Hydro Tech Environmental, Corp.

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January 21st, 2014

Mr. Bryan Rubin
Richmond Liberty LLC
825 3rd Avenue, 37th floor
New York, New York 10022

Re: 178 Richmond Terrace, Staten Island, NY & 24 Stuyvesant Place, Staten Island, NY
Block 13, Lots 75, 78, 79, 80, 81, 82, 92, 100, 103 and 104
Phase II Environmental Site Assessment

Dear Mr. Rubin

This letter is intended to provide you with the results of the recent Phase II investigation conducted at the above-referenced property. The scope of work for this investigation was based upon excerpts of findings from our recent Phase I Environmental Site Assessment (ESA) and is intended to determine if the following REC(s) have impacted the environmental quality of the site:

- The presence of unknown fill material
- The suspect presence of heating oil tanks

SITE DESCRIPTION

The address of the Subject Property is identified as 178 to 194 Richmond Terrace, 8, 18 and 22 to 26 Stuyvesant Place, Staten Island, NY. The Subject Property is approximately 89,800 square feet in area and is currently a vacant lot containing trees and other vegetation. The ground surface throughout the property is bare soil. Miscellaneous debris and broken fences are scattered throughout the Subject Property. Concrete building foundations were identified in the northern portion of the Subject Property. These foundations were observed to be in new condition and are part of a development that was halted during 2004 when development plans grew to include additional lots.

Access to the Subject Property is via Richmond Terrace and Stuyvesant Place to the east and Hamilton Avenue to the south. The Subject Property is not connected to the municipal water, gas and electric services. The topography of the Subject Property is uneven throughout the Site and the topography of the vicinity is sloping towards the northeast. **Figure 1** provides a Site Plan.

FIELDWORK

The field portion of the investigation was performed on January 8th and 9th, 2014 and involved the performance of a Ground Penetrating Radar survey and the installation and sampling of twelve (12) soil probes. Prior to the commencement of the fieldwork, a New York One-Call Public Utility mark-out was requested. Confirmation number **140080931** was issued to the mark-out. **Attachment #1** contains photographs of the fieldwork.

GPR Survey

The GPR survey was performed to determine if any anomalies, including underground storage tanks (USTs), are present at the Site and to clear all sampling locations of any potential subsurface obstruction. The GPR survey was performed utilizing a GSSI SIR-3000 Control Unit and a 400-megahertz shielded antenna. The GPR operator wheeled the antenna over the predetermined grid. The GPR takes one "scan" per set unit. The number of scans per unit is based upon the estimated sizes of targets. As each scan is performed, the antenna emits specific radar amplitude into the subsurface. The amplitude of the radar reflected back to the antenna is based upon the differences in the dielectric constants of the subsurface materials. The difference in amplitude obtained during each scan is graphically displayed on the Control Unit, which are then interpreted by the GPR operator at the time of the survey. Additional interpretations are then conducted in the office using computer software.

No anomalies indicative of USTs were identified during the GPR survey. The survey also cleared all sampling locations of subsurface obstructions.

Soil Probes

Twelve (12) soil probes, designated SP-1 to SP-12, were installed at the Site. Soil probes SP-1 to SP-6 were installed in the northern portion of the Site and soil probes SP-7 to SP-12 soil probes were installed in the southern portion of the Site. Previous **Figure 1** provides a sampling plan.

The soil probes were installed utilizing Hydro Tech's Tractor Geoprobe® unit. This unit installs soil probes utilizing direct-push technology. Soil samples were collected utilizing a four-foot long Macro core sampler fitted with dedicated acetate liners. Each sampler was installed with 1½-inch diameter drill rods. All soil probes were installed to twelve (12) feet below grade surface (bgs). No groundwater was encountered during the installation of soil probes.

Soil samples were obtained from each soil probe location on continuous 2-foot intervals. Each soil sample was characterized in the field and screened for organic vapors utilizing a Photoionization Detector (PID). The general soil type beneath the Site consists of brown, medium to fine grained sand with pebbles. No organic vapor or visual/olfactory evidence of petroleum contamination was noted in any of the soil borings. Soil probe logs are provided as **Attachment #2**.

