NYSDEC. The contents of this RAWP and NYSDEC approval of this RAWP should not be construed as an approval for this purpose.

Trucks entering the site with imported soils will be secured with tight fitting covers.

5.4.9 Stormwater Pollution Prevention

A SWPPP is not required because the site is less than 1 acre in size. Silt fencing or hay bales will be installed around the perimeter of the remedial construction area, as needed. Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering. Erosion and sediment control measures identified in the RAWP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to the sewer system.

5.4.10 Contingency Plan

If USTs or other previously unidentified contaminant sources are found during on-site remedial excavation or development-related construction, sampling will be performed on product, if encountered, and surrounding subsurface materials (e.g., soil, stone, etc.). Chemical analyses will be for full scan parameters (Part 375 TCL VOCs, SVOCs, PCBs, pesticides, TAL metals, 1,4-dioxane and PFAS). Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during ground-intrusive work will be promptly communicated by phone to the NYSDEC Project Manager. These findings will also be detailed in the daily reports and the subsequent monthly BCP progress report.

5.4.11 Community Air Monitoring Plan

Community air monitoring will be conducted in compliance with the NYSDOH Generic CAMP outlined below. Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report.

The CAMP will include real-time monitoring for VOCs and particulates at the downwind perimeter of each designated work area when ground-intrusive work is in progress. Continuous monitoring will be required for all ground-intrusive work. Ground-intrusive work includes, but is not limited

to, soil/fill excavation and handling and utility trenching. Periodic monitoring for VOCs may be required during non-intrusive work such as the collection of soil samples. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location and taking a reading prior to leaving a sample location.

CAMP monitoring of total VOC levels will be conducted using PIDs, and monitoring for particulates will be conducted using particulate sensors equipped with filters that can detect airborne particulates less than 10 microns in diameter (PM10). Monitoring for particulates and odors will be conducted during ground-intrusive work by a Langan field representative under the supervision of the RE. The work zone is defined as the general area in which machinery is operating in support of remediation. A portable PID will be used to monitor the work zone and for periodic monitoring of total VOC levels during work such as soil sampling. The site perimeter will be visually monitored for fugitive dust emissions.

The following actions will be taken based on total VOC measurements:

- If total VOC levels exceed 5 ppm above background for the 15-minute average at the perimeter, work will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work will resume with continued monitoring.
- If total VOC levels at the downwind perimeter of the work zone persist at levels in excess of 5 ppm above background but less than 25 ppm, work will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work will resume provided that the total VOC level 200 feet downwind of the hot zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less but in no case less than 20 feet, is below 5 ppm above background for the 15-minute average.
- If the total VOC level is above 25 ppm at the perimeter of the hot zone, work will be shut down.

The following actions will be taken based on PM10 measurements and visual dust observations:

- If the downwind PM10 level is 100 µg/m³ greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression must be employed. Work may continue with dust suppression techniques provided that downwind PM10 levels do not exceed 150 µg/m³ above the background level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM10 levels are greater than 150 µg/m³ above the background level, work must be stopped and a re-

evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

Sustained concentrations of VOCs or PM10 will be reported to the NYSDEC and NYSDOH Project Managers and included in the daily report. In addition, a map showing the location of the downwind and upwind CAMP stations will be included in the daily report.

5.4.12 Odor, Dust and Nuisance Control Plan

Dust, odor, and nuisance control will be accomplished by the remediation contractor as described in this section. The FER will include the following certification by the RE: "I certify that ground-intrusive work during remediation and development-related construction was conducted in accordance with dust and odor suppression methodology defined in the RAWP."

5.4.12.1 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used as needed will include application of foam suppressants or tarps over the odor or VOC source areas, if encountered. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of site perimeter odor monitoring, including notifying the contractor and NYSDEC of exceedances, will be the responsibility of the Volunteers' RE, who is responsible for certifying the FER. Application of odor controls is the responsibility of the Remedial Contractor.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, procedures may include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (a) direct load-out of soils to trucks for off-site disposal; (b) use of chemical odorants in spray or misting systems; and, (b) use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

5.4.12.2 Dust Control Plan

A dust suppression plan that addresses dust management during ground-intrusive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated water distribution system or on-site water truck for road wetting. Where required, the truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles
- Gravel will be used on roadways to provide a clean and dust-free road surface
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling

5.4.12.3 Other Nuisances

A plan for rodent control will be developed and used by the remediation contractor during site preparation (including clearing and grubbing) and during remedial work.

A plan for noise control will be developed and used by the remediation contractor during site preparation and remedial work and will conform, at a minimum, to the NYCDEP noise control standards.

5.5 Remedial Action: In-Situ Groundwater Treatment

A remedial design investigation was completed in May 2019 that included soil and groundwater sampling for use in a soil oxidant demand (SOD) test. Based on sample results, ISCO and oxygen release compound were selected to provide rapid and sustained degradation of the targeted petroleum-related VOCs and SVOCs. Soil below the groundwater table and groundwater will be treated with one round of ISCO (PersulfOx®) followed by a second round of combined ISCO and oxygen release compound (ORC Advanced®). ISCO and oxygen release compound will be applied directly to the petroleum-impacted soil and groundwater via about 160 temporary injection points or direct mixing with an excavator in the northern half of the site. The approximate treatment area is shown on Figure 12. The treatment depth will target the approximate depth of saturated zone petroleum impacts (assumed to be about 11 to 20 feet bgs on Lot 3 and 18 to 28 feet bgs on Lots 12 and 20).

A complete description of the chemical oxidant application, including quantities and specific chemical information, is provided in the remedial design memorandum, provided as Appendix H. Langan will oversee the application of the oxidant and document operations. Follow-up oxidant application may be required, depending on the groundwater monitoring results.

After completion of the ISCO treatment, groundwater samples will be collected from select monitoring wells within the groundwater treatment area, and analyzed for petroleum-related VOCs (VOCs listed in CP-51 Table 2). Groundwater samples will be collected prior to remedial injections to serve as a baseline for performance monitoring. Groundwater monitoring activities to assess the performance of the remedy, or natural attenuation following the removal of contaminant sources, will continue, as determined by NYSDOH and NYSDEC, until residual groundwater concentrations are found to be below NYSDEC standards or have become asymptotic over an extended period. Monitoring will continue until permission to discontinue is granted in writing by NYSDEC and NYSDOH. Monitoring activities will be outlined in the Monitoring Plan of the SMP. It is anticipated that, following remediation, a minimum of eight quarterly monitoring events will be performed.



6.0 CONTAMINATION TO REMAIN ON-SITE

Exposure to residual contaminated soils will be prevented by an engineered, composite cover system that will be built on the site. The FER will report the results of post-excavation documentation soil samples in tabular and map form. The FER will also include surveyed limits of excavation and location of all final documentation samples.

Since residual contaminated soil will exist beneath the site after the remedy is complete, ECs and ICs are required to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a site specific SMP that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the site) will have one primary EC system; a composite cover system will be comprised of at least 2 feet of clean soil that meets the lower of PGW or RURR SCOs in areas not covered by a concrete building slab.

The FER will report residual contamination on the site in tabular and map form. This will include presentation of exceedances of both Track 1 and Track 4 sites.

7.0 ENGINEERING CONTROLS

Following completion of the remedy, it is anticipated that the site will meet Track 4 SCOs as previously defined. Long-term engineering controls will be required as part of the remedial action. Exposure to residual contaminated soils will be prevented by an engineered, composite cover system that will be built on the site. An engineered composite cap consisting of a building foundation, sidewalks, asphalt cover, or at least 2 feet of clean soil that meets the lower of PGW or RURR SCOs will be installed. A vapor barrier/waterproofing membrane will be installed as part of the composite cap, and also will serve to mitigate potential soil vapor intrusion into the planned building. A minimum 20-mil-thick vapor barrier membrane will be installed under the slab of the entire proposed building and along all foundation sidewalls to grade. The specifications for the product will be provided to the NYSDEC for review and approval.

As-built waterproofing/vapor barrier plans prepared by the Contractor responsible for installing and inspecting the waterproofing/vapor barrier system will be submitted with the FER. The FER will include photographs of the installation process, a copy of a PE/RA-certified letter (on company letterhead) from the Contractor responsible for installation and field inspections, and a copy of the manufacturer's certificate of warranty. A PE will certify that the vapor barrier membrane system was installed per manufacturer's instructions

The composite cover system will be a permanent EC. A vapor barrier/waterproofing membrane will be installed as part of the composite cover. The composite cover will be inspected and its performance certified at specified intervals as required by this RAWP and the SMP. The SMP (to be included in the FER) will outline maintenance requirements and the procedures to be followed in the event that the composite cover system with underlying vapor barrier membrane system is disturbed after the remedial action is complete. A diagram showing the aerial distribution and design detail for each cover type is shown in Figure 13.

A Soil Materials Management Plan (SMMP) will be included in the SMP and will outline the procedures to be followed in the event that the composite cover system and underlying residual contamination are disturbed after the Remedial Action is complete.

8.0 INSTITUTIONAL CONTROLS

After the remedy is complete, the site will have residual contamination remaining in place. ECs for the residual contamination have been incorporated into the remedy to render the overall site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an EE and a SMP.

All as-built drawings, diagrams, calculation and manufacturer documentation for treatment systems will be presented in the FER.

A site-specific EE will be recorded with Bronx County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the EE and the grantor's successors and assigns adhere to all ECs and ICs placed on this site by this NYSDEC-approved remedy. ICs provide restrictions on site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. The SMP describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the EE. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the EE and grantor's successors and assigns.

8.1 Environmental Easement

An EE, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination above UU SCOs is left on-site after the Remedial Action is complete. If the site will have residual contamination after completion of all Remedial Actions, then an EE is required. As part of this remedy, an EE approved by NYSDEC will be filed and recorded with the Bronx County Clerk. The EE will be submitted as part of the FER.

The EE renders the site a Controlled Property. The EE must be recorded with the Bronx County Clerk or City Register before the Certificate of Completion can be issued by NYSDEC. A series of ICs is required under this remedy to implement, maintain and monitor these EC systems, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the site to restricted-residential, industrial and commercial use(s) only. These ICs are requirements or restrictions placed on the site that are listed in, and required by, the EE. ICs can, generally, be subdivided between controls that support ECs, and those that place general restrictions on site usage or other requirements. ICs in both of these groups are closely integrated with the SMP, which provides all of the methods and procedures to be followed to comply with this remedy.

Under the Track 4 scenario, the EC will be in the form of a long-term composite cover (vapor barrier/waterproofing membrane, concrete building foundation, sidewalks, asphalt cover and/or two feet of imported material that meets the lower of PGW or RURR SCOs) and vapor barrier. The ICs that support the ECs are:

- On-site environmental monitoring devices, including but not limited to, groundwater monitor wells, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP;
- Compliance with the EE by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required.
- All ECs must be operated and maintained as specified in the SMP.
- All ECs on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP. A composite cover system consisting of concrete building slabs must be inspected, certified and maintained as required in the SMP;
- Environmental or public health monitoring must be performed as defined in the SMP.
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP.
- ECs may not be discontinued without an amendment or extinguishment of the EE. The
 EE may be extinguished only by release by the Commissioner of NYSDEC, or the
 Commissioner's designee, and filed with the office of the recording officer for the county
 or counties where the Property is situated in the manner prescribed by Article 9 of the
 Real Property Law.

Adherence to these ICs for the site is mandated by the EE and will be implemented under the SMP (discussed in the next section).

The Controlled Property (site) will also have a series of ICs in the form of site restrictions and requirements. The site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming in residual site soil on the Controlled Property are prohibited.
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose as approved by NYSDOH and NYSDEC.
- All future activities on the Controlled Property that will disturb residual contaminated material, if present, are prohibited unless they are conducted in accordance with the soil management provisions in the SMP.

- The Controlled Property may be used for restricted-residential, commercial and industrial use only (as allowed by zoning), provided the long-term ECs and ICs included in the SMP are employed.
- The Controlled Property may not be used for a higher level of use, such as unrestricted or residential (single family) use without an amendment or extinguishment of this EE.
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This statement must be certified by an expert that the NYSDEC finds acceptable.

8.2 Site Management Plan

The SMP in the FER will include a monitoring plan for groundwater at the down-gradient site perimeter to evaluate site -wide performance of the remedy. Appropriately placed groundwater monitor wells will also be installed immediately down-gradient of all VOC remediation areas for the purpose of evaluation of the effectiveness of the remedy that is implemented.

Site Management is the last phase of remediation and begins with the approval of the FER and issuance of the Certificate of Completion for the Remedial Action. The SMP is submitted as part of the FER but will be written in a manner that allows its use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all Site Management responsibilities defined in the EE and the SMP are performed.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all ECs and ICs; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of site information to NYSDEC; and (5) defining criteria for termination of treatment system operation, if applicable.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of IC/ECs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

Site management, reporting, and IC/EC certification will be scheduled on a certification period basis. The certification period will be annual, unless otherwise approved by NYSDEC. The SMP will be based on a calendar year and will be due for submission to NYSDEC by three months following the end of the reporting period.

No exclusions for handling of remaining contaminated soil will be provided in the SMP. All handling of remaining contaminated material will be subject to provisions contained in the SMP.

9.0 FINAL ENGINEERING REPORT

A FER will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP. The FER provides documentation that the remedial work required under this RAWP has been completed and performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The FER will include as-built drawings for all constructed elements, manufacturer documentation for treatment systems, certifications, manifests, bills of lading, and the complete Site Management Plan (formerly the Operation and Maintenance Plan). The FER will provide a description of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling and chemical analysis performed as part of the Remedial Action. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the SMP and EE. This determination will be made by NYSDEC in the context of the FER review.

The FER will include written and photographic documentation of all remedial work performed under this remedy.

The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the site after the Remedial Action will be included in the FER.

The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.

BCP Site No. C203111

The Final Engineering Report will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

Before approval of a FER and issuance of a Certificate of Completion, all project reports must be submitted in digital form on electronic media (PDF).



9.1 Certifications

The following certification will appear in front of the FER Executive Summary. The certification will be signed by the RE, Jason J. Hayes, who is a NYS-licensed Professional Engineer. The certification will be appropriately signed and stamped. The certification will include the following statements:

I, ______, am currently a registered professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the Gerard Avenue and East 146th Street Site

I certify that the site description presented in this Final Engineering Report is identical to the site descriptions presented in the Environmental Easement, Site Management Plan, Brownfield Cleanup Agreement for the Gerard Avenue and East 146th Street site and related amendments.

I certify that the Remedial Action Work Plan dated [month day year] and Stipulations [if any] in a letter dated [month day year] and approved by the NYSDEC were implemented and that all requirements in those documents have been substantively complied with.

I certify that the remedial activities were observed by Langan personnel under my supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved.

I certify that the export of contaminated soil, fill, water, or other material from the property was performed in accordance with the Remedial Action Work Plan, and were taken to facilities licensed to accept this material in full compliance with all federal, state, and local laws.

I certify that import of soils from off-site, including source approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan.

I certify that ground-intrusive work during remediation and development-related construction was conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan.

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

It is a violation of Article 130 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 130, New York State Education Law.



10.0 SCHEDULE

Remedial activities are anticipated to take about 4 to 6 months. Within 90 days of completion of all remedial activities at the site, an FER will be submitted to NYSDEC as detailed in Section 9.0. The project is anticipated to start in April 2020. A Gantt chart showing a detailed project schedule is included in Appendix G.



11.0 REFERENCES

- 1. AEI, Phase II Subsurface Investigation for 445 Gerard Avenue, dated March 7, 2012
- 2. AEI, Phase I Environmental Site Assessment for 445 Gerard Avenue, dated April 16, 2012
- 3. GEI, Phase I Environmental Site Assessment for 417 Gerard Avenue, dated June 2015
- 4. AEI, Phase I Environmental Site Assessment for 440 Exterior Street, dated August 28, 2015
- 5. AEI, Limited Phase II Subsurface Investigation, dated October 12, 2015
- 6. AEI, Phase I Environmental Site Assessment, dated August 16, 2016
- 7. Langan, Subsurface Investigation Letter Report, dated March 2, 2018
- 8. Langan, Draft Geotechnical Engineering Report, dated September 24, 2018
- 9. Langan, Phase I Environmental Site Assessment for 404 Exterior Street, dated April 3, 2019
- 10. Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, DPC., Remedial Investigation Report, dated August 2019.
- 11. New York State Department of Health, Final Guidance for the Evaluation of Soil Vapor Intrusion in the State of New York, dated October 2006.
- 12. New York State Department of Environmental Conservation, Division of Environmental Remediation, Draft Brownfield Cleanup Program Guide, dated May 2004.
- 13. New York State Department of Environmental Conservation, Division of Environmental Remediation, Technical and Administrative Guidance Memorandum No. 4031 Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Waste Sites, dated October 27, 1989.
- 14. New York State Department of Environmental Conservation, Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 3, 2010; effective June 18, 2010.
- 15. New York State Department of Environmental Conservation, Part 375 of Title 6 of the New York Compilation of Codes, Rules, and Regulations, Effective December 14, 2006.
- 16. New York State Division of Water Technical and Operational Guidance Series (TOGS) (1.1.1) dated June 1998.
- 17. New York State Division of Water Technical and Operational Guidance Series (TOGS) 5.1.8 New York State Stormwater Management Design Manual, dated June 2008.
- 18. United States Environmental Protection Agency, Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, "EPA/540/S-95/504, April 1996.

19. United States Census Bureau, July 2018 Census Data, dated 2018.





Table 1 Remedial Action Work Plan Track 1 Soil Cleanup Objectives

Gerard Avenue and East 146th Street Bronx, New York BCP Site No. C203111 Langan Project Number. 170487001

1,1,1-Trichloroethane 0.68 1,1-Dichloroethane 0.27 1,1-Dichloroethylene 0.33 1,2-Dichlorobenzene 1.1 1,2-Dichloroethane 0.02 cis-1,2-Dichloroethene 0.02 trans-1,2-Dichloroethene 0.25 1,3-Dichlorobenzene 0.19 1,4-Dichlorobenzene 1.8 1,4-Dioxane 0.1 2-Butanone 0.12 Acetone 0.05 Benzene 0.06 Carbon tetrachloride 0.76 Chloroform 0.37 Ethyl Benzene 1 Hexachlorobenzene 0.33 Methyl tert-butyl ether (MTBE) 0.93 Methylene chloride 0.05 n-Propylbenzene 3.9 sec-Butylbenzene 11 tert-Butylbenzene 1.3 Tetrachloroethylene 1.3 Toluene 0.7 Trichloroethylene 0.47 1,2,4-Trimethylbenzene 8.4 Vinyl Chloride 0.02	VOCS (mg/kg)	
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Selenium 3.9		+
Silver 2	Silver	2
Zinc 109		1

20
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100
1
1
1
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0.8
1
0.33
100
30
0.5
0.33
100
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7
0.005
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0.014 0.042
0.042
0.1

Notes:

- 1. SCO = Soil Cleanup Objective
- 2. SVOC = semivolatile organic compound
- 3. VOC = volatile organic compound
- 4. PCB = polychlorinated biphenyl
- 5. mg/kg = milligram per kilogram
- 6. SCO values are the lower of Protection of Groundwater and Unrestricted Use guidance values.

Table 2 Remedial Action Work Plan Track 4 Soil Cleanup Objectives

Gerard Avenue and East 146th Street Bronx, New York BCP Site No. C203111 Langan Project Number. 170487001

NO.00 / // //	
VOCS (mg/kg)	0.00
1,1,1-Trichloroethane	0.68
1,1-Dichloroethane	0.27
1,1-Dichloroethene	0.33
1,2,4-Trimethylbenzene	3.6
1,2-Dichlorobenzene	1.1
1,2-Dichloroethane	0.02
1,3,5-Trimethylbenzene (Mesitylene)	8.4
1,3-Dichlorobenzene	2.4
1,4-Dichlorobenzene	1.8
1,4-Dioxane (P-Dioxane)	0.1
Acetone	0.05
Benzene	0.06
Carbon Tetrachloride	0.76
Chlorobenzene	1.1
Chloroform	0.37
Cis-1,2-Dichloroethene	0.25
Ethylbenzene	1
Methyl Ethyl Ketone (2-Butanone)	0.12
Methylene Chloride	0.05
Naphthalene	12
n-Butylbenzene	12
n-Propylbenzene	3.9
Sec-Butylbenzene	11
T-Butylbenzene	5.9
Tert-Butyl Methyl Ether	0.93
Tetrachloroethene (PCE)	1.3
Toluene	0.7
Total Xylenes	1.6
Trans-1,2-Dichloroethene	0.19
Trichloroethene (TCE)	0.47
Vinyl Chloride	0.02
SVOCS (mg/kg)	3.32
1,2-Dichlorobenzene	1.1
1,3-Dichlorobenzene	2.4
1,4-Dichlorobenzene	1.8
1,4-Dioxane (P-Dioxane)	0.1
2-Methylphenol (o-Cresol)	0.33
Acenaphthene	98
Acenaphthylene	100
Anthracene	100
Benzo(a)Anthracene	1
Benzo(a)Pyrene	1
Benzo(b)Fluoranthene	1
Benzo(g,h,i)Perylene	100
Benzo(k)Fluoranthene	1
Chrysene	1
Dibenz(a,h)Anthracene	0.33
Dibenzofuran Fluoranthene	14 100
Fluorene	100
Hexachlorobenzene	0.33
Indeno(1,2,3-c,d)Pyrene	0.5
Naphthalene	12
Pentachlorophenol	0.8
Discounting	
Phenanthrene	100
Phenanthrene Phenol Pyrene	0.33 100

Pesticides (mg/kg)					
4,4'-DDD	2.6				
, 4,4'-DDE	1.8				
4,4'-DDT	1.7				
Aldrin	0.019				
Alpha BHC (Alpha Hexachlorocyclohexane)	0.02				
Alpha Chlordane	0.91				
Alpha Endosulfan	4.8				
Beta Bhc (Beta Hexachlorocyclohexane)	0.072				
Beta Endosulfan	4.8				
Delta Bhc (Delta Hexachlorocyclohexane)	0.25				
Dieldrin ,	0.039				
Endosulfan Sulfate	4.8				
Endrin	0.06				
Gamma Bhc (Lindane)	0.1				
Heptachlor	0.38				
Herbicides (mg/kg)					
Silvex (2,4,5-Tp)	3.8				
Polychlorinated Biphenyls (mg/kg)					
Total PCBs	1				
Inorganics (mg/kg)					
Arsenic	16				
Barium	350				
Beryllium	14				
Cadmium	2.5				
Chromium, Hexavalent	19				
Chromium, Trivalent	36				
Copper	270				
Cyanide	27				
Lead	400				
Manganese	2,000				
Mercury	0.73				
Nickel	130				
Selenium	4				
Silver	8.3				
Zinc	2,200				

Notes:

- 1. SCO = Soil Cleanup Objective
- 2. SVOC = semivolatile organic compound
- 3. VOC = volatile organic compound
- 4. PCB = polychlorinated biphenyl
- 5. mg/kg = milligram per kilogram
- 6. SCO values are the lower of Protection of Groundwater and Restricted Use Restricted-Residential Use guidance values.

Track 1 Remedial Cost Estimate Gerard Avenue and East 146th Street

New York, New York Langan Project Number. 170487001 BCP Site No. C203111

Item	Description of Environmental Item		Quantity Premium Unit Price		Init Price	Estimated Premium
No. A - REM	EDIAL ACTION CONTRACTOR FEES					
A-1	Abatement: - Accounts for abatment of asbestos-contaning materials, lead based paint, and other universal waste and hazardous wastes; and air monitoring during abatement activities	-		Allowance		\$300,000
A-2	In-situ Groundwater Treatment - Accounts for the mobilization of the remediation contractor, installation of injection points, application of chemicals, chemical product costs, and implementation		-	Allowance		\$1,000,000
A-3	<u>Demolition</u> - Accounts for demolition of existing building		=	Allowance		\$945,000
A-4	Remediation Facilities. Equipment. Mobilization. Demobilization. Permits. and Site Maintenance Remediation and decontamination facilities include trailer, truck cleaning facilities, etc.		-	- Allowance		\$100,000
A-5	Support of Excavation (SOE) - Includes installation of a secant-pile wall along the south and west perimeter of Lots 3 and 20, respectively. The secant-pile wall will be installed bedrock, which is at approximately 75 feet below grade surface (bgs). 109 piles will be required to construct the secant-pile wall.	9,000	LF	\$350	per LF	\$3,200,000
A-6	Support of Excavation (SOE) - Includes installation of a soil-mix wall along the perimeter of Lots 3, 12, and 20. The soil-mix wall will be installed bedrock, which is at approximately 75 feet below grade surface (bgs). 455 piles will be required to construct the soil-mix wall.	35,000	LF	\$300	per LF	\$10,500,000
A-7	Management and Handling of Excavated Materials- Accounts for excavation of material containing concentrations exceeding Unrestricted Use Soil Cleanup Objectives.	33,000	CY	\$37	per CY	\$1,221,000
A-8	Transport and Disposal of Historic Fill that Exceeds Unrestriced Use Soil Cleanup Objectives Includes transport vehicles and disposal of material at a permitted facility.	49,500	Tons	\$57	per Ton	\$2,821,500
A-9	<u>Transport and Disposal of Hazardous Lead-Impacted Historic Fill Material</u> -Includes transport vehicles and disposal of a hazardous lead hotspot in Lot 3.	10	Tons	\$125	per Ton	\$1,250
A-10	Aboveground/Underground Storage Tank (AST/UST) Removal- Cleaning, removal, and disposal of three oil-water separators, four ASTs, and four suspect USTs across the three lots.	11	Tanks	\$20,000	per Tank	\$220,000
A-11	<u>Dewatering/Fluid Treatment</u> - Accounts for design and installation and for the fees to operate and maintain the dewatering and treatment system for 4 months.	4	Months	\$70,000	per Month	\$280,000
A-12	<u>Dust. Odor and Vapor Control</u> - Includes odor, dust, and organic vapor control during remediation of the site. Assumes control measures will include, but not be limited to application of odor suppressant, foam or water.	6	Months	\$20,000	per Month	\$120,000
A-13	Backfill - Import and placement of clean fill material to bring hotspots to development grade. An additional 10% of material is included to account for compaction.	21,000	CY	\$30	CY	\$630,000
			REMEDIAL ACTION	CONTRACTOR FE	ES SUBTOTAL	\$21,339,000
B - ENG	INEERING FEES			T		T
B-1	Waste Characterization		-	Allowance		\$60,000
B-2	Engineering Support, Construction Administration, and Agency Coordination (During Remediation)	6	Months	\$15,000	per Month	\$90,000
B-3	Community Air Monitoring - This fee includes equipment rental fees associated with implementation of CAMP, which will be performed during ground-intrusive work including excavation and backfill, the presence of an on-site engineer to observe and document the site remediation, remediation health and safety including purchase and maintenance of appropriate personal protective equipment (PPE), and daily field reporting to the NYSDEC.	6	Months	\$40,000	per Month	\$240,000
B-4	Engineering Special Inspection of Support of Excavation	6	Months	\$35,000	per Month	\$210,000
B-5	Post-Remediation Groundwater Treatment - This fee includes installation of post-remediation groundwater monitoring wells and quarterly groundwater monitoring and reporting for two years after product application has been completed.	-		Allowance		\$150,000
B-6	<u>Documentation Sampling</u> - To confirm source material removal (assumes analysis for VOCs, SVOCs, PCBs, pesticides, cyanide and metals including hexavalent and trivalent chromium for each sample).	51	Samples	\$1,200	per Sample	\$62,000
B-7	Regulatory Agency Required Reporting - Remedial Design, Closure Reporting (Final Engineering Report)	- Allowance			\$100,000	
				ENGINEERING FE	ES SUBTOTAL	\$912,000
		GC, CM Fee,	Insurance, Contingency (1	6.8% of Contracto	r Fee Subtotal)	\$3,585,000
Total Estimated Fee						\$25,836,000
ESTIMATED REMEDIATION FEE - ALTERNATIVE I						\$25.8 MM

- General Assumptions and Conditions:

 1. The density used for conversion from cubic yards to tons was 1.5 tons per cubic yard.
- 2. Excavation depths were estimated using Remedial Investigation soil sample results, field observations, and observed fill depths. Assumes 25 feet of excavation across Lots 1, 3, 12, and 20.
- 3. This estimate has been prepared for the purposes of comparing potential remedial alternatives. The information in this fee estimate is based on the available information regarding the site investigation and the anticipated scope of the remedial alternative. Changes in fee elements are likely to occur as a result of new information and data collected during the engineering design of the remedial alternative. This fee estimate is expected to be within -30% to +50% of the actu fee. Utilization of this fee estimate information beyond the stated purpose is not recommended. Langan is not licensed to provide financial or legal consulting services; as such, this fee estimate information is not intended to be utilized for complying with financial reporting requirements associated with liability services.
- 4. A six month period is assumed for remediation and soil handling.
- 5. VOC = volatile organic compound; SVOC = semivolatile organic compound; PCBs = polychlorinated biphenyls

A-2 - The cost assumes an allowance for treatment of groundwater impacts across the site and off-site through implementation of in-situ chemical oxidation (ISCO). The proposed treatment includes injections of a remedial technology (e.g. Oxygen Release Compound [ORC®] or PlumeStop®) into the contaminated soil depth interval (10 to 20 feet bgs on Lot 3 and 20 to 30 feet bgs on Lot 12) prior to site-wide excavation.

- A-7 The unit rate provided reflects OSHA-certified construction labor.
- $\hbox{A-7-The site footprint is about } 38,100 \ \text{square feet}. \ \hbox{Assumes excacation to 25 feet bgs across Lots 1, 3, 12, and 20.}$ A-8 and A-9 - The unit rate provided reflects average disposal facility fees and may vary depending on time of year and facility.
- A-9 Hazardous lead-impacted soil was identified during the RI at the RB06 location on Lot 3 from 0 to 2 feet below grade surface (bgs). The volume assumed a 5-foot wide by 5-foot long, by 5-foot deep hotspot excavation.
- A-11 The fee is associated with treating the effluent before discharge into the sewer. Estimate is based on dewatering for 4 months of on-site operation. The fee includes mobilization, demobilization, freight, and equipment rental. Based o the depth-to-groundwater measurements recorded during the Remedial Investigation, dewatering will be necessary to accommodate a portion of the work associated with remedial excavation and SOE installation.
- A-12 Fee estimate includes application of dust suppression methods to open excavations and soil loaded into trucks. Labor provided by excavation, handling, and disposal contractor provided above; this line item estimate reflects material,
- A-13 Backfill placement and compaction assumes soil handling and management fees for the New York City area. Backfill will not contain concentrations of compounds above Track 1 Unrestricted Use Soil Cleanup Objectives (6NYCRR-Part 375-6.8(a)). The quantity of soil has been increased by 10% to account for compaction.

Engineering Fee Assumptions

B-3 - The assumed duration of the community air monitoring program (CAMP) is six months to accommodate the estimated remediation timeline. CAMP fees include full-time equipment rental to facilitate perimeter dust and VOC monitoring. B-6 - The fee assumes collection of 51 post-excavation confirmation soil samples including quality assurance/quality control samples. Sample analysis will be for Part 375 VOCs, SVOCs, PCBs, pesticides, cyanide, and metals (including hexavalent and trivalent chromium). The fee includes subcontracted laboratory analysis by a NYSDOH ELAP-certified laboratory and ASP Category B deliverables.

