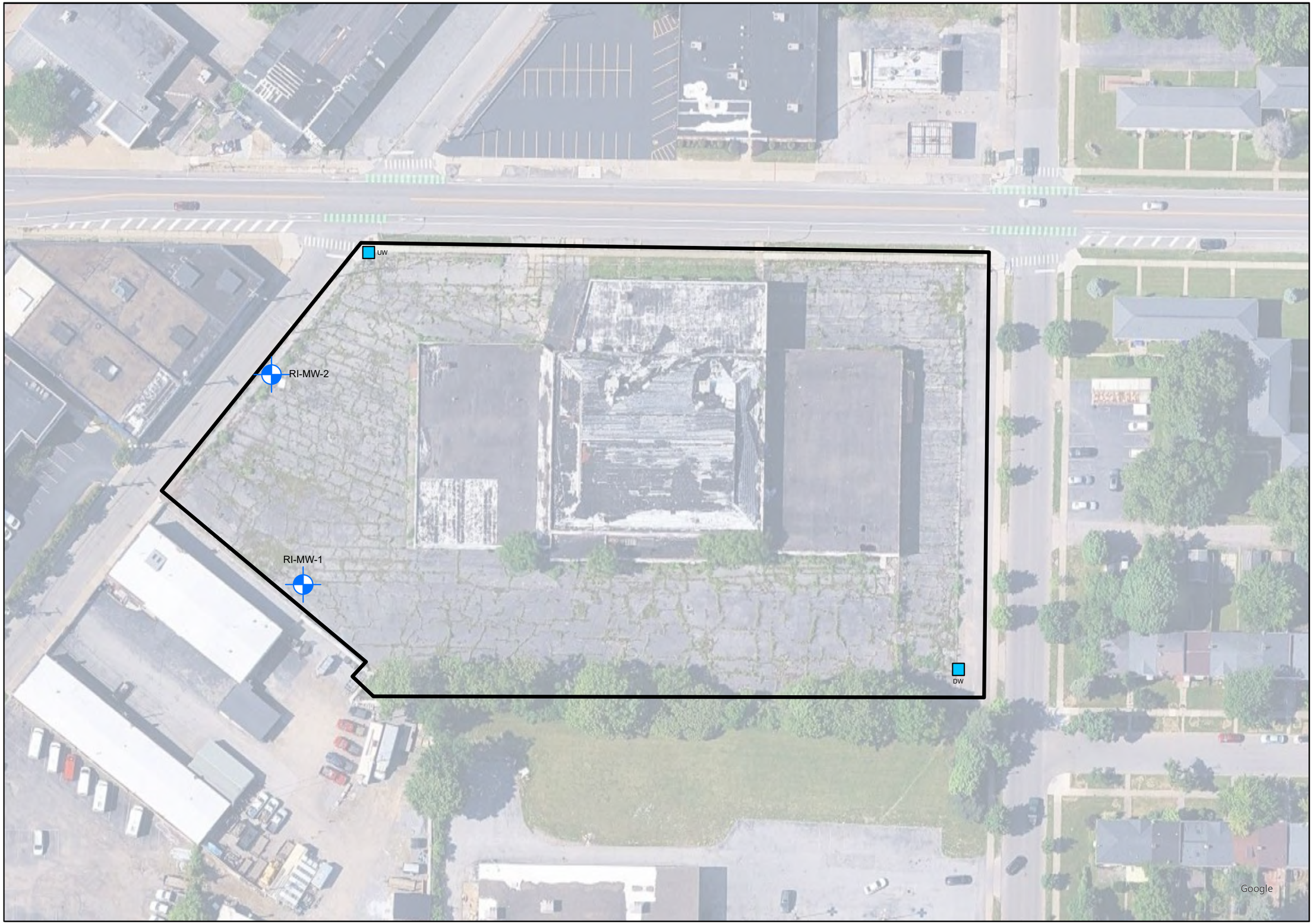
Date:	Friday, April 4, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. Drilling to bedrock at RI-MW-2.

2. Installing casing in RI-MW-2.

3. Casing set in RI-MW-2.

4. Drilling to bedrock at RI-MW-1.



BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue
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WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 4, 2025
WEATHER: PARTLY CLOUDY, 46 °F
WIND: NNW 9 MPH

LEGEND

- Property Boundary
- Monitoring Well (MW-1)
- CAMP Station (DW/UW)

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Friday, April 4, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
4/4/2025 8:30	-	4/4/2025 8:30	-	0	
4/4/2025 8:45	9.3	4/4/2025 8:45	1.6	0	-7.7
4/4/2025 9:00	2.5	4/4/2025 9:00	1.4	0	-1.1
4/4/2025 9:15	8	4/4/2025 9:15	1.5	0	-6.5
4/4/2025 9:30	2.4	4/4/2025 9:30	0.9	0	-1.5
4/4/2025 9:45	5	4/4/2025 9:45	1.3	0	-3.7
4/4/2025 10:00	8.8	4/4/2025 10:00	1.2	0	-7.6
4/4/2025 10:15	6.1	4/4/2025 10:15	1.5	0	-4.6
4/4/2025 10:30	1.7	4/4/2025 10:30	1.3	0	-0.4
4/4/2025 10:45	4.7	4/4/2025 10:45	1.1	0	-3.6
4/4/2025 11:00	2.9	4/4/2025 11:00	1.2	0	-1.7
4/4/2025 11:15	11	4/4/2025 11:15	1.3	0	-9.7
4/4/2025 11:30	9.8	4/4/2025 11:30	1.8	0	-8
4/4/2025 11:45	7.6	4/4/2025 11:45	0.9	0	-6.7
4/4/2025 12:00	3.3	4/4/2025 12:00	1.5	0	-1.8
4/4/2025 12:15	6.9	4/4/2025 12:15	1.6	0	-5.3
4/4/2025 12:30	4	4/4/2025 12:30	1	0	-3
4/4/2025 12:45	2.4	4/4/2025 12:45	1.6	0	-0.8
4/4/2025 13:00	8.2	4/4/2025 13:00	1.3	0	-6.9
4/4/2025 13:15	9	4/4/2025 13:15	1.6	0	-7.4
4/4/2025 13:30	2	4/4/2025 13:30	1.3	0	-0.7
4/4/2025 13:45	7.1	4/4/2025 13:45	2.1	0	-5
4/4/2025 14:00	6.5	4/4/2025 14:00	1.4	0	-5.1
4/4/2025 14:15	3.8	4/4/2025 14:15	1.4	0	-2.4
4/4/2025 14:30	5.4	4/4/2025 14:30	1.6	0	-3.8
4/4/2025 14:45	1.2	4/4/2025 14:45	1.9	0	0.7
4/4/2025 15:00	2.1	4/4/2025 15:00	1.6	0	-0.5
4/4/2025 15:15	4.9	4/4/2025 15:15	1.9	0	-3
4/4/2025 15:30	9	4/4/2025 15:30	1.8	0	-7.2
4/4/2025 15:45	9.7	4/4/2025 15:45	1.6	0	-8.1
4/4/2025 16:00	6.4	4/4/2025 16:00	1.5	0	-4.9
4/4/2025 16:15	3.1	4/4/2025 16:15	1.2	0	-1.9

***Particulate Threshold PM 10 15minute average = 100µg/m³ above background**

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Monday, April 7, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Partly Cloudy 38 ˚F S 7 MPH

Description of Work Performed:

8:00	Arrived on site and met with Tim Burmeier, P.G. and Jason Tadarski (driller). Deployed upwind and downwind air monitors.
9:30	Set up on RI-MW-1 to begin drilling into bedrock (noted yesterday at 10.5').
12:00	Hole was terminated at 13.5' (i.e., 3 feet into bedrock). Awaiting steel casing arrival.
12:30	Returned to RI-MW-2 to begin coring bedrock. Used roller bit to break up hardened cement/grout.
13:30	Veronica and Jason (DEC) arrive on-site to observe rock coring.
14:30	Completed coring RI-MW-2.
15:30	Casing dropped off to site. Flushed RI-MW-1 and began grouting casing into place.
16:00	Broke down equipment and demobilized site.

Problems/Observations:	None.
Health and Safety Concerns:	None.
Contractor Work Force:	1 driller, 1 helper
Contractor Equipment	Geoprobe (Model 7720DT)
Attachments : Photolog, Work Location Map	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

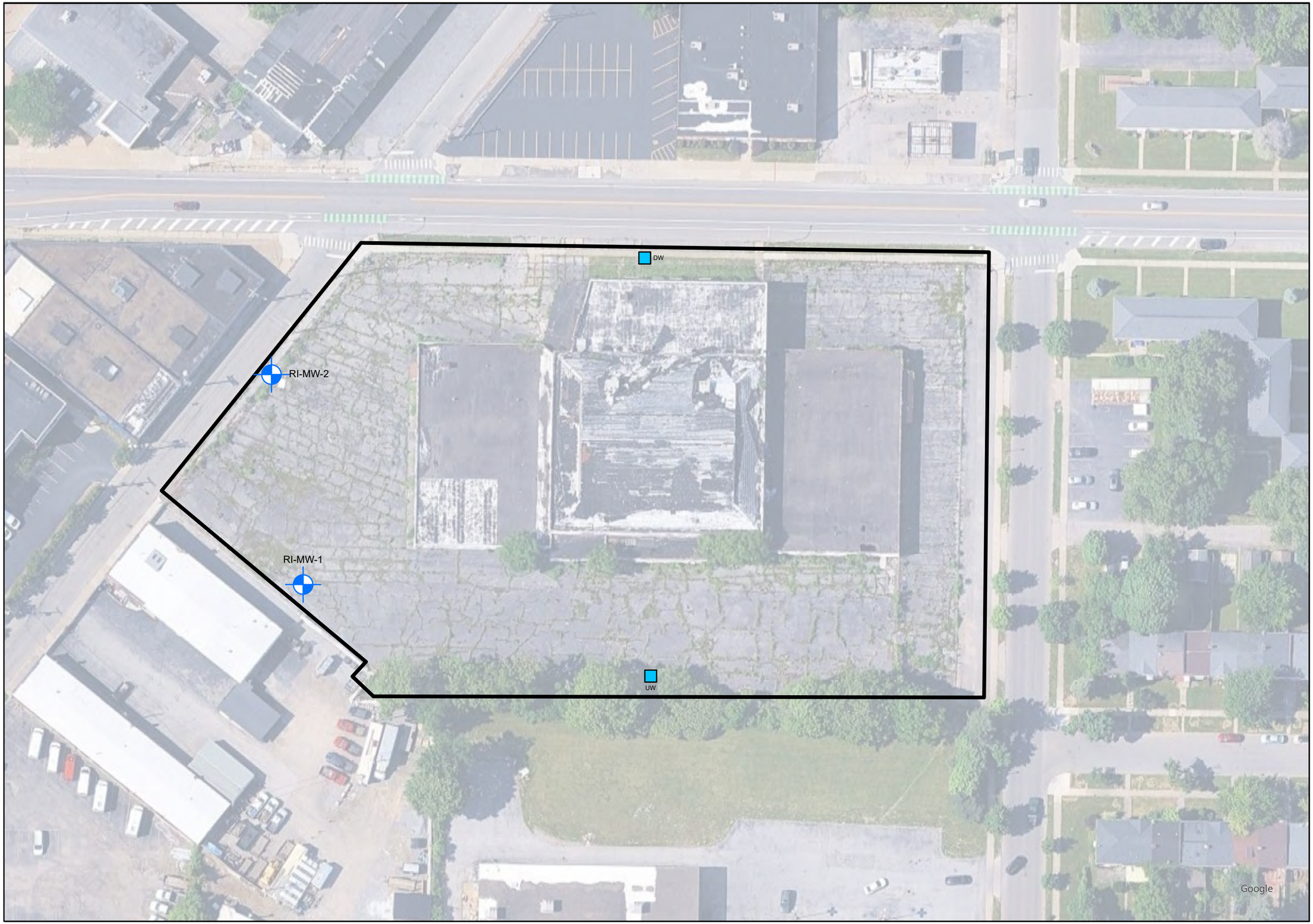
Date:	Monday, April 7, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. Drilling 3' rock socket at RI-MW-1.

2. Coring RI-MW-2.

3. RI-MW-2 completed (minus curb box).

4. Set casing at RI-MW-1.



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BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue
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WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 7, 2025
WEATHER: PARTLY CLOUDY, 38 °F
WIND: S 7 MPH

LEGEND

- Property Boundary
- Monitoring Well (MW-1)
- CAMP Station (DW/UW)

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Monday, April 7, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
4/7/2025 8:45	-	4/7/2025 8:45	4.4	0	4.4
4/7/2025 9:00	1.5	4/7/2025 9:00	3.5	0	2
4/7/2025 9:15	2	4/7/2025 9:15	3.5	0	1.5
4/7/2025 9:30	1.7	4/7/2025 9:30	2.8	0	1.1
4/7/2025 9:45	1.2	4/7/2025 9:45	4.8	0	3.6
4/7/2025 10:00	1.3	4/7/2025 10:00	1.8	0	0.5
4/7/2025 10:15	1.1	4/7/2025 10:15	2.8	0	1.7
4/7/2025 10:30	1.3	4/7/2025 10:30	6.1	0	4.8
4/7/2025 10:45	1	4/7/2025 10:45	2.7	0	1.7
4/7/2025 11:00	1.3	4/7/2025 11:00	5.1	0	3.8
4/7/2025 11:15	1.2	4/7/2025 11:15	2	0	0.8
4/7/2025 11:30	1.3	4/7/2025 11:30	2.1	0	0.8
4/7/2025 11:45	1	4/7/2025 11:45	2.3	0	1.3
4/7/2025 12:00	1.4	4/7/2025 12:00	3.8	0	2.4
4/7/2025 12:15	1.3	4/7/2025 12:15	2	0	0.7
4/7/2025 12:30	1.3	4/7/2025 12:30	2.9	0	1.6
4/7/2025 12:45	0.9	4/7/2025 12:45	2	0	1.1
4/7/2025 13:00	1	4/7/2025 13:00	59.8	0	58.8
4/7/2025 13:15	1	4/7/2025 13:15	5.4	0	4.4
4/7/2025 13:30	1.1	4/7/2025 13:30	3.8	0	2.7
4/7/2025 13:45	0.7	4/7/2025 13:45	2	0	1.3
4/7/2025 14:00	1.1	4/7/2025 14:00	3.1	0	2
4/7/2025 14:15	1.5	4/7/2025 14:15	3.2	0	1.7
4/7/2025 14:30	2.2	4/7/2025 14:30	2.6	0	0.4
4/7/2025 14:45	1.3	4/7/2025 14:45	3.2	0	1.9
4/7/2025 15:00	1.3	4/7/2025 15:00	3.3	0	2
4/7/2025 15:15	1.6	4/7/2025 15:15	2.5	0	0.9
4/7/2025 15:30	1.5	4/7/2025 15:30	2.3	0	0.8
4/7/2025 15:45	1.5	4/7/2025 15:45	2.8	0	1.3
4/7/2025 16:00	1.1	4/7/2025 16:00	2	0	0.9

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Tuesday, April 8, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Light snow 25 ˚F W 18 MPH

Description of Work Performed:

8:00	Arrive on site and meet with Tim Burmeier, P.G. and Jason Tadarski (driller). Deployed upwind and downwind air monitors.
8:30	Set up on RI-MW-1 and finished grouting casing.
9:00	Move to RI-MW-3 to begin drilling overburden. Jim Hull (field technician) arrive on site.
9:30	Reached top of rock at 7' and collected RI-MW-3 soil sample.
10:30	Began drilling 3' rock socket.
12:00	Finished drilling rock socket.
14:00	Finished grouting casing at RI-MW-3.
14:30	Broke down equipment and demobilized site.

