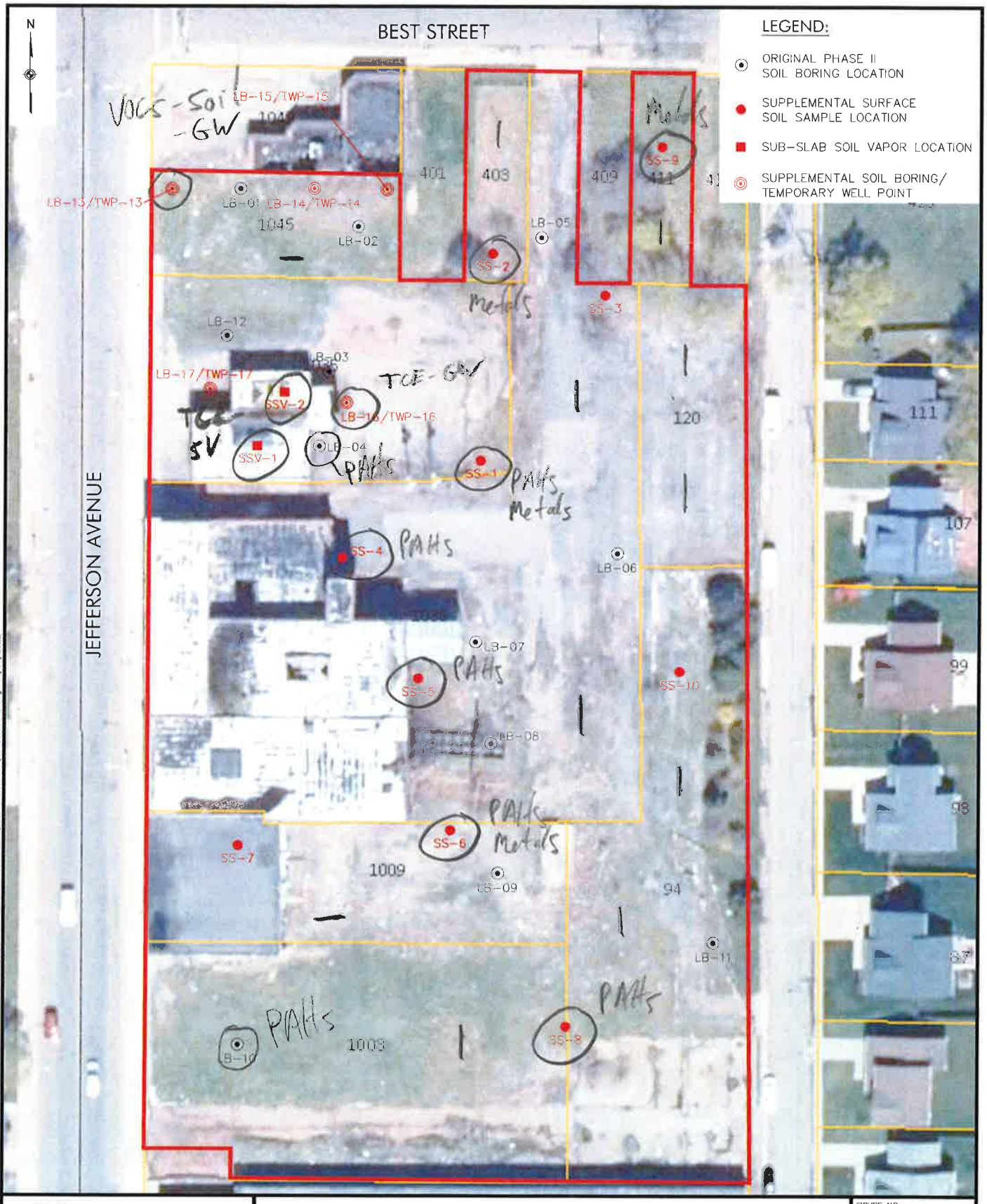


LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

JEFFERSON AVENUE AND BEST STREET SAMPLE LOCATION MAP

FIGURE NO.
2

LiRo Engineers, Inc.
A LiRo Group Company
690 Delaware Avenue, Buffalo, NY 14209 Telephone 716.882.5476 Facsimile 716.882.9640 www.liro.com

MEMORANDUM

From: Stephen Frank, P.G., LiRo Engineers Inc.
To: Paula McDonald, T.O.P. Enterprise; Maggie Hamilton, LISC
Date: November 16, 2022
RE: Supplemental Phase II Environmental Subsurface Investigation Results
Jefferson Avenue – Best Street Site
Tax Section, Block, & Lot Nos. 100.74-1-3, 4.1, 6, 41.111, 41.112, 41.13, 41,3, 42, and 43
Buffalo, New York

LiRo Engineers, Inc. (LiRo) is pleased to submit this report of results from the Supplemental Phase II Environmental Subsurface Investigation (ESI) performed at the Jefferson-Best Site in October 2022.

