2.I HAZARDOUS MATERIALS

INTRODUCTION

A hazardous materials assessment is conducted to determine whether the proposed project may increase the exposure of people or the environment to hazardous materials and, if so, whether this increased exposure would result in potential significant public health or environmental impacts. This section examines the Proposed Action's potential to cause a significant adverse hazardous materials impact by leading to redevelopment or other activities that could expose people to hazardous materials, either by introducing land uses that would involve the use or storage of such materials or by increasing pathways to exposure to existing hazardous materials that contaminate portions of the proposed rezoning area as a result of current or past activities. A hazardous material is any substance that poses a threat to human health or the environment; such substances typically include heavy metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, dioxins, and other toxic, corrosive, or flammable waste products of industrial or other processes. Manufacturing operations, automotive repair shops, gasoline service stations, dry cleaners, exterminators, chemical laboratories, junk yards, solid waste transfer stations, welding shops, and printers are among those land uses that may be associated with subsequent hazardous materials contamination of soil or groundwater, as well as any land use with underground fuel storage tanks.

PRINCIPAL CONCLUSIONS

The Proposed Action would not introduce new activities or processes using hazardous materials; however, the Proposed Action would allow new residential development in an area that has long been used for industrial and automotive uses. The Proposed Action would not result in significant adverse impacts due to hazardous materials with the incorporation of (E) designations on the projected and potential development sites not controlled by the applicant and the recording of restrictive declarations against all of the projected development sites controlled by the applicant.

Many sites within the proposed rezoning area were identified as potentially contaminated with an array of both petroleum-based and non-petroleum-based chemicals as a result of former activities on or near those sites. These findings are summarized in this section and detailed in a hazardous materials report appended to this EIS (as Appendix 5). As a result, in accordance with the report's recommendations and New York City Department of Environmental Protection (DEP) requirements, precautions will be taken to ensure that demolition and construction workers and future residents and visitors are not exposed to hazardous materials. All of the 45 lots that would be rezoned and have been identified as projected or potential development sites but that are not under the applicant's control will receive (E) designations. The (E) designation would require that, prior to the issuance of construction-related permits for redevelopment, the property owner conduct a Phase I environmental site assessment in accordance with the American Society of Testing Materials (ASTM) E1527-05, prepare and implement a soil and groundwater testing protocol, and perform such remediation activities as are deemed appropriate by the New York City Mayor's Office of Environmental Remediation (OER), to the satisfaction of OER.[1] For those lots under the applicant's control, DEP has reviewed the Phase I and Phase II reports that have been prepared to date and has determined that additional investigation and/or remediation will be required. For lots under the applicant's control, a restrictive declaration will be recorded against the property, binding the applicant to perform all investigative or remedial activities required by DEP, in accordance with protocols devised by the agency, and to the agency's satisfaction, before submitting any permit applications to the New York City Department of Buildings. The placement of (E) designations

[1] Note that pursuant to Local Law 27 of 2009, the New York City Mayor's Office of Environmental Remediation (OER) was granted authority over administering (E) designations issued pursuant to Section 11-15 of the Zoning Resolution, as successor to DEP for such purpose.

on the 45 tax lots not controlled by the applicant and the recording of restrictive declarations against all of the 15 lots controlled by the applicant would ensure that no significant impacts related to hazardous materials would occur as a result of the Proposed Action.

METHODOLOGY

The hazardous materials screening assessment was performed in accordance with the guidance in the *CEQR Technical Manual*. Information from historical sources and regulatory databases was reviewed to determine the potential for petroleum and non-petroleum contaminants. Any lots that support, that historically supported, or that are or were adjacent to land uses listed in Hazardous Materials Appendix 1 to the *CEQR Technical Manual* were presumed to be potentially contaminated – that is, to be subject to a "recognized environmental condition," as that term is defined in American Society of Testing and Materials (ASTM) E 1527-05. A recognized environmental condition also was assumed if the past or present uses on other nearby lots were listed in Hazardous Materials Appendix 1.

Site reconnaissance was carried out during field trips on March 30, 2009, September 25, 2009, and September 26, 2009. It was limited to observations from sidewalks adjacent to the lots. Land uses within 400 feet of the rezoning area also were evaluated for uses that could be sources of hazardous materials contamination.