Problems/Observations:	None.
Health and Safety Concerns:	None.
Contractor Work Force:	1 driller, 1 helper
Contractor Equipment	Geoprobe (Model 7720DT)

Attachments : Photolog, Work Location Map

Inspectors Name	Alexis Palumbo-Compton

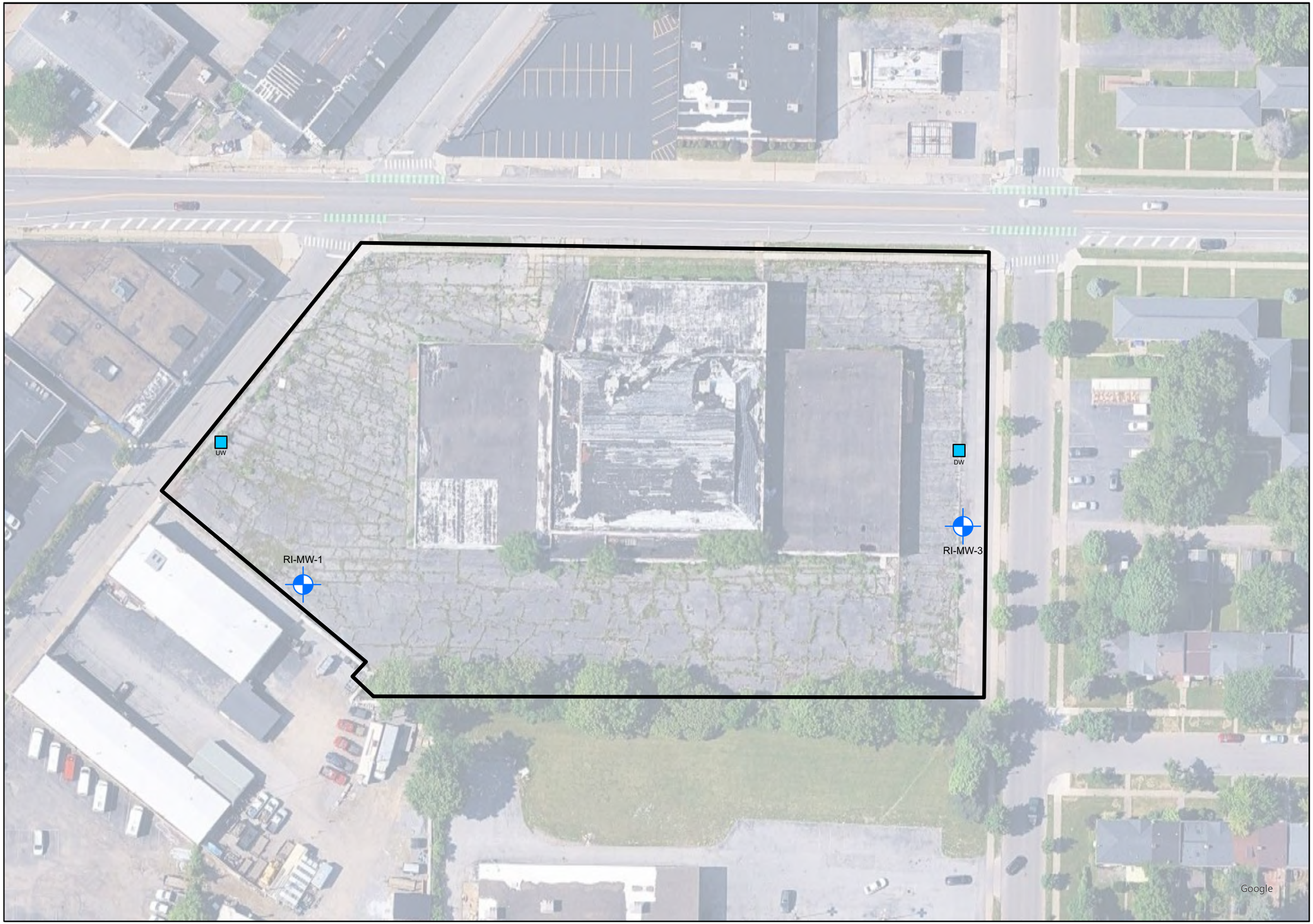
960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

Date:	Tuesday, April 8, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. Drilling 3' rock socket at RI-MW-3.

2. Set casing at RI-MW-3.



BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

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WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 8, 2025
WEATHER: LIGHT SNOW, 25 ˚F
WIND: W 18 MPH

LEGEND

- Property Boundary
- Monitoring Well (MW-1)
- CAMP Station (DW/UW)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Tuesday, April 8, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
4/8/2025 8:30	53.4	4/8/2025 8:30	3.4	0	-50
4/8/2025 8:45	10.6	4/8/2025 8:45	4.3	0	-6.3
4/8/2025 9:00	7.9	4/8/2025 9:00	2.4	0	-5.5
4/8/2025 9:15	11.5	4/8/2025 9:15	2.6	0	-8.9
4/8/2025 9:30	3.7	4/8/2025 9:30	2.2	0	-1.5
4/8/2025 9:45	7.1	4/8/2025 9:45	1.8	0	-5.3
4/8/2025 10:00	8.2	4/8/2025 10:00	2.1	0	-6.1
4/8/2025 10:15	10.3	4/8/2025 10:15	2.6	0	-7.7
4/8/2025 10:30	15.8	4/8/2025 10:30	2.3	0	-13.5
4/8/2025 10:45	12	4/8/2025 10:45	2.3	0	-9.7
4/8/2025 11:00	4.4	4/8/2025 11:00	2.7	0	-1.7
4/8/2025 11:15	4.7	4/8/2025 11:15	2.5	0	-2.2
4/8/2025 11:30	6.4	4/8/2025 11:30	2.3	0	-4.1
4/8/2025 11:45	10	4/8/2025 11:45	2.5	0	-7.5
4/8/2025 12:00	21.7	4/8/2025 12:00	2	0	-19.7
4/8/2025 12:15	15.1	4/8/2025 12:15	1.5	0	-13.6
4/8/2025 12:30	4.8	4/8/2025 12:30	2	0	-2.8
4/8/2025 12:45	3.6	4/8/2025 12:45	2.1	0	-1.5
4/8/2025 13:00	3.3	4/8/2025 13:00	2.1	0	-1.2
4/8/2025 13:15	5.2	4/8/2025 13:15	2.2	0	-3
4/8/2025 13:30	3.7	4/8/2025 13:30	2.4	0	-1.3
4/8/2025 13:45	4.2	4/8/2025 13:45	3.2	0	-1
4/8/2025 14:00	5.1	4/8/2025 14:00	2.6	0	-2.5
4/8/2025 14:15	7.4	4/8/2025 14:15	2.6	0	-4.8
4/8/2025 14:30	7.4	4/8/2025 14:30	2.4	0	-5

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Wednesday, April 9, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Sunny 25 ˚F W 7 MPH

Description of Work Performed:

8:00	Arrived on site and met with Tim Burmeier, P.G. and Jason Tadarski (driller). Deployed upwind and downwind air monitors.
8:30	Set up on RI-MW-1 and began coring bedrock.
10:00	Finished coring bedrock at RI-MW-1.
11:30	Cut down steel casing and finished installing PVC risers at RI-MW-2.
13:00	Completed RI-BH-14 inside building and collected sample.
14:00	Completed RI-BH-13 inside building and collected sample.
15:00	Broke down equipment and demobilized site.

Problems/Observations:	RI DEVIATION: RI-BH-13 location was moved south of the initially intended location as the concrete was too thick to core. This was discussed with DEC as an alternative location.
Health and Safety Concerns:	None.
Contractor Work Force:	1 driller, 1 helper
Contractor Equipment	Geoprobe (Model 7720DT)
Attachments : Photolog, Work Location Map	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

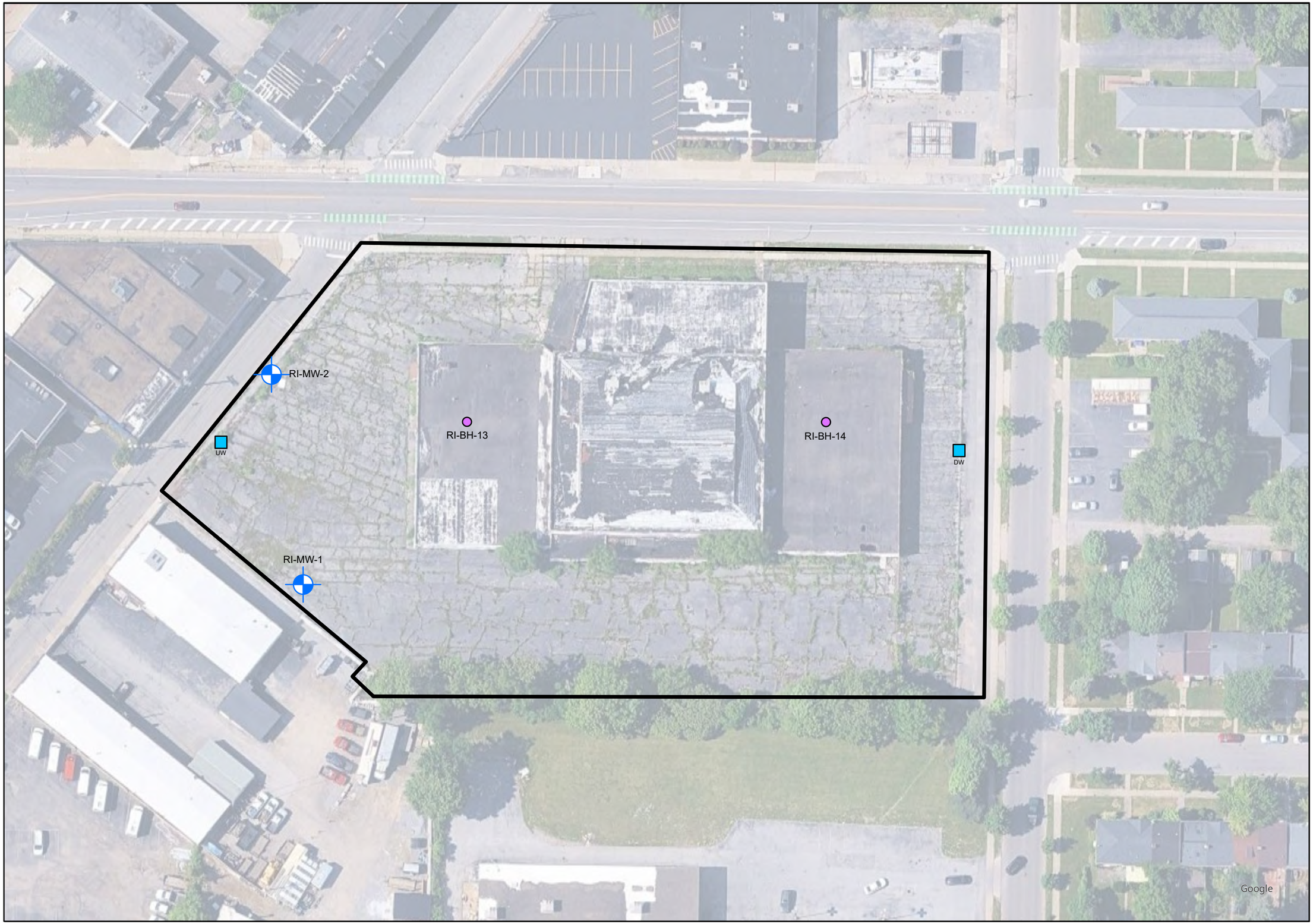
Date:	Wednesday, April 9, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. Coring RI-MW-1.

2. Cutting steel casing at RI-MW-2.

3. Coring concrete at RI-BH-14.

4. Coring concrete at RI-BH-13.



BRYDGES ENGINEERING
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960 Busti Avenue
Buffalo, NY 14213
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jbrydges@be3corp.com

WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 9, 2025
WEATHER: SUNNY, 25 °F
WIND: W 7 MPH

LEGEND

- Property Boundary
- Soil Boring (RI-BH-1)
- Monitoring Well (MW-1)
- CAMP Station (DW/UW)

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Wednesday, April 9, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
4/9/2025 8:30	-	4/9/2025 8:30	-	0	0
4/9/2025 8:45	9.4	4/9/2025 8:45	11.5	0	2.1
4/9/2025 9:00	6.5	4/9/2025 9:00	5.4	0	-1.1
4/9/2025 9:15	4.7	4/9/2025 9:15	7.2	0	2.5
4/9/2025 9:30	6.1	4/9/2025 9:30	6.6	0	0.5
4/9/2025 9:45	5.4	4/9/2025 9:45	9.6	0	4.2
4/9/2025 10:00	13.5	4/9/2025 10:00	10.4	0	-3.1
4/9/2025 10:15	3.1	4/9/2025 10:15	3.7	0	0.6
4/9/2025 10:30	3.7	4/9/2025 10:30	34.2	0	30.5
4/9/2025 10:45	7.3	4/9/2025 10:45	9.8	0	2.5
4/9/2025 11:00	2.5	4/9/2025 11:00	7.4	0	4.9
4/9/2025 11:15	5.1	4/9/2025 11:15	8.1	0	3
4/9/2025 11:30	4	4/9/2025 11:30	10.2	0	6.2
4/9/2025 11:45	17.8	4/9/2025 11:45	21	0	3.2
4/9/2025 12:00	10.4	4/9/2025 12:00	5.9	0	-4.5
4/9/2025 12:15	6.7	4/9/2025 12:15	4.2	0	-2.5
4/9/2025 12:30	8.8	4/9/2025 12:30	5.2	0	-3.6
4/9/2025 13:15	-	4/9/2025 13:15	-	0	0
4/9/2025 13:30	2.8	4/9/2025 13:30	4.8	0	2
4/9/2025 13:45	1.1	4/9/2025 13:45	2.7	0	1.6
4/9/2025 14:00	1.4	4/9/2025 14:00	2.3	0	0.9
4/9/2025 14:15	1.4	4/9/2025 14:15	2.6	0	1.2
4/9/2025 14:30	0.8	4/9/2025 14:30	1.2	0	0.4
4/9/2025 14:45	0.7	4/9/2025 14:45	2.1	0	1.4
4/9/2025 15:00	0.4	4/9/2025 15:00	1.8	0	1.4

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Thursday, April 10, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Cloudy 37 ˚F E 7 MPH

Description of Work Performed:

8:00	Arrived on site and met with Tim Burmeier, P.G. and Jason Tadarski (driller). Deployed upwind and downwind air monitors.
8:30	Set up on RI-MW-3 and began coring bedrock.
10:00	Casing cement potentially dislodged at 18.2' and water encountered. Ceased coring.
11:00	Broke down equipment and demobilized site.

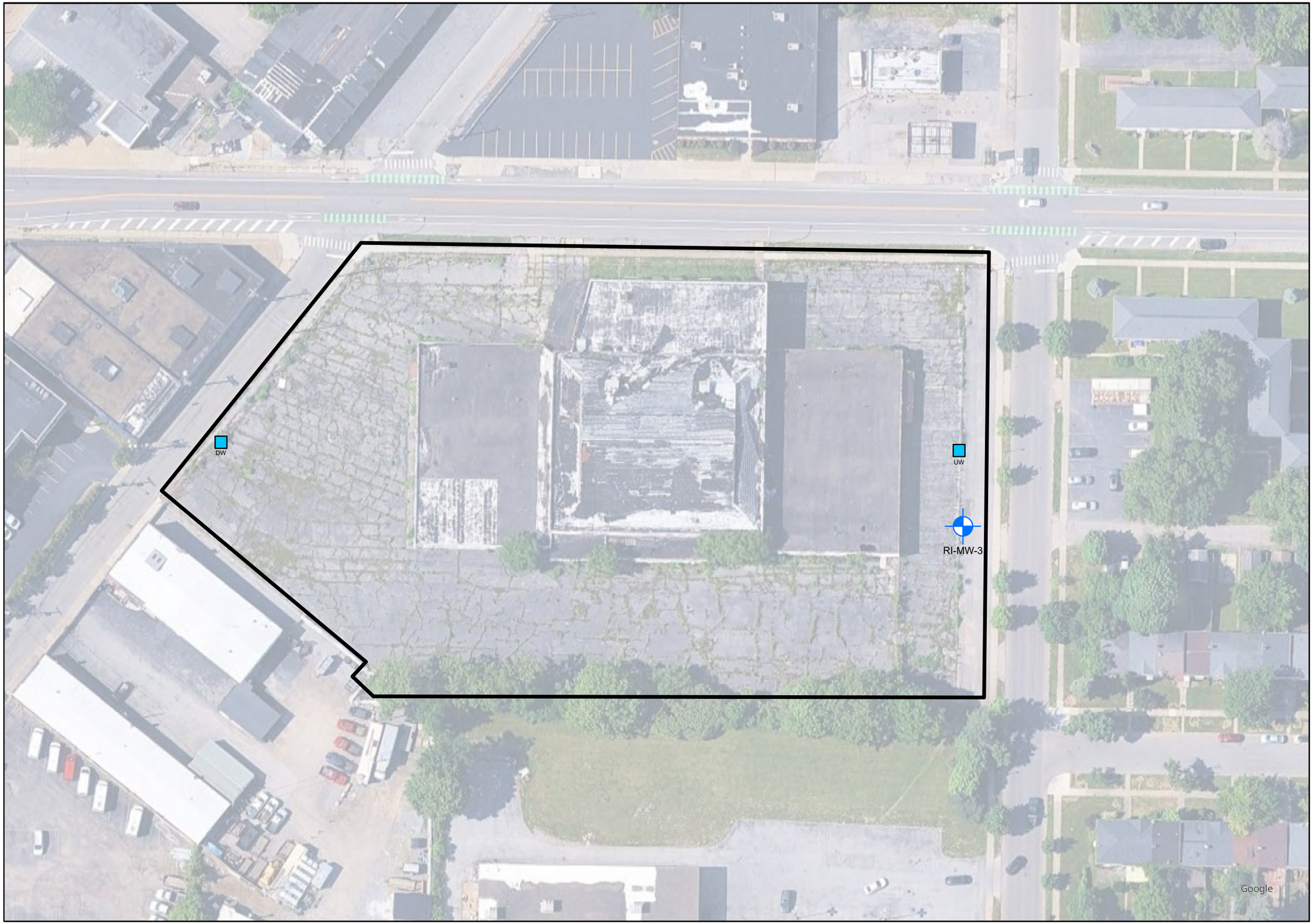
Problems/Observations:	RI DEVIATION: RI-MW-3 was completed to a depth of 18.2' instead of the proposed 20'. Water was encountered and levels will be reassessed the following day. DEC aware of deviation and will confirm with DOH this depth is sufficient.
Health and Safety Concerns:	None.
Contractor Work Force:	1 driller, 1 helper
Contractor Equipment	Geoprobe (Model 7720DT)
Attachments : Photolog, Work Location Map	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

Date:	Thursday, April 10, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. Coring RI-MW-3.