Background

LiRo completed a Phase II ESI dated February 28, 2022 conforming to ASTM Standard Practice for Environmental Site Assessments: Phase II (ASTM E1903-11). LiRo's Phase II ESI data indicated that elevated levels of polycyclic aromatic hydrocarbons (PAHs) were present in fill at the site, however, only one boring had PAH concentrations that greatly exceeded NYSDEC Soil Cleanup Objectives.

Based on feedback from the property owner, additional sampling was requested in the portion of the Site adjacent to the former gasoline/auto service station at the corner of Jefferson Avenue and Best Street, and additional sampling was conducted to better establish the eligibility of the Site for acceptance into NYSDEC's Brownfield Cleanup Program (BCP).

Scope of Work

The scope of the Supplemental Phase II ESI was provided in a letter dated July 26, 2022 and included provisions for soil, soil vapor, and groundwater sampling. Details of the scope are summarized below.

Surface Soil Sampling

Ten surface soil samples (SS-1 through SS-10) were collected at the locations shown on Figure 2. These samples were collected from ground surface to 1 foot below ground surface using hand tools (shovel, pickaxe, hammer drill, etc.). Surface cover was removed and a shallow soil samples were collected using a pre-cleaned stainless steel trowel. Sample containers were filled with soil, labelled, placed on a cooler with ice.

Soil Vapor Sampling

Two sub-slab soil vapor samples (SSV-1 and SSV-2) were collected from within the northernmost building at the Site. This building had been identified as a REC in a Phase I ESA issued by CPL in November 2019. Records indicated uses of the Site as an automotive paint and repair shop and historical dry cleaner. The locations of the sub-slab soil vapor sampling locations are shown on Figure 2.
The sub-slab soil vapor sampling points were installed by drilling a ¾-inch diameter hole approximately 2 inches into the concrete floor slab. A ¼-inch diameter hole was then drilled in the center of the ¾-inch hole through the concrete floor slab into the sub-base aggregate. A length of ¼-inch diameter polyethylene tubing was inserted into the ¼-inch hole to the bottom of the concrete floor slab. Natural beeswax was then melted and poured into the ¾-inch hole around the tubing to form a seal to prevent migration of indoor air.

Sub-slab soil vapor samples were collected from each location for analysis of VOCs using laboratory supplied 1.7 liter Summa Canisters and flow regulators. The sampling point tubing was purged using a PID acting as a low volume pump to minimize indoor air infiltration during the sampling. Following purging, the sample tubing was attached to the Summa Canister regulator and sampling was initiated. The regulators were pre-set to a flow rate of 0.007 liters per minute to allow for sample collection over a 4-hour period.

Soil Borings and Temporary Monitoring Wells

Five soil borings (LB-13 through LB-17) were installed at the locations shown on Figure 2. Borings were advanced using a track mounted GeoProbe direct push drill rig. Soil sampling was accomplished with the use of a 4-foot long Macro-core sampler with PVC liners. Soil from each boring was classified and examined for visual evidence (i.e., staining, discoloration) and any olfactory indications (i.e., odors) of contamination. In addition, a photoionization detector (PID) was used to screen the soil for Volatile Organic Compounds (VOC) vapors. Two soil samples for VOC analysis were collected from soil boring LB-13 at depths of 4-5 feet below ground surface (ftbg) and 18-19 ftbg.

Soil boring logs are presented in Attachment A.

Temporary Well Points (TWPs) were installed within three (3) soil borings (LB-13, LB-14, and LB-17). These locations were selected in the field based on visual and olfactory indications of contamination, the presence of groundwater, and the location on the Site. The TWPs consisted of 1-inch diameter well screen and riser installed to the bottom of the boring. A sandpack and bentonite seal were installed during construction.

The TWPs were allowed to fill with water for approximately 30 to 60 minutes prior to sampling. Groundwater samples were collected for analysis of VOCs using ½-inch diameter disposable bailers. Groundwater was transferred from the bailer into laboratory supplied sample containers. Following collection, the groundwater samples were labelled and placed in a cooler with ice.

TWP construction logs are included in Attachment A.

Laboratory Analysis

The soil, groundwater, and sub-slab soil vapor samples were submitted to Alpha Analytical, a NYS Department of Health (NYSDOH) certified laboratory (No. 11148). Field derived Quality Assurance/Quality Control (QA/QC) samples were not collected during this investigation.

Surface soil samples were analyzed for: (1) PAHs using United States Environmental Protection Agency (USEPA) Method 8270D; and, (2) RCRA Metals using USEPA Methods 6010 and 7471B. Subsurface soil samples were analyzed for Target Compound List (TCL) VOCs using USEPA Method 8260.

Groundwater samples were analyzed for TCL VOCs using USEPA Method 8260.

Sub-slab soil vapor samples were analyzed for VOCs using USEPA Method TO-15.