Track 4 Remedial Cost Estimate Gerard Avenue and East 146th Street

New York, New York Langan Project Number. 170487001 BCP Site No. C203111

Item No.	Description of Environmental Item	Quantity Premium Unit Price			Estimated Premium	
4 - REIV	IEDIAL ACTION CONTRACTOR FEES					
A-1	Abatement - Accounts for abatment of asbestos-contaning materials, lead based paint, and other universal waste and hazardou wastes; and air monitoring during abatement activities			Allowa	nce	\$300,000
A-2	In-situ Groundwater Treatment - Accounts for the mobilization of the remediation contractor, installation of injection points, application of chemicals, chemical product costs, and implementation	- All		Allowa	nce	\$1,000,000
A-3	<u>Demolition</u> - Accounts for demolition of existing building		-	Allowa	nce	\$945,000
A-4	Remediation Facilities. Equipment. Mobilization. Demobilization. Permits. and Site Maintenance Remediation and decontamination facilities include trailer, truck cleaning facilities, etc.		_	Allowa	nce	\$100,000
A-5	Support of Excavation (SOE) - Includes installation of a soldier pile and lagging to 5 feet below surface grade on Lots 1 and 3 and 15 feet on Lots 12 and 20.		_	Allowa	nce	\$2,300,000
A-6	Management and Handling of Excavated Materials- Accounts for excavation of material containing concentrations exceeding Track 4 Soil Cleanup Objectives and/or to development depth.	13,000	CY	\$37	per CY	\$481,000
A-7	<u>Transport and Disposal of Historic Fill for a Track 4 SCOs</u> - Includes transport vehicles and disposal of material at a permitted facility.	19,500	Tons	\$57	per Ton	\$1,111,500
A-8	<u>Transport and Disposal of Hazardous Lead-Impacted Historic Fill Materia</u> l-Includes transport vehicles and disposal of a hazardous lead hotspot in Lot 3.	10	Tons	\$125	per Ton	\$1,250
A-9	Waterproofing/Vapor Barrier Membrane - Assumes a continuous waterproofing membrane will be installed below the foundation slab and along vertical foundation walls up to the proposed finished development grade.	47,000	SF	\$9	per SF	\$423,000
A-10	Aboveground/Underground Storage Tank (AST/UST) Removal - Cleaning, removal, and disposal of three oil-water separators, four ASTs, and four suspect USTs across the three lots.	11	Tanks	\$20,000	per Tank	\$220,000
A-11	Dewatering/Fluid Treatment - Accounts for design and installation and for the fees to operate and maintain localized dewatering and treatment system for 1 month.	1	Months	\$70,000	per Month	\$70,000
A-12	<u>Dust. Odor and Vapor Control</u> - Includes odor, dust, and organic vapor control during remediation of the site. Assumes control measures will include, but not be limited to application of odor suppressant, foam or water.	4	Months	\$20,000	per Month	\$80,000
A-13	Backfill - Import and placement of clean fill material to development grade. An additional 10% of material is included to accoun for compaction.	2,848	CY	\$25	CY	\$72,000
A-14	Site Cover System - Installation of a site cover system consisting of the building foundation slab and/or two feet of clean fill in areas of the site that may not be covered by the building foundation.	3,000	CY	\$25	CY	\$75,000
			REMEDIAL ACTIO	ON CONTRACTOR F	EES SUBTOTAL	\$7,179,000
3 - ENG	INEERING FEES					
B-1	Waste Characterization		**	Allowa	nce	\$50,000
B-2	Engineering Support. Construction Administration, and Agency Coordination (During Remediation)	4	Months	\$15,000	per Month	\$60,000
B-3	Community Air Monitoring - This fee includes equipment rental fees associated with implementation of CAMP, which will be performed during ground-intrusive work including excavation and backfill, the presence of an on-site engineer to observe and document the site remediation, remediation health and safety including purchase and maintenance of appropriate personal protective equipment (PPE), and daily field reporting to the NYSDEC.	4	Months	\$40,000	per Month	\$160,000
B-4	Engineering Special Inspection of Support of Excavation	4	Months	\$35,000	per Month	\$140,000
B-5	Post-Remediation Groundwater Treatment - This fee includes installation of post-remediation groundwater monitoring wells and quarterly groundwater monitoring and reporting for two years after product application has been completed.	-		Allowance		\$150,000
B-6	Documentation Sampling - To confirm source material removal (assumes analysis for VOCs, SVOCs, PCBs, pesticides, cyanide and metals including hexavalent and trivalent chromium for each sample).	51	Samples	\$1,200	per Sample	\$62,000
B-7	Regulatory Agency Required Reporting - Remedial Design, Closure Reporting (Final Engineering Report and Site Management Plan)	t - Allowance		\$120,000		
B-8	Site Management - Management of long-term EC/IC, which includes site visits, annual reporting fees, and operations and maintenance costs.	10	Years	\$20,000	per Year	\$200,000
				ENGINEERING F	EES SUBTOTAL	\$942,000
		GC, CM F	ee, Insurance, Contingency	(16.8% of Contracto	r Fee Subtotal)	\$1,207,000
Total Estimated Fee					\$9,328,000	
ESTIMATED REMEDIATION FEE - ALTERNATIVE II						\$9.3 MM

General Assumptions and Conditions:

- 1. The density used for conversion from cubic yards to tons was 1.5 tons per cubic yard.
- 2. Excavation depths were estimated using Remedial Investigation soil sample results, field observations, and observed fill depths. Assumes 3 feet of excavation across Lots 1 and 3 and 15 feet bgs across Lots 12 and 20.
- 3. This estimate has been prepared for the purposes of comparing potential remedial alternatives. The information in this fee estimate is based on the available information regarding the site investigation and the anticipated scope of the remedial alternative. Changes in fee elements are likely to occur as a result of new information and data collected during the engineering design of the remedial alternative. This fee estimate is expected to be within -30% to +50% of the actual fee. Utilization of this fee estimate information beyond the stated purpose is not recommended. Langan is not licensed to provide financial or legal consulting services; as such, this fee estimate information is not intended to be utilize for complying with financial reporting requirements associated with liability services.
- 4. A four month period is assumed for remediation and soil handling.
- $5. \ \ VOC = volatile \ organic \ compound; \ SVOC = semivolatile \ organic \ compound; \ PCBs = polychlorinated \ biphenyls$

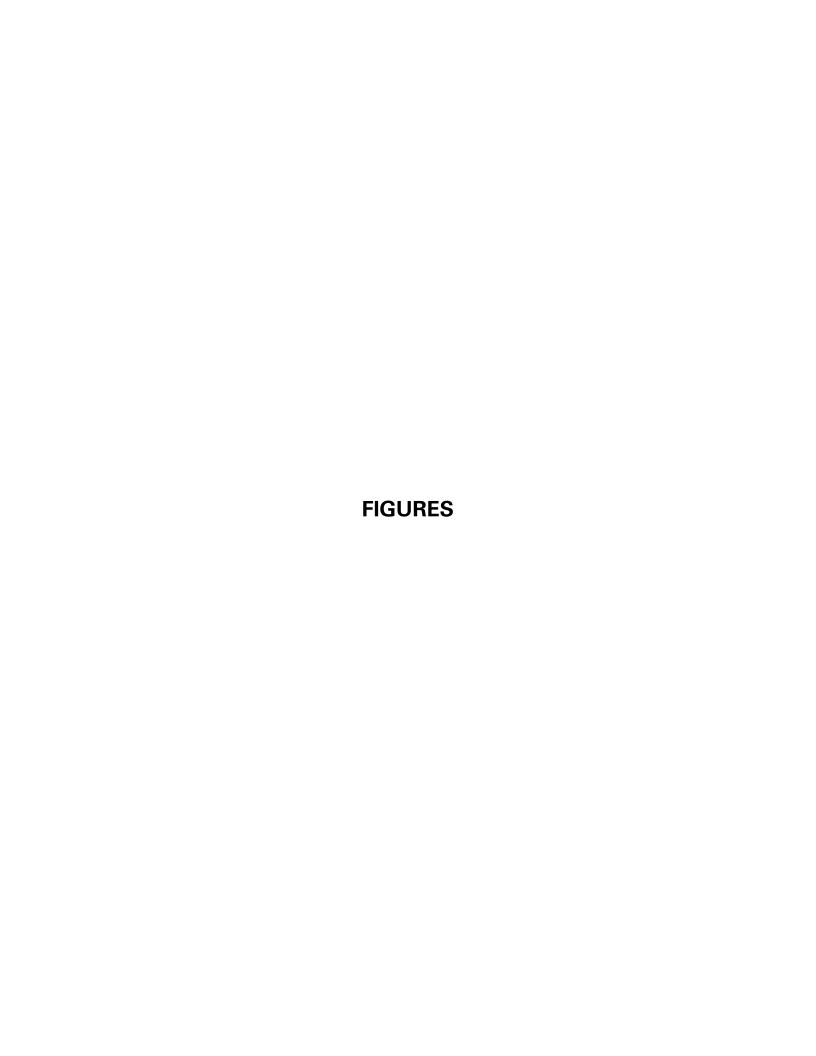
Contractor Fee Assumptions:

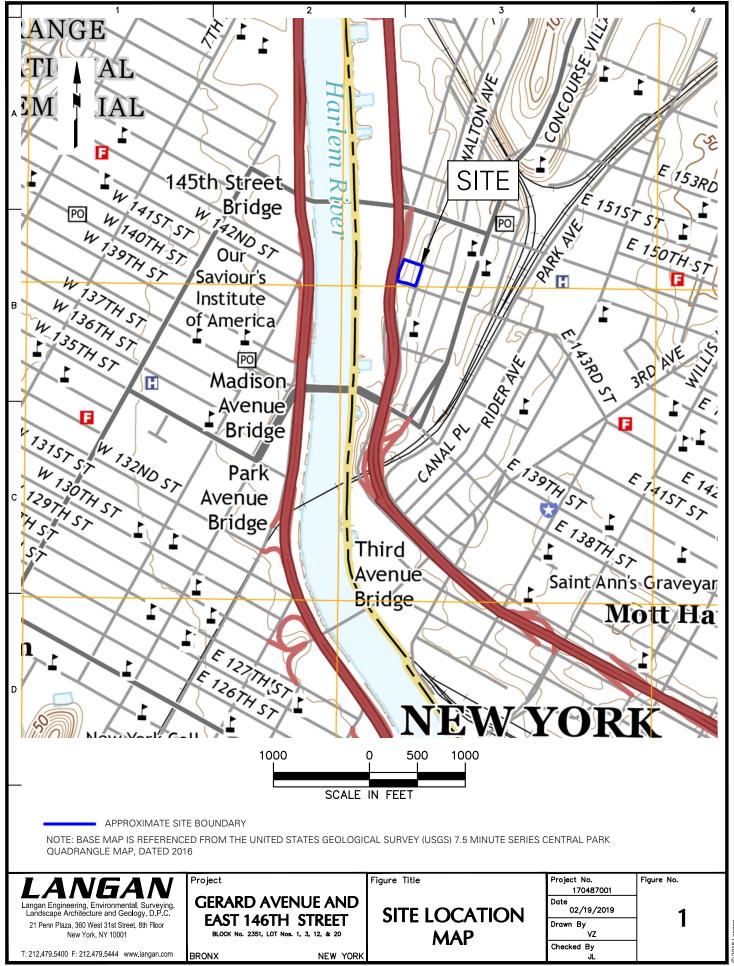
- A-2 The cost assumes an allowance for treatment of groundwater impacts across the site through implementation of in-situ chemical oxidation (ISCO). The proposed treatment includes injections of a remedial technology (e.g. Oxygen Release Compound [ORC®] or PlumeStop®) into the contaminated soil depth interval (10 to 20 feet bgs on Lot 3 and 20 to 30 feet bgs on Lot 12) prior to site-wide excavation.
- A-6 The unit rate provided reflects OSHA-certified construction labor.
- A-6 The site footprint is about 38,100 square feet. Assumes excacation to 3 feet bgs across Lots 1 and 3 and 15 feet bgs across Lots 12 and 20
- A-7 and A-8 The unit rate provided reflects average disposal facility fees and may vary depending on time of year and facility.
- A-8 Hazardous lead-impacted soil was identified during the RI at the RB06 location on Lot 3 from 0 to 2 feet below grade surface (bgs). The volume assumed a 5-foot wide by 5-foot long, by
- A-11 The fee is associated with treating the effluent before discharge into the sewer. Estimate is based on localized dewatering for 1 months of on-site operation. The fee includes mobilization, demobilization, freight, and equipment renta Based on the depth-to-groundwater measurements recorded during the Remedial Investigation, dewatering will be necessary to accommodate a portion of the work associated with remedial excavation and SOE installation. A-12 - Fee estimate includes application of dust suppression methods to open excavations and soil loaded into trucks. Labor provided by excavation, handling, and disposal contractor provided above; this line item estimate reflects material,
- freight, and equipment fees.

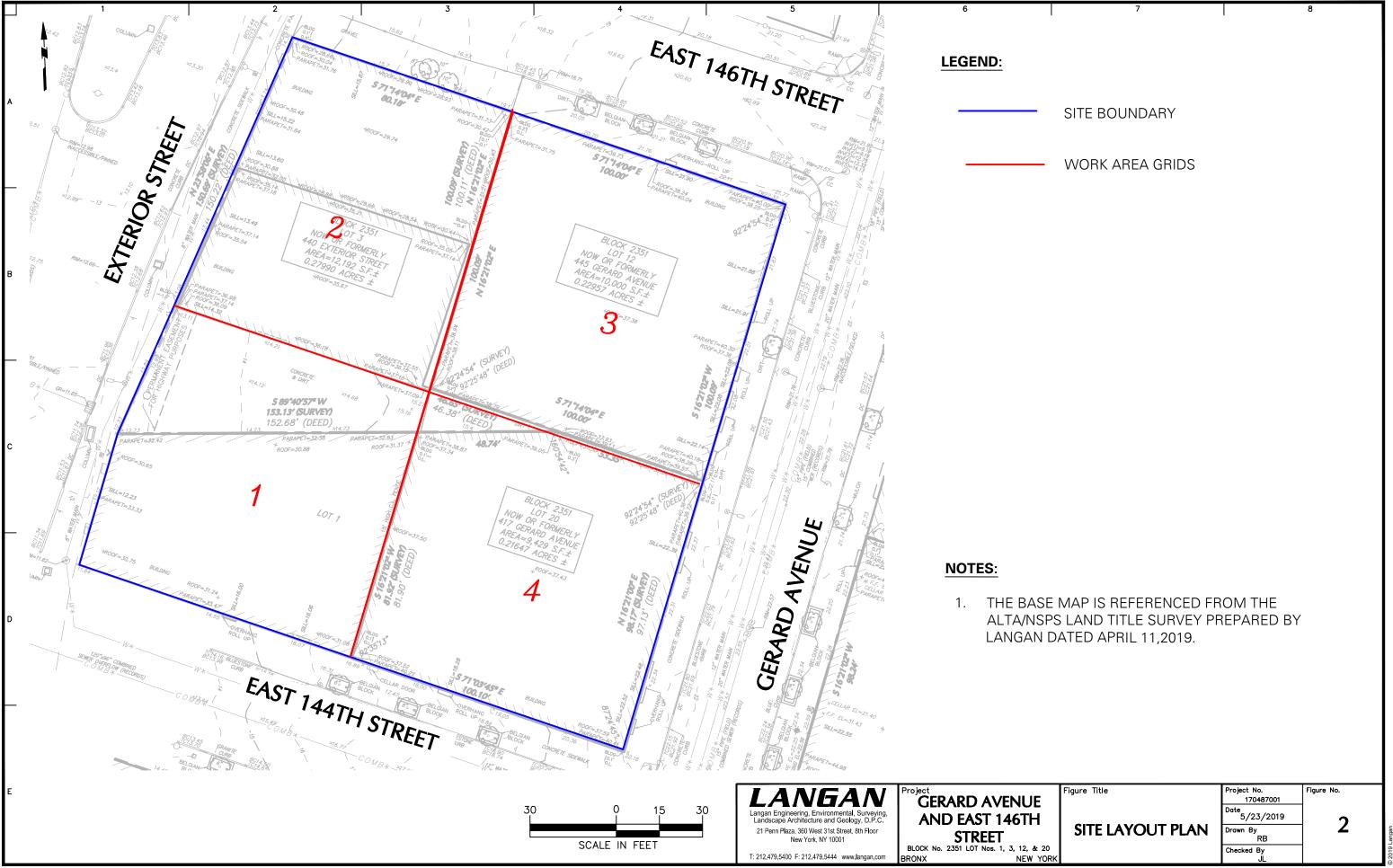
 A-13 Though backfill for this Track 4 cleanup is not anticipated. A contingency of 500 CY of backfill material is included. Backfill placement and compaction assumes soil handling and management fees for the New York City area. Backfill
- will meet Track 4 Site-Specific SCOs (6 NYCRR Part 375-6.8(b)). The quantity of soil has been increased by 10% to account for compaction A-14 The cost of the site cover system (i.e. building foundation) is equal to the cost of two feet of clean fill across the entire site footprint.

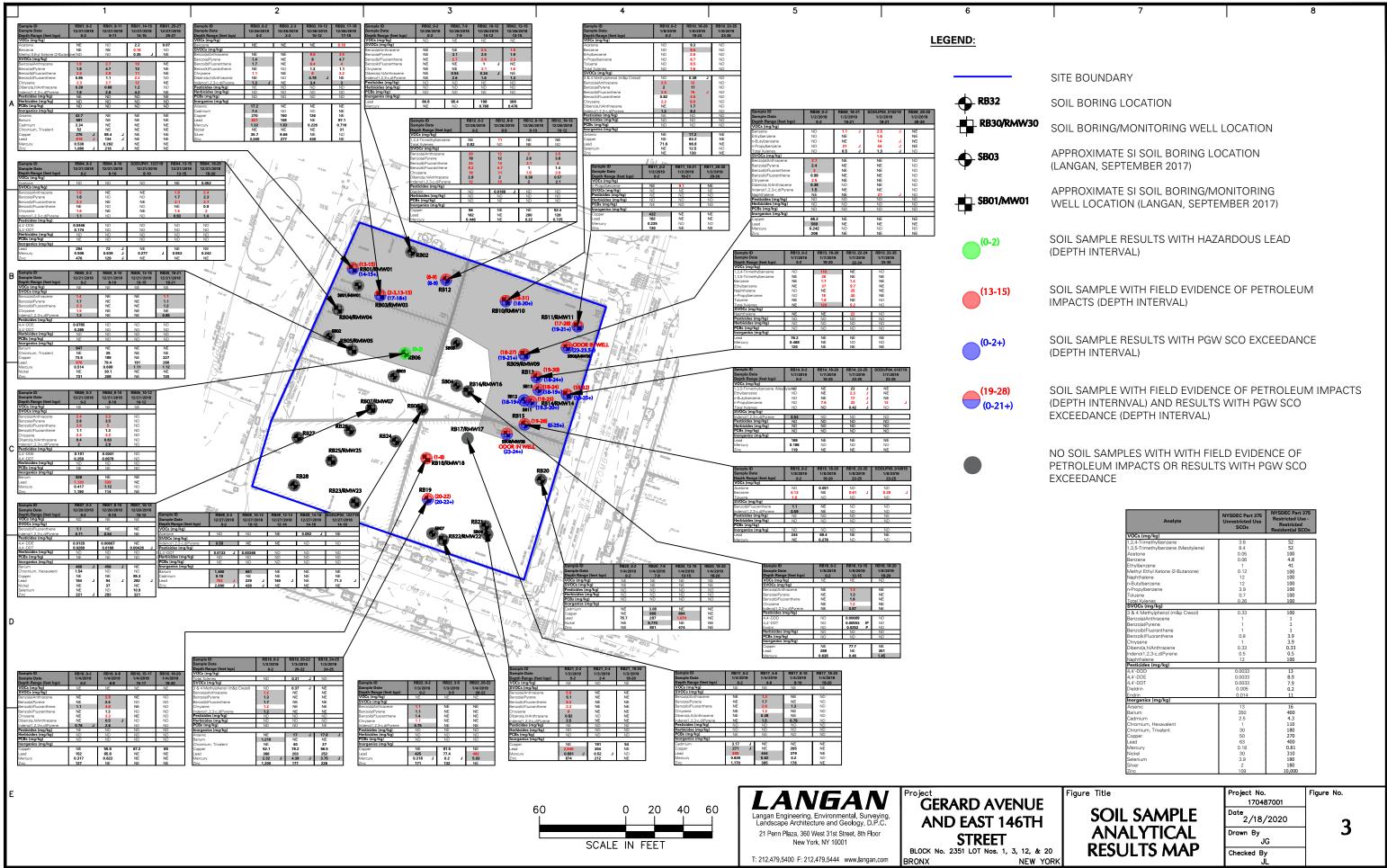
Engineering Fee Assumptions

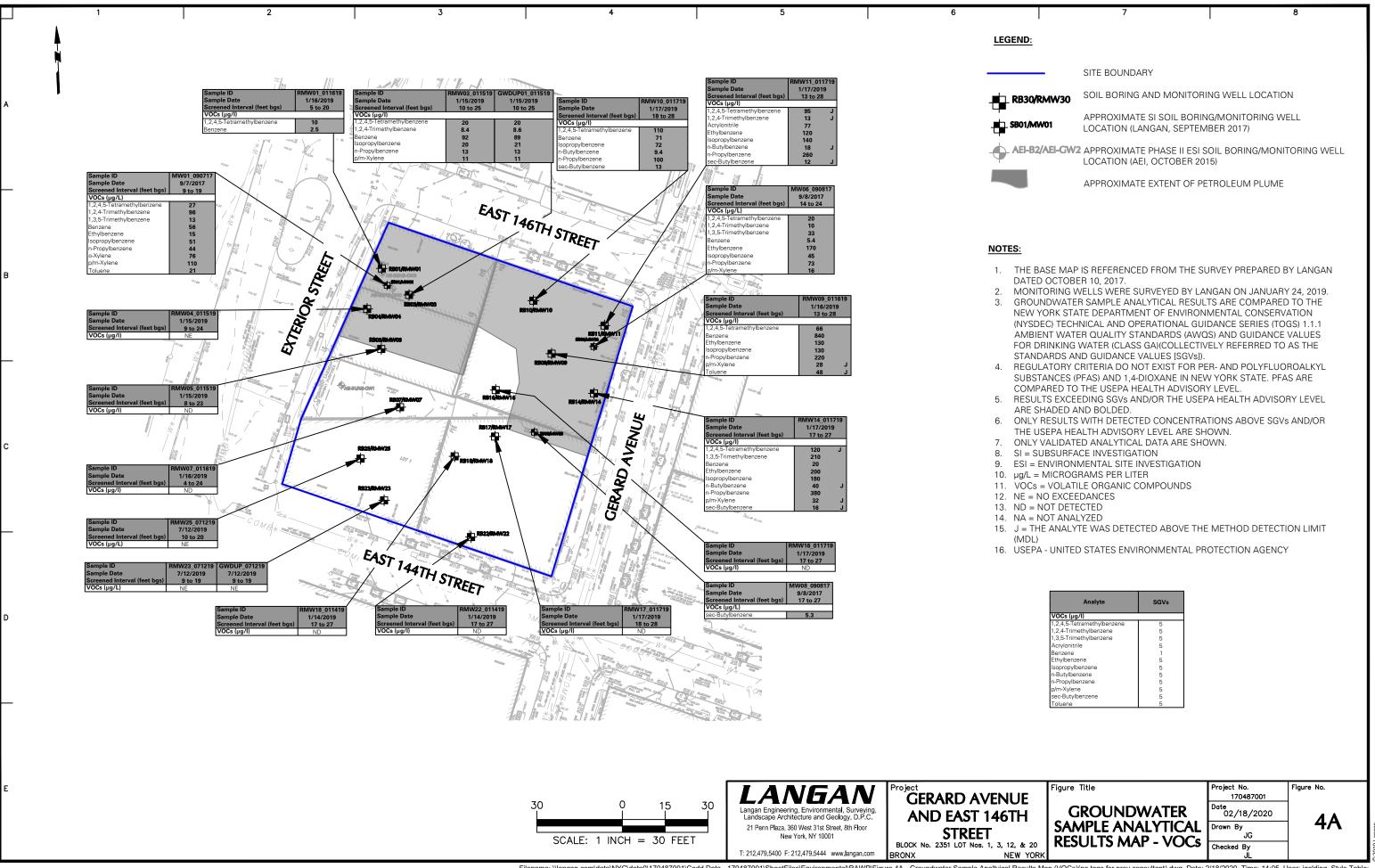
- B-3 The assumed duration of the community air monitoring program (CAMP) is four months to accommodate the estimated remediation timeline. CAMP fees include full-time equipment rental to facilitate perimeter dust and VOC
- B-6 The fee assumes collection of 51 post-excavation confirmation soil samples including quality assurance/quality control samples. Sample analysis will be for Part 375 VOCs, SVOCs, PCBs, pesticides, cyanide, and metals (including hexavalent and trivalent chromium). The fee includes subcontracted laboratory analysis by a NYSDOH ELAP-certified laboratory and ASP Category B deliverables
- B-8 The assumed duration of operation and monitoring of long-term institutional controls/engineering controls is 10 years. Fee includes annual reporting fees for annual periodic review reports.