Historical information was reviewed, using Sanborn fire insurance maps between the years of 1896 and 2007; USGS maps for 1897, 1947, 1966, 1979, and 1995; and aerial photos for 1954, 1966, 1975, 1984, 1994, and 2006. Available certificates of occupancy also were reviewed.

The 15 lots under the applicant's control have been the subject of Phase I environmental site assessments and in most cases Phase II investigative studies. These were reviewed and summarized.

Federal and state hazardous materials databases, maintained by the United States Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (DEC) respectively, were reviewed to identify sites where storage, handling, emission, and/or spill cleanup of hazardous or toxic materials may have occurred. Search distances varied according to the requirements of ASTM Standard Practice for Environmental Assessments, E 1527-05. These distances were calculated from the outer edges of the proposed rezoning area to provide sufficient search radii for all of the sites within the rezoning area.

EXISTING CONDITIONS

Currently, the rezoning area contains a mix of industrial, automotive, commercial, residential, educational, and recreational land uses. Many of the existing land uses constitute recognized environmental conditions. Historical uses of concern have been identified on many additional lots within the proposed rezoning area, and many others may have become contaminated as a result of current or prior activities at nearby locations. Although it was not possible to identify all specific past and present tenants within the study area, identified operations that may have contributed to the non-petroleum-based hazardous materials contamination in this area include auto repair, sheet metal works, paint shops, dry cleaners, and iron works. Identified facilities that may have contributed to petroleum-based hazardous materials contamination included above-ground and underground fuel tanks, auto repair facilities, and gas stations.

In areas such as this, where industrial and automotive uses and commercial uses such as dry cleaners have long occupied many sites, dating to an era when environmental hazards were not treated as serious concerns and no records were kept of leaks or spills, typically very few if any lots can be considered safe from the effects of onsite activities or hazardous materials that may have migrated through soils and groundwater. The screening assessment concluded that all of the lots within the proposed rezoning area are potentially contaminated with hazardous materials.

Land uses within 400 feet of the proposed rezoning area also have included a mixture of rail, manufacturing, warehousing, garage, and residential uses. The lots with historical uses or incidents that potentially may have contributed to contamination of soils or groundwater are dispersed throughout the 400-foot area. They are sufficiently close to the lots in the rezoning area to be a source of concern for potential contamination, and their presence was additional reason for the recommendations presented below.

FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

In the absence of the Proposed Action, the current development scale and mixture of land uses would remain throughout most of the study area, and the only significant new development within the proposed rezoning area would occur on Block 3016, Lot 42, at the northernmost end of the rezoning area. Currently, it contains a hotel, vacant commercial buildings, and an accessory parking lot. The anticipated development would consist of a mixed use building with a combination of residential and commercial space.

FUTURE CONDITIONS WITH THE PROPOSED ACTION AND ITS POTENTIAL IMPACT

Impact Potential

The Proposed Action would include a zoning map amendment that would replace a manufacturing district with a residential district that would permit residential or community facility development and that would replace an existing residential district covering part of Block 3016 with a higher density residential district that would increase the amount of permitted residential and community facility floor area. The reasonable worst case development scenario presented in Chapter 1 of this EIS projects that 26 development sites within the proposed rezoning area would likely be redeveloped by the 2022 analysis year and 8 development sites that might potentially be redeveloped with residential or community facility floor area at some point in the future.

This assessment has concluded that all of 28 projected and potential development sites that are not under the applicant's control and that have been identified as projected or potential development sites have potential for hazardous materials contamination due to historic uses on the sites or historic uses on other lots of the same block. As a result, the Proposed Action should include (E) designations for these 28 projected and potential development sites. The lots are listed in Table I-1, along with the identified potential for contamination (with petroleum or non-petroleum contaminants or both), and Figure I-1 serves as a key for identifying the lots listed in the table. The action of assigning (E) to these development sites would eliminate the potential for significant adverse impacts from the Proposed Action, and would ensure that appropriate testing and remediation, if needed, would be undertaken.