Based upon the requirements set forth in the scope of work, one soil sample was collected from each soil probe. Each soil sample was placed into pre-cleaned laboratory containers and appropriately labeled. The following soil samples from each soil probe were analyzed for confirmatory analyses at a State-certified laboratory:

Soil Probe (SP)	Depth Interval (Feet)
SP-1	10 to 12
SP-2	6 to 8
SP-3	0 to 2
SP-4	2 to 4
SP-5	8 to 10
SP-6	4 to 6
SP-7	0 to 2
SP-8	2 to 4
SP-9	6 to 8
SP-10	10 to 12
SP-11	4 to 6
SP-12	8 to 10

All soil samples were placed in a cooler filled with ice and maintained at 4 degrees Celsius. The samples were transmitted under proper chain of custody procedures to a State-certified laboratory and were analyzed for volatile organic compounds (VOCs) via EPA Method 8260 and semi-volatile organic compounds (SVOCs) via EPA Method 8270 BN and RCRA Metals. **Attachment #3** provides the laboratory reports.

Investigatory Derived Waste

All investigatory-derived waste was placed in one (1) 55-gallon drum, which is currently secured with Hydro Tech. Once disposal arrangements with a proper disposal facility have been completed, the drum will be disposed of in accordance to DER-10 Technical Guidance for Site Investigation and Remediation (May 2010).

ANALYTICAL RESULTS

Soil Results

Tables 1, 2 and **3** provide the analytical results for the soil samples collected from SP-1 to SP-12. Concentrations reported in **Tables 1, 2** and **3** are in milligrams per kilogram (mg/kg). **Table 1, 2** and **3** also provides a comparison of the analytical results to the 6 NYCRR Part 375 Unrestricted Use and Restricted Residential Soil Cleanup Objectives (SCO). As **Table 1** indicates, no VOCs were detected in any of the soil samples at concentrations exceeding their respective Unrestricted Use SCOs. Two VOCs, Toluene and Benzene, were detected in the soil sample collected from boring SP-4 at a concentration exceeding the Method Detection Limit (MDL) but well below the Unrestricted SCO.

As **Table 2** indicates, no SVOCs were detected in any of the soil samples at concentrations exceeding the MDLs.

As **Table 3** indicates, Selenium was detected in all of the soil samples at concentrations exceeding the Unrestricted SCO but below the Restricted Residential SCO. Lead was detected in the soil samples from SP-7 and SP-9 at concentrations exceeding the Unrestricted SCO but below the Restricted Residential SCO (maximum of 99.7 mg/kg). Mercury was detected in the soil sample from SP-9 at a concentration 2.41 mg/kg, which exceeds both the Unrestricted SCO and Restricted Residential SCO

DISCUSSION OF RESULTS

The GPR survey did not identify any anomalies indicative of underground storage tanks at the Site.

Based upon the analytical results discussed above, no evidence of a significant adverse impact related to urban fill material or heating oil tanks was identified in the soil at the Site. This is evidenced by the analytical results from the soil samples collected from soil probes SP-1 through SP-12 in which only three metals were detected at concentrations exceeding regulatory standards. No VOCs or SVOCs were detected in the soil at the Site at concentrations exceeding the most stringent regulatory standards.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the findings of this investigation, no significant adverse impacts from urban fill material or heating oil tanks was found at the Site.

Due to the presence of metals in the soil at concentrations exceeding unrestricted regulatory standards, any soil removed from the Site should be disposed of at a proper facility in accordance with all Federal, State and Local laws and regulations.

Should you have any questions or comments, please feel free to contact me at your convenience.

Very Truly Yours,
Hydro Tech Environmental, Corp.

Sasha M. Rothenberg
Environmental Scientist

Charren Cabaroy
Assistant Project Manager

SR:CC/ym
Enc.

cc: Hydro Tech File 140003 w/Enc.

EXCLUSIONS & DISCLAIMER

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

In preparing this report, **Hydro Tech Environmental, Corp.** may have relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to **Hydro Tech Environmental, Corp.** at the time of the subject property assessment. Although there may have been some degree of overlap in the information provided by these various sources, **Hydro Tech Environmental, Corp.** did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this subject property assessment.

Observations were made of the subject property and of structures on the subject property as indicated within the report. Where access to portions of the subject property or to structures on the subject property was unavailable or limited, **Hydro Tech Environmental, Corp**. renders no opinion as to the presence of non-hazardous or hazardous materials, or to the presence of indirect evidence relating to a non hazardous or hazardous materials, in that portion of the subject property or structure. In addition, **Hydro Tech Environmental, Corp.** renders no opinion as to the presence of hazardous materials, or the presence of indirect evidence relating to hazardous materials, where direct observation of the interior walls, floors, or ceiling of a structure on a subject property was obstructed by objects or coverings on or over these surfaces.

