

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT**

**EAST 125TH STREET DEVELOPMENT – UPTOWN NY
BETWEEN EAST 125TH AND EAST 127TH STREETS AND SECOND AND
THIRD AVENUES
BLOCK 1789, LOT 46,
BLOCK 1790,
LOTS 1, 3, 5, 6, 8, 12, 13, 20, 24 - 31, 40, 41, 44 - 46, 49 AND 101
BLOCK 1791,
LOTS 1, 25, AND 34
BOROUGH OF MANHATTAN – CITY OF NEW YORK**

Prepared for



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EXECUTIVE SUMMARY

Metcalf & Eddy, Inc. ("M&E") was retained by the New York City Economic Development Corporation ("EDC") to conduct a Phase I Environmental Site Assessment ("ESA") of the property identified as the East 125th Street Corridor-Uptown NY by the EDC (the "Site"). The Site is located in the East Harlem section of the Borough of Manhattan in the City of New York between East 125th Street and East 127th Street, and between Second and Third Avenues. The Site consists of twenty-seven (27) individual lots which the City identifies as Block 1789 - Lot 46, Block 1790 - Lots 1, 3, 5, 6, 8, 12, 13, 20, 24-31, 40, 41, 44-46, 49, and 101 and Block 1791 - Lots 1, 25, and 34. Of these properties, fifteen (15) lots are owned by the EDC and the New York City Department of Housing Preservation and Development ("HPD"), eleven (11) lots are privately owned, and one (1) lot is owned by the New York City Transit Authority ("NYCTA").

The environmental database provided by Environmental Data Resources ("EDR") identified sites within the search radii where documented environmental impacts have occurred. The EDR report indicates that a service station located at Block 1790 Lot 24 (2449 Second Avenue) has impacted soil and groundwater in that area of the Site. The EDR database information did not include any documentation from which it could be concluded that nearby sites identified within the search radii have impacted the Site. It is possible that groundwater under the Site has been impacted due to historical site usage and the potential for leaking residential heating oil tanks on the Site and the surrounding area. However, it should be noted that the groundwater in this area is not used as a potable source.

During the Phase I ESA, a visual inspection of the Site was performed. The visual reconnaissance of the Site revealed a total of fifteen (15) vacant lots; three (3) lots reported as vacant but utilized for parking; and, nine (9) commercial/retail businesses, three of which are located on the ground floor below loft apartments. The reconnaissance of the vacant lots revealed the presence of uneven ground surfaces, asphalt paving, buried foundations and/or fill materials. These observations suggest that buried underground storage tanks ("USTs") and potentially contaminated fill materials may remain below the surface. Minor oil staining of surface soils was observed at 2453 Second Avenue (Block 1790, Lot 26). The lot located at 2293 Third Avenue (Block 1789, Lot 46) is utilized for automobile parking by the New York City Fire Department ("FDNY"); the lot located at 243 East 125th Street (Block 1790, Lot 13) operates under the name East-End Truck Parking, is asphalt paved and contains a mobile office trailer and truck and automobile parking; and, 2469 Second Avenue (Block 1791, Lot 25) is asphalt paved and used by the NYCTA for bus and automobile parking.

The nine (9) commercial/retail businesses include Fancy Dry Cleaners located at 2315 Third

Avenue (Block 1790, Lot 46), Preferred Floors, Inc., a retail carpet and flooring store located at 2305 Third Avenue (Block 1790, Lot 1), Schmuck Bros. Inc., an antique shop and loft apartments in a 4-story building located at 205 East 125th Street (Block 1790, Lot 101), Tone's Barber Shop and Elizabeth Salon and apparently vacant loft apartments in a 3-story building at 207 East 125th Street, Lee Myles Transmissions and Midas Muffler shop in a 2-story building located at 213 East 125th Street (Block 1790, Lot 8), United Control and Refrigeration, an appliance store and loft apartments in a 4-story building at 225 East 125th Street (Block 1790, Lot 12), a BP gasoline service station (2449 Second Avenue), Dunkin Donuts (255 East 125th Street) and Lugo Flat Fix present on Block 1790, Lot 40. The Manhattan Coach Works, a one-story automobile restoration and repair shop, is located at 212 East 127th Street (Block 1791, Lot 1). Used automobile engines and other potentially oil-filled parts were observed along side the Manhattan Coach Works building. Cycle Therapy, a 5-story motorcycle dealership and repair shop with showrooms on the upper floors is located at 230 East 127th Street (Block 1791, Lot 34).

Based upon the observations of the vacant lots, a subsurface investigation of these lots limited to test pits and geophysical investigation methods is recommended to characterize fill materials and identify potential USTs. An asbestos and lead based paint ("LBP") survey should be conducted on the nine (9) structures that occupy the Site to determine if asbestos and/or LBP are present.

Additional recommendations could be warranted should potential environmental issues be identified from outstanding FOIL/Information requests submitted to the New York State Department of Mental Health and Hygiene, the New York State Department of Environmental Conservation, New York City Department of Environmental Protection, or the Fire Department of the City of New York.

1.0 INTRODUCTION

Metcalf & Eddy, Inc. ("M&E") was retained by the New York City Economic Development Corporation ("EDC") to conduct a Phase I Environmental Site Assessment ("ESA") of the property identified as the East 125th Street corridor-Uptown NY by the EDC (the "Site"). The Site is located in the East Harlem section of the Borough of Manhattan in the City of New York between East 125th Street and East 127th Street, between Second and Third Avenues. The Site consists of twenty-seven (27) individual lots which the City identifies as Block 1789 - Lot 46, Block 1790 - Lots 1, 3, 5, 6, 8, 12, 13, 20, 24-31, 40, 41, 44-46, 49, and 101 and Block 1791 - Lots 1, 25, and 34. Of these properties, fifteen (15) lots are owned by the EDC and the New York City Department of Housing Preservation and Development ("HPD"), eleven (11) lots are privately owned, and one (1) lot is owned by the New York City Transit Authority ("NYCTA").

1.1 Purpose

The ESA was performed at the request of the EDC in anticipation of the future development of property.

1.2 Report Outline

The report is divided into twelve (12) sections:

- Section 1 presents the introduction to the report;
- Section 2 details M&E's scope of work for this project;
- Section 3 provides information on the site background, setting, and operations;
- Section 4 provides details on the historical use and development of the site;
- Section 5 presents the results of the regulatory agency review;
- Section 6 presents the results of contacts with local agencies;
- Section 7 presents information provided by the client;
- Section 8 provides observations made during the site reconnaissance;
- Section 9 identifies facility personnel who were interviewed;
- Section 10 presents M&E's findings and conclusions;
- Section 11 presents a statement of limitations, and;
- Section 12 contains a list of references.

2.0 SCOPE OF WORK

2.1 Scope of Assessment

The purpose of the ESA was to evaluate site conditions with respect to potential impacts to soil or groundwater from petroleum products or hazardous substances. The scope of the ESA consisted of the performance of a site walk-through to inspect the Site with respect to environmental issues, interviews with key personnel, and requesting / reviewing local governmental files relating to environmental issues at the Site. An environmental database search (Appendix B), historical aerial photographs (Appendix C), Sanborn Fire Insurance Maps (Appendix D), historical topographic maps (Appendix E), and a city directory search (Appendix F) were obtained from Environmental Data Resources, Inc. ("EDR") in Southport, Connecticut.

2.2 Significant Assumptions

This Phase I ESA was prepared using information obtained from and/or provided by the following sources:

- Visual inspection of the Site;
- Available published information;
- EDR database searches;
- Local/State government officials, and;
- Site/Owner representatives.

It is assumed that the information obtained through the above methods is valid and accurate as provided. The passage of time, manifestation of latent conditions, and occurrence of future events or changes to existing codes/regulations may alter the conclusions and recommendations of this report.

2.3 Limitations and Exceptions

Performance of the Phase I ESA was limited to accessible areas of the Site. The privately owned vacant lots located at 249 East 125th Street (Block 1790, Lot 20) and 208 East 126th Street (Block 1790, Lot 44) are fenced and the Site conditions were observed from the sidewalk areas. In addition, City owned vacant lots located at 2309 Third Avenue (Block 1790, Lot 3), 2313 Third Avenue (Block 1790, Lot 49), 209 East 125th Street (Block 1790, Lot 6) and a portion of 2321 Third Avenue (Block 1791, Lot 1) located at the intersection of Third Avenue and East 126th Street are fenced and the Site conditions were observed from the sidewalk areas. The nine (9) commercial/retail properties were not entered during the Phase I ESA thus limiting the visual inspection to the exteriors of these properties.

2.4 Reliance

This report has been prepared on behalf of and for the exclusive use of the EDC and is subject to and issued in connection with the Agreement and provisions thereof.

3.0 SITE BACKGROUND

3.1 Location

The Site is located in the East Harlem section of the Borough of Manhattan in the City of New York between East 125th Street and East 127th Street, between Second and Third Avenues (Figure 1). The City identifies the Site as Block 1789 - Lot 46, Block 1790 - Lots 1, 3, 5, 6, 8, 12, 13, 20, 24-31, 40, 41, 44-46, 49, and 101 and Block 1791 - Lots 1, 25, and 34. The Site has a combined acreage of approximately 5.53 acres (240,604 square feet). The elevation of the Site is approximately 10-20 feet above mean sea level ("msl"). A site plan is provided as Figure 2.

3.2 Regional Geology/Hydrogeology

The Borough of Manhattan lies within the glaciated highlands physiographic region of New York. The local geologic strata in the area surrounding the Site consist of a surficial unit of unconsolidated fill (imported material or re-worked native soil of glacial origin) overlying undisturbed glacial material and bedrock identified as the Manhattan Schist. The bedrock surface ranges from near the surface to a depth greater than 50 feet. It is believed to be at a greater depth near the Site. Groundwater flow in the area of the Site is anticipated to be in an easterly direction towards the Harlem River. However, localized variations in the flow of groundwater may be present due to the presence of building foundations, underground utilities and other below grade structures.

The buried, native soils in the general area of the Site are believed to be composed of loamy sand, silt loam, sandy loam and fine sandy loam. The deeper soil types are believed to consist of very gravelly-loamy sand, and stratified sandy loam.

3.3 Facility Description and Operations

The Site consists of twenty-seven lots with a combined acreage of approximately 5.53 acres (240,604 square feet). Fifteen (15) of the lots are fenced and vacant and were observed to have uneven ground surfaces, asphalt paving, buried foundations and/or fill materials. Three (3) lots are reported as vacant but utilized for automobile, bus and truck parking, and nine (9) lots are occupied by commercial/retail businesses, three (3) of which are located on the ground floor below loft apartments. A description of the lots that comprise the Site is provided in the table below.

Block	Lot	Address	Description
1789	46	2293 Third Avenue	Reported as a City owned vacant lot, used for automobile parking by the City of New York Fire Department ("FDNY").
1790	1	2305 Third Avenue	Preferred Flooring, Inc., retail carpet and flooring store.

1790	3	2309 Third Avenue	City owned vacant lot.
1790	5	207 East 125 th Street	Tone's Barber Shop and Elizabeth Salon in a 3-story building.
1790	6	209 East 125 th Street	City owned vacant lot.
1790	8	213 East 125 th Street	Lee Myles and Midas Muffler Shop in a 2-story building.
1790	12	225 East 125 th Street	United Control and Refrigeration, appliance parts store in a 4-story building
1790	13	243 East 125 th Street	Reported city owned vacant lot occupied by East-End Truck Parking.
1790	20	249 East 125 th Street	Privately owned vacant lot.
1790	24	2449 Second Avenue	BP gasoline service station, Dunkin Donuts (255 East 125 th Street), and Lugo Flat Fix.
1790	25	2451 Second Avenue	City owned vacant lot.
1790	26	2453 Second Avenue	City owned vacant lot.
1790	27	2455 Second Avenue	City owned vacant lot.
1790	28	2457 Second Avenue	Privately owned vacant lot.
1790	29	2459 Second Avenue	City owned vacant lot.
1790	30	238 East 126 th Street	City owned vacant lot.
1790	31	236 East 126 th Street	City owned vacant lot.
1790	40	214 East 126 th Street	City owned vacant lot.
1790	41	210 East 126 th Street	City owned vacant lot.
1790	44	208 East 126 th Street	Privately owned vacant lot.
1790	45	204 East 126 th Street	City owned vacant lot.
1790	46	2315 Third Avenue	Fancy Drycleaners
1790	49	2313 Third Avenue	City owned vacant lot.
1790	101	205 East 125 th Street	Schmuck Bros. Antique Store in a 4-story building.
1791	1	2321 Third Avenue	Manhattan Coach Works, a 1-story automobile repair and restoration shop at 212 East 127 th Street. The remainder of the lot is used for automobile parking.
1791	25	2469 Second Avenue	New York City Transit bus and automobile parking lot.
1791	34	230 East 127 th Street	Cycle Therapy, a motorcycle dealership, repair shop and showrooms in a 5-story building.

3.4 Adjacent Properties

The buildings and land use types surrounding the site are as follows:

- North: Harlem Auto Mall;
- South: Commercial/retail properties with loft apartments fronting on East 125th Street;
- East: A NYCTA bus depot east of Block 1791 and commercial/retail properties east of Block 1790; and,
- West: Commercial/office buildings that include the Salvation Army west of Block 1790 and New York City Jobs Office west of Block 1791.

4.0 SITE HISTORY

4.1 General Site History

The Site is located in the East Harlem section of the Borough of Manhattan, New York. The area was developed by the late 1800s. Historical site information was obtained from historical aerial photographs, Sanborn Fire Insurance Maps, historical topographic maps and a City Directory Search. A review of these sources indicates that portions of the property were developed as early as the late 1800s, and were used for commercial, retail and residential purposes. Based on the aerial photographs, the Site contained the buildings with outlines that match those of buildings depicted on Sanborn Maps for the same period of coverage. A detailed description of the documents that were reviewed is presented below.

4.2 Historical Aerial Photographs

Historical aerial photographs were reviewed for the years 1954, 1966, 1975, 1984, and 1994. A brief description of each photograph is presented below. Aerial photographs are included as Appendix C.

1954 Aerial Photograph (Scale 1" = 750')

This photograph shows the site and surrounding properties as developed. The local streets are shown largely as they appear today. The Site contains the buildings with outlines that match those of buildings depicted on Sanborn Maps for the same period of coverage. Finer details of the Site cannot be determined due to the scale of the photograph.

1966 Aerial Photograph (Scale 1" = 750')

Site features on the 1966 aerial photograph appear to be similar to those shown on the 1954 aerial photograph. The Franklin D. Roosevelt ("FDR") Drive is now present north and east of the Site.

1975 Aerial Photograph (Scale: 1"=750')

Several significant changes to the Site are depicted on the 1975 aerial photograph. It appears that two to three buildings on Block 1790 fronting Second Avenue have been demolished as well as several buildings located on Block 1790 and fronting East 126th Street, west of the former Public School ("PS") 39. All but three (3) of the buildings located on Block 1791 and fronting East 126th Street have been demolished. The exception being the buildings located on the corners of East 126th Street, Second Avenue and Third Avenue and one building in the center of the block. In addition, the buildings located between 212 and 230 East 127th Street have also been

demolished. Many of the buildings located on the adjacent blocks surrounding the Site depicted on the 1966 aerial photo have been razed and replaced with the buildings that currently occupy those locations.

1984 Aerial Photograph (Scale: 1"=750')

Due to the poor quality of this photograph, finer details cannot be determined. However, it appears that the former PS 39 building is no longer present and the building located at the corner of East 126th Street and Second Avenue, as well as the building in the central portion of Block 1791 and fronting East 126th Street have been razed. Minimal changes to the surrounding area are also present.

1994 Aerial Photograph (Scale 1" = 750')

Due to the poor quality of this photograph, finer details cannot be determined. The structure located at the corner of East 126th Street and Third Avenue appears to have been demolished. There appear to be no changes to the surrounding area from the previous photograph.

4.3 Sanborn Fire Insurance Maps

The Sanborn Fire Insurance Map database was searched by EDR. Sanborn Maps were reviewed for the years 1896, 1911, 1939, 1951, 1968, 1979, 1982, 1989, 1993 and 1996 (Appendix D). The following is a brief description of features observed on each map.

1896 Sanborn Map

The majority of the Site is developed with the exception of the lot located at the northwest corner of the intersection of East 126th Street and Second Avenue. The majority of the structures appear to be storefronts and private dwellings. Grammar School No. 39 is present fronting East 125th Street. A lodging house is located at 2315-2317 Third Avenue, and a Car House operated by the Second Avenue Railroad Company is located at the southwest corner of East 127th Street and Second Avenue.

1911 Sanborn Map

The Site has undergone minimal changes from the previous Sanborn map. The lot located at the northwest corner of the intersection of East 126th Street and Second Avenue is now occupied by storefronts and dwellings and the lot formerly occupied by the Car House located at the southwest corner of East 127th Street and Second Avenue is shown as vacant. The properties located at 216 to 234 East 126th Street have been demolished and replaced by the expanded PS 39 structure. The property located at 206 East 126th Street is listed as a Chine Laundry. The buildings located at 205-211 East 125th Street are shown as furniture storage and auction rooms,

as well as the building on Block 1789 Lot 46 (2293 Third Avenue).

1939 Sanborn Map

The majority of the properties on the Site remain relatively unchanged with some notable exceptions. The original PS 39 building fronting on East 125th Street has been demolished along with the six (6) dwellings located at 213 to 223 East 125th Street. These buildings were replaced with the current 2-story garage building which was constructed in 1917. The former dwelling at 249 East 125th Street is now listed as the All Saint's Roman Catholic Church. The Chine Laundry is still present and the property located at 249 East 126th Street is noted as containing "junk". The lodging house located at 2315-2317 Third Avenue and the storefronts and/or dwellings located at 253 East 125th Street, 228 East 127th Street and 2455 Second Avenue have been demolished and are shown as vacant. The property located at 2321 Third Avenue is now listed as a hotel and the property at 212 East 127th Street is listed as containing waste paper and rags. The property at 230 East 127th Street is now utilized as a furniture warehouse and the lot formerly occupied by the Car House located at the southwest corner of East 127th Street and Second Avenue is shown as a garage with a capacity of 105 cars. The Sanborn map also notes two (2) buried 550 gallon gasoline tanks present at this property.

1951 Sanborn Map

Minimal changes to the Site have occurred since the previous Sanborn map. A storefront is present on the lot previously shown as vacant and located at 253 East 125th Street. The dwelling located at 2459 Second Avenue is now listed as a storefront and the junk notation at the property located at 242 East 126th Street is no longer present. The dwelling located 236 East 126th Street is no longer present and the lot shown as vacant. The vacant lot located at 2315-2317 Third Avenue is now depicted as a parking lot. The property at 2321 Third Avenue is no longer listed as a hotel. Three (3) storefronts/dwellings located at 2325-2329 Third Avenue have been demolished and replaced with a 25 car garage with two (2) gasoline tanks present. The property listed as containing waste paper and rags at 212 East 127th Street expanded to include 208-210 East 127th Street and the vacant lot at 228 East 127th Street is now listed as a motor freight station. A dwelling at 224 East 127th Street has been razed and the lot shown as vacant. A storefront/dwelling located at 249-251 East 126th Street and the first floor of a former dwelling located at 225 East 126th Street are now shown as Iron Works. The garage located at the southwest corner of East 127th Street and Second Avenue is now listed as the Crown Wire Manufacturing Company. The two (2) buried 550 gallon gasoline tanks previously identified on the 1939 Sanborn map are not present on this map.

1968 Sanborn Map

The parking lot located at 2315-2317 Third Avenue and storefronts and dwellings located at 200-202 East 126th Street have been replaced with a Metal Supplies company. The storefronts/dwellings located at 253-259 East 125th Street (2449 Second Avenue) have been demolished and replaced with a filling station. The storefronts/dwellings located at 2451 and 2453 Second Avenue are reported as boarded up and the formerly vacant lots at 2455 Second Avenue and 236 East 126th Street are depicted as automobile repair shops. Dwellings at 207-211 and 237-239 East 126th Street have been demolished and the lots are shown as vacant and the property located at 247 East 126th Street is depicted as a dwelling and church. The vacant lot at 224 East 127th Street is now depicted as an automobile repair shop and the Crown Wire Manufacturing Company is now a Filmways Inc. Studio. The property located at 2331-2339 Third Avenue and 200-206 East 127th Street (Block 1791, Lot 44) which is currently occupied by the United Moravian Church and not part of this ESA was formerly used as storefronts/dwellings and included a tin shop and junk dealer is listed as a filling station.

1979 Sanborn Map

The Site has undergone significant changes from the previous Sanborn map. The building located at 2293 Third Avenue is no longer listed as furniture storage and auction rooms and the furniture storage and auction rooms located at 209-211 East 125th Street have been demolished and the lots vacant. The storefronts and/or dwellings including the Chine Laundry located at 204-214 East 126th Street have been demolished and the lots depicted as vacant. All Saint's Church located at 249 East 125th Street as well as the storefronts/dwellings at 251 East 125th Street, 2451 Second Avenue and 2457-2459 Second Avenue have been demolished and the lots vacant. The property located at 2453 Second Avenue is still reported as boarded up. The 2-story garage building located at 213 to 223 East 125th Street is depicted as the Opportunities Industrialization Center and the former PS 39 is now the Harlem S.P.A.R.K. City Service Center. The building located at 2321 Third Avenue and the parking garage located at 2325-2329 Third Avenue have been demolished and the lots vacant. A commercial building remains at 2323 Third Avenue. The dwellings at 203-205, 213-223, 227-235 and 241-251 and the Iron Works at 225 East 126th Street have all been demolished and the lots are depicted as vacant. The dwellings, auto repair shop and motor freight station located at 214-228 East 127th Street have also been demolished and the lots vacant. The buildings at 208-212 and 230 East 127th Street remain as does the Filmways Studio and storefront/dwellings and apartment building located at 2461-2469 Second Avenue. The filling station located at 2331-2339 Third Avenue is now shown as a church, constructed in 1977.

1982 Sanborn Map

The former PS 39 and Harlem S.P.A.R.K. Center and the boarded up building located at 2453 Second Avenue have been demolished and the lots depicted as vacant. The filling station at 2449 Second Avenue and the auto repair shop at 2455 Second Avenue remain as does the automobile repair shop located at 236 East 126th Street. The residential property located at 238 East 126th Street is listed as vacant. The commercial property located at 2323 Third Avenue and the storefront/dwellings and apartment building located at 2461-2469 Second Avenue have been demolished and the lots vacant.

1989 Sanborn Map

Changes to the Site are difficult to determine due to the poor quality of the 1989 Sanborn map; however, it appears that the Filmways Studio building located at the southwest corner of East 127th Street is no longer present. The properties located at 2457-2459 Second Avenue are depicted as a parking lot.

1993 Sanborn Map

The filling station located at 2449 Second Avenue appears to have been demolished and replaced with a new filling station in its current configuration with a separate building in the northwestern portion of the lot (currently a Dunkin Donuts). The building located at 208-212 East 127th Street is now listed as an automobile repair shop and the building at 230 East 127th Street is listed as a commercial property.

1996 Sanborn Map

The automobile repair shop located at 2455 Second Avenue has been razed and the lot shown along with the properties located at 2457-2459 Second Avenue as a parking lot. The 1996 Sanborn map indicates that all or portions of 216-234 East 126th Street are used for truck rental, although no other details are presented. The former Filmways Studio property is listed as a parking lot used by the NYCTA.

4.4 Historical Topographic Maps

Historical topographic maps (USGS 7.5 minute Quadrangle sections) were obtained from EDR, and were reviewed for the years 1897, 1947, 1966, 1979 and 1995. A brief description of each of the maps and the map scale is presented below. The historical topographic maps are included as Appendix E.

1897 Topographic Map (1:62,500)

Due to the scale of this map, the structural features of the Site cannot be identified; however, the street network is shown much as it appears today.

1947 Topographic Map (1:25,000)

The Site and environs are in an area shown as completely urbanized; however, no specific features on the Site are identifiable.