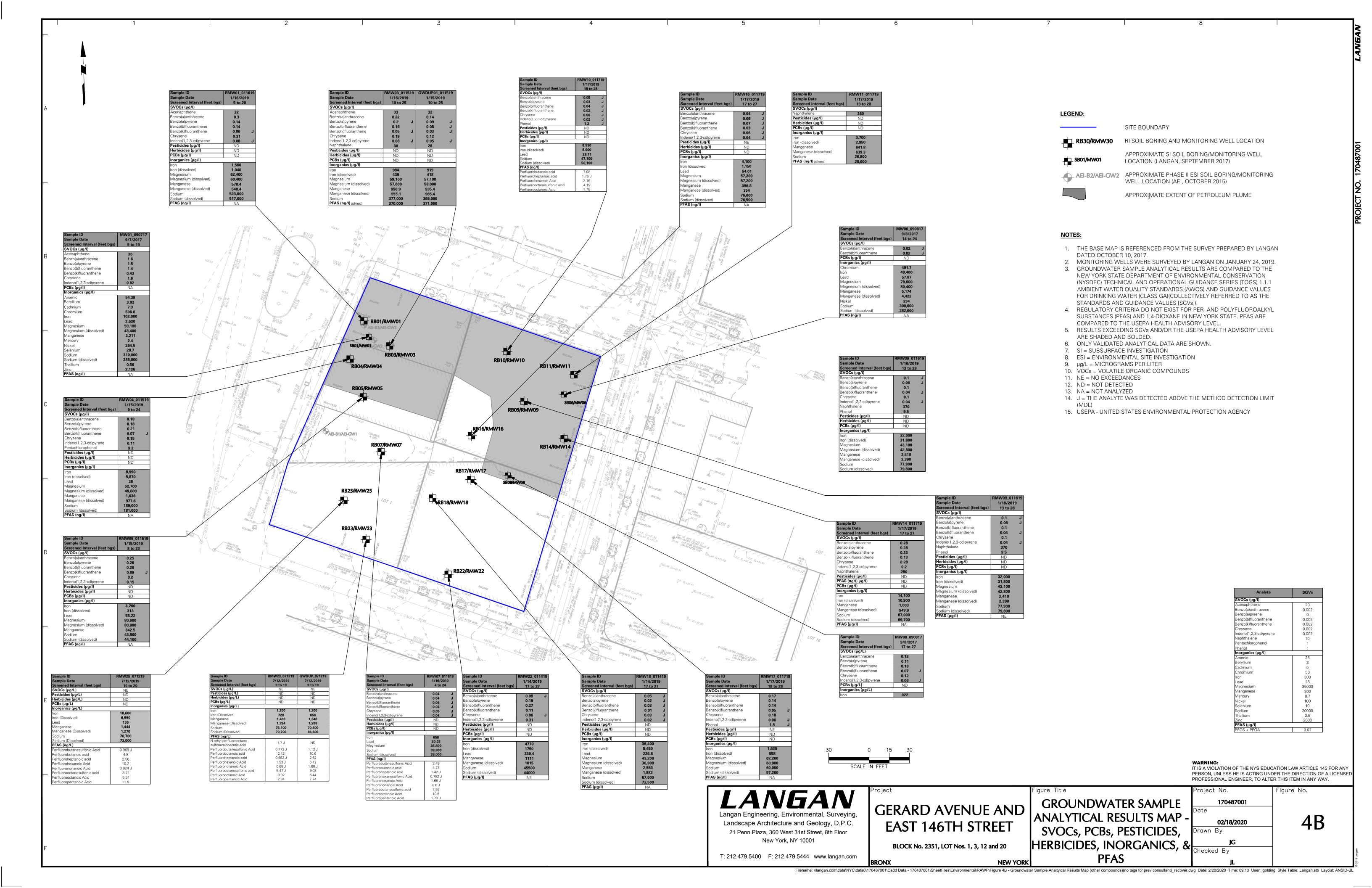


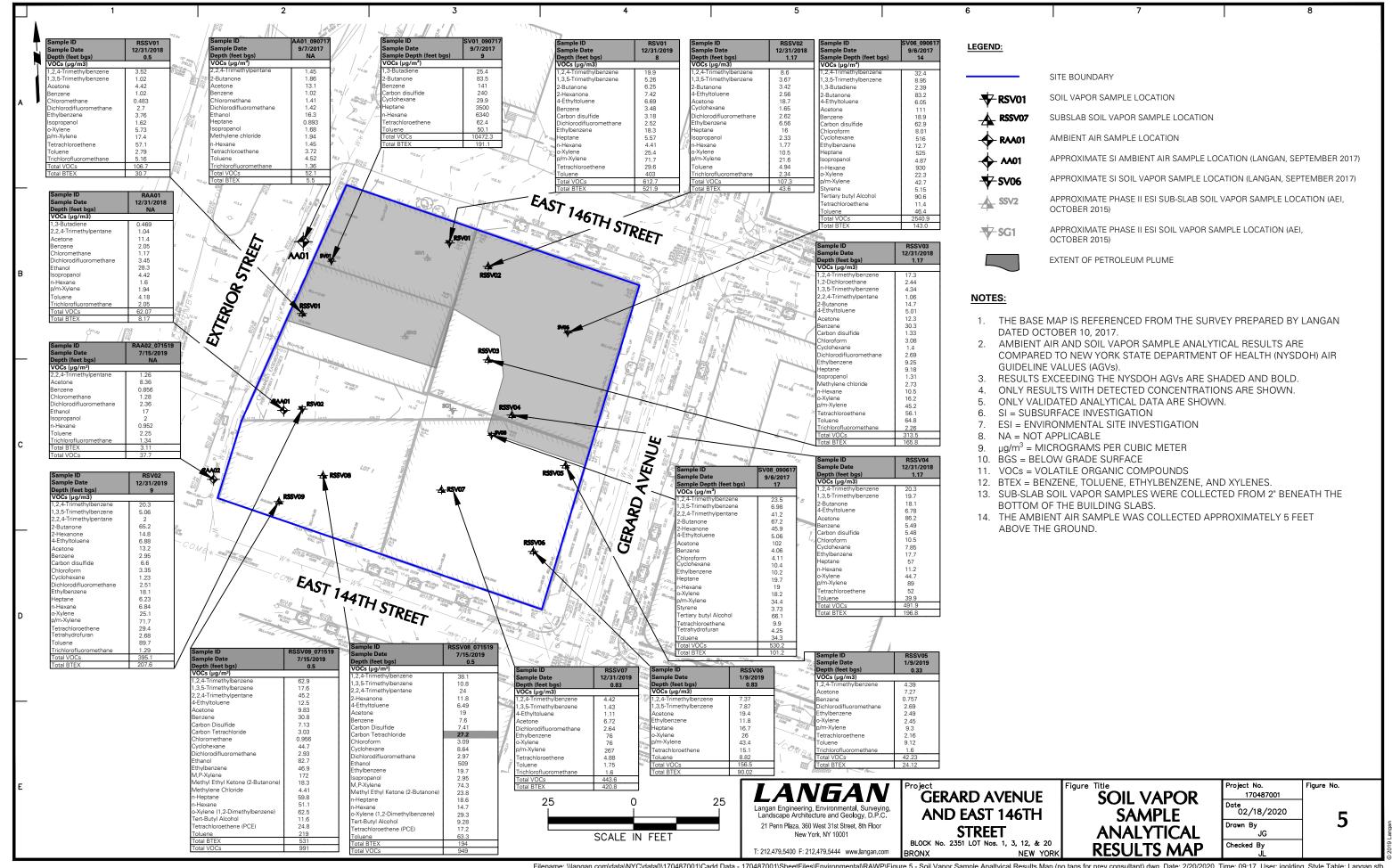


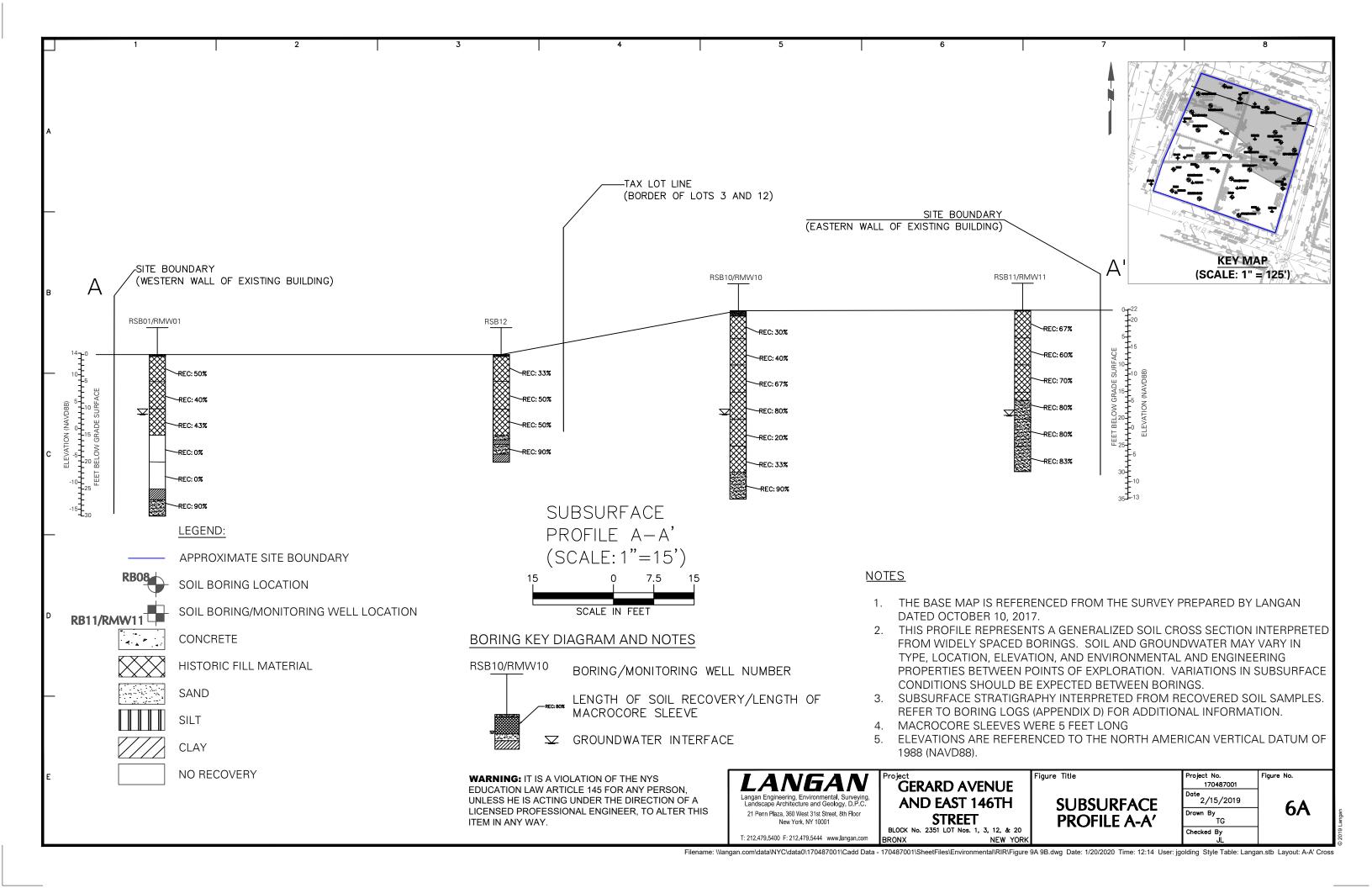


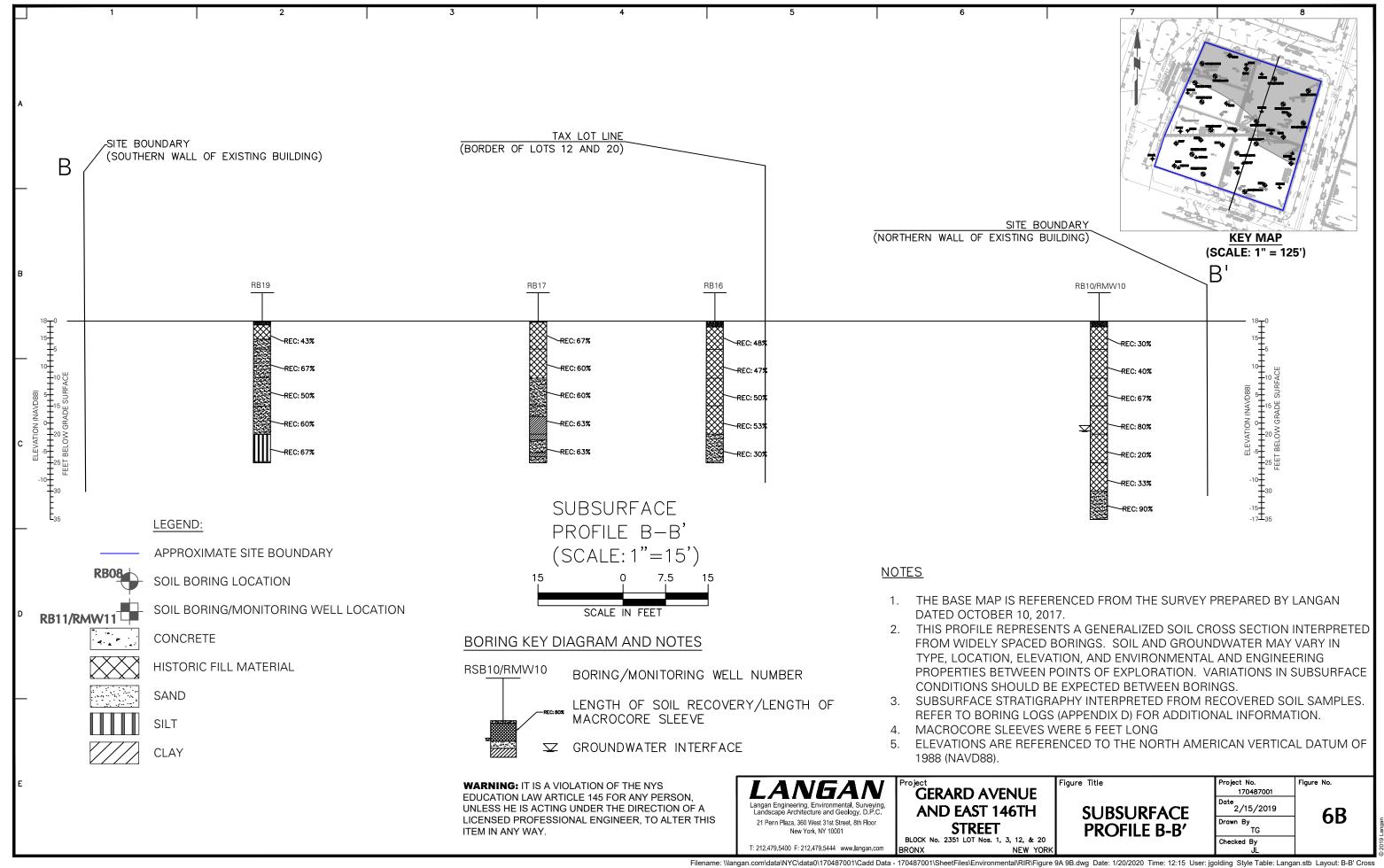


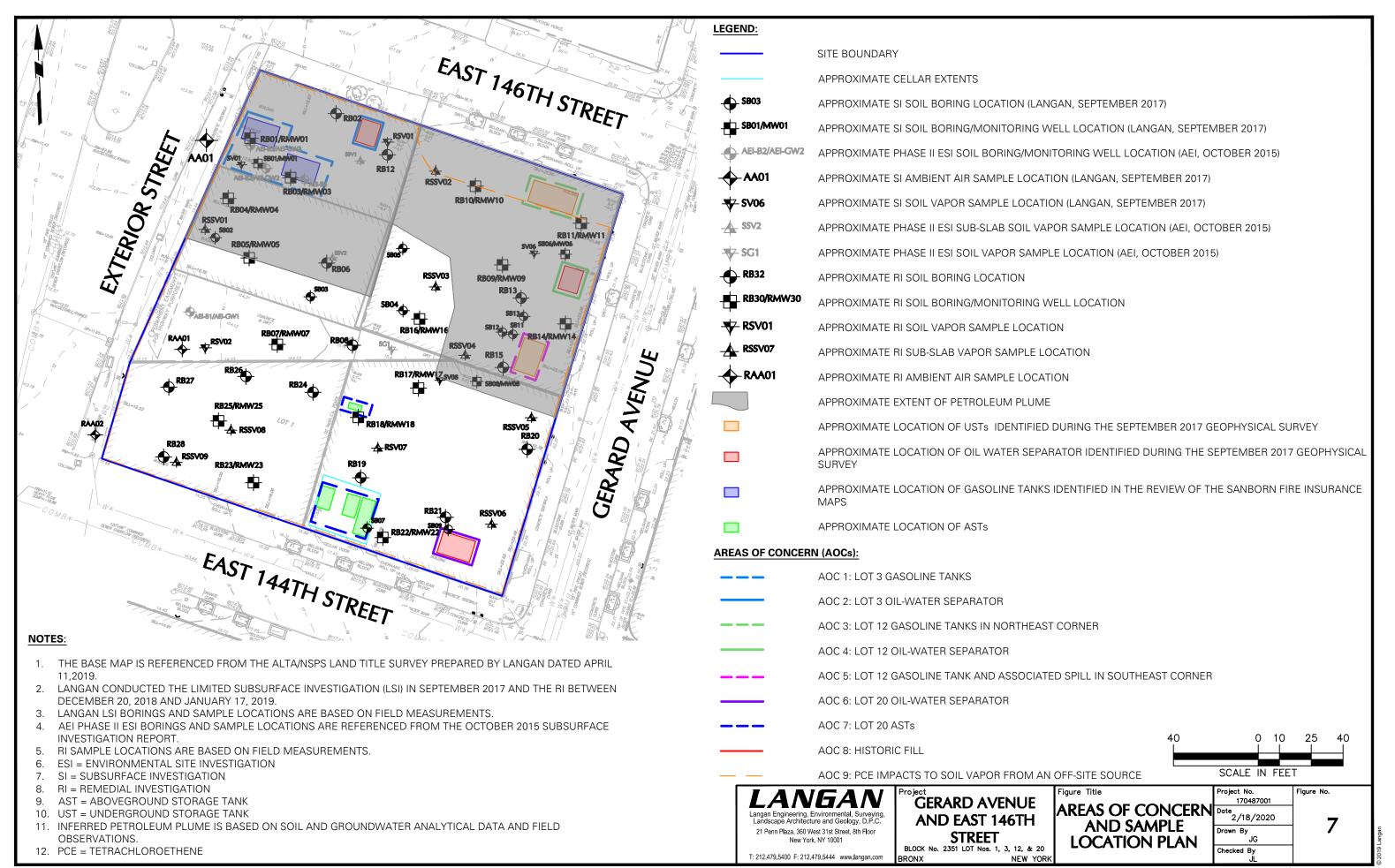


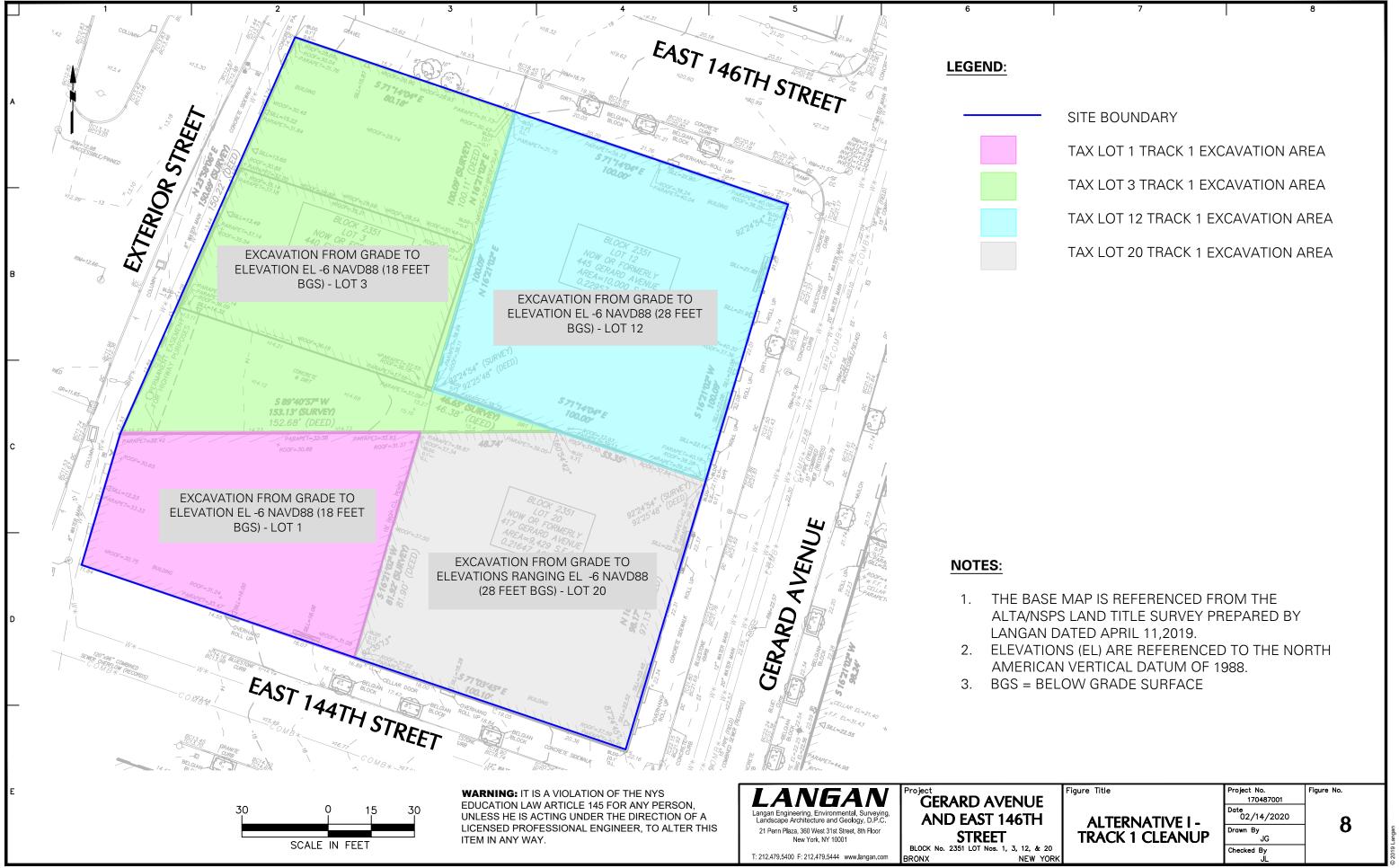


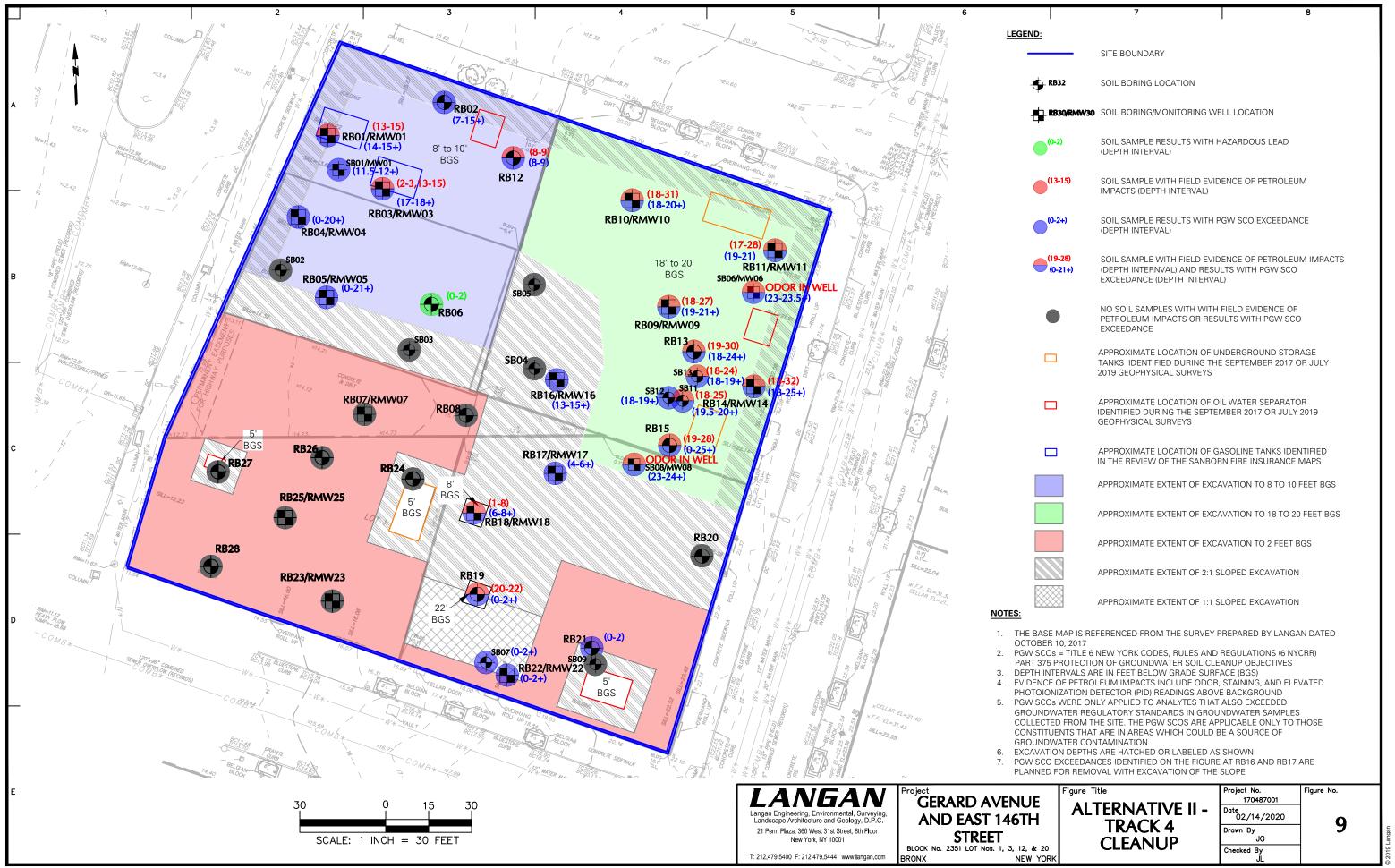


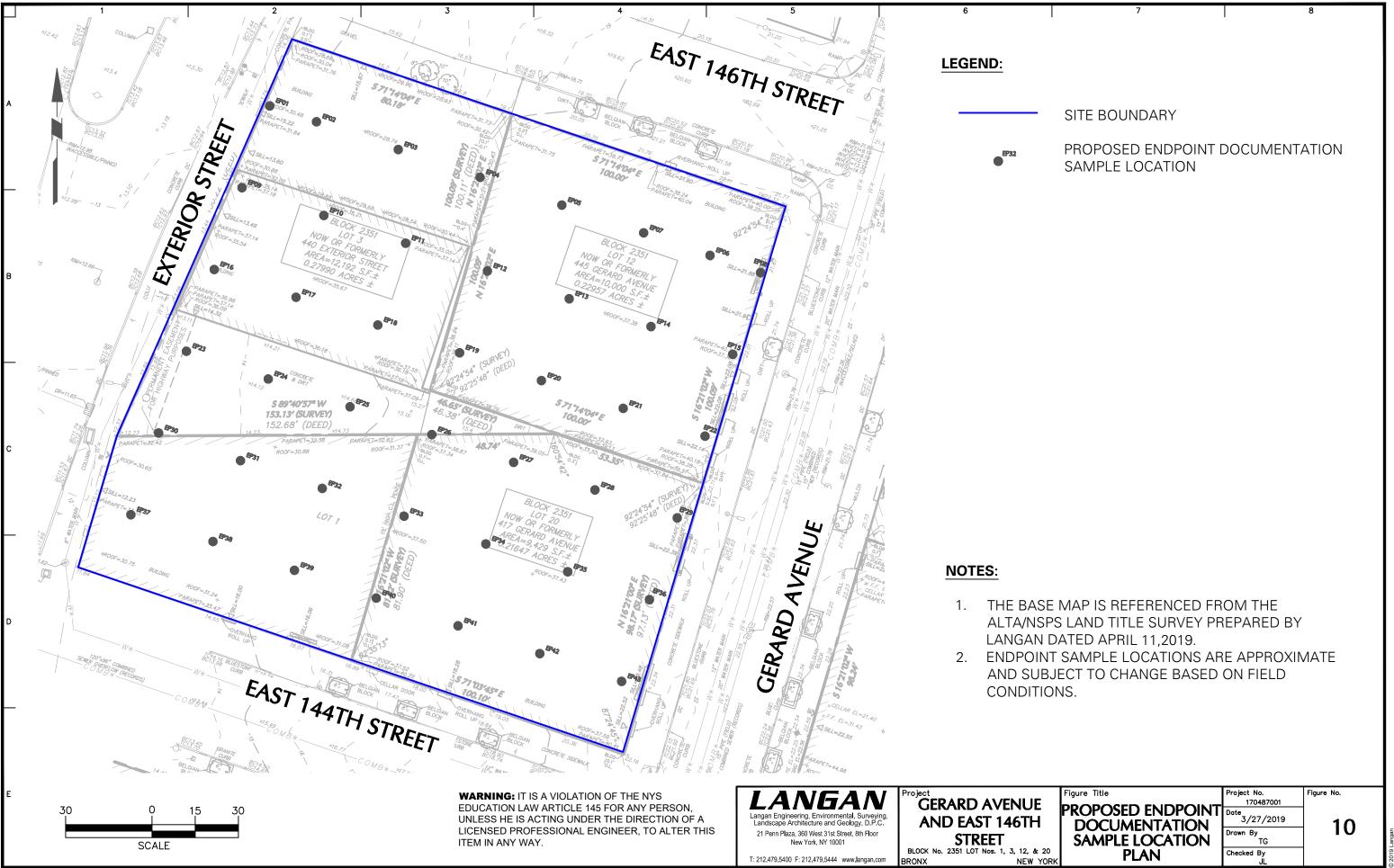


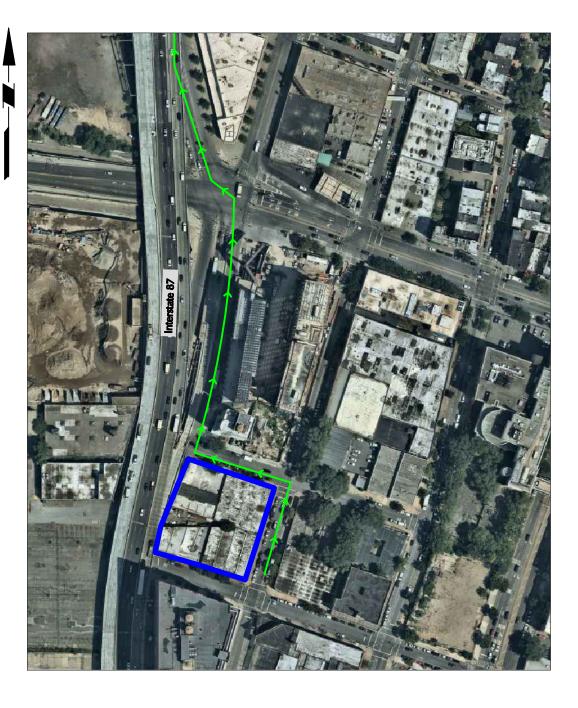


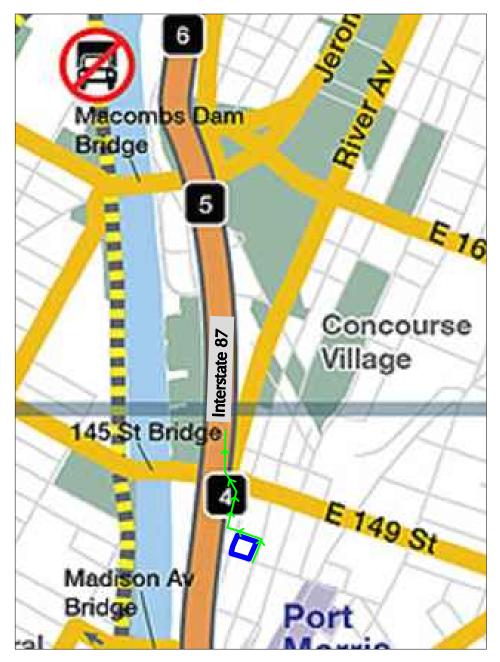












LEGEND:

APPROXIMATE SITE BOUNDARY

PROPOSED TRUCK ROUTE

LOCAL TRUCK ROUTE

THROUGH TRUCK ROUTE ON EXPRESSWAY

HIGHWAY EXIT

COMMERCIAL VEHICLES PROHIBITED

NOTES:

- 1. TRUCK ROUTE MAP AND LEGEND ADAPTED FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION (NYCDOT) 2015 NEW YORK CITY TRUCK ROUTE MAP.
- 2. AERIAL MAP FROM NEARMAP.COM, IMAGE DATED JULY 31, 2017
- 3. SITE ACCESS GATE LOCATION MAY CHANGE BASED ON CONSTRUCTION LOGISTICS.
- 4. FIGURE IS NOT TO SCALE.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001

T: 212.479.5400 F: 212.479.5444 www.langan.com BRONX

GERARD AVENUE **AND EAST 146TH**

STREET BLOCK No. 2351 LOT Nos. 1, 3, 12, & 20 NEW YORK

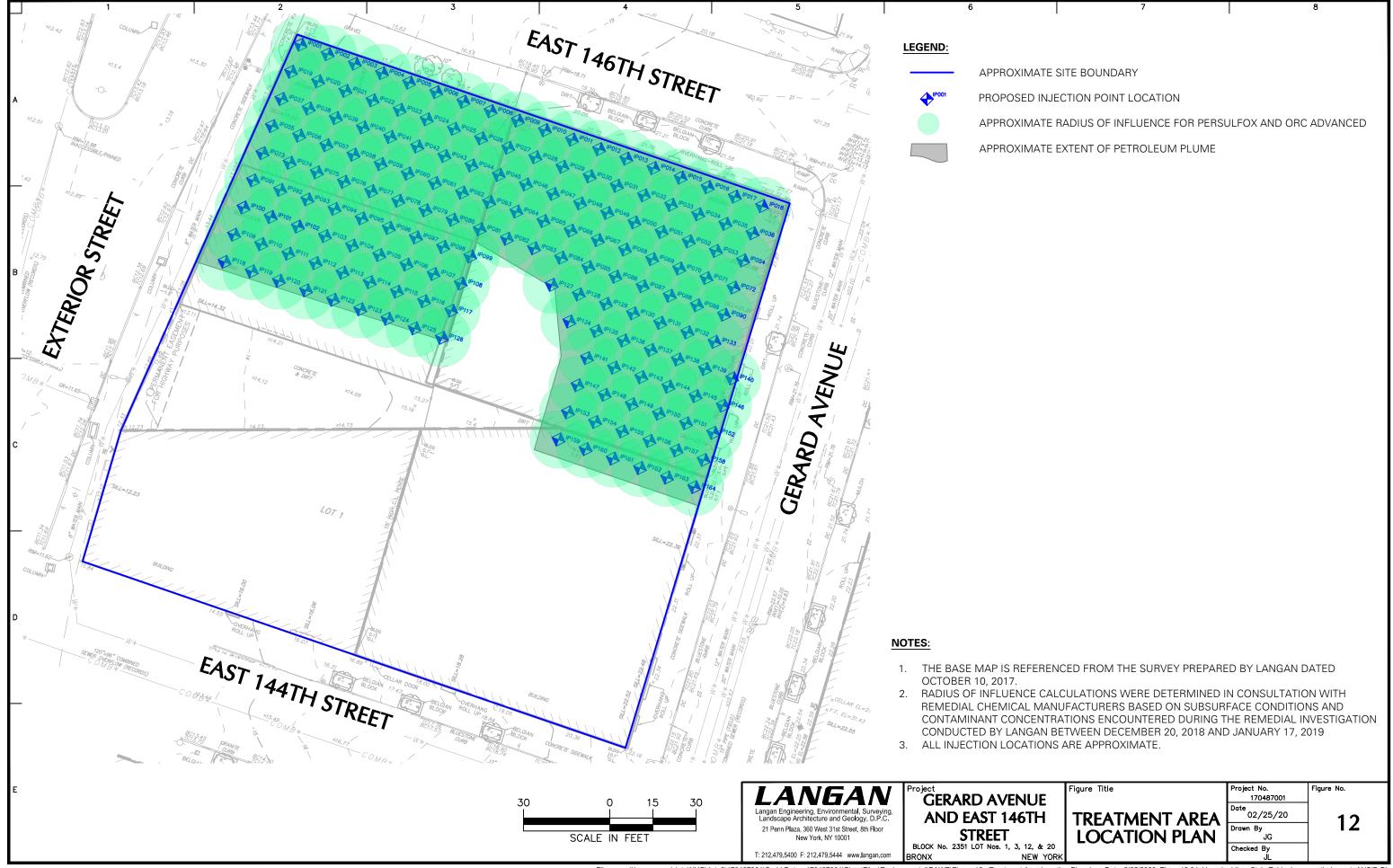
TRUCK ROUTE MAP

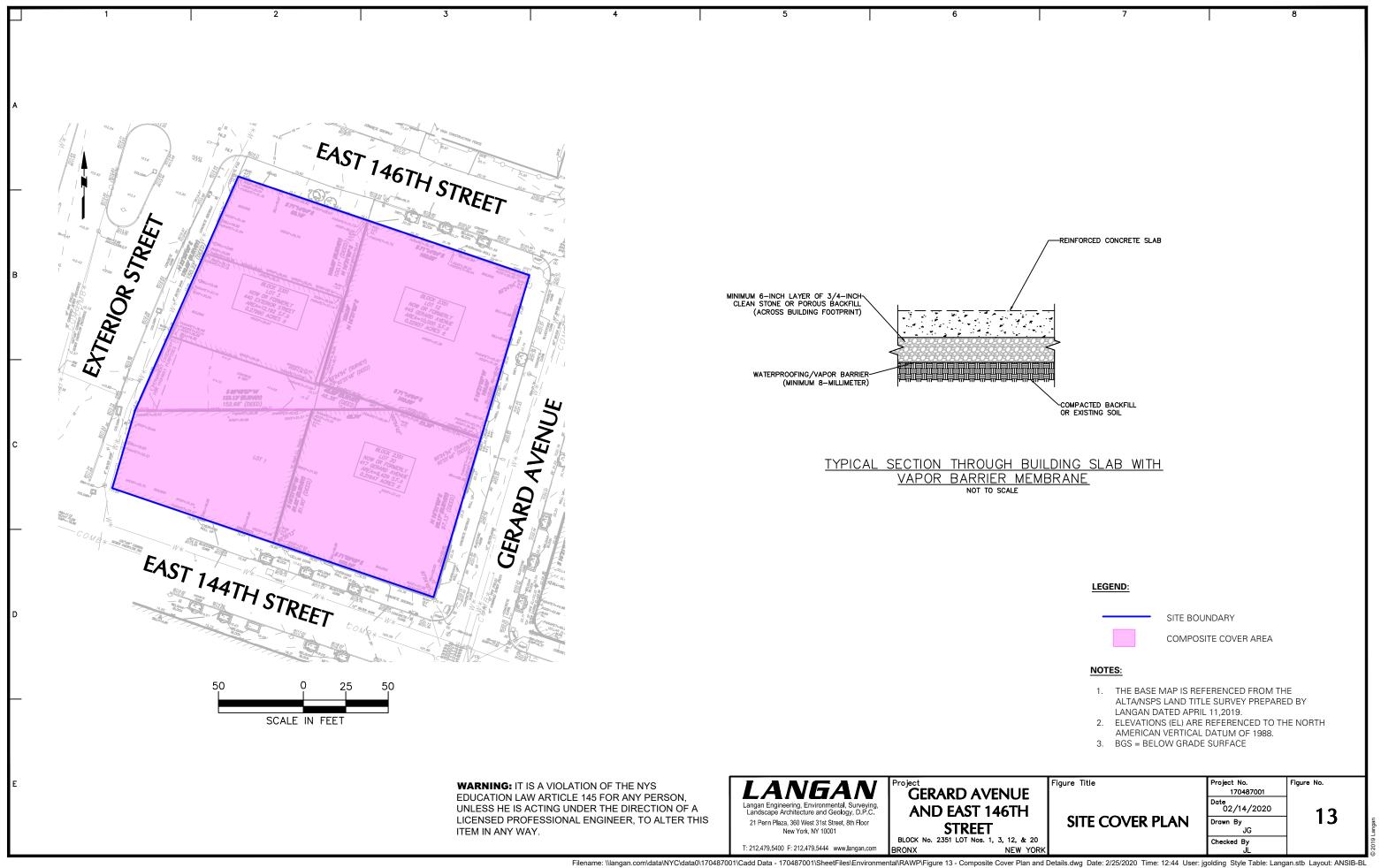
Figure Title

Figure No. 170487001 Oate 3/27/2019 Drawn By TG

Checked By

11





APPENDIX A

BOUNDARY SURVEY

DATUM CONVERSION CHART

LEGEND (NOT SHOWN TO SCALE)