BRYDGES ENGINEERING
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960 Busti Avenue
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WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 10, 2025
WEATHER: CLOUDY, 37 °F
WIND: E 7 MPH

LEGEND

- Property Boundary
- Monitoring Well (MW-1)
- CAMP Station

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960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Thursday, April 10, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
4/10/2025 8:30	7.9	4/10/2025 8:30	7.3	0	0
4/10/2025 8:45	5.3	4/10/2025 8:45	2.2	0	-3.1
4/10/2025 9:00	1.9	4/10/2025 9:00	9.4	0	7.5
4/10/2025 9:15	2.6	4/10/2025 9:15	4.5	0	1.9
4/10/2025 9:30	9.6	4/10/2025 9:30	3.5	0	-6.1
4/10/2025 9:45	4.3	4/10/2025 9:45	8	0	3.7
4/10/2025 10:00	8.6	4/10/2025 10:00	6	0	-2.6
4/10/2025 10:15	3.7	4/10/2025 10:15	1.4	0	-2.3
4/10/2025 10:30	6.7	4/10/2025 10:30	2.4	0	-4.3
4/10/2025 10:45	1.5	4/10/2025 10:45	2.4	0	0.9
4/10/2025 11:00	5.9	4/10/2025 11:00	2.6	0	-3.3

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Friday, April 18, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Building Diagnotics (EBD)
Weather Conditions:	Mostly cloudy 51 ˚F SE 10 MPH

Description of Work Performed:

8:00	Arrived on site and met with Paul Staub (BE3 Engineer), Jim Hull (field technician) and operator (EBD). Deployed upwind and downwind air monitors.
8:30	Set up on RI-TT-1 to begin test trenching.
	Traversed counter-clockwise and completed all trenches with the exception of RI-TT-2 (noted below).
12:00	Broke down equipment and demobilized site.

Problems/Observations:	The contractor did not bring the approprite equipment to reach bedrock in TT-2. This equipment will be brought to site Monday to complete this test pit.
Health and Safety Concerns:	None.
Contractor Work Force:	1 operator
Contractor Equipment	Mini-excavator

Attachments : Photolog, Work Location Map

Inspectors Name	Jim Hull and Paul Staub

960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

Date:	Friday, April 18, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. RI-TT-1 location.

2. RI-TT-2 location.

3. RI-TT-3 location.

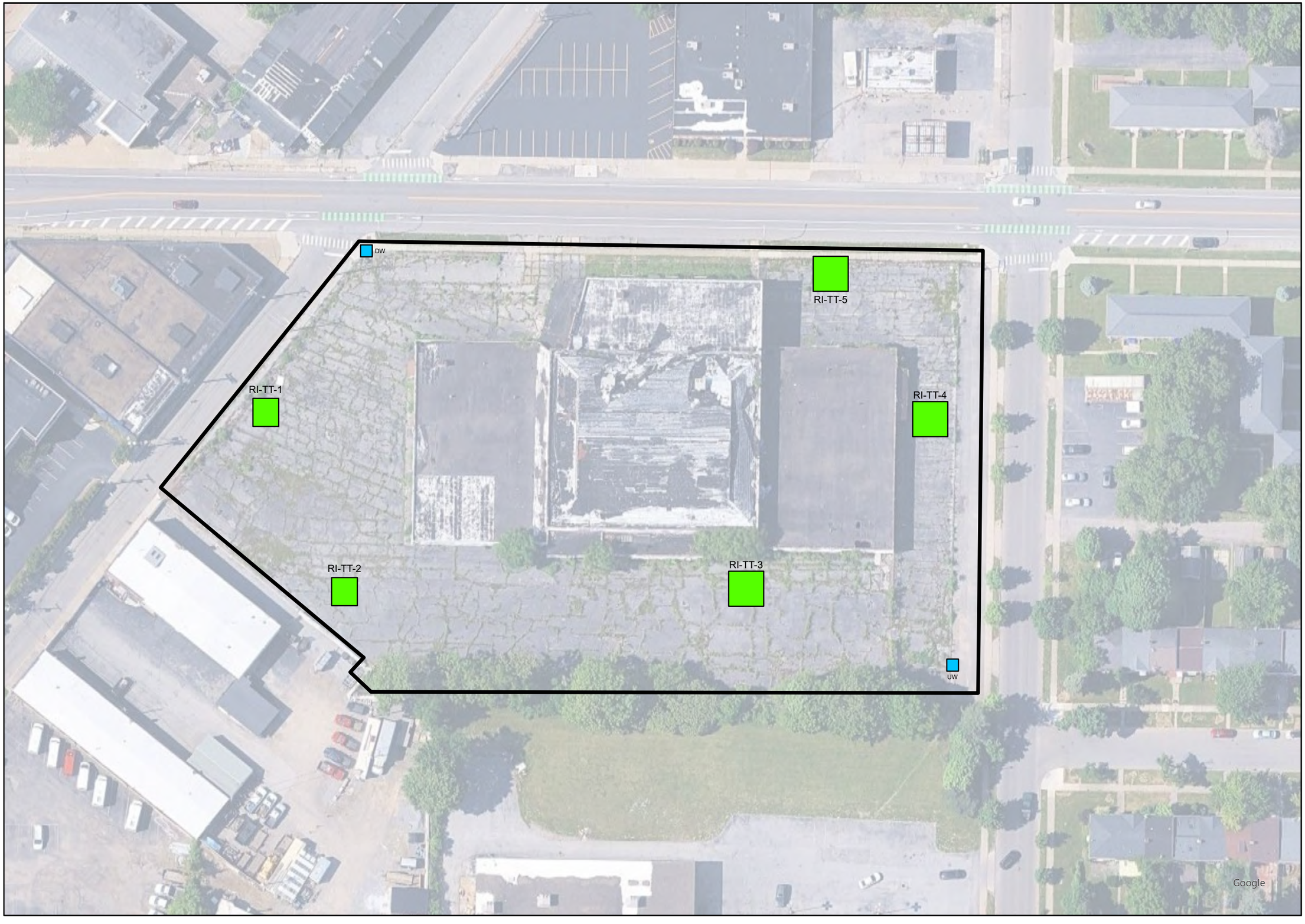
4. RI-TT-4 location.

960 Busti Ave.
Buffalo, New York 14213

PHOTO LOG

Date:	Friday, April 18, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

5. RI-TT-5 location.



BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue
Buffalo, NY 14213
716.249.6880
jbrydges@be3corp.com

WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 18, 2025
WEATHER: MOSTLY CLOUDY, 51 °F
WIND: SE 10 MPH

LEGEND

- Property Boundary
- Soil Boring (RI-BH-1)
- Boring/Vapor Point (RI-VP-1/BH-1)
- CAMP Station (DW/UW)

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Friday, April 18, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
4/21/2025 8:30	2.1	4/21/2025 8:30	3.6	0	1.5
4/21/2025 8:45	2.5	4/21/2025 8:45	4.2	0	1.7
4/21/2025 9:00	2.8	4/21/2025 9:00	4.3	0	1.5
4/21/2025 9:15	2.8	4/21/2025 9:15	3.3	0	0.5
4/21/2025 9:30	3.3	4/21/2025 9:30	2.9	0	-0.4
4/21/2025 9:45	3.6	4/21/2025 9:45	4.3	0	0.7
4/21/2025 10:00	3.6	4/21/2025 10:00	6.7	0	3.1
4/21/2025 10:15	2.5	4/21/2025 10:15	4.2	0	1.7
4/21/2025 10:30	3.8	4/21/2025 10:30	6.2	0	2.4
4/21/2025 10:45	2.1	4/21/2025 10:45	8.9	0	6.8
4/21/2025 11:00	3.5	4/21/2025 11:00	8	0	4.5
4/21/2025 11:15	3.1	4/21/2025 11:15	10.4	0	7.3
4/21/2025 11:30	3.7	4/21/2025 11:30	7.9	0	4.2
4/21/2025 11:45	4.2	4/21/2025 11:45	8.4	0	4.2
4/21/2025 12:00	4.4	4/21/2025 12:00	15	0	10.6

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Monday, April 21, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Building Diagnotics (EBD)
Weather Conditions:	Cloudy 50 ˚F SE 14 MPH

Description of Work Performed:

8:00 Arrive on site and meet with operator (EBD). No monitors deployed (actively raining).

8:30 Set up on RI-TT-2 to complete to bedrock.

10:00 Broke down equipment and demobilized site.

Problems/Observations:	Suspect materials were encountered at the bottom of the excavation that may require further discussion with DEC and DOH.
Health and Safety Concerns:	None.
Contractor Work Force:	1 operator
Contractor Equipment	Mini-excavator

Attachments : Photolog, Work Location Map

Inspectors Name	Jim Hull

960 Busti Ave.
Buffalo, New York 14213

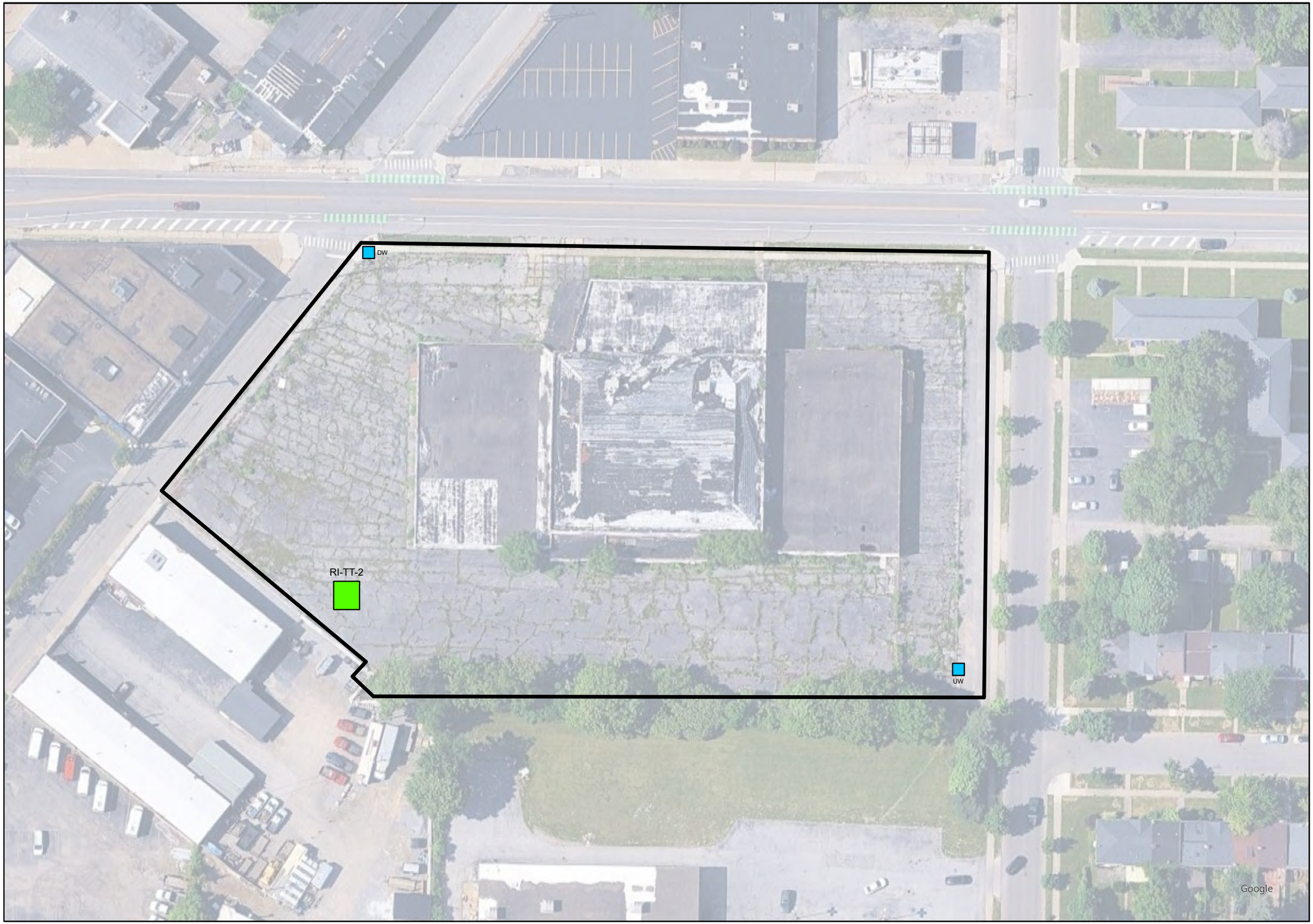
PHOTO LOG

Date:	Monday, April 21, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. Suspect material.

2. Additional suspect material.

3. Additional suspect material.



BE3
BRYDGES ENGINEERING
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960 Busti Avenue
Buffalo, NY 14213
716.249.6880
jbrydges@be3corp.com

WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 21, 2025
WEATHER: CLOUDY, 50 ˚F
WIND: SE 14 MPH

LEGEND

- Property Boundary
- Soil Boring (RI-BH-1)
- Boring/Vapor Point (RI-VP-1/BH-1)
- CAMP Station (DW/UW)

960 Busti Ave.
Buffalo, New York 14213

DAILY FIELD REPORT

Date:	Wednesday, April 23, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214
Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor/Sub-Contractor:	Empire Geo Exploration (Empire)
Weather Conditions:	Cloudy 43 ˚F E 7 MPH

Description of Work Performed:

8:00	Arrived on site and met with Tim Burmeier, P.G., Jason Tadarski (driller) and Jim Hull (field technician). Deployed upwind and downwind air monitors.
8:30	Set up to core additional bedrock at RI-MW-1 as well is dry. Driller leave site to get PVC.
9:30	Began coring additional bedrock at RI-MW-1.
10:00	Finished coring additional bedrock. Moved to RI-MW-2 to begin installing curb box.
13:00	Finished curb box installation at RI-MW-2 and moved to RI-MW-1.
13:45	Finished curb box installation at RI-MW-1.
14:30	Broke down equipment and demobilized site.