1966-1995 Topographic Maps (1:24,000)

PS 39 is the only specific feature of the Site depicted on these topographic maps.

4.5 City Directory Search

A City Directory Search was conducted for the years 1920 - 2000, using 250 East 126th Street as the center point of the search (Appendix E). The Site address was not listed in the research source. A search of neighboring properties includes a succession of residential properties with few retail/commercial properties surrounding the Site. Residential properties include the addresses at 238-241, 243, 245, 247, 249, 251 and 253 East 126th Street with retail/commercial properties included at the 240, 243, 249 and 253 East 126th Street addresses. The 243 East 126th Street address was formerly an ice and coal house in the 1920s and 1930s. The property located 247 East 126th Street is listed as Saint Peter and Paul Church from 1963 to 1968. The 249 East 126th Street was formerly an iron works from 1938 to 1958 and a grocery store in 1963. The property at 242 East 126th Street was listed as a junk dealer in 1942 and 1947 and not listed again until 1988 as Hermans Shoe Repair.

4.6 Historical Information Concerning Adjacent Properties

Some site-specific information on the history of the adjoining properties is available through the Sanborn maps, aerial photographs, and the city directory search. The majority of the area surrounding the Site has been used for residential, retail, and commercial purposes since the area was initially developed. Residential uses in this area since the late 1800s have ranged from single to multi-family homes and many former retail establishments included loft apartments.

5.0 REGULATORY AGENCY DATABASE REVIEW

EDR conducted a regulatory file review for the Site and surrounding areas. The search radii for the database review centered on a point located near the center of the Site at the midpoint along East 126th Street between Second and Third Avenues. The coordinates for the center point of the search are 40° 48' 14.0" N, 73° 56' 3.1" W. A copy of the EDR report is provided in Appendix B. The Phase I ESA discusses only those facilities identified by EDR in the databases searched and at the distances from the center point of the Site noted below. The databases were searched and selected by EDR based on the requirements of ASTM E1527-00.

Federal Database Records

- National Priority List ("NPL") for both existing and deleted facilities within a 1-mile boundary of the Site as of April 19, 2006.
- Proposed NPL, sites proposed for inclusion on the NPL as of April 19, 2006.
- The NPL Deletions database for sites approximately 1 mile of the Site as of April 19, 2006. The NPL Deletions database identifies sites meeting the EPA's criteria to delete sites from the NPL per the National Oil and Hazardous Substances Pollution Contingency Plan.
- NPL Recovery database as of October 15, 1991. The NPL Liens database lists those sites where the USEPA has filed liens against real property in order to recover remedial action expenditures. The database search is for only the Site.
- Comprehensive Environmental Response, Compensation, and Liability Information System ("CERCLIS") sites located within approximately 1/2 mile of the boundary of the Site as of June 19, 2006.
- No Further Remedial Action Proposed ("NFRAP") sites located within 1/2 mile of the boundary of the Site as of February 1, 2006.
- RCRA Corrective Action Activity ("CORRACTS") sites located within 1 mile of the Site as of March 15, 2006. CORRACTS identifies RCRA facilities under corrective action activity.
- Resource Conservation and Recovery Information System ("RCRIS") Facilities Lists including large and small quantity generators and treatment facilities located within

approximately 1/4 mile and storage, transportation, and disposal facilities located within approximately 1/2 mile of the boundary of the Site as of June 13, 2006.

- Emergency Response Notification System ("ERNS") listings for the Site as of December 31, 2005.
- The Hazardous Materials Information Reporting System ("HMIRS") as of July 3, 2006. The HMIRS database contains hazardous materials spill incidents reported to the DOT. The database search is for only the Site.
- US ENG Control as of March 21, 2006 is a listing of sites with engineering controls in place including various forms of caps, building foundations, liners and treatment methods to create pathway elimination for regulated substances to enter environmental media or affect human health.
- US INST Control as of March 21, 2006 is a listing of sites with institutional controls in place including administrative measures such as groundwater use, construction and property use restrictions, and post remediation care requirements intended to prevent exposure to contaminant remaining on site.
- Department of Defense ("DOD") database include federally owned or lands administered by the DOD that have any area greater than 640 acres. This data set was last updated December 31, 2004.
- Formerly Used Defense Site ("FUDS") database as of December 5, 2005 includes properties where the US Army Corps of Engineers is actively working and will take necessary cleanup measures.
- US Brownfields database as of April 26, 2006 includes sites addressed by Targeted Brownfield Assessments ("TBA") and EPA Cooperative Agreement Recipients.
- The Superfund Consent Decrees ("CONSENT") are major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites including settlements within approximately 1 mile of the boundary of the Site. This data set was last updated December 14, 2004.
- The Record of Decision ("ROD") for sites approximately 1 mile of the Site as of April 13, 2006. The ROD documents mandate a permanent remedy at an NPL site containing technical and health information to aid in the cleanup.

- The Toxic Release Inventory System ("TRIS") Database searches for the Site as of December 31, 2004. The TRIS sites are required to complete a Toxic Chemical Release Form (Form R) for specified chemicals.
- The Toxic Substances Control Act ("TSCA") database as of December 31, 2002. The TSCA database identifies facilities that manufacture or chemical substances included on the TSCA Chemical Substance Inventory list. The database search is for only the Site.
- The FIFRA/TSCA Tracking System ("FTTS") database as of March 29, 2006. The FTTS database tracks administrative cases and pesticide enforcement actions related to the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), TSCA, and Emergency Planning and Right to Know ("EPCRA") Act. The database search is for only the Site.
- SSTS database as of December 31, 2004 is the Section Seven Tracking Systems database of the FTTS, which requires all pesticide producing establishments to submit an annual report to the EPA by March 1 of each year.
- The PCB Activity Database System ("PADS") as of December 27, 2005. PADS is maintained by EPA and identifies generators, transporters, commercial storers and /or brokers and disposers of PCB's. The database search is for only the Site.
- The Material Licensing Tracking System ("MLTS") as of April 12, 2006. MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites that possess or use radioactive materials and which are subject to NRC licensing requirements. The database search is for only the Site.
- The Mines Master Index File ("MINES") for sites within 1/4 mile of the Site as of May 16, 2006. MINES is maintained by the Department of Labor, Mine Safety and Health Administration to identify mining issues.
- The Facility Index System/Facility Identification Initiative Program Summary Report ("FINDS") as of April 27, 2006. The FINDS database contains both facility information and "pointers" to other sources that contain more detail. The database search is for only the Site.
- The RCRA Administrative Action Tracking System ("RAATS") database has been discontinued; however the EPA has retained a copy for historical records.

- The Biennial Reporting System ("BRS") as of December 31, 2003. The BRS is a system administered by EPA that collects data on the generation and management of hazardous wastes.

State of New York ASTM Standard Records

- The Hazardous Substance Waste Disposal Site Inventory ("HSWDS") database contains a listing of any known or suspected hazardous waste disposal sites that are within 1/2 mile of the Site. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-registry sites that USEPA Preliminary Assessment ("PA") reports or Site Investigation ("SI") reports were prepared. This database is no longer maintained as a separate entity. The last update to the database was made September 1, 2002, and the last EDR contact was August 28, 2006.
- The Inactive Hazardous Waste Disposal Sites ("SHWS") database contains site records within 1 mile of the Site that are the State's equivalent to CERCLIS. The date of the last EDR contact was June 15, 2006.
- DEL SHWS is a database of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites. The latest update was made May 25, 2006.
- The Solid Waste Facilities/Landfill Sites ("SWF/LF") database contains an inventory of solid waste disposal facilities or landfills in the state within 1/2 mile of the Site. The latest update to the database was May 3, 2006.
- The Registered Recycling Facility List ("SWRCY") as of May 3, 2006. The database list facilities that are within 1/2 mile of the Site.
- The Registered Waste Tire Storage Facility List ("SWTIRE") as of April 1, 2004. The database identifies if the Site is on the list.
- LTANKS is the Spills Information Database which includes Leaking Storage Tank Incident Reports and contains an inventory as of June 6, 2006 of reported leaking storage tanks (above or underground) within 1/2 mile of the Site. The causes include tank test failures, tank failures, or tank overfills. HIST LTANKS is a listing of leaking underground and above ground storage tanks. In 2002 the DEC stopped providing updates to its original Spills Information Database. The date of the last EDR contact was July 7, 2006.
- The Petroleum Bulk Storage database ("PBS UST") identifies underground storage tanks ("UST") sites with capacities ranging from 1,100 gallons to 400,000 gallons that are

located within 1/4 mile of the Site. The date of the last EDR contact was July 26, 2006.

- The Chemical Bulk Storage Database ("CBS") identifies facilities within 1/4 mile of the Site that store regulated hazardous substances in USTs of any size. The date of the last EDR contact was October 24, 2005.
- The Major Oil Storage Facilities Database UST ("MOSF") identifies facilities within 1/2 mile of the Site that may be onshore facilities, or vessels, with petroleum storage capacities of 400,000 gallons or greater. The date of the last EDR contact was July 25, 2005.
- The Petroleum Bulk Storage ("PBS AST") database identifies registered aboveground storage tanks ("AST") located at the Site. The date of the last EDR contact was July 26, 2006.
- The Chemical Bulk Storage Database, AST ("CBS AST") identifies facilities within 1/4 mile of the Site that store regulated hazardous substances in ASTs with capacities of 185 gallons or greater, and/or in USTs of any size. The date of the last EDR contact was July 25, 2005.
- The Major Oil Storage Facilities Database AST ("MOSF AST") identifies AST facilities within 1/2 mile of the Site that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater. The date of the last EDR contact was July 25, 2005.
- NY MANIFEST as of May 2, 2006 is a database that tracks facility and manifest data.
- The Spills Information Database ("SPILLS") identifies data collected on spills within 1/8 mile of the Site that were reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date. The latest update to the database was June 6, 2006. HIST SPILLS is a listing of leaking USTs and ASTs. In 2002 the DEC stopped providing updates to its original Spills Information Database. The date of the last EDR contact was July 7, 2005.
- ENG CONTROL as of May 25, 2006 is a listing of sites with engineering controls in place including various forms of caps, building foundations, liners and treatment methods to create pathway elimination for regulated substances to enter environmental media or affect human health.

- INST CONTROL as of May 25, 2006 is a listing of sites with institutional controls in place including administrative measures such as groundwater use, construction and property use restrictions, and post remediation care requirements intended to prevent exposure to contaminant remaining on site.
- The Voluntary Cleanup Agreements ("VCP") identifies sites within 1/2 mile of the Site where private monies are being used to remediate contaminated sites to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination. The date of the last EDR contact was June 15, 2006.
- DRYCLEANERS as of June 15, 2004 is a listing of registered dry cleaning facilities.
- BROWNFIELDS as of May 25, 2006 is the New York State Brownfields site list.
- The State Pollutant Discharge Elimination System ("SPDES") for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. SPDES also controls point source discharges to groundwater as well as surface waters. The last EDR contact was August 8, 2006.
- The Aerometric Information Retrieval System ("AIRS") as of December 31, 2002 includes air emissions data.

The following sections discuss EDR's findings. Only databases for which information was found are presented below.

5.1 Results of Database Search

5.1.1 Subject Site

Due to the size of the Site, a generic address of Third Avenue was used as the target address for the Site. The EDR report lists five (5) sites with a target address of Third Avenue; however, none of these sites are located at addresses included in this Phase I ESA, or appear to be in close proximity to the Site to have had an environmental impact on the Site.

A review of the nearby sites indicates that there are six (6) sites with addresses within the scope of this Phase I ESA. Each of the nearby sites identified as part of the target property are listed below with respect to the database in which they appear. The same site may be listed with multiple addresses and found on more than one database.

Site Name	Address	Database(s)	Comments
2 nd Avenue Subway-NYCT	127 th Street and Second Avenue	NY SPILLS	Spill No. 0306147 reported 9/10/03. Gasoline contaminated soil reported in soil boring. Spill remains open.
BP SS#13401	255 East 125 th Street	UST HIST UST	One (1) 550 gallon steel fuel oil UST (installation date unknown) and five (5) 4,000 gallon steel unleaded gasoline USTs installed in 1987 are reported on site. One (1) 4,000 gallon steel unleaded gasoline UST reported installed in 1971 and one (1) 4,000 gallon and twelve (12) 550 gallon steel USTs installed in 1965 are also reported at the site. No tank closure dates are reported for any of the USTs and the total capacity for the site is listed as 16,000 gallons.
255 East 125 th Street/Amoco	255 East 125 th Street	LTANKS	Spill No. 8809618 reported 3/14/89. Two (2) 4,000 gallon UST siphoned together failed tank tightness test. Spill closed 3/25/04 and consolidated with Spill No. 9711337.
Amoco Service Station	255 East 125 th Street	NY SPILLS	Spill No. 9711337 reported 1/9/98 due to equipment failure remains open. 30-50 gallons of gasoline and water pumped from tank sump. Soil and groundwater sampling indicated VOC concentrations above clean up standards. UST piping was reported replaced and abandoned steel piping removed. The UST system reported upgraded with sumps, spill containment boxes beneath the dispensers and leak detection of product piping tied into an existing leak detection system.
Limax Corp-Amoco	255 East 125 th Street	RCRIS-SQG FINDS	No violations reported. Other pertinent activity identified in RCRAInfo database.
Carmie Elmore S/S 13401	2449 Second Avenue and 125 th Street	FINDS	Other pertinent activity identified in AIRS and the NYSDEC Facility Information System ("FIS").
Fancy East Side Cleaners	2315 Third Avenue	RCRIS-SQG NY MANIFEST	Conditionally exempt SQG, no violations found.

Site Name	Address	Database(s)	Comments
Lot Next to Amoco Station	249 East 125 th Street	NY SPILLS	Spill No. 0411494 reported 1/25/05. Evidence of a spill reported in soil and groundwater samples collected on the site. Analytical results of soil and groundwater samples indicated no exceedances detected. Spill closed 5/4/05.
Uptown Auto Est. DBA Midas	223 East 125 th Street	AST	One (1) registered waste oil AST reported on site. Capacity of tank is not reported.
Manhattan Coach Auto Body	212 East 127 th Street	FINDS	Other pertinent activity identified in the NYSDEC FIS.

5.1.2 Nearby Sites

EDR identified a total of one hundred seventy (170) sites within the search radii of the Site, including the six (6) sites identified as part of the target property. The following identifies the sites that are within 1/4 mile of the Site and have assumed groundwater elevations equal to or higher than the Site (based upon the assumed flow direction of groundwater to the east-northeast). Downgradient sites are not included since the potential for these sites to impact the Site is low. Each of the nearby sites is identified below with respect to the database in which they appear and the same site may be listed on more than one database.

5.1.2.1 RCRIS (LQG) Sites

EDR identified a total of four (4) Large Quantity Generator ("LQG") sites within 1/4 mile of the Site; however, all four (4) sites are downgradient of the Site. LQGs generate over 1,000 kilograms ("kg") of hazardous waste or over 1 kg of acutely hazardous waste per month.

5.1.2.2 RCRIS (SQG) Sites

EDR identified a total of twenty-four (24) listed Small Quantity Generator ("SQG") sites within 1/4 mile of the Site, two (2) of which are identified as part of the target property. Of the remaining twenty-two (22) SQG sites, twelve (12) were located at elevations equal to or higher and hydrogeologically upgradient or sidegradient of the Site with respect to the assumed groundwater flow direction. SQGs generate between 100 and 1,000 kg of hazardous waste per month. These SQGs are summarized below:

Site Name	Address	Distance / Direction ⁽¹⁾	Comments
USPS-Triborough Station	167 East 124 th Street	0-1/8 mile W / upgradient	Conditionally exempt SQG. No violations found.
William Somerville Inc.	166 East 124 th Street	0-1/8 mile W / upgradient	Conditionally exempt SQG. No violations found.

Site Name	Address	Distance / Direction ⁽¹⁾	Comments
2083 Dry Clean Inc.	2083 Lexington Avenue	0-1/8 mile WNW / sidegradient	Conditionally exempt SQG. No violations found.
MTA NYCT-125 th Street and Lexington Avenue	125 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	SQG. No violations found.
NYCTA-248 Central Instr Rm	125 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	No violations found.
NYCTA-South 125 th Street Relay Rm	125 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	No violations found.
Taino Towers Dry Cleaners	2253 Third Avenue	0-1/8 mile SSW / upgradient	No violations found.
Our Cleaners	2021 Lexington Avenue	1/8-1/4 mile W / upgradient	No violations found.
Chandler Royce Co.	185 East 122 nd Street	1/8-1/4 mile SW / upgradient	No violations found.
Odyssey House of New York	219 East 121 st Street	1/8-1/4 mile SSW / upgradient	No violations found.
Lee Building	103 East 125 th Street	1/8-1/4 mile WNW / sidegradient	No violations found.
Lore Decorators	2201 Third Avenue	1/8-1/4 mile SSW / upgradient	Conditionally exempt SQG. No violations found.

1. Upgradient/sidegradient direction based on assumed groundwater flow direction.

5.1.2.3 LTANKs Sites

EDR identified fifty-one (51) sites on the LTANKS database within 1/2 mile of the Site, one (1) of which is identified as part of the target property. Of these, eight (8) were located at elevations equal to or higher and hydrogeologically upgradient or sidegradient of the Site with respect to the assumed groundwater flow direction and within 1/4 mile of the Site. A summary of the LTANK sites are provided below:

Site Name	Address	Distance / Direction ⁽¹⁾	Comments
Eng Co. 35	2283 Third Avenue	0-1/8 mile SSW / upgradient	Spill No. 9801567 reported 5/6/98. Originally reported as a tank overflow, spill a result of soil contamination detected during tank closure-in-place activities. Spill closed 5/9/05.
Not Reported	205 East 124 th Street	0-1/8 mile SSW / upgradient	Spill No. 9802381 reported 5/23/98. No. 2 fuel oil tank failed tank tightness test, tank passed re-test, spill closed 11/26/04.
230 East 123 rd Street/Manh	230 East 123 rd Street	0-1/8 mile S / upgradient	Spill No. 8905085 reported 8/22/89. Thirty (30) gallons of #2 fuel oil spilled as a result of a tank overflow. Spill reported cleaned up and closed 11/15/94.

Site Name	Address	Distance / Direction ⁽¹⁾	Comments
Taino Tower	2253 Third Avenue	0-1/8 mile SSW / upgradient	Spill No. 0514031 reported 3/8/06. Unknown quantity of No.2 fuel oil spilled from vent pipe onto sidewalk and asphalt during transfer of fuel oil from one tank to another. Spill remains open. Note three (3) 20,000 gallon fuel oil USTs are referenced but the site is not reported in the UST database searched by EDR.
2021 Lexington Avenue	2021 Lexington Avenue	1/8-1/4 mile W / upgradient	Spill No. 9410094 reported 10/28/94. Spillage from leaking fittings on concrete encased AST observed. Spill closed 12/3/03.
Residence	212 East 122 nd Street	1/8-1/4 mile SSW / upgradient	Spill No. 0000067 reported 4/3/00. No. 2 fuel oil tank reported failed tightness test. Spill remains open.
Store front	124 East 124 th Street	1/8-1/4 mile WNW / sidegradient	Spill No. 0508613 reported 10/18/05. No. 2 fuel oil tank reported failed tightness test. Spill remains open.
1824 Park Avenue/Sunoco	1824 Park Avenue	1/8-1/4 mile WNW / sidegradient	Spill No. 9108459 reported 11/7/91. Gasoline UST failed tightness test, spill remains open.

1. Upgradient/sidegradient direction based on assumed groundwater flow direction.

5.1.2.4 UST Sites

EDR identified fourteen (14) sites on the UST database, one (1) of which is identified as part of the target property. Of the remaining thirteen UST sites, four (4) were within 1/4 mile of the Site and hydrogeologically upgradient or sidegradient with respect to the assumed groundwater flow direction. Note that one (1) additional site was identified; however the site was incorrectly mapped and, based upon the address, determined to be located downgradient of the Site. A summary of the UST sites is provided below:

Site Name	Address	Distance / Direction ⁽¹⁾	Comments
156-158 East 126 th Street	156-158 East 126 th Street	0-1/8 mile WNW / sidegradient	One (1) 2,000 gallon fuel oil UST reported closed 3/1/01.
Block 1774 Lot 27	157 East 125 th Street	0-1/8 mile WNW / sidegradient	One (1) 1,500 gallon vaulted steel fuel oil UST reported closed 11/1/00.
Police Service Area #5 (NYPD Housing Bureau)	221 East 123 rd Street	0-1/8 mile SSW / upgradient	Three (3) 2,500 gallon fiberglass reinforced plastic ("FRP") USTs containing Nos. 1, 2, or 4 fuel oil and diesel fuel reported installed in 1995 and remaining in service.
UPACA I & II (KNW Assoc.)	1990 Lexington Avenue	1/8-1/4 mile WSW / upgradient	One (1) 5,000 gallon No. 5 or 6 fuel oil UST reported closed 10/1/96.

1. Upgradient/sidegradient direction based on assumed groundwater flow direction.

5.1.2.5 NY Spills Sites

EDR identified thirty-one (31) sites on the Spills Information database that were within 1/8 mile of the Site, two (2) of which are identified as part of the target property. Of the remaining twenty-nine (29) sites, nine (9) are hydrogeologically upgradient or sidegradient to the Site with respect to groundwater flow. Note that one (1) additional site was identified; however the site was incorrectly mapped and, based upon the address, determined to be located downgradient of the Site. A summary of the NYSPILLS sites is provided below.

Site Name	Address	Distance / Direction ⁽¹⁾	Comments
Manhole #45816	East 127 th Street and Third Avenue	0-1/8 mile / sidegradient	Spill No. 9814391 reported 3/2/99. Less than one (1) gallon unknown oil in manhole. Spill remains open.
Manhole #45805	East 126 th Street and Second Avenue	0-1/8 mile / sidegradient	Spill No. 9814395 reported 3/2/99. Less than one (1) gallon of dielectric fluid in manhole. Spill closed 3/12/99.
I/O Firehouse	2282 Third Avenue	0-1/8 mile SSW / upgradient	Spill No. 0330038 reported 9/15/03. Drum with a reported 20 gallons of unknown petroleum was left in front of the firehouse. Drum removed and spill closed 10/3/03.
Vault #9153	Third Avenue and East 123 rd Street	0-1/8 mile SSW / upgradient	Spill No. 0400692 reported 4/21/04. Less than one (1) gallon of unknown oil mixed with water from transformer leak. Spill closed 7/27/04.
Manhole #39250	126 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	Spill No. 0403213 reported 6/23/04. Less than one (1) gallon of dielectric fluid from feeder cable leak. Spill closed 9/29/04.
2 nd Ave Subway- NYCT	125 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	Spill No. 0300354 reported 4/10/03. Elevated PID reading in a boring performed as part of the 2 nd Avenue Subway project. Spill closed 8/26/05.
Not Reported	125 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	Spill No. 9905454 reported 8/5/99. Less than one (1) gallon of unknown oil on 200 gallons of water. Spill closed 8/6/99.
Not Reported	125 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	Spill No. 9907360 reported 9/19/99. Less than one (1) gallon of unknown oil on 25 gallons of water. Spill closed 2/3/04.

Site Name	Address	Distance / Direction ⁽¹⁾	Comments
Manhole #39242	125 th Street and Lexington Avenue	0-1/8 mile WNW / sidegradient	Spill No. 9809077 reported 10/21/98. Approximately five (5) gallons of unknown oil on 100 gallons of water in manhole. Spill closed 11/14/03.

1. Upgradient/sidegradient direction based on assumed groundwater flow direction.

5.1.3 Orphan Sites

Orphan sites are those having limited address information that precludes mapping the site. Fifty (50) unmapped sites were identified by EDR. Orphan sites are listed in the EDR report found in Appendix B. None of the orphan sites were identified during the site reconnaissance.

6.0 AGENCY REVIEW

M&E contacted several city, borough, and state officials to determine whether they had any knowledge of the Site or environmental concerns in the vicinity of the Site. A brief summary of M&E's correspondence is presented in the following sections, with copies of FOIL requests included in Appendix G and downloaded New York City Department of Buildings ("DOB") information included in Appendix H.