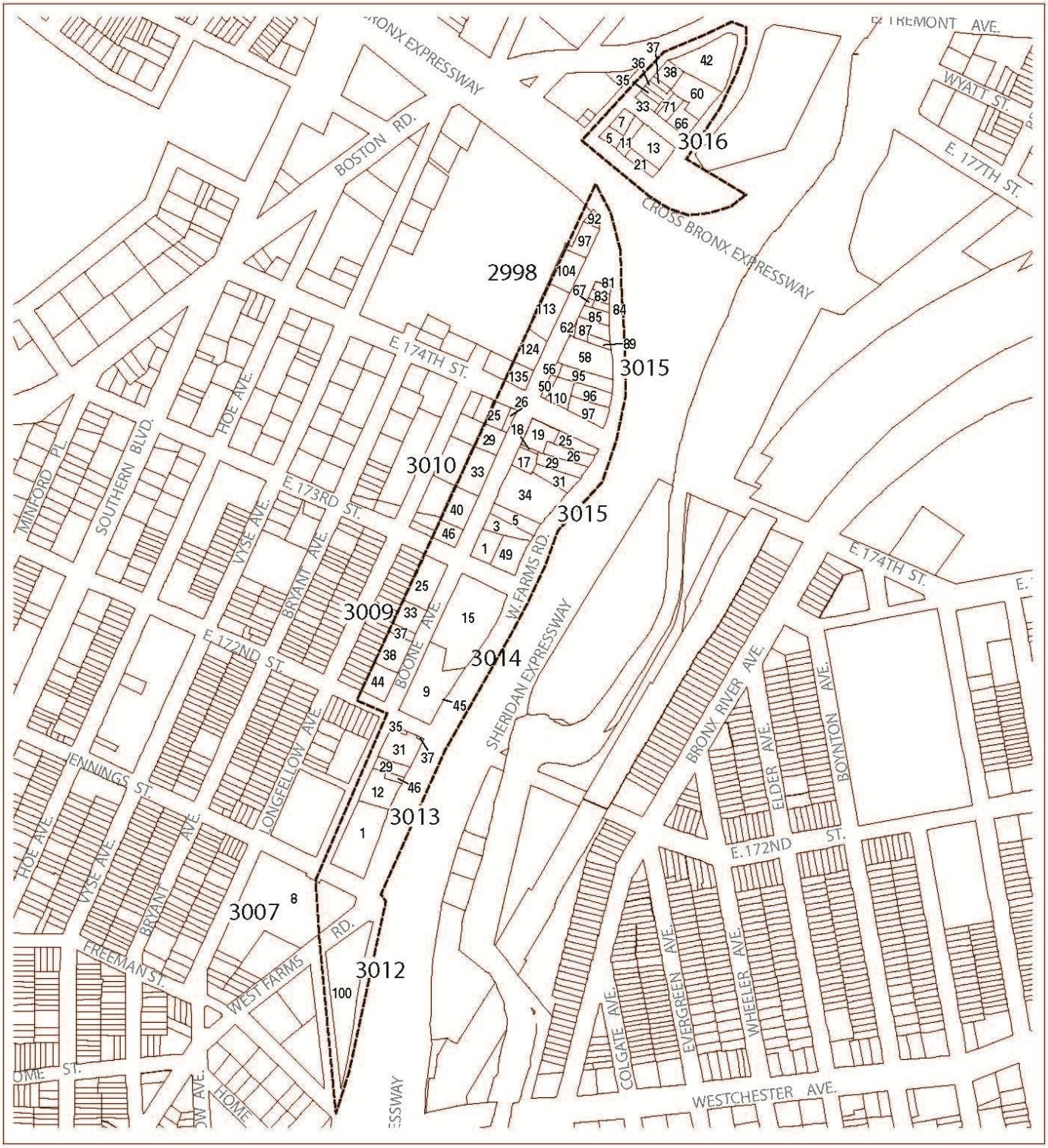
Phase I environmental site assessments (ESAs) have been performed for the 6 development sites under the applicant's control, and Phase II investigations, a ground penetrating radar survey, or other subsequent studies were conducted on most of them. In most cases, recommendations for removal of fuel storage tanks or contaminated soils were subsequently carried out. Much of the remaining contamination includes lead paint or asbestos concerns, as well as soil contamination typical of urban fill, which is typically not hazardous and would not be subject to remediation as long as the lot remains in its current condition. However, the Phase I and Phase II studies are two to four years old, and some of the Phase I ESAs relied on prior limited subsurface investigations that were not available for review. The hazardous materials assessment report therefore concluded that DEP should review the Phase I and Phase II reports that have been prepared for these sites to determine whether additional investigation or remediation should be performed. The 15 lots are listed in Table I-1, along with the identified potential for contamination (with petroleum or non-petroleum contaminants or both).