---- HYDRANT

---- STAND PIPE

---- ROOF DRAIN

---- STREET LIGHT

---- ANCHOR POLE

---- GAS VALVE

---- CATCH BASIN

---- CLEAN OUT

---- BOLLARD

ELECTRIC BOX

GAS METER

----- WATER METER

---- ELECTRIC METER

TELEPHONE BOX

---- MONITOR WELL

---- DOUBLE DOOR

---- ROLL UP DOOR

---- BOTTOM OF WALL

YARD DRAIN

--- TOP OF WALL

TOP OF CURB

---- FINISHED FLOOR

LEGAL GRADE FROM SECTIONAL MAP

---- EXISTING GRADE FROM SECTIONAL MAP

GUIDE RAIL METAL

IRON FENCE

EASEMENT LINE

RIGHT-OF-WAY LINE

GAS MARK OUT LINE

SANITARY MARK OUT LINE

EXISTING MAPPING

---- DRAINAGE MARK OUT LINE

---- COMP ---- COMBINED SEWER MARK OUT LINE

-----UNK UNKNOWN UTILITY MARK OUT LINE

WATER MARK OUT LINE

ELECTRIC MARK OUT LINE

COMMUNICATION MARK OUT LINE

AS NOTED) - PLOTTED FROM

(CONVERTED TO NAVD88 SEE NOTE 4)

(CONVERTED TO NAVD88 SEE NOTE 4)

---- DROP CURB

--- CHAINLINK FENCE

GUIDE RAIL WOOD

---- STOCKADE FENCE

FF = 322.35

---- MAILBOX

---- BENCH

—— DOOR

---- TRAFFIC SIGNAL POLE

----- SIGN

----- UNKNOWN VALVE

---- SPOT ELEVATION

---- MANHOLE (TYPE AS LABELED)

----- PEDESTAL LIGHT

----- FLAG POLE

0.00' BRONX HIGHWAY DATUM		-	1.538′
0.00' NAVD 88	2.608		
		1.070	
0.00' NGVD 29		<u> </u>	

l ·	LOWING REQUESTS FOR UTILITY RMATION HAVE BEEN MADE
UTILITY	RECEIVED
WATER	DEP 3/21/19
SEWER	DEP 3/21/19
GAS	
ELECTRIC	
STEAM	
COMM/ OTHER	ECS/VERIZON 9/5/17, CABLEVISION 9/20/17, AT&T LNS 3/21/19, AT&T CORE 9/6/17, PROTEK 9/27/17 LEVEL 3 9/6/17, SPRINT 9/14/17, CENTURY LINK 9/5/17

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH AND COUNTY OF BRONX, CITY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF EAST 146TH STREET (60' WIDE) WITH THE EASTERLY SIDE OF EXTERIOR STREET (AKA MAJOR DEEGAN BOULEVARD)(IRREGULAR WIDTH), AND RUNNING THENCE;

EASTERLY ALONG SAID SOUTHERLY SIDE OF EAST 146TH STREET, N71"14'04"W 80.18 FEET TO A POINT, THENCE;

SOUTHERLY AND PARALLEL WITH THE WESTERLY SIDE OF GERARD AVENUE (60' WIDE), S16"21'02"W 100.09 FEET TO A POINT, THENCE;

EASTERLY AND PARALLEL WITH THE AFOREMENTIONED SOUTHERLY SIDE OF EAST 146TH STREET, N71"14'04"W 46.65 FEET TO A POINT, THENCE

EASTERLY AND PARALLEL WITH THE AFOREMENTIONED SOUTHERLY SIDE OF EAST 146TH STREET, N71114'04"W 46.65 FEET TO A POINT, THENCE

WESTERLY ALONG A LINE, S89'40'57"W 153.13 FEET TO THE AFOREMENTIONED EASTERLY SIDE OF EXTERIOR STREET, THENCE;

NORTHERLY ALONG SAID EASTERLY SIDE OF EXTERIOR STREET, N23'58'06"E 150.69 FEET TO THE POINT OR PLACE OF BEGINNING.

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH AND COUNTY OF BRONX, CITY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF EAST 146TH STREET (60' WIDE) WITH THE WESTERLY SIDE OF GERARD AVENUE (60' WIDE), AND RUNNING THENCE;

SOUTHERLY ALONG SAID WESTERLY SIDE OF GERARD AVENUE, \$16°21'02"W 100.09 FEET TO A POINT, THENCE;

WESTERLY AND PARALLEL WITH SAID SOUTHERLY SIDE OF EAST 146TH STREET, N71"14'04"W 100.00 FEET TO A POINT, THENCE

NORTHERLY AND PARALLEL WITH SAID WESTERLY SIDE OF GERARD AVENUE, N16°21'02"E 100.09 FEET TO THE AFOREMENTIONED SOUTHERLY SIDE OF EAST 146TH STREET, THENCE;

EASTERLY ALONG SAID SOUTHERLY SIDE OF EAST 144TH STREET, \$71"14'04"E 100.00 FEET TO THE POINT OR PLACE OF BEGINNING.

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH AND COUNTY OF BRONX, CITY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE NORTHERLY SIDE OF EAST 144TH STREET (60' WIDE) WITH THE WESTERLY SIDE OF GERARD AVENUE (60' WIDE), AND RUNNING THENCE;

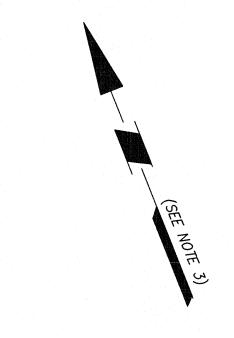
WESTERLY ALONG SAID NORTHERLY SIDE OF EAST 144TH STREET, N71'03'45"W 100.10 FEET TO A POINT, THENCE;

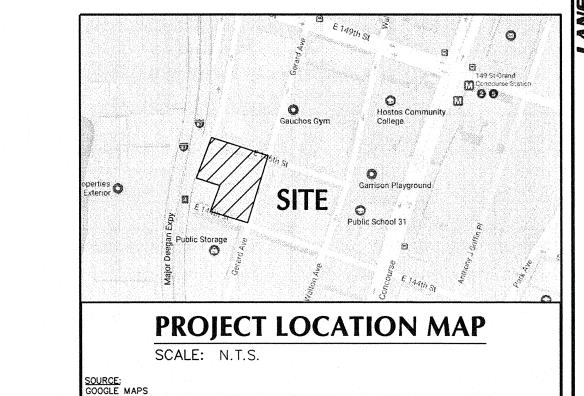
NORTHERLY ALONG A LINE, N16"21'20"E 81.92 FEET TO A POINT, THENCE;

EASTERLY AND PARALLEL WITH THE SOUTHERLY SIDE OF EAST 146TH STREET (60'WIDE), S71"14'04"E 53.35 FEET TO A POINT ON THE AFOREMENTIONED WESTERLY SIDE OF GERARD AVENUE, THENCE;

SOUTHERLY ALONG SAID WESTERLY SIDE OF GERARD AVENUE, S16'21'02"W 98.17 FEET TO THE

POINT OR PLACE OF BEGINNING.





NOTES

1. THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:

A. CURRENT NYC TAX MAP.
B. BOROUGH OF BRONX, RECORD MAP SECTION 7.
C. GRADE MAP SECTION 7, FILED NOVEMBER 2, 1895.

D. "TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY, 440 EXTERIOR STREET, 445 GERARD AVENUE, 417 GERARD AVENUE", BY LANGAN, PROJECT NO. 170487001, DRAWING NO. VB101, DATED 10/10/17.

E. TITLE NO. NY190087, BLOCK 2350 LOT 1 AND BLOCK 2351 LOTS 3, 12 & 20, BY COMMONWEALTH LAND TITLE INSURANCE COMPANY, EFFECTIVE DATE FEBRUARY 20, 2019

COMMONWEALTH LAND TITLE INSURANCE COMPANY, EFFECTIVE DATE FEBRUARY 20, 2019

F. DEED BLOCK 2351 LOT 12— CRFN2016000421890, RECORDED/FILED 11/16/16 10:13 (PLOTTED)

G. DEED BLOCK 2351 LOT 20— CRFN201600034820, RECORDED/FILED 09/23/16 09:16 (PLOTTED)

H. DEED BLOCK 2351 LOT 3— CRFN2016000108349, RECORDED/FILED 03/28/16 11:43 (PLOTTED)

I. TITLE NO. 19NYB13309 BLOCK 2351 LOT 1, BY COMMONWEALTH LAND TITLE INSURANCE

COMPANY, EFFECTIVE DATE FEBRUARY 13, 2019

J. DEED BLOCK 2351 LOT 1— REEL 116 PG. 217 RECORDED 9/4/1969

K. ZONING LETTER PROVIDED BY S9 ARCHITECTS DATED MARCH 25, 2019.

2. THE SURVEYED PROPERTY IS SUBJECT BUT NOT LIMITED TO THE FOLLOWING FACTS AS REVEALED BY THE HEREON REFERENCED INFORMATION. THE INFORMATION SHOWN HEREON DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR. ALL INFORMATION THAT MAY AFFECT THE QUALITY OF TITLE TO BOTH THE SUBJECT AND ADJOINING PARCELS SHOULD BE VERIFIED BY AN ACCURATE AND CURRENT TITLE REPORT.

EXHIBITS AS LISTED IN TITLE NO. NY190087. BY COMMONWEALTH LAND TITLE INSURANCE

COMPANY (SEE NOTE 1E)

SOLIBER 517 PG. 465 [COVENANTS AND RESTRICTIONS CONTAINED IN DEED- LOT 3] (NOT

PLOTTABALE)

/Sb. CRFN2013000247985, RECORDED/FILED 06/24/13 19:07 [PERMANENT EASEMENT— LOT 3]

(PLOTTED), CRFN2013000284208, RECORDED/FILED 07/18/13 15:36 [APPROPRIATION OF PROPERTY BY THE PEOPLE OF THE STATE OF NEW YORK— LOT 3] (NOT PLOTTABLE), CRFN2013000490217, RECORDED/FILED 11/27/13 12:00 [APPROPRIATION OF PROPERTY BY THE PEOPLE OF THE STATE OF NEW YORK— LOT 3] (NOT PLOTTABLE)

 THE MERIDIAN OF THIS SURVEY IS REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM NYLI NAD83 AS ESTABLISHED BY GPS METHODS.

4. ELEVATIONS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
AS ESTABLISHED BY GPS METHODS.

STREET NAMES, R.O.W. WIDTHS, BLOCK, AND LOT NUMBERS AS PER MAPS REFERENCED IN NOTES 1A AND 1B.
 PLANIMETRIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. DURING MARCH OF 2019.

D.P.C. DURING MARCH OF 2019.

7. FEMA INFORMATION

A. AS PER THE "NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP TITLED CITY OF NEW YORK, NEW YORK, PANEL 83 OF 457, COMMUNITY PANEL NUMBER 3604970083F REVISED DATE SEPTEMBER 5, 2007." THE SUBJECT PROPERTY LIES WITHIN UNSHADED ZONE X, AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

B. AS PER THE PRELIMINARY "NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP TITLED CITY OF NEW YORK, NEW YORK, PANEL 83 OF 457, COMMUNITY PANEL NUMBER 360497083G DATED DECEMBER 5, 2013 ." THE SUBJECT PROPERTY LIES WITHIN UNSHADED ZONE X, AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

8. OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED IN CONSTRUCTION OF ANY TYPE.

9. WETLANDS, ENVIRONMENTAL AND/OR HAZARDOUS MATERIALS LOCATION, IF ANY, NOT COVERED UNDER THIS CONTRACT.

UNDER THIS CONTRACT.

10. UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND THE LOCATIONS WHERE DATA WAS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE THE SURVEYOR CANNOT AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED

ADDITIONAL UTILITY (WATER, GAS, ELECTRIC, ETC.) DATA MAY BE SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.

UNLESS SPECIFICALLY NOTED HEREON THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.

PRIOR TO ANY DESIGN OR CONSTRUCTION THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.

UNLESS NOTED BELOW SUPPLEMENTAL DOCUMENTS WERE NOT USED TO COMPILE THE SUBSURFACE UTILITY INFORMATION SHOWN HEREON.

11. THIS IS TO CERTIFY THAT THERE ARE NO STREAMS NOR NATURAL WATERCOURSES ON THE PROPERTY AS SHOWN ON THIS SURVEY.

WATER AND SEWER UTILITY MAPS WERE PROVIDED BY NYC DEP.

SET FORTH IN LETTER REFERENCED IN NOTE 1K;

12. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

13. THIS PLAN NOT VALID UNLESS EMBOSSED OR BLUE INK STAMPED WITH THE SEAL OF THE PROFESSIONAL.

14. IN REFERENCE TO ALTA/NSPS ITEM NUMBERS 16 OF THE TABLE "A" OPTIONAL REQUIREMENTS: EVIDENCE WAS OBSERVED OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITONS OBSERVED IN THE PROCESS OF CONDUCTING FIELD WORK.

15. IN REFERENCE TO ALTA/NSPS ITEM NUMBERS 17 OF THE TABLE "A" OPTIONAL REQUIREMENTS: NO INFORMATION WAS MADE AVAILABLE OF PROPOSED CHANGES IN STREET RIGHT OF WAY

NO INFORMATION WAS MADE AVAILABLE OF PROPOSED CHANGES IN STREET RIGHT OF WAY LINES BY THE CONTROLLING JURISDICTION. EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS NOT OBSERVED IN THE PROCESS OF CONDUCTING FIELD WORK.

16. IN REFERENCE TO ALTA/NSPS ITEM NUMBERS 6(a) OF THE TABLE "A" OPTIONAL REQUIREMENTS

ZONE - M1-4/R8A WITHIN MX-13 SPECIAL MIXED USE DISTRICT. THE SITE LIES WITHIN A VOLUNTARY INCLUSIONARY HOUSING DESIGNATED AREA AS DESCRIBED IN ZR APPENDIX F, AND WITHIN TRANSIT ZONE AS DESCRIBED IN ZR APPENDIX 1.

HEIGHT AND SETBACK REQUIREMENTS - THE HEIGHTS OF BUILDINGS AND BUILDING FLEMENTS

HEIGHT AND SETBACK REQUIREMENTS— THE HEIGHTS OF BUILDINGS AND BUILDING ELEMENTS ARE MEASURED FROM THE BASE PLANE. THE MAXIMUM PERMITTED BUILDING HEIGHT IS 140 FT, EXCLUSIVE OF PERMITTED OBSTRUCTIONS. THIS HEIGHT MAY BE INCREASED TO 145 FT OR 14 STORIES FOR BUILDINGS WITH A QUALIFYING GROUND FLOOR (A GROUND FLOOR WITH A MINIMUM HEIGHT OF 13 FT ABOVE ADJOINING SIDEWALK FOR BUILDINGS PROVIDING AFFORDABLE HOUSING). 70% OF THE AGGREGATE LENGTH OF STREET WALLS MUST LIE WITH 15 TO F THE STREET LINE FRONTED. BUILDING STREET WALLS LOCATED WITHIN 50 FT OF A STREET LINE WINST SET BACK AT A HEIGHT OF NOT LESS THAN 60 FT AND NOT MORE THAN 105 FT. THE MINIMUM DEPTH OF SETBACK IS 15 FT. THE REQUIRED DEPTH OF SETBACK MAY BE REDUCED BY ONE FOOT FOR EACH FOOT THE STREET WALL IS LOCATED BEYOND THE STREET LINE, UP TO 8 FT. AREAS ABOVE BUILDING SETBACKS MAY BE PARTIALLY OCCUPIED AND OBSTRUCTED BY BUILDING FLOOR AREA PURSUANT TO ZR DORMER REGULATIONS.

RESIDENTIAL USE IS 5.40, WHICH MAY BE INCREASED TO AS MUCH AS 7.20 WITH THE INCLUSION OF AFFORDABLE HOUSING UNITS PURSUANT TO ZR INCLUSIONARY HOUSING REGULATIONS. THE MAXIMUM PERMITTED FAR FOR COMMUNITY FACILITY USE IS 6.50. THE MAXIMUM PERMITTED FAR FOR COMMERCIAL AND MANUFACTURING USE IS 2.00. THE MAXIMUM PERMITTED FAR FOR ANY COMBINATION OF USES ON THE ZONING LOT IS LIMITED TO THE MAXIMUM PERMITTED RESIDENTIAL FAR.

PARKING REQUIREMENTS—THERE ARE NO ACCESSORY PARKING REQUIREMENTS FOR INCOME RESTRICTED DWELLING UNITS WITH HOUSEHOLD INCOMES EQUAL TO OR LESS THAN 80% OF THE AREA MEDIAN INCOME (AMI). THE MINIMUM NUMBER OF REQUIRED ACCESSORY PARKING SPACES PROVIDED FOR OTHER UNITS MUST BE NOT LESS THE 40% OF THE PROPOSED NUMBER OF SUCH DWELLING UNITS. THERE ARE NO ACCESSORY PARKING REQUIREMENTS FOR MOST COMMUNITY FACILITY AND COMMERCIAL USES, INCLUDING GENERAL RETAIL ESTABLISHMENTS. LOADING BERTHS MUST BE PROVIDED FOR COMMERCIAL RETAIL USES EXCEDING 8,000 SF OF ZONING FLOOR AREA. AN ONSITE BICYCLE PARKING SPACE MUST BE PROVIDED FOR NOT LESS THAN 50% OF PROPOSED DWELLING UNITS, AND ONE BICYCLE PARKING SPACE MUST BE PROVIDED FOR EACH 10,000 SF OF ZONING FLOOR AREA EXCEEDING 30,000 SF USED FOR RETAIL USE.

ALTA CERTIFICATION

2. COMMONWEALTH LAND TITLE INSURANCE COMPANY
3. CENTENNIAL BANK, ITS SUCCESSORS AND/OR ASSIGNS, AS THEIR INTEREST MAY APPEAR
4. SHERWOOD EQUITIES, ITS SUCCESSORS AND/OR ASSIGNS, AS THEIR INTEREST MAY APPEAR
5. SHERWOOD GERARD AVE LLC

"I HEREBY STATE THAT THIS PLAN IS BASED ON A FIELD SURVEY MADE BY ME OR UNDER MY IMMEDIATE SUPERVISION IN ACCORDANCE WITH NYSPLS CODE OF PRACTICE FOR LAND SURVEYS, AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF, AND IN MY PROFESSIONAL OPINION, CORRECTLY REPRESENTS THE CONDITIONS FOUND ON THE DATE OF THE FIELD SURVEY AT THE SUBJECT PROPERTY" AND

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(a), 7(b-1), 11, 12, 16 AND 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MARCH 15, 2019,

Signature:

PAUL/BARISHER

PROFESSIONAL LAND SURVEYOR

NY LIC. No. 050784-1

Date Description No.

REVISIONS

Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001

Langan Engineering, Environmental, Surveying

T: 212.479.5400 F: 212.479.5444 www.langan.com

440 EXTERIOR STREET
445 GERARD AVENUE
417 GERARD AVENUE
BLOCK No. 2351,
LOTS No. 3, No. 12 AND No. 20

BOROUGH OF BRONX

BRONX COUNTY
Drawing Title

AA, LB, JM PDF

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ALTA/ NSPS LAND TITLE SURVEY

Project No.

170487003

Date

03/29/19

Scale

1"=20'

Drawn By Checked By

Sheet 001 of 001

20 0 5 10 2 SCALE IN FEET

APPENDIX B

PREVIOUS ENVIRONMENTAL REPORTS

March 7, 2012

San Francisco HO

PHASE II SUBSURFACE INVESTIGATION

Chicago

Atlanta

Property Identification:

445 Gerard Avenue Bronx, New York 14051 Costa Mesa

AEI Project No. 304181

Dallas

Prepared for:

JP Morgan Chase Bank, N.A. 1111 Polaris Parkway, Mail Code OH1-1092 Columbus, Ohio 43240

Business Initiative Corporation of New York and/or US Small Business Administration c/o

Denver

Corporation 8280 College Parkway, Suite 204 Fort Myers, Florida 33919

Independent Development Services

Los Angeles

Miami

New York

Phoenix

Portland

San Jose

Prepared by:

AEI Consultants 30 Montgomery Street, Suite 220 Jersey City, New Jersey 07302 (201) 332-1844

the Bronx County Building

Bronx, New York 10451

851 Grand Concourse, Suite 123

National Presence

Regional Focus

Local Solutions



Environmental & Engineering Services

Wednesday, March 7, 2012

JP Morgan Chase Bank, N.A. 1111 Polaris Parkway, Mail Code OH1-1092 Columbus, Ohio 43240

Subject: Phase II Subsurface Investigation

445 Gerard Avenue Bronx, New York 14051 AEI Project No. 304181

Dear Sir/Madam:

AEI Consultants (AEI) is pleased to provide you with this report which describes the activities and results of the Phase II Subsurface Investigation (Phase II) performed at the above referenced property (subject property) (Figure 1: Site Location Map). This investigation was completed in general accordance with the authorized scope of services outlined in our signed proposal number 3844 dated January 10, 2012.

The purpose of the Phase II at the subject property was to evaluate conditions related to the reported presence of heating oil underground storage tanks (USTs) and the suspected historical auto repair operations that may have been conducted at the subject property as reported in a Phase I Environmental Site Assessment (Phase I) by AB Property Evaluations, Inc. (AB) in October 2010.

1.0 SITE DESCRIPTION

The subject property is a rectangular shaped parcel of land, approximately 0.25 acre in size, located at the southwest corner of Gerard Avenue and 146th Street, just east of the Major Deegan Expressway (I-87) in the Bronx, New York. The subject property is bordered by various commercial properties to the east, south, north and west. Development of the site, as it currently exists, was reported to be in the early 1930's. The subject property contains a single story commercial building structure with a partial basement area.

2.0 BACKGROUND

Phase I Environmental Site Assessment, prepared by AB (October 2010):

The Phase I for the subject property completed by AB made the following recommendations:

• The floor drainage system which includes an oil separator unit should be cleaned and properly maintained.

- Documentation should be obtained from the existing owner regarding the reported USTs abandonment which was reportedly performed at the subject property when the building was utilized by a taxi cab dispatch facility.
- The fill port located at grade along the building's north elevation requires further investigation to determine if this fuel fill connection port and associated piping can be removed.
- It is recommended that all exposed/abandoned fuel tank vent and instrumentation piping which is no longer in service is removed throughout the building.

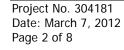
Based on AEI's review of the prior Phase I, the following items that would require additional investigation were identified:

- Former USTs: The subject property was formerly equipped with at least one or more USTs utilized in connection to a former taxi cab dispatch facility operating on the subject property from the 1930s until the 1970s. According to the current owner of the site, the USTs were reportedly abandoned (no abandonment or removal information provided) on the property. No information concerning the quantity, location or contents of the USTs was available. However, a fill port was identified along the northern boundary of the property (in the subject property sidewalk), and vent pipes were identified in the interior of the subject property building along the building's east wall. Based on the lack of information regarding any UST removals and the unknown age of these systems, it is possible that releases from these USTs have resulted in an impact to the subsurface of the subject property. Based on this information, the former presence of USTs on the subject property represents a recognized environmental condition.
- Former Auto Repair Operations: In addition to taxi cab dispatch operations, building permits included in AB's appendices indicate that the subject property may have been utilized for auto repair operations in the 1980s. Auto repair facilities typically store and utilize solvents and petroleum products on-site. Although no violations or major releases were noted by AB, the subject property building is equipped with a drainage system which leads to an oil/water separator on-site (location of separator not identified in AB report). Due to the subsurface nature of oil/water separators, the potential exists that they may act as a conduit to the subsurface of the subject property for any contaminants discharged to the drainage system. Based on the lack of information concerning detailed operations on the subject property, the unknown length of time auto repair operations occurred, the unknown hazardous waste handling procedures employed and the unknown age of the oil/water separator, the former use of the subject property as an auto repair facility with an oil/water separator drainage system represents a recognized environmental condition.

In order to address the items identified by AEI based on a review of the previous Phase I, AEI proposed to conduct the following activities in general accordance with the authorized scope of services as outlined in the proposal referenced above:

Former USTs:

- Conduct a geophysical survey utilizing GPR to determine the exact location of the USTs identified in the Phase I.
- Obtain a sidewalk opening permit through the New York City Department of Transportation (NYCDOT) for the proposed sidewalk drilling locations.





- Advance two (2) borings each in the area of the GPR identified USTs for a total of four (4) borings to approximately 16 feet below ground surface (bgs) or to refusal, whichever is encountered first. If no USTs are identified then the borings will be advanced in areas where the USTs were most likely located.
- Collect and analyze a total of four (4) soil samples for volatile organic compounds (VOCs) utilizing the New York State Department of Environmental Conservation (NYSDEC) Spill Technology and Remediation Series (STARS) Petroleum List via EPA Method 8260 and for semi-volatile organic compounds (SVOCs) utilizing the NYSDEC STARS Petroleum List via EPA Method 8270 at the UST locations. If groundwater is encountered then groundwater samples will be collected and analyzed in place of soil.

Former Auto Repair Operations:

- Advance four (4) borings in a grid-like pattern within the subject property building to approximately 16 feet bgs or to refusal, whichever is encountered first. One of the four borings will be located in the vicinity of the oil/water separator to address the potential for contamination from this source.
- Collect and analyze a total of four (4) soil samples for VOCs via EPA Method 8260, SVOCs via EPA Method 8270 and polychlorinated biphenyls (PCBs) via EPA Method 8082. If groundwater is encountered then groundwater samples will be collected and analyzed in place of soil.

3.0 INVESTIGATIVE EFFORTS

PRE-DRILLING ACTIVITIES

Tri-State Drilling Technologies, Inc. (Tri-State) was contracted to notify dig alert and to identify public utilities in the work area at least 72 hours prior to field activities. In addition, Tri-State obtained a sidewalk opening permit from the NYCDOT. A Site Specific Health and Safety Plan (HASP) was prepared and reviewed on site prior to field activities.

GEOPHYSICAL SURVEY

On February 1, 2012, Tri-State conducted the GPR survey where the UST was identified in the aforementioned Phase I. The GPR technician utilized a Radiodetection RD 1000 cart-mounted GPR unit and a Fisher TW-6 metallic locator to survey the area of concern.

The GPR survey identified no anomalies beneath the sidewalk that may have been indicative of a UST; however, during the Phase II activities, a fill port was identified inside the northeast portion of the subject property building approximately 15 feet from the sidewalk along Gerard Avenue. Site personnel informed AEI that that portion of the building was previously an outdoor turning area when the subject property was used as a taxi cab dispatch location. The area was subsequently enclosed, and the UST was reported to be abandoned and presently located within the building.

Project No. 304181 Date: March 7, 2012 Page 3 of 8



DRILLING AND SOIL SAMPLE COLLECTION

On February 1, 2012, eight (8) soil borings, AEI-B1 through AEI-B8, were advanced at the subject property (Figure 2: Soil Boring Locations) by Tri-State using a limited access direct-push drilling rig. The target depth of the borings was 16 feet bgs. Due to the bedrock geology of the area, only four of the borings were successful. These borings were advanced at the following locations:

- Borings AEI-B1 and AEI-B2 were advanced exterior of the north wall of the subject property building. Boring AEI-B1 was advanced approximately 15 feet to the north of the location of the UST that was identified within the subject property building. Boring AEI-B2 was advanced further west toward the rear of the building. Borings AEI-B1 and AEI-B2 reached a maximum depth of 14.5 feet bgs each where refusal was met.
- Borings AEI-B3 and AEI-B4 were advanced exterior of the east wall of the subject property building. Boring AEI-B3 was advanced approximately 15 feet to the east of the location of the UST that was identified within the subject property building and northeast from where the oil/water separator is located. Boring AEI-B4 was advanced further south along Gerard Avenue southeast from where the oil/water separator is located. Borings AEI-B3 and AEI-B4 reached maximum depth of 14 feet bgs and 5.5 feet bgs, respectively where refusal was met.
- Borings AEI-B5 through AEI-B8 were to be advanced in a grid pattern in the interior of the subject property building. Competent bedrock was encountered at each boring location area within the building including the area adjacent to the UST. Several attempts were made at each location, and the Geoprobe steel corer could not advance beyond the bedrock located immediately below the concrete slab of the subject property building. As such soil samples could not be collected from locations immediately adjacent to the UST or the oil/water separator.