6.1 City/Borough Agencies

The following is a summary of information obtained from several local regulatory agencies.

Fire Department of the City of New York

A Records Search Request was submitted to the Fire Department of the City of New York ("FDNY") for any records related to heating oil tanks at the properties comprising the Site. No response from the FDNY has been received to date.

New York City Department of Buildings

M&E performed a search on the Buildings Information Search ("BIS") on the NYC DOB website on September 8, 12 and 13, 2006. The following table lists the properties that comprise the Site and includes the number of Actions, or pre-BIS construction related activities, complaints, DOB violations and Environmental Control Board ("ECB") violations reported for each property and other relevant information regarding the properties provided in available Certificates of Occupancy.

Address	Complaints (total/open)	DOB- Violations (total/open)	ECB- Violations (total/open)	Actions	Additional Information
2293 Third Avenue (Block 1789 Lot 46)	0/0	0/0	0/0	0	None.
2305 Third Avenue (Block 1790 Lot 1)	0/0	11/0	0/0	30	None.
2309 Third Avenue (Block 1790 Lot 3)	1/0	0/0	0/0	47	None.

Address	Complaints (total/open)	DOB- Violations (total/open)	ECB- Violations (total/open)	Actions	Additional Information
207 East 125 th Street (Block 1790 Lot 5)	2/0	1/1	0/0	14	A 1977 CO indicates a 3-story building with cellar storage, a store on the first floor and the second and third floors to remain vacant.
209 East 125 th Street (Block 1790 Lot 6)	0/0	5/5	1/1	29	None.
213 East 125 th Street (Block 1790 Lot 8)	3/1	6/5	0/0	61	A 1973 CO indicates a boiler room in the cellar, fabric storage in the basement and an adult trade school on the first floor. An elevator is also reported on the site.
225 East 125 th Street (Block 1790 Lot 12)	1/0	4/1	1/0	25	A 1949 CO indicates a 4-story building with a cellar boiler room and storage, a store on the first floor and factory and office space on the second through fourth floors. Fuel oil installation was approved by the FDNY on 1/8/49. A 1958 CO indicates no change to the cellar and 1 st floors, a shop and office on the second floor and single family dwellings on the 3 rd and 4 th floors. Fuel oil installation was approved by FDNY on 8/21/57.
243 East 125 th Street (Block 1790 Lot 13)	0/0	0/0	0/0	23	None.
249 East 125 th Street (Block 1790 Lot 20)	0/0	2/2	0/0	15	A 1917 CO indicates a 3-story building with cellar storage, a church mission (All Saints RC Church) on the first floor, office and meeting room on the second floor and a dwelling on the third floor.
2449 Second Avenue (Block 1790 Lot 24)	0/0	2/2	1/1	101	A 1948 CO for 253 East 125 th Street (Block 1790 Lot 22) indicates a 1-story structure on site used as an office, salesroom and warehouse. The 1958 CO for this address indicates that the sales room is for used motor vehicles. The 1954 CO for 255-259 East 125 th Street (Block 1790 Lots 23 and 24) indicates the site is used for used car sales and contains a 1-story temporary frame office. The 1965 CO for Lots 22 and 24 and the 1987 CO Lot 22 indicate that the site is a retail gasoline station.
2451 Second Avenue (Block 1790 Lot 25)	0/0	20/20	0/0	60	The 1945 CO indicates a 5-story building with a cellar boiler room and storage. The first story is occupied by two (2) stores and two (2) apartments and multi-family dwellings on the second through fifth stories.
2453 Second Avenue (Block 1790 Lot 26)	0/0	0/0	0/0	0	Address not listed in property file.
2455 Second Avenue (Block 1790 Lot 27)	0/0	0/0	0/0	0	Reported as vacant land.

Address	Complaints (total/open)	DOB- Violations (total/open)	ECB- Violations (total/open)	Actions	Additional Information
2457 Second Avenue (Block 1790 Lot 28)	0/0	0/0	0/0	0	Reported as vacant land
2459 Second Avenue (Block 1790 Lot 29)	0/0	0/0	0/0	0	Address not listed in property file.
238 East 126 th Street (Block 1790 Lot 30)	1/0	11/0	0/0	13	None.
236 East 126 th Street (Block 1790 Lot 31)	2/0	1/0	0/0	16	1955 CO indicates a single story motor vehicle repair shop and garage for five (5) motor vehicles.
214 East 126 th Street (Block 1790 Lot 40)	0/0	0/0	0/0	0	Address not listed in property file.
210 East 126 th Street (Block 1790 Lot 41)	0/0	0/0	0/0	11	1939 CO indicates a 5-story apartment building with a boiler room in the basement.
208 East 126 th Street (Block 1790 Lot 44)	0/0	0/0	2/0	15	None.
204 East 126 th Street (Block 1790 Lot 45)	0/0	9/9	0/0	17	1961 CO indicates a 5-story apartment building with a boiler room in the basement.
2315 Third Avenue (Block 1790 Lot 46)	0/0	12/12	0/0	61	1948 CO indicates the site usage as a parking lot for 5 or more motor vehicles. 1957 CO indicates a parking lot and used car dealership with a 1-story wood frame temporary office. Application for a gasoline tank was also filed in 1957. The 1967 CO indicates a 1-story building with a storage cellar used as a steel and metal manufacturing business. Two (2) Fulton FB 030-A boilers are currently registered on site.
2313 Third Avenue (Block 1790 Lot 49)	0/0	3/3	0/0	15	None.
205 East 125 th Street (Block 1790 Lot 101)	4/0	4/2	7/0	12	None.

Address	Complaints (total/open)	DOB- Violations (total/open)	ECB- Violations (total/open)	Actions	Additional Information
2321 Third Avenue (Block 1791 Lot 1)	3/0	19/19	1/0	452	A 1921 CO for 215 East 126th St. (Lot 8) indicates a 3-story structure with a storage cellar, basement level mattress shop, first floor office and sewing room and single family dwellings on the second and third floors. The 1942 CO for this lot indicates a conversion to a multi-family dwelling. A 1937 CO for 221 East 126th St. (Lot 9 ½) indicates a 3-story multi-family dwelling with a storage cellar. The 1937 CO for 212 East 127th St. (Lot 42) indicates a junk shop with scrap paper and rags on the first floor and mezzanine levels and the second through fifth floors are not to be occupied. In 1938, the CO for this lot no longer lists floors 2 through 5. The 1938 CO for 2465 Second Ave. (part of Lot 24) lists a 6-story apartment building with storage cellar. A 1948 CO for 228 East 127th St. (Lot 35) indicates a 1-story garage for four (4) vehicles and a gasoline tank approved by the FDNY in May 1948. The 1948 CO for 225 East 126th St. (Lot 11 ½) indicates a 5-story building with a storage cellar and first floor iron works. The second to fifth floors are listed as vacant. The 1949 CO for 208-210 East 127th St. (Lots 43 & 44) indicates a 1-story building used as storage and bailing. A 1-story motor vehicle repair is listed at 224 East 127th St. (Lot 37) on a 1952 CO. The 1954 CO for 207 East 126th St. (part of Lot 5) indicates a 3-story building with cellar storage, a basement factory and furnished rooms on the first through third stories. The 1954 COs for 237 East 126th St. (Lot 16 ½) indicates a 3-story building with a cellar boiler room and multi-family dwellings and fuel oil installation approved by the FDNY in June 1954; 203 East 126th St. (Lot 4 ¼) is listed as a 3-story multi-family dwelling with a cellar heating plant and fuel oil installation approved by the FDNY in July 1954; and, 239 East 126th St. (Lot 17) is listed as a 3-story multi-family dwelling with a cellar boiler room. A 1955 CO for 229 East 126th St. (Lot 13) lists a 5-story multi-family dwelling with a cellar boiler room. The 1957 COs for 235 East 126th St. (Lot 13) and 219 East 126th St. (Lot 9) indicate 3-story multi-family dwellings with cellar boiler rooms on each lot. The 1961 CO for 247 East 126th St. (Lot 20) indicates an open cellar and heating space, basement and second floor dwellings and a chapel on the first floor. The 1962 CO for 205 East 126th St. (Lot 105) indicates a 3-story multi-family dwelling with cellar boiler room and an undated fuel oil installation permit.

Address	Complaints (total/open)	DOB- Violations (total/open)	ECB- Violations (total/open)	Actions	Additional Information
2469 Second Avenue (Block 1791 Lot 25)	0/0	0/0	0/0	0	Address not listed in property file.
230 East 127 th Street (Block 1791 Lot 34)	6/0	26/3	3/0	20	Temporary COs for June and October 1960 and January and September 1961 indicated a 5-story building with a first floor factory, second floor electrical shop and warehousing throughout. The April 1963 CO indicates the building was used as a carpenters shop, electrical shop and warehousing for the motion picture industry.

CO – Certificate of Occupancy

New York City Department of Health and Mental Hygiene

FOIL letters were submitted to the Records Access Officer of the New York City Department of Health and Mental Hygiene ("NYCDHMH") by M&E requesting a file search for the properties that comprise the Site. No response from the NYCDHMH has been received to date. M&E will immediately notify the EDC should the NYCDHMH provide information indicating the presence of additional environmental concerns at the Site.

New York City Department of Environmental Protection

FOIL letters were submitted to Mr. Frank Schiano, legal advisor to the NYCDEP and the New York City Department of Environmental Health ("NYCDEH") for the properties that comprise the Site. To date, no response has been received from the NYCDEP or the NYCDEH. M&E will notify EDC if additional site information is provided by this agency.

6.2 State AgenciesNew York State Department of Environmental Conservation

FOIL letters were submitted to the Records Access Officer of the New York State Department of Environmental Conservation ("NYSDEC") by M&E requesting a file search of the properties that comprise the Site. No response has been received from the NYSDEC to date. M&E will immediately notify the EDC should the NYSDEC provide information indicating the presence of additional environmental concerns at the Site.

7.0 Client Provided Information

M&E requested that the EDC provide copies of all available information related to the Site or surrounding area. The EDC provided a map depicting the site location and block and lot numbers and a spreadsheet listing the block, lot, owner and address of each of the parcels that comprise the Site.

8.0 SITE RECONNAISSANCE

Mr. Ronald Kantor of M&E conducted the site reconnaissance on September 11 and 19, 2006. Mr. George Sotiroff of HPD was present on September 19 to provide M&E access to the property located at 2293 Third Avenue which was locked during the initial site visit. A photographic log is located in Appendix I.

8.1 Methodology and Limiting Conditions

Performance of the Phase I ESA was limited to accessible areas of the Site. The privately owned vacant lots located at 249 East 125th Street (Block 1790, Lot 20) and 208 East 126th Street (Block 1790, Lot 44) are fenced and the Site conditions were observed from the sidewalk areas. In addition, City owned vacant lots located 2309 Third Avenue (Block 1790, Lot 3), 2313 Third Avenue (Block 1790, Lot 49), 209 East 125th Street (Block 1790, Lot 6) and a portion of 2321 Third Avenue (Block 1791, Lot 1) located at the intersection of Third Avenue and East 126th Street are fenced and the Site conditions were observed from the sidewalk areas. The nine (9) commercial/retail properties were not entered during the Phase I ESA thus limiting the visual inspection to the exteriors of these properties.

8.2 Site Conditions

The visual reconnaissance of the Site revealed a total of fifteen (15) vacant lots; three (3) lots reported as vacant but utilized for parking; and, nine (9) commercial/retail businesses, three of which are located on the ground floor below loft apartments. The vacant lots are fenced and all were accessible with the exception of the privately owned vacant lots located at 249 East 125th Street (Block 1790, Lot 20) and 208 East 126th Street (Block 1790, Lot 44) and the City owned vacant lots located 2309 Third Avenue (Block 1790, Lot 3), 2313 Third Avenue (Block 1790, Lot 49), 209 East 125th Street (Block 1790, Lot 6). In addition, an unimproved portion of the City owned Block 1791, Lot 1 located at the corner of East 126th Street and Third Avenue was fenced and not accessible. Observations of the Site conditions of these lots were made from the sidewalk areas. The reconnaissance of the accessible vacant lots revealed the presence of uneven ground surfaces, asphalt paving, buried foundations and/or fill materials. These observations suggest that buried USTs and potentially contaminated fill materials may remain below the surface. Minor oil staining of surface soils was observed at 2453 Second Avenue (Block 1790, Lot 26). The lot located at 2293 Third Avenue (Block 1789, Lot 46) is utilized for automobile parking by the FDNY; the lot located at 243 East 125th Street (Block 1790, Lot 13) operates under the name East-End Truck Parking is asphalt paved and contains a mobile office trailer and truck and automobile parking; and, 2469 Second Avenue (Block 1791, Lot 25) is asphalt paved

and used by NYCTA for bus and automobile parking.

The nine (9) commercial/retail businesses include Fancy Dry Cleaners located at 2315 Third Avenue (Block 1790, Lot 46), Preferred Floors, Inc., a retail carpet and flooring store located at 2305 Third Avenue (Block 1790, Lot 1), Schmuck Bros. Inc., an antique shop and loft apartments in a 4-story building located at 205 East 125th Street (Block 1790, Lot 101), Tone's Barber Shop and Elizabeth Salon and apparently vacant loft apartments in a 3-story building at 207 East 125th Street (Block 1790, Lot 5), Lee Myles Transmissions and Midas Muffler shop in a 2-story building located at 213 East 125th Street (Block 1790, Lot 8), United Control and Refrigeration, an appliance store and loft apartments in a 4-story building at 225 East 125th Street (Block 1790, Lot 12), a BP gasoline service station (2449 Second Avenue), Dunkin Donuts (255 East 125th Street) and Lugo Flat Fix present on Block 1790, Lot 40. The Manhattan Coach Works, a one-story automobile restoration and repair shop, is located at 212 East 127th Street (Block 1791, Lot 1). Used automobile engines and other potentially oil-filled parts were observed along side the Manhattan Coach Works building. Cycle Therapy, a 5-story motorcycle dealership and repair shop with showrooms on the upper floors is located at 230 East 127th Street (Block 1791, Lot 34). The nine (9) commercial/retail properties are privately owned and were not internally inspected during the Phase I ESA.

8.3 Site Utilities

The commercial/retail and residential properties on the Site are likely served by ConEd (electricity), Keyspan Energy (natural gas), the NYCDEP (water, sewer) and Verizon (telephone). No heating oil fill pipes or vent lines were observed at the on-site buildings. A visual inspection of the surrounding right-of-ways confirmed electrical utility grates, water mains/valves, sewer manholes and gas valves.

8.4 Site Drainage

Runoff leaving the Site is collected by inlets along the adjoining streets, and flows to the Wards Island sewage treatment facility, which ultimately discharges to the upper East River. Some of precipitation falling on the vacant lots of the Site may infiltrate to the subsurface.

8.5 Underground and Aboveground Storage Tanks

One (1) 550 gallon steel fuel oil UST (installation date unknown) and five (5) 4,000 gallon steel unleaded gasoline USTs installed in 1987 are reported at the BP service station located at 2449 Second Avenue. One (1) registered waste oil AST of unknown capacity is reported at the Midas Muffler/Lee Myles shop located at 213 East 125th Street. However, historic building demolition

may have resulted in the burial of historic heating oil or gasoline tanks that served the residential and commercial buildings that formerly occupied the Site.

8.6 Oil-Filled Equipment

Oil-filled equipment was not observed on the vacant lots of the Site; however, used automobile engine parts were observed along side the Manhattan Coach Works at 212 East 127th Street and additional oil-filled equipment may be present at the other privately owned businesses that occupy the Site.

8.7 Hazardous Materials Storage

Gasoline, fuel oil and petroleum products are present at the BP service station located at 2449 Second Avenue. Waste oil and petroleum products are expected to exist at the Midas Muffler/Lee Myles shop located at 213 East 125th Street and may also be present at the Manhattan Coach Works, Inc. an automotive repair and body shop located at 212 East 127th Street and at Cycle Therapy, a motorcycle dealership and repair shop located at 230 East 127th Street. Hazardous materials in the form of dry cleaning solvents and chemicals may also be present at Fancy Dry Cleaners located at 2315 Third Avenue. In addition, potentially hazardous flooring adhesives may be present at Preferred Flooring, Inc. located at 2305 Third Avenue. No hazardous materials were observed on the vacant parcels of the Site.

8.8 Waste Generation

Household wastes generated at the Site are collected by the New York City Department of Sanitation. Hazardous and non-hazardous industrial wastes may be generated by the BP service station located at 2449 Second Avenue, the Midas Muffler/Lee Myles located at 213 East 125th Street, Fancy Dry Cleaners located at 2315 Third Avenue, Manhattan Coach Works, Inc. located at 212 East 127th Street and at Cycle Therapy located at 230 East 127th Street. The vacant properties of the Site are accumulating trash deposited by others.

8.9 Neighboring Properties

The neighboring properties include the Harlem Auto Mall to the north, commercial/retail properties with loft apartments fronting on East 125th Street to the south, a NYCTA bus depot and commercial/retail properties east of the Site, and commercial/office buildings that include the Salvation Army and a New York City Jobs Office west of the Site.

9.0 INTERVIEWS WITH FACILITY PERSONNEL

No individuals with site-specific knowledge of the Site or its history were available for interviews as part of this Phase I ESA.

10.0 FINDINGS AND CONCLUSIONS

The environmental database provided by EDR identified sites within the search radii where documented environmental impacts have occurred. The EDR report indicates that the service station located at 2449 Second Avenue has impacted soil and groundwater in that area of the Site. The EDR database information did not include any documentation from which it could be concluded that the nearby sites identified within the search radii have impacted the Site. It is possible that groundwater under the Site has been impacted due to historical site usage and the potential for leaking residential heating oil tanks on the Site and the surrounding area. However, it should be noted that the groundwater in this area is not used as a potable source.

During the Phase I ESA, a visual inspection of the Site was performed. The visual reconnaissance of the Site revealed a total of fifteen (15) vacant lots; three (3) lots reported as vacant but utilized for parking; and, nine (9) commercial/retail businesses, three of which are located on the ground floor below loft apartments. The reconnaissance of the vacant lots revealed the presence of uneven ground surfaces, asphalt paving, buried foundations and/or fill materials. These observations suggest that buried USTs and potentially contaminated fill materials may remain below the surface. Minor oil staining of surface soils was observed at 2453 Second Avenue (Block 1790, Lot 26). The lot located at 2293 Third Avenue (Block 1789, Lot 46) is utilized for automobile parking by the New York City Fire Department ("FDNY"); the lot located at 243 East 125th Street (Block 1790, Lot 13) operates under the name East-End Truck Parking, is asphalt paved and contains a mobile office trailer and truck and automobile parking; and, 2469 Second Avenue (Block 1791, Lot 25) is asphalt paved and used by the NYCTA for bus and automobile parking.

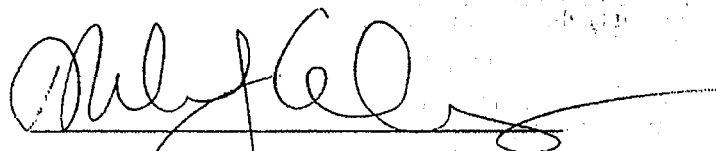
The nine (9) commercial/retail businesses include Fancy Dry Cleaners located at 2315 Third Avenue (Block 1790, Lot 46), Preferred Floors, Inc., a retail carpet and flooring store located at 2305 Third Avenue (Block 1790, Lot 1), Schmuck Bros. Inc., an antique shop and loft apartments in a 4-story building located at 205 East 125th Street (Block 1790, Lot 101), Tone's Barber Shop and Elizabeth Salon and apparently vacant loft apartments in a 3-story building at 207 East 125th Street, Lee Myles Transmissions and Midas Muffler shop in a 2-story building located at 213 East 125th Street (Block 1790, Lot 8), United Control and Refrigeration, an appliance store and loft apartments in a 4-story building at 225 East 125th Street (Block 1790, Lot 12), a BP gasoline service station (2449 Second Avenue), Dunkin Donuts (255 East 125th Street) and Lugo Flat Fix present on Block 1790, Lot 40. The Manhattan Coach Works, a one-story automobile restoration and repair shop, is located at 212 East 127th Street (Block 1791, Lot 1). Used automobile engines and other potentially oil-filled parts were observed along side the Manhattan Coach Works building. Cycle Therapy, a 5-story motorcycle dealership and repair

shop with showrooms on the upper floors is located at 230 East 127th Street (Block 1791, Lot 34).

Based upon the observations of the vacant lots, a subsurface investigation of these lots limited to test pits and geophysical investigation methods is recommended to characterize fill materials and identify potential USTs. An asbestos and lead based paint ("LBP") survey should be conducted on the nine (9) structures that occupy the Site to determine if asbestos and/or LBP are present.

Additional recommendations could be warranted should potential environmental issues be identified from outstanding FOIL/Information requests submitted to the New York State Department of Mental Health and Hygiene, the New York State Department of Environmental Conservation, New York City Department of Environmental Protection, or the Fire Department of the City of New York.