All samples were hand delivered to the laboratory using standard chain-of-custody procedures.

Guidance Values

Soil sampling results were compared to NYSDEC Part 375 Restricted Use – Restricted Residential Soil Cleanup Objectives (RRSCOs) and Unrestricted Use Soil Cleanup Objectives (UUSCOs) in the attached data summary tables. Groundwater sampling results were compared to NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards and Guidance Values (AWQSGVs) – Groundwater (GA) standards. Sub-slab soil vapor sampling results were compared to Air Guideline Values (AGVs) and Decision Matrices published in the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Copies of the laboratory analytical results are included in Attachment B.

Investigation Results

Soil Sample Results

Samples for VOC analysis were collected from LB-13 at 4-5 ftbg and 18-19 ftbg. There was PID evidence of petroleum contamination and the sample from 4-5 ftbg reported xylenes at concentrations exceeding RRSCOs and UUSCOs. VOC results are summarized in Table 1

Samples for PAH analysis were collected from a depth of 0-1 ftbg at all 10 surface soil sample locations. There were exceedances of RRSCOs and UUSCOs for one or more of the PAH compounds at 5 of the 10 locations (SS-1, SS-4, SS-5, SS-6, and SS-8). At 4 of the 10 locations, concentrations of individual carcinogenic PAHs were far in excess of the RRSCOs. PAH results are summarized in Table 2.

Samples for RCRA metals analysis were collected from a depth of 0-1 ftbg at all 10 surface soil sample locations. There were exceedances of RRSCOs at 4 of the 10 locations and exceedances of UUSCOs at 5 of the 10 locations. RCRA metals results are summarized in Table 3.

Groundwater Sample Results

Groundwater samples were collected at two locations (LB-13 and LB-14) adjacent to the neighboring service station property and at one location (LB-16) adjacent to the onsite building that was reportedly a former dry cleaner. The groundwater samples were analyzed for VOCs. LB-13 reported evidence of petroleum contamination and the concentrations of methyl tert-butyl ether (MTBE) and benzene in the sample exceeded their respective AWQSGVs. The sample for LB-16 reported trichloroethene (TCE) at a concentration in excess of its AWQSGV. Groundwater results are summarized in Table 4.

Sub-Slab Soil Vapor Sample Results

Table 5 provides a summary of VOCs detected in the sub-slab soil vapor samples. A total of 16 of the 63 VOCs included in the TO-15 analysis were detected in sub-slab soil vapor at the Site.

The NYSDOH Vapor Intrusion Guidance Document matrices provide guidance on actions that should be taken to address current and potential exposures related to soil vapor intrusion. The recommended actions are based on a comparison of sub-slab soil vapor concentrations to indoor air concentrations and include no further action, monitor, and re-sample and/or mitigate. The matrices provide concentration action levels for sub-slab vapor and indoor air. One VOC, (TCE) is included in Matrix A and two VOCs, 1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethene (PCE) are included in Matrix B.

Based on the concentrations of TCE in each of the sub-slab soil vapor samples collected, mitigation would be required using the NYSDOH guidance.

Two of the 16 detected VOCs have NYSDOH AGVs; trichloroethene with an AGV of 2 micrograms per cubic meter ($\mu g/m^3$) and tetrachloroethene with an AGV of 30 $\mu g/m^3$. Trichloroethene was detected in both sub-slab soil vapor samples at concentrations exceeding the NYSDOH AGV. Tetrachloroethene was detected in SSV-02 at a concentration below the NYSDOH AGV.

Conclusions

The Phase II Investigations soil sampling results show that contaminated fill with PAH and metals concentrations in excess of NYSDEC RRSCOs is widespread at the site. This contamination is most evident in shallow fill (0-1 ftbg) and is likely a result of historical industrial/commercial uses at the site.

The groundwater petroleum contamination observed in boring LB-13 at the Site may be from an offsite source (the adjacent former service station). The TCE in groundwater may be a result of the former Site dry cleaning operation.