Problems/Observations:	
Health and Safety Concerns:	None.
Contractor Work Force:	1 driller, 1 helper
Contractor Equipment	Geoprobe (Model 7720DT)
Attachments : Photolog, Work Location Map	
Inspectors Name	Alexis Palumbo-Compton

960 Busti Ave.
Buffalo, New York 14213

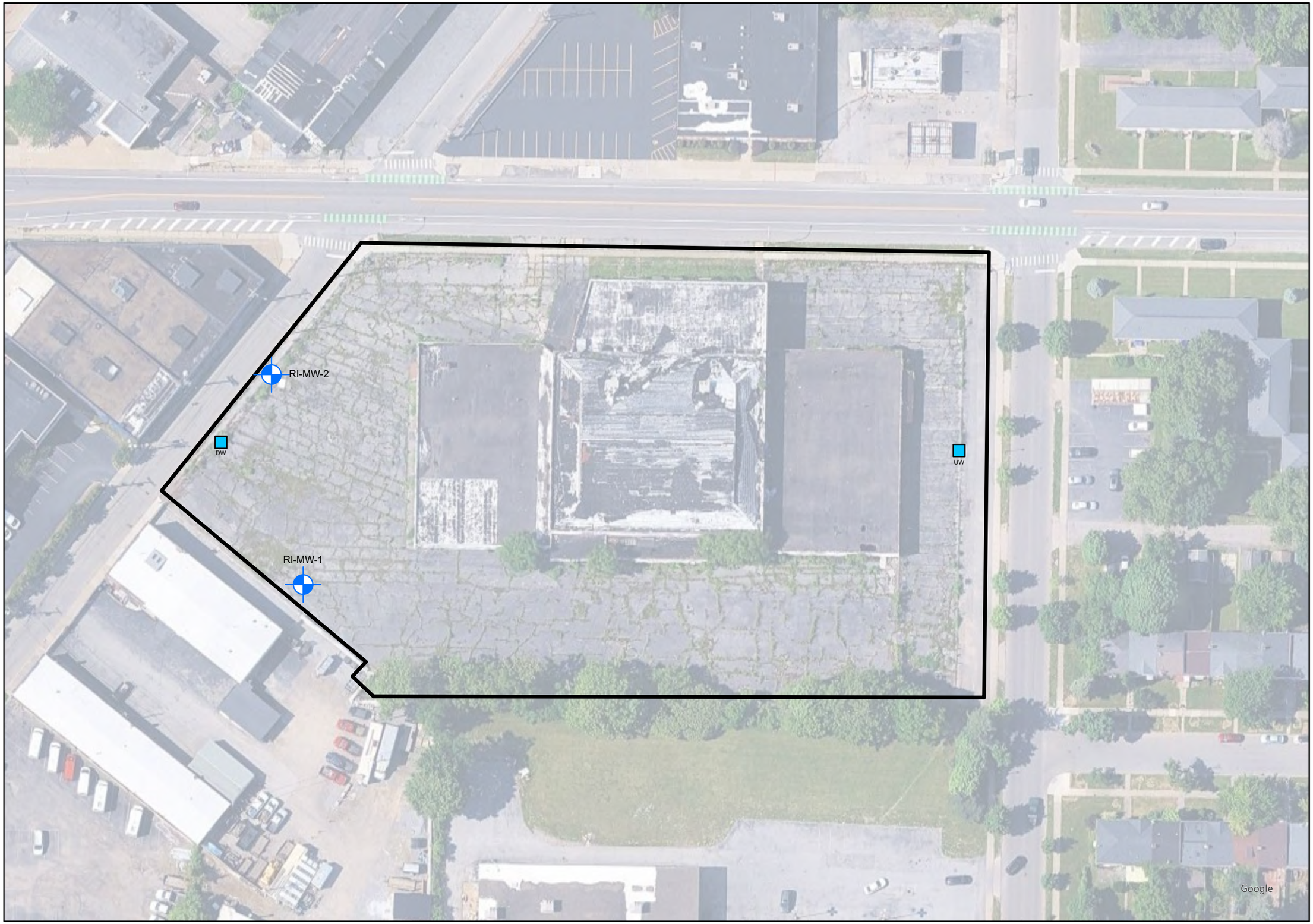
PHOTO LOG

Date:	Wednesday, April 23, 2025
Site Name:	47 East Amherst Street, Buffalo, NY 14214

1. Coring additional bedrock at RI-MW-1.

2. Curb box installed at RI-MW-2.

3. Curb box installed at RI-MW-1.



BRYDGES ENGINEERING
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WORK LOCATION MAP

47 EAST AMHERST STREET
BCP SITE NO. C915397
REMEDIAL INVESTIGATION

DATE: APRIL 23, 2025
WEATHER: CLOUDY, 43 ˚F
WIND: E 7 MPH

LEGEND

- Property Boundary
- Monitoring Well (MW-1)
- CAMP Station

960 Busti Ave.
Buffalo, New York 14213

Community Air Monitoring Program Data

Date:	Wednesday, April 23, 2025
Site Name:	47 East Amherst Street

Upwind Data		Downwind Data			Delta
Time	PM 10 - 15 min AVG (µg/m³)	Time	PM 10 - 15 min AVG (µg/m³)	VOC	PM 10 - 15m AVG (µg/m³)
4/23/2025 8:30	23.5	4/23/2025 8:30	5.6	0	-17.9
4/23/2025 8:45	11.6	4/23/2025 8:45	1.3	0	-10.3
4/23/2025 9:00	15.4	4/23/2025 9:00	9.1	0	-6.3
4/23/2025 9:15	13.2	4/23/2025 9:15	3.9	0	-9.3
4/23/2025 9:30	5.5	4/23/2025 9:30	6.2	0	0.7
4/23/2025 9:45	6.5	4/23/2025 9:45	8.7	0	2.2
4/23/2025 10:00	9.8	4/23/2025 10:00	4.4	0	-5.4
4/23/2025 10:15	21.3	4/23/2025 10:15	2.7	0	-18.6
4/23/2025 10:30	16.1	4/23/2025 10:30	1.6	0	-14.5
4/23/2025 10:45	10	4/23/2025 10:45	9.5	0	-0.5
4/23/2025 11:00	3.6	4/23/2025 11:00	3.2	0	-0.4
4/23/2025 11:15	4	4/23/2025 11:15	7	0	3
4/23/2025 11:30	7.1	4/23/2025 11:30	6.8	0	-0.3
4/23/2025 11:45	4.7	4/23/2025 11:45	5.1	0	0.4
4/23/2025 12:00	8.8	4/23/2025 12:00	8.3	0	-0.5
4/23/2025 12:15	4.7	4/23/2025 12:15	2.3	0	-2.4
4/23/2025 12:30	7	4/23/2025 12:30	4.6	0	-2.4
4/23/2025 13:15	7.5	4/23/2025 13:15	1	0	-6.5
4/23/2025 13:30	7.4	4/23/2025 13:30	7.8	0	0.4
4/23/2025 13:45	2.8	4/23/2025 13:45	5.3	0	2.5

Particulate Threshold PM 10 15minute average = 100µg/m³ above background

Appendix B

Site Photographs

1. RI-BH-1 (COMPLETED 3/27/2025).

2. RI-BH-2 (COMPLETED 3/27/2025).

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3. RI-BH-3 (COMPLETED 3/27/2025).

4. RI-BH-4 (COMPLETED 3/27/2025).

5. RI-BH-5 (COMPLETED 3/27/2025).

6. RI-BH-6 (COMPLETED 3/27/2025).

7. RI-BH-7 (COMPLETED 3/27/2025).

8. RI-BH-9 (COMPLETED 3/28/2025).

9. RI-BH-11 (COMPLETED 3/28/2025).

10. RI-BH-12 (COMPLETED 3/28/2025).

11. RI-BH-13 (COMPLETED 4/9/2025).

12. RI-BH-14 (COMPLETED 4/9/2025).

13. RI-TT-1 (COMPLETED 4/18/2025).

14. RI-TT-2 (COMPLETED 4/21/2025).

15. RI-TT-3 (COMPLETED 4/18/2025).

16. RI-TT-4 (COMPLETED 4/18/2025).

17. RI-TT-5 (COMPLETED 4/18/2025).

Appendix C

Boring and Test Trench Logs

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-1

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/27/2025

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DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0	RI-BH-1			0	Asphalt	
1				0	FILL; brown sandy fine gravel and medium brown silty clay	
2						
		2.7'	100	0	weathered shale	refusal @ 2.7'
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-2

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/27/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0	RI-BH-2			0	Asphalt	
1				0	FILL; dark gray-brown silty fine-coarse gravel	
2		2.2'	81	0	dark gray clayey shale	refusal @ 2.5', collected MS/MSD samples
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-3

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/27/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
1						
2						
3						
4				0	FILL; dark gray clayey coarse gravel	
5						
6	RI-BH-3					collected duplicate sample
7		1.5'	20	0	Coarse gravel slabby weathered bedrock	refusal @ 7'
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-4

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/27/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
		1'	100	0	Dark brown silty organic soil	
1						
2						
3						
4						
5						
6		2'	20	0	FILL; light yellow-brown silty clay with coarse angular gravel	
7						
8						
9						
10	RI-BH-4					
11						3 refusals @ 1'; slightly offset boring; refusal @ 11'
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-5

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/27/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
1						
2						
3		2.3'	33	0	FILL; medium brown silty clay with coarse light gray gravel	
4						
5	RI-BH-5					
6						
7						refusal @ 7'
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-6

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/27/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0	RI-BH-6	1'	100	0	Asphalt	
0				0	FILL; medium gray brown mottled light brown silty clay with fractured angular gravel	
1						conducted 2 adjacent attempts
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-7

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/27/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
1						
2				0	FILL; silty gravel	
3						
4						
5	RI-BH-7	2'	29	0	crushed gray Dolostone	
6				0	SUSPECT FILL; medium brown silty clay with coarse light gray gravel	
7						refusal @ 7'
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-9

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/28/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
1						
2						
3	RI-BH-9					
4		2.4'	32	0	FILL; medium brown silty fine sandy clay with trace brick and Dolostone fragments	
5						
6						
7						refusal @ 7.5'
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-11

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/28/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
4	RI-BH-11	2.4'	30	0	FILL; sandy fine gravel, brick, coal ash, coal rock fragments	
8						refusal @ 8', 2" wet above suspect bedrock/refusal

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-12

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: Direct Push

EXCAVATION EQUIPMENT: Geoprobe Model 7720DT

LOGGED BY: TB

DATE STARTED: 3/28/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
				0	top soil	
1						
2	RI-BH-12	4'	100	0	FILL; brown-gray silty clay with fine gravel, trace brick, trace coal ash and trace coal	
3						
4						refusal @ 4'
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-13

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: N/A

EXCAVATION EQUIPMENT: Hand Auger

LOGGED BY: APC

DATE STARTED: 4/9/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Concrete	utilized concrete corer
1	RI-BH-13			0	FILL; dark brown-black silty clay with coarse angular gravel	
2						
3						refusal @ 3', wet (water introduced during concrete coring)
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

BORING LOG

BORING LOCATION: RI-BH-14

DRILLING CONTRACTOR: Empire Geo Exploration

DRILLING METHOD: N/A

EXCAVATION EQUIPMENT: Hand Auger

LOGGED BY: APC

DATE STARTED: 4/9/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Concrete	utilized concrete corer
1	RI-BH-14			0	FILL; dark brown-black silty clay with coarse angular gravel	
2						refusal @ 2', wet (water introduced during concrete coring)
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

TEST TRENCH LOG

BORING LOCATION: RI-TT-1

DRILLING CONTRACTOR: Empire Building Diagnostics

DRILLING METHOD: N/A

EXCAVATION EQUIPMENT: Mini Excavator

LOGGED BY: PS

DATE STARTED: 4/18/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
1						
2	RI-TT-1			0	FILL; loose black sandy stone with some incidental debris (sea shells, pipes, bottles and grinded woodchips)	
3						
4	RI-TT-1			0	SUSPECT FILL; dark brown loose trace wet clay	
5						bedrock at 5'
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

TEST TRENCH LOG

BORING LOCATION: RI-TT-2

DRILLING CONTRACTOR: Empire Building Diagnostics

DRILLING METHOD: N/A

EXCAVATION EQUIPMENT: Mini Excavator

LOGGED BY: PS

DATE STARTED: 4/21/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
				0	top soil, brown loose trace organics	
1	RI-TT-2					
2				0	FILL; loose brown sand with black zones, trace brick , debris, extensive voids and boulders	
3						
4						
5	RI-TT-2					
6						
7				0	FILL; continuation of loose brown sand with larger flat boulders and extensive voids	
8						
9						
10						incinerator waste/suspect slag noted in bottom foot of excavation bedrock at 10.3'
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

TEST TRENCH LOG

BORING LOCATION: RI-TT-3

DRILLING CONTRACTOR: Empire Building Diagnostics

DRILLING METHOD: N/A

EXCAVATION EQUIPMENT: Mini Excavator

LOGGED BY: PS

DATE STARTED: 4/18/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
				0	mostly boulders with trace organics/roots	
1						
2	RI-TT-3			0	FILL; light brown-gray fine sand with trace clay	
3						
4	RI-TT-3			0	large blasted rock, extensive voids, some intermingled shale	
5						bedrock at 5.3'
6						
7						
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

TEST TRENCH LOG

BORING LOCATION: RI-TT-4

DRILLING CONTRACTOR: Empire Building Diagnostics

DRILLING METHOD: N/A

EXCAVATION EQUIPMENT: Mini Excavator

LOGGED BY: JH

DATE STARTED: 4/18/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
1	RI-TT-4			0	FILL; crushed stone base with small-large rock, brown-black fines and trace organics	
2						
3						
4						
5	RI-TT-4			0	FILL; boulders and cobbles, some gravel, some debris and extensive voids	
6						
7						bedrock at 7.5'
8						
9						
10						
11						
12						
13						
14						

PROJECT:

47 East Amherst Remedial Investigation

TEST TRENCH LOG

BORING LOCATION: RI-TT-5

DRILLING CONTRACTOR: Empire Building Diagnostics

DRILLING METHOD: N/A

EXCAVATION EQUIPMENT: Mini Excavator

LOGGED BY: JH

DATE STARTED: 4/18/2025

BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

DEPTH (feet)	Sample	Recovery	% Rec.	PID Reading	DESCRIPTION	REMARKS
0				0	Asphalt	
1	RI-TT-5			0	FILL; light brown-black fines, cobbles and trace organics	
2						
3						
4						
5	RI-TT-5			0	FILL; large shot rock, extensive voids, some fines and construction/demolition debris	bedrock at 5.5'
6						
7						
8						
9						
10						
11						
12						
13						
14						

Appendix D

Monitoring Well Construction/Bedrock Logs

DRILLING SUMMARY

Geologist:
Tim Burmeier

Contractor:
Empire Exploration and Geology

Operator:
Jason Tadarski

Model:
CME 550 X ATV Drilling Rig

Date:
4/9/2025 and 4/23/2025

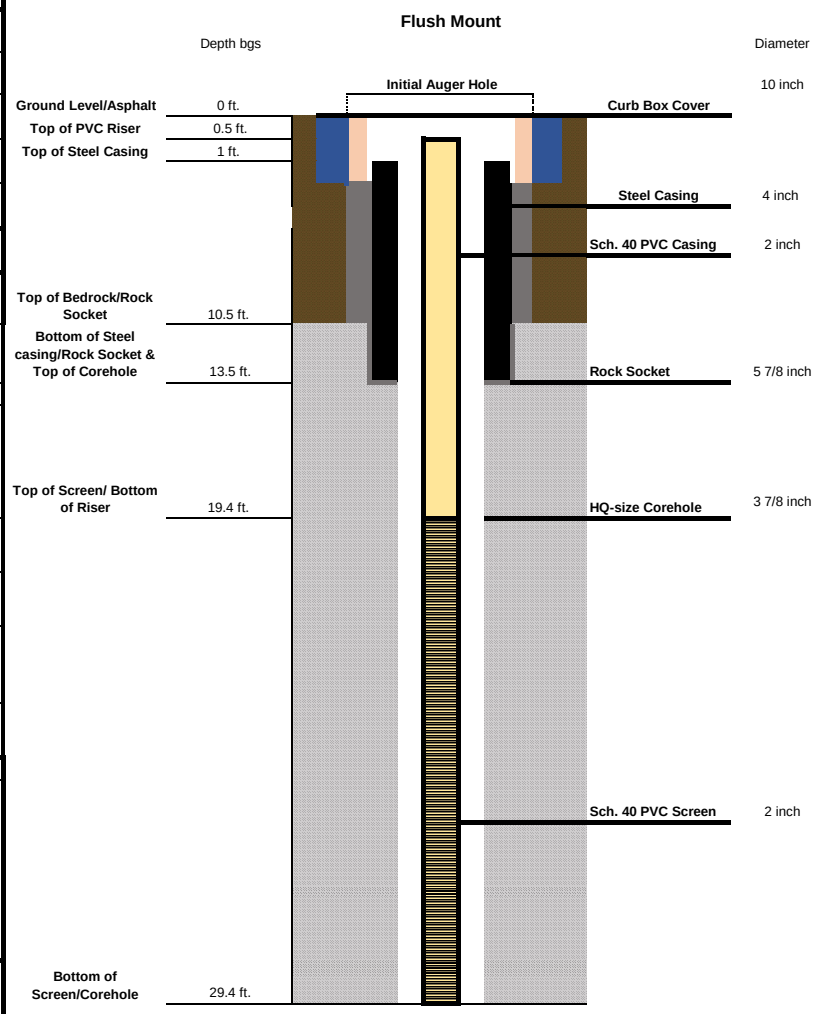
BORING/BEDROCK LOG

Depth	Run	Rec. (%)	RQD (%)	Description
0-10.5'	-	-	-	Overburden
10.5-13.5'	-	-	-	Rock socket
13.5-17'	1	100	70	Medium gray finely crystalline Dolostone; 1/4" banding or 1/10" shaly partings; weathered hard zone @ 15.4'; becomes light brown finely banded Dolostone @ 13.6'; hard
17-19'	2	100	16	Same lithology with very thick black wavy laminate; hard
19-21'	3	100	70	Light gray brown; some hackly fractures; finely crystalline; hard
21-26'	4	96	48	Medium gray Dolostone; hard, slight banding; very thin black shaly laminate; weathered zone @ 23.5'
26-29.4'	5	79	71	Medium gray brown Dolostone; 1/4" - 1" darker gray banding

COMMENTS

1. The well was not sand packed therefore the white spacing on either side of the PVC riser and screen represents void space.
2. The steel casing was positioned 3 feet into bedrock.
3. All depths are measured from ground surface.
4. The well was extended 9.4' to attempt to reach the water table on 4/23/25.