Ronald W. Kantor
Senior Scientist

Nelson J. Abrams, P.G.
Project Manager

11.0 STATEMENT OF LIMITATIONS

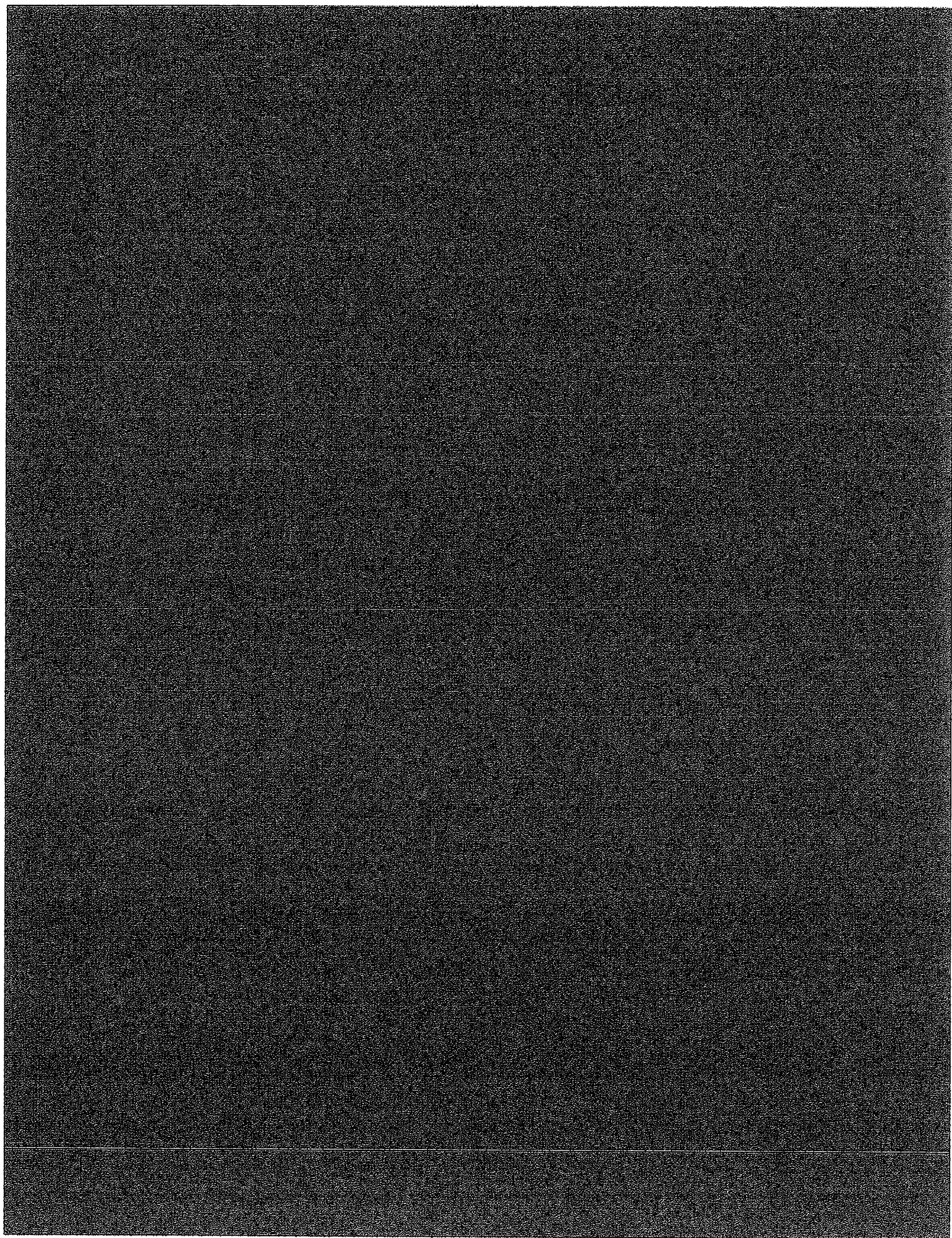
The data presented and the opinions expressed in this report are qualified as follows:

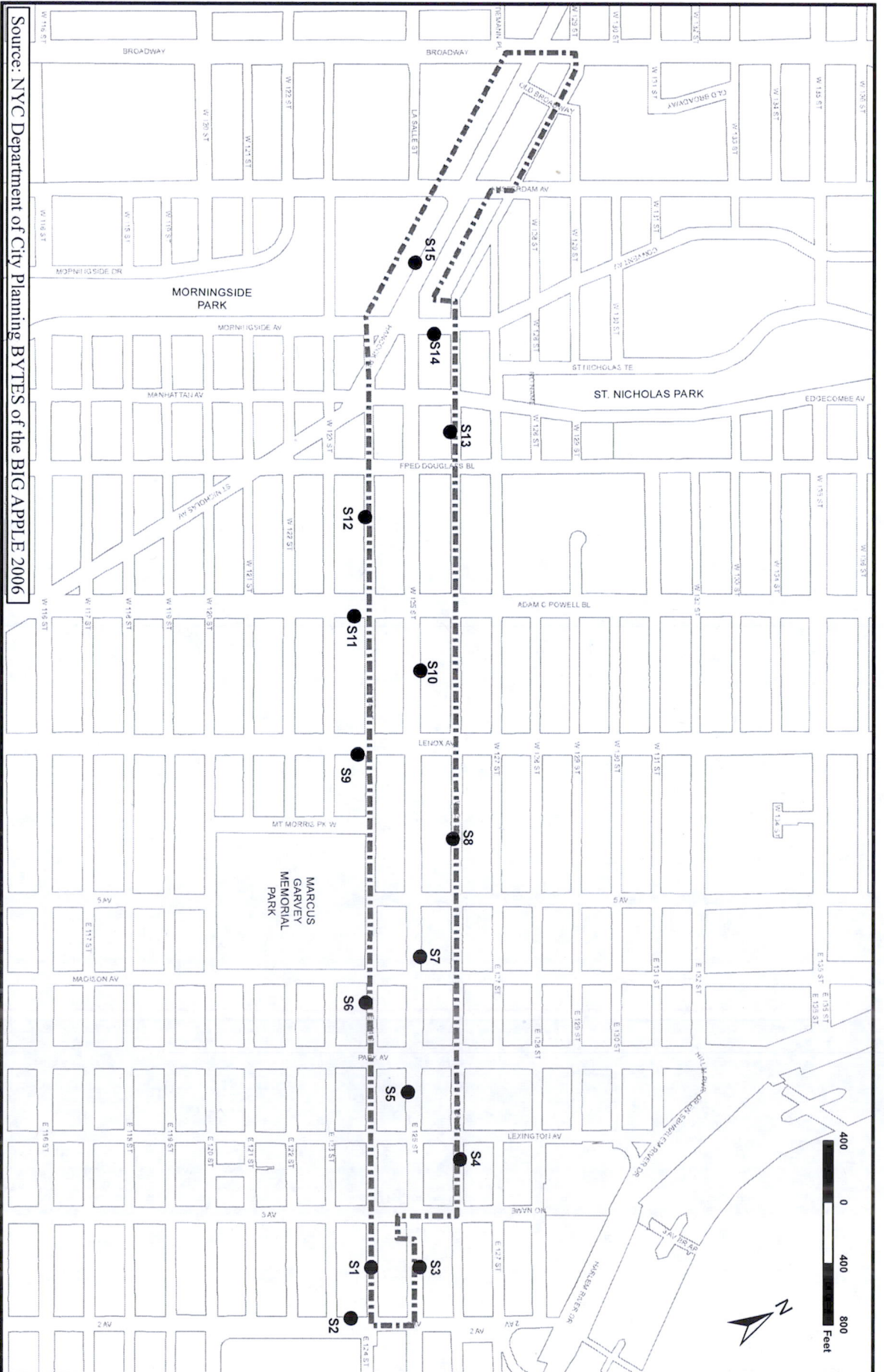
1. The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence in the environment of oil or hazardous materials and substances as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.
2. Metcalf & Eddy (M&E) derived the data in this report primarily from visual inspections, examination of records in the public domain, and interviews with individuals with information about the Site. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.
3. In preparing this report, M&E has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, M&E has not attempted to verify the accuracy or completeness of any such information.
4. The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Services. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.
5. Because of the limitations stated above, the findings, observations, and conclusions expressed by M&E in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Further, such data, findings observations, and conclusions are based solely upon site conditions in existence at the time of investigation.
6. This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

7. The Phase I ESA was performed using standard engineering practices, with the understanding that environmental professionals can and should use their professional judgment in carrying out environmental site assessments.

12.0 REFERENCES

Baskerville, Charles A. *Bedrock and Engineering Geologic Maps of Brooklyn County and Parts of New York and Queens Counties, New York* 1992 United States Geologic Survey





Source: NYC Department of City Planning BYTES of the BIG APPLE 2006

Legend

- Noise Monitoring Location
- ▬ Proposed Rezoning Area

Figure 3.18-2- Locations of Noise Monitoring Sites

125th Street Corridor Rezoning and Related Actions EIS
 NYC Department of City Planning

- Pitch describes the character and frequency content of noise. Measured in Hertz (Hz), the pitch is used to identify annoying characteristics of noise and help in determining appropriate mitigation to minimize annoyance. The human ear is sensitive to noise frequencies between 20 Hz (low-pitched noise) and 20,000 Hz (high-pitched noise). For example, a noise may be characterized as a low-pitched “rumble” from stereo sub-woofers or a high-pitched “whine” from a train whistle or a train wheel squeal.
- Time variation describes the pattern of the sound over the observation period. Time variation of environmental noise can be characterized as: 1) continuous, such as noise from a building ventilation fan; 2) intermittent, such as noise from a train passage; or 3) impulsive, like noise from a car backfire. Time variation is used in combination with loudness and pitch to determine the sound energy exposure from a particular noise during a period of time, such as a 24-hour day.

3.18.2 HUMAN PERCEPTION OF NOISE AND NOISE DESCRIPTORS

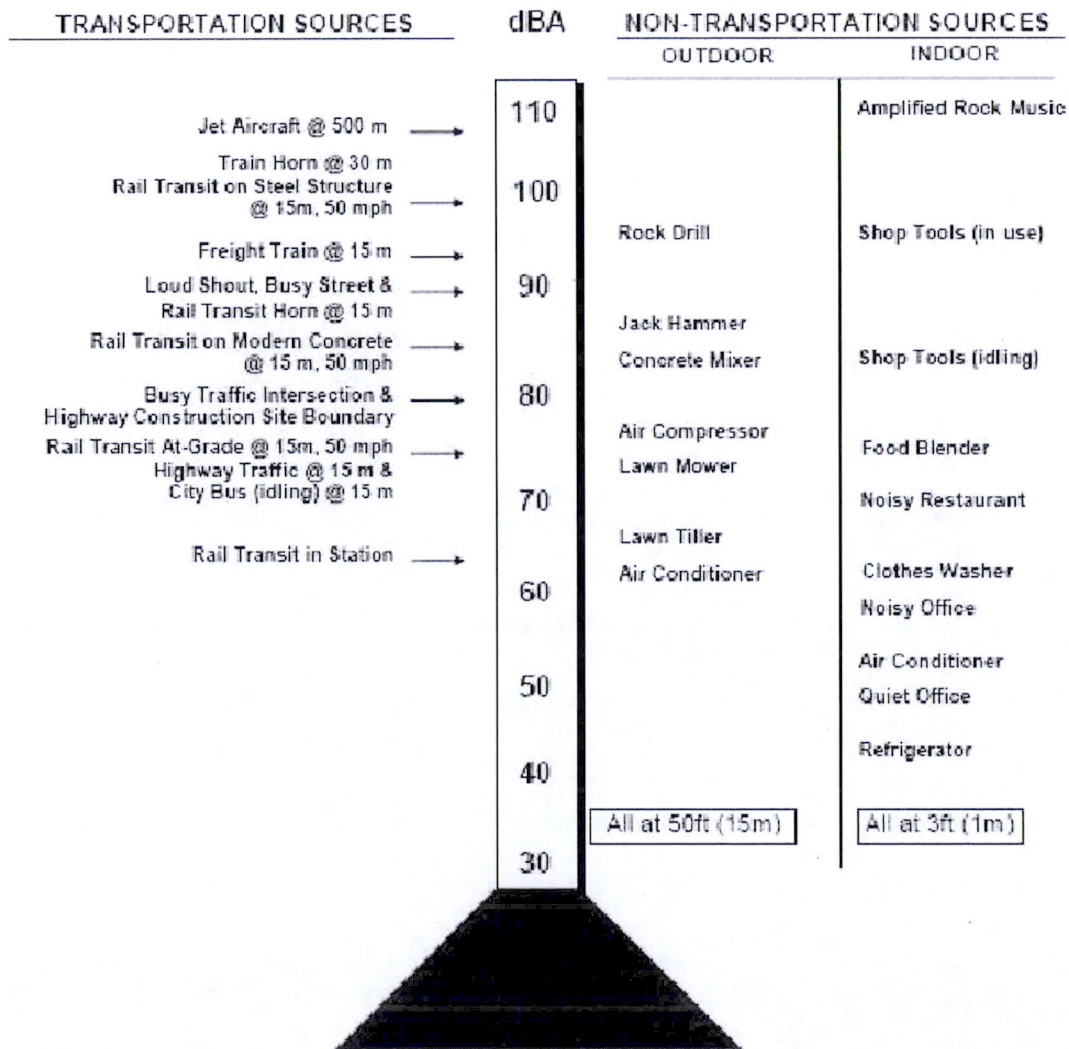
Since the human ear does not respond equally to all frequencies, measured sound levels (in decibel units at standard frequency bands) are often adjusted or weighted to correspond to the frequency response of human hearing. The weighted sound level is expressed in units called “A”-weighted decibels (dBA) and is measured with a calibrated noise meter. A 10 dBA increase in noise level is generally perceived as a doubling of loudness, while a 3 dBA increase in noise is just barely perceptible to the human ear. Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived. A change in sound level of 5 dBA is subjectively noticeable. Typical A-weighted noise levels in the environment lie in the range of 0 dBA (approximate threshold of hearing) to 120 dBA (jet aircraft at 500 feet) (see Figure.3.18-1).

The following A-weighted noise descriptors (noise metrics) are typically used to determine impacts from noise sources.

- L_{eq} represents the level of a constant noise containing the same acoustical energy as a fluctuating noise (e.g., highway traffic) observed during a given interval, typically one hour. The L_{eq} is commonly used to describe energy average levels at places with primarily daytime uses such as offices, schools, and churches. L_{eq} (1 h) represents the cumulative noise exposure from all events averaged over one hour.
- L_{90} : Noise level in dBA exceeded 90 percent of the observation time. L_{90} is often considered to represent the “background” noise in a community.
- L_{10} : Noise level in dBA exceeded 10 percent of the observation time. This unit is used in CEQR regulations and establishes threshold levels for acceptable noise exposure.

Outdoor A-weighted sound levels were used in the measurements and analysis of the noise effects from the proposed action, as dBA correlates well with the human perception of noise. Noise descriptors selected for this analysis were the one-hour equivalent continuous noise level (L_{eq} (1h) in dBA), and the noise level exceeded 10 percent of the time (L_{10} in dBA).

Common Indoor and Outdoor Noise Levels



m = meters; mph = miles per hour.

Sources: FTA Report DOT-T-95-16, "Transit Noise and Vibration Impact Assessment: Final Report", April 1995

Figure 3.18-1 - Common Indoor and Outdoor Noise Levels

125th Street Corridor Rezoning and Related Actions EIS

NYC Department of City Planning

Criteria

The New York City Department of Environmental Protection (NYCDEP) Division of Noise Abatement sets standards for external noise exposure. These standards are classified into four main categories: “Acceptable”; “Marginally Acceptable”; “Marginally Unacceptable”; and “Clearly Unacceptable” (see Table 3.18-1). The 2001 *CEQR Technical Manual* provides guidance for assessing project-generated noise impacts at sensitive receptors based on the category of external noise exposure at these receptor sites. These guidelines are used in this analysis to determine the applicable interior noise levels of sensitive uses, including potential future residential sites based on external noise exposure. For example, at a potential residential site located within areas with “Marginally Unacceptable” external noise levels, a minimum of 30 to 35 dBA reduction below daytime external noise level would be required according to CEQR guidelines to satisfy the interior noise level criteria.

Under the *CEQR Technical Manual*, increases in daytime noise levels as a result of the proposed action are not considered significant unless the resulting noise levels exceed 65 dBA. At night and during the day where the No-action noise levels exceed 65 dBA, a 3dBA increase from the No-action condition is considered a significant adverse impact. In addition, the introduction of sensitive uses such as residences into an area with noise levels above 70 dBA constitutes a significant adverse impact unless interior noise levels for the buildings are attenuated to 45 dBA.

Table 3.18-1, Noise Exposure Standards for Use in City Environmental Impact Reviews

Receptor type	Time period	Acceptable General External Exposure	Airport Exposure ³	Marginally Acceptable General External Exposure	Airport Exposure ³	Marginally Unacceptable General External Exposure	Airport Exposure ³	Clearly Unacceptable General External Exposure	Airport Exposure ³
1. Outdoor area requiring serenity and quiet ²		$L_{10} \leq 55$ dBA	----- $L_{dn} \leq 60$ dBA -----						
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA	----- $60 < L_{dn} \leq 65$ dBA -----	$65 < L_{10} \leq 80$ dBA	----- $65 < L_{dn} \leq 70$ dBA, (II) 70 dBA $\leq L_{dn}$ -----	$L_{10} > 80$ dBA	----- $L_{dn} \leq 75$ dBA -----
3. Residence, residential hotel or motel	7 AM - 10 PM	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 PM - 7 AM	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient health facility		Same as Residential Day (7 AM - 10 PM)		Same as Residential Day (7 AM - 10 PM)		Same as Residential Day (7 AM - 10 PM)		Same as Residential Day (7 AM - 10 PM)	
5. Commercial or office		Same as Residential Day (7 AM - 10 PM)		Same as Residential Day (7 AM - 10 PM)		Same as Residential Day (7 AM - 10 PM)		Same as Residential Day (7 AM - 10 PM)	
6. Industrial, public areas only ⁴	Note 4	Note 4		Note 4		Note 4		Note 4	

Source:
New York City Department of Environmental Protection (adopted by DEP for use in CEQR-1983)

Notes:
(1) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more:
1. Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by ANSI Standards; all values are for the worst hour in the time period.
2. Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential of the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.
3. One may use FAA-approved Land contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.
4. External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

3.18.3 TRAFFIC NOISE ASSESSMENT

EXISTING CONDITIONS

Noise Monitoring Locations

Information about land use in the rezoning area and trip assignment for potential future uses was reviewed to select monitoring sites and assess future noise impacts on sensitive sites. The fifteen monitoring sites depicted on Figure 3.18-2 are representative of the sensitive land uses in the area and of locations where additional new vehicle trips are expected, which could result in an increase in noise. Measured noise levels represent the existing noise exposure conditions at these locations. Noise monitoring was performed on two weekdays (November 9 and 15, 2006) and on three weekend days (November 4, 11 and 18, 2006.). The time periods chosen for noise monitoring included AM peak (7 AM to 9 AM), Midday Peak (11 AM to 1 PM), PM peak (4 PM to 6 PM) and weekend Saturday (12 PM – 2 PM). These time periods are the peak hours when the majority of existing and future project-generated traffic, would be passing these locations. Weekend monitoring takes into account heavy retail and residential traffic while weekday AM and PM monitoring takes into account the peak work week and school traffic. The duration of the measurements varied from 15 to 20 minutes and simultaneous traffic counts were taken. In addition to $L_{eq}(h)$ and L_{10} noise levels, other statistical noise descriptors (L_{50} , L_{90} , L_{max} and L_{min}) were also sampled at all locations for all time periods. For the Proposed Action, the analysis of potential noise impacts utilized the L_{10} and $L_{eq}(h)$ descriptors. Other noise descriptors collected during the monitoring program were collected to assist in the characterization of the existing noise environment.

The monitored noise levels are summarized in Table 3.18-2.

Equipment Used in Noise Monitoring

Noise measurements were taken with a Larson & Davis Model 820 Type I sound level meter. A windscreen was placed over the microphone for all measurements. The meter was properly calibrated for all measurements using a Larson & Davis Model Cal250 calibrator. There were no significant variances between the beginning and ending calibration measurements. Weather conditions during all measurements consisted of sunny skies and temperatures of approximately 50 - 60 degrees Fahrenheit.

Results of Baseline Noise Measurements

The results of baseline noise measurements are presented in Table 3.18-2. Daytime noise levels at all of the receptor sites are fairly typical of noise levels in the study area. A steady background noise exists at all locations due to consistent traffic movement on nearby streets. The background noise level L_{90} (lowest average minimum level) is in the range of 56.5 to 70.8 dBA. The highest L_{10} monitored noise level was measured during the AM peak period at site S10 (120 West 125th Street) and it is represented by a noise level of 80.0 dBA. This level of exposure places this site,

along with thirteen others under the CEQR defined “Marginally Unacceptable” category. Site 13 (311 West 126th Street) with a monitored noise level of 69.2 would be placed in the CEQR defined “Marginally Acceptable” category. The categorization of these monitoring sites is based on the results of baseline noise monitoring and *CEQR Technical Manual* noise exposure standards (see Table 3.18-1).

Noise measurements for the $L_{eq}(h)$ and L_{10} noise descriptors were also conducted at an elevated location on the platform of the existing Metro-North Railroad at Park Avenue. The platform measurement was conducted to identify the contribution of the elevated train to the surrounding noise environment. This monitoring took place on Tuesday, April 10, 2007 during the AM, Midday, and PM peak periods. Monitoring was conducted for one hour. Monitoring during the peak weekday periods is a conservative approach since there would be substantially more train traffic during peak weekday than the peak weekend period. The monitored $L_{eq}(h)$ noise levels at the elevated platform were, 80.8 dBA, 73.5 dBA and 82.5 dBA for the AM, Midday and PM peak periods, respectively. The monitored L_{10} noise levels at the elevated platform were 85.3 dBA, 75.7 dBA and 86.0 dBA for the AM, Midday and PM peak periods, respectively.

Table 3.18-2, Existing Short-term Noise Levels at Monitoring Sites S1 through S15 during November 4 through 18, 2006

Site #	Location	Measurement Times*	Existing Noise Levels				CEQR Noise Exposure Category*
			Leq	L ₁₀	L ₅₀	L ₉₀	
S1	221 East 124th Street	7:00 - 9:00 AM	68.6	72.0	65.9	61.0	Marginally Unacceptable
		12:00 - 2PM	67.8	69.6	63.9	58.9	
		4:00 - 6:00 PM	75.8	78.0	73.2	67.1	
		12:00 - 2:00 PM	70.4	72.9	69.2	65.2	
S2	2425 2nd Avenue	7:00 - 9:00 AM	74.7	77.6	73.5	70.1	Marginally Unacceptable
		12:00 - 2PM	72.4	75.0	70.9	68.0	
		4:00 - 6:00 PM	75.5	78.2	74.0	70.2	
		12:00 - 2:00 PM	62.9	64.8	61.4	58.3	
S3	231 East 125th Street	7:00 - 9:00 AM	76.0	79.0	74.5	68.6	Marginally Unacceptable
		12:00 - 2PM	73.2	74.7	69.6	66.2	
		4:00 - 6:00 PM	77.6	79.5	72.4	67.6	
		12:00 - 2:00 PM	70.6	73.7	67.3	63.9	
S4	145 East 126th Street	7:00 - 9:00 AM	69.9	72.8	67.5	63.8	Marginally Unacceptable
		12:00 - 2PM	68.5	71.5	64.7	61.5	
		4:00 - 6:00 PM	70.2	73.5	64.7	61.7	
		12:00 - 2:00 PM	66.8	69.0	66.1	61.0	
S5	116 East 125th Street	7:00 - 9:00 AM	76.0	77.9	73.4	68.5	Marginally Unacceptable
		12:00 - 2PM	75.1	78.2	72.4	68.5	
		4:00 - 6:00 PM	75.0	77.0	73.7	70.8	
		12:00 - 2:00 PM	73.4	76.1	72.2	67.4	
S6	55 East 124th Street	7:00 - 9:00 AM	70.9	75.0	66.5	61.5	Marginally Unacceptable
		12:00 - 2PM	67.9	71.0	65.8	62.9	
		4:00 - 6:00 PM	71.5	75.4	67.6	60.8	
		12:00 - 2:00 PM	66.3	69.3	62.5	59.0	
S7	35 East 125th Street	7:00 - 9:00 AM	76.6	79.7	74.0	68.2	Marginally Unacceptable
		12:00 - 2PM	73.1	75.8	71.2	66.9	
		4:00 - 6:00 PM	72.8	75.2	71.3	68.5	
		12:00 - 2:00 PM	71.6	73.6	68.7	64.7	
S8	9 East 126th Street	7:00 - 9:00 AM	68.9	72.8	62.9	58.5	Marginally Unacceptable
		12:00 - 2PM	67.0	70.8	61.8	56.5	
		4:00 - 6:00 PM	66.9	70.9	61.4	56.5	
		12:00 - 2:00 PM	65.4	68.6	62.3	58.3	
S9	274 Lenox Avenue	7:00 - 9:00 AM	70.9	73.5	69.1	64.5	Marginally Unacceptable
		12:00 - 2PM	69.3	72.3	67.6	64.4	

Site #	Location	Measurement Times*	Existing Noise Levels				CEQR Noise Exposure Category*
			Leq	L ₁₀	L ₅₀	L ₉₀	
		4:00 - 6:00 PM	71.5	74.4	70.1	65.1	
		12:00 - 2:00 PM	67.0	69.7	65.3	61.5	
S10	120 West 125th Street	7:00 - 9:00 AM	77.2	80.0	72.0	67.9	Marginally Unacceptable
		12:00 - 2PM	70.2	73.1	67.5	63.9	
		4:00 - 6:00 PM	71.0	74.0	69.1	65.8	
		12:00 - 2:00 PM	69.8	72.7	67.8	63.8	
S11	2075 Adam Clayton Powell Blvd	7:00 - 9:00 AM	69.2	72.5	67.8	61.5	Marginally Unacceptable
		12:00 - 2PM	69.4	72.6	67.0	62.3	
		4:00 - 6:00 PM	70.5	73.6	68.6	64.0	
		12:00 - 2:00 PM	67.8	70.2	65.8	60.7	
S12	243 West 124th Street	7:00 - 9:00 AM	68.3	70.4	65.3	59.2	Marginally Unacceptable
		12:00 - 2PM	69.5	72.6	64.4	60.3	
		4:00 - 6:00 PM	65.7	68.5	64.4	61.1	
		12:00 - 2:00 PM	66.4	69.4	62.4	59.2	
S13	311 West 126th Street	7:00 - 9:00 AM	64.7	66.7	62.4	60.2	Marginally Acceptable
		12:00 - 2PM	62.8	64.8	60.4	58.6	
		4:00 - 6:00 PM	66.3	69.2	62.7	59.9	
		12:00 - 2:00 PM	62.9	65.5	61.5	59.7	
S14	145 Morningside Avenue	7:00 - 9:00 AM	69.1	71.4	67.1	63.1	Marginally Unacceptable
		12:00 - 2PM	69.7	71.2	67.6	64.1	
		4:00 - 6:00 PM	70.3	71.2	66.4	63.4	
		12:00 - 2:00 PM	66.1	68.8	65.2	61.3	
S15	429 125th Street	7:00 - 9:00 AM	70.1	72.9	68.9	66.1	Marginally Unacceptable
		12:00 - 2PM	71.7	74.9	70.3	65.7	
		4:00 - 6:00 PM	68.5	70.8	66.9	63.8	
		12:00 - 2:00 PM	69.9	72.7	67.8	64.6	

* Noise exposure category classification was based on the highest noise level measured during any of the four time periods

3.18.4 FUTURE WITHOUT THE PROPOSED ACTION

As per *CEQR Technical Manual* Guidelines, in order to predict the noise levels in the future without the proposed action, monitored noise levels were projected by using a proportional modeling technique to take into account the increases in traffic associated with area growth. First, future traffic volumes were obtained by adding future 2017 No Action traffic volumes to the existing baseline conditions. Then, vehicular traffic volumes under the existing and future No Action conditions were converted into Passenger Car Equivalent (PCE) values. For this conversion, one medium truck is estimated to generate the noise equivalent of 13 cars, one bus is

estimated to generate the noise equivalent of 18 cars, and one heavy truck generated the noise equivalent of 47 cars. Future No Action noise levels are calculated using the following equation:

$$\text{Future No Action Noise Level} = 10 * \log \left(\frac{\text{NoAction PCE}}{\text{Existing PCE}} \right) + \text{Existing Noise Level}$$

As indicated in Table 3.18-2, the individual existing L₁₀ noise levels range from the “Marginally Acceptable” to the “Marginally Unacceptable” category at the monitored sites. Future No Action noise levels at fourteen of the fifteen monitoring sites as shown in Table 3.18-3 would be higher than the existing noise levels, with increases in the range of 0.2 to 1.8 dBA. Changes of this magnitude would be below the threshold of human perception.