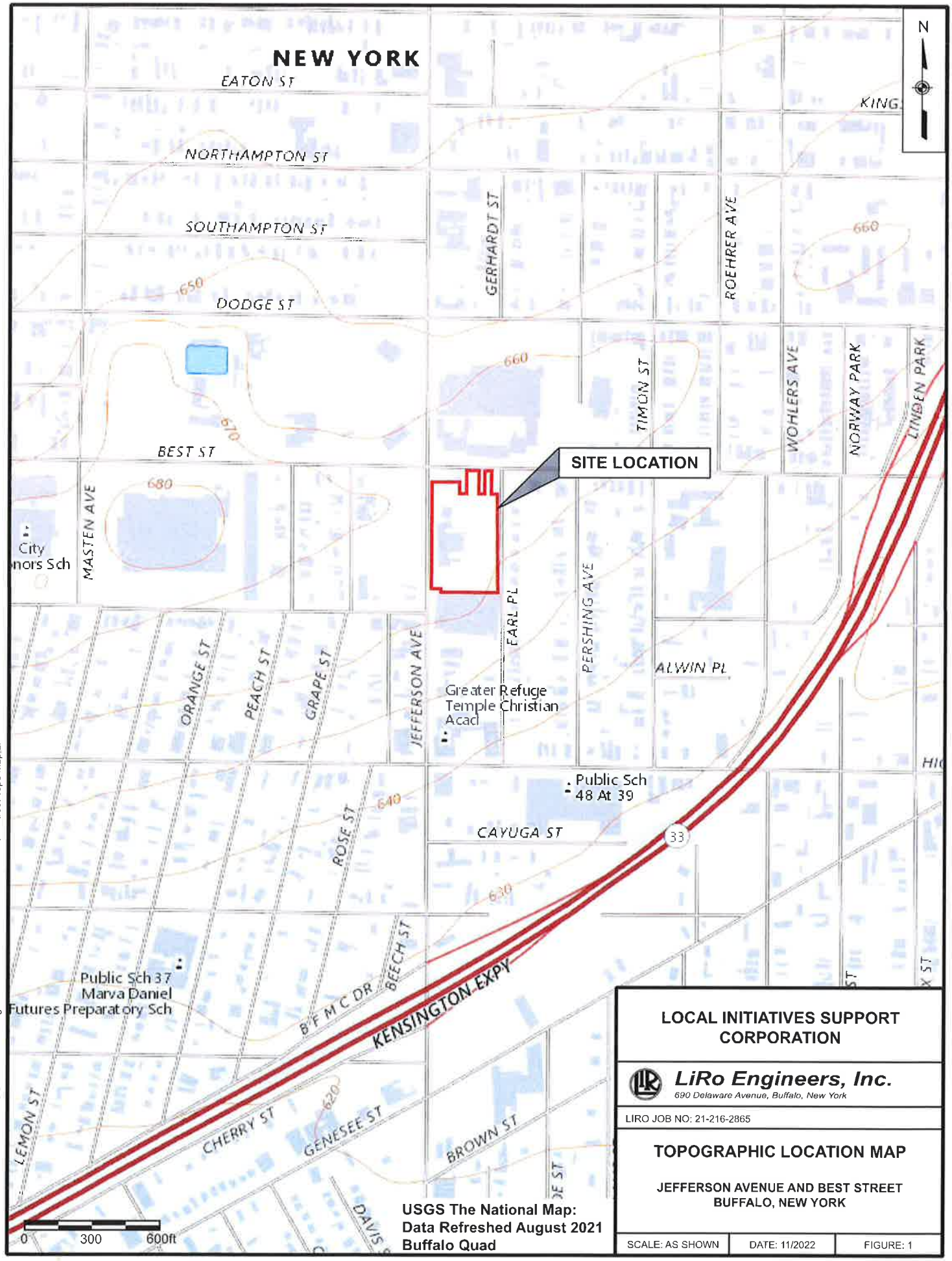
Sub-slab soil vapor samples were collected from beneath the former dry cleaner building, however, the building is not currently heated and does not have a tight envelope (i.e., doors/windows are missing). Therefore, a full vapor intrusion investigation could not be conducted. The sub-slab vapor results indicate that vapor intrusion will be a concern for site redevelopment and that plans for vapor intrusion mitigation should be incorporated into Site redevelopment plans.

Based on these conditions, LiRo believes that the site will be eligible for acceptance into the NYSDEC Brownfield Cleanup Program. For the purposes of this investigation, the separate tax parcels (identified by Block & Lot numbers) have been treated as a single Site. For the purpose of entering the Brownfield Cleanup Program, the individual Lots will first need to be combined into a single tax parcel.

ATTACHMENTS

Figure 1 – Topographic Location Map
Figure 2 – Sample Location Map
Table 1 – Summary of VOCs Detected in Soil
Table 2 – Summary of PAHs Detected in Soil
Table 3 – Summary of RCRA Metals Detected in Soil
Table 4 – Summary of VOCs Detected in Groundwater
Table 5 – Summary of VOCs Detected in Sub-Slab Vapor

Appendix 1 – Soil Boring Logs
Appendix 2 – Supplemental Investigation Laboratory Reports



USGS The National Map:
Data Refreshed August 2021
Buffalo Quad

LOCAL INITIATIVES SUPPORT CORPORATION

LiRo Engineers, Inc.
690 Delaware Avenue, Buffalo, New York

LIRO JOB NO: 21-216-2865

TOPOGRAPHIC LOCATION MAP

JEFFERSON AVENUE AND BEST STREET
BUFFALO, NEW YORK

SCALE: AS SHOWN	DATE: 11/2022	FIGURE: 1

V:\Private\21-216-2865 - LISC T.O.P. PHI & PHII\Design\BEST STREET SUPPLEMENTAL\Best Street Topo Map.ai