WELL DESIGN



CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL	FILTER MATERIAL
0-13.5' bgs: 4" Steel casing (Flush Mount) **Monitor:** 2" Schedule 40 PVC	**Type:** 2" Schedule 40 PVC **Slot Size:** 0.010" **Setting:** 19.4' - 29.4' bgs	**Type 1:** Grout **Setting:** Surrounding steel casing **Type 2:** Concrete **Setting:** Surrounding curb box	**Type:** N/A **Setting** N/A

LEGEND

Cement Grout | Overburden | Concrete | Steel Casing | PVC Riser Pipe | PVC Screen

Bedrock | Curb Box | Void Space

Client: Regan Development

Location: 47 East Amherst Street, Buffalo, NY

Project No.: N/A

MONITORING WELL CONSTRUCTION DETAILS

Well Identifier: RI-MW-1

DRILLING SUMMARY

Geologist:
Tim Burmeier

Contractor:
Empire Exploration and Geology

Operator:
Jason Tadarski

Model:
CME 550 X ATV Drilling Rig

Date:
4/4/2025

BORING/BEDROCK LOG

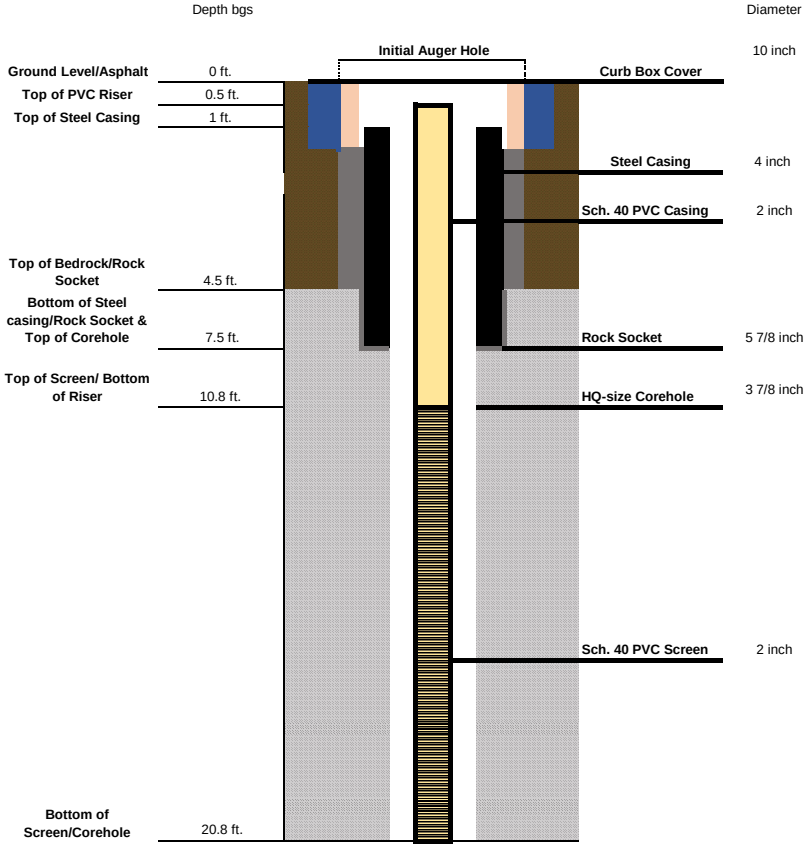
Depth	Run	Rec. (%)	RQD (%)	Description
0-4.5'	-	-	-	Overburden
4.5-7.5'	-	-	-	Rock socket
7.5-8.3'	1	100	15	Light brown finely crystalline Dolostone; hard
8.3-12.5'				Medium gray fine crystalline Dolostone; hard; horizontal - slightly angular; shaly 1"- 4" partings
12.5-16.7'	2	100	7	Light gray brown Dolostone; finely crystalline; trace wavy black thin shaly bands; hard
16.7-20.8'	3	100	54	Light gray brown shaly Dolostone; finely crystalline; wavy breaks in areas

COMMENTS

1. The well was not sand packed therefore the white spacing on either side of the PVC riser and screen represents void space.
2. The steel casing was positioned 3 feet into bedrock.
3. All depths are measured from ground surface.

WELL DESIGN

Flush Mount



CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL	FILTER MATERIAL
0-7.5' bgs: 4" Steel casing (Flush Mount) **Monitor:** 2" Schedule 40 PVC	**Type:** 2" Schedule 40 PVC **Slot Size:** 0.010" **Setting:** 10.8' - 20.8' bgs	**Type 1:** Grout **Setting:** Surrounding steel casing **Type 2:** Concrete **Setting:** Surrounding curb box	**Type:** N/A **Setting** N/A

LEGEND

Cement Grout | Overburden | Concrete | Steel Casing | PVC Riser Pipe | PVC Screen

Bedrock | Curb Box | Void Space

Client: Regan Development

Location: 47 East Amherst Street, Buffalo, NY

Project No.: N/A

MONITORING WELL CONSTRUCTION DETAILS

Well Identifier: RI-MW-2

DRILLING SUMMARY

Geologist:
Tim Burmeier

Contractor:
Empire Exploration and Geology

Operator:
Jason Tadarski

Model:
CME 550 X ATV Drilling Rig

Date:
4/10/2025

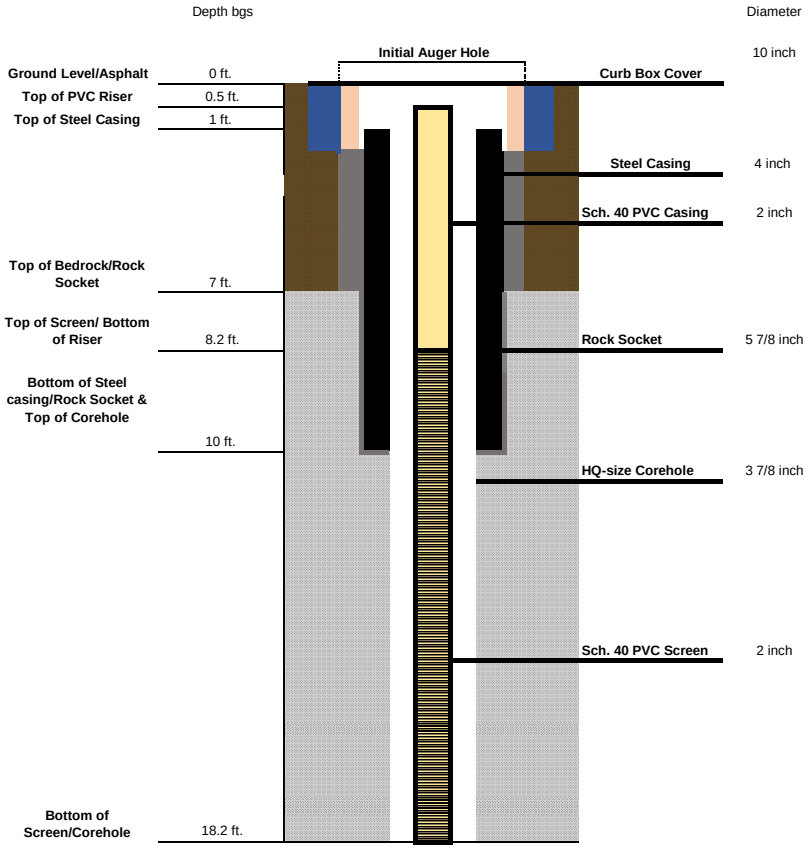
BORING/BEDROCK LOG

Depth	Run	Rec. (%)	RQD (%)	Description
0-7'	-	-	-	Overburden
7-10'	-	-	-	Rock socket
10-10.8'	1	80	35	Medium gray brown Dolostone; hard ~1/4" banding; 45° fracture @ 10.5' and horizontal to sub-horizontal breaks
10.8-11.6'	2	90	63	Lithology transition zone
11.6-16.2'				Light gray brown Dolostone; filled vugs @ 14.8'; very thin wavy black shale bands
16.2-18.2'	3	100	70	Light gray brown Dolostone; fine banding; black wavy laminate

COMMENTS

1. The well was not sand packed therefore the white spacing on either side of the PVC riser and screen represents void space.
2. The steel casing was positioned 3 feet into bedrock.
3. All depths are measured from ground surface.

Flush Mount



WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL	FILTER MATERIAL
0-10' bgs: 4" Steel casing (Flush Mount) **Monitor:** 2" Schedule 40 PVC	**Type:** 2" Schedule 40 PVC **Slot Size:** 0.010" **Setting:** 8.2-18.2' bgs	**Type 1:** Grout **Setting:** Surrounding steel casing **Type 2:** Concrete **Setting:** Surrounding curb box	**Type:** N/A **Setting** N/A

LEGEND

Cement Grout | Overburden | Concrete | Steel Casing | PVC Riser Pipe | PVC Screen

Bedrock | Curb Box | Void Space

Client: Regan Development

Location: 47 East Amherst Street, Buffalo, NY

Project No.: N/A

MONITORING WELL CONSTRUCTION DETAILS

Well Identifier: RI-MW-3

Appendix E

Well Development Logs

WELL DEVELOPMENT LOG

PROJECT TITLE: 47 East Amherst Remedial Investigation WELL NO RI-MW-2

PROJECT NO.: N/A

STAFF: Alexis Palumbo-Compton

DATE(S): 4/17/2025

DEVELOPMENT METHOD: Manual surging with surge block, foot valve and 1" diameter tubing

			WELL ID.	VOL. (GAL/FT)
1. DEPTH TO WELL BOTTOM (FT. BTOR)	=	20.0'	1"	0.04
2. WATER LEVEL BELOW TOP OF RISER (FT. BTOR)	=	16.1'	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	4'	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GALLONS)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	0.68	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x_____)	=	2.04	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	18	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	3	4	4.5	5	6	7	8	16	18		
pH	7.70	7.38	7.71	7.62	7.70	7.75	7.78	7.87	7.92		
TEMPERATURE (°C)	9.6	11.2	10.6	11.3	11.1	10.3	11.1	9.9	9.9		
SPEC. COND. (mS/cm)	0.69	0.699	0.715	0.714	0.723	0.668	0.714	0.692	0.671		
ORP (mV)	29.7	68	60.2	126.2	96	90	102	158.2	222.5		
DISSOLVED OXYGEN (mg/l)	4.92	6.13	5.76	5.96	5.72	5.4	5.6	5.62	5.71		
TURBIDITY (NTU)	-3.3	8.63	25.2	8.32	1.72	45.1	10.8	7.39	7.69		
DEPTH TO WATER (btor)	19.5'	19.5'	19.5'	19.5'	19.5'	19.75'	19.75'	19.75'	19.75'		
TIME	1420	1445	1455	1520	1535	1605	1620	1800	1830		

COMMENTS:

WELL DEVELOPMENT LOG

PROJECT TITLE: 47 East Amherst Remedial Investigation WELL NO RI-MW-3

PROJECT NO.: N/A

STAFF: Alexis Palumbo-Compton

DATE(S): 4/18/2025

DEVELOPMENT METHOD: Manual surging with surge block, foot valve and 1" diameter tubing

			WELL ID.	VOL. (GAL/FT)
1. DEPTH TO WELL BOTTOM (FT. BTOR)	=	20.0'	1"	0.04
2. WATER LEVEL BELOW TOP OF RISER (FT. BTOR)	=	18.5'	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	1.5'	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GALLONS)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	0.255	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x_____)	=	0.765	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	15.5	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	3	6	10	13	14.5	15.5					
pH	-	8.77	8.68	8.69	8.62	8.63					
TEMPERATURE (°C)	-	15.2	13.7	14.5	13.8	12.6					
SPEC. COND. (mS/cm)	-	0.592	0.575	0.589	0.569	0.557					
ORP (mV)	-	165.3	250.2	195.2	235	245.7					
DISSOLVED OXYGEN (mg/l)	-	5.01	4.72	4.56	4.81	4.91					
TURBIDITY (NTU)	-	159.1	104.21	1.07	49.01	8.83					
DEPTH TO WATER (btor)	18.6'	18.6'	18.6'	18.7'	18.6'	18.6'					
TIME	1220	1315	1410	1500	1515	1540					

COMMENTS:

*DEPTH TO WELL BOTTOM AND DEPTH TO WATER WERE MEASURED IN RESPECT TO THE STICK-UP POSITION. WELL WILL BE FLUSH MOUNT ONCE COMPLETED WHICH WILL DECREASE DEPTHS BY APPROXIMATELY 2 FEET.

*SHORT RAIN BETWEEN 1500 AND 1515.

Appendix F

Purge Logs

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 47 East Amherst Street RI Site: 47 East Amherst Street Well I.D.: RI-MW-2

Date: 4/21/2025 Sampling Personnel: Jim Hull Company: BE3

Purging/Sampling Device: Low flow perastaltic pump Tubing Type: HDPE/Silicon Pump/Tubing Inlet Location: Well bottom

Measuring Point: ground level Initial Depth to Water: 19.7' Depth to Well Bottom: 20' Well Diameter: 2 in Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (gallons): 0.51 Estimated Purge Volume (gallons): 9.0

Sample ID: RI-MW-2 Sample Time: 1320 QA/QC: N/A

Sample Parameters: TCL VOCs and TICs, TCL SVOCs, TAL Metals + cyanide, PCBs, Pesticides, 1,4-dioxane and PFAS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (gal/min)	DEPTH TO WATER (feet)
1035	7.68	11.8	0.761	5.72	8.53	63.8	0.05	19.6
1100	7.59	13.1	0.855	6.07	50.83	157.9	0.05	19.6
1130	7.68	13.4	0.854	6.88	141.22	197.6	0.05	19.5
1150	7.71	15.0	0.908	7.32	94.37	185.7	0.05	19.5
1205	7.68	15.4	0.929	7.68	81.66	216.7	0.05	19.5
1215	7.90	16.5	0.951	7.80	58.5	217	0.05	19.5
1235	7.66	16.2	0.914	7.66	56.7	205	0.05	19.4
1255	8.01	16.3	0.943	7.84	47.7	218	0.05	19.4
1305	7.91	16.2	0.891	7.51	45.1	205	0.05	19.4
1315	8.07	16.30	0.919	7.73	41.68	199	0.05	19.4
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = pr^2h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 47 East Amherst Street RI Site: 47 East Amherst Street Well I.D.: RI-MW-3

Date: 4/23/2025 Sampling Personnel: Jim Hull Company: BE3

Purging/Sampling Device: Low flow perastaltic pump Tubing Type: HDPE/Silicon Pump/Tubing Inlet Location: Well bottom

Measuring Point: ground level Initial Depth to Water: 16.9' Depth to Well Bottom: 20' Well Diameter: 2 in Screen Length: 10'

Casing Type: PVC Volume in 1 Well Casing (gallons): 0.3 Estimated Purge Volume (gallons): 3

Sample ID: RI-MW-3, RI-MW-3 MS and RI-MW-3 MSD Sample Time: 1130 QA/QC: MS and MSD

Sample Parameters: TCL VOCs and TICs, TCL SVOCs, TAL Metals + cyanide, PCBs, Pesticides, 1,4-dioxane and PFAS

PURGE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	Eh (mV)	FLOW RATE (gal/min)	DEPTH TO WATER (btor)
1030	8.69	13.2	0.638	6.06	6.74	203.6	0.05	18.6
1040	8.71	13.0	0.688	5.76	10.05	186.3	0.05	18.4
1055	8.21	13.0	0.720	5.81	12.50	207.3	0.05	18.4
1110	9.05	13.2	0.676	6.14	18.61	191.9	0.05	18.2
1125	8.40	13.3	0.648	5.93	15.40	188.7	0.05	18.2
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = pr^2h$)

Remarks:

Appendix G

Vapor Point Construction Logs

VAPOR POINT STANDARD DETAIL

Staff:
Alexis Palumbo-Compton

Contractor:
Empire Exploration & Geology

Operator:
Chuck Guzzetta, P.G.