3.18.5 FUTURE WITH THE PROPOSED ACTION

In order to predict noise levels in the future with the proposed action, the additional increase in traffic noise associated with the proposed action was added to the future No Action traffic noise condition. Future proposed action traffic volumes utilized in the mobile source noise analyses were based on unmitigated traffic conditions. Using the methodology previously used to calculate No Action traffic noise, there would be no perceptible increases in traffic noise levels at the Projected and Potential Development Sites as a result of increases in traffic associated with the proposed action (see Table 3.18-3). At site S3, where the greatest increase in traffic volumes is expected, and at sites S5, S7, S9, S10, S11 and S15, the increase in noise level conditions in the future with the proposed action compared to the future no action condition noise levels is predicted to be in the range of 0.1 dB to 0.8 dB. This increase at these locations would be considered insignificant and imperceptible. At the remaining eight monitoring sites (S1, S2, S4, S6, S8, S12, S13 and S14), the increase in future traffic volume would result in no increase in noise levels over the future no action condition. As result of the proposed action, the increase in the proposed action noise level over the no action noise level would not exceed the 3 dBA CEQR threshold at any of the receptor sites. Therefore, significant adverse noise impacts from mobile sources are not predicted to occur.

Table 3.18-3, Existing and Future Traffic Noise Levels (L_{eq}) at Monitored Sites

Noise Site #	Site Description	Peak Traffic Time Period	Existing PCEs ¹	Future No Action PCEs ¹	Future Proposed Action PCEs ¹	Existing Noise Level (dBA)	Predicted Future No Action Noise Level (dBA)	Proposed Action Noise Level (dBA)	Future Proposed Action Minus Future No Action (dBA)	Impact (Yes/No)
S1	221 East 124th Street	PM	4050	4256	4256	75.8	76.0	76.0	0.0	No
S2	2425 2nd Avenue	PM	4694	5258	5258	75.5	76.0	76.0	0.0	No
S3	231 East 125th Street	PM	5063	7675	9159	77.6	79.4	80.2	0.8	No
S4	145 East 126th Street	PM	1920	2653	2653	70.2	71.6	71.6	0.0	No
S5	116 East 125th Street	AM	6289	8476	9319	76.0	77.3	77.7	0.4	No
S6	55 East 124th Street	PM	669	704	704	71.5	71.7	71.7	0.0	No
S7	35 East 125th Street	AM	6597	8492	9267	76.6	77.7	78.1	0.4	No
S8	9 East 126th Street	AM	1596	1707	1707	68.9	69.2	69.2	0.0	No
S9	274 Lenox Avenue	PM	2848	3106	3157	71.5	71.9	72.0	0.1	No
S10	120 West 125th Street	AM	5954	7629	8318	77.2	78.3	78.7	0.4	No
S11	2075 Adam Clayton Powell Blvd	PM	2661	2898	2971	70.5	70.9	71.0	0.1	No
S12	243 West 124th St	MD	1333	1333	1333	69.5	69.5	69.5	0.0	No
S13	311 West 126th Street	PM	596	659	659	66.3	66.7	66.7	0.0	No
S14	145 Morningside Avenue	PM	846	1048	1054	70.3	71.2	71.2	0.0	No
S15	429 125th Street	MD	5349	6337	6526	71.7	72.4	72.5	0.1	No

1. For impact assessment, the highest measured hourly level for the entire day, AM Peak (7:00 am to 9:00 am), Midday Peak (12:00 pm to 2:00 pm) PM Peak (4:00 pm to 6:00 pm) and Saturday (12:00 pm to 2:00 pm), was used for each location to calculate change in noise level from calculated PCE's for the existing, the no-build and the build conditions.

Table 3.18-4, Required Attenuation Values To Achieve Acceptable Interior Noise Levels

	<i>Marginally Acceptable</i>	<i>Marginally Unacceptable</i>		<i>Clearly Unacceptable</i>		
Noise level with proposed action	$65 < L_{10} \leq 70$	$70 < L_{10} \leq 75$	$75 < L_{10} \leq 80$	$80 < L_{10} \leq 85$	$85 < L_{10} \leq 90$	$90 < L_{10} \leq 95$
Attenuation	25 dBA	30 dBA	35 dBA	40 dBA	45 dBA	50 dBA

Source: New York City Department of Environmental Protection

3.18.6 SENSITIVE RECEPTOR ASSESSMENT

The proposed action would introduce new sensitive receptors into an area with high existing ambient noise levels. As indicated in Table 3.18-1, the existing noise levels range from "Marginally Acceptable" to "Marginally Unacceptable" at the sites where residential, commercial or community facility use is part of the projected development.

The existing L_{10} noise levels at 14 of the 15 monitoring sites and the future noise levels at all of the 48 projected and potential development sites would exceed 70 dBA. These sites would be suitable for residential, commercial and community facility uses only by providing window-wall attenuation ranging from 30 dBA to 40 dBA for the exterior facade of the affected development in order to achieve a 45 dBA interior noise level (Table 3.18-4). An (E) designation for these sites would preclude the potential for significant adverse noise impacts. Window/wall attenuation requirements base on future Action noise levels are shown in Table 3.18-5 for the fifteen noise monitoring sites. To properly assess potential impacts on the development sites, the attenuation requirements predicted for the monitoring sites were used and applied as shown in Tables 3.18-6 and 3.18-7. The corresponding required (E) designations for the projected and potential development sites are described below and also shown in Tables 3.18-6 and 3.18-7. The closed window condition at these sites can be maintained only by providing an alternate means of ventilation for the interior spaces. Details of window insulation are the following:

- Sound attenuation of 30 dBA would be needed for sites where future noise levels would be between 70 and 75 dBA. This can be achieved through installing ¼ inch laminated single-glazed windows or double-glazed windows with 1/8 inch glass panes with ¼ inch air space between them mounted in a heavy frame.
- Sound attenuation of 35 dBA would be required for sites where future noise levels would be between 75 and 80 dBA. This can be achieved through installing double glazed windows on a heavy frame in masonry structures or windows consisting of laminated glass.

- Sound attenuation of 40 dBA would be required where future noise levels would be between 80 and 85 dBA. This requires the use of noise attenuation measures that typically exceed standard practice for new construction. Achieving the 40 dBA attenuation would require the placement of acoustically well-sealed 0.25" laminated storm sash 1.5" to 3" from single glazed window on wood or metal frame.

Table 3.18-5, Required Window Attenuation Values for Monitored sites S1 through S15*

<u>Noise Site</u>	<u>L₁₀ (No Action)¹</u>	<u>Change in noise level due to change in Traffic PCEs</u>	<u>Build L₁₀ Noise Levels</u>	<u>Required Window Attenuation dBA</u>
		<u>Proposed Action</u>	<u>Proposed Action</u>	<u>Proposed Action</u>
S1	78.2	0.0	78.2	35
S2	78.7	0.0	78.7	35
S3	81.3	0.8	82.1	40
S4	74.9	0.0	74.9	30
S5	79.2	0.4	79.6	35
S6	75.6	0.0	75.6	35
S7	80.8	0.4	81.2	40
S8	73.1	0.0	73.1	30
S9	74.8	0.1	74.9	35 ²
S10	81.1	0.4	81.5	40
S11	74.0	0.1	74.1	30
S12	72.6	0.0	72.6	30
S13	69.6	0.0	69.6	30 ²
S14	72.1	0.0	72.1	30
S15	75.6	0.1	75.7	35

* The E designation associated with these build L₁₀ noise levels would preclude the potential for adverse noise impacts.

¹ As stated in the CEQR Technical Manual "L₁₀ values can be calculated by adding the difference between the L₁₀ and L_{eq} descriptors found to exist in the measurement program to the calculated no action L_{eq} noise level." For example, for Site 1 the difference between L₁₀ and L_{eq} in the measurement program is 78.0.-75.8=2.2. Future calculated no-action L₁₀ is 76.0 + 2.2 = 78.2

² The required window attenuation for monitoring sites 9 and 13 were conservatively increased since the Build L₁₀ noise levels were close to the next attenuation category.

For projected and potential development site locations including block and lot numbers and attenuation requirements, see Table 3.18-6 (Projected Development Sites) and 3.18-7 (Potential Development Sites).

Table 3.18-6, Required Attenuation Values for Projected Developmental Sites^{1, 2, 3}

<u>Dev. Site Number</u>	<u>Address</u>	<u>Block Number</u>	<u>Lot(s) Number</u>	<u>Build Max L10 (dBA)</u>	<u>Attenuation Required</u>	
<u>1</u>	<u>321 WEST 125 STREET</u>	<u>S10, S14</u>	<u>1952</u>	<u>19</u>	<u>81.5</u>	<u>35</u>
	<u>319 WEST 125 STREET</u>	<u>S10, S14</u>	<u>1952</u>	<u>21</u>	<u>81.5</u>	<u>35</u>
	<u>317 WEST 125 STREET</u>	<u>S10, S14</u>	<u>1952</u>	<u>22</u>	<u>81.5</u>	<u>35</u>
<u>2</u>	<u>2329 FRED DOUGLASS BLVD</u>	<u>S10, S13</u>	<u>1952</u>	<u>29</u>	<u>81.5</u>	<u>30, 40 OSF</u>
<u>3</u>	<u>362 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1951</u>	<u>7</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>4</u>	<u>350 WEST 125 STREET</u>	<u>S10, S14</u>	<u>1951</u>	<u>51</u>	<u>81.5</u>	<u>35</u>
<u>5</u>	<u>324 WEST 125 STREET</u>	<u>S10, S14</u>	<u>1951</u>	<u>43</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>6</u>	<u>2100 AC POWELL BLVD</u>	<u>S10, S11</u>	<u>1931</u>	<u>27</u>	<u>81.5</u>	<u>30, 40 OSF</u>
<u>7</u>	<u>260 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>55</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>260 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>55</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>8</u>	<u>256 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>53</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>256 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>53</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>252 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>51</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>250 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>50</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>246 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>49</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>226 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>41</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>9</u>	<u>226 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>41</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>222 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>40</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>222 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>40</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>208 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>37</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>208 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>37</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>2105 AC POWELL BLVD</u>	<u>S8, S10, S11</u>	<u>1910</u>	<u>1</u>	<u>81.5</u>	<u>35</u>
<u>10</u>	<u>2105 AC POWELL BLVD</u>	<u>S8, S10, S11</u>	<u>1910</u>	<u>1</u>	<u>81.5</u>	<u>35</u>
	<u>125 WEST 125 STREET</u>	<u>S8, S10, S11</u>	<u>1910</u>	<u>7501</u>	<u>81.5</u>	<u>35</u>
<u>11</u>	<u>158 WEST 125 STREET</u>	<u>S10, S11</u>	<u>1909</u>	<u>59</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>2089 AC POWELL BLVD</u>	<u>S10, S11</u>	<u>1909</u>	<u>63</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>12</u>	<u>120 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>44</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>124 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>46</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>124 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>46</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>13</u>	<u>111 WEST 124 STREET</u>	<u>S9, S10</u>	<u>1909</u>	<u>26</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>109 WEST 124 STREET</u>	<u>S9, S10</u>	<u>1909</u>	<u>27</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>107 WEST 124 STREET</u>	<u>S9, S10</u>	<u>1909</u>	<u>28</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>281 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1909</u>	<u>29</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>283 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1909</u>	<u>129</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>285 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1909</u>	<u>30</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>287 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1909</u>	<u>31</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>289 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1909</u>	<u>32</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>291 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1909</u>	<u>33</u>	<u>81.5</u>	<u>35, 40 ONF</u>
	<u>108 WEST 125 STREET</u>	<u>S9, S10</u>	<u>1909</u>	<u>38</u>	<u>81.5</u>	<u>35, 40 ONF</u>

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	<u>110 WEST 125 STREET</u>	<u>S9, S10</u>	<u>1909</u>	<u>39</u>	<u>81.5</u>	<u>35, 40 ONF</u>
<u>14</u>	<u>35 WEST 125 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>17</u>	<u>81.2</u>	<u>30, 40 OSF</u>
	<u>33 WEST 125 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>21</u>	<u>81.2</u>	<u>30, 40 OSF</u>
	<u>31 WEST 125 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>22</u>	<u>81.2</u>	<u>30, 40 OSF</u>
	<u>29 WEST 125 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>122</u>	<u>81.2</u>	<u>30, 40 OSF</u>
	<u>38 WEST 126 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>53</u>	<u>81.2</u>	<u>30, 40 OSF</u>
<u>15</u>	<u>5 WEST 125 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>31</u>	<u>81.2</u>	<u>30, 40 OSF</u>
	<u>16 WEST 126 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>144</u>	<u>81.2</u>	<u>30, 40 OSF</u>
	<u>18 WEST 126 STREET</u>	<u>S7, S8</u>	<u>1723</u>	<u>45</u>	<u>81.2</u>	<u>30, 40 OSF</u>
<u>16</u>	<u>76 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>168</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>74 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>68</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>72 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>67</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>70 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>66</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>68 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>65</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>64 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>63</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>62 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>62</u>	<u>81.2</u>	<u>35, 40 ONF</u>
<u>17</u>	<u>60 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>61</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>58 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>60</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>56 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>59</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>54 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>58</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>69 EAST 125 STREET</u>	<u>S4, S7</u>	<u>1750</u>	<u>28</u>	<u>81.2</u>	<u>35, 40 OSF</u>
<u>18</u>	<u>71 EAST 125 STREET</u>	<u>S4, S7</u>	<u>1750</u>	<u>29</u>	<u>81.2</u>	<u>35, 40 OSF</u>
	<u>75 EAST 125 STREET</u>	<u>S4, S7</u>	<u>1750</u>	<u>30</u>	<u>81.2</u>	<u>35, 40 OSF</u>
	<u>58 EAST 126 STREET</u>	<u>S4, S7</u>	<u>1750</u>	<u>44</u>	<u>81.2</u>	<u>35, 40 OSF</u>
	<u>1824 PARK AVENUE</u>	<u>S7 & MN</u>	<u>1750</u>	<u>40</u>	<u>84.8</u>	<u>40</u>
<u>19</u>	<u>81 EAST 125 STREET</u>	<u>S7 & MN</u>	<u>1750</u>	<u>34</u>	<u>84.8</u>	<u>40</u>
<u>20</u>	<u>60 EAST 125 STREET</u>	<u>S6, S7</u>	<u>1749</u>	<u>48</u>	<u>81.2</u>	<u>35, 40 ONF</u>
	<u>58 EAST 125 STREET</u>	<u>S6, S7</u>	<u>1749</u>	<u>49</u>	<u>81.2</u>	<u>35, 40 ONF</u>
<u>21</u>	<u>71 EAST 124 STREET</u>	<u>S6 & MN</u>	<u>1749</u>	<u>31</u>	<u>83.1</u>	<u>35</u>
	<u>1800 PARK AVENUE</u>	<u>S7 & MN</u>	<u>1749</u>	<u>33</u>	<u>84.8</u>	<u>35</u>
	<u>1804 PARK AVENUE</u>	<u>S7 & MN</u>	<u>1749</u>	<u>35</u>	<u>84.8</u>	<u>35</u>
	<u>1808 PARK AVENUE</u>	<u>S7 & MN</u>	<u>1749</u>	<u>40</u>	<u>84.8</u>	<u>35</u>
	<u>66 EAST 125 STREET</u>	<u>S7 & MN</u>	<u>1749</u>	<u>43</u>	<u>84.8</u>	<u>35</u>
	<u>55 EAST 124 STREET</u>	<u>S6 & MN</u>	<u>1749</u>	<u>24</u>	<u>83.1</u>	<u>35</u>
	<u>127 EAST 125 STREET</u>	<u>S5, S9</u>	<u>1774</u>	<u>17</u>	<u>79.6</u>	<u>35, 40 OSF</u>
<u>22</u>	<u>132 EAST 126 STREET</u>	<u>S5, S9</u>	<u>1774</u>	<u>56</u>	<u>79.6</u>	<u>35, 40 OSF</u>
<u>23</u>	<u>1815 PARK AVENUE</u>	<u>S5 & MN</u>	<u>1773</u>	<u>69</u>	<u>84.2</u>	<u>40</u>
	<u>1811 PARK AVENUE</u>	<u>S5, S6 & MN</u>	<u>1773</u>	<u>72</u>	<u>84.2</u>	<u>35, 40 ONF</u>
	<u>1807 PARK AVENUE</u>	<u>S5, S6 & MN</u>	<u>1773</u>	<u>4</u>	<u>84.2</u>	<u>35, 40 ONF</u>
	<u>1801 PARK AVENUE</u>	<u>S5, S6 & MN</u>	<u>1773</u>	<u>1</u>	<u>84.2</u>	<u>35, 40 ONF</u>
	<u>1801 PARK AVENUE</u>	<u>S5, S6 & MN</u>	<u>1773</u>	<u>1</u>	<u>84.2</u>	<u>35, 40 ONF</u>
	<u>110 EAST 125 STREET</u>	<u>S5 & MN</u>	<u>1773</u>	<u>67</u>	<u>83.1</u>	<u>35, 40 ONF</u>

<u>24</u>	<u>212 EAST 125 STREET</u>	<u>S1, S3</u>	<u>1789</u>	<u>45</u>	<u>82.1</u>	<u>35, 40 ONF</u>
	<u>214 EAST 125 STREET</u>	<u>S1, S3</u>	<u>1789</u>	<u>43</u>	<u>82.1</u>	<u>35, 40 ONF</u>
	<u>218 EAST 125 STREET</u>	<u>S1, S3</u>	<u>1789</u>	<u>42</u>	<u>82.1</u>	<u>35, 40 ONF</u>
	<u>215 EAST 124 STREET</u>	<u>S1, S3</u>	<u>1789</u>	<u>9</u>	<u>82.1</u>	<u>35, 40 ONF</u>
<u>25</u>	<u>246 EAST 125 STREET</u>	<u>S1, S3</u>	<u>1789</u>	<u>30</u>	<u>82.1</u>	<u>40</u>
<u>26*</u>	<u>233 EAST 124 STREET</u>	<u>S1, S2</u>	<u>1789</u>	<u>16</u>	<u>78.7</u>	<u>34</u>
	<u>237 EAST 124 STREET</u>	<u>S1, S2</u>	<u>1789</u>	<u>18</u>	<u>78.7</u>	<u>34</u>
	<u>241 EAST 124 STREET</u>	<u>S1, S2</u>	<u>1789</u>	<u>19</u>	<u>78.7</u>	<u>34</u>
	<u>243 EAST 124 STREET</u>	<u>S1, S2</u>	<u>1789</u>	<u>20</u>	<u>78.7</u>	<u>34</u>
	<u>245 EAST 124 STREET</u>	<u>S1, S2</u>	<u>1789</u>	<u>21</u>	<u>78.7</u>	<u>34</u>
	<u>247 EAST 124 STREET</u>	<u>S1, S2</u>	<u>1789</u>	<u>121</u>	<u>78.7</u>	<u>34</u>
	<u>2423 2 AVENUE</u>	<u>S1, S2</u>	<u>1789</u>	<u>25</u>	<u>78.7</u>	<u>34</u>
	<u>2421 2 AVENUE</u>	<u>S1, S2</u>	<u>1789</u>	<u>24</u>	<u>78.7</u>	<u>34</u>
	<u>2419 2 AVENUE</u>	<u>S1, S2</u>	<u>1789</u>	<u>23</u>	<u>78.7</u>	<u>34</u>
	<u>2417 2 AVENUE</u>	<u>S1, S2</u>	<u>1789</u>	<u>22</u>	<u>78.7</u>	<u>34</u>

¹ The representative monitoring sites are shown next to the address

² With respect to the "Sensitive Receptor Assessment", the worse case L₁₀ noise level for the Metro north noise measurement program (86.0 dBA) was propagated outward based on the relationship between noise dissipation of a line source and distance. Affected sites included sites, 19, 21, 23, 42 and 43. For these sites, the impact of the propagated Metro North noise levels were included in the final maximum build noise level results.

³ ONF – On North Façade of the development block, OSF – On South Façade of the development block, OSE – On East Façade of the development site, MN – Metro North Train

* Projected Development Site 26 is partially comprised of City-owned property under the jurisdiction of the Department of Housing Preservation and Development (HPD). As discussed in Chapter 1, "Project Description," the Department of City Planning (DCP), as lead agency, is conducting a coordinated review with HPD. With respect to required attenuation, when conducting its own reviews, HPD typically rounds up to the nearest decibel (Table 3R-4 in the CEQR Technical Manual suggests that attenuation levels be determined by conservatively rounding up to the nearest 5 decibels). In order to maintain a maximum interior(closed-window) noise environment of 45 dB(A) on Projected Development Site 26, the (E) designation would require the attenuation levels shown above.