TABLE 1

Summary of VOCs Detected in Soil
Supplemental Phase II
Jefferson-Best Site, Buffalo, New York

TCL VOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Restricted Residential Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth (ftbg)	
			LB-13-0-1	LB-13-18-19
			10/24/2022	10/24/2022
			4-5	18-19
1,1,1-Trichloroethane (TCA)	680	100,000	0.21 J	ND
1,2,4-Trimethylbenzene	3,600	52,000	740 E	ND
1,2-Dichloroethane	20	3,100	ND	ND
1,3,5-Trimethylbenzene	8,400	52,000	480 E	ND
Acetone	50	100,000	ND	6.7 J
Benzene	60	4,800	1.5	ND
Cyclohexane	NS	NS	25	ND
Ethylbenzene	1,000	41,000	5.4	ND
Isopropylbenzene	NS	NS	11	ND
Methyl cyclohexane	NS	NS	110	ND
Methyl tert-Butyl Ether	930	100,000	ND	500
Naphthalene	12,000	100,000	36	ND
Toluene	700	100,000	8.2	ND
m,p-Xylenes	260	260	**320**	ND
n-Butylbenzene	12,000	100,000	16	ND
n-Propylbenzene	3,900	100,000	8.9	ND
p-Isopropyltoluene	NS	NS	26	ND
o-Xylene	260	260	**380**	ND
sec-Butylbenzene	11,000	100,000	22	ND
tert-Butylbenzene	5,900	100,000	4.1	ND

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

Concentration exceeds Unrestricted Use SCOs

BOLD - Concentration exceeds Restricted Residential SCOs

ND = Compound not detected above method detection limit

NS = No Standard

J = Compound detected below the quantitation limit

E = Concentration of analyte exceeds the range of the calibration curve and/or linear range of instrument.

TABLE 2

Summary of PAHs Detected in Soil
Supplemental Phase II
Jefferson-Best Site, Buffalo, New York

TCL SVOC	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Restricted Residential Soil Cleanup Objectives (SCOs)	Sample ID, Date Collect, and Depth (ftbg)									
			SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10
			10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
			0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
Acenaphthene	100,000	100,000	580	33 J	ND	210	420	540 J	26 J	300	ND	ND
Acenaphthylene	100,000	100,000	360	79 J	ND	62 J	87 J	260 J	43 J	170	ND	ND
Anthracene	100,000	100,000	1,400	140	ND	450	860	1,900	83 J	990	ND	46 J
Benz(a)anthracene	1,000	1,000	**3,500**	560	ND	910	**2,300**	**5,900**	270	**2,800**	110 J	170
Benzo(a)pyrene	1,000	1,000	**3,000**	470	ND	820	**2,400**	**5,600**	260	**2,500**	110 J	170 J
Benzo(b)fluoranthene	1,000	1,000	**4,000**	600	ND	1,000	**2,600**	**6,700**	310	**2,900**	140	240
Benzo(g,h,i)perylene	100,000	100,000	1,800	240	ND	450	1,200	3,400	140 J	1,400	64 J	110 J
Benzo(k)fluoranthene	800	3,900	1,400	220	ND	350	1,000	2,300	99 J	1,100	44 J	74 J
Chrysene	1,000	3,900	3,500	590	ND	900	2,500	**5,600**	250	2,400	120	180
Dibenz(a,h)anthracene	330	330	**460**	72 J	ND	110	270	**760**	31 J	310	ND	27 J
Fluoranthene	100,000	100,000	6,800	1,200	ND	2,500	5,000	15,000	610	5,900	210	300
Fluorene	30,000	100,000	810	53 J	ND	320	490	690 J	37 J	420	ND	ND
Indeno(1,2,3-cd)pyrene	500	500	**2,100**	290	ND	**540**	**1,400**	**4,200**	160	**1,700**	76 J	120 J
Phenanthrene	100,000	100,000	5,700	590	ND	2,200	4,400	7,300	320	3,700	110 J	160
Pyrene	100,000	100,000	5,400	910	ND	1,800	4,300	12,000	490	4,700	170	260

Notes:

All concentrations are reported in parts per billion (ppb or ug/kg)

Concentration exceeds Unrestricted Use SCOs

BOLD - Concentration exceeds Restricted Residential SCOs

ND = Compound not detected above method detection limit

J = Compound detected below the quantitation limit

TABLE 3

Summary of RCRA Metals Detected in Soil
Supplemental Phase II
Jefferson-Best Site, Buffalo, New York