Equipment:
7720 DT Geoprobe Rig

Date:
March 27, 2025

Location:
47 East Amherst Street, Buffalo, NY

SEAL MATERIAL

Type:	Bentonite Chips
Setting:	0-5 ft bgs

FILTER MATERIAL

Type:	No. 0 Sand
Setting:	5-7 ft bgs

LEGEND

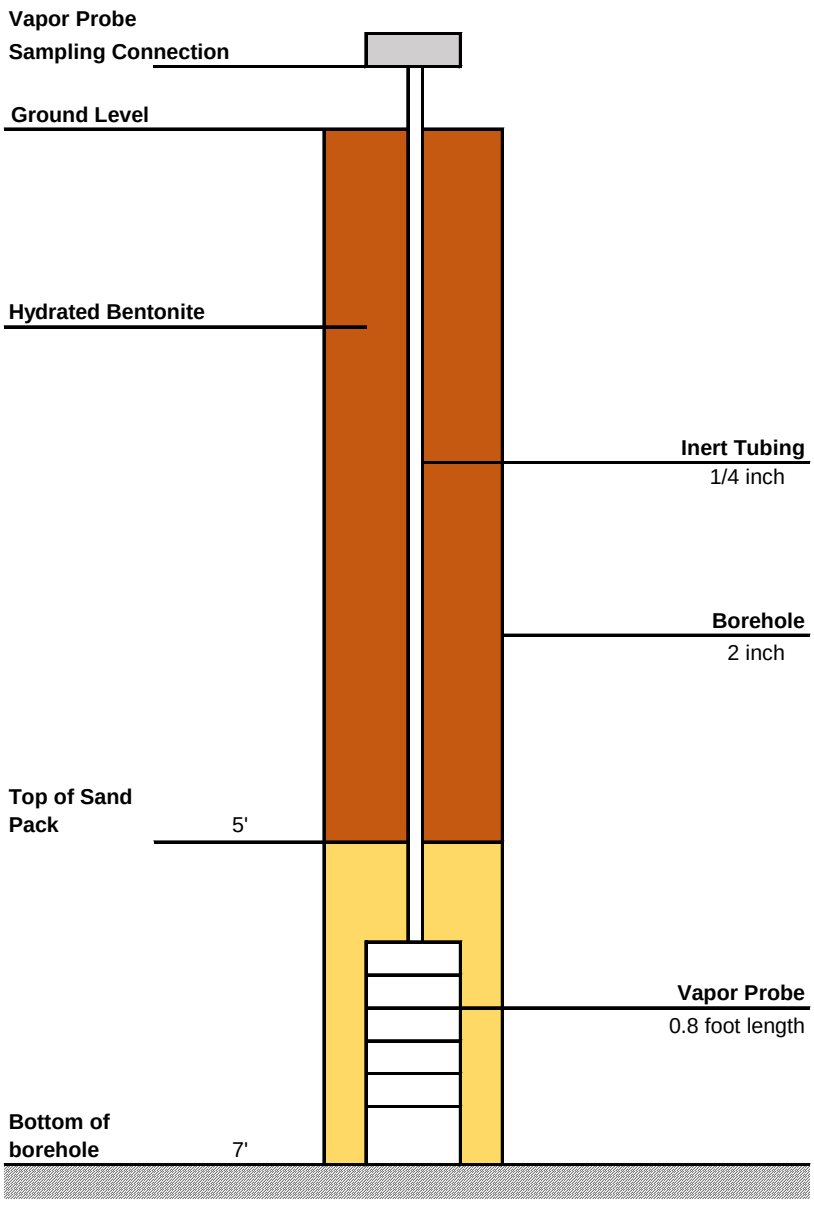
Bentonite Chip Seal

Sand Pack

COMMENTS

Vapor point installed in RI-BH-3

Vapor probe is stainless steel



BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

Client: Regan Development

Probe No.: RI-VP-1

VAPOR POINT STANDARD DETAIL

Staff:
Alexis Palumbo-Compton

Contractor:
Empire Exploration & Geology

Operator:
Chuck Guzzetta, P.G.

Equipment:
7720 DT Geoprobe Rig

Date:
March 27, 2025

Location:
47 East Amherst Street, Buffalo, NY

SEAL MATERIAL

Type:	Bentonite Chips
Setting:	0-9 ft bgs

FILTER MATERIAL

Type:	No. 0 Sand
Setting:	9-11 ft bgs

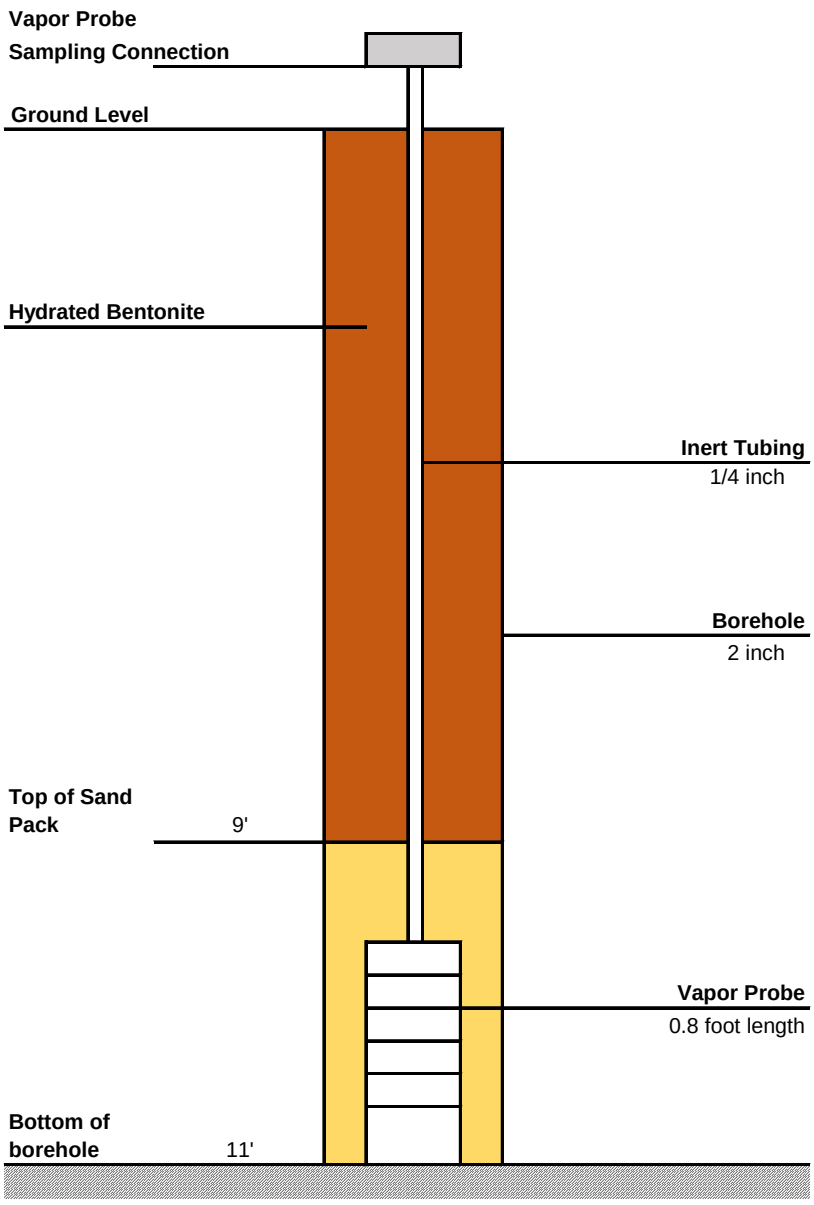
LEGEND

Bentonite Chip Seal

Sand Pack

COMMENTS

Vapor point installed in RI-BH-4
Vapor probe is stainless steel



BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

Client: Regan Development

Probe No.: RI-VP-2

VAPOR POINT STANDARD DETAIL

Staff:
Alexis Palumbo-Compton

Contractor:
Empire Exploration & Geology

Operator:
Chuck Guzzetta, P.G.

Equipment:
7720 DT Geoprobe Rig

Date:
March 27, 2025

Location:
47 East Amherst Street, Buffalo, NY

SEAL MATERIAL

Type:	Bentonite Chips
Setting:	0-5 ft bgs

FILTER MATERIAL

Type:	No. 0 Sand
Setting:	5-7 ft bgs

LEGEND

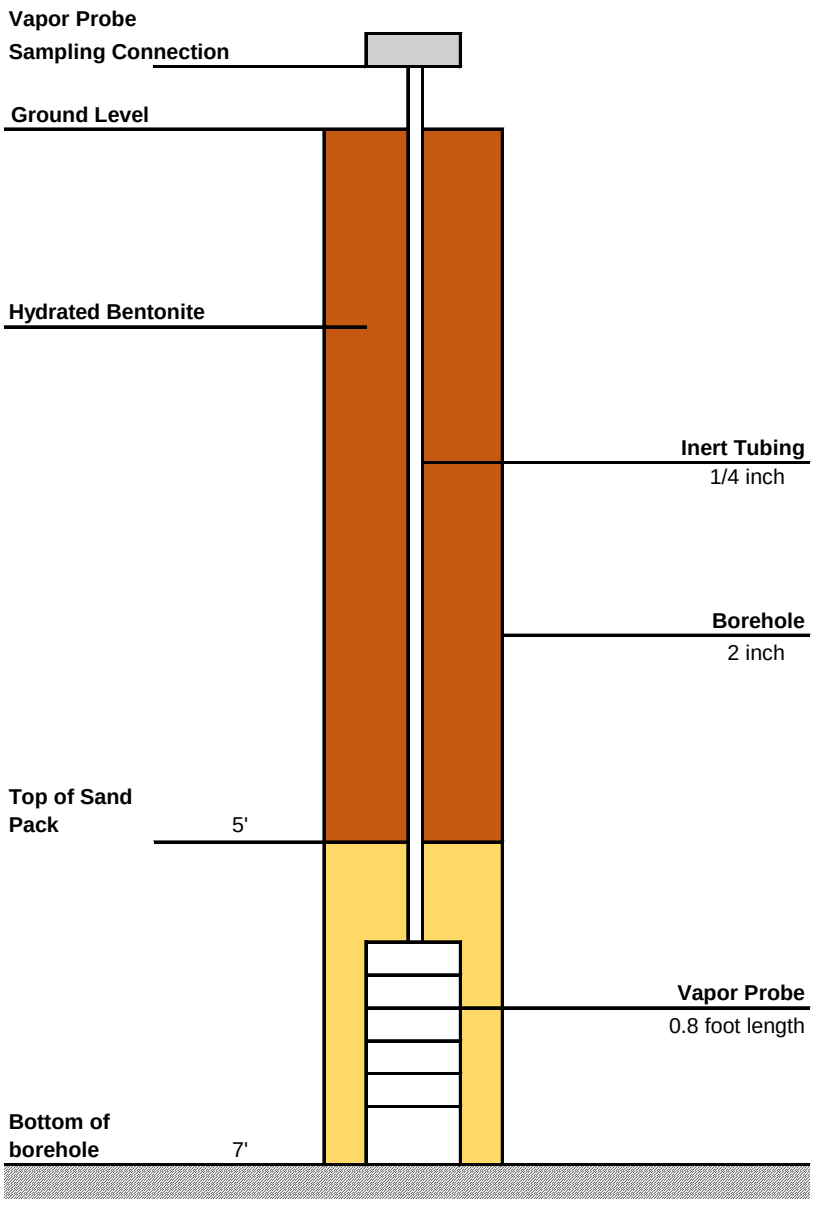
Bentonite Chip Seal

Sand Pack

COMMENTS

Vapor point installed in RI-BH-7

Vapor probe is stainless steel



BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

Client: Regan Development

Probe No.: RI-VP-3

VAPOR POINT STANDARD DETAIL

Staff:
Alexis Palumbo-Compton

Contractor:
Empire Exploration & Geology

Operator:
Chuck Guzzetta, P.G.

Equipment:
7720 DT Geoprobe Rig

Date:
March 28, 2025

Location:
47 East Amherst Street, Buffalo, NY

SEAL MATERIAL

Type:	Bentonite Chips
Setting:	0-5 ft bgs

FILTER MATERIAL

Type:	No. 0 Sand
Setting:	5-7 ft bgs

LEGEND

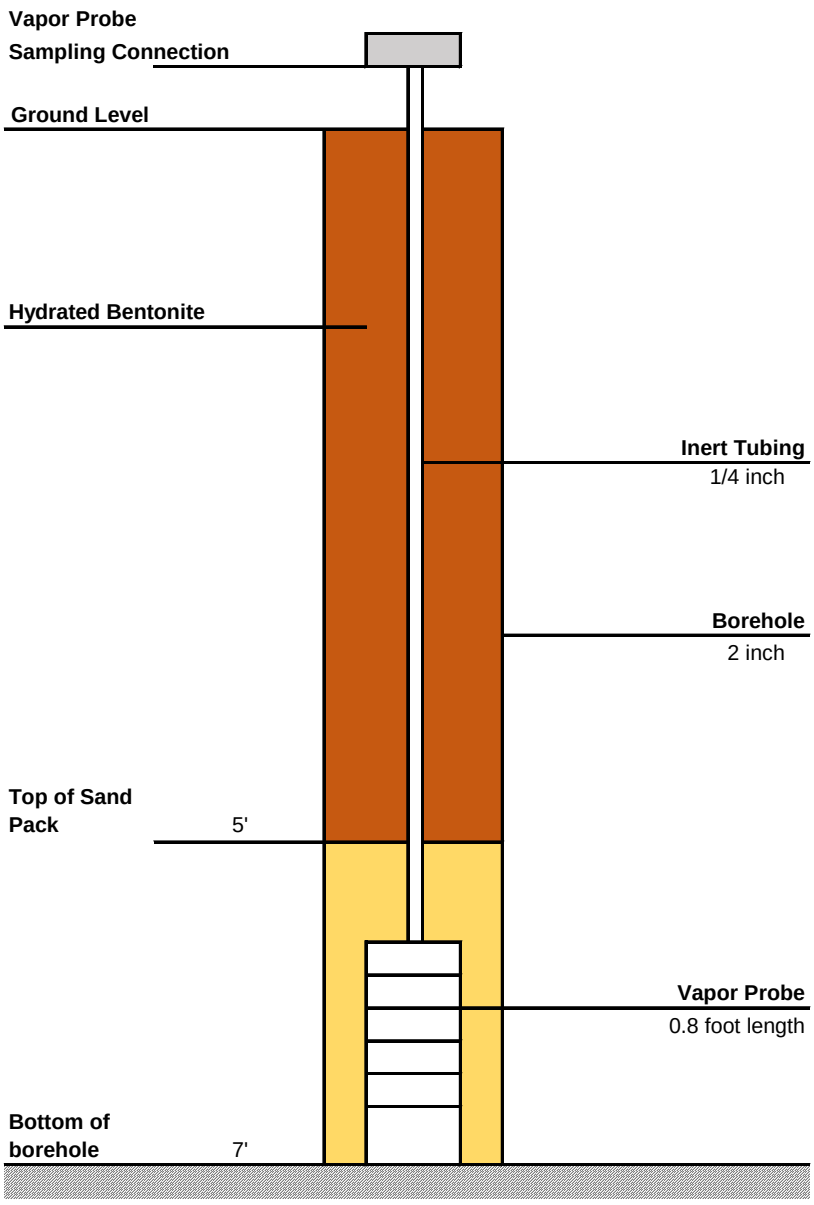
Bentonite Chip Seal

Sand Pack

COMMENTS

Vapor point installed in RI-BH-9

Vapor probe is stainless steel



BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

Client: Regan Development

Probe No.: RI-VP-4

VAPOR POINT STANDARD DETAIL

Staff:
Alexis Palumbo-Compton

Contractor:
Empire Exploration & Geology

Operator:
Chuck Guzzetta, P.G.