Table 3.18-7, Required Attenuation Values for Potential Developmental Sites^{1, 2, 3, 4}

<u>Dev. Site Number</u>	<u>Address</u>		<u>Block Number</u>	<u>Lot(s) Number</u>	<u>Build Max L10 (dBA)</u>	<u>Attenuation Required</u>
<u>27</u>	<u>568 WEST 125 STREET</u>	<u>S15</u>	<u>1980</u>	<u>75</u>	<u>75.7</u>	<u>30</u>
<u>28</u>	<u>151-153 MORNINGSIDE AVE</u>	<u>S14</u>	<u>1952</u>	<u>61</u>	<u>72.1</u>	<u>30</u>
<u>29</u>	<u>381 WEST 125 STREET</u>	<u>S10, S14</u>	<u>1952</u>	<u>101</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>379 WEST 125 STREET</u>	<u>S10, S14</u>	<u>1952</u>	<u>2</u>	<u>81.5</u>	<u>30, 40 OSF</u>
<u>30</u>	<u>361 WEST 125 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>9</u>	<u>81.5</u>	<u>30, 40 OSF</u>
<u>31</u>	<u>313 WEST 125 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>23</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>311 WEST 126 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>41</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>309 WEST 125 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>25</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>307 WEST 125 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>27</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>305 WEST 125 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>28</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>308 WEST 126 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>38</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>306 WEST 126 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>138</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>304 WEST 126 STREET</u>	<u>S10, S13</u>	<u>1952</u>	<u>37</u>	<u>81.5</u>	<u>30, 40 OSF</u>
	<u>32</u>	<u>2342 FRED DOUGLASS BLVD</u>	<u>S13</u>	<u>1931</u>	<u>61</u>	<u>69.6</u>
<u>260 WEST 126 STREET</u>		<u>S13</u>	<u>1931</u>	<u>56</u>	<u>69.6</u>	<u>30</u>
<u>2340 FRED DOUGLASS BLVD</u>		<u>S13</u>	<u>1931</u>	<u>63</u>	<u>69.6</u>	<u>30</u>
<u>2338 FRED DOUGLASS BLVD</u>		<u>S13</u>	<u>1931</u>	<u>64</u>	<u>69.6</u>	<u>30</u>
<u>33</u>	<u>2330 FRED DOUGLASS BLVD</u>	<u>S10, S13</u>	<u>1931</u>	<u>1</u>	<u>81.5</u>	<u>30, 40 OSF</u>
<u>34</u>	<u>2310 FRED DOUGLASS BLVD</u>	<u>S10, S14</u>	<u>1930</u>	<u>1</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>2310 FRED DOUGLASS BLVD</u>	<u>S10, S14</u>	<u>1930</u>	<u>1</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>35</u>	<u>268 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>59</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>264 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>57</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>264 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1930</u>	<u>57</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>36</u>	<u>112 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>40</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>114 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>41</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>116 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>42</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>117 WEST 124 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>24</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>119 WEST 124 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>25</u>	<u>81.5</u>	<u>30, 40 ONF</u>
	<u>283 WEST 125 STREET</u>	<u>S10, S12</u>	<u>1909</u>	<u>140</u>	<u>81.5</u>	<u>30, 40 ONF</u>
<u>37</u>	<u>300 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1723</u>	<u>1</u>	<u>81.5</u>	<u>35, 40 OSF</u>
	<u>308 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1723</u>	<u>4</u>	<u>81.5</u>	<u>35, 40 OSF</u>
<u>38</u>	<u>2022 5 AVENUE</u>	<u>S9, S10</u>	<u>1723</u>	<u>33</u>	<u>81.5</u>	<u>35, 40 OSF</u>

	<u>2032 5 AVENUE</u>	<u>S9, S10</u>	<u>1723</u>	<u>37</u>	<u>81.5</u>	<u>35, 40 OSF</u>
<u>39</u>	<u>290 LENOX AVENUE</u>	<u>S9, S10</u>	<u>1722</u>	<u>69</u>	<u>81.5</u>	<u>35, 40 ONF</u>
<u>40</u>	<u>52 WEST 125 STREET</u>	<u>S7</u>	<u>1722</u>	<u>57</u>	<u>81.2</u>	<u>40</u>
	<u>50 WEST 125 STREET</u>	<u>S7</u>	<u>1722</u>	<u>156</u>	<u>81.2</u>	<u>40</u>
	<u>48 WEST 125 STREET</u>	<u>S7</u>	<u>1722</u>	<u>56</u>	<u>81.2</u>	<u>40</u>
	<u>46 WEST 125 STREET</u>	<u>S7</u>	<u>1722</u>	<u>155</u>	<u>81.2</u>	<u>40</u>
	<u>44 WEST 125 STREET</u>	<u>S7</u>	<u>1722</u>	<u>55</u>	<u>81.2</u>	<u>40</u>
	<u>32 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>51</u>	<u>81.1</u>	<u>35, 40 ONF</u>
<u>41</u>	<u>32 WEST 125 STREET</u>	<u>S6, S7</u>	<u>1722</u>	<u>51</u>	<u>81.1</u>	<u>35, 40 ONF</u>
<u>42</u>	<u>102 EAST 126 STREET</u>	<u>S9 & MN</u>	<u>1774</u>	<u>68</u>	<u>82.8</u>	<u>35, 40 OEF</u>
<u>43</u>	<u>108 EAST 126 STREET</u>	<u>S4, S5 & MN</u>	<u>1774</u>	<u>65</u>	<u>83.6</u>	<u>30, 40 OSF</u>
	<u>106 EAST 126 STREET</u>	<u>S4, S5 & MN</u>	<u>1774</u>	<u>66</u>	<u>83.6</u>	<u>30, 40 OSF</u>
	<u>104 EAST 126 STREET</u>	<u>S4, S5 & MN</u>	<u>1774</u>	<u>67</u>	<u>83.6</u>	<u>30, 40 OSF</u>
	<u>107 EAST 125 STREET</u>	<u>S4, S5 & MN</u>	<u>1774</u>	<u>5</u>	<u>79.7</u>	<u>30, 40 OSF</u>
	<u>109 EAST 125 STREET</u>	<u>S4, S5 & MN</u>	<u>1774</u>	<u>6</u>	<u>79.7</u>	<u>30, 40 OSF</u>
	<u>111 EAST 125 STREET</u>	<u>S4, S5 & MN</u>	<u>1774</u>	<u>7</u>	<u>79.7</u>	<u>30, 40 OSF</u>
	<u>113 EAST 125 STREET</u>	<u>S4, S5 & MN</u>	<u>1774</u>	<u>8</u>	<u>79.7</u>	<u>30, 40 OSF</u>
<u>44</u>	<u>150-170 EAST 126 STREET</u>	<u>S4</u>	<u>1774</u>	<u>48</u>	<u>74.9</u>	<u>30</u>
<u>45</u>	<u>2306 3 AVENUE</u>	<u>S3, S9</u>	<u>1774</u>	<u>33</u>	<u>81.9</u>	<u>30, 35 OSF</u>
<u>46</u>	<u>122 EAST 125 STREET</u>	<u>S5</u>	<u>1773</u>	<u>61</u>	<u>79.6</u>	<u>40</u>
	<u>128 EAST 125 STREET</u>	<u>S5</u>	<u>1773</u>	<u>58</u>	<u>79.6</u>	<u>40</u>
<u>47</u>	<u>129 EAST 124 STREET</u>	<u>S6</u>	<u>1773</u>	<u>15</u>	<u>75.6</u>	<u>35</u>
	<u>2050 LEXINGTON AVENUE</u>	<u>S6</u>	<u>1773</u>	<u>17</u>	<u>75.6</u>	<u>35</u>
	<u>2054 LEXINGTON AVENUE</u>	<u>S6</u>	<u>1773</u>	<u>18</u>	<u>75.6</u>	<u>35</u>
<u>48</u>	<u>149 EAST 124 STREET</u>	<u>S3, S6</u>	<u>1773</u>	<u>20</u>	<u>82.1</u>	<u>35, 40 ONF</u>
<u>49</u>	<u>228 EAST 125 STREET</u>	<u>S3</u>	<u>1789</u>	<u>36</u>	<u>82.1</u>	<u>40</u>
	<u>230 EAST 125 STREET</u>	<u>S3</u>	<u>1789</u>	<u>35</u>	<u>82.1</u>	<u>40</u>
	<u>232 EAST 125 STREET</u>	<u>S3</u>	<u>1789</u>	<u>34</u>	<u>82.1</u>	<u>40</u>

¹ The representative monitoring sites are shown next to the address

² With respect to the "Sensitive Receptor Assessment", the worse case L₁₀ noise level for the Metro north noise measurement program (86.0 dBA) was propagated outward based on the relationship between noise dissipation of a line source and distance. Affected sites included sites, 19, 21, 23, 42 and 43. For these sites, the impact of the propagated Metro north noise levels were included in the final maximum build noise level results.

³ ONF – On North Façade of the development block, OSF – On South Façade of the development block, OSE – On East Façade of the development site, MN – Metro North Train

⁴ Site 41 has been removed as a potential site, due to a new proposal since the DEIS for the village Academies School (see Chapter 3.1).

The following sites require 40 dBA of noise attenuation in order to avoid the potential for significant adverse impacts related to noise. The proposed action includes (E) designations on the following properties:

<u>PROJECTED DEVELOPMENT SITES</u>		
<u>Development Site</u>	<u>Block</u>	<u>Lot(s)</u>
<u>19</u>	<u>1750</u>	<u>34, 40</u>
<u>25</u>	<u>1789</u>	<u>30</u>
<u>POTENTIAL DEVELOPMENT SITES</u>		
<u>40</u>	<u>1722</u>	<u>55, 56, 57, 155, 156</u>
<u>46</u>	<u>1773</u>	<u>61, 58</u>
<u>49</u>	<u>1789</u>	<u>34, 35, 36</u>

The text of the (E) designation for noise for the above properties is as follows:

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 40 dBA window/wall attenuation on all façades in order to maintain an interior noise level of 45 dBA. To achieve 40 dBA of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially design windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

The following sites require 35 dBA of noise attenuation in order to avoid the potential for significant adverse impacts related to noise. The proposed action includes (E) designations on the following properties:

<u>PROJECTED DEVELOPMENT SITES</u>		
<u>Development Site</u>	<u>Block</u>	<u>Lot(s)</u>
<u>1</u>	<u>1952</u>	<u>19, 21, 22</u>
<u>4</u>	<u>1951</u>	<u>51</u>
<u>10</u>	<u>1910</u>	<u>1, 7501</u>
<u>21</u>	<u>1749</u>	<u>24, 31, 33, 35, 40, 43</u>

<u>POTENTIAL DEVELOPMENT SITES</u>		
<u>47</u>	<u>1773</u>	<u>15, 17, 18</u>

The text of the (E) designation for noise for the above properties is as follows:

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 35 dB(A) window/wall attenuation in all façades in order to maintain an interior noise level of 45 dB(A). In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning or air conditioning sleeves containing air conditioners or HUD-approved fans.

The following sites require 34 dBA of noise attenuation on specific façades in order to avoid the potential for significant adverse impacts related to noise. The proposed action includes (E) designations on the following properties:

<u>Projected Development Site</u>	<u>Block</u>	<u>Lot(s)</u>
<u>26</u>	<u>1789</u>	<u>16, 18, 19, 20, 21, 22, 23, 24, 25, 121</u>

The text of the (E) designation for noise for the above properties is as follows:

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 34 dB(A) window/wall attenuation in all façades in order to maintain an interior noise level of 45 dB(A). In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning or air conditioning sleeves containing air conditioners or HUD-approved fans.

The following sites require 30 dBA of noise attenuation in order to avoid the potential for significant adverse impacts related to noise. The proposed action includes (E) designations on the following properties:

<u>POTENTIAL DEVELOPMENT SITES</u>		
<u>Development Site</u>	<u>Block</u>	<u>Lot(s)</u>
<u>22</u>	<u>1774</u>	<u>17, 56</u>
<u>28</u>	<u>1952</u>	<u>61</u>
<u>27</u>	<u>1980</u>	<u>75</u>
<u>32</u>	<u>1931</u>	<u>56, 61, 63, 64</u>
<u>44</u>	<u>1774</u>	<u>48</u>

The text of the (E) designation for noise for the above properties is as follows:

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 30 dB(A) window/wall attenuation in all façades in order to maintain an interior noise level of 45 dB(A). In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning or air conditioning sleeves containing air conditioners or HUD-approved fans.

The following sites require combination of 30 dBA and 35 dBA of noise attenuation on specific façades in order to avoid the potential for significant adverse impacts related to noise. The proposed action includes (E) designations on the following properties:

<u>POTENTIAL DEVELOPMENT SITES</u>		
<u>45</u>	<u>1774</u>	<u>33</u>

The text of the (E) designation for noise for the above properties is as follows:

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 30 dBA and 35 dBA window/wall attenuation on some façades in order to maintain an interior noise level of 45 dBA. To achieve 35 dBA of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially design windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

The following sites require a combination of 30 dBA and 40 dBA of noise attenuation on specific façades in order to avoid the potential for significant adverse impacts related to noise. The proposed action includes (E) designations on the following properties:

<u>PROJECTED DEVELOPMENT SITES</u>		
<u>Development Site</u>	<u>Block</u>	<u>Lot(s)</u>
<u>2</u>	<u>1952</u>	<u>29</u>
<u>3</u>	<u>1951</u>	<u>7</u>
<u>5</u>	<u>1951</u>	<u>43</u>
<u>6</u>	<u>1931</u>	<u>27</u>
<u>7</u>	<u>1930</u>	<u>55</u>
<u>8</u>	<u>1930</u>	<u>49, 50, 51, 53</u>
<u>9</u>	<u>1930</u>	<u>37, 40, 41</u>
<u>11</u>	<u>1909</u>	<u>59, 63</u>
<u>12</u>	<u>1909</u>	<u>44, 46</u>
<u>14</u>	<u>1723</u>	<u>17, 21, 22, 53</u> <u>122</u>
<u>15</u>	<u>1723</u>	<u>31, 45, 144</u>
<u>POTENTIAL DEVELOPMENT SITES</u>		
<u>29</u>	<u>1952</u>	<u>2, 101</u>
<u>30</u>	<u>1952</u>	<u>9</u>
<u>31</u>	<u>1952</u>	<u>23, 25, 27, 28,</u> <u>37, 38, 41, 138</u>
<u>33</u>	<u>1931</u>	<u>1</u>
<u>34</u>	<u>1930</u>	<u>1</u>
<u>35</u>	<u>1930</u>	<u>57, 59</u>
<u>36</u>	<u>1909</u>	<u>24, 25, 40, 41,</u> <u>42, 140</u>
<u>43</u>	<u>1774</u>	<u>68, 65, 66, 67,</u> <u>5, 6, 7, 8</u>

The text of the (E) designation for noise for the above properties is as follows:

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 30 dBA and 40 dBA window/wall attenuation on some façades in order to maintain an interior noise level of 45 dBA. To achieve 40 dBA of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially design windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window

condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.”

The following sites require combination of 35 dBA and 40 dBA of noise attenuation on specific façades in order to avoid the potential for significant adverse impacts related to noise. The proposed action includes (E) designations on the following properties:

<u>PROJECTED DEVELOPMENT SITES</u>		
<u>Development Site</u>	<u>Block</u>	<u>Lot(s)</u>
<u>13</u>	<u>1909</u>	<u>26, 27, 28, 29, 30, 31, 32, 38, 39, 129, 33</u>
<u>16</u>	<u>1722</u>	<u>63, 65, 66, 67, 68, 168</u>
<u>17</u>	<u>1722</u>	<u>58, 59, 60, 61, 62</u>
<u>18</u>	<u>1750</u>	<u>28, 29, 30, 44</u>
<u>20</u>	<u>1749</u>	<u>48, 49</u>
<u>23</u>	<u>1773</u>	<u>1, 69, 72, 4, 67</u>
<u>22</u>	<u>1774</u>	<u>17, 56</u>
<u>24</u>	<u>1789</u>	<u>9, 42, 43, 45</u>
<u>POTENTIAL DEVELOPMENT SITES</u>		
<u>37</u>	<u>1723</u>	<u>1, 4</u>
<u>38</u>	<u>1723</u>	<u>33, 37</u>
<u>39</u>	<u>1722</u>	<u>69</u>
<u>41**</u>	<u>1722</u>	<u>51</u>
<u>42</u>	<u>1774</u>	<u>68</u>
<u>48</u>	<u>1773</u>	<u>20</u>

**Site 41 has been removed as a potential development site, due to a new proposal since the DEIS for the Village Academies School (see Chapter 3.1, “Land Use, Zoning, and Public Policy”).

The text of the (E) designation for noise for the above properties is as follows:

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 35 dBA and 40 dBA window/wall attenuation on some façades in order to maintain an interior noise level of 45 dBA. To achieve 40 dBA of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially design windows (i.e., windows with small sizes, windows with air gaps, windows with thicker

glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

With the attenuation measures specified above, the proposed rezoning would not result in any significant adverse noise impacts, and would meet CEQR guidelines.

CONCLUSION

The proposed action would not result in significant adverse impacts related to noise. The proposed action would generate new residential, commercial and community facility uses in an area that is already characterized by medium to high density residential and commercial development. As discussed above, as part of the proposed action, (E) designations would be placed on the zoning map for all of the projected and potential development sites to avoid the potential for significant adverse noise impacts. Residential, commercial and community facility development on lots mapped with an (E) designation would be required to provide sufficient noise attenuation to maintain interior noise levels of 45 dBA or lower, and the proposed action would not result in significant adverse noise impacts.

3.18 NOISE

INTRODUCTION

The proposed action would not result in significant adverse impacts related to noise. As described in Chapter 3.1, "Project Description," it would generate new, medium to high density residential and commercial uses in an area historically occupied by similar land uses. As part of the proposed action, (E) designations would be placed on the zoning map for all projected and potential development sites where there is the potential for significant adverse noise impacts. Residential, commercial and community facility development on lots mapped with an (E) designation would be required to provide sufficient noise attenuation to maintain interior noise levels of 45 dBA or lower. The (E) designations on the projected and potential development sites would preclude the potential for the proposed action to result in significant adverse noise impacts.

An analysis was prepared to evaluate the potential effect of the proposed action on noise levels at existing and potential future noise sensitive locations in the surrounding area. Existing noise levels are predominantly the result of vehicular traffic. At some locations, the Metro-North railroad also contributed to noise levels. Future noise sensitive locations include areas that may be redeveloped for residential, commercial and community facility uses.

In order to assess the potential for significant adverse noise impacts, an analysis was conducted that considered changes in noise due to increases in traffic and the introduction of sensitive receptors into an area with existing ambient noise levels classified as "Marginally Unacceptable" and "Clearly Unacceptable," as defined in the *CEQR Technical Manual*. The noise analysis addresses two factors: 1) the change in noise levels from the existing condition in the area as a result of the proposed action; and 2) the location of new sensitive receptors and the degree to which window/wall attenuation would provide acceptable interior noise levels.

No stationary sources of noise were identified within the project corridor. As a result further analysis of stationary source noise was not conducted.

3.18.1 NOISE FUNDAMENTALS

Noise is "unwanted sound" and, by this definition, the perception of noise is a subjective process. Noise in the environment can be characterized by three distinguishing characteristics: loudness, pitch, and time variation.

- The loudness or magnitude of noise is a measure of its intensity, and it is measured in units called decibels (dB). The decibel unit is based on a logarithmic scale, and it compresses a large range of sound pressures into manageable numbers. For example, on the decibel scale, environmental noise ranges from 40 dB from the rustling of leaves to over 80 dB from a truck passage and up to 100 dB at the front rows of a rock concert. The louder the sound, the greater is its decibel value.

FIGURES

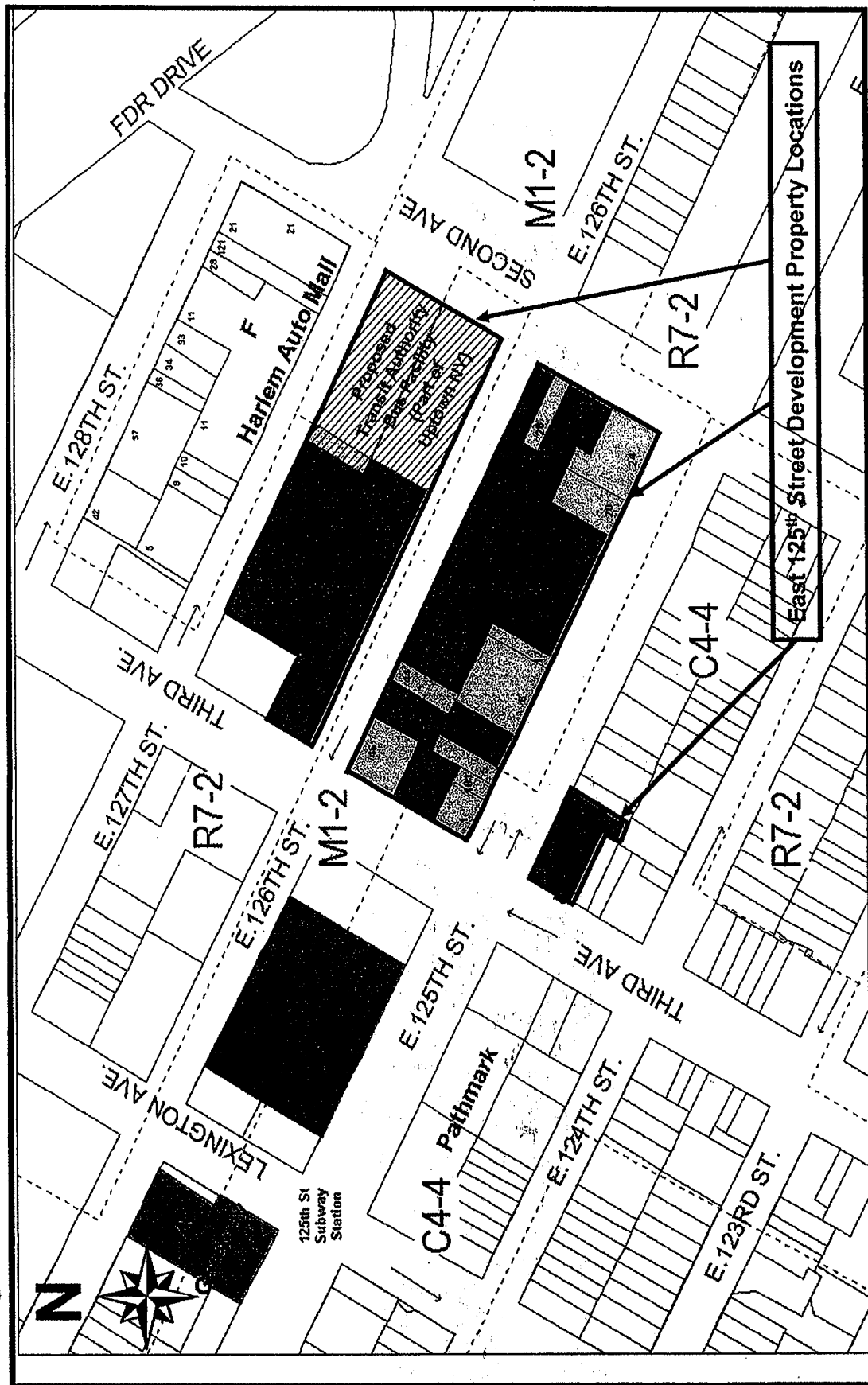


Figure 2
Site Plan
 Phase I Environmental Site Assessment
 East 125th Street Development-Uptown NY
 Manhattan, New York

METCALF & EDDY | AECOM

Source: EDC

**PHASE II ENVIRONMENTAL SITE INVESTIGATION
REPORT
OF
THREE PARCELS
EAST 125TH STREET DEVELOPMENT PROJECT
NEW YORK, NY**

CONSULTANT PROJECT NO.: 4012846-0003

JULY 6, 2007

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EXECUTIVE SUMMARY

The New York City Economic Development Corporation (NYCEDC) requested that STV Incorporated (STV) conduct a Phase II Environmental Site Investigation (ESI) of three parcels identified as Block 1791, Lots 1, 25, and 34 (Parcel A), Block 1790, all lots (Parcel B), and Block 1789, Lot 46 (Parcel C). These parcels are located from just south of East 125th Street to East 127th Street between Second and Third Avenues in East Harlem, New York, New York (hereafter referred to as the "Site"). The Site is approximately 241,000 square feet (6 acres) in area. The Site consists of 15 vacant lots, three lots that are reported as vacant but utilized for parking, and nine mixed use commercial/retail businesses, three of which are located on the ground floor below currently or formerly occupied loft apartments. The mixed used parcels include manufacturing, auto body repair, retail petroleum, and surface parking uses. The surrounding area is developed with residential homes, apartment buildings, commercial retail stores, a public library, and a bus storage facility. The NYCEDC is considering disposition of the Site for a mixed use development of housing, retail/entertainment space, media/office space, not-for-profit performing /media arts space, hotel and public open space. The proposed action would replace an existing, at-grade bus storage facility with an underground replacement facility for those operations.