Hydro Tech Environmental, Corp. did not perform testing or analyses to determine the presence or concentration of asbestos at the subject property or in the environment of the subject property under the scope of the services performed.

The conclusions and recommendations contained in this report are based in part, where noted, upon the data obtained from a limited number of soil samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

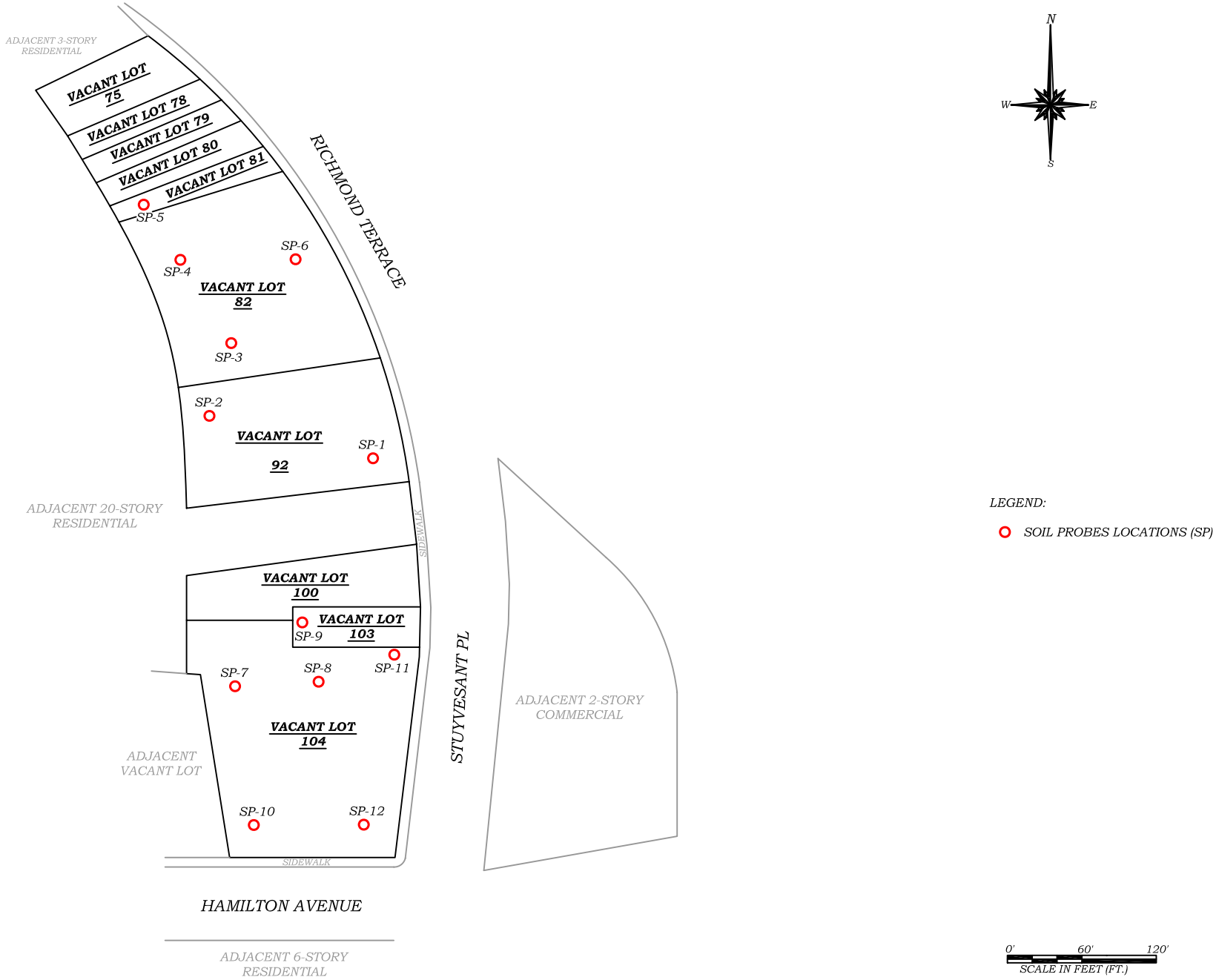
Any water level reading made in test pits, borings, and/or observation wells were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

Except as noted within the text of the report, no qualitative laboratory testing was performed as part of the subject property assessment. Where such analyses have been conducted by an outside laboratory, **Hydro Tech Environmental, Corp**. has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data.