RCRA Metals	Part 375-6.8 (a) Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs)	Part 375-6.8 (b) Restricted Use (Track 2) Restricted Residential Soil Cleanup Objectives (SCOs)	Sample ID, Date Collected, and Depth (ftbg)									
			SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10
			10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
			0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
Silver	2	180	0.500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	13	16	13.8	8.54	4.16	3.42	3.14	4.02	2.58	3.60	7.67	5.02
Barium	350	400	**1,620**	82.6	38.4	10.5	22.5	60.9	29.0	49.2	117	44.9
Cadmium	3	4	**10.0**	1.32	3.20	0.376 J	0.183 J	0.346 J	0.222 J	0.362 J	0.906	1.08
Chromium	30	180	**381**	19.5	57.6	19.1	21.2	12.3	5.59	8.58	18.1	21.8
Lead	63	400	**26,700**	252	251	16.0	29.7	34.1	10.8	14.8	**401**	51.9
Selenium	3.9	180	1.12 J	ND	ND	ND	ND	ND	ND	ND	0.127 J	ND
Mercury	0.18	0.81	**3.23**	**0.958**	ND	ND	ND	**11.4**	ND	ND	0.194	ND

Notes:

All concentrations are reported in parts per million (ppm or mg/kg)

Concentration exceeds Unrestricted Use SCOs

BOLD - Concentration exceeds Restricted Residential SCOs

ND = Compound not detected above method detection limit

J = Compound detected below the quantitation limit

TABLE 4

Summary of VOCs Detected in Groundwater
Supplemental Phase II
Jefferson-Best Site, Buffalo, New York

TCL VOC	Division of Water Technical and Operational Guidance Series (1.1.1) (TOGS) - Water Class GA	Sample ID and Date Collected			
		GW-LB-13	GW-LB-14	GW-LB-16	TRIP BLANK
		10/25/2022	10/25/2022	10/25/2022	10/25/2022
1,2,4-Trimethylbenzene	5	3.5	ND	ND	ND
1,2-Dichloroethane	0.6	0.40 J	ND	ND	ND
1,3,5-Trimethylbenzene	5	2.4 J	ND	ND	ND
2-Butanone (MEK)	50	4.2 J	ND	ND	ND
Acetone	50	6.7	3.9 J	**4.6 J**	ND
Benzene	1	**8.6**	0.61	0.73	ND
Cyclohexane	NS	0.79 J	0.29 J	0.37 J	ND
Methyl cyclohexane	NS	0.97 J	ND	ND	ND
Methyl tert-Butyl Ether	10	**110**	ND	ND	ND
Toluene	5	1.2 J	ND	0.83 J	ND
Trichloroethene (TCE)	5	ND	ND	**6.3**	ND
m,p-Xylenes	5	2.2 J	ND	ND	ND
o-Xylene	5	2.6	ND	ND	ND

Notes:

BOLD - Concentration exceeds TOGS Water Class GA Standard/Guidance Value

All concentrations are reported in parts per billion (ppb or ug/L)

ND = Compound not detected above method detection limit

NS = No Standard

J = Compound detected below the quantitation limit

TABLE 5

Summary of VOCs Detected in Sub-Slab Soil Vapor
Supplemental Phase II
Jefferson - Best Site
Buffalo, New York

VOLATILE ORGANICS IN AIR	Units	NYSDOH Matrix Sub-Slab Mitigation Threshold	Sample ID, Date Collected, and Location		Required Action
			SSV-01	SSV-02	
			10/18/2022	10/18/2022	
			SSV-01	SSV-02	
Dichlorodifluoromethane	µg/m^3	NC	ND	2.48	
1,3-Butadiene	µg/m^3	NC	18.7	ND	
Acetone	µg/m^3	NC	886	14.4	
Tertiary butyl Alcohol	µg/m^3	NC	ND	3.36	
Carbon disulfide	µg/m^3	NC	302	13.6	
2-Butanone	µg/m^3	NC	121	12.7	
Chloroform	µg/m^3	NC	ND	3.89	
n-Hexane	µg/m^3	NC	1530	0.948	
1,1,1-Trichloroethane	µg/m^3	1,000	ND	24.7	
Benzene	µg/m^3	NC	185	0.85	
Cyclohexane	µg/m^3	NC	5130	0.881	
Trichloroethene	µg/m^3	60	**88.1**	**449**	**Mitigate**
Heptane	µg/m^3	NC	1270	ND	
Toluene	µg/m^3	NC	212	2.31	
2-Hexanone	µg/m^3	NC	ND	3.41	
Tetrachloroethene	µg/m^3	1,000	ND	2.41	

Notes:

NYSDOH = New York State Department of Health

AGV = Air Guideline Value

µg/m3 - Micrograms per cubic meter

NC - No Criteria

ND - Compound not detected at the associated detection limit

Shaded/Bold results indicate required mitigation as per NYSDOH Guidance for evaluating vapor intrusion

APPENDIX 1
Soil Boring Logs

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Supplemental Phase II Investigation
CLIENT:	T.O.P. Enterprises
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

	CAS.	SAMPLER	TUBE
TYPE		4' Macros	
DIA.			
WT.			
FALL			

DATE	TIME	LEVEL	TYPE
			NA

BORING NO:	LB-13
SHEET:	1 of 1
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	October 24, 2022
DATE FINISHED:	October 24, 2022
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Steve Frank