The Phase II ESI was completed to assess Recognized Environmental Conditions (RECs) identified during the Phase I Environmental Site Assessment (ESA) which was completed by Metcalf & Eddy, Inc. and dated November 2006. The Phase I ESA identified RECs pertaining to the potential presence of petroleum underground storage tanks identified at the Site through visual observations and historical records, two open NYSDEC spill cases and offsite (adjacent) areas of concern including an adjacent service/gasoline station, several service/gasoline stations hydraulically upgradient and cross gradient to the Site and an adjacent dry cleaning establishment.

Phase II ESI field activities were performed on May 2 through 15, 2007, and included a geophysical survey, advancement of soil borings and collection of soil, sub-surface soil vapor and groundwater samples for laboratory analysis.

Findings from the geophysical survey performed on May 2 through 8, 2007 identified the presence of two (2) anomalies which appeared to be consistent in size to 1,000 gallon underground storage tanks (USTs), located at the northeast corner lot at Third Avenue and 126th Street. Additionally, multiple anomalies were identified through the Site and are likely the result of metal pipes/plates and former concrete/brick foundation walls.

Soil sample analytical results indicated concentrations of semi-volatile organic compounds (SVOCs) and metals in exceedance of both the New York State Department of Environmental Conservation (NYSDEC) Recommended Soil Cleanup Objectives (RSCOs) and NYSDEC Brownfields Cleanup Program (BCP) Track 1 Soil Cleanup Objectives (SCOs) and/or NYSDEC eastern background concentrations (metals only). SVOCs exceeding NYSDEC RSCOs and NYSDEC BCP Track 1 SCOs consisted of the following compounds: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene. Metals exceeding NYSDEC RSCOs, NYSDEC BCP Track 1 SCOs and eastern background levels consisted of the following compounds: barium, calcium, chromium, copper, lead, magnesium, mercury, nickel and zinc. The elevated concentrations of these compounds are attributed to the historic fill material present. Although one volatile organic compound (VOC), acetone, was detected in exceedance of the RSCO and BCP Track 1 values, this is attributed as a common laboratory contaminant.

Groundwater sample analytical results indicated concentrations of several VOCs, SVOCS and metals in exceedance of NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Class GA Standards or Guidance Values. The following compounds were in exceedance of

TOGS: cis-1,2-dichloroethene, tetrachloroethene, benzene, ethylbenzene, m/p-xylenes, isopropylbenzene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, aluminum (total), antimony (total), iron (total), lead (total) magnesium (total), manganese (total), mercury (total) and sodium (total), aluminum (dissolved), antimony (dissolved), iron (dissolved), lead (dissolved), magnesium (dissolved), manganese (dissolved), selenium (dissolved) and sodium (dissolved). No detectable concentrations of PCBs or pesticides were identified in the groundwater samples.

Sub-surface soil vapor sample analytical results indicated elevated concentrations of several VOCs including: tetrachloroethene (PCE) and trichloroethene (TCE) above the New York State Department of Health (NYSDOH) Air Guidance Values (AGVs) in sub-surface soil vapor. The source of these chlorinated VOCs is likely attributed to dry cleaner operations. In addition, petroleum related compounds including benzene, ethylbenzene, toluene, and xylene were detected at concentrations above expected background values published by NYSDOH. The source of these petroleum-related VOCs is likely attributed to nearby gasoline stations.

Three general areas of environmental concern have been identified as a result of this Phase II ESI as follows:

- Environmental impacts to the Site due to the known petroleum spill associated with an active gasoline station at 255 East 125th Street (Block 1790, Lot 24);
- Presence of two former gasoline USTs at the northeast corner lot of Third Avenue and 126th Street (southwest corner of Block 1791); and
- Presence of soil vapor attributed in part to the dry cleaners at 2315 Third Avenue (Block 1790, Lot 46), the gasoline station at 255 East 125th Street and any other similar off-site nearby potential sources.

For future Site development, the following actions are recommended:

- Additional soil and groundwater investigations, followed by remediation of the gasoline station property area located at 255 East 125th Street (Block 1790, Lot 24);
- Removal of the former gasoline USTs at the northeast corner lot of Third Avenue and 126th Street (southwest corner of Block 1791) in accordance with NYSDEC tank closure regulations; and
- New buildings constructed in the area should consider incorporating soil vapor barriers or other vapor mitigation procedures in accordance with the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

Additionally, in accordance with industry practice, the following is recommended:

- If shallow soils at the site are excavated during renovations or construction activities, it is recommended that the soils be characterized to identify material handling requirements and for material reuse, handling and/or waste disposal requirements and be managed in accordance with federal, state and local regulations.
- If landscaped areas are incorporated into the development of the Site, then at least two foot thick certified clean fill cap should be placed over on-site soils in these areas.

- If dewatering is required for construction activities, then groundwater at the locations of dewatering should be sampled and the need for pretreatment assessed prior to discharge to the NYC sewer.

The total cost of environmental remediation at the Site is difficult to assess given the large area covered by the Site, limits of environmental investigation activities, and lack of detailed development plans for the Site at this time. However, for planning purposes, order-of-magnitude estimates of environmental remediation costs are provided herein ranging from approximately \$2 to \$4 million. This estimate is based on assumptions that there are two significant source areas of petroleum contamination (the active gasoline station at 255 East 125th Street and the northeast corner lot at Third Avenue and 126th Street) that may cost approximately \$1 to 2 million to remediate, assuming that on-site soil is contaminated to a depth of 10 to 20 feet and that groundwater is also contaminated. This estimate also assumes that there is a source area of chlorinated VOCs at the dry cleaners at 2315 Third Avenue that may cost approximately \$0.5 million to remediate; and that mitigation measures for soil vapor intrusion, consisting of passive vapor barriers for new buildings, are implemented across approximately half the Site at a cost of approximately \$0.5 to \$1 million. The cost of handling and disposal of fill material from the Site is not included in these costs. The actual cost will vary based upon final design, market conditions at the time the work is performed and the competitive bidding process used.

1.0 INTRODUCTION

1.1 Purpose

The New York City Economic Development Corporation (NYCEDC) requested that STV Incorporated (STV) conduct a Phase II Environmental Site Investigation (ESI) associated with the three parcels identified as Block 1791, Lots 1, 25, and 34 (Parcel A), Block 1790, all lots (Parcel B), and Block 1789, Lot 46 (Parcel C). These parcels are located from just south of East 125th Street to East 127th Street between Second and Third Avenues in East Harlem, New York, New York (hereafter referred to as the "Site"). The Site is approximately 241,000 square feet (6 acres) in area. The Site consists of 15 vacant lots, three lots that are reported as vacant but utilized for parking, and nine mixed use commercial/retail businesses, three of which are located on the ground floor below currently or formerly occupied loft apartments. The mixed used parcels include manufacturing, auto body repair, retail petroleum, and surface parking uses. The surrounding area is developed with residential homes, apartment buildings, commercial retail stores, public library, and a bus storage facility.

Figure 1 presents a Site Location Map and Figure 2 presents a Soil, Groundwater, Soil Vapor and Ambient Air Sampling Location Plan.

The Phase II ESI was completed to assess Recognized Environmental Conditions (RECs) identified during the Phase I ESA, completed by Metcalf & Eddy, Inc. and dated November 2006.

1.2 Recognized Environmental Conditions

The Phase I ESA Report identified two on-site and three off-site RECs and provided recommendations for further environmental site assessment to better define areas of potential environmental liability associated with the Site. Based on the results of the Phase I ESA, the following RECs were identified:

- Two open NYSDEC spill cases: 1) On-Site NYSDEC Spill Case No. 9711337 for Block 1790, Lot 25 (reported 1/9/98) and 2) NYSDEC Spill Case No. 0306147 for Block 1791, Lot 25 (reported 9/10/03) which is adjacent to the NYC Transit lot;
- Service/gasoline station at 255 East 125th St. (Block 1790, Lot 24);
- Several off-Site service/gasoline stations hydraulically upgradient and cross gradient to the Site;
- Dry cleaning establishment at 2315 Third Ave, (Block 1790, Lot 46);
- Demolition of structures may have left in-place petroleum underground storage tanks (USTs); and
- On-Site potential presence of petroleum underground storage tanks identified at the Site through visual observations and historical records.

2.0 SITE SETTING

2.1 Current Facility Description

The Site is approximately 241,000 square feet (6 acres) in area. The Site consists of three parcels identified as Block 1791, Lots 1, 25, and 34 (Parcel A), Block 1790, all lots (Parcel B), and Block 1789, Lot 46 (Parcel C) which are located from East 127th Street to just south of East 125th Street between Second and Third Avenues in East Harlem, New York, New York (hereafter referred to as the "Site"). The Site consists of 15 vacant lots, three lots that are reported as vacant but utilized for parking, and nine mixed use commercial/retail businesses, three of which are located on the ground floor below currently or formerly occupied loft apartments. The mixed used parcels include manufacturing, auto body repair, retail petroleum, parking areas and the currently or formerly occupied residential uses.

2.2 Site Physical Characteristics

2.2.1 Topography

According to a review of the United States Geological Survey (USGS) 7.5-Minute Quadrangle Map, Central Park, NY, dated 1966, the elevation of the Site area is approximately 15 feet above mean sea level. The topography within the immediate area is relatively flat with a slight slope to the east. A copy of the topographic map is presented as Figure 1.

2.2.2 Geology

Manhattan is underlain by high-grade metamorphic bedrock consisting of a sequence of Cambrian and Ordovician age gneiss, schistose-gneiss, and marble. The bedrock is characterized by numerous faults and fractures, many of which are transmissive and contain groundwater. Unconsolidated sediments overlie the bedrock and consist of Pleistocene aged sand, gravel and silty clays, deposited by glacial-fluvial activity.

2.2.3 Soils

The soils beneath the Site are classified as Urban Land Complex. Urban Land refers to soils that have been altered by human activities thus making them unidentifiable. Typically, these soils have been mixed with other materials, such as brick and concrete, and characteristics can only be determined by on-site investigation.

2.2.4 Hydrology

Groundwater generally occurs within the unconsolidated sediments at average depths of 10 to 20 feet below ground surface. Groundwater also occurs in bedrock within secondary permeability zones such as fractures, faults and foliation planes. Regional groundwater flow direction is generally controlled by regional topography with groundwater flow from higher to lower elevations. According to the USGS 7.5-minute Quadrangle map, Central Park, NY, dated 1966, groundwater is inferred to flow in an easterly direction towards the East River, which is located approximately ¼ of a mile to the east of the Site.

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Groundwater in the vicinity of the Site is not known to be used for human consumption, as most potable water in the area is derived from upstate reservoirs. Estimated groundwater levels and/or flow direction(s) may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations.

3.0 DESCRIPTION OF PHASE II FIELD ACTIVITIES

To address the recognized environmental conditions (RECs) identified during the Phase I Environmental Site Assessment, STV completed a focused subsurface investigation on May 2, 3, 4, 7, 8, 9, 10, 11, 14 and 15, 2007, which included the following efforts:

- Geophysical survey to clear locations of proposed boring from buried utilities and to determine if USTs were located throughout the Site.
- Advancement of fourteen soil borings to approximately 15 ft-bgs or depth of refusal.
- Collection of soil samples from each boring for laboratory analyses.
- Installation of six (6) temporary well points (TWPs).
- Collection of groundwater samples from each TWP for laboratory analyses.
- Collection of six (6) sub-surface vapor samples for laboratory analysis.
- Collection of one (1) ambient air sample for laboratory analysis.

The scope and methods used for the various field activities are documented below.

3.1 Geophysical Survey

A geophysical survey was performed between May 2 and 8, 2007 by NOVA Geophysical Services (NOVA), of Forest Hills, New York. The survey was done to determine if USTs were located at the Site and the proposed soil boring locations conflicted with subsurface structures or utilities. The geophysical survey consisted of ground penetrating radar (GPR) and precision utility location (PUL) methods. The surveyed areas included accessible areas within the Site. Boring locations were established in areas that did not conflict with subsurface structures or utilities which were identified and marked out. NOVA's geophysical survey report is provided in Appendix A.

3.2 Subsurface Soils Investigation

A soil sampling program was conducted as part of this Phase II ESI. Soil samples were collected to assess the RECs identified during the Phase I ESA and to determine the nature of soils to be encountered during Site demolition and construction activities. Figure 2 depicts the soil boring locations.

As part of this Phase II ESI, a subsurface soil sampling program was completed between May 9 and 15, 2007 utilizing Aquifer Drilling and Testing, Inc. (ADT), of New Hyde Park, New York. Direct push drilling methods utilizing a Geoprobe rig were used to retrieve soil samples from fourteen borings using 5-foot long, 2-inch diameter Macro Cores® lined with acetate sleeves that were advanced continuously from grade to the depth of the last required soil sample, refusal and/or the soil groundwater interface. Upon completion of soil sampling, direct push drilling methods continued to a depth of approximately 15-

20 feet below grade surface (ft bgs) for installation of temporary well points (TWPs) at boring locations B1, B4, B8, B9, B13 and B16.

A total of fourteen (14) borings (B1, and B4 through B16), were advanced at strategic locations throughout the Site which would be representative of sub-surface Site soils. Borings B2 and B3 were omitted from the sampling analysis plan due to site access restrictions.

Soil samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), PCBs, pesticides and list of target analyte list (TAL) metals.

A description of the soils retained in each Geoprobe sampler was logged by a qualified scientist, and the soils were monitored in the field for the presence of VOCs with a photoionization detector (PID). PID headspace readings from eleven of the fourteen boring locations indicated no presence of volatiles, with readings of 0.0 or non-detect (ND). Three of the fourteen boring locations (B6, B13 and B15) had elevated PID headspace readings as follows: B6, located in the MTA Third Avenue parking lot facing East 126th Street, at 30 parts per million (ppm) (PID units); B13, located adjacent to the Dunkin' Donuts and BP Gas Station at the corner of 2nd Avenue and East 125th Street, at 591 ppm and B15, located next to the Lee Myles/Midas Muffler building facing East 125th Street, at 350 ppm. It was determined during the field activities that the Site is underlain by urban fill consisting of fine silts and medium sands, concrete and brick from an interval of 0 to approximately 10 feet below grade and overlying native materials consisting of fine to coarse sands with little or no fines. The soil boring logs are presented in Appendix B.

Upon completion of probing, each boring was backfilled to near grade surface. The borings were patched at the surface with concrete where necessary.

The soil sample analytical plan is presented as Table 1 and provides information on the sample identification, sample depth interval, boring depth, PID levels and the analytical parameters sampled for. An "X" indicates that the sample analysis was performed for that analytical parameter.

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Table 1

Soil Sample Analytical Plan

Sample Identification	Sample Interval Depth (ft bgs)	Boring Depth (ft bgs)	PID Levels (ppm)	TCL VOCs	TCL SVOCs	RCRA Metals	PCBs and Pesticides
B1(1 -3')/ B1(2')	1 – 3	20	0.0	X	X	X	X
B4 (0-2')/ B4 (2')	0 – 2	20	0.0	X	X	X	X
B4 (12-14')/ B4 (13')	12 – 14	20	0.0	X	X	X	X
B5 (1-3')/ B5 (3')	1 – 3	15	0.0	X	X	X	X
B5 (12-14')/ B5 (13')	12 – 14	15	0.0	X	X	X	X
B6 (0-2')/ B6(2')	0 – 2	15	30	X	X	X	X
B6 (12-15')/ B6 (15')	12 – 15	15	0.0	X	X	X	X
B7 (7- 8')/ B7(6')	7 – 8	15	0.0	X	X	X	X
B7 (12-13')/ B7(11')	12 – 13	15	0.0	X	X	X	X
B8 (3-5')/ B8(2')	3 – 5	20	0.0	X	X	X	X
B8 (10-12')/ B8(10')	10 – 12	20	0.0	X	X	X	X
B9 (8-10')/ B9(6')	8 – 10	20	0.0	X	X	X	X
B9 (12-13')/ B9(11')	12 – 13	20	0.0	X	X	X	X
B10 (1-3')/ B10(2')	1 – 3	6	0.0	X	X	X	X
B11 (2-4')/ B11(2')	2 – 4	15	0.0	X	X	X	X
B11 (12-15')/ B11(14')	12 – 15	15	0.0	X	X	X	X
B12 (0-2')/ B12(1')	0 – 2	15	0.0	X	X	X	X
B12 (12-14')/ B12(14')	12 – 14	15	0.0	X	X	X	X
B13 (0.5-2')/ B13(1')	0.5 – 2	20	0.0	X	X	X	X
B13 (15-16')/ B13(15')	15 – 16	20	591	X	X	X	X
B14 (3-5')/ B14(2')	3 – 5	15	0.0	X	X	X	X
B14 (12-14')/ B14 (13')	12 – 14	15	0.0	X	X	X	X
B15(0.5-2')/ B15(1')	0.5 – 2	15	0.0	X	X	X	X
B15 (9-11')/ B15(10')	9 – 11	15	350	X	X	X	X
B16 (8-10')/ B16(6')	8 - 10	20	0.0	X	X	X	X
B16 (12-13')/ B16(11')	12 – 13	20	0.0	X	X	X	X
DUPLICATE @ B7 (9-10')/ B7(5')	9 - 10	15	0.0	X	X	X	X

The samples were collected, preserved as necessary, properly cooled and packaged to prevent breakage, and forwarded via courier to Chemtech of Mountainside, New Jersey, which is a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory. Standard chain-of-custody procedures were followed. Laboratory reports for soil analysis are provided in Appendix C.

3.3 Groundwater Investigation

A groundwater sampling program was conducted as part of the Phase II ESI. Groundwater samples were collected to assess the RECs identified in the Phase I ESA report and identify the nature of groundwater to be encountered during construction dewatering activities. Figure 2 indicates the location of Geoprobe-TWPs installed to collect groundwater samples from boring locations B1, B4, B8, B9, B13 and B16.

As part of this Phase II ESI, groundwater sampling was completed on May 9, 14 and 15, 2007. ADT provided the installation of TWPs by advancing a Geoprobe and installing PVC pipe with a ½" slotted screen to depth by ADT. The groundwater samples were then collected using a peristaltic pump with dedicated polyethylene tubing. The groundwater investigation included the following:

- Groundwater samples were collected from TWPs at six (6) boring locations (B1, B4, B8, B9, B13 and B16). When groundwater was encountered (approximately 15 ft bgs), borings were advanced an additional 5 feet to install the temporary well points.
- Groundwater samples were analyzed for TCL VOCs, TCL SVOCs, PCBs, Pesticides and TAL Metals (total and dissolved). The groundwater sample from B13 was additionally analyzed for NYCDEP Sewer Discharge Parameters. Trip blanks were analyzed for VOCs only.

The groundwater sampling analytical program is summarized in Table 2. Laboratory analysis was performed in accordance with USEPA Publication SW-848.

Table 2
Groundwater Sampling Analytical Plan

Sample Identification	Depth to GW (ft bgs)	TCL VOCs (ppm)	TCL SVOCs	RCRA Metals	PCBs and Pesticides	NYCDEP Sewer Discharge Parameters
B1	15	X	X	X	X	NA
B4	15	X	X	X	X	NA
B8	12	X	X	X	X	NA
B9	14	X	X	X	X	NA
B13	15	X	X	X	X	X
B16	14	X	X	X	X	NA
Duplicate (B8)	20	X	X	X	X	NA

X - indicates sample analysis performed

NA – Not Analyzed.

The samples were collected, preserved as necessary, properly cooled and packaged, and forwarded via courier to Chemtech of Mountainside, New Jersey, which is a NYSDOH ELAP-certified analytical laboratory. Standard chain-of-custody procedures were followed. Laboratory reports for groundwater analysis are provided in Appendix C.

3.4 Sub-Surface Soil Vapor Survey

A sub-surface soil vapor survey was completed to further assess the potential impact from off-site RECs identified during the Phase I ESA. The investigation was performed in accordance with the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 (NYSDOH Final Guidance). Sub-slab vapor sample locations are shown on Figure 2.

The following suite of 26 volatile organic compounds (VOCs) parameters were selected for reporting from the TO-15 expanded list to evaluate the soil vapor conditions at the Site.

	Compound	Rationale for Including in Parameter Suite
1	Benzene	Petroleum constituent
2	Carbon Tetrachloride	Historically used at dry cleaners
3	Chlorobenzene	Petroleum constituent
4	Chloroethane	Breakdown product of 1,1,1 TCA
5	Chloromethane	Breakdown product of carbon tetrachloride
6	1,2 Dichlorobenzene	Petroleum constituent
7	1,3 Dichlorobenzene	Petroleum constituent
8	1,1-Dichloroethane	Breakdown product of 1,1,1 TCA
9	1,2-Dichloroethane	Breakdown product of PCE and TCE
10	1,1-Dichloroethene	Breakdown product of PCE and TCE
11	<i>Cis</i> -1,2-Dichloroethene	Breakdown product of PCE and TCE
12	<i>trans</i> -1,2-Dichloroethene	Breakdown product of PCE and TCE
13	1,2-Dichloropropane	Unleaded gasoline additive
14	Ethyl Benzene	Petroleum constituent
15	Methyl <i>tert</i> -butyl Ether	Gasoline additive
16	Methylene Chloride	Breakdown product of carbon tetrachloride, paint stripper and cleaning component
17	Naphthalene	Petroleum constituent
18	Tetrachloroethene (PCE)	Dry cleaning solvent
19	Toluene	Petroleum constituent
20	1,1,1 – Trichloroethane	Common degreasing solvent
21	Trichloroethene (TCE)	Dry cleaning solvent
22	1,2,4-Trimethylbenzene	Petroleum constituent
23	1,3,5- Trimethylbenzene	Petroleum constituent
24	Vinyl Chloride	Breakdown product of PCE & TCE, used in PVC
25	m,p-Xylenes	Petroleum constituent
26	o-Xylene	Petroleum constituent

Six sub-surface soil vapor samples at locations B1, B4, B8, B9, B13 and B16 were collected on May 10, 11 and 14, 2007 as part of the sub-surface soil vapor survey. ADT provided drill holes extending approximately 4-5 ft into the subsoil. Sub-surface soil vapor sampling was completed through the advancement of one 3/8" dedicated polyethylene tubing to a depth of approximately 4.5 feet below grade, backfilled and sealed with a bentonite slurry from 3 ft bg to grade. The above-grade end of the polyethylene tubing was connected and sealed to the Summa canister by way of Teflon tape and modeling clay. Three volumes of air were purged from the soil and tubing and PID measurements were taken to confirm free flow of sub-surface soil vapor was taking place. A one hour sampling period was then initiated as recommended by Con-Test Analytical Laboratory (Con-Test) for sufficient volume of air for sample analysis.

The table below presents the PID measurements detected at each bore hole and the locations of the SUMMA Canisters.

Table 3
Sub-Surface Vapor Sampling Summary

Sample Identification	Sample Location	PID Levels (ppm)
B1	South side of E. 127th St. between Manhattan Coach Works (auto repair) and Suzuki.	ND
B4	MTA lease - New Lot	ND
B8	East side of Third Ave next to dry cleaners	ND
B9	South side of East 126th St.; Second lot E/O Third Ave. and next to corner dry cleaners	ND
B13	Second Ave. between E. 125th and 126th; lot is next to the corner gas station and adjacent to a Dunkin' Donuts.	ND
B16	South side of East 125th St.; SE corner lot at Third Ave.	ND

After collection, the SUMMA Canisters were submitted for analysis to Con-Test Analytical Laboratory of East Long Meadow, Massachusetts (ELAP/NELAP # 10899) and analyzed using United States Environmental Protection Agency (USEPA) Method TO-15. Standard chain-of-custody procedures were followed. Laboratory reports for soil vapor analysis are provided in Appendix D.

3.5 Ambient Air Survey

One ambient air sample was collected on May 11, 2007 utilizing a certified clean Summa canister for quality assurance/quality control (QA/QC) purposes. The sample was collected at a height of approximately three (3) feet above grade to simulate breathing zone conditions. The investigation was performed in accordance with the NYSDOH Final Guidance. The ambient air sample location is shown on Figure 2.

The sample was collected for a 4-hour period. The four hour period was selected to overlap with the collection of subsurface soil vapor samples taken on the same day. Table 4, below, denotes the sample location and PID reading.