Soil cores were collected with a 2" outer diameter stainless steel corer fitted with acetate liners. The borings were advanced in five-foot increments. After each advance, the corer was withdrawn and the acrylic liner containing the soil core was removed. Each soil core was measured and examined for odors or stains, and screened with a photoionization detector (PID). This information including the lithology of each core was recorded using the Unified Soil Classification System. A soil sample would be collected from the portion of the soil column that exhibited the highest PID reading or exhibited significant odors or staining.

The soil in each of the borings exhibited no odors or visual staining. There were no PID readings throughout each soil column. As such, soil samples were collected from the terminal depth at each boring location.

Appendix B: Boring Logs, provides details on the soils observed in each boring as well as soil screening details.

GROUNDWATER SAMPLE COLLECTION

Groundwater was not encountered at any of the soil boring locations.





BORING DESTRUCTION

Following completion of sample collection and removal of tooling, the borings were backfilled with drilling cuttings and hydrated bentonite chips and completed at the surface with asphalt cold patch or concrete to match the surrounding conditions.

LABORATORY ANALYSIS

The soil samples were labeled and placed into a cooler with ice and transferred under appropriate chain-of-custody documentation to Aqua Pro Tech Laboratories of Fairfield, New Jersey.

Laboratory analysis of the four (4) soil samples that were able to be collected (AEI-B1 through AEI-B4) consisted of the following:

- VOCs via EPA Method 8260.
- SVOCs via EPA Method 8270.
- PCBs via EPA Method 8082

4.0 FINDINGS

The New York State Department of Environmental Conservation (NYSDEC) has the responsibility for overseeing soil and groundwater cleanups which are managed under a variety of different regulatory programs. The results of this investigation were reviewed along with the applicable NYSDEC Recommended Soil Cleanup Objectives (RSCOs).

GEOLOGY AND HYDROGEOLOGY

Based on borings advanced during this investigation, the strata immediately below the surface beneath the sidewalks at the subject property is urban fill with fine silty sands. Deeper layers are comprised of clayey silt. The geology beneath the subject property building consists of competent bedrock. As described above the borings reached a maximum depth of 14.5 feet bgs along the sidewalk exterior of the north wall of the subject property building before meeting with refusal, and the borings advanced in the sidewalk exterior of the east wall of the building reached maximum depths of 14 feet bgs and 5.5 feet bgs, respectively, before meeting with refusal. The borings within the building met refusal immediately beneath the concrete slab at several locations within the building.

Boring Logs are presented in Appendix B.

SOIL SAMPLE ANALYTICAL RESULTS

The following information is a summary of the soil sample analytical test results. This information has also been included in Table 1. The laboratory analytical documentation is provided in Appendix C.

Project No. 304181 Date: March 7, 2012 Page 5 of 8



VO<u>Cs</u>

No VOCs were detected in the samples collected from borings AEI-B1 through AEI-B4.
 As discussed above, samples could not be collected at boring locations AEI-B5 through AEI-B8.

SVOCs

• Sample AEI-B2 contained low concentrations of the following SVOCs: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, biphenyl, bis(2-ethylhexyl)phthalate, carbazole, chrysene, dibenzo(a,h)anthracene, dibenzofuran, dimethylphthalate, di-n-octylphthalate, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, 2-methyl naphthalene, naphthalene, phenanthrene and pyrene. All of the identified SVOCs were below their respective NYSDEC RSCOs for industrial properties with the exception of benzo(a)pyrene. Samples AEI-B1, AEI-B3 and AEI-B4 also contained low concentrations of SVOCs; however the number of SVOC compounds were fewer than those found in AEI-B2 and their respective concentrations were lower.

PCBs

No PCBs were detected in the samples collected from borings AEI-B1 through AEI-B4.
 As discussed above, samples could not be collected at boring locations AEI-B5 through AEI-B8.

GROUNDWATER SAMPLE ANALYTICAL RESULTS

Groundwater was not encountered at any of the soil boring locations.

5.0 SUMMARY AND CONCLUSIONS

AEI completed a Phase II at the subject property to evaluate conditions related to the reported presence of heating oil USTs and the suspected historical auto repair operations that may have been conducted at the subject property as reported in a Phase I Environmental Site Assessment by AB in October 2010.

A total of eight (8) borings were advanced at the subject property for the collection of soil samples. As discussed above, refusal was met immediately beneath the subject property concrete slab floor at several attempted locations at each of the four (4) proposed interior sampling areas. Of the samples that were collected, the results were compared to the appropriate NYSDEC RSCOs.

Although the presence of SVOCs was detected in the soil samples that were collected, it appears they are not associated with a possible release from compounds associated with the UST as the two borings located in the vicinity of the UST (AEI-B1 and AEI-B3) contained low concentrations of SVOCs not typically associated with fuel oil or gasoline compounds. The SVOC compounds detected in borings AEI-B2, AEI-B3 and AEI-B4 were more consistent with components of asphalt or fly ash, both of which are commonly found in fill material in old urban areas such as New York City as well as the Bronx which is located adjacent to the East River, where fill material was historically utilized.

Project No. 304181 Date: March 7, 2012 Page 6 of 8



As previously discussed, the Geoprobe borings met refusal at each of the soil boring locations before reaching the target depth of 16 feet bgs. The maximum depth achieved was 14.5 feet bgs at two locations, and 14 feet bgs and 5.5 feet bgs at two other locations, respectively. The Geoprobe met refusal at at least 10 separate locations in the four proposed sampling areas within the subject property building including two locations adjacent to the UST that was identified and in the vicinity of the oil/water separator. Such findings are consistent with the granitic gneiss and schist geology that is common throughout the New York City area. Although uncommon, USTs have been found to be present in such material. To accommodate the UST, a "pocket" is chipped out of the rock formation. The UST is then installed and is contained in a natural vault.

Due to the geology of the area, AEI was unable to collect all of the samples that were proposed. Based on the geology, observations made in the field during the Phase II activities and the sampling results that were obtained, it does not appear that there has been any significant release to the subject property subsurface. The type of geology that is present would hinder migration of any releases that may have occurred and were not detected. Additionally, the potential for horizontal transport appears low in the shallow unconfined groundwater table, since perched groundwater was not present above the bedrock layer. Although groundwater may exist in fractured bedrock in the subject property area, the sampling efforts completed during this investigation could not assess for the presence of fractured bedrock and the potential for groundwater contamination. It should also be noted that the subject property has not been identified as a historical release site in previous Phase I investigations. Specifically, no releases cases (LUST or SPILLS) were initiated during the prior UST closure assessments.

Based on the above discussion and the results of this investigation, AEI does not recommend any further action for the subject property at this time. Although the concentrations of SVOCs that were detected are within NYSDEC RSCOs for industrial locations with the exception of benzo(a)pyrene, several exceed RSCOs for residential and commercial locations. If urban renewal projects where residential or commercial use is planned where the subject property is located, additional investigation should be conducted. In addition, if renovation or demolition of the building at the subject property is conducted in the future, AEI recommends that the UST and oil/water separator be removed from the ground in accordance with all applicable NYSDEC regulations and guidelines including the collection and analysis of post closure samples.

6.0 REPORT LIMITATION AND RELIANCE

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, subject to limitations inherent in this type of work, but it cannot be assumed that they are representative of areas not sampled. All conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in

Project No. 304181 Date: March 7, 2012 Page 7 of 8



accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work.

This investigation was prepared for the sole use and benefit of JP Morgan Chase Bank, N.A., the Business Initiative Corporation of New York and/or US Small Business Administration and the Independent Development Services Corporation. Neither this report, nor any of the information contained herein shall be used or relied upon for any purpose by any person or entity other than JP Morgan Chase Bank, N.A., the Business Initiative Corporation of New York and/or US Small Business Administration and the Independent Development Services Corporation.

If there are any questions regarding our investigation, please do not hesitate to contact AEI at 2011-332-1844.

Sincerely,

AEI Consultants

Michael Taormina

Senior Project Manager, CHMM

Lillian Cheng

Senior Project Manager

And

Paul Hinkston Vice President

Figures

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April 16, 2012

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Property Identification:

Jesse Shapiro & James Glass Corp. 445 Gerard Avenue Bronx, Bronx County, New York 10451

AEI Project No. 306199

Prepared for:

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Los Angeles

Miami

New York

Phoenix

Portland

San Jose

National Presence

Regional Focus

Local Solutions

PROJECT SUMMARY

Jesse Shapiro & James Glass Corp. 445 Gerard Avenue, Bronx, Bronx County, New York

R	eport Section	No Further Action	REC	HREC	BER	Recommended Action
2.1	Current use of subject property	Х				
2.2	Adjoining property information	Х				
3.1	Historical Summary	Х		X		
4.0	Regulatory Agency Records Review	Х				
5.0	Regulatory Database Records Review	Х		Х		
6.3	Previous Reports	Х		Х		
7.0	Site Inspection and Reconnaissance	Х				
7.2.1	Asbestos- Containing Materials				Х	
7.2.2	Lead-Based Paint				Х	
7.2.3	Radon	X			-	
7.2.4	Lead in Drinking Water	Х				
7.2.5	Mold	X				



EXECUTIVE SUMMARY

AEI Consultants (AEI) was retained by Business Initiative Corp. of New York to conduct a Phase I Environmental Site Assessment (ESA), in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 445 Gerard Avenue in the Bronx, Bronx County, New York. Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report.

PROPERTY DESCRIPTION

The subject property, which consists of a warehouse building, is located at the southwest corner of Gerard Avenue and 146th Street, just east of the Major Deegan Expressway (I-87) in an industrial area of the Bronx, New York. The property totals approximately 0.25 acres and is improved with a one-story building totaling approximately 10,000 square feet. The subject property formerly contained a partial basement area, which has since been filled with concrete. The building now resides on a concrete slab. The subject property is currently occupied by Jesse Shapiro & James Glass Corporation and Glass Town. On-site operations include the storage and distribution of glass. In addition to the subject property building, the property is improved with concrete sidewalks on the north and east sides.

The property was developed with the current improvements in 1931 for use as a garage. Prior to the construction of the building, the property was utilized as a storage yard for lumber since 1908. Prior to 1908, the subject property was undeveloped land. The subject property was utilized as a garage in 1931. Two 550-gallon buried gasoline tanks were noted on the south side of the property from 1931 until 1946. The property was briefly utilized as a warehouse for liquor cases in the early 1940s. By 1946, the subject property was utilized as a garage and auto repair facility until the 1980s. In 1947, the two southern gasoline USTs were no longer depicted on Sanborn maps, but another gasoline tank was depicted in the location of the current abandoned tank in the northeast area until 1980. In 1980, the subject property was utilized occupied by the current tenant, Jesse Shapiro & James Glass Corporation for the storage and distribution of glass.

The subject property was identified in the regulatory database as a Resource Conservation and Recovery Act (RCRA) Non-Generator (NonGen) site, a Facility Index System (FINDS) site, a Manifest site, and an Environmental (E) Designation site, and is further discussed in Section 5.1.

The immediately surrounding properties consist of the following:

Direction from Site	Address-Tenant/Use	
North	East 146 th Street followed by a vacant lot.	
South	Glass Town warehouse building (417 Gerard Avenue)	
East	Gerard Avenue followed by a warehouse building occupied by Mega Radio Communications (444 Gerard Avenue)	
West	Warehouse building occupied by Clear Channel Outdoor (440 Exterior Street)	

The adjoining sites to the south and east, 417 and 444 Gerard Avenue, were identified in the regulatory database as an E Designation site.



The adjacent intersection to the northeast, the intersection of Gerard Avenue and 146th Street, was identified in the regulatory database as a New York Spills (SPILLS) site. Please refer to Section 5.1 for further discussion of these listings.

Based upon topographic map interpretation, the direction of groundwater flow beneath the subject property is inferred to be to the west. Based on the United States Geological Survey (SGS) Active Groundwater Level Network, groundwater is presumed to be present at an estimated depth of 8 to 10 feet below ground surface (bgs).

FINDINGS

Recognized Environmental Conditions (RECs) are defined by the ASTM Standard Practice E1527-05 as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. AEI's assessment has revealed the following RECs associated with the subject property or nearby properties:

No on-site RECs were identified during the course of this assessment.

<u>Historical Recognized Environmental Conditions (HRECs)</u> are defined by the ASTM Standard Practice E1527-05 as an environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently. AEI's assessment has revealed the following HRECs associated with the subject property or nearby properties:

• The subject property was formerly equipped with several USTs utilized in connection to a former taxi cab dispatch facility operating on the subject property from the 1930s until the 1970s. According to the prior Phase I prepared by AB, the subject property building is equipped with a drainage system which leads to an oil/water separator on-site. According to the current owner of the site, the USTs were reportedly abandoned (no abandonment or removal information provided) on the property. No information concerning the capacity, location or contents of the USTs was available. However, a fill port was identified along the northern boundary of the property (in the subject property sidewalk), and vent pipes were identified in the interior of the subject property building along the building's east wall by a prior consultant, AB Property Evaluations, Inc. In order to address the reported abandoned UST, oil/water separator, and long history of automotive repair operations, AEI conducted a Phase II Subsurface Investigation, further discussed in Section 6.3.

Although the presence of SVOCs was detected in the soil samples that were collected, it appears they are not associated with a possible release from compounds associated with the UST as the two borings located in the vicinity of the UST (AEI-B1 and AEI-B3) contained low concentrations of SVOCs not typically associated with fuel oil or gasoline compounds. The SVOC compounds detected in borings AEI-B2, AEI-B3 and AEI-B4 were more consistent with components of asphalt or fly ash, both of which are commonly found in fill material in old urban areas such as New York City as well as the Bronx which is located adjacent to the East River, where fill material was historically utilized. Based on the above discussion and the results of this investigation, AEI did not recommend any further action for the subject property at this time. Although the concentrations of SVOCs that were detected are within NYSDEC RSCOs for industrial locations with the exception of benzo(a)pyrene, several



exceed RSCOs for residential and commercial locations. If urban renewal projects where residential or commercial use are planned for where the subject property is located, additional investigation should be conducted. In addition, if renovation or demolition of the building at the subject property is conducted in the future, AEI recommends that the USTs and oil/water separator be removed from the ground in accordance with all applicable NYSDEC regulations and guidelines including the collection and analysis of post closure samples. Therefore, the abandoned USTs and oil/water separator represent a historic recognized environmental concerns.

<u>De Minimis Environmental Conditions</u> include environmental concerns identified by AEI that warrant discussion but do not qualify as RECs, as defined by the ASTM Standard Practice E1527-05. AEI's assessment has revealed the following de minimis environmental conditions associated with the subject property or nearby properties:

 No on-site de minimis environmental conditions were identified during the course of this assessment.

<u>Business Environmental Risks (BERs)</u> include risks which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the subject property, not necessarily limited to those environmental issues required to be investigated in the standard ASTM scope. BERs may affect the liabilities and financial obligations of the client, the health & safety of site occupants, and the value and marketability of the subject property. AEI's assessment has revealed the following BERs associated with the subject property or nearby properties:

- Due to the age of the subject property building, there is a potential that asbestos-containing materials (ACMs) are present. All suspect ACMs were observed in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to AHERA sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs.
- Due to the age of the subject property building, there is a potential that lead-based paint (LBP) is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to lead-based paint in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

CONCLUSIONS, OPINIONS AND RECOMMENDATIONS

We have performed a Phase I Environmental Site Assessment for the property located at 445 Gerard Avenue in the Bronx, Bronx County, New York, in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312). Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report.



This assessment has revealed no evidence of RECs in connection with the property. AEI recommends no further investigations for the subject property at this time.

If urban renewal projects where residential or commercial use are planned for where the subject property is located, additional investigation should be conducted. In addition, if renovation or demolition of the building at the subject property is conducted in the future, AEI recommends that the USTs and oil/water separator be removed from the ground in accordance with all applicable NYSDEC regulations and guidelines including the collection and analysis of post closure samples.



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1.0 INTRODUCTION

This report documents the methods and findings of the Phase I Environmental Site Assessment (ESA) performed in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 445 Gerard Avenue in the Bronx, Bronx County, New York (Figure 1: Site Location Map, Figure 2: Site Map, and Appendix A: Property Photographs).

1.1 SCOPE OF WORK

The purpose of the Phase I Environmental Site Assessment is to assist the client in identifying potential environmental liabilities associated with the presence of any hazardous substances or petroleum products, their use, storage, and disposal at and in the vicinity of the subject property, as well as regulatory non-compliance that may have occurred at the subject property. Property assessment activities focused on: 1) a review of federal, state, tribal and local databases that identify and describe underground fuel tank sites, leaking underground fuel tank sites, hazardous waste generation sites, and hazardous waste storage and disposal facility sites within the ASTM approximate minimum search distance; 2) a property and surrounding site reconnaissance, and interviews with the past and present owners and current occupants and operators to identify potential environmental contamination; and 3) a review of historical sources to help ascertain previous land use at the site and in the surrounding area.

The goal of AEI Consultants in conducting the Phase I Environmental Site Assessment was to identify the presence or likely presence of any hazardous substances or petroleum products on the property that may indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum product into the soil, groundwater, or surface water of the property.

1.2 SIGNIFICANT ASSUMPTIONS

The following assumptions are made by AEI Consultants in this report. AEI Consultants relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, and personal interviews. AEI Consultants has reviewed and evaluated the thoroughness and reliability of the information derived from secondary sources including government agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, or personal interviews. It appears that all information obtained from outside sources and reviewed for this assessment is thorough and reliable. However, AEI cannot guarantee the thoroughness or reliability of this information.

Groundwater flow and depth to groundwater, unless otherwise specified by on-site well data, or well data from adjacent sites are assumed based on contours depicted on the United States Geological Survey topographic maps. AEI Consultants assumes the property has been correctly and accurately identified by the client, designated representative of the client, property contact, property owner, and property owner's representatives.



1.3 LIMITATIONS

Property conditions, as well as local, state, tribal and federal regulations can change significantly over time. Therefore, the recommendations and conclusions presented as a result of this study apply strictly to the environmental regulations and property conditions existing at the time the study was performed. Available information has been analyzed using currently accepted assessment techniques and it is believed that the inferences made are reasonably representative of the property. AEI Consultants makes no warranty, expressed or implied, except that the services have been performed in accordance with generally accepted environmental property assessment practices applicable at the time and location of the study.

Considerations identified by ASTM as beyond the scope of a Phase I ESA that may affect business environmental risk at a given property include the following: asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, mold, vapor intrusion, and high voltage lines. These environmental issues or conditions may warrant assessment based on the type of the property transaction; however, they are considered non-scope issues under ASTM Standard Practice E1527-05.

If requested by the client, these non-scope issues are discussed in Section 7.2. Otherwise, the purpose of this assessment is solely to satisfy one of the requirements for qualification of the innocent landowner defense, contiguous property owner or bona fide prospective purchaser under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). ASTM Standard Practice E1527-05 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) constitute the "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in:

- 1) 42 U.S.C § 9601(35)(B), referenced in the ASTM Standard Practice E1527-05.
- 2) Sections 101(35)(B) (ii) and (iii) of CERCLA and referenced in the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).
- 3) 42 U.S.C. 9601(40) and 42 U.S.C. 9607(q).

The Phase I Environmental Site Assessment is not, and should not be construed as, a warranty or guarantee about the presence or absence of environmental contaminants that may affect the property. Neither is the assessment intended to assure clear title to the property in question. The sole purpose of assessment into property title records is to ascertain a historical basis of prior land use. All findings, conclusions, and recommendations stated in this report are based upon facts, circumstances, and industry-accepted procedures for such services as they existed at the time this report was prepared (i.e., federal, state, and local laws, rules, regulations, market conditions, economic conditions, political climate, and other applicable matters). All findings, conclusions, and recommendations stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the property visit.

Responses received from local, state, or federal agencies or other secondary sources of information after the issuance of this report may change certain facts, findings, conclusions, or circumstances to the report.



A change in any fact, circumstance, or industry-accepted procedure upon which this report was based may adversely affect the findings, conclusions, and recommendations expressed in this report.

1.4 LIMITING CONDITIONS

The performance of this Phase I Environmental Site Assessment was limited by the following conditions:

- The User did not complete the ASTM User questionnaire or provide the User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this investigation.
- On March 20, 2012, The New York State Department of Health (NYSDOH) was contacted for information on the subject property in order to identify historical tenants, property use and/or hazardous materials handling. However, records were not available for inclusion in this report. Based on the quality of information obtained from other sources (historical resources, alternate agency records and Phase II data), this limitation is not expected to alter the findings of this assessment.

1.5 DATA GAPS AND DATA FAILURE

According to ASTM E1527-05, data gaps occur when the Environmental Professional is unable to obtain information required, despite good faith efforts to gather such information.

Data failure is one type of data gap. According to ASTM E1527-05 "data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met". Pursuant to ASTM Standards, historical sources are required to document property use back to the property's first developed use or back to 1940, whichever is earlier.

No data gaps were identified during the course of this assessment.

1.6 RELIANCE

All reports, both verbal and written, are for the benefit of Business Initiative Corp. of New York and the United States SBA. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by Business Initiative Corp. of New York on March 16, 2012. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.



2.0 SITE AND VICINITY DESCRIPTION

2.1 SITE LOCATION AND DESCRIPTION

The subject property, which consists of a warehouse building, is located at the southwest corner of Gerard Avenue and 146th Street, just east of the Major Deegan Expressway (I-87) in an industrial area of the Bronx, New York. The property totals approximately 0.25 acres and is improved with a one-story building totaling approximately 10,000 square feet. The subject property formerly contained a partial basement area, which has since been filled with concrete. The building now resides on a concrete slab. The subject property is currently occupied by Jesse Shapiro & James Glass Corporation and Glass Town. On-site operations include the storage and distribution of glass. In addition to the subject property building, the property is improved with concrete sidewalks on the north and east sides.

The subject property was identified in the regulatory database as a Resource Conservation and Recovery Act (RCRA) Non-Generator (NonGen) site, a Facility Index System (FINDS) site, a Manifest site, and an Environmental (E) Designation site, and is further discussed in Section 5.1.

The Assessor's Parcel Number (APN) for the subject property is Block 2351, Lot 12. According to Mr. Terry Rothman, Manager, heating and cooling systems on the subject property are fueled by natural gas and electricity provided by Consolidated Edison, and potable water and sewage disposal are provided by the City of New York.

Refer to Figure 1: Site Location Map, Figure 2: Site Map, and Appendix A: Property Photographs for site location.

2.2 SITE AND VICINITY CHARACTERISTICS

The subject property is located in an industrial area of the Bronx, New York. The immediately surrounding properties consist of the following:

Direction from	Address-Tenant/Use		
Site			
North	East 146 th Street followed by a vacant lot.		
South	Glass Town warehouse building (417 Gerard Avenue)		
East	Gerard Avenue followed by a warehouse building occupied by Mega Radio Communications (444 Gerard Avenue)		
West	Warehouse building occupied by Clear Channel Outdoor (440 Exterior Street)		

The adjoining sites to the south and east, 417 and 444 Gerard Avenue, were identified in the regulatory database as an E Designation site. The adjacent intersection to the northeast, the intersection of Gerard Avenue and 146th Street, was identified in the regulatory database as a New York Spills (SPILLS) site. Please refer to Section 5.1 for further discussion of these listings.



2.3 PHYSICAL SETTING

Geology:

According to information obtained from the US Geological Survey (USGS), the area surrounding the subject property is underlain by glacial deposits of the Middle Ordovician.

Based on a review of the US Department of Agriculture (USDA) Soil Survey for the area of the subject property, the soils in the vicinity of the subject property are classified as the Urban Land Series. Soils from this series are characterized as pavement, concrete, buildings, and other structures underlain by disturbed and natural soil materials. Because of the variability of the soil material, onsite investigation would be required to determine the specific soil composition at the subject property. See Appendix E for discussion of the results of the Phase II investigation conducted onsite in March 2012.

USGS Topographic Map:	Central Park, NY Quadrangle	
Nearest surface water to subject property:	Harlem River / 550 feet west	
Gradient Direction/Source:	West / Topographic map interpretation	
Estimated Depth to Groundwater/Source:	8 to 10 feet bgs / USGS	



3.0 HISTORICAL REVIEW OF SITE AND VICINITY

3.1 HISTORICAL SUMMARY

Reasonably ascertainable standard historical sources as outlined in ASTM Standard E1527-05 were used to determine previous uses and occupancies of the subject property that are likely to have led to RECs in connection with the subject property. A chronological summary of historical data found, including but not limited to aerial photographs, historic city directories, Sanborn fire insurance maps and agency records is as follows:

Date Range	Subject Property Description/Use	Source(s)
1891 – 1903	Undeveloped land	Sanborns
1908	Unimproved land utilized for lumber storage	Sanborns
1931 – 1935	Developed with the current subject building, labeled as a garage, with two 550-gallon buried gasoline USTs on the south side of the property	Sanborns, City Directories
1944	The current subject building is now utilized as a warehouse for the storage of liquor cases. The USTs remain onsite.	Sanborns
1946	The current subject building is now utilized as a taxi garage and repair facility. The USTs remain onsite.	Sanborns, City Directories
1947 – 1978	The current subject building is now utilized as a garage and repair facility. The two USTs on the south side of the property are no longer depicted. A gas tank is now located in the northeast corner of the building.	Sanborns, Aerials, City Directories
1980 – 1986	The current building remains utilized for garage and repair services. The UST in the northeast corner of the building is no longer depicted. The current tenant is now listed at the subject property.	Sanborns, Aerials, City Directories
1989 – 2007	The current subject building is listed as a manufacturing facility	Sanborns, Aerials, City Directories

According to historical sources, the current subject property building was constructed in 1931 for use as a garage. Prior to the construction of the building, the property was utilized as a storage yard for lumber since 1908. Prior to 1908, the subject property was undeveloped land. The subject property was utilized as a garage in 1931. Two 550-gallon buried gasoline tanks were noted on the south side of the property from 1931 until 1946. The property was briefly utilized as a warehouse for liquor cases in the early 1940s. By 1946, the subject property was utilized as a garage and auto repair facility until the 1980s. In 1947, the two southern gasoline USTs were no longer depicted on Sanborn maps, but another gasoline tank was depicted in the location of the current abandoned tank until 1980. In 1980, the subject property was utilized occupied by the current tenant, Jesse Shapiro & James Glass Corporation for the storage and distribution of glass.

Based on a review of historical sources, the following historical addresses were associated with the subject property: 459 Gerard Avenue, 112 East 146th Street, and 108 East 146th Street. These addresses were also researched as part of this assessment.



The long term historic use of the subject property as an auto repair facility with floor drains and gasoline tanks represents an environmental concern; however, as favorably addressed in the Phase II Subsurface Investigation, no further action is necessary at this time.

If available, copies of historical sources are provided in the report appendices.

3.2 AERIAL PHOTOGRAPH REVIEW

AEI Consultants reviewed aerial photographs of the subject property and surrounding area. Aerial photographs were reviewed for the following years: 1954, 1966, 1974, 1980, 1995, 2004, 2006, 2009, and 2011.

Date(s)	Scale	Subject Property Description	Surrounding Area Descriptions
1954	1:91	Appears developed with	North: 146 th Street followed by a lot utilized for
		current subject building;	car storage with a small commercial building
		vehicular access is available	South: Current commercial building
		from the north and east.	East: Gerard Avenue followed by an apparent
			commercial building
			West: Current commercial building
1966	1:91	No significant changes	North: No significant changes
			South: No significant changes
			East: Gerard Avenue followed by the current
			commercial building
			West: No significant changes
1974	1:91	No significant changes	North: 146 th Street followed by an unimproved
			lot utilized for car storage
			South: No significant changes
			East: No significant changes
			West: No significant changes
1980	1:91	No significant changes	North: No significant changes
			South: No significant changes
			East: No significant changes
			West: No significant changes
1995	1:91	No significant changes	North: 146 th Street followed by a small
			commercial building
			South: No significant changes
			East: No significant changes
			West: No significant changes
2004,	1:91	No significant changes	North: No significant changes
2006			South: No significant changes
			East: No significant changes
			West: No significant changes
2009	1:91	No significant changes	North: 146 th Street followed by an undeveloped
			lot
			South: No significant changes
			East: No significant changes
	1		West: No significant changes
2011	1:91	No significant changes	North: No significant changes
			South: No significant changes
			East: No significant changes
			West: No significant changes



3.3 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance maps were developed in the late 1800s and early 1900s for use as an assessment tool for fire insurance rates in urbanized areas. A search was made by Environmental Data Resources (EDR) of Sanborn Fire Insurance maps. Sanborn maps were available and reviewed for the years 1891, 1903, 1908, 1935, 1944, 1946, 1947, 1951, 1977, 1978, 1980, 1981, 1984, 1986, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 2001, 2002, 2003, 2004, 2005, 2006, and 2007.