DEP has reviewed the hazardous materials assessment report and the Phase I and Phase II reports that were prepared for the applicant's properties and has determined that additional subsurface investigations are required. The new Phase II investigations will be performed, according to protocols approved by the agency, followed by any remediation activities that DEP deems to be warranted, and redevelopment would not occur until the agency issues written approval. Restrictive declarations recorded against the applicant's properties would ensure that appropriate testing and remediation, if needed, would be undertaken.

E Designations

Before any lot restricted by the (E) designation could be redeveloped or converted to a new use, a Phase I ESA and a Phase II investigation must be undertaken by the fee owner(s) of the lot. The Phase II investigation will follow a soil and groundwater testing protocol approved by OER. OER will then review

the Phase II report to determine whether further testing or remediation is necessary. If OER determines that no remediation activities are necessary, a written notice will be released to that effect. If OER determines that remediation is necessary, the fee owner(s) of the lot restricted by the (E) designation must submit a proposed remediation plan to OER for its review and approval. Once approval has been obtained, and the work completed, the fee owner(s) of the lot restricted by the (E) designation must provide proof to OER that the work has been completed in a satisfactory fashion. After OER determines that remediation has been completed to its satisfaction, the agency would issue a Notice of Satisfaction. These actions must be completed prior to the issuance of any Department of Buildings permits for construction activities on the lot. The (E) designation also requires mandatory construction-related health and safety plans, which must also be approved by OER.



Proposed Rezoning Area

2998 Block Number

44 Lot Number

Block	Lot	Development Site	Address	Identified Potential for Contamination		Recommendation
				Petroleum	Non-Petroleum	
2998	97	7A	1829-35 Boone Ave.	×	×	(1)
2998	104	7B	1817-27 Boone Ave.	×	×	(1)
2998	113	7B	1801-15 Boone Ave.	×	×	(1)
2998	124	7B	1769 Boone Ave.	×	×	(1)
3009	25	3A	1006 E. 173rd St.	×	×	(1)
3009	33	3B	1551-59 Boone Ave.	×	×	(2)
3009	37	3C	1549 Boone Ave.	×	×	(1)
3009	38	3D	1529 Boone Ave.	×	×	(1)
3009	44	3E	1521-27 Boone Ave. 1015 E. 172nd St.	×	×	(1)
3010	26	5A	1711 Boone Ave.	×	×	(1)
3010	29	5B	1701-09 Boone Ave.	×	×	(1)
3010	33	5C	1695 Boone Ave	×	×	(1)
3010	40	5D	1685 Boone Ave.	×	×	(1)
3010	46	5E	1661 Boone Ave 1011 E. 173rd St..	×	×	(1)
3013	12	1	1471 West Farms Rd.	×	×	(2)
3013	29	1	1493 West Farms Rd.	×	×	(2)
3013	31	1	1508 Boone Ave	×	×	(2)
3013	35	1	1512 Boone Ave.	×	×	(2)
3013	37	1	E. 172nd St.	×	×	(2)
3013	46	1	1481 West Farms Rd.	×	×	(2)
3014	9	2S	1544 Boone Ave.	×	×	(2)
3014	15	2N	1552-62 Boone Ave. 1565-71 W. Farms Rd. 1010-30 E. 173rd St.	×	×	(2)
3014	45	2S	None Listed			(2)
3015	1	4A	1015 E. 173rd St.		×	(1)
3015	3	4B	1680 Boone Ave.		×	(1)
3015	5	4B	1717 W. Farms Rd.			(1)
3015	18	4C	1704 Boone Ave.	×	×	(1)
3015	18	4C	1708 Boone Ave.			(1)
3015	19	4D	1720 Boone Ave.			(1)
3015	25	4E	1745 W. Farms Rd.			(1)
3015	26	5A	1743 W. Farms Rd.			(1)
3015	29	4C	1735 W. Farms Rd.			(1)
3015	31	4C	1731 W. Farms Rd.			(1)
3015	34	4F	1725 W. Farms Rd.			(1)
3015	50	6A	1760 Boone Ave.			(1)
3015	56	6A	Boone Ave.			(1)
3015	62	6B	1787 Boone Ave.			(1)
3015	67	6C	Boone Ave.			(1)
3015	81	6D	1829 W. Farms Rd.			(1)
3015	83	6C	1825 W. Farms Rd.	×	×	(1)
3015	84	6C	1821 W. Farms Rd.			(1)
3015	85	6C	1819 W. Farms Rd.	×	×	(1)
3015	87	6B	1817 W. Farms Rd.			(1)
3015	89	6B	1815 W. Farms Rd.			(1)
3015	95	6E	1783 W. Farms Rd.	×	×	(1)
3015	96	6F	1775 W. Farms Rd.			(1)
3015	97	6G	1763 W. Farms Rd.			(1)
3015	110	6A	E. 174th St.			(1)
3016	11	8	Rodman Place			(2)
3016	13	8	1905 West Farms Rd.			(2)
3016	21	8	1899 West Farms Rd.			(2)
3016	33	9A	1916 Longfellow Ave.			(1)
3016	35	9A	1918 Longfellow Ave.			(1)
3016	36	9B	1920 Longfellow Ave.			(1)
3016	37	9B	1924 Longfellow Ave.			(1)
3016	38	9C	Longfellow Ave.			(1)
3016	42	9C	1962 Boston Rd.			(1)
3016	60	9D	1927 West Farms Rd.			(2)
3016	66	9D	1923 West Farms Rd.			(2)
3016	71	9E	1295 Rodman Place			(1)