Table 4
Ambient Air Sampling Summary

Sample Identification	Sample Location	PID Levels (ppm)
Ambient	South side of East 126th St.; 6th lot E/O Third Ave. (NW corner of lot)	ND

After collection, the SUMMA Canister was submitted for analysis to Con-Test Analytical Laboratory of East Long Meadow, Massachusetts (ELAP/NELAP # 10899) a certified laboratory and analyzed using USEPA Method TO-15. Standard chain-of-custody procedures were followed. Laboratory reports for ambient air analysis are provided in Appendix D.

4.0 DISCUSSION OF PHASE II FINDINGS

This section discusses the Phase II analytical data and findings. The complete laboratory analytical data reports are included in Appendices C and D for environmental samples. Tabulated detected compounds in the various environmental media sampled are presented in Appendix E.

4.1 Applicable Regulatory Standards and Guidelines

This subsection discusses the NYSDEC regulatory standards and guidelines used to interpret the soil and groundwater analytical results. New York State has not promulgated soil standards, but soil guidance values have been established under various NYSDEC regulatory programs. The particular standards and guidelines used to evaluate the data are described individually below.

4.1.1 Recommended Soil Cleanup Objectives (RSCOs)

New York State has not promulgated soil standards, but Recommended Soil Cleanup Objectives (RSCOs) have been established under the NYSDEC Technical and Administrative Guidance Memorandum HWR-4046 (TAGM) Determination of Soil Cleanup Objectives and Cleanup Levels,” dated January 1994 and amended on December 20, 2000. Soils analytical results were compared to the TAGM RSCOs. These criteria aided in the assessment of soils that were potentially impacted by former activities at the Site. The results of the metals analysis were also compared to the Eastern USA Background concentrations included in TAGM.

4.1.2 Brownfields Cleanup Program (Subpart 375)

Analytical results for soil samples were also compared to Track 1 of the NYSDEC Brownfields Cleanup Program (BCP) multi-track remedial programs and site use-based soil cleanup objectives (SCOs) as promulgated in the 6 NYCRR § 375 regulations effective December 14, 2006. Soil cleanup objectives are based on protection of public health and protection of ecological resources.

4.1.3 Technical and Operational Guidance Series (TOGS)

Groundwater sample results were compared against the NYSDEC ground water quality standards and guidance values provided in 6 NYCRR § 700 – 705 and described in Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

4.1.4 NYCDEP Sewer Discharge Parameters

Groundwater sample results from boring B13 were compared against New York City Department of Environmental Protection (NYCDEP) Bureau of Wastewater Treatment: Limitations for Effluent to Sanitary or Combined Sewers standards, effective May 1, 2005.

4.1.5 Sub-Surface Soil Vapor Guidelines

Analytical results for sub-surface soil vapor samples were compared to the NYSDOH Air Guideline Values (AGVs) and to three background databases for indoor and outdoor air published in the NYSDOH Final Guidance, Summary of Background Levels (NYSDOH BGL). These include the NYSDOH 2003 Study of VOCs in Air of Fuel Oil Heated Homes, which included indoor and outdoor samples from 104 fuel oil-heated homes in New York State; the USEPA 2001 Building Assessment and Survey Evaluation (BASE) database, which included concentrations of VOCs from 100 randomly selected public and commercial buildings; and, the Health Effects Institute (HEI) Relationship of Indoor, Outdoor, and Personal Air (RIOPA) study, which includes data collected from 100 homes in 3 cities between 1999 and 2001.

4.1.6 Ambient Air Guidelines

Analytical results for ambient air samples were compared to the nearest New York State Department of Environmental Conservation (NYSDEC) Ambient Air Monitoring Station located at Intermediate School (I.S.) 52 in the Bronx, located approximately 2.2 miles northeast of the Site, which is the closest air monitoring station to the Site.

4.2 Geophysical Survey Findings

Findings from the geophysical survey performed between May 2 and 8, 2007 identified the presence of two (2) anomalies which appeared to be consistent in size to 1,000 gallon USTs and are located at the northeast corner lot of Third Avenue and 126th Street. Additionally, multiple anomalies were identified throughout the Site and are likely the result of metal pipes/plates and former concrete/brick foundation walls. The geophysical findings report is provided in Appendix A.

4.3 Sub-Surface Soil Sampling Findings

4.3.1 Volatile Organic Compounds (VOCs) in Soil

Soil sample analytical results identified detectable concentrations of acetone, methylene chloride, 2-butanone, trichlorofluoromethane, benzene, toluene, tetrachloroethene and carbon disulfide. Only one VOC (acetone, at 0.21 mg/kg; location B-16 (6') and 0.37 mg/kg; location B16 (11')), exceeded both NYSDEC RSCOs (0.2 mg/kg) and NYSDEC BCP Track 1 SCO (0.05 mg/kg). Acetone is a common laboratory contaminant and the detection of this constituent can be attributed to its use in the laboratory. All remaining detected VOCs were detected below their respective regulatory levels. The analytical data summary table is presented in Table E-1 in Appendix E. The analytical data report is provided in Appendix C.

4.3.2 Semi-Volatile Organic Compounds (SVOCs) in Soil

Laboratory analytical results indicated that detectable concentrations of targeted TCL SVOCs were present at all boring locations. The analytical data summary table is presented in Appendix E and the analytical data report is provided in Appendix C.

Exceedances of NYSDEC RSCOs and NYSDEC BCP Part 375 SCOs were encountered at twelve sample intervals and at a duplicate location (boring locations B4(0-2), B5(1-3), B6(0-2), B7(7-8), B9(8-10), B8(10-12), B11(2-4), B12(0-2), B13(0-2), B14(3-5), B16(8-10), B16(12-13) and Duplicate at B7) and included the following TCL SVOCs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene and Indeno(1,2,3-cd)pyrene. Exceedances of SVOCs in soil are summarized in Table 5. The exceedances of these compounds are attributed to the presence of historical urban fill materials and any combusted materials therein.

Table 5
SVOCs in Soil - Exceedances Summary

SVOC	NYSDEC TAGM 4046 RSCOs (ppm)	Track 1 Unrestricted Use Part 375-6.8 (ppm)	B4 0-2 ft- bgs	B5 1-3 ft- bgs	B6 0-2 ft- bgs	B7 7-8 ft- bgs	B8 10- 12 ft- bgs	B9 8- 10 ft- bgs	B11 2-4 ft- bgs	B12 0-2 ft- bgs	B13 0-2 ft- bgs	B14 3-5 ft- bgs	B16 8-10 ft- bgs	B16 12-13 ft-bgs	DUP (B7) 9-10 ft- bgs
Benz(a) anthracene	0.224 or MDL	1	2.7J	NE	2.6	2.5	NE	NE	41D	NE	14	NE	2J	2J	NE
Benzo(a)pyrene	0.061 or MDL	1	4.1J	1.4J	5.5	3.3	NE	NE	49D	1.6J	21	2.8J	2.8J	2.7J	1.5
Benzo(b)fluorant hene	1.1	1	5J	1.7J	7.1	4	1.3	1.2J	66D	3J	30D	1.5J	3.7J	3.3J	2.3
Benzo(k)fluorant hene	1.1	0.8	1.9J	NE	2.5	ND	NE	NE	22D	1.3J	10	ND	ND	ND	NE
Chrysene	0.4	1	2.6J	NE	2.8	2.2	NE	NE	35D	1.1J	15	NE	2.2J	2J	NE
Dibenzo(a,h) anthracene	0.014 or MDL	0.33	ND	ND	0.36J	ND	NE	NE	2.1	ND	ND	NE	ND	ND	NE
Indeno(1,2,3- cd)pyrene	3.2	0.5	NE	NE	NE	NE	NE	NE	5.5	ND	NE	NE	ND	ND	0.92

ND – not detected; NE – detected but does not exceed the regulatory levels; J-estimated value below the method detection level; D-diluted.

4.3.3 TAL Metals in Soil

A review of the analytical results indicates that the following metals: aluminum, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium and silver were detected in the samples. Detected concentrations of barium, calcium, chromium, copper, lead, magnesium, mercury, nickel and zinc exceeded the NYSDEC TAGM RSCOs, Eastern USA Background Concentrations and NYSDEC BCP Track 1 SCOs.

Barium was detected in sample locations B12(0-2) at 1,020 mg/kg, B13(0-2) at 765 mg/kg and Dup-B7(9-10) at 605 mg/kg and exceeded the NYSDEC RSCO level of 300 mg/kg, maximum eastern background level of 600 mg/kg and NYSDEC BCP Track 1 SCO level of 350 mg/kg.

Calcium was detected at multiple locations [B5(1-3), B6(0-2), B7(7-8), B9(12-15), B12(0-2), B13(0-2), B15(1-3), B16(8-10), B16(12-13) and Dup-B7(9-10)] with exceedances ranging from 35,300 mg/kg to 79,400 mg/kg which exceed the maximum eastern background level of 35,000 mg/kg. NYSDEC RSCOs use background levels for regulatory purposes and no NYSDEC BCP Track 1 SCOs are available for calcium.

Chromium was detected at sample location B13(0-2) at a concentration of 45.1 mg/kg which exceeded the NYSDEC RSCO level of 10 mg/kg or site background and above maximum eastern background level of 40 mg/kg. No NYSDEC BCP Track 1 SCOs are available for chromium.

Copper was detected at sample locations B6(0-2) at 63.9 mg/kg and B9(8-10) at 101 mg/kg exceeding NYSDEC RSCO level of 25 mg/kg, maximum eastern background level of 50 mg/kg and NYSDEC BCP Track 1 SCO level of 50 mg/kg.

Lead was detected at multiple sample locations with exceedances ranging from 112 mg/kg to 4,170 mg/kg which exceed the maximum eastern background level of 500 mg/kg and NYSDEC BCP Track 1 SCO level of 63 mg/kg. Site background levels are used for NYSDEC RSCOs.

Magnesium was detected at multiple sample locations with exceedances ranging from 5,540 mg/kg to 14,000 mg/kg which exceed the maximum eastern background level of 5,000 mg/kg. Site background levels are used for NYSDEC RSCOs and no NYSDEC BCP Track 1 SCOs are available for magnesium.

Mercury was detected at multiple sample locations ranging from 0.215 mg/kg to 2.8 mg/kg which all exceed NYSDEC RSCO level of 0.1 mg/kg, maximum eastern background level of 0.2 mg/kg and NYSDEC BCP Track 1 SCO level of 0.18 mg/kg.

Nickel was detected at sample location B11(12-15) at 30.7 mg/kg and exceeding NYSDEC RSCO level of 13 mg/kg or site background, maximum eastern background level of 25 mg/kg and NYSDEC BCP Track 1 SCO level of 30 mg/kg.

Zinc was detected at multiple sample locations ranging from 111 mg/kg to 1,240 mg/kg which all exceed NYSDEC RSCO level of 20 mg/kg or site background, maximum eastern background level of 50 mg/kg and NYSDEC BCP Track 1 SCO level of 109 mg/kg.

Elevated metals concentrations are attributed to historic fill/demolition material. The analytical data summary table is presented in Appendix B and the analytical data report is provided in Appendix C.

4.3.4 Polychlorinated Biphenyls (PCBs) in Soil

The laboratory results indicate that no detectable concentrations of PCBs were present in the soil samples collected. The analytical data is summarized in Appendix E and the analytical data report is provided in Appendix C.

4.3.5 Pesticides in Soil

The laboratory results indicate that detectable concentrations of the following pesticides were detected on Site: aldrin, dieldrin, 4,4-DDE, 4,4-DDD, 4,4-DDT, endrin, alpha-chlordane and gamma chlordane. None of the detected pesticides were above NYSDEC RSCOs or NYSDEC BCP Track 1 SCOs. The presence of these pesticides is likely to be the result of historic urban fill materials. The analytical data is summarized in Appendix E and the analytical data report is provided in Appendix C.

4.4 Groundwater Sampling Findings

Groundwater samples were collected from six (6) TWP installed at boring locations B1, B4, B8, B9, B13 and B16.

4.4.1 Volatile Organic Compounds (VOCs) in Groundwater

The laboratory results indicated that detectable concentrations of TCL VOCs were present in three of the six groundwater samples collected (locations: B1, B9 and B13). Exceedances of NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards Guidance Values were present in groundwater samples B1 and B13. Compounds in exceedance of TOGS guidance and standard values included: cis-1,2-dichloroethene (6 ug/L) and tetrachloroethene (16 ug/L) at TWP B1, and benzene (5.2 ug/L), ethyl benzene (470 ug/L), m/p-xylenes (39 ug/L) and isopropylbenzene (140 ug/L) at TWP B13. The presence of compounds in exceedance of TOGS at location B13 are hydrocarbons consistent with gasoline additives and can be attributed to the nearby retail petroleum station and is likely the result of historic filling and pumping activities. The presence of chlorinated VOCs is likely attributed to dry cleaner operations. The analytical data summary table is presented in Appendix E and the analytical data report is provided in Appendix C.

4.4.2 Semi-Volatile Organic Compounds (SVOCs) in Groundwater

The laboratory results indicated that detectable concentrations of TCL SVOCs were present in four of the six groundwater samples collected (locations: B1, B8, B13 and B16). Exceedances of NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards Guidance Values were present in one groundwater sample at location B13. Compounds in exceedance of TOGS guidance and standard values included: benz(a)anthracene (0.76 ug/L), chrysene (0.67 ug/L), benzo(b)fluoranthene (0.84 ug/L) and benzo(k)fluoranthene (0.58 ug/L). The presence of compounds in exceedance of TOGS at location B13 can be attributed to the nearby retail petroleum station and is likely the result of historic filling and pumping activities. The analytical data summary table is presented in Appendix E and the analytical data report is provided in Appendix C.

4.4.3 TAL Metals (Total) in Groundwater

The laboratory results indicated that detectable concentrations of Target Analyte List (TAL) total metals were present at all TWP sample locations. The following total metals: aluminum, antimony, iron, lead, magnesium, manganese, mercury and sodium were detected.

Exceedances of aluminum were detected at all sample locations with the exception of B13 and concentrations ranged from 247 ug/L to 9,520 ug/L, all in exceedance of TOGS standard or guidance value of 100 ug/L. A duplicate (B8) detection of 1,290 ug/L was also found.

Antimony was detected in exceedance of TOGS standard or guidance value of 3 ug/L at the following locations: B1 (26.6 ug/L), B4 (10.3 ug/L) and B9 (4.36 ug/L).

Iron was detected in exceedance of TOGS standard or guidance value of 300 ug/L at all sample locations, with concentrations ranging from: 380 ug/L at B4 to 11,900 ug/L at B8. A duplicate (B8) detection of 1,700 ug/L was also found.

Lead was detected in exceedance of TOGS standard or guidance value of 25 ug/L at two locations: B8 (37.7 ug/L) and B9 (79.4 ug/L).

Magnesium was detected in exceedance of TOGS standard or guidance value of 35,000 ug/L at four locations: B1 (57,300 ug/L), B4 (278,000 ug/L), B9 (81,700 ug/L) and B16 (190,000).

Manganese was detected in exceedance of TOGS standard or guidance value of 300 ug/L at four locations: B8 (952 ug/L), B9 (616 ug/L), B13 (1,250 ug/L) and B16 (3,860 ug/L). A duplicate (B8) detection of 441 ug/L was also found.

Mercury was detected in exceedance of TOGS standard or guidance value of 0.7 ug/L at sample location B13, with a concentration of 0.11 ug/L.

Sodium was detected in exceedance of TOGS standard or guidance value of 20,000 ug/L at all sample locations, with concentrations ranging from: 56,500 ug/L at B9 to 464,000 ug/L at B1.

4.4.4 TAL Metals (Dissolved) in Groundwater

The laboratory results indicated that detectable concentrations of TAL dissolved metals were present at all sample locations. The following total metals: aluminum, antimony, iron, lead, magnesium, manganese, selenium and sodium were detected.

Exceedances of aluminum were detected at sample locations B8 and B13 with concentrations 383 ug/L and 135 ug/L respectively, which exceed TOGS standard or guidance value of 100 ug/L.

Exceedances of antimony were detected at sample locations B4 and B9 with concentrations 30.5 ug/L and 80.2 ug/L respectively, which exceed TOGS standard or guidance value of 3 ug/L.

Iron was detected in exceedance of TOGS standard or guidance value of 300 ug/L at sample locations B8, B13 and B16, with concentrations 661 ug/L, 967 ug/L and 914 ug/L respectively.

Lead was detected in exceedance of TOGS standard or guidance value of 25 ug/L at sample location B8 with concentration 33.9 ug/L.

Magnesium was detected in exceedance of TOGS standard or guidance value of 35,000 ug/L at four locations: B1 (56,100 ug/L), B4 (253,000 ug/L), B9 (89,900 ug/L) and B16 (175,000).

Manganese was detected in exceedance of TOGS standard or guidance value of 300 ug/L at three locations: B8 (479 ug/L), B13 (1,310 ug/L) and B16 (3,910 ug/L). A duplicate (B8) detection of 340 ug/L is also noted.

Selenium was detected in exceedance of TOGS standard or guidance value of 10 ug/L at sample location B1, with a concentration of 15.5 ug/L.

Sodium was detected in exceedance of TOGS standard or guidance value of 20,000 ug/L at all sample locations, with concentrations ranging from: 63,700 ug/L at B9 to 451,000 ug/L at B1.

4.4.5 Polychlorinated Biphenyls (PCBs) in Groundwater

The laboratory results indicate that no detectable concentrations of PCBs were present in groundwater samples collected. The analytical data is summarized in Appendix E and the analytical data report is provided in Appendix C.

4.4.6 Pesticides in Groundwater

The laboratory results indicate that no detectable concentrations of pesticides were present in groundwater samples collected. The analytical data is summarized in Appendix E and the analytical data report is provided in Appendix C.

4.4.7 NYCDEP Sewer Discharge Parameters

The laboratory results indicated four exceedances of sewer discharge parameters. Groundwater temperature exceeded sewer discharge limits by approximately 10⁰ Fahrenheit. This exceedance is due to a rise in temperature during sample handling in the laboratory. The remaining three exceedances consist of mercury, zinc and ethylbenzene. The presence of ethylbenzene, a component of gasoline, can be attributed to the nearby retail petroleum station. The presence of the metals can be attributed to historic fill. The analytical data summary table is presented in Appendix E and the analytical data report is provided in Appendix C.

4.5 Sub-Surface Soil Vapor Findings

The results of the investigation identified seventeen compounds above laboratory detection limits in all sub-surface soil vapor samples collected; eleven of which are above expected background values published by NYSDOH. Elevated concentrations of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, m,p-xylene, o-xylene, tetrachloroethene (PCE) and toluene were identified in all sub-surface soil vapor sample locations (B1, B4, B8, B9, B13 and B16). Additional elevated concentrations of: benzene (locations: B4, B8, B9, B13 and B16); cis-1,2-dichloroethene (DCE) (locations B4 and B16); trichloroethene (TCE) (locations: B4, B9 and B16) and vinyl chloride (B16) were detected and exceeded NYSDOH AGVs, NYSDOH Fuel Oil Upper Fence Limits, USEPA BASE Data Values, or HEI RIOPA Values. Table 5 below denotes sample locations with elevated VOC concentrations in exceedance of NYSDOH AGVs.

The source of the chlorinated VOCs (PCE, TCE, DCE and vinyl chloride) is likely attributed to dry cleaner operations. In addition, petroleum-related VOCs (benzene, ethylbenzene, toluene, and xylene) is likely attributed to nearby gasoline stations.

Table 6

Detected VOCs in Soil Vapor Above NYSDOH AGVs

Soil Boring Number	VOC	Reported Concentration (µg/m ³)	NYSDOH AGV (µg/m ³)
B9	PCE	450	100
B4	TCE	7.4	5
B9	TCE	5.1	5
B16	TCE	11	5

TCE was detected at a concentrations ranging from 5.1 ug/m³ to 11 ug/m³, which exceeds the NYSDOH AGV of 5 ug/m³. PCE was detected at a concentration of 450 ug/m³, which exceeds the AGV of 100 ug/m³. Concentrations of TCE and PCE detected could require monitoring or mitigation dependant on indoor air concentrations according to decision Matrices 1 and 2 published in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

A summary of the analytical results for VOCs in sub-surface soil vapor samples is presented in Appendix E and the analytical data report is provided in Appendix D.

4.6 Ambient Air Sample Findings

The ambient air sample laboratory analytical results revealed that all detected compounds were below anticipated background concentrations recorded from a nearby NYSDEC air monitoring station located at I.S. 52 in Bronx, NY and listed as air monitoring station 7094-07. A summary of the analytical results for VOCs in the ambient air sample is presented in Appendix E and the analytical data report is provided in Appendix D.

5.0 RECOMMENDATIONS

Three general areas of environmental concern have been identified as a result of this Phase II ESI as follows:

- Environmental impacts to the Site due to the known petroleum spill associated with an active gasoline station at 255 East 125th Street (Block 1790, Lot 24);
- Presence of two former gasoline USTs at the northeast corner lot of Third Avenue and 126th Street (southwest corner of Block 1791); and
- Presence of soil vapor attributed in part to the dry cleaners at 2315 Third Avenue (Block 1790, Lot 46), the gasoline station at 255 East 125th Street and any other similar off-site nearby potential sources.

For future Site development, the following actions are recommended:

- Additional soil and groundwater investigations, followed by remediation of the gasoline station property area located at 255 East 125th Street (Block 1790, Lot 24);
- Removal of the former gasoline USTs at the northeast corner lot of Third Avenue and 126th Street (southwest corner of Block 1791) in accordance with NYSDEC tank closure regulations; and
- New buildings constructed in the area should consider incorporating soil vapor barriers or other vapor mitigation procedures in accordance with the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

Additionally, in accordance with industry practice, the following is recommended:

- If shallow soils at the site are excavated during renovations or construction activities, it is recommended that the soils be characterized to identify material handling requirements and for material reuse, handling and/or waste disposal requirements and be managed in accordance with federal, state and local regulations.
- If landscaped areas are incorporated into the development of the Site, then at least two foot thick certified clean fill cap should be placed over on-site soils in these areas.
- If dewatering is required for construction activities, then groundwater at the locations of dewatering should be sampled and the need for pretreatment assessed prior to discharge to the NYC sewer.

The total cost of environmental remediation at the Site is difficult to assess given the large area covered by the Site, limits of environmental investigation activities, and lack of detailed development plans for the Site at this time. However, for planning purposes, order-of-magnitude estimates of environmental remediation costs are provided herein ranging from approximately \$2 to \$4 million. This estimate is based on assumptions that there are two significant source areas of petroleum contamination (the active gasoline station at 255 East 125th Street and the northeast corner lot at Third Avenue and 126th Street)

that may cost approximately \$1 to 2 million to remediate, assuming that on-site soil is contaminated to a depth of 10 to 20 feet and that groundwater is also contaminated. This estimate also assumes that there is a source area of chlorinated VOCs at the dry cleaners at 2315 Third Avenue that may cost approximately \$0.5 million to remediate; and that mitigation measures for soil vapor intrusion, consisting of passive vapor barriers for new buildings, are implemented across approximately half the Site at a cost of approximately \$0.5 to \$1 million. The cost of handling and disposal of fill material from the Site is not included in these costs. The actual cost will vary based upon final design, market conditions at the time the work is performed and the competitive bidding process used.

FIGURES

Figure 1 Site Location Map

Figure 2 Soil, Groundwater, Soil Vapor and Ambient Air Sampling Location Plan

APPENDIX A

GEOPHYSICAL SURVEY – REPORT FINDINGS AND FIGURES

APPENDIX B
SOIL BORING LOGS

APPENDIX C

**ENVIRONMENTAL SAMPLES – SOIL AND GROUNDWATER
LABORATORY ANALYTICAL DATA REPORT**

APPENDIX D

**ENVIRONMENTAL SAMPLES – SOIL VAPOR AND AMBIENT AIR
LABORATORY ANALYTICAL DATA REPORT**

APPENDIX E

ENVIRONMENTAL SAMPLING RESULTS SUMMARY TABLES