The conclusions and recommendations contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. The data have been reviewed and interpretations were made in the report. As indicated within the report, some of the data may be preliminary “screening” level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, the data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.

Chemical analyses have been performed for specific constituents during the course of this subject property assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the subject property.

FIGURES



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&
24 Stuyvesant Place
Staten Island, NY
HTE Job # 140003

Drawn By:	C.Q.
Reviewed By:	M.R
Approved By:	M.S
Date:	01/12/13
Scale:	AS NOTED

TITLE:

FIGURE 1: SITE & SAMPLING PLAN

TABLES

Table 1
Soil Samples Analytical Results for VOCs
178 Richmond Terrace and 24 Stuyvesant Place, Staten Island, NY

Sample ID	SP-1	SP-2	SP-3	SP-4	SP-5	SP-6	SP-7	SP-8	SP-9	SP-10	SP-11	SP-12	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives mg/kg dry
Sampling Depth (ft)	10'-12'	6'-8'	0'-2'	2'-4'	8'-10'	4'-6'	0-2'	2'-4'	2'-4'	6'-8'	4'-6'	8'-10'	
Sampling Date	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
Units	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	
Volatile Organics, 8260 List													
Benzene	<0.00106	<0.00108	<0.000963	**0.00259**	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.06
Bromobenzene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
Bromochloromethane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
Bromodichloromethane	<0.00531	<0.00538	<0.00481	<0.00519	<0.00535	<0.00649	<0.00573	<0.00250	<0.00530	<0.00250	<0.00519	<0.00523	NS
Bromoform	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
Bromomethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
sec-Butylbenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	11
n-Butylbenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	12
tert-Butylbenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	5.9
Carbon tetrachloride	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	0.76
Chlorobenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	1.1
Chloroethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
Chloroform	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.37
Chloromethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
2-Chlorotoluene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
4-Chlorotoluene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
1,2-Dibromo-3-chloropropane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
Dibromochloromethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00130	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
1,2-Dibromoethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00130	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
Dibromomethane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00214	<0.00260	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
1,2-Dichlorobenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	1.1
1,3-Dichlorobenzene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00130	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	2.4
1,4-Dichlorobenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00260	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	1.8
Dichlorodifluoromethane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
1,1-Dichloroethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	0.27
1,2-Dichloroethane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.02
1,1-Dichloroethene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.33
cis-1,2-Dichloroethene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.25
trans-1,2-Dichloroethene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.19
1,3-Dichloropropane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
2,2-Dichloropropane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
1,2-Dichloropropane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
trans-1,3-Dichloropropene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
1,1-Dichloropropene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
cis-1,3-Dichloropropene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
Ethylbenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	1
Hexachlorobutadiene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
Isopropylbenzene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
4-Isopropyltoluene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
Methyl-Tert-Butyl-Ether	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.00130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00209	0.93
Methylene chloride	<0.0106	<0.0108	<0.00963	<0.0104	<0.0107	<0.0130	<0.0115	<0.0125	<0.0106	<0.0125	<0.0104	<0.0105	0.05
n-Propylbenzene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	3.9
Styrene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
1,1,2,2-Tetrachloroethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
1,1,1,2-Tetrachloroethane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
Tetrachloroethene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	1.3
Toluene	<0.00106	<0.00108	<0.000963	**0.00219**	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.7
1,2,3-Trichlorobenzene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
1,1,1-Trichloroethane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.68
1,1,2-Trichloroethane	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	NS
Trichloroethene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	0.47
Trichlorofluoromethane	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	NS
1,2,3-Trichloropropane	<0.00531	<0.00538	<0.00481	<0.00519	<0.00535	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00523	NS
1,2,4-Trimethylbenzene	<0.00106	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00125	<0.00104	<0.00105	3.6
1,3,5-Trimethylbenzene	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	8.4
Vinyl chloride	<0.00213	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00250	<0.00208	<0.00209	0.02
m + p-Xylene	<0.00106	<0.00215	<0.00193	<0.00208	<0.00214	<0.00260	<0.00229	<0.00250	<0.00212	<0.00125	<0.00104	<0.00105	0.26
o-Xylene	<0.00213	<0.00108	<0.000963	<0.00104	<0.00107	<0.0130	<0.00115	<0.00125	<0.00106	<0.00250	<0.00208	<0.00209	0.26
Total VOCs	0	0	0	0.00478	0	0	0	0	0	0	0	0	NS