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					4%	Brown	Dense	0-0.2' - Topsoil. Silt with little sand and gravel.	FILL	0 ppm Dry to Moist
4										
					100%	Black	Dense	4-6' - Gravel, Sand, and Silt, some red brick fragments		13.8 ppm Very Moist
8						Brown		6-8.3' - Silt, some fine sand and clay	SM	0 ppm Moist
12					100%	Brown	Dense	8.3-12' - Clay, little to some silt	CL	0 ppm wet @ 8'
16					100%	Gray	Dense	12-16' - Silt and fine sand	SM	0 ppm moist to wet
20					100%	Brown	Dense	16-20' - Clay, little to some silt and fine sand	CL	0.5 ppm moist
25								End of boring at 20'. Temporary well point installed.		
30										
35										

COMMENTS: Sample LB-13-0-1 collected from 4-5 ft. and sample LB-13-18-19 collected from 18-19 ft. for analysis of VOCs.

Soil was classified according to the Unified Soil Classification System (USCS).

PROJECT NO.: 21-216-2865

BORING NO.: LB-13

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Supplemental Phase II Investigation
CLIENT:	T.O.P. Enterprises
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

					CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		4' Macros	
			NA	DIA.			
				WT.			
				FALL			

BORING NO:	LB-14
SHEET:	1 of 1
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	October 24, 2022
DATE FINISHED:	October 24, 2022
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Steve Frank

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					75%	Brown	Dense	0-3.4' - Gravel, sand, and silt, some red brick fragments	FILL	0 ppm Moist
4										
					100%	Brown	Dense	3.4-11' - Silt and fine sand	SM	0 ppm Moist
8										
					100%	Brown	Dense			0 ppm Moist
12										
					100%	Brown	Dense	11-16' - Clay, some silt, trace gravel	CL	0 ppm Moist
16										
					100%	Brown	Dense	16-20' - fine Sand and silt	SM	0 ppm Wet
20										
								End of boring at 20'. Temporary well point installed.		
25										
30										
35										

COMMENTS:	PROJECT NO.: 21-216-2865
Soil was classified according to the Unified Soil Classification System (USCS)	BORING NO.: LB-14

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Supplemental Phase II Investigation
CLIENT:	T.O.P. Enterprises
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

BORING NO:	LB-15
SHEET:	1 of 1
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	October 24, 2022
DATE FINISHED:	October 24, 2022
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Steve Frank

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					50%	Dark Gray to Black	Dense	0-1' - Red brick fragments 1-4.5' - Sand and Gravel	FILL	0 ppm Moist
4										
8					100%	Brown	Dense	4.5-7.4' - fine Sand and Silt	SM	0 ppm Moist to Wet
12					100%	Brown	Dense	7.4-12' - Silt, trace to little fine sand		0 ppm Moist to Wet
16					100%	Brown	Dense	12-20' - Silt with trace clay	ML	0 ppm Moist
20					100%	Brown	Stiff			0 ppm Moist
25								End of boring at 20'.		
30										
35										

COMMENTS:

Soil was classified according to the Unified Soil Classification System (USCS)

PROJECT NO.: 21-216-2865

BORING NO.: LB-15

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Supplemental Phase II Investigation
CLIENT:	T.O.P. Enterprises
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

BORING NO:	LB-16
SHEET:	1 of 1
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	October 24, 2022
DATE FINISHED:	October 24, 2022
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Steve Frank

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	TUBE
			NA	DIA.		4' Macros	
				WT.			
				FALL			

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					33%	Black and Gray	Dense	0-4' - Asphalt and Gravel	FILL	0 ppm Dry
4										
8					45%	Gray and Brown	Dense	4-8.8' - Gravel with silt, and fine to medium sand		0 ppm Moist
12					100%	Brown	Dense			0 ppm Moist to Wet
16					100%	Brown	Dense	8.8-20' - Silt and fine Sand -alternating silt and fine sand layers	SM	0 ppm Moist to Wet
20					100%	Brown	Dense			0 ppm Moist to Wet
25								Bottom of boring at 20'. Temporary well point installed.		
30										
35										

COMMENTS:

Soil was classified according to the Unified Soil Classification System (USCS)

PROJECT NO.: 21-216-2865

BORING NO.: LB-16

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	Supplemental Phase II Investigation
CLIENT:	T.O.P. Enterprises
BORING CONTRACTOR:	SJB Services, Inc.
GROUNDWATER:	NA

					CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		4' Macros	
			NA	DIA.			
				WT.			
				FALL			

BORING NO:	LB-17
SHEET:	1 of 1
JOB NO.:	21-216-2865
LOCATION:	As per plan
GROUND ELEVATION:	NA
DATE STARTED:	October 24, 2022
DATE FINISHED:	October 24, 2022
DRILLER:	Art Koske
GEOLOGIST:	Jon Williams
REVIEWED BY:	Steve Frank