Date(s)	Subject Property Description	Surrounding Area Descriptions
1891	Undeveloped land, with access from Gerard Avenue	North: Undeveloped land South: Undeveloped land East: Gerard Avenue, followed by undeveloped land an a small two- and three-story building West: Undeveloped land
1903	No significant changes, except access now available from East 146 th Street	North: East 146 th Street, followed by undeveloped land South: No significant changes East: Gerard Avenue, followed by undeveloped land West: No significant changes
1908	Unimproved land labeled as a portion of Church E. Gates & Co. Storage of Lumber	North: East 146 th Street followed by unimproved land labeled as Church E. Gates & Co. Lumber Yard South: Unimproved portion of Church E. Gates & Co. Storage of Lumber East: Gerard Avenue followed by a two- and threestory residence West: Unimproved portion of Church E. Gates & Co. Storage of Lumber
1935	Developed with the current commercial building labeled as a garage with a 67 car capacity. Two 550-gallon buried gas tanks are noted on the south side of the subject property.	North: East 146 th Street followed by several one- story buildings labeled for use by York Sign Frame Co. and Auto Junk Yard. A 550-gallon buried gasoline tank is noted in the northeast corner. South: The current commercial building labeled as a garage with two 550-gallon buried gasoline tanks. East: No significant changes West: A two-story office and residence with attached one-story garage. A 550-gallon buried gasoline tank is noted within the garage.
1944	No significant changes, except the current building is now labeled for use as a warehouse of liquor in cases.	North: Several one-story buildings labeled as an Auto Junk Yard. The buried gas tank is no longer depicted. South: No significant changes, except now labeled for Garage and Repair East: No significant changes, except there is now a small one-story garage behind the residence West: No significant changes
1946	No significant changes, except the current building is now labeled for use as a Taxi Garage and Repair	North: No significant changes South: No significant changes East: No significant changes West: No significant changes



		T
1947	No significant changes, except	North: No significant changes
	the current building is now	South: Current building is labeled as Private
	labeled as Private Garage and	Garage with two (2) gasoline tanks
	Repair. Only one gasoline tank	East: No significant changes
	is depicted, in the location of	West: No significant changes
	the current abandoned UST.	
1951	No significant changes	North: No significant changes
		South: No significant changes
		East: No significant changes
		West: One-story Private Garage with one gas tank
		depicted
1977	No significant changes	North: No significant changes, except only
		remaining buildings along east side of property
		South: Current warehouse labeled as Con Edison
		Garage. The gas tanks are no longer depicted.
		East: Gerard Avenue followed by the current
		commercial building labeled Con Edison offices and
		garage
		West: Current commercial building labeled as a
		warehouse, with the southern portion constructed in
		1974. The gas tanks are no longer depicted.
1978	No significant changes	North: No significant changes
		South: No significant changes
		East: No significant changes
		West: No significant changes
1980	Current one-story subject	North: No significant changes
	building labeled as Auto Repair.	South: No significant changes
	The gasoline tank is no longer	East: No significant changes
	depicted.	West: No significant changes
1981, 1984,	No significant changes	North: No significant changes
1986		South: No significant changes
		East: No significant changes
		West: No significant changes
1989	Current subject building labeled	North: No significant changes
	for manufacturing	South: No significant changes
		East: Gerard Avenue followed by the current
		commercial building labeled for offices and
		manufacturing
		West: No significant changes
1991, 1992,	No significant changes	North: No significant changes
1993, 1994		South: No significant changes
		East: No significant changes
		West: No significant changes
1995	No significant changes	North: No significant changes
		South: Current commercial building
		East: No significant changes
		West: No significant changes
1996, 1998,	No significant changes	North: No significant changes
2001, 2002,		South: No significant changes
2003, 2004,		East: No significant changes
2005, 2006,		
2005, 2006, 2007		West: No significant changes



3.4 CITY DIRECTORIES

A search of historic city directories was conducted for the subject property by EDR. Directories were available and reviewed for the years 1927, 1931, 1940, 1949, 1956, 1961, 1965, 1971, 1976, 1983, 1993, 2000, and 2005. The following table summarizes the results of the city directory search.

City Directory Search Results

Date(s)	Occupant Listed
1927	Gehn Harry Auto Co.
1931	Not listed
1940	Gehn Harry auto parts
	Harrigan Auto Parts Co Inc
	Philco Sales & Service Corp radios
1949	Delmart Service Corp Garage
1956 – 1961	Super Operating Corp
1965	Super Adjustment Co
	Super Operating Corp
1971	Lenox Maintenance Corp
1976	Kustom Auto Collision
1983	A Stone Services
	Jesse Shapiro & James Inc
	Stone Services Inc
1993	A Stone Services
	AAA Glass & Mirror Supplies
	All Hands Disposable Inc
	Jesse Shapiro & James Glass Corp
	Shapiro & James Jesse Glass Corp
	Stone Services Inc
2000	AAA Glass & Mirror Supplies
	Jesse Shapiro & James
	Shapiro & James Crp
2005	AAA Glass & Mirror Supplies
	Jesse Shapiro & James Glass

The subject property was utilized by auto repair facilities from at least 1927 until circa 1970s. The long history of auto repair operations at the subject property represents a significant environmental concern; however, soil sampling performed in a prior Phase II report did not find any evidence of impacts from the historical operations at the subject property.

3.5 HISTORICAL TOPOGRAPHIC MAPS

In accordance with our approved scope of services, historical topographic maps were not reviewed as a part of this assessment.

3.6 CHAIN OF TITLE

In accordance with our approved scope of services, a Chain of Title search was not performed as part of this assessment.



4.0 REGULATORY AGENCY RECORDS REVIEW

4.1 REGULATORY AGENCIES

Local and state agencies, such as environmental health departments, fire prevention bureaus, and building and planning departments are contacted to identify any current or previous reports of hazardous materials use, storage, and/or unauthorized releases that may have impacted the subject property. In addition, information pertaining to Activity and Use Limitations (AULs), defined as legal or physical restrictions, or limitations on the use of, or access to, a site or facility, is requested.

4.1.1 HEALTH DEPARTMENT

On March 20, 2012, AEI contacted the New York State Department of Health (NYSDOH) for information on the subject property and nearby sites of concern. Files at this agency may contain information regarding hazardous materials storage, as well as information regarding unauthorized releases of petroleum hydrocarbons or other contaminants that may affect the soil or groundwater in the area.

As of this writing, no response has been received from the NYSDOH. Upon receipt of pertinent documents, AEI will update this report if issues of environmental concern are noted.

4.1.2 FIRE DEPARTMENT

On March 20, 2012, AEI contacted the Fire Department of New York (FDNY) for information on the subject property to identify any evidence of previous or current hazardous material usage.

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the FDNY.

4.1.3 BUILDING DEPARTMENT

On March 20, 2012, AEI contacted the New York City Department of Buildings (NYCDOB) for information on the subject property in order to identify historical tenants and property use.

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the NYCDOB.

4.1.4 PLANNING DEPARTMENT

On March 20, 2012, AEI contacted the New York City Planning Department (NYCPD) for information on the subject property in order to identify AULs associated with the subject property.

No information indicating the existence of AULs was on file for the subject property with the NYCPD.

4.1.5 ASSESSOR OFFICE

On March 20, 2012, AEI accessed the New York City assessor's database for information on the subject property in order to determine the earliest recorded date of development and use.



According to the New York City assessor's database, the earliest recorded date of development on subject property was 1931, and the subject property was utilized for industrial/manufacturing purposes.

4.1.6 DEPARTMENT OF OIL AND GAS

Department of Oil and Gas (DOG) maps concerning the subject property and nearby properties were reviewed. DOG maps contain information regarding oil and gas development.

According to the DOG map, there are no oil or gas wells within 500 feet of the subject property. No environmental concerns were noted during the DOG map review.

4.1.7 OTHER AGENCIES SEARCHED

On March 20, 2012, AEI contacted the New York State Department of Environmental Concern (NYSDEC) for information regarding ASTs, USTs, storage of hazardous chemicals, chemical and solid waste storage, spills or releases, groundwater or soil contamination, groundwater monitoring data or sampling records, site remediation, fill materials, and/or environmental violations.

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the NYSDEC. In addition, the subject property was not identified on the NYSDEC's online Spills database.



5.0 REGULATORY DATABASE RECORDS REVIEW

AEI contracted Environmental Data Resources (EDR) to conduct a search of federal, state, tribal, and local databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-05 are summarized in the following table. A copy of the regulatory database report is included in Appendix B of this report.

The subject property was identified in the databases reviewed and is further discussed below.

In determining if a site is a potential environmental concern to the subject property in the records summary table below, AEI has applied the following criteria to classify the site(s) as low concern: 1) the site(s) only hold an operating permit (which does not imply a release), 2) the site(s) have been granted "No Further Action" by the appropriate regulatory agency, and/or 3) based upon AEI's review, the distance and/or topographic position relative to the subject property reduce the level of risk associated with the site(s).

5.1 RECORDS SUMMARY

Database	Search Distance	Subject Property	Total Number	Potential Environmental Concern to the Subject
	(Miles)	Listed	of	Property
			Listings	(Yes/No)
NPL	1	No	0	
DELISTED NPL	0.5	No	0	
CERCLIS	0.5	No	0	
CERCLIS NFRAP	0.5	No	0	
RCRA CORRACTS	1	No	0	
RCRA-TSD	0.5	No	0	
RCRA LG-GEN, SM-GEN, CESQGs, VGN, NLR	TP/ADJ	No	0	
US ENG CONTROLS	TP	No	0	
US INST CONTROLS	TP	No	0	
ERNS	TP	No	0	
STATE/TRIBAL HWS	1	No	1	No, based on the relative distance from the subject property and inferred direction of groundwater flow.
STATE/TRIBAL SWLF	0.5	No	2	No, based on relative distance from the subject property and/or inferred direction of groundwater flow.



Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Potential Environmental Concern to the Subject Property (Yes/No)
STATE/TRIBAL REGISTERED STORAGE TANKS	TP/ADJ	No	0	
STATE/TRIBAL LUST/LTANKS	0.5	No	49	No, based on closed regulatory status, relative distance from the subject property, and/or inferred direction of groundwater flow.
STATE/TRIBAL ENG-INST CONTROLS	TP	No	0	
STATE/TRIBAL VCP	0.5	No	0	
STATE/TRIBAL BROWNFIELD	0.5	No	1	No, based on relative distance from the subject property and inferred direction of groundwater flow.
ORPHAN	N/A	No	20	None of the identified orphan sites are located in the immediate vicinity (500-feet) of the subject property, and therefore, these sites are not expected to represent a significant environmental concern.
NON-ASTM DATABASES	TP/ADJ	Yes	6	The subject property and adjacent sites are discussed below.

Site Name: Stone Services Inc.

Database(s): RCRA-NonGen, FINDS, MANIFEST

Address: 445 Gerard Avenue Distance: Subject Property Direction: Subject Property

Comments:

<u>RCRA</u> Program identifies and tracks hazardous waste from the point of generation to the point of disposal. Non-GEN, or non-generators, are facilities that do not presently generate hazardous waste.

According to the regulatory database, this site has been a non-generator since January 1, 2007.
This site was formerly listed as a Non-Generator on January 1, 2006, a Small Quantity Generator
on July 14, 1999, and a Large Quantity Generator on April 28, 1989. No violations were reported
in association with these listings. Based on the lack of violations reported, this listing is not
expected to represent a significant environmental concern.

<u>FINDS</u> is typically a pointer to other databases, and is used as a tracking tool by the US EPA and State agencies. It is a compilation of the following lists: Permit Compliance System (PCS), Aerometric Information Retrieval System (AIRS), the enforcement document used to manage and track information on civil judicial enforcement cases (Docket), Federal Underground Injection Control (FURS), the criminal docket system used to track criminal enforcement actions for all environmental statutes (C-Docket), Federal Facilities Information System (FFIS), state environmental laws and



statutes (State), and the PCB activity data system (PADS).

• This property is listed as a FINDS site in association with the above listing. No further information was provided under this listing. Based on the nature of this listing, it is not expected to represent a significant environmental concern.

<u>Manifest</u> lists and tracks hazardous waste from the generator through transporters to a TSD facility.

According to the regulatory database, various hazardous wastes were transported from this
property 50 times in New York between 1989 and 1995. No violations were listed in association
with these manifests. Documentation of proper storage, transfer, and disposal of hazardous
materials is not considered to represent a significant environmental concern.

Site Name: Lot 12, Tax block 2351 Database(s): E DESIGNATION Address: 445 Gerard Avenue Distance: Subject Property Direction: Subject Property

Comments:

<u>Environmental (E) Designation</u> listings ensure that sampling and remediation take place on the subject properties and would avoid any significant impacts related to hazardous materials at these locations. The E designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The E designations also include a mandatory construction-related health and safety plan which must be approved by the NYCDEP.

• According to the regulatory database, this site is listed under E Number E-227, which became effective June 30, 2009 and is due to air quality for #2 or #4 fuel oil or natural gas for HVAC systems, exhaust stack location limitations, hazardous materials Phase I and Phase II Testing Protocol, and window wall attenuation and alternate ventilation. Based on the results of soil sampling activities conducted by AEI during the Phase II investigation, the presence of low concentrations of semivolatile organic compounds (SVOCs) are not typically associated with fuel oil or gasoline compounds and are more consistent with components of asphalt or fly ash, commonly found in fill material in old urban areas such as New York City. Therefore, this listing does not represent a significant environmental concern. However, if urban renewal projects where residential or commercial use are planned for where the subject property is located, additional investigation should be conducted.

Site Name: Manhole 4505 Database(s): NY SPILLS

Address: West Gerard Ave / 146th Street

Distance: Adjacent Direction: Northeast

Comments:

<u>Spills</u> is a listing of sites at which chemical and petroleum spill incidents that may have impacted waters of the state occurred and were reported to the NYSDEC.

According to the regulatory database, a release was reported at this site on October 7, 2006 due
to a equipment failure, which resulted in a release of dielectric fluid. Corrective action was
conducted and the release was granted case closure on August 20, 2007. Based on the closed
regulatory status, this release is not expected to represent a significant environmental concern.



Site Name: Lot 20, Tax block 2351 Database(s): E DESIGNATION Address: 417 Gerard Avenue

Distance: Adjoining Direction: South

Comments:

<u>Environmental (E) Designation</u> listings ensure that sampling and remediation take place on the subject properties and would avoid any significant impacts related to hazardous materials at these locations. The E designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The E designations also include a mandatory construction-related health and safety plan which must be approved by the NYCDEP.

According to the regulatory database, this site is listed under E Number E-227, which became effective June 30, 2009 and is due to air quality for #2 or #4 fuel oil or natural gas for HVAC systems, exhaust stack location limitations, hazardous materials Phase I and Phase II Testing Protocol, and window wall attenuation and alternate ventilation. Based on the results of soil sampling activities conducted by AEI on the subject property (discussed above), this listing does not represent a significant environmental concern to the subject property.

Site Name: Lot 5, Tax block 2350 Database(s): E DESIGNATION Address: 444 Gerard Avenue

Distance: Adjacent Direction: East

Comments:

<u>Environmental (E) Designation</u> listings ensure that sampling and remediation take place on the subject properties and would avoid any significant impacts related to hazardous materials at these locations. The E designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The E designations also include a mandatory construction-related health and safety plan which must be approved by the NYCDEP.

According to the regulatory database, this site is listed under E Number E-227, which became
effective June 30, 2009 and is due to air quality for #2 or #4 fuel oil or natural gas for HVAC
systems, exhaust stack location limitations, and hazardous materials Phase I and Phase II Testing
Protocol. Based on the results of soil sampling activities conducted by AEI on the subject property
(discussed above), this listing does not represent a significant environmental concern to the
subject property.



6.0 INTERVIEWS AND USER PROVIDED INFORMATION

6.1 INTERVIEWS

Pursuant to ASTM E1527-05, the following interviews were performed during this investigation in order to obtain information indicating RECs in connection with the subject property.

6.1.1 INTERVIEW WITH OWNER

The subject property owner, Mr. James Maloney, was contacted on April 3, 2012. Mr. Maloney has been associated with the subject property since approximately 1989. Mr. Maloney was asked if he was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or				
petroleum products in, on, or from the property.		Yes	X	No
Any pending, threatened or past administrative proceedings relevant to				
hazardous substances or petroleum products in, on, or from the property.		Yes	X	No
Any notices from any governmental entity regarding any possible violation of				
environmental laws or possible liability relating to hazardous substances or				
petroleum products.		Yes	X	No
Any incidents of flooding, leaks, or other water intrusion, and/or complaints				
related to indoor air quality.		Yes	X	No

6.1.2 INTERVIEW WITH KEY SITE MANAGER

The key site manager, Mr. Terry Rothman, was contacted during the site inspection on April 3, 2012. Mr. Rothman has been associated with the subject property since approximately 1989. Mr. Rothman provided general information regarding historic and current operations at the subject property. Mr. Rothman was asked if he was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or				
petroleum products in, on, or from the property.		Yes	Χ	No
Any pending, threatened or past administrative proceedings relevant to				
hazardous substances or petroleum products in, on, or from the property.		Yes	X	No
Any notices from any governmental entity regarding any possible violation of				
environmental laws or possible liability relating to hazardous substances or				
petroleum products.		Yes	Χ	No
Any incidents of flooding, leaks, or other water intrusion, and/or complaints				
related to indoor air quality.		Yes	Χ	No

6.1.3 PAST OWNERS, OPERATORS AND OCCUPANTS

Interviews with past owners and occupants regarding historical onsite operations were not reasonably ascertainable. However, based on information obtained from other sources including historical resources, it is likely that the information provided by past owners and operators would have been duplicative.

6.1.4 INTERVIEW WITH OTHERS

Information obtained during interviews with local government officials is incorporated into the appropriate segments of this section.



6.2 USER PROVIDED INFORMATION

User provided information is intended to help identify the possibility of RECs in connection with the subject property. According to ASTM E1527-05 and EPA's AAI Rule, certain items should be researched by the prospective landowner or grantee, and the results of such inquiries may be provided to the environmental professional. The responsibility for qualifying for Landowner Liability Protections (LLPs) by conducting the inquiries ultimately rests with the User, and providing the information to the environmental professional would be prudent if such information is available.

The User did not complete the ASTM User questionnaire or provide the User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this assessment.

6.3 Previous Reports and Other Provided Documentation

Documentation was provided to AEI by the Client during this assessment. A summary of this information follows:

Environmental Assessment, prepared by AB Property Evaluations, Inc. (October 2011)

At the time of AB Property Evaluations, Inc.'s (AB) site inspection, the subject property was developed with the current subject building and for similar use as observed by AEI. AB determined that the subject property was developed in the 1930s and utilized as a taxi cab dispatch facility until the 1970s. Since then, it has been utilized as a mirror and glass fabrication facility. AB observed a fill port at grade along the north elevation, vent stacks along the inside exterior wall (east elevation), and control valve apparatus within the building on the east wall. No fuel storage tanks are registered for the subject property with the NYSDEC Petroleum Bulk Storage Listing. AB identified the subject property (Stone Services Inc.) in the regulatory database for reportedly generating spent halogenated and non-halogenated solvents in 1989, 1990, and 1998. The subject property was also identified on the E designation database. AB made the following recommendations:

- The floor drainage system which includes an oil separator unit should be cleaned and properly maintained.
- Documentation should be obtained from the existing owner regarding the reported USTs abandonment which was reportedly performed at the subject property when the building was utilized by a taxi cab dispatch facility.
- The fill port located at grade along the building's north elevation requires further investigation to determine if this fuel fill connection port and associated piping can be removed.
- It is recommended that all exposed/abandoned fuel tank vent and instrumentation piping which is no longer in service is removed throughout the building.

Phase II Subsurface Investigation, prepared by AEI Consultants (March 7, 2012)

AEI Consultants (AEI) completed a Phase II Subsurface Investigation to address the concerns identified in AB's Environmental Assessment.



In order to address the items identified by AEI based on a review of AB's Phase I, AEI proposed to conduct the following activities in general accordance with the authorized scope of services as outlined in the proposal referenced above:

Former USTs:

- Conduct a geophysical survey utilizing GPR to determine the exact location of the USTs identified in the Phase I.
- Obtain a sidewalk opening permit through the New York City Department of Transportation (NYCDOT) for the proposed sidewalk drilling locations.
- Advance two (2) borings each in the area of the GPR identified USTs for a total of four (4) borings to approximately 16 feet below ground surface (bgs) or to refusal, whichever is encountered first. If no USTs are identified then the borings will be advanced in areas where the USTs were most likely located.
- Collect and analyze a total of four (4) soil samples for volatile organic compounds (VOCs) utilizing the New York State Department of Environmental Conservation (NYSDEC) Spill Technology and Remediation Series (STARS) Petroleum List via EPA Method 8260 and for semi-volatile organic compounds (SVOCs) utilizing the NYSDEC STARS Petroleum List via EPA Method 8270 at the UST locations. If groundwater is encountered then groundwater samples will be collected and analyzed in place of soil.

Former Auto Repair Operations:

- Advance four (4) borings in a grid-like pattern within the subject property building to approximately 16 feet bgs or to refusal, whichever is encountered first. One of the four borings will be located in the vicinity of the oil/water separator to address the potential for contamination from this source.
- Collect and analyze a total of four (4) soil samples for VOCs via EPA Method 8260, SVOCs via EPA Method 8270 and polychlorinated biphenyls (PCBs) via EPA Method 8082. If groundwater is encountered then groundwater samples will be collected and analyzed in place of soil.

A total of eight (8) borings were advanced at the subject property for the collection of soil samples. As discussed above, refusal was met immediately beneath the subject property concrete slab floor at several attempted locations at each of the four (4) proposed interior sampling areas. Of the samples that were collected, the results were compared to the appropriate NYSDEC RSCOs.

Although the presence of SVOCs was detected in the soil samples that were collected, it appears they are not associated with a possible release from compounds associated with the UST as the two borings located in the vicinity of the UST (AEI-B1 and AEI-B3) contained low concentrations of SVOCs not typically associated with fuel oil or gasoline compounds. The SVOC compounds detected in borings AEI-B2, AEI-B3 and AEI-B4 were more consistent with components of asphalt or fly ash, both of which are commonly found in fill material in old urban areas such as New York City as well as the Bronx which is located adjacent to the East River, where fill material was historically utilized.

The Geoprobe borings met refusal at each of the soil boring locations before reaching the target depth of 16 feet bgs. The maximum depth achieved was 14.5 feet bgs at two locations, and 14 feet bgs and 5.5 feet bgs at two other locations, respectively. The Geoprobe met refusal at



least 10 separate locations in the four proposed sampling areas within the subject property building including two locations adjacent to the UST that was identified and in the vicinity of the oil/water separator. Such findings are consistent with the granitic gneiss and schist geology that is common throughout the New York City area. Although uncommon, USTs have been found to be present in such material. To accommodate the UST, a "pocket" is chipped out of the rock formation. The UST is then installed and is contained in a natural vault.

Due to the geology of the area, AEI was unable to collect all of the samples that were proposed. Based on the geology, observations made in the field during the Phase II activities and the sampling results that were obtained, it does not appear that there has been any significant release to the subject property subsurface. The type of geology that is present would hinder migration of any releases that may have occurred and were not detected. Additionally, the potential for horizontal transport appears low in the shallow unconfined groundwater table, since perched groundwater was not present above the bedrock layer. Although groundwater may exist in fractured bedrock in the subject property area, the sampling efforts completed during this investigation could not assess for the presence of fractured bedrock and the potential for groundwater contamination. It should also be noted that the subject property has not been identified as a historical release site in previous Phase I investigations. Specifically, no releases cases (LUST or SPILLS) were initiated during the prior UST closure assessments.

Based on the above discussion and the results of this investigation, AEI did not recommend any further action for the subject property. Although the concentrations of SVOCs that were detected are within NYSDEC RSCOs for industrial locations, with the exception of benzo(a)pyrene, several exceed RSCOs for residential and commercial locations. If urban renewal projects where residential or commercial use are planned where the subject property is located, additional investigation should be conducted. In addition, if renovation or demolition of the building at the subject property is conducted in the future, AEI recommended that the UST and oil/water separator be removed from the ground in accordance with all applicable NYSDEC regulations and guidelines including the collection and analysis of post closure samples.

Copies of these reports are appended.



7.0 SITE INSPECTION AND RECONNAISSANCE

On April 3, 2012, a site reconnaissance of the subject property and adjacent properties was conducted by Ms. Lindsay Glassman of AEI in order to obtain information indicating the likelihood of RECs at the subject property and adjacent properties as specified in ASTM Standard Practice E1527-05 §8.4.2, 8.4.3 and 8.4.4. During the onsite reconnaissance, AEI was accompanied by Mr. Terry Rothman, Site Manager. AEI inspected all areas of the subject property building.

7.1 SUBJECT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation	
	Х	Hazardous Substances and/or Petroleum Products in Connection with Property Use	
Х		Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs / USTs)	
	Х	Hazardous Substance and Petroleum Product Containers and Unidentified Containers not in Connection with Property Use	
	X	Unidentified Substance Containers	
	Х	Electrical or Mechanical Equipment Likely to Contain Fluids	
	Х	Interior Stains or Corrosion	
	Х	Strong, Pungent or Noxious Odors	
	Х	Pools of Liquid	
Х		Drains, Sumps and Clarifiers	
	Х	Pits, Ponds and Lagoons	
	Х	Stained Soil or Pavement	
	Х	Stressed Vegetation	
	Х	Solid Waste Disposal or Evidence of Fill Materials	
	Х	Waste Water Discharges	
	Х	Wells	
	Х	Septic Systems	
	Х	Other	

The subject property is currently occupied by Jesse Shapiro & James Glass Corporation. On-site operations consist of storage and distribution of glass. The above identified observed items are further discussed below.

ABOVEGROUND & UNDERGROUND HAZARDOUS SUBSTANCE OR PETROLEUM PRODUCT STORAGE TANKS (ASTs / USTs)

The subject property was formerly equipped with at least one or more USTs utilized in connection to a former taxi cab dispatch facility operating on the subject property from the 1930s until the 1970s. According to the current owner of the site, the USTs were reportedly abandoned (no abandonment or removal information provided) on the property. No information concerning the quantity, location or contents of the USTs was available. However, a fill port was identified along the northern boundary of the property (in the subject property sidewalk), and vent pipes were identified in the interior of the subject property building along the building's east wall by a prior consultant, AB Property Evaluations, Inc.



In order to address the reported abandoned UST, AEI conducted a Phase II Subsurface Investigation which did not identify any contamination relating to the tanks, as described above in Section 6.3.

If renovation or demolition of the building at the subject property is conducted in the future, AEI recommends that the USTs and oil/water separator be removed from the ground in accordance with all applicable NYSDEC regulations and guidelines including the collection and analysis of post closure samples. Therefore, the abandoned USTs do not represent a significant environmental concern.

DRAINS, SUMPS AND CLARIFIERS

According to the prior Phase I prepared by AB, the subject property building is equipped with a drainage system which leads to an oil/water separator on-site (location of separator not identified in AB report). Due to the subsurface nature of oil/water separators, the potential exists that they may act as a conduit to the subsurface of the subject property for any contaminants discharged to the drainage system. In order to address the reported oil/water separator, AEI conducted a Phase II Subsurface Investigation, as described above in Section 6.3. As discussed above, AEI did not recommend any further action for the subject property based on the results of the subsurface investigation; therefore, the presence of the oil/water separator does not indicate a significant environmental concern at this time.

7.2 Non-ASTM Services

7.2.1 ASBESTOS-CONTAINING BUILDING MATERIALS

OSHA

For buildings constructed prior to 1981, the Code of Federal Regulations (29 CFR 1926.1101 and 29 CFR 1910.1001) define presumed asbestos-containing material (PACM) as 1. Thermal System Insulation (TSI), e.g., boiler insulation, pipe lagging, fireproofing; and 2. Surfacing Materials, e.g., acoustical ceilings. Building owners/employers are responsible for locating the presence and quantity of PACM. Building Owners/employers can rebut installed material as PACM by either having an inspection in accordance with Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763, Subpart E) or hiring an accredited inspector to take bulk samples of the suspect material.

Typical materials not covered by the presumptive rule include but are not limited to: floor tiles and adhesives, wallboard systems, siding and roofing. Building materials such as wallboard systems may contain asbestos but unless a building owner/employer has specific knowledge or should have known through the exercise of due diligence that these other materials contain asbestos, the standard does not compel the building owner to sample these materials.

NESHAP

The applicability of the EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Chapter 61, Subpart M) apply to the owner or operator of a facility where an inspection for the presence of asbestos-containing materials (ACM), including Category I (asbestos containing packings, gaskets, resilient floor coverings and asphalt roofing products), and Category II (all remaining types of non-friable asbestos containing material not included in



Category I that when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure), non-friable ACM must occur prior to the commencement of demolition or renovation activities. NESHAP defines ACM as any material or product that contains *greater than* 1% asbestos. It should be noted that the NESHAP regulation applies to all facilities regardless of construction date, including: 1. Any institutional, commercial, public, industrial, or residential structure, installation, or building; 2. Any ship; and 3. Any active or inactive waste disposal site. This requirement is typically enforced by the EPA or by local air pollution control/air quality management districts.

The information below is for general informational purposes only and does not constitute an asbestos survey. In addition, the information is not intended to comply with federal, state or local regulations in regards to ACM.

Due to the age of the subject property building, there is a potential that ACMs are present. The condition and friability of the identified suspect ACMs is noted in the following table:

Suspect Asbestos Containing Materials (ACMs)

Material	Location	Friable	Condition
Ceiling tiles	Interior of building	Yes	Good
Roofing Systems	Roof	Not Inspected	Not Inspected

All observed suspect ACMs were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to AHERA sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs.

7.2.2 LEAD-BASED PAINT

Lead-based paint (LBP) is defined as any paint, varnish, stain, or other applied coating that has ≥1 mg/cm² (5,000 µg/g or 5,000 ppm) or more of lead by federal guidelines; state and local definitions may differ from the federal definitions in amounts ranging from 0.5 mg/cm² to 2.0 mg/cm². Section 1017 of the Housing and Urban Development (HUD) Guidelines, Residential Lead-Based Paint Hazard Reduction Act of 1992, otherwise known as "Title X", defines a LBP hazard is "any condition that causes exposure to lead that would result in adverse human health effects" resulting from lead-contaminated dust, bare, lead-contaminated soil, and/or lead-contaminated paint that is deteriorated or present on accessible, friction, or impact surfaces. Therefore, under Title X, intact lead-based paint on most walls and ceilings would not be considered a "hazard", although the paint should be maintained and its condition and monitored to ensure that it does not deteriorate and become a hazard. Additionally, Section 1018 of this law directed HUD and EPA to require the disclosure of known information on lead-based paint and lead-based paint hazards before the sale or lease of most housing built before 1978. Most private housing, public housing, federally owned or subsidized housing are affected by this rule.

Lead-containing paint (LCP) is defined as any paint with any detectable amount of lead present in it. It is important to note that LCP may create a lead hazard when being removed. The condition of these materials must be monitored when they are being disturbed. In the event LCP is subject to abrading, sanding, torching and/or cutting during demolition or renovation activities, there may be regulatory issues that must be addressed.



The information below is for general informational purposes only and does not constitute a lead hazard evaluation. In addition, the information is not intended to comply with federal, state or local regulations in regards to lead-containing paints.

In buildings constructed after 1978, it is unlikely that LBP is present. Structures built prior to 1978 and especially prior to the 1960's should be expected to contain LBP.

Due to the age of the subject property building, there is a potential that lead-based paint (LBP) is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to lead-based paint in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing *any amount* of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

7.2.3 RADON

Radon is a naturally-occurring, odorless, invisible gas. Natural radon levels vary and are closely related to geologic formations. Radon may enter buildings through basement sumps or other openings.

The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action limit of 4.0 picoCuries per Liter (pCi/L). It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not requested as part of this assessment. According to the US EPA, the radon zone level for the area is Zone 3, which has a predicted average indoor screening level of less than 2 pCi/L, below the action level of 4.0 pCi/L set forth by the EPA.

7.2.4 Drinking Water Sources and Lead in Drinking Water

The New York City Department of Environmental Protection (NYSDEP) supplies potable water to the subject property. The most recent water quality report states that lead levels in the areas water supply were within standards established by the USEPA.

7.2.5 MOLD/INDOOR AIR QUALITY ISSUES

Molds are simple, microscopic organisms, which can often be seen in the form of discoloration, frequently green, gray, white, brown or black. When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problem remains undiscovered or is not addressed. As such, interior areas of buildings characterized by poor ventilation and high humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation, and carpeting often play host to such growth.



Mold spores primarily cause health problems through the inhalation of mold spores or the toxins they emit when they are present in large numbers. This can occur primarily when there is active mold growth within places where people live or work.

Mold, if present, may or may not visually manifest itself. Neither the individual completing this inspection, nor AEI has any liability for the identification of mold-related concerns except as defined in applicable industry standards. In short, this Phase I ESA should not be construed as a mold survey or inspection.

AEI Consultants observed interior areas of the building in order to identify the significant presence of mold. AEI did not note obvious visual or olfactory indications of the presence of mold, nor did AEI observe obvious indications of significant water damage. As such, no bulk sampling of suspect surfaces was conducted as part of this assessment and no additional action with respect to mold appears to be warranted at this time.