Equipment:
7720 DT Geoprobe Rig

Date:
March 28, 2025

Location:
47 East Amherst Street, Buffalo, NY

SEAL MATERIAL

Type:	Bentonite Chips
Setting:	0-6 ft bgs

FILTER MATERIAL

Type:	No. 0 Sand
Setting:	6-8 ft bgs

LEGEND

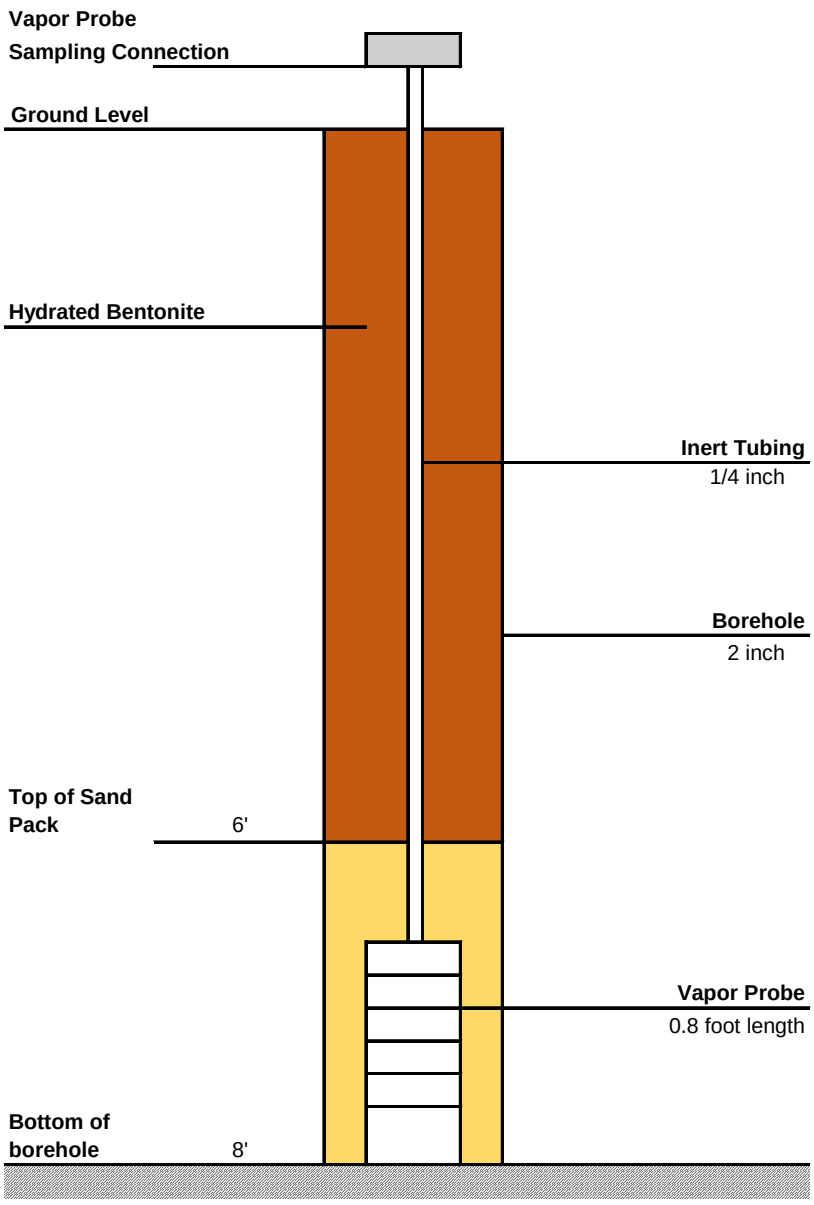
Bentonite Chip Seal

Sand Pack

COMMENTS

Vapor point installed in RI-BH-11

Vapor probe is stainless steel



BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

Client: Regan Development

Probe No.: RI-VP-5

Appendix H

DER-10 – Appendix 3C Decision Key

Appendix 3C Fish and Wildlife Resources Impact Analysis Decision Key	If YES Go to:	If NO Go to:
1. Is the site or area of concern a discharge or spill event?	13	2
2. Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas.	13	3
3. Is the site and all adjacent property a developed area with buildings, paved surfaces and little or no vegetation?	4	9
4. Does the site contain habitat of an endangered, threatened or special concern species?	Section 3.10.1	5
5. Has the contamination gone off-site?	6	14
6. Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination?	7	14
7. Are the site contaminants PCBs, pesticides or other persistent, bioaccumulable substances?	Section 3.10.1	8
8. Does contamination exist at concentrations that could exceed ecological impact SCGs or be toxic to aquatic life if discharged to surface water?	Section 3.10.1	14
9. Does the site or any adjacent or downgradient property contain any of the following resources? i. Any endangered, threatened or special concern species or rare plants or their habitat ii. Any DEC designated significant habitats or rare NYS Ecological Communities iii. Tidal or freshwater wetlands iv. Stream, creek or river v. Pond, lake, lagoon vi. Drainage ditch or channel vii. Other surface water feature viii. Other marine or freshwater habitat ix. Forest x. Grassland or grassy field xi. Parkland or woodland xii. Shrubby area xiii. Urban wildlife habitat xiv. Other terrestrial habitat	11	10
10. Is the lack of resources due to the contamination?	3.10.1	14
11. Is the contamination a localized source which has not migrated and will not migrate from the source to impact any on-site or off-site resources?	14	12
12. Does the site have widespread surface soil contamination that is not confined under and around buildings or paved areas?	Section 3.10.1	12
13. Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for list of potential resources. Contact DEC for information regarding endangered species.)	Section 3.10.1	14
14. No Fish and Wildlife Resources Impact Analysis needed.		

Appendix I

RI Deviation Information

April 1, 2025

Veronica Kreutzer
Assistant Engineer (Environmental)
Division of Environmental Remediation
New York State Department of Environmental Conservation
700 Delaware Ave., Buffalo, NY 14209
P: (716) 851-7232
veronica.kreutzer@dec.ny.gov

Re: Proposal – Supplemental RIWP – 47 East Amherst Street (BCP Site No. C915397)

Veronica:

This proposal is to address deviations encountered during the Remedial Investigation (RI) at 47 East Amherst Street (BCP Site No. C915397) located in the City of Buffalo, Erie County, New York. The proposed deviations are based upon input from both the New York State Department of Environmental Conservation (NYSDEC) and Department of Health (DOH). Below is a summary of proposed deviations from the Remedial Investigation Work Plan (RIWP) and an updated **Proposed RI Sampling Locations Map** is provided as an attachment.

- Initial proposal: 7 native samples will be collected at specified location.
  - Conditions encountered: bedrock is shallow across the site, ranging from 2.5-7.5 feet below ground surface (bgs), no native soil was encountered, and recovery was poor.
  - Proposed deviation: Two borings, RI-BH-8 and RI-BH-10, will be eliminated from the sampling plan and supplemented with two test trenches which will be sampled accordingly. As eliminating these borings creates a data gap in the southern area of the site surrounding RI-BH-5, RI-BH-6, and RI-BH9, an additional test trench is proposed in this area. If native soil is encountered during test trenching activities, a sample will be collected and analyzed as outlined in the Remedial Investigation Work Plan (RIWP).
- Initial proposal: 4 borings will be taken in the basement of the building.
  - Conditions encountered: the building has a centrally located partial basement; both the east and west wing are slab-on-grade. Additionally, potential friable TSI was noted throughout the building and the stairways to the basement were not safe/integral enough for equipment transportation.
  - Proposed deviation: 2 borings will be taken on the first floor, denoted RI-BH-13 (west wing) and RI-BH-14 (east wing). The borings will not be performed until the areas of the borings are deemed safe and human health is protected.

As discussed with NYSDEC personnel, without sampling below the center portion of the building, there is a data gap. In order to remedy this data gap, a Pre-Remedial Design Investigation (PDI) Work Plan will be submitted after the RI to outline the collection of additional samples, as applicable (i.e., if soil is encountered beneath the building post-demolition). If the PDI Work Plan is deemed acceptable by both NYSDEC and DOH the Remedial Investigation Report (RIR) approval can be issued without sampling under this section of the building. This sampling would be performed prior to site remediation.

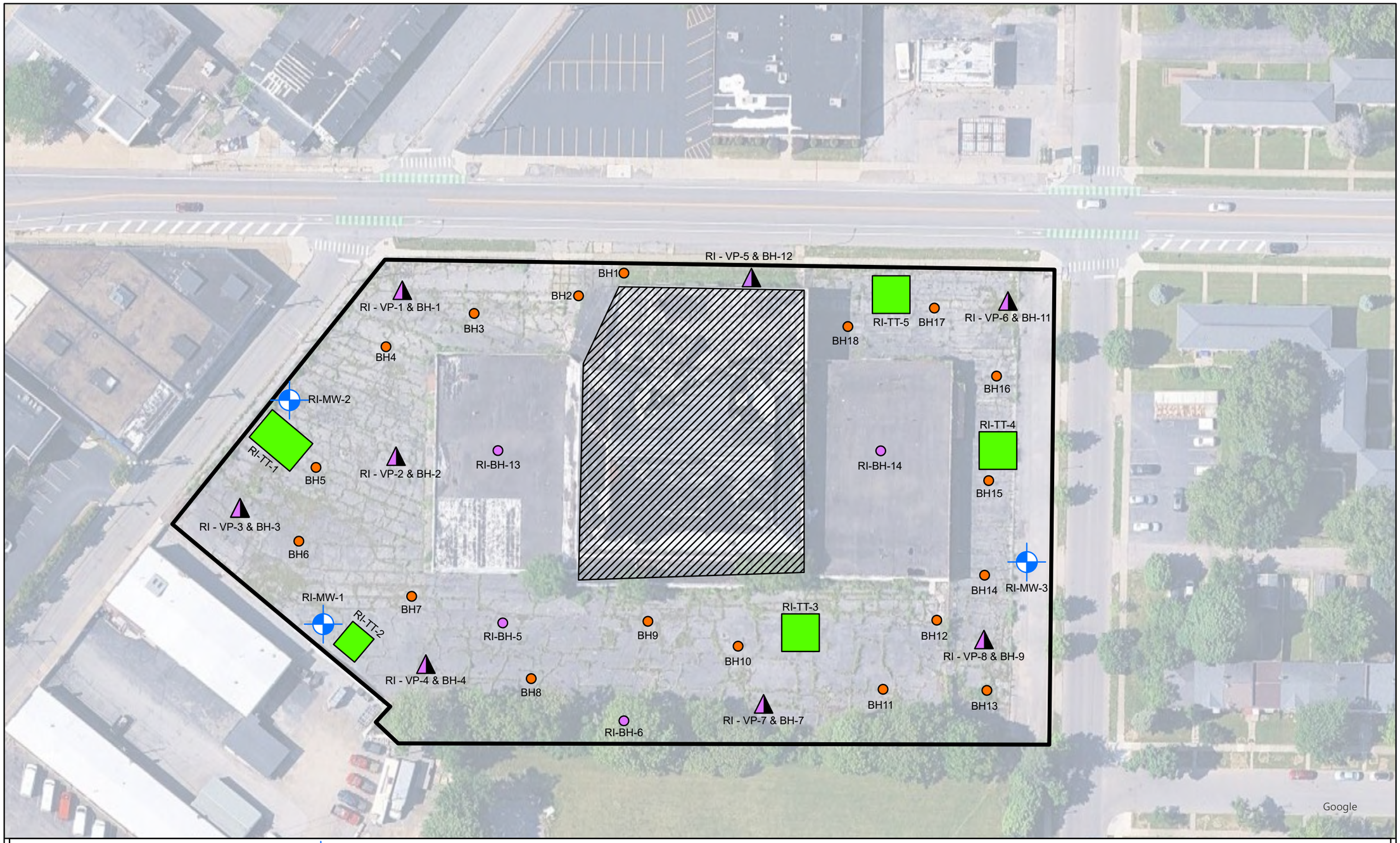
Your acceptance of this proposal may be indicated by signing this proposal or providing a Notice to Proceed (NTP) via email.

Thank you,

Alexis P-C

Alexis Palumbo-Compton
Project Engineer

Name	Signature	Date



LEGEND

- Property Boundary
- Proposed Test Trench Location
- PDI Area
- RI-MW-1 — RI Proposed Monitoring Well
- BH1 — Phase II ESA Boring Locations (1/17/23)
- RI-BH-1 — RI Proposed Boring Locations
- RI-VP-1/BH-1 — RI Proposed Boring & Vapor Point

NOTES

1. Three test pits were added to the investigation (TT-3 through TT-5) and two borings (BH-8 and BH-10) were selected for removal. These locations were selected to maintain representative coverage of the site.
2. It was determined that the initially proposed 4 borings inside the building are not feasible. As a part of the RI, 2 borings will be taken on the slab-on-grade portion of the building (denoted RI-BH-13 and RI-BH-14).
3. RI-TT-1 and RI-TT-2 were planned in areas of suspect USTs.
4. Sample locations in the PDI Area will be further assessed post-demolition.

BE3
BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue
Buffalo, NY 14213
716.249.6880
jbrydges@be3corp.com

CLIENT: REGAN DEVELOPMENT

Previous Phase II & Proposed RI Sampling Locations

revised 4/1/2025

47 E. Amherst Street
Buffalo, NY 14214

N
W E
S

DATE ISSUED:
December 17, 2024

△ 3/28/2025: RI-BH-8 and RI-BH-10 removed; RI-TT-3 and RI-TT-4 added.

△ 4/1/2025: Relocated RI-BH-13 and RI-BH-14 ; removed RI-BH-15 and RI-BH-16; added PDI Area and additional TT.

SCALE: 1:1,288

Outlook

RE: C915397 Amherst Commons LLC RI Work

From Kreutzer, Veronica M (DEC) <veronica.kreutzer@dec.ny.gov>
Date Thu 4/3/2025 8:45 AM
To Alexis Palumbo <apalumbo@be3corp.com>
Cc Jason Brydges <jbrydges@be3corp.com>; Paul Staub <pstaub@be3corp.com>

Regarding the submitted supplemental RIWP, please note the following:

- The proposed deviation from the Initial Proposal regarding the PDI area states “a Pre-Remedial Design Investigation (PDI) Work Plan will be submitted after the RI to outline the collection of additional samples, as applicable (i.e., if soil is encountered beneath the building post-demolition).” Even if no soil is encountered beneath this area, sampling must be performed to fill this data gap. Sampling can also include soil vapor and/or groundwater sampling.

Additionally, after discussion regarding the bedrock wells, it is preferred that core collection is performed on two of the three proposed bedrock wells, one on the west side of the site, and MW-3. This would give us a better understanding of the bedrock beneath and any potential pathways.

I will be out today and tomorrow, but we can discuss more on Monday on-site when you start coring the first monitoring well.

Please let me know if anything changes with the schedule.

Sincerely,

Veronica

April 14, 2025

Veronica Kreutzer
Assistant Engineer (Environmental)
Division of Environmental Remediation
New York State Department of Environmental Conservation
700 Delaware Ave., Buffalo, NY 14209
P: (716) 851-7232
veronica.kreutzer@dec.ny.gov

Re: **Additional** Proposal – Supplemental RIWP – 47 East Amherst Street (BCP Site No. C915397)

Veronica:

This proposal is to address **additional** deviations encountered during the Remedial Investigation (RI) at 47 East Amherst Street (BCP Site No. C915397) located in the City of Buffalo, Erie County, New York. The proposed deviations are based upon input from both the New York State Department of Environmental Conservation (NYSDEC) and Department of Health (DOH). Below is a summary of proposed deviations from the Remedial Investigation Work Plan (RIWP) and an updated **Proposed RI Sampling Locations Map (*revised 4/14/2025*)** is attached.

- Vapor points were removed from interior locations as the depth to refusal/potential bedrock was too shallow to warrant vapor probes. The interior locations will be addressed post-demolition in a Pre-Remedial Design Investigation (PDI) Work Plan.
- A vapor point was added to RI-BH-7 to provide more representative coverage of the site.
- RI-MW-3 is currently set to a depth of 18 deet below ground surface (bgs) and demonstrated a significant volume of water and notable fractures in the first few feet of bedrock. It is proposed that the well remain at this depth (instead of the originally proposed 20-foot depth).

Based on these deviations, the following text (noted in red) should be removed from the scope of work described in Section 4.0/4.1 of the approved RIWP:

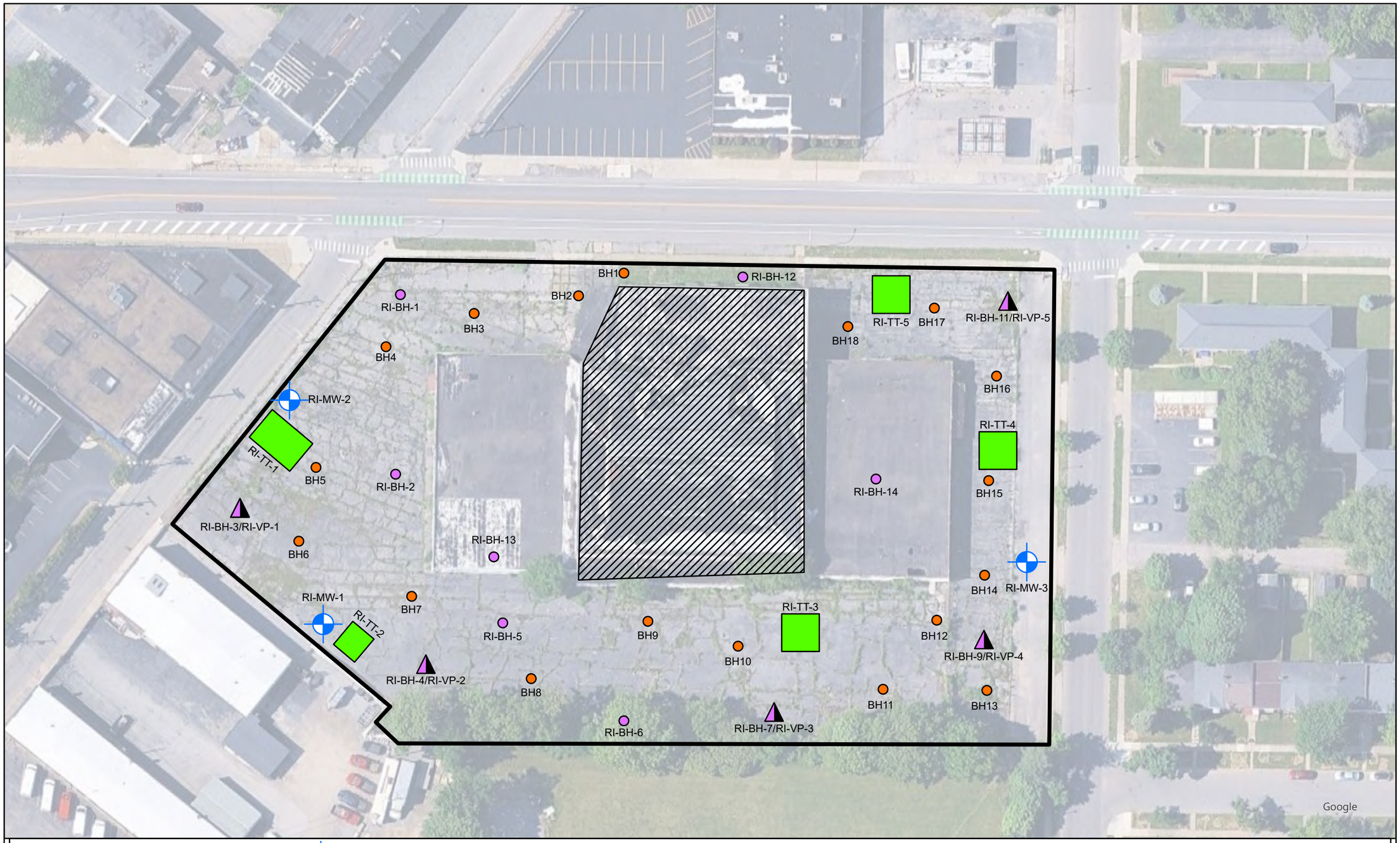
“Collection and analyses of soil vapor and sub-slab vapor, samples to evaluate the potential for inhalation exposure via soil vapor intrusion.