B=analyte found in the analysis batch blank
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
ND=analyte not detected at or above the level indicated
NS=this indicates that no regulatory limit has been established for this analyte

Table 2
Soil Samples Analytical Results for SVOCs
178 Richmond Terrace and 24 Stuyvesant Place, Staten Island, NY

Sample ID	SP-1	SP-2	SP-3	SP-4	SP-5	SP-6	SP-7	SP-8	SP-9	SP-10	SP-11	SP-12	
Sampling Depth (ft)	10'-12'	6'-8'	0'-2'	2'-4'	8'-10'	4'-6'	0-2'	2'-4'	2'-4'	6'-8'	4'-6'	8'-10'	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives mg/kg dry
Sampling Date	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
Units	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	
Semi-Volatiles, 8270 Target List													
Acenaphthene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	20
Acenaphthylene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	100
Anthracene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	100
Benzo(a)anthracene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	1
Benzo(a)pyrene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	1
Benzo(b)fluoranthene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	1
Benzo (g,h,i) perylene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	100
Benzo(k)fluoranthene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	0.8
4-Bromophenyl phenyl ether	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Butyl benzyl pthalate	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
4-Chloroaniline	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Bis(2-chloroethoxy)methane	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Bis(2-chloroethyl)ether	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Bis(2-chloroisopropyl)ether	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
2-Chloronaphthalene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
4-Chlorophenyl phenyl ether	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Chrysene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	1
Dibenzo(a,h)anthracene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	0.33
Di-n-Butyl Phthalate	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
3,3'-Dichlorobenzidine	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Diethyl Phthalate	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Dimethyl Phthalate	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
2,4-Dinitrotoluene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
2,6-Dinitrotoluene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
D-n-n-octyl Phthalate	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
bis (2-Ethyl Hexyl) Phthalate	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Fluoranthene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	100
Fluorene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	30
Hexachlorobenzene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Hexachlorobudadiene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Hexachlorocyclopentadiene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Hexachloroethane	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Indeno (1,2,3-cd) Pyrene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	0.5
Isophorone	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
2-Methylnaphthalene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Naphthalene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	12
3-Nitroaniline	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
2-Nitroaniline	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
4-Nitroaniline	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Nitrobenzene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
N-Nitrosodiphenylamine	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
n-Nitrosodi-n-propylamine	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Phenanthrene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	100
Pyrene	<0.266	<0.269	<0.289	<0.305	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	100
1,2,4-Trichlorobenzene	<0.266	<0.269	<0.289	<0.306	<0.286	<0.270	<0.287	<0.294	<0.265	<0.312	<0.260	<0.282	NS
Total SVOCs	0	0	0	0	0	0	0	0	0	0	0	0	NS

J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
ND=analyte not detected at or above the level indicated
NS=this indicates that no regulatory limit has been established for this analyte

Table 3
Soil Samples Analytical Results for Metals
178 Richmond Terrace and 24 Stuyvesant Place, Staten Island, NY

Sample ID	SP-1	SP-2	SP-3	SP-4	SP-5	SP-6	SP-7	SP-8	SP-9	SP-10	SP-11	SP-12	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives mg/kg dry	Restricted Use Soil Cleanup Objectives (6 NYC RR Pt.375-6.8b) - Restricted Residential mg/kg dry
Sampling Depth (ft)	10'-12'	6'-8'	0'-2'	2'-4'	8'-10'	4'-6'	0-2'	2'-4'	2'-4'	6'-8'	4'-6'	8'-10'		
Sampling Date	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014	1/9/2014		
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
Units	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry	mg/kg dry		
Metals, Target Analyte														
Arsenic	**5.87**	**5.33**	**5.81**	**6.79**	**1.96**	**3.26**	**5.08**	**5.26**	**10.3**	**4.41**	**4.75**	**7.04**	13	16
Barium	**25.3**	**23.3**	**53.8**	**71.7**	**28.2**	**33.7**	**56.4**	**26.6**	**47.2**	**11.6**	**17.6**	**35.5**	350	400
Cadmium	<0.923	<0.733	**1.34**	1.33	<0.953	**0.912**	**0.939**	**1.49**	**1.27**	**1.47**	<0.752	**0.987**	2.5	4.3
Chromium	12.8	12.5	**76.6**	65.3	**17.7**	**22.8**	**30**	**60.7**	**20.1**	**45.7**	**8.75**	**15.5**	NS	NS
Lead	**6.69**	**7.44**	**44.7**	**54.5**	**10.9**	**9.11**	**99.7**	**12.8**	**99.1**	**3.8**	**8.49**	**20.3**	63	400
Mercury	<0.01	<0.02	**0.05**	**0.08**	**0.01**	**0.02**	**0.13**	<0.01	**2.41**	**0.02**	<0.01	**0.04**	0.18	0.81
Selenium	**5.69**	**4.44**	**12.2**	**11.5**	**3.98**	**8.3**	**8.65**	**15.5**	**5.44**	**20**	**4.97**	**8.12**	3.9	180
Silver	<0.923	<0.733	<0.928	<0.929	<0.953	<0.871	<0.869	<0.915	<0.794	<0.848	<0.752	<0.842	2	180