This activity was not designed to discover all areas which may be affected by mold growth on the subject property. Rather, it is intended to give the client an indication if significant (based on observed areas) mold growth is present at the subject property. Additional areas of mold not observed as part of this limited assessment, possibly in pipe chases, HVAC systems and behind enclosed walls and ceilings, may be present on the subject property.



7.3 ADJACENT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation	
	Х	Hazardous Substances and/or Petroleum Products in Connection with Property Use	
	Х	Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs / USTs)	
	Х	Hazardous Substance and Petroleum Product Containers and Unidentified Containers not in Connection with Property Use	
	Х	Unidentified Substance Containers	
	Х	Electrical or Mechanical Equipment Likely to Contain Fluids	
	Х	Strong, Pungent or Noxious Odors	
	Х	Pools of Liquid	
	Х	Drains, Sumps and Clarifiers	
	Х	Pits, Ponds and Lagoons	
	Х	Stained Soil or Pavement	
	Х	Stressed Vegetation	
	Х	Solid Waste Disposal or Evidence of Fill Materials	
	Х	Waste Water Discharges	
	Х	Wells	
	Х	Septic Systems	
	Х	Other	

None of the above listed items were observed during the site inspection. Please refer to Section 5.1 for a discussion of potential regulatory concerns identified at adjacent sites.



8.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

By signing this report, the senior author declares that, to the best of his or her professional knowledge and belief, he or she meets the definition of *Environmental Professional* as defined in §312.10 of 40 CFR Part 312.

The senior author has the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. The senior author has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40CFR Part 312.

Prepared By:

Lindsay Glassman Project Manager Reviewed By:

John Copman Senior Author

9.0 REFERENCES

Item	Date(s)	Source
Topographic Map	1995	United States Geological Survey
Regulatory Database	March 19, 2012	Environmental Data Resources
Aerials	1954, 1966, 1974, 1980, 2004, 2006	www.historicaerials.com
Aerials	1995, 2004, 2009, 2011	Google Earth
Sanborn maps	1891, 1903, 1908, 1935, 1944, 1946, 1947, 1951, 1977, 1978, 1980, 1981, 1984, 1986, 1989, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 2001, 2002, 2003, 2004, 2005, 2006, 2007	Environmental Data Resources
City Directories	1927, 1931, 1940, 1949, 1956, 1961, 1965, 1971, 1976, 1983, 1993, 2000, 2005	Environmental Data Resources
Radon Information	1993	United States Environmental Protection Agency Map of Radon Zones http://www.epa.gov/radon/zonemap.html
Soil Information	Current	United States Department of Agriculture Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/HomePagen.htm
Groundwater Information	Current	USGS Active Groundwater Level Network http://groundwaterwatch.usgs.gov/default.asp
Environmental Assessment	May 3, 2011	AB Property Evaluations, Inc.
Phase II Subsurface Investigation	March 7, 2012	AEI Consultants







Consulting
Engineers and
Scientists

Phase I Environmental Site Assessment

417 Gerard Avenue, Bronx, New York

Submitted to:

Galaxy General Contracting and 417 Gerard LLC 3152 Albany Crescent Bronx, New York 10463

Submitted by:

GEI Consultants, Inc., P. C. 110 Walt Whitman Road, Suite 204 Huntington Station, New York 11746 631.760.9300

June 2015 Project 1508320



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- 2. 1993 Sanborn Atlas

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- A. Photographs
- B. User Questionnaire
- C. Historical Sanborns
- D. Regulatory Agency Database

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Executive Summary

The findings of this Phase I Environmental Site Assessment (ESA) are based on the following: visual inspection of the project site, visual survey of adjacent/contiguous and nearby properties, and review of available historical property and environmental regulatory agency records of the project site (417 Gerard Avenue) located on the northwest corner at the intersection of Gerard Avenue and East 144th Street, in the Borough of the Bronx, New York City, New York (**Figure 1**).

The lot area of the project site is approximately 9,200 square feet. The project site is occupied by a single story industrial building that covers the entire lot. This building has a small basement area in the southwest corner of the building. The building was occupied by Glasstown, Inc., a wholesaler glass, window, glass door, and mirror company. Operations included the design, cutting, etching, frosting, etc., of various sized glass panels.

No visible indications of on-site waste disposal of toxic and/or hazardous materials were observed at the time of inspection. No operations involving the use of toxic or hazardous materials were present on the project site at the time of the site assessment.

GEI Consultants, Inc. P. C.'s analysis of historical information shows that the building on the project site was constructed in the early 1900s for use as a public garage and then as a garage building for Con Edison. Subsequent uses included fire door manufacturing and glass and mirror fabrication since at least the 1970s.

Floor drains were observed within the building. Additionally, underneath a metal plate in the southeastern corner of the building appeared to be an old oil-water separator.

Two (2) 550-gallon underground gasoline storage tanks were identified to be located on the project site. The vent lines for these tanks were observed protruding from the roof-top of the building. Additionally, these two tanks are depicted on historical atlases. It is likely that these tanks remain buried underneath the subject building. Additionally, two 275-gallon aboveground tanks, as well as a larger aboveground tank (estimated to be 1,000-gallons to 1,500-gallons) that was encased within a concrete vault, were located in the basement of the building.

GEI's review of historical Sanborn atlases indicated that adjoining and neighboring properties surrounding the project site have historically consisted of parking garages, automotive repair garages, a bakery building, industrial buildings, and warehouses.

Presently, the project site is adjoined by single story industrial warehouse buildings occupied by a box company and a wholesaler of glass and mirrors. No gasoline filling stations, auto

repair facilities, or heavy manufacturing/industrial operations were identified adjacent/contiguous to the project site.

The project site is not included in the following United States Environmental Protection Agency databases: Superfund or Comprehensive Environmental Response, Compensation, and Liability Act Information System, Emergency Response Notification System, Resource Conservation and Recovery Act Hazardous Waste Treatment/Storage/Disposal Facilities, and RCRA Hazardous Waste Handlers. There are no listings for the project site in the following NYSDEC databases: Chemical Bulk Storage, Brownfields, Inactive Hazardous Waste Disposal Site Registry, Solid Waste Facilities, Petroleum Bulk Storage and Major Oil Storage Facilities. However, the project site is listed on the New York City Environmental Quality Review "E" Site database.

Based on the evaluation of readily available information obtained during this Phase I ESA, according to the scope and limitations as defined in the Phase I ESA, and GEI's professional judgment, no apparent evidence of Historical Recognized Environmental Conditions or Controlled Recognized Environmental Conditions were identified in connection with the project site. However, the following Recognized Environmental Conditions were identified that would require further investigation:

Aboveground and Underground Storage Tanks

Two (2) 550-gallon underground gasoline storage tanks were identified to be located on the project site. The vent lines for these tanks were observed protruding from the roof-top of the building. Additionally, these two tanks are depicted on historical atlases. It is likely that these tanks remain buried underneath the subject building. Additionally, two 275-gallon aboveground tanks, as well as a larger aboveground tank that was encased within a concrete vault, were located in the basement of the building.

Interior Floor Drains and an Oil Water Separator

Floor drains were observed within the building, as well as an oil water separator.

Soil Vapor

Based upon the potential for soil contamination from the underground gasoline storage tanks, aboveground storage tank resting on soil, floor drains and the oil water separator, there is the potential for soil vapor impacts.

New York City E-Designation

An E-designation is recorded against the project site for Hazardous Materials Phase I and Phase II Testing Protocols, Air and Noise. It should be noted that an E-designation does not interfere with the present use of the site; however, E-designations do prevent the release of

building permits subject to a detailed environmental review and release by the NYC Office of Environmental Remediation. Such release may require a full subsurface investigation, remedial and health and safety planning, implementation of a remedial program and documentation that the remedial program was completed during redevelopment of the property.

1. Introduction

GEI Consultants, Inc., P. C. has undertaken a Phase I Environmental Site Assessment (ESA) of the project site described as 417 Gerard Avenue located in the Borough of Bronx, New York City, New York (Block 2351, Lot 20). This Phase I ESA has been performed in compliance with the scope and limitations of ASTM International (ASTM) Standard Practice E 1527-13. The purpose for this Phase I ESA report is to provide Galaxy General Contracting Corporation and 417 Gerard LLC as the Client/User of this report under the ASTM Practice, with Phase I ESA findings, conclusions, and professional opinions to characterize relative environmental risks.

This Phase I ESA report was completed by GEI's Senior Environmental Professional, Mr. Richard Fasciani. The findings of this Phase I ESA are based on the following: visual inspection of the project site, visual survey of adjacent/contiguous and nearby properties, and review of available historical property and environmental regulatory agency records.

The Executive Summary is presented on Page iv of this report. A detailed description of the Phase I ESA findings is presented in Section 2. GEI's professional opinions, based on the findings of this Phase I ESA, are presented in Section 3. GEI's conclusions, based on the findings of this Phase I ESA, are presented in Section 4. GEI's Scope of Work is outlined in Section 5. Disclaimer Statements are presented in Section 6. Any exceptions to, or deletions from, this practice are described in Section 5 of this report.

Photographs are attached as **Appendix A**. The User Questionnaire is attached as **Appendix B**. Historical Atlases are attached as **Appendix C**. Regulatory Agency Database Information from Toxics Targeting Inc. is attached as **Appendix D**.



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2. Report of Findings

The project site was inspected on May 21, 2015 by GEI environmental professional, Mr. Richard Fasciani.

The findings of GEI's Phase I ESA, including our regulatory agency checks, are presented in the following sections. It should be noted that throughout the report the subject property located at 417 Gerard Avenue will sometimes be referred to as the "project site." Photographs taken during GEI's site visit are attached as **Appendix A**.

2.1 Property Descriptions

2.1.1 Location and Legal Description

The project site is located on the northwest corner at the intersection of Gerard Avenue and East 144th Street, in the Borough of the Bronx, New York City, New York (**Figure 1**). The New York City Tax Map identification numbers associated with the project site are Block 2351, Lot 20. The address associated with the project site is 415-417 Gerard Avenue and 111 East 144th Street, Bronx, New York.

2.1.2 Site Description and Current Use

The project site is primarily rectangular in shape and is currently occupied by a single story industrial building. The project site is located in special purpose mix use zoned district (MX-13). The New York City Department of Finance Building Classification is F4-Factory/Industrial.

The lot area of the project site is approximately 9,200 square feet. The project site is occupied by a single story industrial building that occupies the entire lot. This building has a small basement area in the southwest corner of the building.

The building was occupied by Glasstown, Inc., (Glasstown) a wholesaler glass, window, glass door, and mirror company. Operations included the design, cutting, etching, frosting, etc., of various sized glass panels.

The heating system which consisted of ceiling mounted oil-fired blower that was not operational at the time of GEI's site visit. They also had a wood fired stove within the office area.

A black and white photograph from the 1970's shows the building at that time to be occupied by Glasstown.



No visible indications of on-site waste disposal of toxic and/or hazardous materials were observed at the time of inspection. No operations involving the use of toxic or hazardous materials were present on the project site at the time of the site assessment.

2.2 User Provided Information

ASTM E 1527-13 defines the "User" as: "the party seeking to use practice E 1527-13 to complete an environmental site assessment of the property." The performance standards required for all appropriate inquiries (AAI) include inquiries by an Environmental Professional, and additional inquiries by persons (User) seeking to establish one of the Comprehensive Environmental and Liability Act of 1980 (CERCLA) liability protections. Under § 312.22, additional inquiries by persons seeking to establish one of the CERCLA liability protections, if not otherwise provided to the Environmental Professional, includes in substance: an evaluation of environmental cleanup liens against the project site; consideration of specialized knowledge or experience of the person seeking to claim liability protection; evaluation of the relationship of the purchase price to fair market value of the project site, if the property was not contaminated; or other commonly known or reasonably ascertainable information about the property.

Based upon the above, a User Questionnaire was completed by Mr. Richard Sica, a Member of 417 Gerard LLC, for characterizing relative environmental risks for commercial purposes, as part of a client's regulatory requirement for conducting AAI to support any one of the three legal defenses against CERCLA liability, or other stated purposes (**Appendix B**). The following pertinent information is documented within this Questionnaire:

- Mr. Sica stated that the purpose of this Phase I ESA is to satisfy the potential lenders
 requirements for financing the purchase of the project site and that the purchase price
 reflects fair market value.
- Mr. Sica stated that to the best of his knowledge, he is unaware of any environmental cleanup liens against the project site that is filed or recorded under federal, tribal, state, or local law. In addition, Mr. Sica is unaware of any Activities and Use Limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the project site and/or have been filed or recorded in a registry under federal, tribal, state, or local law. Mr. Sica indicated that title report has been ordered and that to the best of his knowledge, there are no environmental liens recorded against the project site.
- Mr. Sica stated he does not have any specialized knowledge or experience with regard to any chemicals and/or processes used by current occupants of the project site or adjoining properties. Mr. Sica stated he has no knowledge with regard to the following items on the project site: specific chemicals that are present or once were present, onsite spills or other chemical releases, or environmental cleanups that have



taken place. Additionally, Mr. Sica stated that based on his knowledge and experience related to the project site, there are no obvious indicators that point to the presence or likely presence of contamination at the project site.

2.3 Previous Environmental Reports

No previous environmental reports have been supplied to GEI during the course of this Phase I ESA.

2.4 Site History

Primary sources for the history of New York City sites include historical fire insurance/real estate atlases, as well as the available records of the New York City Department of Buildings (NYCDOB) concerning permits for new buildings, certificates of occupancy, alterations, demolitions, and other changes at the project site.

2.4.1 Historical Atlases

Historical Sanborn fire insurance/real estate atlases were reviewed (**Appendix C**). These atlases are another source for the history of structures on the project site, and may indicate property use and the presence of buried gasoline tanks. Supplemental information regarding historical building occupants and property use were provided through review of available NYCDOB database records for the project site.

Year of Historical Sanborn Maps	Property Use
1891	This atlas indicates that the project site was an undeveloped lot. Most of the development in the surrounding area consisted of residential dwellings. It should be noted that 29 th Street was first named Taylor Street as depicted on the 1915 atlas. Two small auto garages were depicted in the rear of the property.
	This atlas shows that the entire block the project site is located on was at that time used for lumber storage.
1908	Most of the surrounding blocks west, south and north are also associated with lumber storage/lumber yards. To the east are residential dwellings and a public school.
1935	This atlas depicts the present building on the project site. The building is shown to be utilized as a garage. This atlas indicates that two 550-gallon gasoline tanks are buried on the site.
	The rest of the block is also developed with garages and warehouses. The nearby uses consisted of warehouses, bakery, and other garages, repair shops, etc.
1944, 1946, 1947 and 1951	The building is depicted primarily as it is on the 1935 atlas. The adjacent and nearby buildings and uses are also primarily the same as on the 1935 atlases.
1977	The building is shown to be utilized as a garage for Con Edison. The two gasoline tanks that were depicted on the earlier atlases are no longer depicted.



Year of Historical Sanborn Maps	Property Use
1978, 1980, 1981, 1984, 1986, 1989, 1991, 1993 and 1994	These atlases are similar to the previous 1977 atlas.
1996, 1998, 2001, 2002, 2003, 2004, 2005, 2006, and 2007	These atlases depict the same building; however, the only exception is that Con Edison is no longer depicted as a tenant.
	Surrounding uses appear as garages, warehouses, and various single story commercial buildings.

2.4.2 Building Department Information

GEI reviewed readily available information relating to the project site supplied by the NYCDOB, Building Information System website. Information regarding the project site is found under Building Identification No. 20010962. The Department of Finance Building Classification for the project site is E4-Warehouse.

A Certificate of Occupancy (CO) associated with the project site is described as follows:

• CO Number 49851, dated April 14, 1975 – The CO indicates that it supersedes a previous CO (#49634-74); however, the previous CO is undecipherable. The CO dated April 14, 1975 indicates that the building is single story and was at that time used as a factory for the assembly of steel products.

Furthermore, the earliest recorded action depicted on the website was in 1968 for an alteration (Permit Number: ALT 45-68). This permit was issued in 1968. Additionally, according to the New York City Department of Finance, Office of the City Register, in the 1970s, one of the names depicted as a property owner included the words "Altype Fire Door Corporation."

No other pertinent records or information was depicted within the NYCDOB Building Information System website indicating an environmental concern or condition.

Furthermore, the website information includes a notation that the project site is part of an E-Designated area of New York City, designated for environmental conditions requiring special activities coordinated through the New York City Office of Environmental Remediation. The Environmental Restrictions noted pertain to Hazardous Materials, Noise and Air.

2.4.3 Interviews

No formal interviews were performed as part of this Phase I ESA; however, general discussions with some of the employees within the building at the time of the site inspection revealed that at one time Con Edison occupied the building and that the current business had existed at this location for more than 20 years.



2.4.4 Aerial Photographs

Based upon a review of historical aerial photographs obtained from Google Earth, the project site was developed with the current building from 1995 until 2014.

2.4.5 Summary of Site History

GEI's analysis of historical information shows that the building on the project site was constructed in the early 1900s for use as a public garage and then as a garage building for Con Edison. Later uses included fire door manufacturing and glass and mirror fabrication since at least the 1970s.

The surrounding area has primarily consisted of garages, commercial and industrial buildings and warehouse buildings. The adjacent buildings to the north and west consist of a garage building and a manufacturing/industrial building (respectively).

2.5 Site Characteristics

2.5.1 Site Topography

From observations made during GEI's site assessment, as well as information obtained from the topographic map, the topography of the area surrounding the project site is generally level along Gerard Avenue and a westerly slope along West 144th Street. According to Google Earth, the elevation of the project site, at street level, is estimated to be approximately 15-20 feet above Mean Sea Level.

2.5.2 Site Hydrogeology

The Bronx is underlain by three principal bedrock formations: Inwood Marble, Fordham Gneiss, and Manhattan Schist. The strata of these rock types have been folded by forces produced by movements in the earth's crust, and the resulting pattern has produced a series of ridges and valleys. The rock of Inwood Marble is soluble in even slightly acidic water, and has been eroded through time to form lowlands and valleys, including the channel of the Harlem River. Further erosion of the marble, as well as the schist and gneiss occurred later in time, as the surface of rock in New York City was covered by massive glaciers. Besides the erosion that they produce, the glaciers transported broken-up rock fragments from areas to the north and deposited them in many areas of the Bronx. Meltwater streams produced by the glaciers occupied the valleys of Inwood Marble, and they in turn produced outwash sand deposits. These permeable deposits, in combination with solutional fractures present in the limestone, account for the ability of the areas underlain by Inwood Marble to yield significant quantities of groundwater.



Recharge of groundwater in the Bronx is chiefly from precipitation. Possible secondary sources include lateral underground flow from Westchester County, as well as leakage from water mains and sewer lines. Areas of the Bronx, in which clay deposits from former glacial lake beds formed marshes, may contain minor quantities of groundwater, which do not readily percolate downward due to the impermeability of these materials. The schist and gneiss are also relatively impermeable, and have historically yielded relatively minor quantities of water to wells. Uses of groundwater in the Bronx, other than for domestic purposes, have included water withdrawals of cooling, air conditioning, washing and flushing, and laundering. Today, public water supply for the Bronx comes from the upstate reservoirs which supply the City of New York.

Based upon the topography of this area of the Bronx, it is inferred that groundwater in the area of the project site follows the topographic gradient and flows in a southwesterly direction. Groundwater, although accessible in some areas, is considered not suitable for public use due to low well production yields and poor quality, and is not utilized as a potable source.

Site specific hydrogeology can only be determined through a program of drilling to confirm groundwater depth, direction, and composition of the soil/rock matrix. No such drilling program was undertaken as part of this Phase I ESA.

2.5.3 Site Drainage

Floor drains were observed within the building. Additionally, underneath a metal plate in the southeastern corner of the building appeared to be an old oil-water separator. The employees within the building stated that this structure was never utilized by them and they did not know of its existence.

2.5.4 Flood Plain Information

The project site lies in Zone X, an area of minimal flooding, on the Federal Emergency Management Act (FEMA) Flood Insurance Rate Map (No., 3604970083F). The project site is not in a flood plain.

2.5.5 Sensitive Receptors

Sensitive receptors (i.e., wetlands, surface waters, drinking water well fields, and groundwater recharge basins) are identified for the immediate vicinity of the project site. In the event of an incident involving the spill of a hazardous substance or petroleum product at the project site, more costly remedial actions may be required when sensitive receptors are present.

No surface waters, wetlands, recharge basins, or drinking water well fields were observed on the project site.



2.5.6 Water Supply

Water is supplied to the project site through municipal sources available in this area of the Bronx, New York City, New York. No on-site water supply wells were observed on the project site at the time of GEI's site visit.

2.5.7 Monitoring/Observation Wells

No monitoring/observation wells were observed on the project site at the time of GEI's site inspection.

2.6 Hazardous Substances and Petroleum Products

No visual evidence for hazardous substances or petroleum products (other than fuel oil) was observed within the project site during GEI's site inspection.

2.7 Storage Tanks

The building heat was observed to be supplied by an oil-fired ceiling mounted hot air blower. A 275-gallon aboveground fuel oil tank was observed to be connected to this system and was located in the basement. A second tank, encased with concrete was also located in the basement area. The exact size of this tank could not be ascertained; however, based upon its size, the tank's capacity would range from 1,000 to 1,500-gallons.

2.8 PCB Containing Electrical Equipment

Prior to 1979, Polychlorinated Biphenyls (PCBs) were widely used in electrical equipment such as transformers, capacitors, switches, and voltage regulators for their cooling properties. The manufacture, processing, commercial distribution, and use (except in a "totally enclosed manner") of PCBs was banned in 1979, under the Toxic Substances Control Act (40 CFR Part 761). PCB spills are subject to strict reporting, cleanup, and disposal requirements, due to the toxicity of the substance, and their threat to human health and the environment.

No electrical transformers or other electrical equipment containing PCBs were observed on the project site during GEI's site visit.

2.9 Non-Scope Discussion

2.9.1 Suspected Asbestos-Containing Materials

Based upon our observations, evidence of any asbestos-containing insulation materials was observed on the dilapidated boiler and piping noted within the basement area.



2.9.2 Lead-Based Paint

Consumer sale of lead-based paint (containing over .06 percent metallic lead) was banned by the United States Consumer Products Safety Commission in 1977. Given the age of the building, it is possible that underlying painted surfaces on interior building components that have not been renovated or replaced since the construction of the building may contain lead.

2.9.3 Mold

No visual evidence of extreme, large and/or significant areas of mold spore growth was noted at the time of GEI's site visit.

2.9.4 Radon

Radon, a naturally occurring radioactive gas, is the product of the decay of radium. It is found most frequently in relatively high concentrations in rock formations containing uranium, granite, shale, phosphate, and pitchblende. Radon may also be found in soils contaminated with industrial waste from uranium and phosphate mining. Radon as a gas can move through the soil and water, and into the atmosphere, and is a potential health concern if confined in sufficiently high concentrations in indoor environments. The United State Environmental Protection Agency (USEPA) has set an "action level" of 4.0 picocuries per liter for continuous long term exposure to radon gas. If radon gas is measured above this level, USEPA suggests follow-up testing and remediation measures.

According to data compiled by the Bureau of Radiation Protection, New York State Department of Health (NYSDOH), New York City has one of the lowest average levels of basement radon measurements in New York State. The latest statistics indicate an average of 1.4 picocuries/liter for New York City (an average of the five counties), compared to a statewide average of 5.6. Based on these low average levels for New York City, it is unlikely that radon gas levels on the project site exceed the USEPA action level of 4.0 picocuries per liter, and therefore radon testing is typically not recommended.

2.10 Adjacent/Contiguous and Nearby Properties

2.10.1 Historical Atlas Review

GEI's review of historical Sanborn atlases indicated that adjoining and neighboring properties surrounding the project site have historically consisted of parking garages, automotive repair garages, a bakery building, industrial buildings, and warehouses.



2.10.2 Current Observations of Adjacent/Contiguous and Nearby Properties

GEI's site inspection included a visual reconnaissance of properties located adjacent/contiguous to, and in the immediate vicinity of the project site. These noted properties were viewed from public right-of-ways. Although there were no significant barriers preventing GEI from determining the general uses of these properties, GEI did not enter any of these properties for a detailed inspection of site conditions for legal reasons (i.e., trespassing). The table below summarizes GEI's visual observations.

Direction	Property Use
North	Single story structure utilized as a glass and mirror supply and installation company.
South	A nine story structure currently utilized as a public storage facility.
East (across Gerard Avenue)	Single story structure currently utilized as a box warehouse.
West	Single story structure currently utilized as a box warehouse.

Land uses in the area primarily consist of residential dwellings and a public school.

Properties identified within available regulatory agency database search radii are listed in the next subsections of this report (refer to Sections 2.11 and 2.12).

2.11 Federal and State Regulatory Records and Databases

GEI obtained and evaluated the readily available and most recent environmental regulatory agency database records provided by Toxics Targeting, Inc. of Ithaca, New York (Appendix D). This report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Environmental Site Assessments (E 1527-13).

GEI's review of available and most recent federal and state agency database records for the project site, adjacent/contiguous properties, and surrounding neighborhood was completed according to the requirements set forth in ASTM E 1527-13, Section 8. The search distances reviewed for this assessment generally meet or exceed the minimum search distances according to the requirements set forth in ASTM E 1527-13, Section 8.2.1. Any deviations from the minimum search distances are addressed in the individual database discussions presented below.



Federal Regulatory Database Search

NPL Sites

The USEPA National Priorities List (NPL) identifies confirmed hazardous waste sites that are ranked for clean-up under the federal Superfund program. This program was authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA" or "Superfund"), as amended by Superfund Amendments and Reauthorization Act of 1986 ("SARA") and Small Business Liability Relief and Brownfields Revitalization Act of 2002 ("Brownfields Amendments").

The project site was not identified within this database. No USEPA NPL sites were identified within an approximate 1-mile radius of the project site.

CERCLIS

The USEPA CERCLA Information System (CERCLIS), which is a comprehensive database and management system that inventories and tracks sites addressed or needing to be addressed by the Superfund program. Sites that USEPA decides do not warrant further evaluation are given a "No Further Remedial Action Planned (NFRAP)" designation by USEPA, which means that no further action under CERCLA is presently anticipated for that site. A "NFRAP" designation does not necessarily indicate that there is no hazard associated with the site only that, based on available information, USEPA does not plan further investigation at this time.

The project site was not identified within this database. There were no USEPA CERCLIS sites identified within an approximate 1/2-mile radius of the project site.

RCRA Corrective Action Activity

The Resource Conservation and Recovery Act (RCRA) Corrective Action Activity (CORRACTS) database lists hazardous waste facilities with RCRA corrective action activity reported by the USEPA.

The project site was not identified within this database. There were no RCRA Corrective Action sites identified within an approximate 1-mile radius of the project site.

RCRA Treatment/Storage/Disposal Facilities

The RCRA Treatment/Storage/Disposal Facilities (TSDF) database includes facilities that treat, store, and/or dispose of hazardous wastes, or have engaged in these activities in the past. TSDF operators, as with hazardous waste transporters and generators, are regulated under the RCRA.



The project site was not identified within this database. One RCRA TSDF site was identified within an approximate 1/2-mile radius of the project site. This site (Power Chemical Company, Inc., USEPA Facility ID NYD001549633) is located over 1,400-feet east southeast from the project site and at this distance is not likely to have the potential to impact the environmental integrity of the project site. Additionally, there are no spills associated with the project site.

RCRA Hazardous Waste Generators and Transporters

RCRA Hazardous Waste Generators and Transporters are regulated by the federal government under the RCRA. RCRA facilities are permitted by the USEPA, RCRA Division, to generate hazardous waste as part of business operations and dispose of the waste legally. These facilities generally abide by USEPA regulations for storage, handling and disposal of hazardous materials. RCRA Hazardous Waste Generator and Transporter sites are not permitted to store any hazardous wastes at any time for more than 90 days, reducing the potential risk of a spill. A review of the Hazardous Waste Generator and Transporter listings is useful to assess the kinds of hazardous materials/wastes that are handled, stored, and/or transported in the vicinity of the project site, as well as on the project site. With the exception of those identified on, or adjacent/contiguous to the project site, the presence of hazardous waste generators or transporters in the immediate vicinity does not necessarily imply risk of contamination to the project site.

The project site is not listed on this database. The adjacent property to the north is registered as follows:

 Stone Service – 445 Gerard Avenue, Bronx, New York; USEPA Facility ID NYD012261244. According to information in the database, this site is depicted as having generated over 10,070-pounds of spent halogenated and non-halogenated wastes in total for the years 1989, 1990, and 1998. No other information was depicted for this property. There are no NYSDEC spills associated with this property.

Civil and Administrative Enforcement Docket

USEPA's Civil and Administrative Enforcement Docket is a database that tracks civil judiciary cases filed on behalf of USEPA by the U.S. Department of Justice.

The project site and adjacent properties were not identified within this database. There was one Civil and Administrative Enforcement Docket site listed within 1/8-mile of the project site as follows:

Bronx Industrial Scrap – 459 Exterior Street, Bronx, New York; USEPA Facility
 Id: NYD099511974. No other information is depicted in the database. This site is



also listed on the NYSDEC Solid Waste, Wastewater Discharge, Spills and Air Discharge databases.

Given the distance and down gradient direction from the project site, it is deemed unlikely that this Civil and Administrative Enforcement Docket site would have the potential to impact the integrity of the project site.

Emergency Response Notification System

USEPA's Emergency Response Notification System (ERNS) database contains information from federal agencies on CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity.

The project site was not identified within this database.

New York State Regulatory Database Search

Inactive Hazardous Waste Disposal Sites

New York State Department of Environmental Conservation (NYSDEC) Inactive Hazardous Waste Disposal Site Registry contains information concerning potentially hazardous waste sites in New York State. The list of NYSDEC Inactive Hazardous Waste Disposal (IHWD) Sites contains summary information pertaining to those facilities that are deemed hazardous and requiring response actions regulated by the NYSDEC under the State's Superfund Program.

The project site was not identified within this database. There are eight Inactive Hazardous Waste Disposal sites listed within an approximate 1-mile radius of the project site. All eight are located over an approximate 1/4-mile radius from the project site. The closest of these sites is located in the Borough of Manhattan. Due to the distance from the project site, these IHWD sites are deemed unlikely to have impacted the environmental integrity of the project site.

Hazardous Substance Waste Disposal Sites

NYSDEC maintains a database of waste disposal sites that may pose threats to public health or the environment, but cannot be remediated using monies from the Hazards Waste Remediation Fund.

The project site is not listed in this database. No NYSDEC Hazardous Substance Waste Disposal sites were identified within an approximate 1/2-mile radius of the project site.



Brownfields Sites

The New York State Brownfields database is a listing of sites that are abandoned, idled or under-used industrial and commercial sites in New York State, where expansion or redevelopment is complicated by real or perceived environmental contamination.

The project site is not listed on this database. Eight New York State Brownfields sites were listed within an approximate 1/2-mile radius of the project site. The nearest site is depicted as follows:

• 500 Exterior Street, Lot B, Bronx, New York (NYSDEC Facility Id C 203071), located 268 feet north of the project site. This site was described as a vacant lot. A Phase II Investigation was performed. Groundwater was encountered between 12 and 19 feet and groundwater flow is toward the west. No significant groundwater contamination was encountered. Contaminants of concern in soils are PCBs and metals. Given the anticipated cross-gradient groundwater flow direction, this nearby Brownfield site is not anticipated to be an environmental concern.