Your acceptance of this proposal may be indicated by signing this proposal or providing a Notice to Proceed (NTP) via email.

Thank you,

Alexis Palumbo-Compton
Project Engineer

Name	Signature	Date



LEGEND

- Property Boundary
- Proposed Test Trench Location
- PDI Area
- RI-MW-1 — RI Proposed Monitoring Well
- BH1 — Phase II ESA Boring Locations (1/17/23)
- RI-BH-1 — RI Proposed Boring Locations
- RI-VP-1/BH-1 — RI Proposed Boring & Vapor Point

NOTES

1. Vapor points were removed from interior locations as the depth to refusal/potential bedrock was too shallow to warrant vapor probes.
2. A vapor point was added to RI-BH-7 to provide more representative coverage of the site.

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue
Buffalo, NY 14213
716.249.6880
jbrydges@be3corp.com

CLIENT: REGAN DEVELOPMENT

Previous Phase II & Proposed RI Sampling Locations

revised 4/14/2025

47 E. Amherst Street
Buffalo, NY 14214

N
W E
S

DATE ISSUED:
December 17, 2024

△ 3/28/2025: RI-BH-8 and RI-BH-10 removed; RI-TT-3 and RI-TT-4 added.
△ 4/1/2025: Relocated RI-BH-13 and RI-BH-14 ; removed RI-BH-15 and RI-BH-16; added PDI Area and additional TT.
△ 4/8/2025: Moved RI-VP-1 and -2; removed RI-VP-5; renamed RI-VP-8 to RI-VP-5.
△ 4/14/2025: Removed 2 interior vapor points; added vapor point to RI-BH-7.

SCALE: 1:1,288

Outlook

RE: C915397 Amherst Commons LLC RI Work

From Kreutzer, Veronica M (DEC) <veronica.kreutzer@dec.ny.gov>
Date Tue 4/15/2025 2:56 PM
To Alexis Palumbo <apalumbo@be3corp.com>
Cc Jason Brydges <jbrydges@be3corp.com>; Paul Staub <pstaub@be3corp.com>; Budd, Christopher (HEALTH) <Christopher.Budd@health.ny.gov>

Alexis,

The RIWP revisions submitted on April 14, 2025 are approved with the understanding that all sub-slab vapor samples as well as possible additional under-building soil samples will be collected under a PDIWP following building demolition.

Please keep in touch with a schedule for the test trench sampling.

Thanks,

Veronica

Outlook

RE: C915397- Amherst Commons RI TT2

From Kreutzer, Veronica M (DEC) <veronica.kreutzer@dec.ny.gov>
Date Tue 5/13/2025 8:43 AM
To Alexis Palumbo <apalumbo@be3corp.com>

Alexis,

That works on our end, we will just want the survey plan submitted prior to implementation. We can discuss this as part of the RAWP.

Veronica

From: Alexis Palumbo <apalumbo@be3corp.com>
Sent: Monday, May 12, 2025 10:05 AM
To: Kreutzer, Veronica M (DEC) <veronica.kreutzer@dec.ny.gov>
Subject: Re: C915397- Amherst Commons RI TT2

Good morning Veronica,

Yes, we were hoping to perform the survey during the remedial phase.

Best,
Alexis

Alexis Palumbo-Compton

Project Engineer

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue, Suite B-150

Buffalo, New York, 14213

Office: 716.249.6880

Cell: 585.944.6793

be3corp.com

From: Kreutzer, Veronica M (DEC) <veronica.kreutzer@dec.ny.gov>
Sent: Monday, May 12, 2025 8:48 AM
To: Alexis Palumbo <apalumbo@be3corp.com>
Subject: RE: C915397- Amherst Commons RI TT2

CAUTION: This email originated from outside of the organization.

Hi Alexis,

Just to clarify, you're requesting to perform a survey of the material during excavation, which I am assuming will be during the remedial phase of the project?

Veronica

From: Alexis Palumbo <apalumbo@be3corp.com>
Sent: Friday, May 9, 2025 4:51 PM
To: Kreutzer, Veronica M (DEC) <veronica.kreutzer@dec.ny.gov>
Subject: Re: C915397- Amherst Commons RI TT2

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Veronica,

I apologize for the delayed response. After speaking with Jason and our specialist, TerranearPMC (TPMC), who possesses a United States Nuclear Regulatory Commission (USNRC) nationwide Decontamination and Decommissioning (D&D) license, BE3/TPMC is prepared to obtain reciprocity at any time, as this can occur relatively quickly. Obviously, we can also generate a survey plan, as required. However, performing a rad survey of the material in question at this time is logistically difficult due to its depth and localized nature (i.e., only identified in TT-2 and at a depth of 10 feet bgs). We suggest that we provide a trained radiation technician at the site throughout the excavation of this material in question. Please let me know your thoughts. We can certainly set up a meeting sometime next week or the following if a greater discussion is needed.

Have a great weekend!
Alexis

Alexis Palumbo-Compton

Project Engineer

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

960 Busti Avenue, Suite B-150

Buffalo, New York, 14213

Office: 716.249.6880

Cell: 585.944.6793

be3corp.com

From: Kreutzer, Veronica M (DEC) <veronica.kreutzer@dec.ny.gov>
Sent: Monday, May 5, 2025 11:42 AM
To: Alexis Palumbo <apalumbo@be3corp.com>
Cc: Jason Brydges <jbrydges@be3corp.com>; Concannon, Patrick W (DEC) <patrick.concannon@dec.ny.gov>; Dietrich, Derick R (DEC) <Derick.Dietrich@dec.ny.gov>; Papura, Thomas R (DEC) <thomas.papura@dec.ny.gov>; Caprio, Andrea (DEC) <Andrea.Caprio@dec.ny.gov>
Subject: C915397- Amherst Commons RI TT2

CAUTION: This email originated from outside of the organization.

Good morning Alexis,

Regarding the material found in TT2 during RI work, please see below:

Based on the visual observations and photos collected from the material, the Department believes that the material in question may potentially contain technologically enhanced naturally occurring radioactive materials (TENORM).

BE3 personnel claimed that the material is not slag but rather “incinerator waste” and therefore should not be considered TENORM. This claim is incorrect. Any material that contained naturally occurring radioactive materials (NORM) prior to being processed has the potential for the NORM to be concentrated in the resulting waste products.

Regardless of whether the material is slag or incinerator waste, there exists the potential for either of these materials to contain TENORM. The Department strongly recommends that BE3/TPMC obtain reciprocity from the NYS Department of Health (DOH) to perform a radiological survey of the material at this site to determine if the material is TENORM. Please note, a survey plan must be submitted to the

Department and approved prior to any official surveying of potential TENORM. The Departments guidance document, DMM-5, outlines the process to evaluate suspected TENORM to guide handling and/or disposal pathways. Currently, TENORM, at any concentration, cannot be disposed of at a NYS landfill per 6 NYCRR Part 363-7.1(o)(7).

If you would like to set up a time on Friday to discuss the above response, please let me know.

Sincerely,

Veronica Kreutzer
Assistant Engineer (Environmental), Division of Environmental Remediation

New York State Department of Environmental Conservation
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www.dec.ny.gov | | |

NEW YORK STATE | Department of Environmental Conservation

Appendix J

GPR Survey Results

JOB SUMMARY REPORT

Order Number:	Work Order #766362	**Job Date:**	Apr 4, 2025 6:43:00 AM
Customer:	151666 BE3	**Billing Address:**	BRYDGES ENGINEERING 960 Busti Ave. Suite B-150 Buffalo NY 14213 United States

JOB DETAILS

Jobsite Location	47 East Amherst St. Buffalo, New York 14214
Work Order Number	Work Order #766362
Job Number	
PO Number	

GPRS Project Manager: Jeff Aurand

Thank you for using GPRS on your project. We appreciate the opportunity to work with you. If you have questions regarding the results of this scanning, please contact the lead GPRS project manager on this project.

EQUIPMENT USED

The following equipment was used on this project:

- **Underground GPR Antenna:** This GPR Antenna uses frequencies ranging from 250 MHz to 450 MHz and is mounted in a stroller frame that rolls over the surface. Data is displayed on a screen and marked in the field in real time. The surface needs to be reasonably smooth and unobstructed to obtain readable scans. Obstructions such as curbs, landscaping, and vegetation will limit the efficacy of GPR. The total effective scan depth can be as much as 8’ or more with this antenna but can vary widely depending on the soil conditions and composition. Some soil types, such as clay, may limit maximum depths to 3’ or less. As depth increases, targets must be larger to be detected, and non-metallic targets can be challenging to locate. The depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: Link
- **EM Pipe Locator:** Electromagnetic Pipe and Cable Locator. Detects electromagnetic fields. Used to actively trace conductive pipes and tracer wires, or passively detect power and radio signals traveling along conductive pipes and utilities. For more information, please visit: Link
- **Magnetometer:** The Magnetometer detects the magnetic field of a ferromagnetic object by responding to the difference in the magnetic field between two sensors. Data is interpreted in the field by listening to changes in frequency emitted by a speaker on the device. Larger metallic objects can be located at depths of up to 10’ or more, depending on the size, type, shape, and orientation of targets and the amount of interference from other objects. For more information, please visit: Link Link
- **GPS:** This handheld unit offers accuracy down to 4 inches; however, the accuracy achieved will depend on the satellite environment at the time of collection and is not considered survey-grade. Features can be collected as points, lines, or areas and then exported as a KML/KMZ or overlaid on a CAD drawing. For more information, please visit: Link
- **Traceable Rodder:** The rodder has a copper wire encased in fiberglass. The device is pushed through accessible pipes before placing a current on the wire, and the signal is then traced from the surface. The maximum traceable depth is 10’ depending on the soil conditions, and the maximum distance is 200’. The line can be pushed through a pipe with direct access, such as a sewer line at a cleanout or a storm drain catch basin. It may not be able to be pushed through deeper pipes within manholes. GPRS will not access electrical conduits. The signal cannot be located through metallic pipes.

JOB SUMMARY REPORT

WORK PERFORMED

UNDERGROUND STORAGE TANKS	
Client Provided Drawings	Yes
Scope of Work	Underground Utility/UST locate
Small Area Scan (sq ft)	110,400
Approximate GPR Effective Depth (ft)	3
Potential UST Located	No
Potential UST Description	No UST's Detected
Potential Area of Concern Located	No
Limitations Encountered	- Surface obstructions - Surface too rough - Overgrown vegetation - Utilities too deep to locate - Soil conditions not suitable for GPR at time of scanning - RF interference
Limitations Encountered - Other	See Notes
Obstructions Encountered	See Notes
Marking Medium	- Spray Paint
Results Notes	The Scope of Work involved an Underground Utility/UST locate. The Electric and Communication lines enter from a utility pole in the rear of the property. The Electric is approximately 1'- 2' deep and the Communication lines are aerial. There appears to be a Sanitary Sewer clean out adjacent to the Electric, unfortunately I was unable to push a traceable rodder into the clean out; so no trace was obtained. The Gas line was connected to on East Amherst Street and traveled parallel with the street at around 2'- 3' in depth but could not be followed onto the Property a Sanitary Storm line is around 2'- 3' on the Holden Street side of the locate with an Unknown Duct traveling the Entire Scan Area parallel with Holden Street at an Unknown Depth. A steel road plate was detected using GPR and a Magnetometer along the Rear fence and Holden Street, it is possible of a an underground vault or void below the plate and should be examined. All of the potential soil boring locations appear to be clear and ok to drill. BH13 thru 16 are inside of the building and could not be located. No UST's were Detected inside of The Suspected Areas. With GPR only retrieving reliable data of 3' in depth and RF Interference, overgrown vegetation in areas and uneven terrain there is a chance of undetected utilities such as Water, Gas, Sewer and Others. All Utilities and Unknown lines Should Be Field Verified. ********** Please Use Extreme Caution **********

JOBSITE IMAGES

Jobsite Photo #1

Jobsite Photo #2

Jobsite Photo #3

Jobsite Photo #4

Jobsite Photo #5

Jobsite Photo #6

Jobsite Photo #7

Jobsite Photo #8

Jobsite Photo #9

Jobsite Photo #10

Jobsite Photo #11

Jobsite Photo #12

Jobsite Photo #13

Jobsite Photo #14

JOB SUMMARY REPORT

CONTACT / SIGNATURE INFORMATION

Contact Information

Contact Name	Paul Staub	**Email**	pstaub@be3corp.com

TERMS & CONDITIONS

http://www.gprsinc.com/termsandconditions.html

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6. PRIVATE UTILITY LOCATING IS NEVER A REPLACEMENT FOR ONE CALL/811 SERVICES. STATE LAW REQUIRES 811 TO BE CALLED PRIOR TO ANY AND ALL EXCAVATION ACTIVITIES.

LEGEND

- SCAN AREA
- E — ELECTRICAL DUCT
- MISC AREA OUTLINE
- ST — STORM
- U — UNKNOWN
- U — UNKNOWN DUCT
- BOLLARD
- UTILITYPOLE
- SAN CLEANOUT
- S — SIGN
- SOIL BORING
- CB — CATCH BASIN
- X — END OF INFO
- LINE CONTINUES
- D= — DEPTH

0 50' 100'

811 Know what's below. Call before you dig.

GPRS IS NOT AFFILIATED WITH 811 BUT DOES RECOMMEND THAT THE SERVICE IS USED ON EVERY PROJECT IN ADDITION TO OUR OWN. SEE NOTE #6 ABOVE.

FOR INFORMATION ONLY

GPRS UTILITY FINDINGS MAP

PREPARED FOR:
BE3

LOCATION:
AMHERST BOWLING CENTER
47 E AMHERST ST
BUFFALO, NY 14214

DRAWN BY: JAY.AUTMAN

PROJECT MANAGER:
JEFFREY AURAND
315.322.8580
JEFF.AURAND@GPRSINC.COM

DATE	5/12/2025		
DRAWING NO.	1	REV.	0

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0 20' 40'

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DRAWING NO.	3	REV.	0

Appendix K

Alternative Cost Estimates

47 EAST AMHERST STREET
REMEDIAL ALTERNATIVE COST ESTIMATES

Assumptions:

1) - Conversion factor of cubic yards of soil/stone to tons is 1.5.
2) - Quantity of 1 implies the cost is a lump sum.

ALTERNATIVE 1 - REMEDIATE TO TRACK 4 - RESTRICTED RESIDENTIAL			
Item	**Unit Cost**	**Quantity**	**Total**
Mobilization/Demobilization	$10,000.00	1	$10,000.00
Building Demolition and Abatement	$300,000.00	1	$300,000.00
Excavate/transport/dipose impacted soil (tons)	$45.00	8500	$382,500.00
Delinieation fabric (SY)	$1.35	2500	$3,375.00
Import/placement of clean backfill (tons)			
i.) Fill historic basement area	$25.00	4500	$112,500.00
ii.) Cover materials (2 feet in greenspace areas)	$25.00	2000	$50,000.00
Asphalt Paving (SF)	$4.00	80000	$320,000.00
Building Foundation (SF)	$100,000.00	1	$100,000.00
Laboratory sampling and analyses			
i.) Disposal sampling	$10,000.00	1	$10,000.00
ii.) Imported fill sampling	$5,000.00	1	$5,000.00
Engineering Oversight	$100,000.00	1	$100,000.00
Total			$1,393,375.00
Contingency (10%)			$139,337.50
Estimated Capital Total Cost			**$1,532,712.50**

ALTERNATIVE 2 - REMEDIATE TO TRACK 1 - UNRESTRICTED			
Item	**Unit Cost**	**Quantity**	**Total**
Mobilization/Demobilization	$11,000.00	1	$11,000.00
Building Demolition and Abatement	$300,000.00	1	$300,000.00
Excavate/transport/dipose impacted soil (tons)	$45.00	40000	$1,800,000.00
Import/placement of clean backfill (tons)			
i.) Fill historic basement area	$25.00	4500	$112,500.00
ii.) Remainder of Site	$25.00	30000	$750,000.00
Asphalt Paving (SF)	$4.00	80000	$320,000.00
Building Foundation (SF)	$100,000.00	1	$100,000.00
Laboratory sampling and analyses			
i.) Disposal sampling	$20,000.00	1	$20,000.00
ii.) Imported fill sampling	$10,000.00	1	$10,000.00
Engineering Oversight	$110,000.00	1	$110,000.00
Total			$3,533,500.00
Contingency (10%)			$353,350.00
Estimated Capital Total Cost			**$3,886,850.00**