(1) E designation
(2) Restrictive declaration to ensure additional investigation and, if necessary, remediation

Review and Approval Procedures for the Proposed Project

(E) designations would not be placed on those lots under the applicant's control. Instead, the following restrictions, laid out in a July 2010 letter from DEP to DCP, would be ensured through restrictive declarations recorded against such lots:

"For those properties owned or otherwise controlled by the applicant or the applicant's subsidiaries – Block 3009, Lot 33; Block 3013, Lots 12, 29, 31, 35, 37, 46; Block 3014 Lots 9, 15 and 45; Block 3016, Lots 11, 13, 21, 60 and 66 – a Phase II Environmental Site Assessment (Phase II) will be required to adequately identify/characterize the surface and subsurface soils of the above subject parcels prior to on-site soil disturbance; and, if hazardous materials are found as the result of the Phase II, to perform any necessary remediation of the subject properties.

a. A Phase II Investigative Protocol/Workplan summarizing the proposed drilling and soil/groundwater sampling activities will be required to be submitted to DEP for review and approval. The Workplan is to include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting the proposed soil boring locations. Soil and groundwater samples are to be collected and analyzed by a NYS Department of Health Environmental Laboratory Approval Program certified (NYSDOH ELAP-CERTIFIED) laboratory for the presence of Volatile Organic Compounds (VOCs) by U.S. EPA Method 8260, Semi-Volatile Organic Compounds (SVOCs) by Method 8270, Pesticides/Polychlorinated Biphenyl (Pesticides/PCBs) by Method 8081/8082 and Target Analyte List (TAL) metals (filtered and unfiltered for groundwater).
b. An investigative Health and Safety Plan (HASP) is also to be submitted to DEP for review and approval.
c. If hazardous materials are found as the result of the Phase II, the applicant is to perform any necessary remediation of the subject properties. Prior to undertaking any remediation measures, the applicant will be required to prepare and submit a Remedial Action Plan, including a sampling protocol and a health and safety plan, for DEP for approval. Remediation measures would be undertaken pursuant to the approved remediation plan.
d. The applicant will be restricted from submitting any permit applications to the NYC Department of Buildings (DOB) that would allow for soil disturbance on the subject property until such time that DEP provides the necessary written notice to DOB.
e. The above is to be stipulated as part of a restrictive declaration on the subject properties and be binding upon the properties' successors and assigns."[2]

CONCLUSION

This assessment included the evaluation of all lots within the proposed rezoning area. On-site impacts to soil and/or groundwater from contamination by hazardous materials may have occurred due to the historical industrial nature of the developments identified within these areas.

All lots within the proposed rezoning area that are not under the applicant's control and have been identified as projected or potential development sites would receive (E) designations. For development sites under the applicant's control, a restrictive declaration will be recorded against the property, binding the applicant to perform soil and groundwater testing, as well as any remedial activities required by DEP, in

[2] Note that pursuant to Local Law 27 of 2009, OER

accordance with protocols devised by the agency, and to the agency's satisfaction. The placement of (E) designations on 45 tax lots, DEP's review of the assessment and investigation reports prepared for the applicant's 15 lots, and the recording of restrictive declarations against all of the 15 lots on which DEP determines that additional investigation or remediation is required would ensure that no significant impacts related to hazardous materials would occur as a result of the Proposed Action.