The remaining sites are located over 1,300-feet from the project site and at this distance are not deemed likely to have impacted the environmental integrity of the project site.

Solid Waste Facilities

A review of the NYSDEC database of solid waste facilities (including, but not limited to, landfills, incinerators, transfer stations, recycling centers) determined that the project site was not identified within this database. Ten solid waste facilities are listed in this database. These sites are all located over 600 feet from the project site and at this distance are unlikely to have impacted the environmental integrity of the project site.

NYSDEC Spill Log Database

The NYSDEC maintains a database of spills of hazardous materials, including petroleum products, reported to the agency according to its regulatory requirements. Parties found responsible for these spills are required to respond by notifying the NYSDEC's Spill Hotline, obtain a Spill Number, and eliminate the source of the spill and perform the necessary cleanup of contamination in surface and subsurface soils and groundwater. The responsible party is required to report its response actions to an assigned NYSDEC case manager, and meet the applicable NYSDEC cleanup criteria for the media impacted by the spill before the NYSDEC will render a determination of "no further action" and at such time, the NYSDEC will "close" the spill number. Spill numbers listed as "active" indicate that the spill incident is either still undergoing remediation, or awaiting completion of paperwork for closure. The NYSDEC Spills database records spills of unknown substances, regulated chemicals, petroleum spills, and spills due to tank failures and tank tightness test failures.



The project site and adjoining properties were not identified in the NYSDEC Spills database. However, there were 194 NYSDEC spill incidents identified within an approximate 1/2-mile radius of the project site, of which 180 have been closed. Of the remaining 14 spill incidents that were listed as "active" within the NYSDEC Spills database, all are located over 1,000 feet from the project site.

Upon review, due to such factors as the intervening development (e.g., roadways, gas and electrical conduits, underground sewer systems, basements of adjoining and nearby buildings, etc.) between the project site and these "active" spill incidents, the spill incident statuses, the distances between the spill sources and the project site, the quantities of materials spilled, and the resources affected, these "active" spill incidents were deemed unlikely to have impacted the environmental integrity of the project site.

Major Oil Storage Facilities

A check was made of the NYSDEC Major Oil Storage Facilities (MOSF) database, which lists all facilities (onshore facilities or vessels) with petroleum storage capacities of 400,000 gallons or greater.

The project site was not identified within this database. No NYSDEC MOSF sites were identified within an approximate 1/8-mile radius of the project site.

Petroleum Bulk Storage Facilities

NYSDEC maintains registration records for facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons. These facilities are documented within the NYSDEC Petroleum Bulk Storage (PBS) and Fire Department of the City of New York (FDNY) databases.

The project site is not listed on this database. However, the following nearby/adjacent properties are listed on the PBS database, as follows:

- 385 Gerard Avenue, Bronx, New York (Facility ID: 2–400319). The database describes a 10,000-gallon aboveground storage tank at this property.
- 414 Gerard Avenue, Bronx, New York (Facility ID: 2-207209). The database depicts that this site has a 3,000-gallon aboveground tank.

It should be noted that there were no NYSDEC spill incidents associated with any of these PBS facilities.



Chemical Bulk Storage Facilities

A check was made of the NYSDEC Chemical Bulk Storage (CBS) database. CBS facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

The project site is not listed in this database. No CBS sites were identified within an approximate 1/8-mile radius of the project site.

2.12 New York City Regulatory Database Records

2.12.1 New York City Historic Utility Facilities

A check was made of the New York City Historic Utility Facilities database which is an inventory of selected power generation stations, manufactured gas plants, gas storage facilities, maintenance yards, and other gas and electric utility sites identified within various historic documents, maps, and annual reports of New York utility companies. A majority of these sites operated between the 1890s and 1940s.

The project site was not identified within this database. There were no Historic Utility Facility sites depicted within an approximate 1/8-mile radius of the project site.

2.12.2 New York City "E" Designated Sites

A check was made of the New York City Environmental Quality Review (CEQR) - E Designation Site database, which lists parcels assigned a special environmental ("E") designation under the CEQR process. An "E" designation requires specific protocols that must be followed during redevelopment.

The project site is identified as an "E" designated site under "E" Number E-227. It should be noted that an E-designation does not interfere with the present use of the site; however, E-designations do prevent the release of building permits subject to a detailed environmental review and release by the NYC Office of Environmental Remediation. Such release may require a full subsurface investigation, remedial and health and safety planning, implementation of a remedial program and documentation that the remedial program was completed during redevelopment of the property.

The Window Wall Attenuation E requires that any new building constructed on the property include a window wall system which will achieve a noise attenuation of 35 decibels to maintain a maximum interior noise level of 45 decibels. An alternate means of ventilation such as through the wall or central air conditioning will also be required to maintain a closed window condition. Satisfaction of the Noise E requires the submission of a Noise Remedial Action Plan and an Installation Report certified by a Professional Engineer or Registered Architect.



The Air requires any new residential and/or commercial development must ensure that the heating, ventilating, and air conditioning stack(s) have certain limitations regarding where they can be placed on a building. The development must also ensure that the type of fuel used for the HVAC system is natural gas with low NOx only.

Additional information regarding "E" sites can be found on the New York City Office of Environmental Remediation website: http://www.nyc.gov/html/oer/html/e-designation/e-designation.shtml

2.13 Vapor Encroachment Screening

We have performed a Tier 1 Vapor Encroachment Screening for the property in accordance with the requirements of ASTM Standard E2600-10.

Toxic, volatile substances that are spilled on the ground or released into the subsurface may migrate in the subsurface environment and eventually enter buildings as a gas or vapor by seeping through cracks in basements, foundations, sewer lines and other openings. Vapor flow toward and into a building can be influenced by a number of factors, including atmospheric pressure changes and building depressurization due to operation of exhaust fans or heating units within the building. The flow rate of vapors into a building often is difficult to predict but generally will depend on factors such as subsurface conditions (e.g., soil properties and contaminant characteristics), building design and condition (e.g., cracks and conduits), and differentials in air pressure across the building foundation. Upon entry into a structure, vapors normally mix with the existing air through the natural or mechanical ventilation of the building. Concentrations of indoor vapors may accumulate to a point where the health of occupants (e.g., residents, workers) in those buildings could be at risk.

Vapor intrusion (also referred to as VI) is the general term given to migration of vapors from a contaminant source in the subsurface into indoor air. Vapor intrusion can occur in a wide variety of building configurations (e.g., buildings with basement, crawlspace, or slab-on-grade foundations). Volatile organic compounds (VOCs) are the category of chemicals of greatest potential concern for this pathway, which among other things includes constituents of gasoline (e.g., benzene) and other petroleum fuels, as well as dry cleaning fluids (e.g., tetrachloroethylene [PCE]) and industrial degreasers and solvents (e.g., trichloroethylene [TCE]). Other vapor-forming chemicals of potential interest include certain semi-volatile organic compounds (SVOCs), certain pesticides, and mercury.

The vapor intrusion pathway has become widely recognized as a potentially significant cause of exposure to toxic substances in indoor spaces. Numerous studies have indicated that the air in buildings overlying soil or groundwater contaminated with toxic vapor forming substances may contain potentially harmful concentrations of these contaminants due to vapor intrusion.



Based on our evaluation of current and past property uses as well as our review of available property records during this Phase I ESA, we concluded that a vapor intrusion concern (VIC), defined as the presence or likely presence of contaminated vapors in the subsurface caused by the release of vapors from the gasoline tanks, oil tank that rests on soil, oil water separator and floor drains could possibly exist.

The Toxics Targeting, Inc. database indicated suspect sources of petroleum contamination within 1/10- mile of the property and suspect sources of non-petroleum contamination within 1/3-mile of the property, which are the "approximate minimum search distances" required in a Tier 1 Vapor Encroachment Screening. However, given the regulatory status, the characteristic of the off-site suspect sources and that there are no documented plumes associated with these suspect sources, it is unlikely that the project site has been impacted from a vapor migration/intrusion viewpoint.

The vapor migration/intrusion pathway is very complex and can vary considerably within a site. It should be noted that this "screening" is not an absolute and definitive methodology for confirming vapor migration/intrusion impacts. Site specific impacts from vapor migration/intrusion can only be determined through a specific testing program. No such testing program was undertaken as part of this Phase I ESA.

2.14 Data Gaps

As part of this report, GEI did encounter any significant data-gaps that would impact the conclusions of this report.



3. Opinions, Conclusions and Recommendations

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13 of the project site located at 417 Gerard Avenue, Bronx, New York. Any exceptions to, or deletions from, this practice are described in Section 4 of this report. This assessment has revealed no evidence of Historical Recognized Environmental Conditions or Controlled Recognized Environmental Conditions; however, the follow Recognized Environmental Conditions were identified in connection with the project site:

Aboveground and Underground Storage Tanks

Two (2) 550-gallon underground gasoline storage tanks were identified to be located on the project site. The vent lines for these tanks were observed protruding from the roof-top of the building. Additionally, these two tanks are depicted on historical atlases. It is likely that these tanks remain buried underneath the subject building. Additionally, two 275-gallon aboveground tanks, as well as a larger aboveground tank that was encased within a concrete vault, were located in the basement of the building.

Interior Floor Drains and an Oil Water Separator

Floor drains were observed within the building as well as an oil water separator.

Soil Vapor

Based upon the potential for soil contamination from the underground gasoline storage tanks, aboveground storage tank resting on soil, floor drains and the oil water separator, there is the potential for soil vapor impacts.

New York City E-Designation

It should be noted that an E-designation does not interfere with the present use of the site; however, E-designations do prevent the release of building permits subject to a detailed environmental review and release by the NYC Office of Environmental Remediation. Such release may require a full subsurface investigation, remedial and health and safety planning, implementation of a remedial program and documentation that the remedial program was completed during redevelopment of the property.

It is GEI's opinion that a Phase II investigation be performed to determine if the underlying soils at this site have been impacted by the above recognized environmental conditions.



ENVIRONMENTAL PROFESSIONAL STATEMENT AND SIGNATURES

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312 of 40 CFR 312. We have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the project site. We have developed and performed the AAIs in conformance with the standards and practices set forth in 40 CFR Part 312.

SENIOR ENVIRONMENTAL PROFESSIONAL:

Environmental Practice Leader

Reviewed by:

Senior Project Manager



4. Scope of Work

The Scope of Work for this Phase I ESA is based on the Standard Practice for Environmental Site Assessments: Phase I ESA Process (E 1527-13) developed by the (ASTM, and generally accepted industry protocols, with the following exceptions: no aerial photos were obtained for inclusion within the report. This Phase I ESA involved, and was limited to: research into the history of uses of the project site, checks with appropriate government and regulatory agencies, a visual inspection of the project site, and an informal survey of adjacent/contiguous and nearby properties to determine the presence of RECs, Historical Recognized Environmental Conditions and Control Recognized Environmental Conditions. These are defined under ASTM E 1527-13, as follows:

Recognized Environmental Conditions (RECs)

"the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

Historical Recognized Environmental Conditions (HRECs)

"a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted uses criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls)."

Controlled Recognized Environmental Conditions (CRECs)

"a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Since the Phase I ESA scope of work does not typically include testing of building materials (e.g., for asbestos, lead-based paints, PCBs, etc.), or of subsurface soils or groundwater, no definitive assessment of the presence of environmental contamination (from on-site or off-site sources) is made. It should also be noted that other issues that may relate to property



value impairments (e.g., ambient air quality, asbestos in building concerns, lead-paint concerns, pollution conditions requiring response costs, noise pollution, perceived risk from electromagnetic fields, etc.) are outside the scope of this Phase I ESA, and are addressed in this study only in a limited manner.

If further determination of any potential contamination or analysis of specific materials is needed, then testing and/or further investigations (e.g., Phase II investigations) may be necessary.

4.1 Conformance with ASTM Standard

GEI has performed this Phase I ESA of the project site in compliance with the scope and limitations of ASTM Practice E 1527-13, and its client's scope of services for Phase I ESAs, as required by the client, as the User. The purpose for this Phase I ESA is to provide GEI's client with Phase I ESA findings, conclusions and professional opinions to support the User's business practices and to meet one of the requirements for innocent landowner and bona fide prospective purchaser limitations on CERCLA liability. If requested by the client, as the User, the scope of work may exceed the recommended ASTM scope (e.g., additional database searches, evaluations for asbestos, radon, lead-based paint issues, wetlands, etc.). If additional evaluations are requested for the purposes of determining business environmental risks, such evaluations will be based upon considerations including, but not necessarily limited to, the nature of the property and the reasons for performing the assessment, and will be agreed upon between the User and GEI as additional services beyond the scope of the ASTM Phase I ESA practice in a signed writing prior to the initiation of the additional tasks.

In accordance with ASTM standards, a Phase I ESA is not intended by GEI to be used by the User as an environmental compliance report. This Phase I ESA report does not address the specific compliance requirements under federal, state and local laws for storage, use, transport, discharge, or disposal of hazardous or toxic materials associated with the project site. Specific compliance issues and questions about a particular site must be addressed directly through the regulatory agency having jurisdiction over the project site. In addition, no judgment is made with respect to the facility's compliance with worker exposure standards established by the federal Occupational Safety and Health Administration (OSHA), or any other state or local regulatory body.

4.2 Sources of Information and Research Methods

As previously mentioned, this Phase I ESA involved, and was limited to: research into the history of uses of the project site, checks with appropriate government and regulatory agencies, a visual inspection of the project site, and an informal survey of adjacent/contiguous and nearby properties to determine the presence of RECs.



Historical site research is important in the assessment of the likelihood of past releases of hazardous substances and/or petroleum products. Sources of historical information for the project site may include one or more of the following:

- Historical Sanborn atlases, aerial photos, etc.
- USGS topographic maps, land use and zoning maps, flood plain maps
- Interviews with site contacts or current site operators
- NYCDOB for building history including construction and alteration permits, and FDNY for information relating to petroleum storage tanks, and storage and use of hazardous substances or petroleum products.

The site inspection involves a review of current operations and walk-through of the project site for visible indications of any significant contamination by hazardous substances and/or petroleum products. The site inspection includes the following objectives:

- to identify sources of potential on-site contamination, such as underground storage tanks, septic systems, dry wells, interior floor drains, electrical equipment potentially containing PCBs, SACMs, and suspected lead-based paints, etc.
- to examine the property for signs of potential contamination: stained soils, unusual odors, stressed or dead vegetation, improperly stored drums, oil slicks, on-site waste disposal/dumping, etc.
- to identify the quantity and type of hazardous substances or petroleum products used in the on-site operations.
- to identify potential off-site sources of contamination. Adjacent uses are noted, along with topography and surface water drainage patterns.
- to identify on-site or adjacent off-site sensitive receptors, such as wetlands, surface waters, drinking water wells.

GEI's review of available federal agency records for listings which may include the project site, adjacent/contiguous properties, and surrounding neighborhood was completed according to the requirements set forth in ASTM E1527-13, Section 8. The search distances reviewed for this assessment generally meet or exceed the minimum search distances according to the requirements set forth in ASTM E1527-13, Section 8.2.1. Any deviations from the minimum search distances are addressed in the discussions for significant individual database findings.

GEI's review of available federal agency records for listings which may include the project site, adjacent/contiguous properties, and surrounding neighborhood included the following federal databases: NPL and Delisted NPL site listings; CERCLIS and CERCLIS NFRAP



site listings; RCRA CORRACTS and RCRA non-CORRACTS TSD facility listings; RCRA Generator listings; Federal institutional control/engineering control registries; and the Federal ERNS list.

GEI's review of readily available NYSDEC records for listings which may include the project site, adjacent/contiguous properties, and the surrounding neighborhood included the following state databases: Inactive Hazardous Waste Disposal Sites; Brownfields Sites and Voluntary Cleanup Program (VCP) Sites listings; Solid Waste Facilities and Historical Solid Waste Sites listings; Petroleum Bulk Storage Facilities, Major Oil Storage Facilities and Chemical Bulk Storage Facilities site listings; and Leaking Underground Storage Tank (LUST) and Spill Site facility listings.

Not all of the objectives described above are applied to every site; investigations are tailored to the particular nature of the site. It should be noted that information requested from regulatory agencies may be incomplete or unavailable within a reasonable time period.

4.3 User Supplied Information

In order for a prospective purchaser to claim CERCLA landowner liability protections, under Section 101 (35)(B) of CERCLA, as amended by the Small Business Liability Relief and Brownfields Revitalization Act, such persons and businesses are required to conduct AAIs prior to or on the date of obtaining ownership of the property. The USEPA, in its Final Rule, Standards and Practices for All Appropriate Inquiries, established federal standards and practices for conducting AAIs, found in 40 CFR Part 312. Under § 312.11 (a), ASTM E 1527-13 is identified as an industry standard which may be used to comply with AAIs.

The performance standards required for AAIs include inquiries by an Environmental Professional, and additional inquiries by persons seeking to establish one of the CERCLA liability protections. Under § 312.22, additional inquiries by persons seeking to establish one of the CERCLA liability protections, if not otherwise provided to the Environmental Professional, includes in substance: an evaluation of environmental cleanup liens against the project site; consideration of specialized knowledge or experience of the person seeking to claim liability protection; evaluation of the relationship of the purchase price to fair market value of the project site, if the property was not contaminated; or other commonly known or reasonably ascertainable information about the project site. If such information is not provided to the Environmental Professional, the AAI report prepared by the Environmental Professional must include a determination as to whether the lack of this information affects his or her ability to identify conditions of releases or threatened releases under the Final Rule, and discuss this condition as a significant Data Gap (Section 2.13.).



5. Disclaimer

This Phase I ESA has been prepared for Galaxy General Contracting and 417 Gerard LLC and is only to be used as a Phase I ESA of the project site in compliance with the scope and limitations of ASTM Practice E 1527-13 at the time of GEI's site visit. This Phase I ESA is based on the review of relevant historic and agency records relating to past uses and occupants, which may be incomplete, and upon a visual inspection of the project site.

Any third party reliance on the findings and conclusions contained in this report is expressly prohibited, unless the third party obtains the written consent of GEI beforehand. GEI assumes no liability for any unauthorized use of this report by any person or entity other than the User for whom it has been prepared. This Phase I ESA was undertaken in accordance with generally accepted currently customary practices, specifically the ASTM Standard Practice for Phase I ESAs. This Phase I ESA makes no representations or conclusions with respect to portions of the project site and its structures which were not inspected portions of the project site which were hidden from view, or portions of the project site not accessed by GEI for any reason.

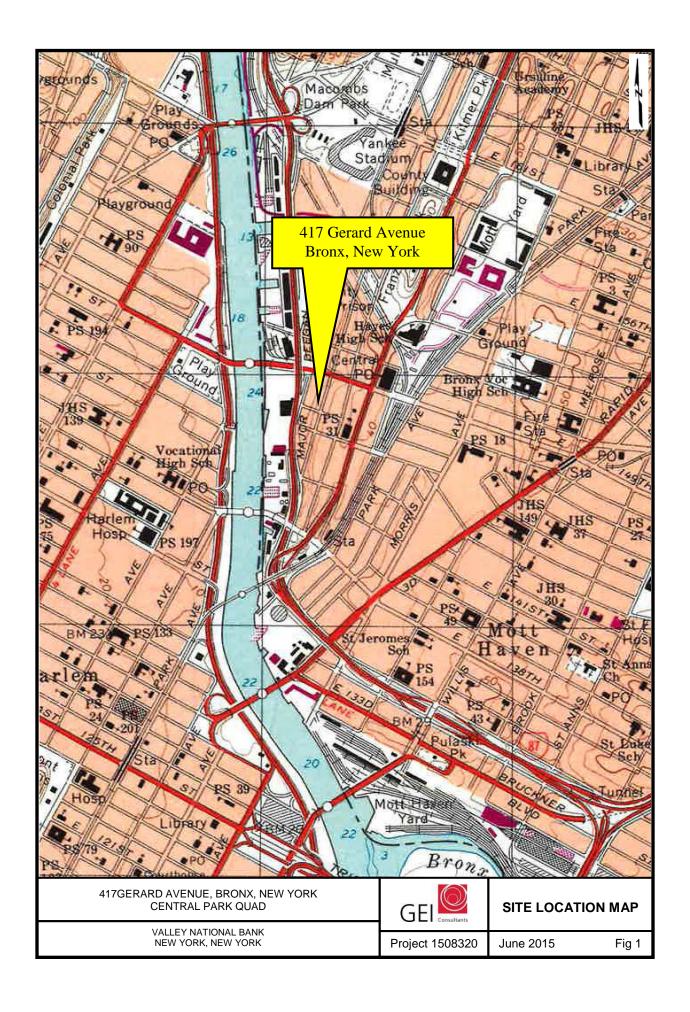
As discussed in ASTM E 1527-13, Section 4.5.1, a Phase I ESA cannot wholly eliminate uncertainty regarding the potential for RECs in connection with a property. The completion of this Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with the property, within reasonable limits of time and cost. This Phase I ESA is a visual, non-intrusive assessment where the investigation included a review of readily available applicable records, interviews with site owners and personnel, and an inspection of readily accessible and visible areas.

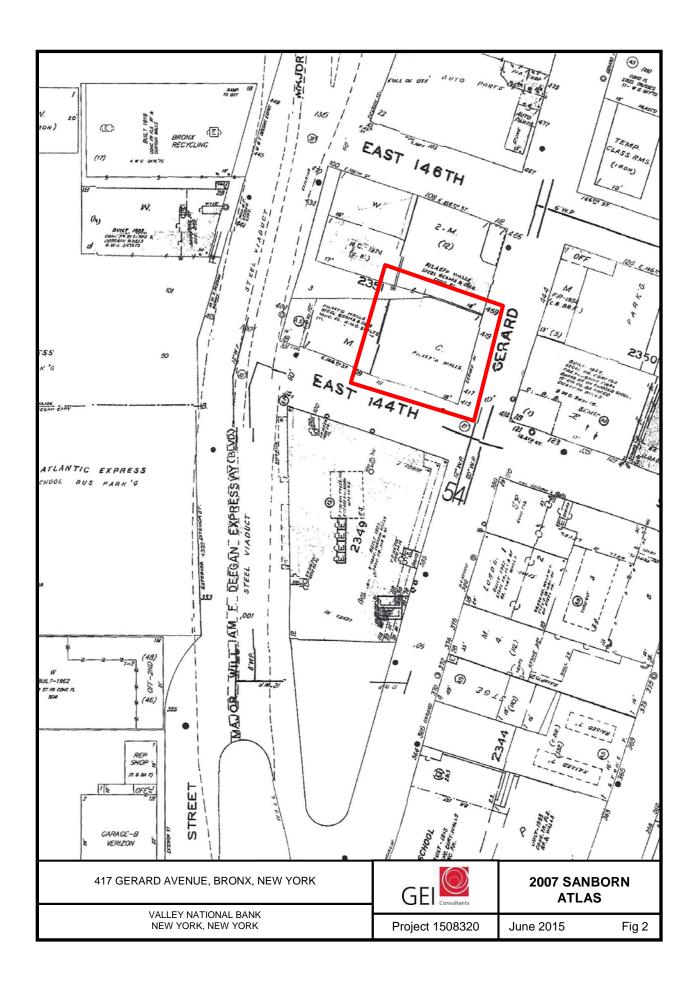
This Phase I ESA does not involve any sampling, testing, or laboratory analysis of soils, surface water, groundwater, products, building materials, or other substances on-site, but constitutes only the professional opinion of GEI based on established ASTM Phase I ESA and User procedures and protocols. This Phase I ESA is not, and should not be construed as, a guaranty, warranty, or certification of the presence or absence of toxic or hazardous substances, which can be made only through direct or indirect testing, and contains no formal plans or recommendations to rectify or remediate the presence of any toxic or hazardous substances, which may be subject to regulatory oversight and approval.

Any and all liability on the part of GEI shall be limited to the extent of applicable coverage of GEI's professional liability insurance between GEI and the User of this Phase I ESA. GEI shall have no liability for any other damages, whether consequential, compensatory, punitive, or special, arising out of, incidental to, or as a result of, this Phase I ESA. GEI assumes no liability for the use of this Phase I ESA by any person or entity other than the institution and/or entities or persons for whom it has been prepared.



Figures





Appendix A – Photographs



PHOTO 1: Looking toward the project site at 417 Gerard Avenue that is occupied by a glass and mirror company.



PHOTO 2: Another view of the building.



PHOTO 3: Interior view of the building.



PHOTO 4: Another interior view of the building.

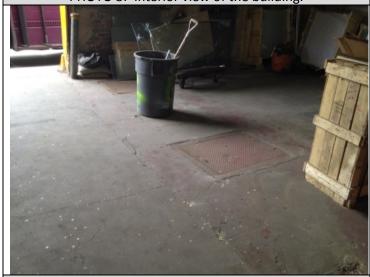


PHOTO 5: Looking at the cover of the oil-water separator within the building.



PHOTO 6: View of the oil-water separator.



PHOTO 7: Looking at the oil-fired hot air blower heating system.



PHOTO 8: Looking at the oil tank associated with the oil fired hot air blower heating system.



PHOTO 9: Looking at the dilapidated boiler within the building.



PHOTO 10: Looking at a second 275-gallon AST and behind that is another AST encased within concrete.



PHOTO 11: Looking at two gas tank vent lines that run up along the front wall of the building.



PHOTO 12: Looking at the building located to the east of the project site (across Gerard Ave.) which is occupied by a box company.

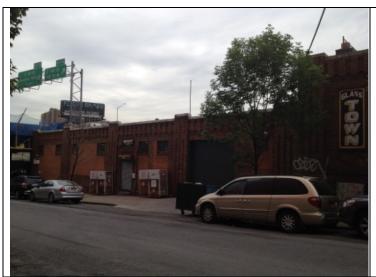


PHOTO 13: View of the adjacent building to the west is occupied by a box company.



Photo 14: The whitish building to the right of the photo is the adjacent building to the north that is occupied by a glass and mirror wholesaler and the building with the orange façade is used for public storage.

Appendix B – User Questionnaire

ESA Phase I User Questionnaire

(Reference ASTM E 1527)

PROJECT SITE ADDRESS: 417 Gerard Avenue, Bronx, NY

GEI PROJECT NO: 1508320

This User Questionnaire is required to be completed in order to comply with the All Appropriate Inquiry (AAI) as required by ASTM E1527. In order to qualify for one of the Landowner Liability Protections (*LLPs*) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that an appropriate inquiry is not complete.

professional. Failure to provide this information could result in a determination that an appropriate inquiry is not complete.
1. In order to assist us in determining the history of and past use(s) of the property, GEI Consultants, Inc. (GEI) would like to discuss this information with the past and present owners of the subject property. If known, please supply us with their contact information so that we contact them during the course of this Phase I ESA investigation. Unknown
2. As the user of this Phase I ESA Report, a title report should be obtained. This would indicate any lien records for environmental liens currently recorded against or relating to the property. Therefore, do you have a Title Report? If yes, does the Title Report depict any environmental liens? If no, then please answer question 3. No, but a report has been ordered.
3. If a Title Report is not in your possession, to the best of you knowledge, are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? If yes, please explain in detail: No
4. Are you aware of any Activities and Use Limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? If yes, please explain in detail: Yes. Property has an E-Designation.

5. As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have

specialized knowledge of the chemicals and processes used by this type of business. If yes, please explain in detail: No
6. Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? If yes please explain in detail: Purchase price reflects fair market value.
7. Are you aware of commonly known or reasonably ascertainable information of about the property that would help the environmental professional to identify conditions? If yes, please explain in detail:
(a) Do you know past use of the property? Commercial Business/Glass Distributor
(b) Do you know of specific chemicals that are present or once were present at the property? No
(c) Do you know of spills or other chemical releases that have taken place at the property? No
(d) Do you know of any environmental cleanups that have taken place at the property? No
8. As the user of this Phase I ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property? No
<u>, </u>
9. Please provide following information:
(a) The reason why the Phase I ESA is required. Purchaser wants report for records and to show to potential lenders.
(b) The type of property and type of transaction? For example, sale, purchase, exchange, refinance etc.Purchase



(c) The complete and correct address for the property (a map, site survey or other documentation showing property location and boundaries is helpful).

417 Gerard Avenue, Bronx, NY 10451

(d) Please indicate how the person(s) signing below is associated with the project site (e.g., owner, owner's representative, purchaser, etc.).

Owner's Representative

Signature

Richard Sica

Print Name

Owner's Representative,417 Gerard LLC

Title, Company

6/25/15

Date

Appendix C – Historical Atlases

417 Gerard Avenue

417 Gerard Avenue Bronx, NY 10451

Inquiry Number: 4328788.1

June 17, 2015

Certified Sanborn® Map Report



Certified Sanborn® Map Report

6/17/15

Site Name: Client Name: 417 Gerard Avenue GEI Consultants

417 Gerard Avenue 110 Walt Whitman Road Bronx, NY 10451 Huntington Station, NY 11746

EDR Inquiry # 4328788.1 Contact: Richard Fasciani



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by GEI Consultants were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Site Name: 417 Gerard Avenue
Address: 417 Gerard Avenue
City, State, Zip: Bronx, NY 10451

Cross Street:

P.O. # 1508320 **Project:** 1508320

Certification # A36C-4A86-9FAF

Maps Provided:

2007	2001	1992	1980	1944
2006	1998	1991	1978	1935
2005	1996	1989	1977	1928
2004	1995	1986	1951	1922
2003	1994	1984	1947	1908
2002	1993	1981	1946	1903



Sanborn® Library search results Certification # A36C-4A86-9FAF

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & 189 Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

✓ Library of Congress

University Publications of America

▼ EDR Private Collection

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



2007 Source Sheets



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Volume 9N, Sheet 52



Volume 9N, Sheet 54



Volume 9N, Sheet 55



Volume 9N, Sheet 56

2006 Source Sheets



Volume 9N, Sheet 51



Volume 9N, Sheet 52



Volume 9N, Sheet 54



Volume 9N, Sheet 55



Volume 9N, Sheet 56

2005 Source Sheets



Volume 9N, Sheet 51



Volume 9N, Sheet 55



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Volume 9N, Sheet 52



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Volume 9N, Sheet 51



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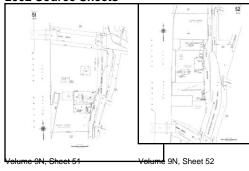


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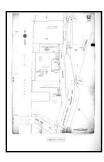






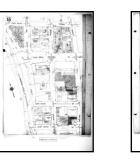
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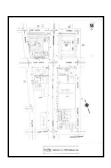
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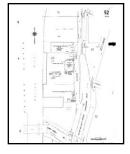
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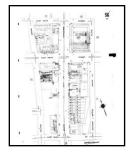
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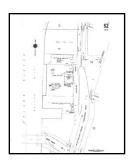
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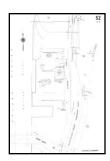


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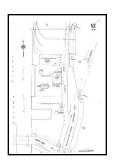
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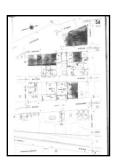
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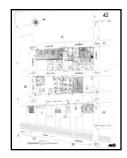
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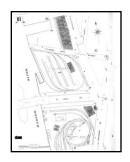
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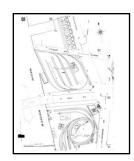
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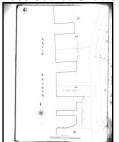
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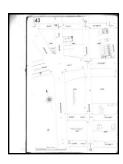
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