DEPTH FEET	SAMPLE STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	USCS	REMARKS
1					63%	Brown	Dense	0-0.5' - Asphalt and gravel subbase	FILL	0 ppm Moist
4								0.5-4' - Silt, trace to some fine sand	ML	
8					100%	Brown	Dense	4-16' - Clay with little silt -occasional fine sand seam	CL	0 ppm Moist
12					100%	Brown	Dense			0 ppm Moist to Wet
16					100%	Brown	Dense	12-16' - fine Sand with little to some silt	SM	0 ppm Wet
20					100%	Brown	Dense	16-20' - Silt -occasional fine sand seam	ML	0 ppm Wet
25								Bottom of boring at 20'.		
30										
35										

COMMENTS:	PROJECT NO.: 21-216-2865
Soil was classified according to the Unified Soil Classification System (USCS)	BORING NO.: LB-17

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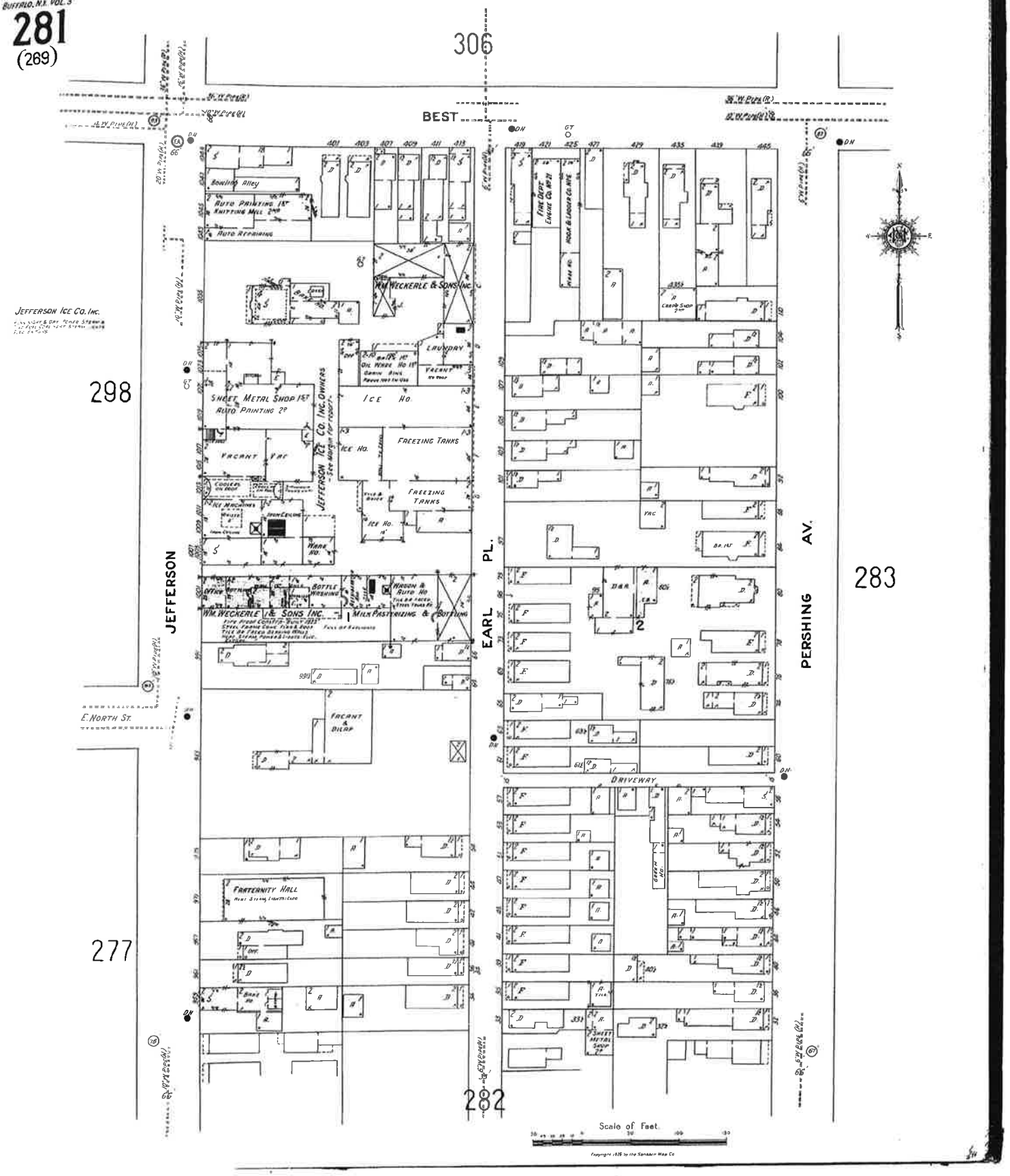

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