NS=this indicates that no regulatory limit has been established for this analyte
Grey shaded values represent concentration exceeding Unrestricted Use SCOs
Blue shading indicates exceedance of Restricted Residential SCO

Soil Map—Richmond County, New York
(Liberty Towers, Staten Island, NY)

Map Scale: 1:1,930 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Richmond County, New York
Survey Area Data: Version 7, Oct 8, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 23, 2014—Aug 15, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GbD	Greenbelt loam, 15 to 25 percent slopes	3.2	21.0%
UGBl	Urban land-Greenbelt complex, 3 to 8 percent slopes, low impervious surface	0.7	4.3%
UGCl	Urban land-Greenbelt complex, 8 to 15 percent slopes, low impervious surface	5.4	34.8%
UGD	Urban land-Greenbelt complex, 15 to 25 percent slopes	0.1	0.7%
UtB	Urban land, till substratum, 3 to 8 percent slopes	3.8	24.8%
UtC	Urban land, till substratum, 8 to 15 percent slopes	2.2	14.3%
Totals for Area of Interest		**15.4**	**100.0%**

Richmond Terrace and Stuyvesant Place, SI

August 27, 2018

1:18,056

0 0.225 0.45 0.9 mi

0 0.35 0.7 1.4 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

NYS Department of Environmental Conservation
Not a legal document

U.S. Fish and Wildlife Service
National Wetlands Inventory

Richmond Terrance and Stuyvesant Place,

August 27, 2018

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

576,000 M
1,972,000 FEET
74°06'00"
1,974,000 FEET
577,000 M
1,976,000 FEET
74°05'00"
1,978,000 FEET
578,000 M

4,500,000 M
154,000 FEET

152,000 FEET
4,499,000 M
150,000 FEET
40°38'00"
148,000 FEET
4,498,000 M

576,000 M
1,972,000 FEET
74°06'00"
1,974,000 FEET
577,000 M
1,976,000 FEET
74°05'00"
1,978,000 FEET
578,000 M

Photomap prepared by Earth Satellite Corporation-Mark Hurd Aerial Surveys, Inc. from color infrared photographs taken 10 August through 9 October 1974.
Position and scale of photo image based on best fit to New York State Department of Transportation 7.5 minute planimetric maps.

NOTE

The position of upland features on this map may be unreliable due to relief displacements inherent in the perspective aerial photograph.

New York Transverse Mercator Grid shown at 1000 meter intervals.

Latitude and longitude ticks shown at 1 minute intervals.

2000 foot ticks based on the New York Plane Coordinate Grid, Long Island Zone.

TIDAL WETLANDS MAP

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

MAP 576-498

INDEX MAP NUMBER 1

COPIES OF TIDAL WETLAND MAPS AND INDEX MAPS ARE AVAILABLE FROM
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
61ST FLOOR, 2 WORLD TRADE CENTER
NEW YORK, NEW YORK 10047

SCALE 1:2400

200 0 200 400 600 800 FEET
50 0 50 100 150 METERS

LEGEND

POLITICAL BOUNDARIES:

- State
- County
- Town or City
- Incorporated Village
- Park or Reservation

Approximate location of political boundary lines based on New York State Department of Transportation 7.5 minute planimetric maps.

WETLANDS CATEGORIES:

- IM Intertidal Marsh
- HM High Marsh or Salt Meadow
- FM Coastal Fresh Marsh
- SM Coastal Shoals, Bars and Mudflats
- FC Formerly Connected Tidal Wetlands
- ds Dredge Spoil
- LZ Littoral Zone
- Areas adjacent to tidal wetlands
- Landward extent of tidal wetlands
- Wetlands category boundaries

576-498 Richmond County

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/27/2018 at 7:23:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.